Status and Future Prospects for Lingcod in Waters off Washington, Oregon, and California as Assessed in 2009

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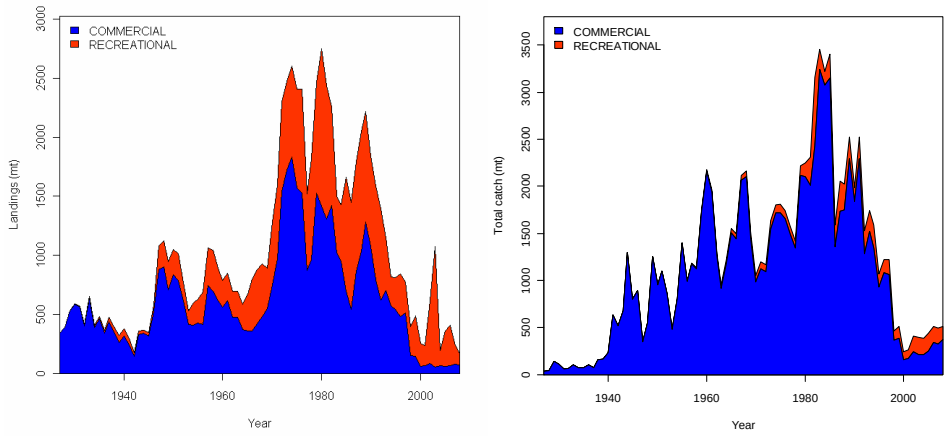
This assessment applies to lingcod (*Ophiodon elongatus*) off the West Coast of the United States, and is conducted as two separate assessments of (1) Lingcod off of Washington and Oregon (the North stock), and lingcod off of California (the South stock).

For each stock, two fisheries are modeled: the commercial fishery and the recreational fishery. Landings are included from 1928-2008, with equilibrium landings estimated for the commercial fisheries prior to 1928. Since the fishery off of California developed earlier, the equilibrium catches are an order of magnitude higher there (341 metric tons (mt) in California vs. 36 mt for Washington/Oregon).

The largest landings off California were 2749 mt in 1980 (nearly equally divided between the commercial and recreational fleets). For Washington/Oregon, the largest landings were 3443 mt in 1983 (with over 90% of the landings coming from the commercial fleet). Landings exceeded 1400 mt for the years 1971-1991 in the South and the years 1973-1994 in the North. Landings have declined significantly over the past two decades, with the average landings over the past 10 years being 298 mt in the North and 405 mt in the South.

Landings history from 1928-2008

South *North*



Year	S. Commercial	S. Recreational	N. Commercial	N. Recreational	Total
1999	142	342	216	125	825
2000	56	199	90	80	425
2001	63	170	93	92	418
2002	81	534	124	166	905
2003	51	1,021	107	189	1,368
2004	63	130	115	171	479
2005	61	299	140	190	690
2006	62	348	197	174	781
2007	79	174	190	168	611
2008	69	102	216	134	521

Landings (MT) for the last 10 years.

Catch (total mortality) is similar to landings for most of the time series. However, discard rates and therefore estimates of mortality due to discard for the commercial fishery have been quite high relative to landed catch in recent years due to regulations.

This assessment used the Stock Synthesis (SS) model, version 3.03a. Lingcod has been modeled using various age-structured forward-projection models since the mid-1990s. The previous assessment was conducted in 2005 in SS2 (Jagielo et al. 1995). Data used in the base models for the current assessment include the following: Commercial and Recreational landings data from 1928-2008, with information on prior catch informing the "equilibrium" landings level; Commercial discard rates from 2002-2007; Triennial survey indices for the years 1980-2004 (every 3rd year); NWFSC survey indices for the years 2003-2008; commercial logbook CPUE indices for the years 1976-1997 (North) or 1978-1997 (South); PSMFC Dockside (recreational) boat survey index 1980-1989, 1993-1997 (South); Commercial length composition data for 1965-2008 (North) or 1978-2008 (South); Commercial discard length composition data for 2003-2007 (North) and 2004-2007 (South); Recreational length composition data for 1993-2008 (North) or 1987-2008 (South); Triennial length composition data for 1986-2004 (North) or 1989-2004 (South); NWFSC length composition data for 2003-2008.

Age data were available and used in sensitivities but not in the base models due to issues with outliers and possible aging bias. The data used in sensitivities include: Commercial conditional age-at-length data for 1980-2008 (North) and 1987-2008 (South); Recreational conditional age-at-length data for1999-2008 (North); Triennial conditional age-at-length data for 1992-2004 (North) or 1995-2004 (South); NWFSC survey conditional age-at-length data for 2003-2008.

A number of sources of uncertainty were explicitly included in this assessment. There were also other sources of uncertainty that were not included in the current model, including the degree of connection between the two lingcod stocks and also between the northern stock and the stock off British Columbia; the effect of the PDO, ENSO and other climatic variables on recruitment, growth and survival of lingcod.

A reference case was selected based on extensive model testing and an attempt was made to balance the sources of uncertainty. In addition, an attempt was made to make the North and South models as equivalent as possible. In this regard, fixed and estimated parameters are largely the same for the two assessments. Natural mortality (M) is fixed at 0.18 for females and 0.32 for males in both assessments, while stock-recruitment steepness (h) is fixed at 0.8. Size at age 1 is estimated along with all other growth parameters except size at age 20. In the North, male and female size at age 20 is estimated within a model which includes conditional age-at-length data and then fixed in the base model. In the South, estimating L_{max} resulted in unrealistically large values (possibly due to bias in ageing), therefore size at age 20 was fixed at the values used in the 2005 assessment. In both models there is a single block for commercial selectivity and retention changes, occurring in 1998 (to present) reflecting the increased regulation and areal limitations which have come into place over that period. That same block is used to model changes in recreational selectivity, reflecting changes in minimum size limits. In the North, male and female selectivities are estimated separately for the recreational fishery, whereas data to do so is lacking in the South.

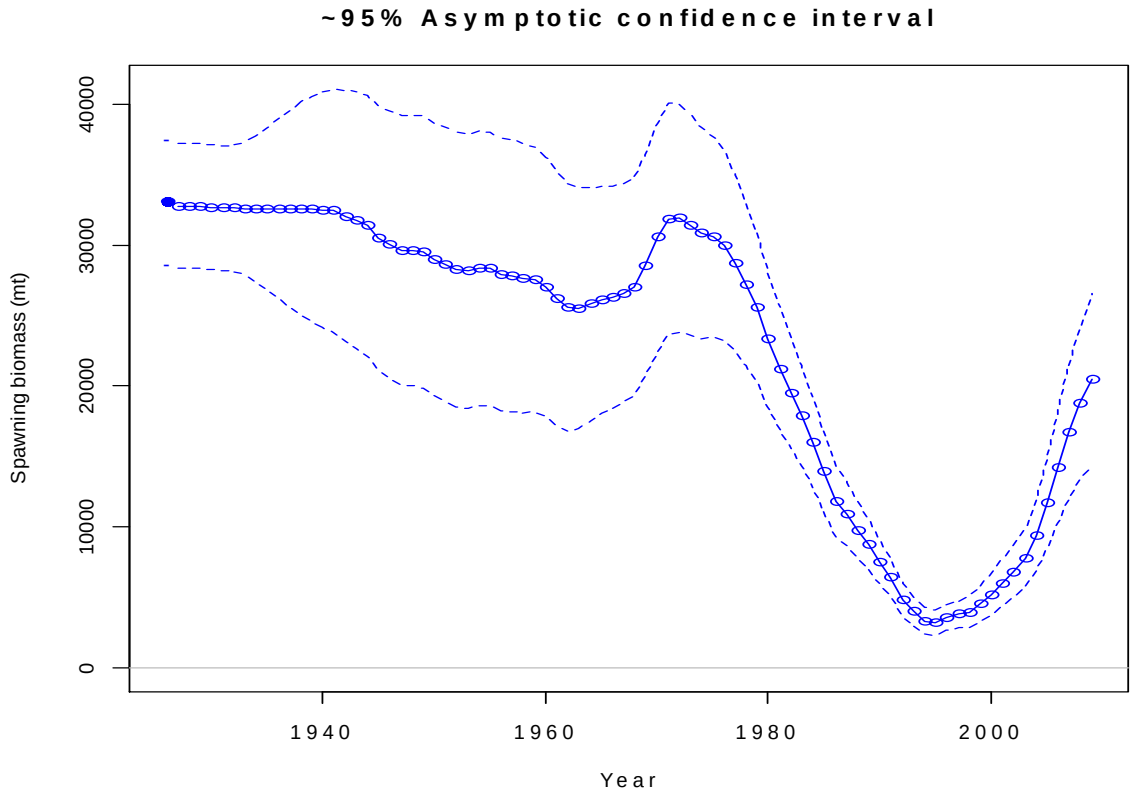
Combined models:

The point estimate for the depletion of the spawning output (= spawning biomass) at the start of 2009 is 61.9% for the North, 73.7% for the South, and 67.0% coast wide. For West Coast groundfish, a stock is considered overfished when it is below 25% of virgin spawning biomass,

and recovered when it reaches 40% of virgin spawning biomass. The current assessment indicates that coast wide, the stock is recovered, as are both stocks, off of Washington and Oregon and off of California. Overfishing is considered to be occurring when catch exceeds the ABC specified for a particular year. Overfishing last occurred in 2003, although there is some dispute about the magnitude of recreational fishery catch off of California for that year.

North Model:

The base model indicates that the lingcod female spawning biomass off of Washington and Oregon declined rapidly in the 1980s and early 1990's, hitting a low of 3,217 mt in 1995, and has subsequently recovered to 21,264 mt, which is over 60% of the virgin level. The 95% confidence interval in the current depletion for the North ranges from 48-76%.



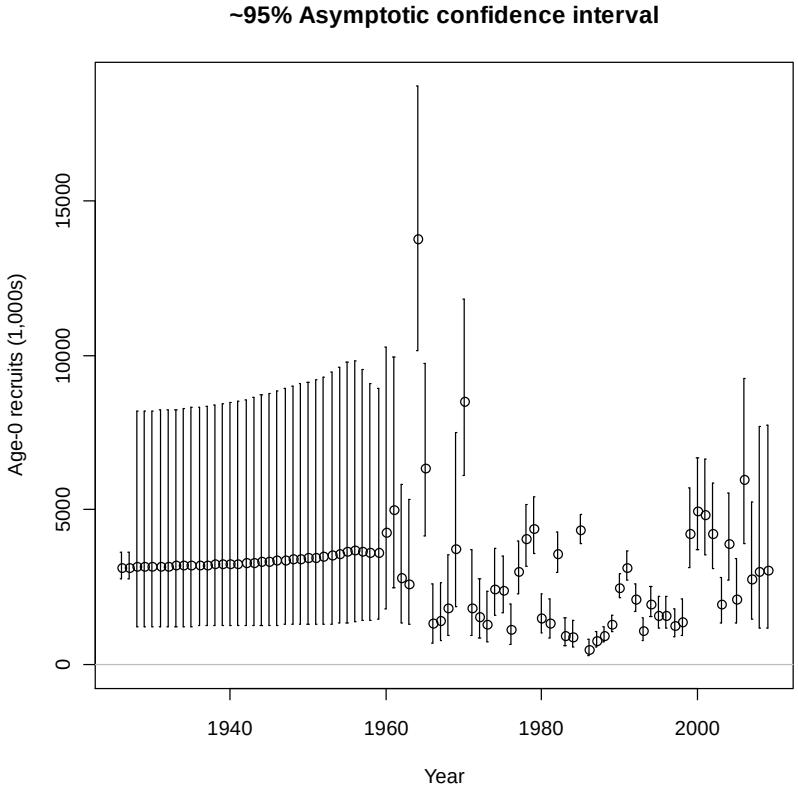
Year	Total biomass (mt)	Age 2+ biomass (mt)	Female spawning biomass (mt)	~95% confidence interval	Estimated depletion	~95% confidence interval
1999	8,743	8,508	4,610	3,362-5,859	13.9%	11-17%
2000	9,824	9,176	5,244	3,805-6,682	15.9%	12-19%
2001	11,776	11,023	6,030	4,388-7,672	18.2%	14-22%
2002	14,364	13,635	6,840	4,980-8,699	20.7%	16-25%
2003	17,283	16,655	7,837	5,694-9,980	23.7%	19-29%
2004	20,215	19,903	9,437	6,859-12,015	28.5%	23-35%
2005	23,078	22,498	11,689	8,489-14,888	35.3%	28-43%
2006	25,551	25,198	14,271	10,321-18,220	43.1%	34-52%
2007	27,979	27,093	16,710	11,993-21,426	50.5%	40-61%
2008	30,235	29,813	18,774	13,360-24,187	56.8%	44-69%
2009	32,222	31,764	20,484	14,449-26,520	61.9%	48-76%

Recruitment

Recruitments in the North were estimated from 1928-2007, with bias correction ramping in from 1950 to 1964 as data becomes informative. The base model indicates a very strong recruitment event in 1964, a secondary event in 1970, and recent relatively strong recruitments in 1999-2002, with fairly high recruitment in 2006 as well. Recruitments subsequent to 2007 are drawn exclusively from the stock-recruit curve, with correspondingly high levels of uncertainty.

Recent estimated trend in lingcod recruitment in the North.

Year	Estimated recruitment	~95% confidence interval
1999	4,235	2,955-5,514
2000	4,972	3,490-6,454
2001	4,836	3,304-6,368
2002	4,256	2,883-5,628
2003	1,960	1,237-2,683
2004	3,908	2,520-5,296
2005	2,138	1,114-3,162
2006	6,004	3,379-8,629
2007	2,771	937-4,605
2008	3,018	28-6,008

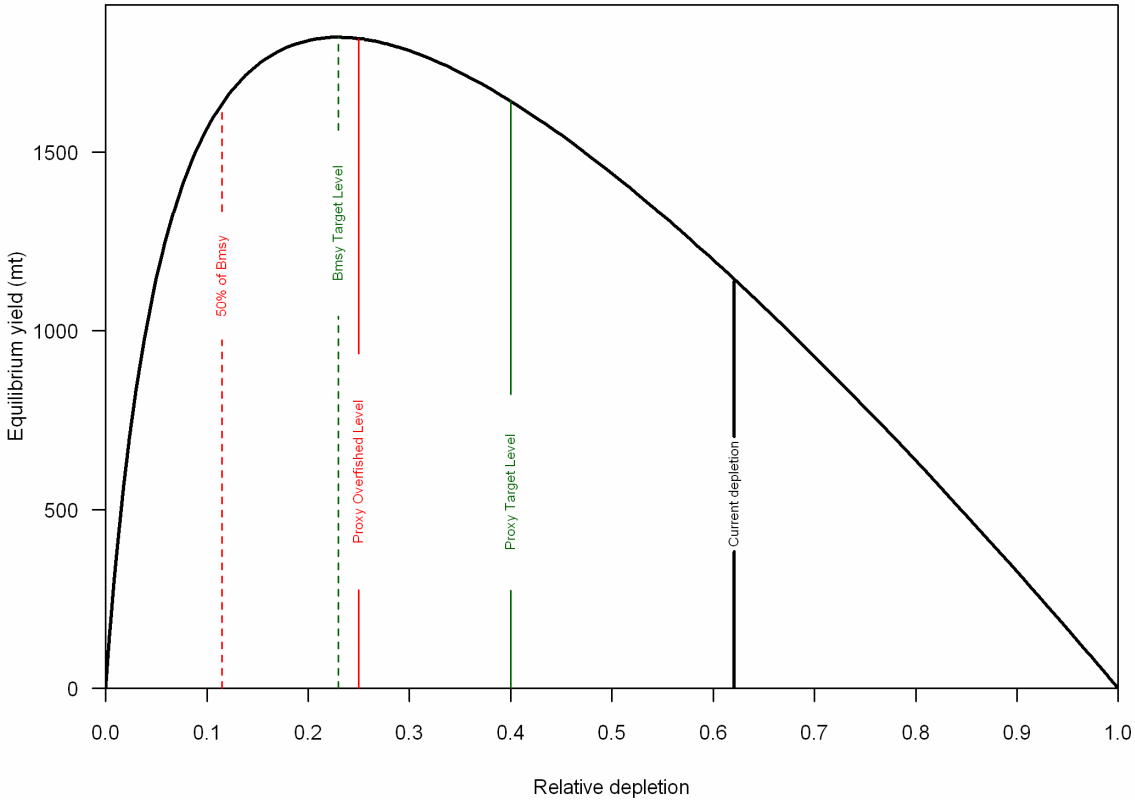


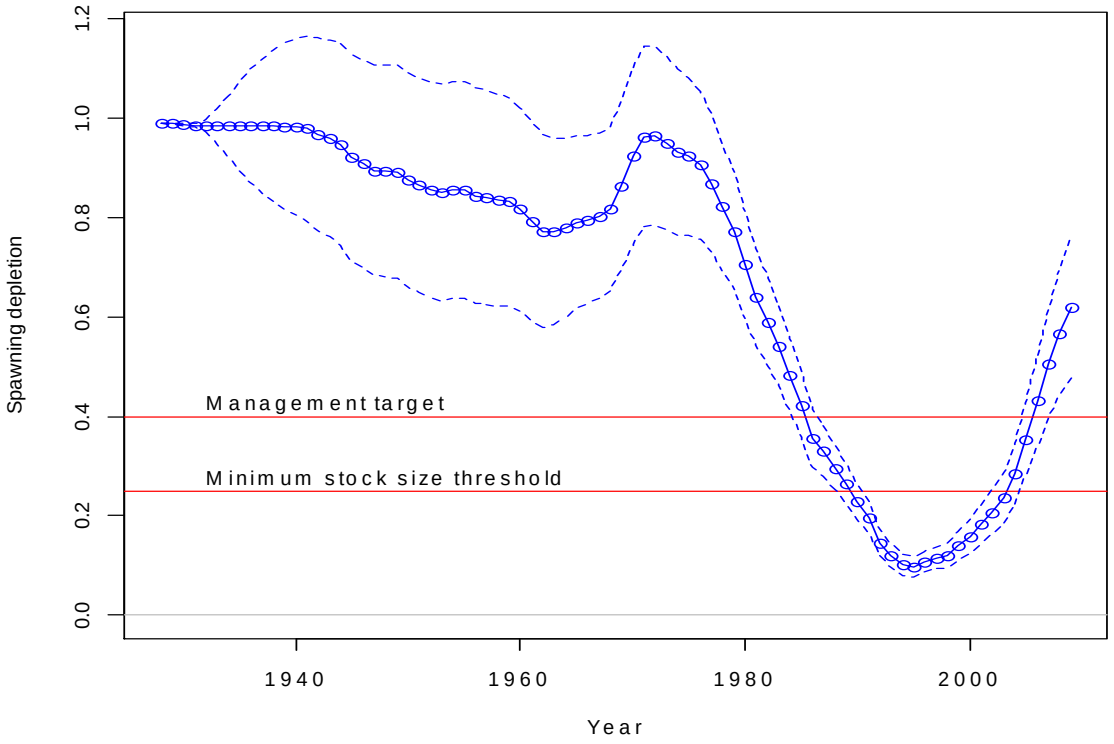
Reference points

For the North, lingcod unfished spawning biomass (SB_{zero}) is estimated to have been 33,075 mt (~95% confidence interval: 28,661-37,489 mt) with an expected mean recruitment of 3.162 million age-0 recruits (~95% confidence interval: 2.728-3.595).

Reference points

	$F_{msy}=F_{spr}$ (0.45)	$F_{msy} = F_{Btarg}(B_{40})$	Calculated F_{msy}
SPR	**0.45**	**0.438**	**0.283**
Exploitation Rate	**0.082**	**0.085**	**0.143**
MSY (mt - catch)	**1,710**	**1,734**	**1,909**
SB_0	**33,075**	**33,075**	**33,075**
SB_{msy}	**13,671**	**13,230**	**7,781**
SB/SB_0	**0.413**	**0.4**	**0.235**
Age 2+ Biomass	**20,827**	**20,285**	**18,309**

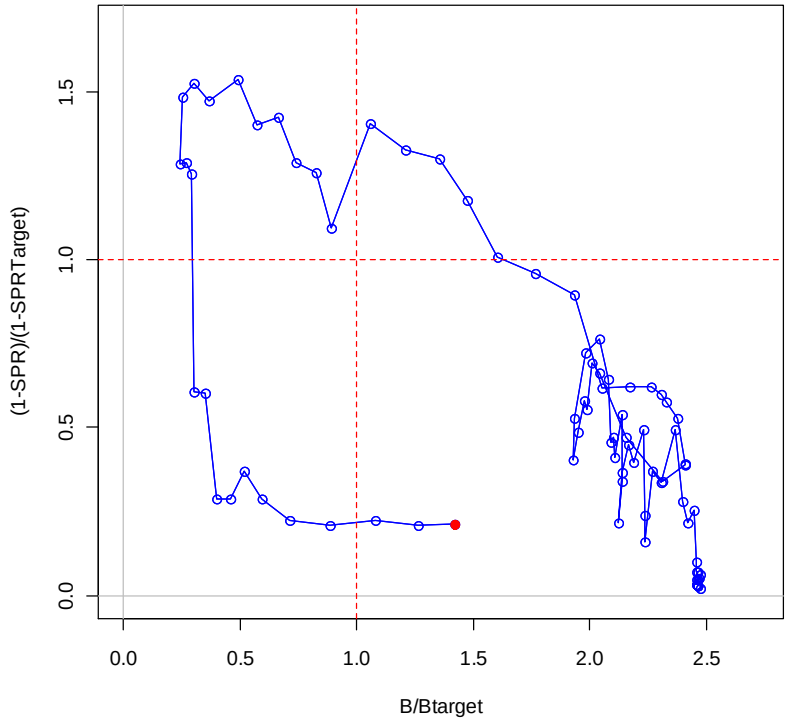




The spawning potential ratio (SPR) for lingcod in the North has been above the proxy target of 45% (indicating fishing mortality rates below the target) since 1998, and in recent years has been far above that level. The full exploitation history in terms of both biomass and relative SPR ((1-SPR)/(1-$SPR_{45\%}$)) is portrayed graphically via a phase plot below.

Recent trend in relative spawning potential ratio (1-SPR/1-$SPR_{Target=0.45}$)

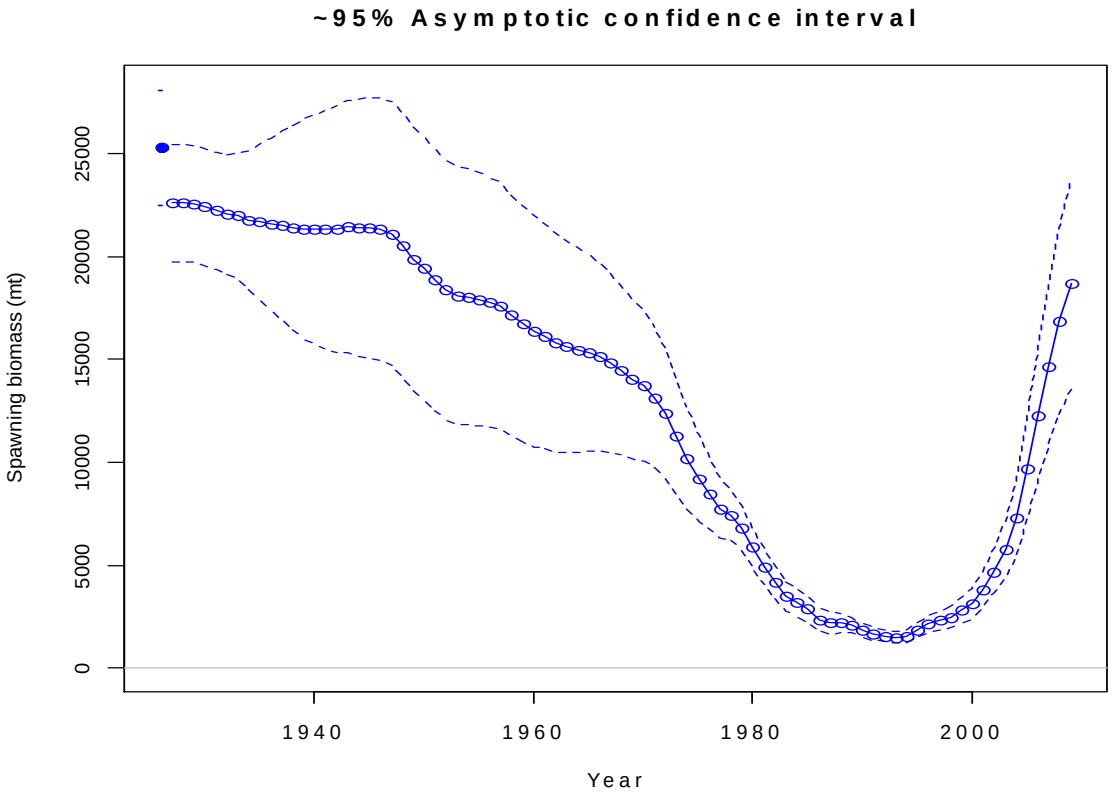
Year	Relative SPR ratio	~95% confidence interval
1999	0.66	0.52-0.79
2000	0.32	0.24-0.39
2001	0.31	0.24-0.39
2002	0.40	0.31-0.50
2003	0.31	0.23-0.39
2004	0.24	0.18-0.31
2005	0.23	0.17-0.29
2006	0.24	0.18-0.31
2007	0.23	0.16-0.29
2008	0.23	0.16-0.30



South Model:

The base model indicates that the lingcod female spawning biomass off of California declined rapidly in the 1970s and early 1980's, reaching a low point of 2,320 mt in 1998, and has subsequently recovered to 13,466 mt, which is over 70% of the virgin level.

Year	Total biomass (mt)	Age 2+ biomass (mt)	Female spawning biomass (mt)	~95% confidence interval	Estimated depletion	~95% confidence interval
1999	6,686	6,426	2,809	2,195-3,423	11.1%	9-14%
2000	8,130	7,043	3,157	2,428-3,886	12.5%	10-15%
2001	10,581	9,878	3,809	2,926-4,692	15.0%	12-18%
2002	13,718	12,917	4,693	3,601-5,786	18.5%	14-23%
2003	16,652	16,229	5,788	4,390-7,186	22.9%	18-28%
2004	19,341	18,576	7,278	5,414-9,142	28.8%	22-35%
2005	22,448	22,224	9,699	7,217-12,181	38.3%	30-47%
2006	24,822	24,565	12,233	9,051-15,416	48.3%	37-59%
2007	26,488	26,240	14,652	10,757-18,546	57.9%	45-71%
2008	28,779	27,201	16,861	12,314-21,408	66.6%	51-82%
2009	31,266	30,875	18,656	13,581-23,731	73.7%	57-91%

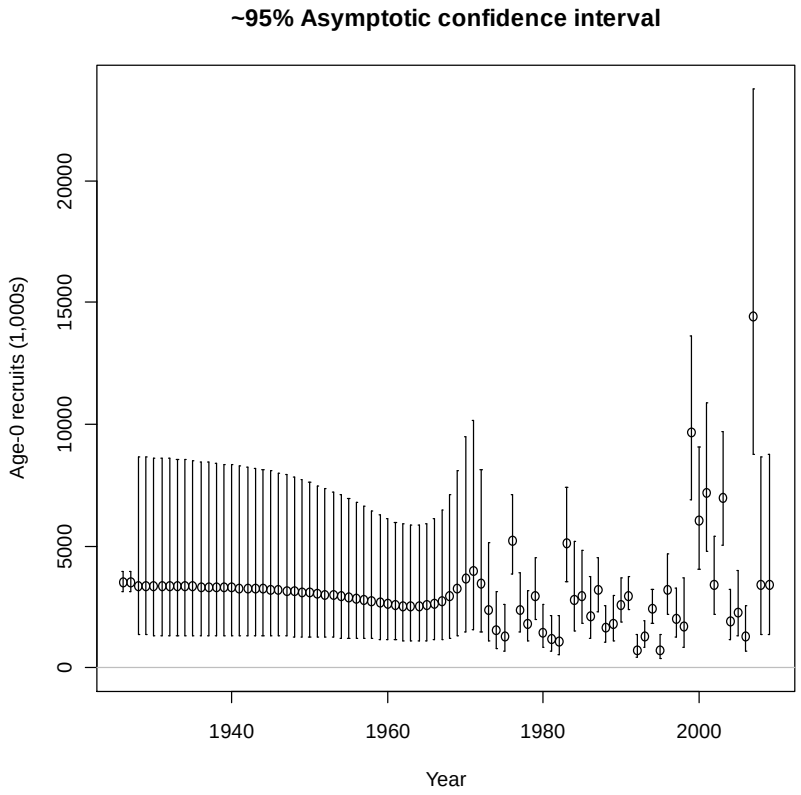


Recruitment

Recruitments in the South were estimated from 1928-2007, with bias correction ramping in from 1960 to 1974 as data becomes informative. The base model indicates relatively strong recruitment events in 1976, 1983 and in 1999-2003, similar to the period of increased recruitment in the North, with a very high but uncertain recruitment in 2007. Recruitments subsequent to 2007 are drawn exclusively from the stock-recruit curve, with correspondingly high levels of uncertainty.

Recent estimated trend in Lingcod recruitment in the South.

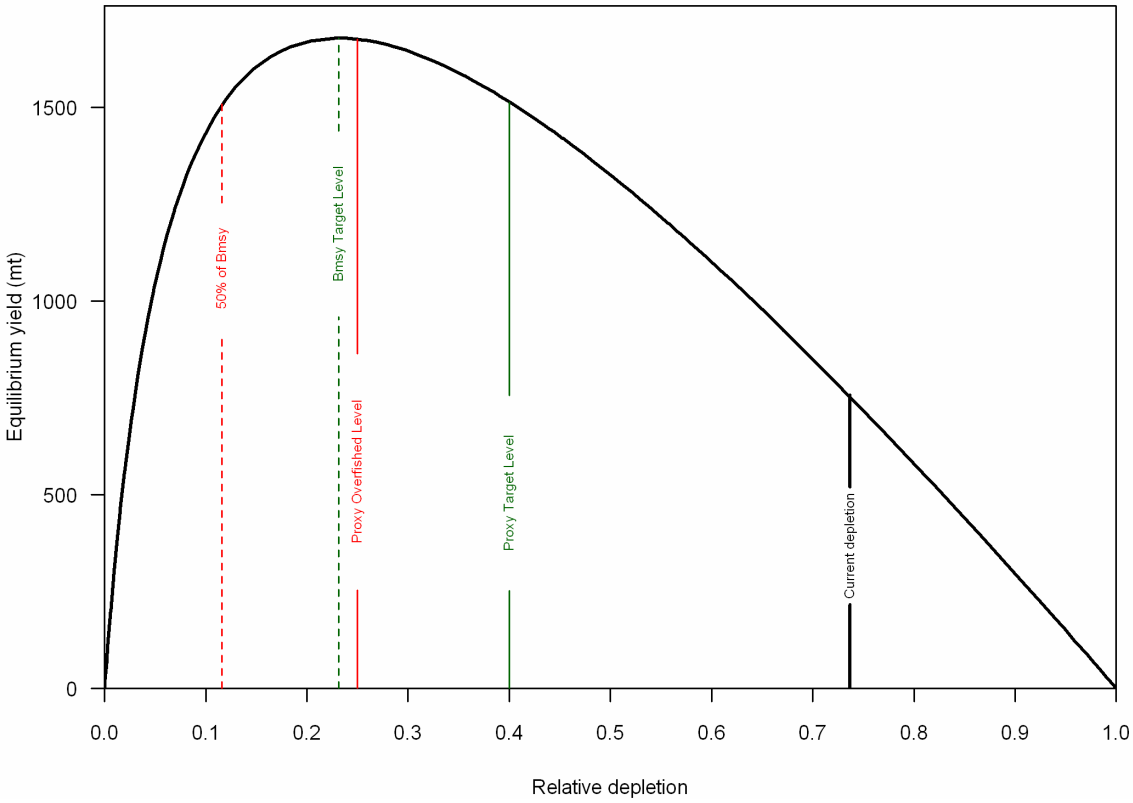
Year	Estimated recruitment	~95% confidence interval
1999	9,703	6,387-13,108
2000	6,049	3,588-8,509
2001	7,217	4,209-10,225
2002	3,452	1,878-5,027
2003	6,988	4,684-9,293
2004	1,926	934-2,918
2005	2,305	1,006-3,603
2006	1,298	388-2,208
2007	14,459	7,138-21,780
2008	3,411	42-6,780



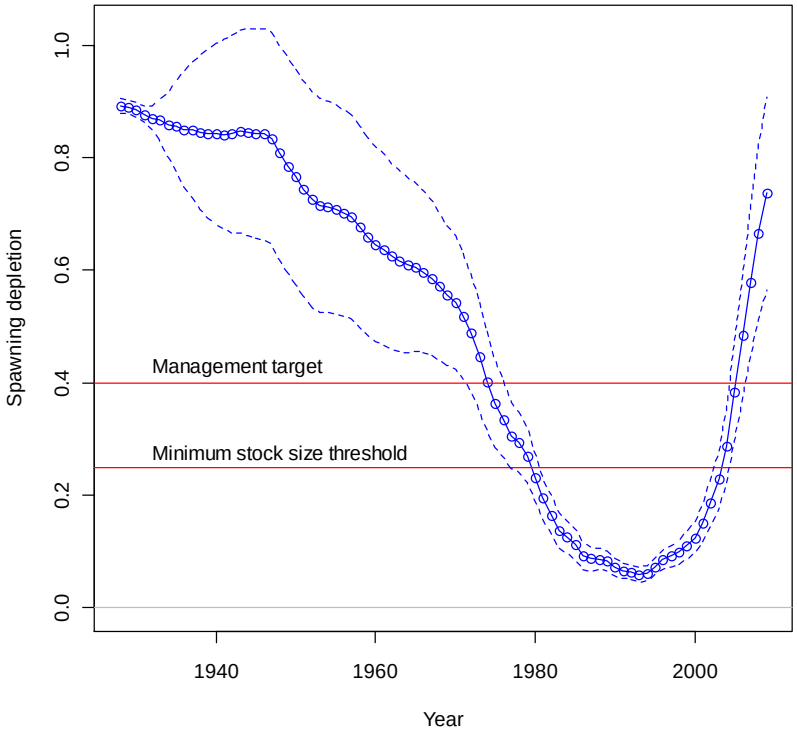
Reference points

For the South, lingcod unfished spawning biomass (SBzero) is estimated to have been 25,311 mt (~95% confidence interval: 22,485-28,136 mt) with an expected mean recruitment of 3.518 million age-0 recruits (~95% confidence interval: 3.100-3.935).

	$F_{msy}=F_{spr}$ (0.45)	$F_{msy} = F_{Btarg}(B_{40})$	Calculated F_{msy}
SPR	**0.45**	**0.438**	**0.279**
Exploitation Rate	**0.084**	**0.088**	**0.103**
MSY (mt - catch)	**1,492**	**1,514**	**1,678**
SB_0	**25,311**	**25,311**	**25,311**
SB_{msy}	**10,462**	**10,124**	**5,856**
SB/SB_0	**0.413**	**0.400**	**0.231**
Age 2+ Biomass	**17,712**	**17,288**	**14,508**

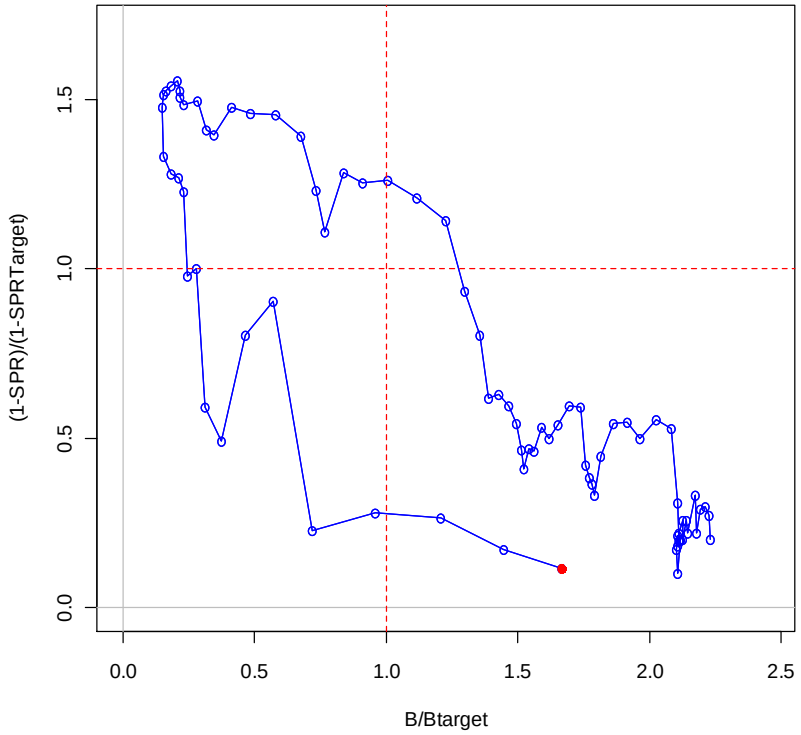


The relative spawning potential ratio (1-SPR) for lingcod in the South has been below the proxy target of 45% since 2001, and in recent years has been far below that level. The full exploitation history in terms of both biomass and F targets is portrayed graphically via a phase plot below



Recent trend in relative spawning potential ratio (1-SPR/1-SPR$_{Target=0.45}$)

Year	Relative SPR ratio	~95% confidence interval
1999	1.07	0.96-1.18
2000	1.09	0.97-1.21
2001	0.64	0.54-0.75
2002	0.54	0.44-0.64
2003	0.88	0.74-1.01
2004	0.99	0.85-1.13
2005	0.25	0.19-0.31
2006	0.30	0.23-0.37
2007	0.29	0.22-0.36
2008	0.19	0.14-0.23



Summary Tables for North and South

Catch in the following table reflect mortality associated with discard from the trawl fleet, where a 50% discard mortality rate is applied. Discard mortality in the recreational fleet, where only a 5% discard morality rate is applied, is minimal and is included in the landings estimates.

Coastwide recent trends (the coastwide SB_0 is estimated to be 58,386 mt)

Year	Landings	Catch	ABC	OY	SSB (mt)	Depletion	Recruitment
1999	825	1,098	960	730	7,420	12.7%	13,937
2000	425	539	700	378	8,400	14.4%	11,020
2001	418	549	1,120	611	9,839	16.9%	12,053
2002	905	1,097	745	577	11,533	19.8%	7,708
2003	1,368	1,513	841	651	13,625	23.3%	8,948
2004	479	627	1,385	735	16,716	28.6%	5,834
2005	690	840	2,922	2,414	21,388	36.6%	4,443
2006	781	962	2,716	2,414	26,504	45.4%	7,303
2007	611	794	6,706	6,706	31,361	53.7%	17,230
2008	521	718	5,853	5,853	35,635	61.0%	6,429
2009			5,278	5,278	39,140	67.0%	

SPR rates in North and South

Year	North SPR	South SPR
1999	0.64 (0.56-0.71)	0.41 (0.35-0.47)
2000	0.83 (0.78-0.87)	0.40 (0.33-0.47)
2001	0.83 (0.78-0.87)	0.65 (0.59-0.70)
2002	0.78 (0.72-0.83)	0.70 (0.65-0.76)
2003	0.83 (0.79-0.87)	0.52 (0.44-0.59)
2004	0.87 (0.83-0.90)	0.46 (0.38-0.54)
2005	0.87 (0.84-0.91)	0.86 (0.83-0.90)
2006	0.87 (0.83-0.90)	0.83 (0.79-0.87)
2007	0.88 (0.84-0.91)	0.84 (0.80-0.88)
2008	0.87 (0.83-0.91)	0.90 (0.87-0.92)

Unresolved Problems and Major Uncertainties

There are a number of issues that could be improved upon in future assessments. The proper break points for separate assessments have not been fully discerned. The break used here, between California and Oregon, is convenient in terms of data, although a break at Cape Mendocino would be likely more biologically accurate. The other artificial break, the U.S./Canada border, is also of concern, which could be alleviated with a bi-national assessment. Estimation of growth is a concern which we had hoped to address via the use of conditional age-at-length compositions. However it is not clear that this was achieved, and in fact we were forced to fix growth in the South due to much higher that expected length at age 20. This may be due to bias in ageing in any or all of the data sets or years, and should be more fully explored. The inability of either the North or South models to fit the NWFSC survey data is of concern, although it is not an ideal survey for lingcod. The overall scale of the assessment relative to the NWFSC indices appears plausible, in any case.

Decision Tables

For the North and South models, different major axes of uncertainty used for the decision tables. This reflects the cohesive nature of the data for the North and the disparities in the South.

NORTH:

For the North model, the major axis of uncertainty used for the decision table was natural mortality (M). The base model use an M of 0.18 for females and 0.32 for males. The "Low M" alternative uses M = 0.16 and 0.285, and the "High M" alternative uses M = 0.20 and 0.355. Commercial catch projections include discard. The three levels of catch are from forecasts from the model runs with the three levels of M.

				Low M		Base M		High M	
Catch levels	Year	Comm. Catch	Rec. Catch	Depletion	Spawning Biomass	Depletion	Spawning Biomass	Depletion	Spawning Biomass
Low Catch – From Low M Model	2009	2076	398	54.5%	18,595	61.9%	20,484	67.8%	21,868
	2010	1941	384	55.5%	18,938	62.8%	20,771	68.3%	22,044
	2011	1807	365	56.4%	19,249	63.6%	21,025	68.8%	22,196
	2012	1682	338	56.8%	19,392	63.8%	21,090	68.7%	22,150
	2013	1577	314	56.6%	19,304	63.2%	20,911	67.8%	21,866
	2014	1488	295	55.8%	19,061	62.2%	20,584	66.5%	21,458
	2015	1420	283	54.9%	18,746	61.1%	20,201	65.2%	21,022
	2016	1373	275	53.9%	18,411	59.9%	19,815	63.9%	20,607
	2017	1344	270	53.0%	18,075	58.8%	19,446	62.7%	20,229
	2018	1326	266	52.0%	17,747	57.7%	19,100	61.7%	19,890
Base Catch – From Base Model	2009	2394	452	54.5%	18,595	61.9%	20,484	67.8%	21,868
	2010	2211	431	54.8%	18,694	62.1%	20,529	67.6%	21,802
	2011	2035	403	55.0%	18,769	62.1%	20,552	67.4%	21,729
	2012	1881	370	54.8%	18,690	61.7%	20,402	66.6%	21,478
	2013	1759	343	53.9%	18,398	60.6%	20,033	65.2%	21,017
	2014	1661	323	52.7%	17,974	59.1%	19,543	63.4%	20,461
	2015	1588	310	51.3%	17,498	57.5%	19,018	61.7%	19,900
	2016	1540	302	49.9%	17,017	56.0%	18,507	60.1%	19,378
	2017	1510	297	48.5%	16,546	54.5%	18,025	58.6%	18,905
	2018	1491	293	47.1%	16,091	53.1%	17,577	57.3%	18,482
High Catch – From High M Model	2009	2683	498	54.5%	18,595	61.9%	20,484	67.8%	21,868
	2010	2455	472	54.1%	18,474	61.4%	20,310	66.9%	21,585
	2011	2245	436	53.7%	18,337	60.8%	20,125	66.1%	21,308
	2012	2069	399	52.9%	18,053	59.8%	19,781	64.7%	20,869
	2013	1936	370	51.5%	17,571	58.2%	19,235	62.8%	20,243
	2014	1833	350	49.7%	16,974	56.2%	18,587	60.6%	19,544
	2015	1759	337	47.9%	16,339	54.2%	17,920	58.5%	18,857
	2016	1712	329	46.0%	15,708	52.2%	17,280	56.5%	18,222
	2017	1682	324	44.2%	15,093	50.4%	16,676	54.7%	17,645
	2018	1663	320	42.5%	14,500	48.7%	16,112	53.1%	17,126

SOUTH:

For the South model, the high alternative is the model with ages included, and the low alternative is the model excluding the recreational CPUE ("Dockside") index. Commercial catch projections include discard. The three levels of catch are from forecasts from the three model runs.

				No Rec CPUE index		Base		With Ages used	
Catch levels	Year	Comm. Catch	Rec. Catch	Depletion	Spawning Biomass	Depletion	Spawning Biomass	Depletion	Spawning Biomass
Low Catch – From Model without Rec. CPUE index	2009	724	548	37.7%	8,684	73.7%	18,656	89.6%	25,603
	2010	731	539	38.2%	8,790	76.2%	19,297	96.8%	27,666
	2011	794	627	39.8%	9,159	78.9%	19,959	105.8%	30,257
	2012	848	683	42.3%	9,741	82.2%	20,811	116.4%	33,269
	2013	869	690	44.3%	10,192	85.2%	21,570	124.7%	35,658
	2014	870	680	45.2%	10,416	86.8%	21,958	129.0%	36,876
	2015	863	669	45.5%	10,475	86.7%	21,951	129.5%	37,032
	2016	853	660	45.4%	10,440	85.6%	21,654	127.4%	36,429
	2017	843	652	45.0%	10,360	83.6%	21,164	123.6%	35,343
	2018	835	646	44.6%	10,263	81.3%	20,573	118.9%	33,983
Base Catch – From Base Model	2009	1528	1177	37.7%	8,684	73.7%	18,656	89.6%	25,603
	2010	1462	1055	33.6%	7,740	72.1%	18,250	93.0%	26,589
	2011	1457	1066	31.3%	7,207	71.0%	17,975	98.7%	28,217
	2012	1481	1116	30.7%	7,062	71.4%	18,066	106.4%	30,425
	2013	1467	1099	29.5%	6,790	71.6%	18,132	112.1%	32,038
	2014	1415	1039	27.4%	6,318	70.6%	17,875	113.8%	32,534
	2015	1348	969	25.1%	5,782	68.4%	17,325	112.3%	32,101
	2016	1281	904	22.9%	5,280	65.7%	16,623	108.8%	31,091
	2017	1219	848	21.1%	4,853	62.7%	15,876	104.2%	29,775
	2018	1165	804	19.6%	4,509	59.9%	15,155	99.1%	28,342
High Catch – From Model with age data	2009	2091	1741	37.7%	8,684	73.7%	18,656	89.6%	25,603
	2010	2034	1630	30.0%	6,912	68.8%	17,423	90.0%	25,741
	2011	2104	1774	24.2%	5,576	64.4%	16,289	92.7%	26,491
	2012	2198	1916	20.0%	4,612	61.1%	15,461	97.0%	27,731
	2013	2167	1859	14.6%	3,372	57.5%	14,544	98.8%	28,240
	2014	2039	1700	8.5%	1,960	52.6%	13,320	96.7%	27,639
	2015	1874	1527	3.2%	730	47.2%	11,943	92.0%	26,297
	2016	1712	1374	0.2%	35	42.0%	10,620	86.2%	24,639
	2017	1569	1249	0.0%	-	37.4%	9,464	80.2%	22,937
	2018	1452	1151	0.0%	-	33.6%	8,512	74.6%	21,337

Research and Data needs

1) Further validation of the ageing of lingcod to verify lack of bias or show bias in ageing.
2) Development of an expanded assessment for the North including British Columbia.
3) Investigation into the effect of the first year for which recruitment is estimated on the estimates of B_0 and of current status.
4) Onboard sampling procedures need to be developed to ensure that a proper and informative subsample of fish be measured during the survey. Investigation of the large survey estimate for lingcod in the 2003 NWFSC survey showed that catches from only three tows made up 63.5% of the total lingcod catch in the survey. The second and third large tows also had large catches of dogfish and the catches were subsampled for counts and detailed sampling. As a result only 2 lingcod were actually measured in the second largest tow (one male and one female) but these measurements were expanded to the whole catch. It is difficult and inappropriate to try to correct such estimates after the fact during the assessments.
5) Consider other survey techniques (e.g., longline, combined lingcod/sablefish pot survey, trap surveys) for lingcod. The NWFSC Trawl Survey may not provide a good linear index of abundance for lingcod. The North sensitivity run with no abundance indices produced a similar fit to the base case suggesting that there was little extra trend information in the abundance indices used in the base case.
6) Investigate the suitability of using catches of lingcod in the IPHC survey as an alternate abundance index.
7) Re-examine the usefulness of the Washington tagging data for next assessment.
8) Clarify the definition of length-at-age in SS. There was confusion over whether SS was using mid-year or beginning of year length at age resulting in larger than expected mean length at age for age 0 and 1.
9) Further investigation of the age and length data needs to be done to understand if seasonal or area differences or some other causes are behind the outliers observed in the length-at-age data.
10) Look at environmental covariates for recruitment and time-varying growth and availability inshore.
11) The impact of nest-guarding on reproductive output should be investigated. The fact that lingcod males are nest-guarders was ignored when determining reproductive output. A cursory look at the proportion of sex ratio in the catch did not appear to indicate any serious changes for either species in recent years. However, we do not know what kind of change in sex ratio would indicate a serious change in reproductive success.
12) Evaluate the default assumption of proportionality between CPUE and abundance for the CPFV fishery. Many rockfish assessments use CPUE data from the CPFV fishery as an index of population abundance. The CPFV fishery is focused primarily on marketing a successful “fishing experience” that is related to the desirability of the species caught, quantity, body size, and fighting characteristics. Simulation modeling of fleet dynamics in a multi-species context is one possible way to address these issues.

Contents

1. Introduction

The assessment utilized data from the entire West Coast of the contiguous United States (waters off of Washington, Oregon and California). The lingcod (*Ophiodon elongatus*) population in these areas was modeled as two stocks in two separate assessment models. The two areas are (1) waters off of Oregon and Washington and (2) waters off of California. These areas were chosen due to a number of factors including: lack of demographic connectivity at moderate to large scales (~100-1000 km) along the coast despite general genetic similarities (Marko et al. 2007); data availability which restricts the number of areas it is possible to model, and which makes this split more feasible than others; evidence from comparison of length compositions and survey indices that the Eureka INPFC area is somewhat more like the areas to its north than those to its south, suggesting that the previously used division which grouped the Eureka area with the Southern area was less than optimal.

Range

Lingcod are found along the coast of the northeast Pacific Ocean from the Aleutian Islands to Baja California with the center of abundance off of British Columbia and Washington state (Hart 1973). They are most abundant in waters less than 100 fathoms (183 m) in depth, but are occasionally found at depths exceeding 200 fathoms (366 m) (Smith and Forrester 1973, Jagielo 1988). Lingcod are demersal on the continental shelf, display a patchy distribution and are most abundant in areas of hard bottom with rocky relief (Rickey 1991).

Life History

Lingcod are top order predators of the family Hexagrammidae. Among the Hexagrammidaes, the genus Ophiodon is ecologically intermediate between the more littoral genera Hexagrammos, Agrammus and Oxylebius and the more pelagic Pleurogrammus (Rutenberg 1962). Larval lingcod hatch in the late winter or early spring and become epipelagic. Analysis of genetic variation indicates that lingcod are genetically similar throughout their range

Movement

Lingcod are generally considered non-migratory, though some tagged individuals have moved exceptional distances, and indirect evidence suggests a seasonal onshore movement associated with spawning (Jagielo 1995). U.S. and Canadian tagging studies have demonstrated movement between coastal areas off Washington and southwest Vancouver Island. However, there is little interchange between these areas and the inland marine waters of Puget Sound and the Strait of Georgia (Cass et al. 1990, Jagielo 1990). Most fish recovered in tagging studies are found near the point of release, but some exceptional movements have been reported. Cass et al. (1990) found that 95% of fish recovered from a tagging study off the west coast of Vancouver Island were recaptured near the point of release. One fish tagged as a juvenile was recovered 510 km to the south in Oregon. At Cape Flattery, Washington, Jagielo (1990) reported that only 19% of recoveries were further than 10km from the release point. However, recaptures came from as far north as Queen Charlotte sound (195 km) and as far south as Cape Falcon (120 km).

Stock differentiation/Spatial structure

There are no clear stock delineations for lingcod in U.S. waters. No distinct breaks are seen in the fishery landings and catch distributions (Figure 1). Survey catches imply a continuous distribution over most of the range, with the largest catches occurring over a swath of latitude and depth. Genetic studies have found coastal lingcod populations to be genetically similar throughout their range (Jagielo et al. 1996). Recent analyses indicate some genetic changes in the stock along the coast, but no distinct stock breaks. Marko et al. (2007) found surprisingly little

connectivity between stocks at moderate (~10 km) to large (~1000 km) ranges, indicating the need for regional assessment and management.

Spawning and Nest Guarding

In the late fall, male lingcod aggregate and become territorial in areas suitable for spawning. The proportion of male lingcod sampled from offshore trawl landings declines in the late fall, suggesting a pre-spawning departure of males from the trawl grounds (Miller and Geibel 1973 (California), Cass et al. 1990 (British Columbia), Jagielo 1994 (Washington)). Males are in spawning condition earlier in the year than females, and it appears that larger and older females spawn first (Cass et al. 1990). Mature females are rarely seen at the spawning grounds and appear to move into spawning areas for only a brief period to deposit eggs (Giorgi 1981). The observed timing of peak spawning activity has ranged from January (Wilby 1937) to early March (La Riviere et al. 1981).

Nest deposition typically occurs in rock crevices, on rock ledges, or under boulders in areas of swift current flow. Ambient oxygen levels are critical to egg survival (Giorgi 1981). Salinity and temperature affect egg survival as well (Cook et al. 2005). Spawning behaviour has been reported from the intertidal zone to a depth of 126 m (Giorgi 1981, O'Connell 1993).

Males remain territorial throughout the period of egg incubation, and appear to be more effective at guarding the nest from predation by vertebrates than by invertebrates (La Riviere et al. 1981, Low and Beamish 1928). Fish predators include greenling, seaperch, sculpins, rockfish and cabezon; invertebrate predators include sea urchins, starfish, anemone, gastropods, starfish and crab (Cass et al. 1990). In experiments where males were removed from nests, new males sometimes assumed a guardian role, but in one removal experiment, 4 of 7 nests were lost to predators within 22 days. (Low and Beamish, 1978).

Early life

Hatching occurs over 1 to 7 days and between January and June (Jewell 1968, Low and Beamish 1978). Larval lingcod hatch at a length of 6-12 mm, and become epipelagic (Phillips and Barraclough 1977, Cass et al. 1990). Larvae in the Strait of Georgia first appear in the plankton in late February. Numbers peak in late April. Larvae were concentrated in the upper 3 m of the water column by day and disperse or migrate to deeper depths at night. Larvae begin to disappear from the upper water column by late May to early June and become demersal at about 70-80 mm and at about 3 months of age. Epipelagic larvae feed on small copepods and copepod eggs, shifting to larger copepods and fish larvae as they grow (Phillips and Barraclough 1977).

When about 3 months old, juveniles settle on sandy bottom areas near eelgrass or kelp beds. By age 1 or 2, lingcod move into rocky habitats similar to those occupied as adults, but shallower. Fishery and survey data indicate that male lingcod tend to be more abundant than females in shallow waters , and the size of both sexes increase with depth (Jagielo 1994). Newly settled juveniles have been sampled nearshore in June on sandy bottom areas near eelgrass or kelp beds (Buckley et al. 1984), and have been found at depth ranging from 20m in Canada (Phillips and Barraclough1977) to 55 m in California (Miller and Geibel, 1973). In Washington, juveniles have been collected from the mouth of the Pysht River in the Strait of Juan de Fuca, from Grays Harbor and Willapa Bay, and from coastal waters nearshore to these embayments (Buckley et al. 1984, Jagielo 1994). Coley et al. (1986) found juvenile lingcod in Grays Harbor in October, over hard bottom shell-cobble habitat near rocks in 9-15 m of water.

Miller and Geibel (1973) reported that juvenile lingcod in California are about 35 cm in length (1 year old) when they first move into nearshore rocky areas typical of adult habitat. Surveys off the

west coast of Vancouver Island suggest that juveniles move from inshore areas to a wider range of flat bottom areas by September (Cass et al. 1990), and begin to move into habitats of similar relief and substrate as adult lingcod by age 2, but remain at shallower depths. Juvenile lingcod feed on small fishes including herring (*Clupea pallasii*), Pacific sand lance (*Ammondytes hexapterus*), flatfish (*Pleuronectidae*), shiner perch (*Cymatogaster aggregate*), and walleye pollock (*Theragra chalcogramma*), and an assortment of invertebrates including shrimp (*Neomysis macrops*) and prawns (*Pandalus danae*) (Cass et al. 1990).

Growth

Lingcod display sexually dimorphic growth. Females grow faster than and reach larger sizes than males.

Phillips and Barraclough (1977) estimated that young-of-the-year (YOY) growth was approximately 1.3 mm/day. Buckley et al. (1984) reported YOY growth from Jun to September in the Strait of Juan de Fuca also averaged 1.3mm/day. Samples from the mouth of the Pysht River averaged 96 mm in June, 135 mm in July, 173 mm in August and 200 mm in September (Jagielo 1994).

Jagielo (1994) estimated growth using a fixed length at age 1 of 30 cm, and estimated L_∞ for males of 93.21 cm and females of 131.05 cm, and k of 0.1694 for males and 0.1137 for females. He also found that the average length for YOY lingcod was 11.99 cm and for age 2 (48.1 cm) for Washington samples, and that growth trajectories diverge considerably by sex after age 3, as female lingcod tend to grow faster and live longer than male lingcod, while male lingcod mature at that age.

Maturation

Richards et al. (1990) examined coastwide trends in lingcod maturity and observed that male lingcod mature at a smaller size and age than female lingcod. They also noted that size at maturity increases with latitude (distance from the equator). Size at 50% maturity was estimated to be 63.6 cm for females and 57.1 cm for males (ages 3.9 and 3.5) off of Vancouver Island, whereas Miller and Geibel (1973) found size at 50% maturity to be 58.8 cm and 39.8 cm (and ages 5 and 2) for females and males off of California. Jagielo (1994) found ages of 50% maturity of 3.4 years for males and 4.6 years for females off Washington.

Fecundity

Hart (1967) reported the relationship between length and weight as $W = 0.000282406 \cdot L^{3.011}$. The fecundity exponent is not significantly different than the length-weight exponent, and is therefore essentially equivalent of a constant relationship between weight and egg number.

Natural mortality

Jagielo 1994 estimated M for male and female lingcod using three empirical models based on life history parameters (Hoenig 1983, Alverson and Carney 1975, and Pauly 1980). Estimates of M for male lingcod ranged from 0.23 to 0.39, while estimates for female lingcod range from 0.16 to 0.19. The averages of the estimates were 0.18 for females and 0.32 for males.

Starr et al. 2005 estimated natural mortality rates from a short term tag-recapture study and came up with ranges of 0.24-0.34 for females and 0.13-0.23 for males. However, these estimates do not take into account variation in M across the year (or between years), especially for males during nest-guarding.

History of the fishery

The fishery for lingcod has a very long history. Lingcod was among the species found in remains from 51 archaeological sites representing the period between 6200 BC and 1830 AD on the central California coast from San Mateo to San Luis Obispo (Gobalet and Jones 1995). More recently, the commercial fishery off of California dates back more than a century, and the fishery off of Washington and Oregon dates back nearly as far.

Prior to 1977, Lingcod stocks in the northeast Pacific were managed by the Canadian Government within its waters, and by the individual states in waters (out to three miles) off of the United States. With implementation of the Magnuson Fishery Conservation and Management Act (MFCMA) in 1977, primary responsibility for management of the groundfish stocks off Washington, Oregon and California shifted from the states to the Pacific Fishery Management Council (PFMC). The ABC for lingcod off of these states was set at 7,000 mt, and catch was consistently below this level. In 1994, a harvest guideline (HG) of 4,000 mt was set. In 1995, both the ABC and HG were dropped to 2,400 mt. Trip limits on commercial Lingcod catch were first instituted in 1995, when a 20,000 lb/month limit was imposed, and a minimum size was imposed for recreational fisheries of 22 inches. In 1998 to present, individual year ABC and OY levels were set, commercial trip limits became much more restrictive (starting at 1,000 mt/2 months in 1998), and recreational bag limit were set at 2 (or 1) lingcod with minimum sizes ranging from 22 to 30 inches (Tables 1-4).

Surveys

Research surveys have been undertaken to provide fishery-independent information about the abundance, distribution, and biological characteristics of groundfish. A coast–wide Shelf Survey was conducted in 1977 (Gunderson and Sample 1980) and was repeated every three years (thus referred to as the "Triennial" survey) through 2004. A cooperative survey conducted using commercial fishing vessels was undertaken on the slope in 1998 and expanded to cover the shelf beginning in 2003.

2. Data

2.1. Removals and regulations

Lingcod landings were estimated for the fishery off the West Coast of the continental United States from 1928 through 2008 (Figure 2; Table 5), with low-level "equilibrium" removals estimated for the period prior to 1928.

New reconstructed estimates of California commercial landings from 1931-2008 were obtained from Don Pearson, and the values from 1931-1980 were used in the (Southern area) assessment. California commercial landings from 1916-1930 were obtained from the 2004 assessment and were used to estimate the "equilibrium" landings level and 1928-1930 landings. Washington historical catches were obtained from Washington State (Farron Wallace, Pers. Comm.) and used for the years 1929-1979, with 1928 assigned the average of the following 9 years. Oregon Commercial catches were taken from Cleaver (1951) for the years 1928-1949 and from Smith (1956) for the years 1950-1953. Commercial landings data were not available for the years 1954 and 1955, and, consequently, those years were assigned values reflecting the surrounding years (130 mt and 120 mt). For 1956-1968, Oregon commercial landings were taken from Lynde (1986), while for 1969-1979, landings were provided by Oregon (Troy Buell, Pers. comm.).

Commercial landings for 1980 for Washington/Oregon were taken from Lynde (1986). PacFIN estimates of commercial landings were used for 1981-2008 for both the Washington/Oregon and California areas.

California recreational landings were obtained from John Field for the years 1928-1980. Washington and Oregon recreational landings prior to 1980 were taken from the previous assessment, and were below 100 mt prior to 1980 and were 0 prior to 1957. RecFIN estimates were used for the years 1980-1989 and 1993-2007 for Washington/Oregon and 1981-1989 and 1993-2007 for California, with GMT scorecard values used for both areas for 2008. Recreational catch for 1990-1993 were taken from the previous assessment.

In California, a 5-fish bag limit was enacted in 1980 followed by a 22 inch size limit in 1981. These regulations remained in effect for 17 years. In March 1998, the bag limit was reduced from 5 to 3 fish and concurrently the size limit was increased to 24 inches. The bag limit was lowered again from 3 fish to 2 fish with in January 1999. In January 2000, the size limit increased from 24 to 26 in. and a seasonal closure (January through February) was implemented from the U.S.-Mexico border north to Lopez Point (36˚ N., Monterey County), and for March through April from Lopez Point north to Cape Mendocino (40˚10' N., Humboldt County) The bag limit remained at 2 fish. A gear restriction was also enacted at this time limiting the number of hooks to 3, although this was primarily directed toward rockfish effort.

Discards

Annual discard amount/rates for 2003 through 2007 were provided by the West Coast Groundfish Observer Program (Table 6 provides estimate of the percent of total lingcod mortalities in the commercial fishery due to discarding). Since these data are provided with a break point at 40° 10' N rather than the Oregon/California border (42° N), and the majority of the data is from the North, including the area between 40° 10' N and 42° N, and the values are similar for most years between the two areas, a single time series of discard proportion was used for both area assessments.

Fishery Length compositions

Commercial fishery landed length compositions (Tables 7-9; Figures 3-5 and 27-28) were estimated from PacFIN for the years 1965-2008 for the North and 1978-1990 and 1992-2008 for the South. These data were sex-specific for the years 1976-2008.

Commercial fishery length compositions were constructed using BDS data retrieved from PacFIN on 6/18/2009. Length, age and sex data were acquired at the trip level, and then aggregated. Since trip level landings were not available for 80% of the length data, each length was treated as an individual sample. The input N for each year and area was calculated via Stewart's Method (Ian Stewart, pers. Comm.), which for fisheries is:

$$N_{effective} = N_{trips} + 0.138 N_{fish} \quad \text{if } N_{fish}/N_{trips} < 44$$
$$N_{effective} = 7.06 N_{trips} \quad \text{if } N_{fish}/N_{trips} \geq 44$$

The length compositions of discards in more recent years (2003-2007) were calculated with observer data from boats using bottom trawl gear (Figures 6 and 29). Although there were discards observed from fixed gear as well, discard mortality from that fishery is minimal for lingcod, and therefore is not representative of the discard mortalities which are modeled here. Individual lengths were scaled up by a straight expansion factor to the total discard for each observed tow.

Input N values for commercial trawl discard length compositions were calculated via Stewart's Method, but capped at the greater of the number of tows or 200 (Table 9).

Recreational length-composition data were retrieved as individual lengths from Oregon and California from RecFIN for the years 1993-2008. Additional length data from central California were obtained from John Field from the central/northern California CPFV monitoring program from 1987-1998. Input n values were set at $1/10^{th}$ the number of fish, and for those years where both sources were combined for California (1993-1998), the total sample size was reduced by an additional 25% (Table 8). The recreational length compositions are shown in Figures 11-13 and 32.

Fishery conditional age-at-length compositions

Conditional age-at-length compositions were constructed from age and length data available from PacFIN for the years 1980-2008 for the North and for 1993-1998 and 2001-2004 for the South. Since most data did not include total trip catch amounts, each age was considered an individual sample (Table 7, Figures 7-10 and 30-31).

For the recreational fishery, conditional age-at-length compositions were constructed from age and length data available from Oregon for the years 1999-2008 (Figures 14-15). Again each sample was considered an individual observation (Table 8).

These age data were not used in the final base or bracketing models, but were used in sensitivity analyses.

Fishery catch-per-unit-effort indices

Three fishery catch-per-unit-effort (CPUE) indices were used in this assessment. Commercial CPUE indices were developed by Jagielo et al. (2000, 2003). They were constructed from Washington, Oregon and California trawl fishery logbook and fish ticket data dating back to 1976 (Table 10, Figures 16 and 33). Skipper's tow-by-tow estimates of retained catch were reconciled with fish ticket data (landing receipts). The adjusted catch and the skipper's estimate of tow duration was used to compute lingcod CPUE (lbs/hour). Following data verification and screening, a total of 490,971 tows in the northern area and 474,946 tows in the southern area were used in the analysis (Jagielo and Wallace, 2005). Because of significant changes in management beginning in 1998 both the northern and southern time series were truncated after 1997. Furthermore, the 1976 and 1977 tow data from the southern area were deemed of insufficient sample size and were dropped from the time series used in the assessment model. Tow-by-tow catch rates (CPUE) were fitted in a two-stage model process using a delta-lognormal GLM procedure to predict abundance indices across the time series for each area. The model included a year, month, depth, and location (PFMC area) effect. A bootstrap procedure was previously used to estimate the standard errors of the year by year index values; however, the previous STAT Star Panel concluded that the bootstrap estimates of standard errors were unrealistically low and recommended using an assumed annual CV of 0.20 in both the southern and northern index in the 2003 assessment (Jagielo et al. 2003). The northern trawl logbook index trend shows a sharply declining stock since 1976, and the southern trawl logbook index indicates a declining stock since 1979.

The third CPUE index used in this assessment is a dockside recreational CPUE index (Table 10, Figure 34) for California developed by Tom Wadsworth (Appendix 1). As with the commercial

CPUE indices, data beyond 1997 was not used in the assessment due to changes in management regulations.

2.2. Surveys

NMFS Cruises

The results from two fishery-independent surveys are used in this assessment:

1. The NWFS Triennial Shelf Survey that was conducted every third year from 1980-2004
2. The NWFSC Survey for the years 2003-2008.

The 1977 Triennial Shelf Survey was not used due to concerns about the first year of the survey's implementation.

Indices

Indices of abundance were derived from each of the above surveys and years using a generalized linear mixed model (GLMM) for each survey (John Wallace, pers. comm.). The GLMM models occurrence of lingcod in a survey haul as a binomial process and the size of the non-zero catches with a gamma model. Coefficients of variation (CVs) about the indices were produced from the GLMM as well. The GLMMs utilized three latitudinal strata, Washington/Oregon, California north of around Point Conception (34.5 degrees north) and California south of 34.5. There were also two depth strata (55-183 m and 183-400m), covering the usual extent of observation of lingcod. These six strata represent the four areas of different sampling densities in the NWFSC survey (and the Triennial survey since it did not sample in the Southern California Bight), and they also include the division between the North and South assessment areas at 42˚N (Table 11, Figures 17,22,35 and 40).

Central California Indices

Thomas Wadsworth developed several indices of abundance for lingcod and other species from various surveys, observer programs, and other fishery monitoring programs for central California (between Point Conception and Point Mendocino). These included SCUBA surveys, spearfish tournament monitoring, Commercial Party Fishing Vessel logbooks and observer programs, and recreational dockside monitoring. All indices were based on the number of fish (rather than biomass) caught, landed or observed. This data was received by the lead author of this assessment on June 26, 2009, and year-by-year length compositions were not available for any of the data sets at that time (although some PISCO SCUBA, spearfish tournament and CDFG observer length data did become available later, and these three indices are included in a sensitivity run). Therefore, only the PSMFC dockside boat survey index (1980-1997) was included in the South assessment, as only that index could be tied directly to the selectivity of a fishery: the California recreational fishery. Data after 1997 was not included due to a succession of changes in management regulations which may have effected the CPUE and length distribution of the catch. A complete description of all the potential indices is included in Appendix 1.

Length compositions

Length compositions were derived for the Triennial survey for the years 1986-2004 in the North (Figures 18-19) and 1989-2004 in the South (Figures 36-37). Length compositions were derived for the NWFSC survey for 2003-2008 for both the North (Figures 23-24) and South (Figures 41-42).

Length, age, and sex data were acquired at the tow level for both surveys and then aggregated within the area and depth strata. For each tow, the length composition of the sampled individuals was scaled up to represent the length composition of the trip landings through use of an expansion factor. In this assessment, the expansion factor was calculated as:

$$\text{Expansion Factor} = (WT_{total}/WT_{sampled})$$

with total weight divided by sample weight being the equivalent of total estimated number over sampled number. No down-weighting exponent was used for the NWFSC survey, as the survey data are collected at the tow level rather than the trip level. However, since for nearly all of the Triennial tows, all lingcod were lengthed, a power of 0.8 was used to downweight the expansion factors for those few tows that were not fully sampled. The initial effective N (input N) was calculated via Stewart's Method (Ian Stewart, pers. Comm.), which for surveys is

$$N_{effective} = N_{trips} + 0.0707 N_{fish} \quad \text{if } N_{fish}/N_{trips} < 55$$
$$N_{effective} = 4.89 N_{trips} \quad \text{if } N_{fish}/N_{trips} \geq 55$$

where N_{fish} is the total number of fish sampled across all trips (Table 12).

Conditional-age-at length compositions

Conditional age-at-length compositions were constructed from age and length data using the same methods as for survey length compositions in the case of the NWFSC survey, and via the same methods as for the commercial fishery for the Triennial survey. These compositions were constructed for the Triennial survey for 1992-2004 in the North (Figures 21-22), and 1996-2004 in the South (Figures 38-39); and for the NWFSC survey from 2003-2008 (Figures 25-26 and 43-44).

These age data were not used in the final base or bracketing models, but were used in sensitivity analyses. A summary of data sources and years is given in Table 13.

2.3. Biology and life history

Natural mortality

Jagielo 1994 estimated M for male and female lingcod using three empirical models based on life history parameters (Hoenig 1983, Alverson and Carney 1975, and Pauly 1980). Estimates of M for male lingcod ranged from 0.23 to 0.39, while estimates for female lingcod ranged from 0.16 to 0.19. The average of the estimates was 0.18 for females and 0.32 for males. Those estimates continue to be used in the current assessment.

Sex ratio, maturation and fecundity

In this assessment, the sex ratio at birth is assumed to be 1:1. Maturity-at-length for females was taken from the last assessment with 50% maturity occurring at 68 cm in the north and 60 cm in the south. (Figures 45 and 94).

Fecundity was assumed to be proportional to weight (figures 46 and 95). Hart (1967) found fecundity to be essentially proportional to length cubed.

Length-weight relationship

The length-weight relationship was estimated by Jagielo (1994) using available survey data. The equation was fit to mean weight at length measured in the West Coast survey.
For males the relationship is:

$$W = 0.000003953\ L^{3.2149}$$

For females, the relationship is:

$$W = 0.00000176\ L^{3.3978}$$

where W is weight (k) and L is fork length (cm).

Ageing error

Aging error (Figure 47) was derived using the double reads done by Washington State using a program designed for that purpose (Punt et al. 2008). This, of course, only accounts for the precision of age reading, not accuracy. While McFarlane and King (2001) did validate that the observed annuli are generally annual marks, via a mark-recapture study which used oxytetracycline (OTC) injections to leave a distinct mark on the otoliths that could be observed upon recapture of the fish and extraction of the otoliths, their results did find some error in ageing (>5% mis-aged) even for a single year at large, and under research settings, which generally have higher precision than under production ageing conditions. More work needs to be done to identify potential biases in production ageing of lingcod. One of the sources of error in ageing lingcod is that the first and second annuli can be re-absorbed as the fish ages. Beamish and Chilton (1977) developed a method that used mean annual diameter measurement to locate the position of the first and second annuli and thus minimize, but not eliminate, error due to this re-absorption.

Age data were not used in the base or bracketing models, but this ageing error matrix was used for the sensitivity analyses which included age data.

2.4 Changes in data from the 2005 assessment

Changes in data for this assessment include a new point of geographic division of the assessments (the Oregon/California border), expansion of the time period of the assessment back to 1928 (from 1956), updated landings and length composition data across time periods, fisheries and surveys; use of conditional age at length data, inclusion of the NWFSC survey data and discard data from the West Coast Groundfish Observer Program, and addition of the California dockside recreational CPUE index.

3. Assessment model

3.1 History of Modeling approaches

There have been six assessments of lingcod since 1986 covering part or all of the West Coast of the United States.

Adams (1986) conducted a yield per recruit analysis. Jagielo (1994) conducted an age-structured assessment of the status of the lingcod stock between Cape Falcon in Northern Oregon to 49 ˚N (off of southwest Vancouver Island in British Columbia - PMFC areas 3A, 3B, and 3C, including Canada), using the Stock Synthesis program (Methot, 1990). Data included trawl and recreational catch from 1979-1993 with equilibrium catch before then, triennial shelf survey and trawl cpue indices, and length and age composition data. The final spawning output levels were estimated to be about 20% of pristine levels, and catch level recommendations ranged between 2500 and 3000 mt based on F40% to F20%.

The 1997 assessment (Jagielo et al.1997) expanded the area south to Cape Blanco (42°50' N), and retained the northern boundary of 49°00'N and the use of the Stock Synthesis model. Depletion in spawning output in this model was below 10% for 1997.

Adams et al. (1999), conducted a length-based, age-structured population model implemented in AD Model Builder (ADMB, Fournier 1996) for the southern area which had not yet been assessed (Eureka, Monterey, and Conception INPFC areas).

Jagielo et al. (2000) conducted age structured models in ADMB for two areas of the US: US Vancouver-Columbia (no longer including Canadian waters) and Eureka, Monterey, Conception INPFC areas. Jagielo et al. (2003) conducted age structured assessments for the two areas using Coleraine. Finally, Jagielo et al. (2005) conducted age structured assessments for the two areas using Stock Synthesis 2 (SS2). They found that the northern stock had recovered substantially from a low point in the 1990s was at 87% depletion, while the southern area had not recovered as well as was at 24% depletion, with a 64% coastwide depletion.

3.2 Current Model

Model

This assessment uses SS version 3.03a. While there are still two separate assessments for the north and south areas, the two areas are now defined by state boundaries – the Northern area being Washington and Oregon, and the southern area being California. This choice was made due to data availability and evidence that the Eureka area is somewhat more connected to the areas to the north than to those to its south. In the current division, the Eureka area is split in half as well. The parameters for the base models, both those that were estimated and those that were fixed, are given in Tables 14 and 15.

Length and age bins

The same length frequency bins were used as in the 2005 assessment. The first bin contained all fish less than 28 cm, followed 2-cm length bins up to 108 cm, with a maximum bin of all fish ≥ 110 cm in length.

Age bins included single year bins from age 1 to 13 and a plus group at 14 years of age and older.

Ageing error

Aging error was derived using the double reads from Washington State using a program designed for that purpose (Punt et al. 2008). The results used are shown in Figure 47.

Growth

Many growth parameters were estimated within both models for both males and females, including the von Bertalanffy growth rate parameters (k) and the CVs of length at ages 1 and 20. The size at age 20 is also estimated in the North model, with the size at age 1 fixed at 30 cm in both models and the size at age 20 fixed in the South model. The estimated growth trajectories are shown in Figures 48 and 96.

Recruitment, stock-recruitment steepness and natural mortality

R_0 is estimated in both models, along with recruitment deviations from 1928 through 2007, with bias correction ramping I 1from 1950 to 1964 (North) and 1960 to 1974 (South), with $\sigma_r = 0.5$. Natural mortality is set at 0.18 for females and 0.32 for males in both models, which are the values used in the 1994-2005 assessments and which balances the estimates from various meta-analyses. In the previous assessment, steepness was set in the final model at 0.9. In the current assessment h is set to be 0.8, this lower value is intended to reflect, to some extent, multiple minimally connected stocks, with different levels of depletion, within each assessment area.

Selectivity and Retention

In initial runs, all 6 parameters of the double normal selectivity function were estimated for the fishery and each survey, along with the inflection point and slope of the logistic retention function. Various blocking schemes on fishery selectivity were tested in an effort to account for changes in depth of fishing and codend mesh size. However, only two time blocks are used in the base models, reflecting the large-scale changes in regulations for both the commercial and recreational fisheries up and down the coast over the past decade or so. Changes in both commercial and recreational selectivities, and in commercial discard rates are allowed in 1998.

All selectivities were allowed to be, and were domed shaped, with the exception of the southern Commercial fishery which was essentially asymptotic when fit. The selectivity pattern for the Triennial survey in the South was ill-defined, and so it was forced to be the same as the base model triennial selectivity in the North. Selectivities and retention patterns are shown in Figures 49-57 and 97-103. Modeled and observed discards are shown in Figures 58-59 and 104-105.

Likelihood contributions

The objective function, which was minimized to obtain the point estimates of the model parameters, included contributions by the data (survey and fishery biomass indices, fishery and survey length and conditional age-at-length composition data) and well as priors (essentially non-informative).

4. Results

4.1. Reference model results

Figures 60-66 and 106-112 show the time trajectories of the estimates of summary biomass, fishery exploitation rate, recruitment, and depletion in spawning output (see Tables 16-17 as well). The fits to the stock-recruitment relationships (Figures 63 and 119) indicate a substantial amount of variability. Figures 67-91 and 113-132 show the fits to the indices and compositional data for the North and South models, respectively. In both the North and the South there appears to be a variability in either growth or ageing, and likely the latter, as the fit to the conditional age-at-length data varies over time and between data sources. Figures 92-93 and 133-134 show management quantities: equilibrium yield plots and time series of surplus production for the two areas.

For both the North and South base models, catchability (q) for the NWFSC survey is between 0.5 and 1.0 (for the most highly selected lengths), indicating a plausible estimate of recent biomass. Although the catchability values are plausible, the actual fits to the NWFSC survey data are rather poor, especially in the South where the last two points are down but the modeled biomass and expected survey index continue to trend up. In fact, as seen by the retrospective analyses (below, Figures 135-136), the NWFSC survey index has very little influence on the results. While the survey is not ideal for lingcod, which tend to be found in higher densities in rocky areas (Jagielo et al. 2003), one would not necessarily expect such a divergence of index and trend, although it is possible that availability changes substantially from year to year.

4.2. Retrospective analysis

Retrospective analyses were conducted as if the assessment were carried out in the years from 2008 down to 2004 (without the last 1-5 years of data). No consistent retrospective pattern was seen in either the North or the South (Figures 135-136). In fact, these are remarkably stable in both models.

4.3 Pre-STAR Sensitivity Analyses

A number of sensitivities were done for each of the two modeled areas prior to the STAR panel. In both pre-STAR base models, as is usually the case, a few selectivity parameters were fixed in order to avoid issues with bounds. The first comparison in each case, therefore, is to a model with those parameters estimated. The result is nearly the same as the base but with a few more estimated parameters. The rest of the models are direct comparisons to the freed up model in each case. There are two general types of sensitivities. The first involves the removal or down-weighting of data. For these, a direct comparison of likelihood is not possible, but differences in the results are noted. The second involves changing the value of fixed parameters, or changing what is estimated. In these cases, likelihood comparisons are easier.

For the North, the sensitivity runs are as follows:
1) Base model with selectivity parameters freed up (“likebase”).
2) Model without CPUE index data (“noCPUE”).
3) Model without Triennial survey (index, length and age) data (“noTri”).
4) Model without NWFSC survey (index, length and age) data (“noNW”).
5) Model with size at age 1 increased from 30 to 32 cm (“Lmin32”).
6) Model without age data (size at age 20 fixed at base model estimates) (“noAge”).

7) Model without age data (size at age 20 fixed below 2004 model estimates) ("noAgealt").
8) Model with female M fixed at 0.2 instead of 0.18 ("Mfem.2").
9) Model with female M fixed at 0.23 instead of 0.18 ("Mfem.23").
10) Model with steepness (h) = 0.75 instead of 0.8 ("h.75").
11) Model with steepness (h) =0.85 instead of 0.8 ("h.85").
12) Model with commercial selectivity forced asymptotic pre-1998 ("Asym").
13) Model with discard fraction data CV at 0.5 instead of 0.1 ("Disc.5").

For the South, the sensitivity runs are as follows:
1) Base model with selectivity parameters freed up ("likebase").
2) Model without (commercial or recreational) CPUE index data ("noCPUE").
3) Model without Triennial survey (index, length and age) data ("noTri").
4) Model without NWFSC survey (index, length and age) data ("noNW").
5) Model with size at age 1 increased from 30 to 35 cm ("Lmin35").
6) Model with size at age 20 estimated for both females and males ("estLmax").
7) Model without age data ("noAge").
8) Model with female M fixed at 0.2 instead of 0.18 ("Mfem.2").
9) Model with female M fixed at 0.23 instead of 0.18 ("Mfem.23").
10) Model with steepness (h) = 0.7 instead of 0.8 ("h.7").
11) Model with steepness (h) =0.9 instead of 0.8 ("h.9").
11) Model with commercial selectivity forced asymptotic pre-1998 ("Asym").
13) Model with discard fraction data CV at 0.5 instead of 0.1 ("Disc.5").

The results from all of the sensitivities are displayed in Tables 18 and 19. In general, the results from the North indicate a much more stable model than do the results form the South.

4.4 STAR modifications

The major change in data use following the STAR panel was the removal of the age data. Outliers and inconsistent ageing appeared to be causing the age data to be more confounding than informative, especially for this fast growing species for which individual year classes are fairly well defined from the length data alone. Another major change was estimating recruitment back to 1928 (with bias correction ramping in mid-century or later). This allows for better accounting of the uncertainty in B_{zero}, and in the case of the North model, included a large recruitment in 1964.

4.5 Post-STAR Sensitivity Analysis

Post-STAR sensitivities for both North and South (Table 20 and 21) included:

1) Natural mortality = 0.16 (females) and 0.285 (males)
2) Natural mortality = 0.20 (females) and 0.355 (males)
3) Natural mortality = 0.22 (females) and 0.39 (males)
4) Stock recruitment steepness = 0.7.
5) Stock recruitment steepness = 0.9.

For the South only, these additional sensitivities were run:
6) Removal of the dockside monitoring CPUE series
7) Inclusion of ages
8) Inclusion of 3 additional indices (CPFV observers, CENCAL and PISCO scuba).

5. Future research

1) Further validation of the ageing of lingcod to verify lack of bias or show bias in ageing.
2) Development of an expanded assessment for the North including British Columbia.
3) Investigation into the effect of the first year for which recruitment is estimated on the estimates of B_0 and of current status.
4) Onboard sampling procedures need to be developed to ensure that a proper and informative subsample of fish be measured during the survey. Investigation of the large survey estimate for lingcod in the 2003 NWFSC survey showed that catches from only three tows made up 63.5% of the total lingcod catch in the survey. The second and third large tows also had large catches of dogfish and the catches were subsampled for counts and detailed sampling. As a result only 2 lingcod were actually measured in the second largest tow (one male and one female) but these measurements were expanded to the whole catch. It is difficult and inappropriate to try to correct such estimates after the fact during the assessments.
5) Consider other survey techniques (e.g., longline, combined lingcod/sablefish pot survey, trap surveys) for lingcod. The NWFSC Trawl Survey may not provide a good linear index of abundance for lingcod. The North sensitivity run with no abundance indices produced a similar fit to the base case suggesting that there was little extra trend information in the abundance indices used in the base case.
6) Investigate the suitability of using catches of lingcod in the IPHC survey as an alternate abundance index.
7) Re-examine the usefulness of the Washington tagging data for next assessment.
8) Clarify the definition of length-at-age in SS. There was confusion over whether SS was using mid-year or beginning of year length at age resulting in larger than expected mean length at age for age 0 and 1.
9) Further investigation of the age and length data needs to be done to understand if seasonal or area differences or some other causes are behind the outliers observed in the length-at-age data.
10) Look at environmental covariates for recruitment and time-varying growth and availability inshore.
11) The impact of nest-guarding on reproductive output should be investigated. The fact that lingcod males are nest-guarders was ignored when determining reproductive output. A cursory look at the proportion of sex ratio in the catch did not appear to indicate any serious changes for either species in recent years. However, we do not know what kind of change in sex ratio would indicate a serious change in reproductive success.
12) Evaluate the default assumption of proportionality between CPUE and abundance for the CPFV fishery. Many rockfish assessments use CPUE data from the CPFV fishery as an index of population abundance. The CPFV fishery is focused primarily on marketing a successful “fishing experience” that is related to the desirability of the species caught, quantity, body size, and fighting characteristics. Simulation modeling of fleet dynamics in a multi-species context is one possible way to address these issues.

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Table 1. History of PFMC lingcod Acceptable Biological Catches (ABCs), Harvest Guidelines (HGs) or Optimum Yields (OYs), landings and estimated total catch (i.e. total fishing related mortalities).

Year	ABC	HG or OY	Landings	Catch
1983-1993	7,000		<7,000	<7,000
1994	7,000	4,000	2,399	2,416
1995	2,400	2,400	1,874	1,889
1996	2,400	2,400	2,061	2,074
1997	2,400	2,400	1,992	2,007
1998	1,532	838	696	934
1999	960	730	824	1,060
2000	700	378	425	525
2001	1,120	611	418	533
2002	745	577	905	1,070
2003	841	651	1,368	1,493
2004	1,385	735	479	611
2005	2,922	2,414	691	819
2006	2,716	2,414	781	929
2007	6,706	6,706	611	760
2008	5,853	5,853	521	676
2009	5,278	5,278		

Table 2. History of lingcod commercial trawl trip limits (thousand lbs.). Note, starting in 1996, trawl gear was allowed retention of 100lbs. at size less than minimum size limit (Commercial size limit of 22' from 1995-1997 and 24" thereafter).

		Jan/Feb	Mar/Apr	May/Jun	Jul/Aug	Sep/Oct	Nov/Dec
<1995					None		
1995					20,000 lb/month		
1996					40,000 lb/2 months		
1997					40,000 lb/2 months		
1998					1,000 lb/2 months		
1999		1,500lb/3 months	1,500lb/3 months	1,500lb/3 months	1,000lb/3 months	1,000lb/3months. .500lb/month	500lbs/month
2000		Prohibited	Prohibited	400lb/month	400lb/month	400lb/month..500 lb/month	Prohibited
2001	Small footrope	No retention	No retention	400 lb/mo.	400 lb/mo.	**Sept:** 400 lb/mo. **Oct:** 500lb/mo	No retention
2002 North	Small footrope	800 lb/2 mo.	800 lb/2 mo.	1,000 lb/2 mo.	1,000 lb/2 mo.	**CLOSED**	**CLOSED**
2002 South	Small footrope	800 lb/2 mo.	800 lb/2 mo.	1,000 lb/2 mo.	**CLOSED**	**CLOSED**	**CLOSED**
2003 North		800lb/2 month	800lb/2 month	1000lb/2 month	1000lb/2 month	**Sept:** 1000lb/2M **Oct:** 800lb/2M	800lb/2 month
2003 South		800lb/2 months	800lb/2 months	1000lb/2 months	1000lb/2 months	800lb/2 months	800lb/2 months
2004 North	Large footrope		Closed	Closed	Closed	500lbs/2 months	500lbs/2 months
	Small footrope		800lb/2 month	800lb/2 month	1000lb/2 months	1000lb/2 months	800lb/2 month
2004 South	Large footrope	Closed	Closed	Closed	500lb/2 months	500lb/2 months	500lb/2 months
	Midwater or Small footrope	800lb/2 month	800lb/2 month	1000lb/2 month	1000lb/2 month	**Sept:** 800lb/2 month **Oct:** 500lb/2 months	500lb/2 months
2005 North	large and small footrope gear	500 lb/ 2 months	500 lb/ 2 months	500 lb/ 2 months	500 lb/ 2 months	500 lb/ 2 months	500 lb/ 2 months
	selective flatfish trawl gear	800 lb / 2 months	800 lb / 2 months	1000 lb / 2 months	1000 lb / 2 months	800 lb / 2 months	800 lb / 2 months
	multiple bottom trawl gear[8]	500 lb/ 2 months	500 lb/ 2 months	500 lb/ 2 months	500 lb/ 2 months	500 lb/ 2 months	500 lb/ 2 months
2005 South	Large footrope or midwater trawl	500lb/2 months	500lb/2 months	500lb/2 months	500lb/2 months	500lb/2 months	500lb/2 months
	Small footrope trawl	800lb/2 month	800lb/2 month	1000lb/2 month	1000lb/2 month	800lb/2 month	800lb/2 month
2006 North	large and small footrope gear	600 lb/ months	600 lb/ months	1200 lb/ 2 months	1200 lb/ 2 months	1200 lb/ 2 months	
	selective flatfish trawl gear	600 lb/ months	600 lb/ months	1200 lb/ 2 months	1200 lb/ 2 months	1200 lb/ 2 months	
	multiple bottom trawl gear[8]	600 lb/ months	600 lb/ months	1200 lb/ 2 months	1200 lb/ 2 months	1200 lb/ 2 months	
2006 South	Large footrope or midwater trawl	600lb/ months	600lb/ months	1200 lb/2 months	1200 lb/2 months	1200 lb/2 months	
	Small footrope trawl	600lb/ months	600lb/ months	1200 lb/2 months	1200 lb/2 months	1200 lb/2 months	
2007 North	large & small footrope	1,200lbs/2 months	1,200lbs/2 months	4,000lbs/2 months	4,000lbs/2 months	4,000lbs/2 months	4,000lbs/2 months
	selective flatfish trawl gear	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months
	multiple bottom trawl gear[8]	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months
2007 South	large footrope or midwater trawl	1,200lbs/2 months	1,200lbs/2 months	4,000lbs/2 months	4,000lbs/2 months	4,000lbs/2 months	4,000lbs/2 months
	small footrope	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months	1,200lbs/2 months

Table 3. History of recreational lingcod bag limit and size limits (inches):

State	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
								Daily Bag Limits								
Washington	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	
Oregon	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	
California	5	5	5	5	3	2	2	2	2	2	2/1	2	2	2	2	2
								Size limit (inches)								
Washington	none	22	22	22	24	24	24	24	24	24	24	24	24	22	22	
Oregon	none	22	22	22	24	24	24	24	24	24	24	24	24	22	22	
California	none	22	22	22	24	24	26	26	24	24	24/30	24	24	24	24	24

Table 4. Summary of California Recreational Management Measures Affecting Lingcod
Created: June 22, 2009
(Note: italics indicate in season changes)

Year	Description	Effective Date
1996	Statewide recreational bag limit: 5 lingcod Min Size:22 inches	3/1/1996
1998	Statewide recreational bag limit: 3 lingcod Min Size:24 inches	3/1/1998
1999	Statewide recreational bag limit: 2 lingcod Min Size:24 inches	3/1/1999
2000	Bag and Size Limits: o Statewide recreational bag limit: 2 lingcod Min Size:26 inches Management Area Seasons: o Open to all anglers south of Lopez Point, Monterey County (36° 00') from March to December. o Open to all anglers north of Lopez Point, Monterey County (36° 00') to near Cape Mendocino(40° 10'), Humboldt County January to February & May to December Recreational gear restriction: o No more than 3 hooks per line *Inseason closure for boat based anglers fishing for lingcod Statewide – closed November and December.*	3/1/2000 *11/1/2000*
2001	Management Area Seasons: o Recreational Management Areas created with seasonal closures: Northern Management Area (Near Cape Mendocino(40° 10') to Point Conception (34° 27')) Open to all anglers January to February & July to December. o Southern Management Area (Point Conception (34° 27') to U.S./Mexico border) Open to all anglers March to December. Recreational gear restriction: o No more than 2 hooks per line *Inseason closure for lingcod for all waters south of Cape Mendocino November to December*	3/1/2001 *11/1/2001*
2002	Bag and Size Limits: o Statewide recreational bag limit: 2 lingcod Min Size:24 inches Management Area Seasons: Recreational Management Areas redefined with seasonal closures o Northern Management Area (Oregon/California border to Near Cape Mendocino(40° 10')) no season closure. o Central Management Area (Near Cape Mendocino(40° 10') to Point Conception (34° 27')) Open to all anglers January to February & July to August. o Southern Management Area (Point Conception (34° 27') to U.S./Mexico border) Open to all anglers from March to October. Note: During rockfish/lingcod season closures no lingcod may be taken or possessed in waters deeper than 20 fathoms. *Inseason closure for lingcod for the waters deeper than 20 fathoms for all boat based anglers south of near Cape Mendocino (40° 10') July to December*	3/1/2002 *7/1/2002*
2003	Management Area Seasons and depth restrictions: o Northern Management Area: Lingcod may not be taken or possessed in waters greater than 27 fathoms.	3/1/2003

	o Central and Southern Management Areas: Open to all anglers from February to November. Note: During closure periods, lingcod may not be taken or possessed in waters greater than 20 fathoms. *Inseason closure for lingcod statewide for all boat-based anglers*	*12/8/2003*
2004	Management Area Seasons and depth restrictions: o Central Management Area: January and February open only in waters less than 30 fathoms, May to August open in waters less than 20 fathoms, waters of the Cordell Bank (Marin County) closed to fishing o Southern Rockfish Management Area: March to December open in waters less than 60 fathoms *Bag and Size Limits:* *Statewide recreational bag limit: 1 lingcod Min Size:30 inches* *Management Area Seasons:* *Recreational Management Areas redefined with seasonal closures* o *Northern Management Area (Oregon/California border to Near Cape Mendocino(40° 10')) Open to all anglers January to October. Lingcod may not be retained in waters greater that 30 fathoms.* o *North-Central Management Area (Near Cape Mendocino(40° 10') to Point Lopez (36° 00')) Open for boat based anglers from January to February & August to October in waters less that 20 fathoms. Shore based anglers and divers open from June to October.* o *South Central Management Area (Point Lopez (36° 00') to Point Conception (34° 27')) Open for boat based anglers June & August to October. Shore based anglers and divers open from June to October. In June and August boat based anglers and divers may only take lingcod in waters less that 30 fathoms. From September to October boat based anglers and divers may only take lingcod in waters less that 20 fathoms.* o *Southern Management Area (Point Conception (34° 27') to U.S./Mexico border) Open to all anglers from June to October. June to August lingcod may only be taken in water less than 60 fathoms. September to October lingcod may only be taken in water less than 30 fathoms.*	1/1/2004 *5/1/2004*
2005	Bag and Size Limits: o Statewide recreational bag limit: 2 lingcod Min Size:24 inches. Management Area Seasons and depth restrictions: o Northern Management Area: Boat based anglers open July to October in water less that 40 fathoms. Shore based anglers and divers open April to November. o North-Central Management Area **redefined** (Near Cape Mendocino(40° 10') to Pigeon Point (37° 11)) Boat based anglers and divers open July to November in water less that 20 fathoms. Shore based anglers open April to November. o Monterey South Central Management Area (Pigeon Point (37° 11) to Lopez Point (36° 00')) Open for boat based anglers July to November in waters less than 20 fathoms. Shore based anglers and divers open from April to November. o Morro Bay South Central Management Area (Lopez Point (36° 00') to Point conception (34° 27')) Open for boat based anglers May to September in waters less than 20 fathoms. Shore based anglers and divers open from April to November. o South Central Management Area (Point Conception (34° 27') to U.S./Mexico border) Open for boat based anglers April to September in waters between 30 and 60 fathoms from April to June then from July to September waters less than 40 fathoms. Shore based anglers and divers open from April to November. *Management Area Seasons:*	3/1/2005

	o *Northern Management Area: Boat based anglers open May to November in water less that 30 fathoms.* o *Morro Bay South Central Management open for boat based anglers May to September in waters less than 40 fathoms.* o *South Central Management Area open for boat based anglers April to November in waters less than 60 fathoms from April to August & November then from September to October waters less than 30 fathoms.*	*6/1/2005*
2006	<u>Management Area Seasons and depth restrictions:</u> o South Central Management Area (Point Conception (34° 27') to U.S./Mexico border) Boat based anglers open April to September. Lingcod may only be taken or possessed in waters between 40 and 60 fathoms from April to June. Lingcod may only be taken or possessed in waters less than 40 fathoms from July to September.	3/1/2006
2007	<u>Management Area Seasons and depth restrictions:</u> o Northern Management Area: Boat based anglers open May to November in water less that 30 fathoms. o North-Central Management Area boat based anglers open June to November in waters less that 30 fathoms. o Monterey South Central Management Area open for boat based anglers May to November in waters less than 40 fathoms. o Morro Bay South Central Management Area open for boat based anglers May to November in waters less than 40 fathoms. o South Central Lingcod Management Area open for all anglers April to November in waters less that 60 fathoms. *Inseason Changes: The Northern and North Central Management Areas Closed in October for all anglers*	3/1/2007 *10/1/2007*
2008	<u>Management Area Seasons and depth restrictions:</u> o Northern Management Area: Boat based anglers open May to November in water less that 20 fathoms. *Inseason Changes:* o *North Central Management Area split into two Management Areas.* o *North Central North of Point Arena Management Area (Near Cape Mendocino(40° 10') to Point Arena (38° 57.5')) and North Central South of Point Arena Management Area (Point Arena (38° 57.5') to Pigeon Point (37° 11)).* o *The Northern and North Central North of Point Arena Management Areas Closed in September for all groundfish anglers.*	1/8/2002 *9/2/2008*
2009	<u>Management Area Seasons and depth restrictions:</u> o North Central North of Point Arena Management Area open for boat based anglers May 15 to September 15 in waters less than 20 fathoms. o North Central North of Point Arena Management Area open for boat based anglers May 15 to August 15 in waters less than 20 fathoms. o North Central South of Point Arena Management Area open for boat based anglers June 13 to October 30 in waters less than 30 fathoms. o Monterey South Central Lingcod Management Area open for boat based anglers May to November 15 in waters less than 40 fathoms. o Morro Bay South Central Lingcod Management Area open for boat based anglers May to November 15 in waters less than 40 fathoms.	3/1/2009

Table 5. Estimated landings for 1928-2008.

	Commercial OR/WA	Recreational OR/WA	Commercial CA	Recreational CA	Total
1928	46	0	387	0	433
1929	142	0	529	3	674
1930	113	0	584	6	703
1931	61	0	558	9	628
1932	68	0	400	12	480
1933	104	0	636	14	754
1934	76	0	389	17	483
1935	72	0	461	20	554
1936	104	0	343	23	470
1937	75	0	440	36	550
1938	158	0	351	43	552
1939	163	0	262	60	484
1940	232	0	313	63	608
1941	628	0	241	58	927
1942	517	0	143	31	691
1943	676	0	327	29	1033
1944	1296	0	339	24	1659
1945	801	0	317	32	1150
1946	889	0	525	56	1469
1947	348	0	880	201	1430
1948	546	0	903	220	1669
1949	561	0	708	239	1508
1950	487	0	833	215	1535
1951	512	0	788	222	1522
1952	335	0	613	158	1107
1953	207	0	415	117	739
1954	311	0	406	188	905
1955	556	0	424	201	1181
1956	426	0	414	274	1114
1957	466	5	744	317	1532
1958	570	10	693	349	1622
1959	500	15	616	275	1406
1960	873	20	558	230	1681
1961	761	25	618	227	1631
1962	633	30	476	221	1361
1963	486	35	476	221	1217
1964	593	40	368	215	1216
1965	597	45	357	313	1312
1966	594	50	359	438	1442
1967	807	55	418	463	1743
1968	1113	60	483	447	2103
1969	869	65	545	347	1827
1970	680	70	749	532	2030
1971	1067	75	973	619	2734
1972	1053	80	1539	756	3429
1973	1451	85	1721	753	4011
1974	1563	90	1834	769	4255

Table 5. (Continued) Estimated landings for 1928-2008.

	Commercial OR/WA	Recreational OR/WA	Commercial CA	Recreational CA	Total
1975	1715	94	1569	841	4220
1976	1658	78	1527	881	4145
1977	1487	85	875	647	3095
1978	1343	78	961	862	3244
1979	2114	96	1529	936	4675
1980	1145	144	1414	1335	4039
1981	2002	301	1304	1133	4740
1982	2429	727	1425	829	5410
1983	3230	213	1020	484	4947
1984	3071	140	952	477	4640
1985	3142	257	969	963	5332
1986	1354	225	541	908	3028
1987	1726	323	863	931	3843
1988	1747	274	1030	1019	4070
1989	2285	232	1280	940	4738
1990	1839	145	1072	765	3822
1991	2279	233	791	795	4097
1992	1270	244	619	772	2905
1993	1509	216	703	442	2871
1994	1336	243	572	248	2399
1995	928	135	542	269	1874
1996	1080	137	482	361	2061
1997	1059	160	510	263	1992
1998	200	98	151	247	696
1999	216	125	142	342	824
2000	90	80	56	199	425
2001	93	92	63	170	418
2002	124	166	81	534	905
2003	107	189	51	1021	1368
2004	115	171	63	130	479
2005	140	190	61	299	691
2006	197	174	62	348	781
2007	190	168	79	174	611
2008	216	134	69	102	521

Table 6. Discard rate estimates used in the assessment.

Year	Discard%	CV
2002	56	0.1
2003	45	0.1
2004	40	0.1
2005	61	0.1
2006	52	0.1
2007	32	0.1

Table 7. Number of trips and fish and input N for commercial fishery length composition, and total number of fish used for commercial fishery conditional age-at-length.

OR/WA Commercial Fishery

	Lengths			*Ages*
Year	Trips	Fish	Input N	Fish
1965	4	572	28	
1966	3	730	21	
1967	5	1,034	35	
1968	38	10,037	268	
1969	16	4,463	113	
1970	20	4,562	141	
1971	14	3,661	99	
1972	4	907	28	
1973	3	561	21	
1974	6	1,421	42	
1975	16	4,083	113	
1976	2	483	14	
1977	1	262	7	
1978	33	1,037	176	
1979	27	1,074	175	
1980	39	2,381	275	2045
1981	21	1,628	148	1540
1982	80	3,278	532	691
1983	25	890	148	516
1984	21	795	131	434
1985	22	912	148	458
1986	46	1,294	225	1022
1987	50	1,184	213	1077
1988	48	1,163	208	966
1989	55	1,621	279	1184
1990	53	1,292	231	1091
1991	51	1,228	220	1194
1992	91	2,495	435	2423
1993	92	2,754	472	2613
1994	80	3,247	528	1834
1995	72	1,887	332	1694
1996	58	1,489	263	1373
1997	73	1,734	312	953
1998	63	1,374	253	854
1999	66	1,533	278	850
2000	87	936	216	508
2001	110	1,129	266	716
2002	139	1,144	297	729
2003	122	1,122	277	852
2004	165	1,182	328	593
2005	71	846	188	595
2006	104	1,063	251	503
2007	181	1,938	448	481
2008	136	1,610	358	496

CA Commercial Fishery

	Lengths			*Ages*
Year	Trips	Fish	Input N	Fish
1978	25	139	44	
1979	33	253	68	
1980	59	1,616	282	
1981	2	3	2	
1982	27	311	70	
1983	38	383	91	
1984	17	238	50	
1985	11	70	21	
1986	9	85	21	
1987	14	146	34	
1988	30	261	66	
1989	17	118	33	
1990	2	3	2	
1991	0	0	0	
1992	2	2	2	
1993	86	1,326	269	816
1994	36	759	141	607
1995	52	535	126	270
1996	96	663	187	334
1997	98	1,164	259	873
1998	42	364	92	257
1999	113	617	198	
2000	40	261	76	
2001	75	387	128	182
2002	41	346	89	248
2003	25	172	49	98
2004	42	335	88	153
2005	24	175	48	
2006	45	348	93	
2007	99	568	177	
2008	83	494	151	

Table 8. Number of fish and input N for recreational fishery length composition, and total number of fish used for recreational fishery conditional age-at-length.

	OR/WA Recreational Fishery				**CA Recreational Fishery**			
	Lengths		*Ages*			*Lengths*		
Year	Fish	Input N	Fish		Year	Recfin	Cent. CA	Input N
1993	574	57.4			1987		284	28.4
1994	537	53.7			1988		1072	107.2
1995	287	28.7			1989		1070	107
1996	415	41.5			1990		223	22.3
1997	325	32.5			1991		359	35.9
1998	198	19.8			1992		718	71.8
1999	1,727	172.7	687		1993	538	566	82.8
2000	2,276	227.6	801		1994	377	589	72.5
2001	1,467	146.7	645		1995	363	952	98.6
2002	863	86.3	860		1996	766	1091	139.3
2003	818	81.8	805		1997	1,147	1290	182.8
2004	694	69.4	650		1998	710	424	85.1
2005	539	53.9	499		1999	699		69.9
2006	1,045	104.5	799		2000	235		23.5
2007	995	99.5	788		2001	147		14.7
2008	1,664	166.4	738		2002	840		84.0
					2003	1,407		140.7
1999-2007 data from Oregon - with sex data					2004	1,131		113.1
Other years from RecFIN without sex data					2005	4,472		447.2
					2006	4,264		426.4
					2007	3,221		322.1
					2008	2,547		254.7

Table 9. Raw numbers of fish and hauls sampled and input Ns used for discard length composition data

	OR/WA			CA		
Year	Tows	Fish	Input N	Tows	Fish	Input N
2003	2	4	3			
2004	432	1881	432	77	546	152
2005	498	2949	498	139	486	200
2006	221	819	221	25	43	31
2007	95	327	140	24	72	34

Table 10. Fishery-based indices of abundance used in the assessment.

North Commercial Logbook GLM			South Commercial Logbook GLM		
Year	*Index*	*CV*	*Year*	*Index*	*CV*
1976	20.33	0.2			
1977	16.16	0.2			
1978	10.79	0.2	1978	5.8	0.2
1979	11.37	0.2	1979	11.8	0.2
1980	11.32	0.2	1980	9.6	0.2
1981	13.33	0.2	1981	7.3	0.2
1982	9.29	0.2	1982	7.4	0.2
1983	9.32	0.2	1983	8.9	0.2
1984	6.99	0.2	1984	7.6	0.2
1985	6.26	0.2	1985	3.6	0.2
1986	3.58	0.2	1986	3.1	0.2
1987	4.24	0.2	1987	5.4	0.2
1988	4.56	0.2	1988	5.6	0.2
1989	5.45	0.2	1989	7.3	0.2
1990	4.36	0.2	1990	6.2	0.2
1991	3.94	0.2	1991	3.8	0.2
1992	2.23	0.2	1992	3.1	0.2
1993	2.74	0.2	1993	3.8	0.2
1994	2.82	0.2	1994	3.6	0.2
1995	2.47	0.2	1995	3.9	0.2
1996	2.54	0.2	1996	3.1	0.2
1997	2.36	0.2	1997	3.3	0.2

PSMFC Dockside Recreational Interview Data (CA)		
Year	*Index*	*CV*
1980	0.0932	0.1408
1981	0.0925	0.2680
1982	0.0362	0.1570
1983	0.0243	0.1640
1984	0.0361	0.1713
1985	0.0338	0.1243
1986	0.0315	0.1196
1987	0.0460	0.1793
1988	0.0334	0.1543
1989	0.0341	0.1523
1990		
1991		
1992		
1993	0.0461	0.0829
1994	0.0387	0.1000
1995	0.0482	0.0884
1996	0.0457	0.0732
1997	0.0522	0.0823

Table 11. GLMM-based biomass indices used in the lingcod assessment models.

A. Triennial Shelf Survey

	Washington/Oregon				Total	
	55-183 m		183-400 m		Biomass	
Year	Median	CV	Median	CV	Median	CV
1980	4,088	0.35	870	0.60	4,957	0.30
1983	6,119	0.28	1,512	0.33	7,631	0.23
1986	4,591	0.30	270	0.72	4,860	0.29
1989	3,457	0.31	1,358	0.45	4,814	0.26
1992	2,856	0.31	287	0.52	3,143	0.28
1995	1,522	0.30	257	0.48	1,779	0.26
1998	1,735	0.32	1,873	0.49	3,608	0.30
2001	2,208	0.35	3,721	0.41	5,930	0.29
2004	9,678	0.29	3,256	0.41	12,934	0.24

	California N of Pt. Conception				Total	
	55-183 m		183-400 m		Biomass	
Year	Median	CV	Median	CV	Median	CV
1980	1,278	0.40	599	0.67	1,877	0.35
1983	1,854	0.34	255	0.75	2,109	0.31
1986	826	0.38	267	1.45	1,093	0.45
1989	2,227	0.31	393	0.62	2,620	0.28
1992	747	0.34	230	1.20	977	0.39
1995	440	0.34	350	0.55	790	0.31
1998	634	0.32	82	0.57	716	0.29
2001	1,041	0.35	199	0.54	1,240	0.31
2004	2,125	0.31	1,499	0.41	3,624	0.25

B. NWFSC Shelf Survey

	Washington/Oregon				Total	
	55-183 m		183-400 m		Biomass	
Year	Median	CV	Median	CV	Median	CV
2003	26,804	0.31	1,596	0.47	28,400	0.29
2004	9,201	0.37	1,129	0.53	10,330	0.34
2005	6,265	0.34	2,547	0.49	8,812	0.28
2006	18,806	0.33	2,376	0.40	21,181	0.30
2007	8,235	0.31	1,273	0.48	9,508	0.27
2008	6,482	0.32	6,539	0.46	13,021	0.28

	California N of Pt. Conception				California S of Pt. Conception				Total	
	183-299 m		300-567 m		183-299 m		300-567 m		Biomass	
Year	Median	CV	Median	CV	Median	CV	Median	CV	Median	CV
2003	4,639	0.30	2,170	0.41	218	0.44	602	0.78	7,630	0.23
2004	11,670	0.36	2,378	0.52	299	0.85	1,706	1.09	16,054	0.30
2005	6,893	0.33	4,444	0.46	240	0.45	1,483	1.39	13,060	0.28
2006	11,308	0.39	1,171	0.68	661	0.77	197	1.93	13,338	0.34
2007	6,829	0.38	535	0.96	513	0.56	213	2.44	8,090	0.33
2008	1,406	0.35	856	0.59	243	0.63	67	1.23	2,571	0.28

Table 12. Number of trips (fishery) or hauls, number of fish, and total input Ns for conditional age-at-length and age compositions used in the assessment.

OR/WA Triennial survey

Lengths

Year	Trawls	Fish	Input N
1986	32	203	46
1989	111	514	147
1992	92	658	139
1995	121	622	165
1998	135	565	175
2001	165	1018	237
2004	91	507	127

Conditional age-at-length

Year	Trawls	Fish	Total Input N
1992	126	207	141
1995	389	565	430
1998	337	418	367
2001	465	653	512
2004	357	424	388

CA Triennial survey

Lengths

Year	Trawls	Fish	Original Input N*
1989	406	72	101
1992	190	32	45
1995	252	55	73
1998	246	64	81
2001	515	102	138
2004	474	90	124

Conditional age-at-length

Year	Trawls	Fish	Total Input N
1995	123	173	136
1998	123	188	137
2001	136	181	149
2004	278	334	303

OR/WA NWFSC survey

Lengths

Year	Trawls	Fish	Input N
2003	91	670	122
2004	89	568	127
2005	98	511	116
2006	119	687	157
2007	116	449	148
2008	113	539	110

Conditional age-at-length

Year	Trawls	Fish	Total Input N
2003	82	415	396
2004	86	420	400
2005	96	444	440
2006	119	485	491
2007	91	326	328
2008	109	431	391

CA NWFSC survey

Lengths

Year	Trawls	Fish	Input N
2003	99	711	129
2004	91	868	145
2005	109	670	114
2006	54	335	67
2007	55	201	59
2008	79	625	93

Conditional age-at-length

Year	Trawls	Fish	Total Input N
2003	94	499	340
2004	85	462	386
2005	98	460	377
2006	54	222	207
2007	54	161	146
2008	77	410	123

*Southern Triennial length data were re-weighted in the final model by a factor of 0.7.

Table 13. Data sources and years included in the Base Model.

Indices	Years
Triennial	1980 1983 1986 19891992 1995 1998 2001 2004
NWFSC	2003-2008
CommercialCPUE	1976-2007 (N) 1978-2007 (S)
RecreationalCPUE	(S Only): 1980-1989, 1993-1997
Comm. Discard	2002-2007
Length Comps	
Comm. Fishery	1965-2008 (N), 1978-2008 (S)
Rec. Fishery	1993-2008 (N), 1987-2008 (S)
Comm. Discard	2003-2007 (N), 2004-2007 (S)
Triennial Shelf	1986 (N only) 1989 1992 1995 1998 2001 2004
NWFSC Shelf	2003-2008
Age-at-length	*Not used in base model*
Comm. Fishery	*1980-2008 (N), 1993-1998, 2001-2004 (S)*
Rec. Fishery	*1999-2008 (N)*
Triennial	*1992 (N only) 1995 1998 2001*
NWFSC	*2003-2008*

Table 14. Parameters in the North base model.

Label	Value	Estimated		Min	Max	Init	Prior	Pr_SD	Like	SD
NatM_p_1_Fem_GP_1	0.18	NO		0.05	0.25	0.18	0.19	99	0.000	_
NatM_p_2_Fem_GP_1	0.18	NO		0.05	0.25	0.18	0.19	99	0.000	_
L_at_Amin_Fem_GP_1	28.10		1	10	60	30.00	42.50	99	0.011	0.342
L_at_Amax_Fem_GP_1	118.00	NO		40	140	118.00	120.00	99	0.000	_
VonBert_K_Fem_GP_1	0.13		2	0.01	0.5	0.10	0.11	99	0.000	0.002
CV_young_Fem_GP_1	0.09		3	0.01	0.5	0.06	0.06	99	0.000	0.005
CV_old_Fem_GP_1	0.04		4	0.01	0.5	0.09	0.07	0.8	0.001	0.008
NatM_p_1_Mal_GP_1	0.32	NO		0.15	0.4	0.32	0.32	99	0.000	_
NatM_p_2_Mal_GP_1	0.32	NO		0.15	0.4	0.32	0.32	99	0.000	_
L_at_Amin_Mal_GP_1	29.73		5	10	60	30.00	42.50	99	0.008	0.439
L_at_Amax_Mal_GP_1	86.00	NO		40	140	86.00	90.00	99	0.000	_
VonBert_K_Mal_GP_1	0.22		6	0.01	1	0.15	0.15	99	0.000	0.005
CV_young_Mal_GP_1	0.09		7	0.01	0.5	0.05	0.05	99	0.000	0.006
CV_old_Mal_GP_1	0.06		8	0.01	0.5	0.09	0.07	0.8	0.000	0.006
Wtlen_1_Fem	0.00	NO		-3	3	0.00	0.00	99	0.000	_
Wtlen_2_Fem	3.40	NO		-3	5	3.40	3.40	99	0.000	_
Mat50%_Fem	68.06	NO		-3	100	68.06	0.16	99	0.000	_
Mat_slope_Fem	-0.16	NO		-5	5	-0.16	68.06	99	0.000	_
Eg/gm_inter_Fem	1.00	NO		-3	3	1.00	1.00	99	0.000	_
Eg/gm_slope_wt_Fem	0.00	NO		-3	3	0.00	0.00	99	0.000	_
Wtlen_1_Mal	0.00	NO		-3	3	0.00	0.00	99	0.000	_
Wtlen_2_Mal	3.21	NO		-5	5	3.21	3.21	99	0.000	_
RecrDist_GP_1	1.00	NO		0	999	1.00	1.00	0.8	0.000	_
RecrDist_Area_1	1.00	NO		0	999	1.00	1.00	0.8	0.000	_
RecrDist_Seas_1	1.00	NO		0	999	1.00	1.00	0.8	0.000	_
CohortGrowDev	1.00	NO		-1	1	1.00	1.00	99	0.000	_
SR_R0	8.06		9	5	20	8.23	7.62	99	0.000	0.070
SR_steep	0.80	NO		0.2	5	0.80	0.90	99	0.000	_
SR_sigmaR	0.50	NO		0	20	0.50	0.50	99	0.000	_
RecrDev_1928	0.008		10	_	_	_	_	_	_	0.498
RecrDev_1929	0.009		11	_	_	_	_	_	_	0.499
RecrDev_1930	0.010		12	_	_	_	_	_	_	0.499
RecrDev_1931	0.012		13	_	_	_	_	_	_	0.499
RecrDev_1932	0.013		14	_	_	_	_	_	_	0.500
RecrDev_1933	0.015		15	_	_	_	_	_	_	0.500
RecrDev_1934	0.017		16	_	_	_	_	_	_	0.500
RecrDev_1935	0.019		17	_	_	_	_	_	_	0.501
RecrDev_1936	0.021		18	_	_	_	_	_	_	0.502
RecrDev_1937	0.024		19	_	_	_	_	_	_	0.502
RecrDev_1938	0.027		20	_	_	_	_	_	_	0.503
RecrDev_1939	0.030		21	_	_	_	_	_	_	0.504
RecrDev_1940	0.034		22	_	_	_	_	_	_	0.505
RecrDev_1941	0.039		23	_	_	_	_	_	_	0.506
RecrDev_1942	0.044		24	_	_	_	_	_	_	0.507
RecrDev_1943	0.050		25	_	_	_	_	_	_	0.509
RecrDev_1944	0.057		26	_	_	_	_	_	_	0.510
RecrDev_1945	0.064		27	_	_	_	_	_	_	0.512
RecrDev_1946	0.072		28	_	_	_	_	_	_	0.514
RecrDev_1947	0.080		29	_	_	_	_	_	_	0.515
RecrDev_1948	0.087		30	_	_	_	_	_	_	0.517
RecrDev_1949	0.093		31	_	_	_	_	_	_	0.518
RecrDev_1950	0.100		32	_	_	_	_	_	_	0.518
RecrDev_1951	0.113		33	_	_	_	_	_	_	0.520
RecrDev_1952	0.131		34	_	_	_	_	_	_	0.523
RecrDev_1953	0.151		35	_	_	_	_	_	_	0.526

RecrDev_1954	0.176		36	_	_	_	_	_	_	0.529
RecrDev_1955	0.201		37	_	_	_	_	_	_	0.530
RecrDev_1956	0.222		38	_	_	_	_	_	_	0.525
RecrDev_1957	0.226		39	_	_	_	_	_	_	0.512
RecrDev_1958	0.218		40	_	_	_	_	_	_	0.494
RecrDev_1959	0.228		41	_	_	_	_	_	_	0.483
RecrDev_1960	0.406		42	_	_	_	_	_	_	0.465
RecrDev_1961	0.573		43	_	_	_	_	_	_	0.362
RecrDev_1962	0.003		44	_	_	_	_	_	_	0.383
RecrDev_1963	-0.049		45	_	_	_	_	_	_	0.363
RecrDev_1964	1.613		46	_	_	_	_	_	_	0.149
RecrDev_1965	0.842		47	_	_	_	_	_	_	0.218
RecrDev_1966	-0.714		48	_	_	_	_	_	_	0.338
RecrDev_1967	-0.654		49	_	_	_	_	_	_	0.319
RecrDev_1968	-0.402		50	_	_	_	_	_	_	0.341
RecrDev_1969	0.308		51	_	_	_	_	_	_	0.352
RecrDev_1970	1.121		52	_	_	_	_	_	_	0.188
RecrDev_1971	-0.406		53	_	_	_	_	_	_	0.363
RecrDev_1972	-0.592		54	_	_	_	_	_	_	0.308
RecrDev_1973	-0.752		55	_	_	_	_	_	_	0.309
RecrDev_1974	-0.124		56	_	_	_	_	_	_	0.219
RecrDev_1975	-0.134		57	_	_	_	_	_	_	0.199
RecrDev_1976	-0.890		58	_	_	_	_	_	_	0.277
RecrDev_1977	0.087		59	_	_	_	_	_	_	0.154
RecrDev_1978	0.390		60	_	_	_	_	_	_	0.137
RecrDev_1979	0.475		61	_	_	_	_	_	_	0.128
RecrDev_1980	-0.583		62	_	_	_	_	_	_	0.218
RecrDev_1981	-0.690		63	_	_	_	_	_	_	0.229
RecrDev_1982	0.292		64	_	_	_	_	_	_	0.117
RecrDev_1983	-1.016		65	_	_	_	_	_	_	0.240
RecrDev_1984	-1.064		66	_	_	_	_	_	_	0.237
RecrDev_1985	0.531		67	_	_	_	_	_	_	0.091
RecrDev_1986	-1.630		68	_	_	_	_	_	_	0.266
RecrDev_1987	-1.161		69	_	_	_	_	_	_	0.167
RecrDev_1988	-0.924		70	_	_	_	_	_	_	0.139
RecrDev_1989	-0.596		71	_	_	_	_	_	_	0.116
RecrDev_1990	0.084		72	_	_	_	_	_	_	0.086
RecrDev_1991	0.350		73	_	_	_	_	_	_	0.082
RecrDev_1992	0.036		74	_	_	_	_	_	_	0.106
RecrDev_1993	-0.566		75	_	_	_	_	_	_	0.155
RecrDev_1994	0.093		76	_	_	_	_	_	_	0.116
RecrDev_1995	-0.091		77	_	_	_	_	_	_	0.138
RecrDev_1996	-0.134		78	_	_	_	_	_	_	0.141
RecrDev_1997	-0.407		79	_	_	_	_	_	_	0.152
RecrDev_1998	-0.309		80	_	_	_	_	_	_	0.176
RecrDev_1999	0.744		81	_	_	_	_	_	_	0.112
RecrDev_2000	0.864		82	_	_	_	_	_	_	0.110
RecrDev_2001	0.797		83	_	_	_	_	_	_	0.122
RecrDev_2002	0.637		84	_	_	_	_	_	_	0.125
RecrDev_2003	-0.170		85	_	_	_	_	_	_	0.152
RecrDev_2004	0.482		86	_	_	_	_	_	_	0.142
RecrDev_2005	-0.158		87	_	_	_	_	_	_	0.220
RecrDev_2006	0.846		88	_	_	_	_	_	_	0.193
RecrDev_2007	0.052		89	_	_	_	_	_	_	0.319
InitF_1COMM	0.001		101	0	1	0.0009	0.009	99	0.000	0.000
InitF_2REC	0.000	NO		0	1	0	0.009	99	0.000	_
SizeSel_1P_1_COMM	75.913		102	35	100	45	75	50	0.000	1.492

SizeSel_1P_2_COMM	-0.475		103	-6	4	0	0	50	0.000	0.143
SizeSel_1P_3_COMM	5.845		104	-1	9	4	4	50	0.001	0.125
SizeSel_1P_4_COMM	5.192		105	-1	9	5	5.5	50	0.000	0.233
SizeSel_1P_5_COMM	-2.931		106	-5	9	-2	-2	50	0.000	0.171
SizeSel_1P_6_COMM	-2.983		107	-5	9	9	5	50	0.013	0.571
Retain_1P_1_COMM	40.000	NO		31	100	40	55	50	0.000	_
Retain_1P_2_COMM	2.000	NO		0.1	10	2	1	99	0.000	_
Retain_1P_3_COMM	1.000	NO		0.001	1	1	1	99	0.000	_
Retain_1P_4_COMM	0.000	NO		0	0	0	0	99	0.000	_
SizeSel_2P_1_REC	54.906		108	35	100	50	75	50	0.081	0.794
SizeSel_2P_2_REC	-5.900	NO		-6	4	-5.9	0	50	0.000	_
SizeSel_2P_3_REC	3.256		109	-1	9	4	4	50	0.000	0.145
SizeSel_2P_4_REC	6.074		110	-1	9	5	5.5	50	0.000	0.172
SizeSel_2P_5_REC	-4.900	NO		-5	9	-4.9	-2	50	0.000	_
SizeSel_2P_6_REC	-4.900	NO		-5	9	-4.9	5	50	0.000	_
SizeSelMale_2P_1_REC	51.418		111	30	100	58	60	99	0.004	4.140
SizeSelMale_2P_2_REC	-0.990	NO		-1	1	-0.99	0	99	0.000	_
SizeSelMale_2P_3_REC	-1.990	NO		-2	1	-1.99	-0.5	99	0.000	_
SizeSelMale_2P_4_REC	1.641		112	-2	2	1.2	-0.2	99	0.000	0.605
SizeSel_3P_1_TRI	70.000	NO		35	100	70	75	50	0.000	_
SizeSel_3P_2_TRI	-0.550	NO		-6	4	-0.55	0	50	0.000	_
SizeSel_3P_3_TRI	5.340	NO		-1	9	5.34	4	50	0.000	_
SizeSel_3P_4_TRI	5.200	NO		-1	9	5.2	5.5	50	0.000	_
SizeSel_3P_5_TRI	-1.140	NO		-5	9	-1.14	-2	50	0.000	_
SizeSel_3P_6_TRI	-4.900	NO		-5	9	-4.9	5	50	0.000	_
SizeSel_4P_1_NWFSC	65.137		113	35	100	40	75	50	0.019	2.605
SizeSel_4P_2_NWFSC	-1.204		114	-6	4	-5.9	0	50	0.000	0.397
SizeSel_4P_3_NWFSC	5.137		115	-1	9	4	4	50	0.000	0.463
SizeSel_4P_4_NWFSC	5.479		116	-1	9	5	5.5	50	0.000	0.472
SizeSel_4P_5_NWFSC	-1.039		117	-5	9	-2	-2	50	0.000	0.218
SizeSel_4P_6_NWFSC	-4.900	NO		-5	9	-4.9	5	50	0.000	_
SizeSel_5P_1_CPUE	-1.000	NO		-2	0	-1	0	50	0.000	_
SizeSel_5P_2_CPUE	-1.000	NO		-2	0	-1	0	50	0.000	_
SizeSel_1P_1_COMM_BLK	70.879		118	35	100	45	75	50	0.003	1.161
SizeSel_1P_2_COMM_BLK	-1.349		119	-6	4	0	0	50	0.000	0.203
Retain_1P_1_COMM_BLK	58.507		120	31	100	40	55	99	0.001	0.275
Retain_1P_3_COMM_BLK	0.628		121	0.1	1	0.9	0.9	99	0.000	0.020
SizeSel_2P_1_REC_BLK	63.257		122	35	100	45	75	50	0.028	0.425

Table 15. Parameters in the South Base Model

Label	Value	Estimated		Min	Max	Init	Prior	Pr_SD	Like	SD
NatM_p_1_Fem_GP_1	0.18	NO		0.05	0.25	0.18	0.19	99	0.000	_
NatM_p_2_Fem_GP_1	0.18	NO		0.05	0.25	0.18	0.19	99	0.000	_
L_at_Amin_Fem_GP_1	26.90		1	10	60	30.00	32.50	99	0.002	0.438
L_at_Amax_Fem_GP_1	108.00	NO		40	140	108.00	120.00	99	0.000	_
VonBert_K_Fem_GP_1	0.11		2	0.01	0.5	0.10	0.11	99	0.000	0.008
CV_young_Fem_GP_1	0.11		3	0.01	0.5	0.06	0.06	99	0.000	0.014
CV_old_Fem_GP_1	0.12		4	0.01	0.5	0.09	0.07	0.8	0.002	0.019
NatM_p_1_Mal_GP_1	0.32	NO		0.15	0.4	0.32	0.32	99	0.000	_
NatM_p_2_Mal_GP_1	0.32	NO		0.15	0.4	0.32	0.32	99	0.000	_
L_at_Amin_Mal_GP_1	25.98		5	10	60	30.00	32.50	99	0.002	0.432
L_at_Amax_Mal_GP_1	81.00	NO		40	140	81.00	90.00	99	0.000	_
VonBert_K_Mal_GP_1	0.23		6	0.01	1	0.15	0.15	99	0.000	0.009
CV_young_Mal_GP_1	0.07		7	0.01	0.5	0.05	0.05	99	0.000	0.009
CV_old_Mal_GP_1	0.14		8	0.01	0.5	0.09	0.07	0.8	0.004	0.012
Wtlen_1_Fem	0.00	NO		-3	3	0.00	0.00	99	0.000	_
Wtlen_2_Fem	3.40	NO		-3	5	3.40	3.40	99	0.000	_
Mat50%_Fem	60.60	NO		-3	100	60.60	60.00	99	0.000	_
Mat_slope_Fem	-0.16	NO		-5	5	-0.16	0.10	99	0.000	_
Eg/gm_inter_Fem	1.00	NO		-3	3	1.00	1.00	99	0.000	_
Eg/gm_slope_wt_Fem	0.00	NO		-3	3	0.00	0.00	99	0.000	_
Wtlen_1_Mal	0.00	NO		-3	3	0.00	0.00	99	0.000	_
Wtlen_2_Mal	3.21	NO		-5	5	3.21	3.21	99	0.000	_
RecrDist_GP_1	1.00	NO		0	999	1.00	1.00	0.8	0.000	_
RecrDist_Area_1	1.00	NO		0	999	1.00	1.00	0.8	0.000	_
RecrDist_Seas_1	1.00	NO		0	999	1.00	1.00	0.8	0.000	_
CohortGrowDev	1.00	NO		-1	1	1.00	1.00	99	0.000	_
SR_R0	8.17		9	1	100	8.23	7.62	99	0.000	0.061
SR_steep	0.80	NO		0.2	5	0.80	0.90	99	0.000	_
SR_sigmaR	0.50	NO		0	20	0.50	0.50	99	0.000	_
SR_envlink	0.00	NO		-5	5	0.00	0.00	99	0.000	_
SR_R1_offset	0.00	NO		-5	5	0.00	0.00	99	0.000	_
SR_autocorr	0.00	NO		0	2	0.00	1.00	50	0.000	_
RecrDev_1928	-0.03		10	_	_	_	_	_	_	0.495
RecrDev_1929	-0.03		11	_	_	_	_	_	_	0.495
RecrDev_1930	-0.03		12	_	_	_	_	_	_	0.494
RecrDev_1931	-0.03		13	_	_	_	_	_	_	0.494
RecrDev_1932	-0.03		14	_	_	_	_	_	_	0.494
RecrDev_1933	-0.03		15	_	_	_	_	_	_	0.493
RecrDev_1934	-0.04		16	_	_	_	_	_	_	0.493
RecrDev_1935	-0.04		17	_	_	_	_	_	_	0.493
RecrDev_1936	-0.04		18	_	_	_	_	_	_	0.492
RecrDev_1937	-0.04		19	_	_	_	_	_	_	0.491
RecrDev_1938	-0.05		20	_	_	_	_	_	_	0.491
RecrDev_1939	-0.05		21	_	_	_	_	_	_	0.490
RecrDev_1940	-0.05		22	_	_	_	_	_	_	0.489
RecrDev_1941	-0.05		23	_	_	_	_	_	_	0.489
RecrDev_1942	-0.06		24	_	_	_	_	_	_	0.488
RecrDev_1943	-0.06		25	_	_	_	_	_	_	0.487
RecrDev_1944	-0.07		26	_	_	_	_	_	_	0.486
RecrDev_1945	-0.07		27	_	_	_	_	_	_	0.484
RecrDev_1946	-0.08		28	_	_	_	_	_	_	0.483
RecrDev_1947	-0.09		29	_	_	_	_	_	_	0.482
RecrDev_1948	-0.09		30	_	_	_	_	_	_	0.480
RecrDev_1949	-0.10		31	_	_	_	_	_	_	0.478
RecrDev_1950	-0.11		32	_	_	_	_	_	_	0.476

RecrDev_1951	-0.12	33	_	_	_	_	_	_	0.474
RecrDev_1952	-0.13	34	_	_	_	_	_	_	0.472
RecrDev_1953	-0.14	35	_	_	_	_	_	_	0.469
RecrDev_1954	-0.15	36	_	_	_	_	_	_	0.466
RecrDev_1955	-0.17	37	_	_	_	_	_	_	0.463
RecrDev_1956	-0.18	38	_	_	_	_	_	_	0.460
RecrDev_1957	-0.20	39	_	_	_	_	_	_	0.456
RecrDev_1958	-0.21	40	_	_	_	_	_	_	0.453
RecrDev_1959	-0.23	41	_	_	_	_	_	_	0.449
RecrDev_1960	-0.25	42	_	_	_	_	_	_	0.446
RecrDev_1961	-0.26	43	_	_	_	_	_	_	0.444
RecrDev_1962	-0.26	44	_	_	_	_	_	_	0.444
RecrDev_1963	-0.26	45	_	_	_	_	_	_	0.444
RecrDev_1964	-0.25	46	_	_	_	_	_	_	0.445
RecrDev_1965	-0.23	47	_	_	_	_	_	_	0.448
RecrDev_1966	-0.19	48	_	_	_	_	_	_	0.454
RecrDev_1967	-0.14	49	_	_	_	_	_	_	0.463
RecrDev_1968	-0.06	50	_	_	_	_	_	_	0.477
RecrDev_1969	0.05	51	_	_	_	_	_	_	0.497
RecrDev_1970	0.19	52	_	_	_	_	_	_	0.519
RecrDev_1971	0.28	53	_	_	_	_	_	_	0.514
RecrDev_1972	0.16	54	_	_	_	_	_	_	0.464
RecrDev_1973	-0.19	55	_	_	_	_	_	_	0.408
RecrDev_1974	-0.60	56	_	_	_	_	_	_	0.363
RecrDev_1975	-0.75	57	_	_	_	_	_	_	0.350
RecrDev_1976	0.64	58	_	_	_	_	_	_	0.162
RecrDev_1977	-0.13	59	_	_	_	_	_	_	0.265
RecrDev_1978	-0.38	60	_	_	_	_	_	_	0.281
RecrDev_1979	0.11	61	_	_	_	_	_	_	0.226
RecrDev_1980	-0.56	62	_	_	_	_	_	_	0.303
RecrDev_1981	-0.70	63	_	_	_	_	_	_	0.302
RecrDev_1982	-0.79	64	_	_	_	_	_	_	0.349
RecrDev_1983	0.83	65	_	_	_	_	_	_	0.190
RecrDev_1984	0.26	66	_	_	_	_	_	_	0.341
RecrDev_1985	0.36	67	_	_	_	_	_	_	0.255
RecrDev_1986	0.10	68	_	_	_	_	_	_	0.305
RecrDev_1987	0.54	69	_	_	_	_	_	_	0.196
RecrDev_1988	-0.13	70	_	_	_	_	_	_	0.232
RecrDev_1989	-0.01	71	_	_	_	_	_	_	0.242
RecrDev_1990	0.42	72	_	_	_	_	_	_	0.167
RecrDev_1991	0.59	73	_	_	_	_	_	_	0.129
RecrDev_1992	-0.76	74	_	_	_	_	_	_	0.305
RecrDev_1993	-0.18	75	_	_	_	_	_	_	0.203
RecrDev_1994	0.42	76	_	_	_	_	_	_	0.123
RecrDev_1995	-0.87	77	_	_	_	_	_	_	0.311
RecrDev_1996	0.55	78	_	_	_	_	_	_	0.167
RecrDev_1997	0.05	79	_	_	_	_	_	_	0.230
RecrDev_1998	-0.13	80	_	_	_	_	_	_	0.372
RecrDev_1999	1.55	81	_	_	_	_	_	_	0.142
RecrDev_2000	1.03	82	_	_	_	_	_	_	0.174
RecrDev_2001	1.15	83	_	_	_	_	_	_	0.211
RecrDev_2002	0.35	84	_	_	_	_	_	_	0.211
RecrDev_2003	1.00	85	_	_	_	_	_	_	0.143
RecrDev_2004	-0.33	86	_	_	_	_	_	_	0.251
RecrDev_2005	-0.20	87	_	_	_	_	_	_	0.274
RecrDev_2006	-0.81	88	_	_	_	_	_	_	0.344
RecrDev_2007	1.58	89	_	_	_	_	_	_	0.240

ForeRecr_2008	0.00		90	_	_	_	_	_	_		0.500
ForeRecr_2009	0.00		91	_	_	_	_	_	_		0.500
ForeRecr_2010	0.00		92	_	_	_	_	_	_		0.500
ForeRecr_2011	0.00		93	_	_	_	_	_	_		0.500
ForeRecr_2012	0.00		94	_	_	_	_	_	_		0.500
ForeRecr_2013	0.00		95	_	_	_	_	_	_		0.500
ForeRecr_2014	0.00		96	_	_	_	_	_	_		0.500
ForeRecr_2015	0.00		97	_	_	_	_	_	_		0.500
ForeRecr_2016	0.00		98	_	_	_	_	_	_		0.500
ForeRecr_2017	0.00		99	_	_	_	_	_	_		0.500
ForeRecr_2018	0.00		100	_	_	_	_	_	_		0.500
InitF_1COMM	0.01		101	0	1	0.0039	0.09	99	0.000		0.001
InitF_2REC	0.00	NO		0	1	0	0.09	99	0.000	_	
SizeSel_1P_1_COMM	63.21		102	35	100	45	75	50	0.028		1.381
SizeSel_1P_2_COMM	-5.00	NO		-6	4	-5	0	50	0.000	_	
SizeSel_1P_3_COMM	4.75		103	-1	9	4	4	50	0.000		0.236
SizeSel_1P_4_COMM	0.00	NO		-1	9	0	5.5	50	0.000	_	
SizeSel_1P_5_COMM	-1.46		104	-5	9	-2	-2	50	0.000		0.144
SizeSel_1P_6_COMM	9.00	NO		-5	9	9	5	50	0.000	_	
Retain_1P_1_COMM	40.00	NO		31	100	40	55	50	0.000	_	
Retain_1P_2_COMM	2.00	NO		0.1	10	2	1	99	0.000	_	
Retain_1P_3_COMM	1.00	NO		0.001	1	1	1	99	0.000	_	
Retain_1P_4_COMM	0.00	NO		0	0	0	0	99	0.000	_	
SizeSel_2P_1_REC	58.88		105	35	100	50	75	50	0.052		0.396
SizeSel_2P_2_REC	-5.90	NO		-6	4	-5.9	0	50	0.000	_	
SizeSel_2P_3_REC	3.06		106	-1	9	4	4	50	0.000		0.124
SizeSel_2P_4_REC	7.67		107	-1	9	5	5.5	50	0.001		0.620
SizeSel_2P_5_REC	-4.90	NO		-5	9	-4.9	-2	50	0.000	_	
SizeSel_2P_6_REC	-4.18		108	-5	9	-4.9	5	50	0.017		12.389
SizeSel_3P_1_TRI	70.00	NO		35	100	70	75	50	0.000	_	
SizeSel_3P_2_TRI	-0.55	NO		-6	4	-0.55	0	50	0.000	_	
SizeSel_3P_3_TRI	5.34	NO		-1	9	5.34	4	50	0.000	_	
SizeSel_3P_4_TRI	5.20	NO		-1	9	5.2	5.5	50	0.000	_	
SizeSel_3P_5_TRI	-1.14	NO		-5	9	-1.14	-2	50	0.000	_	
SizeSel_3P_6_TRI	-4.90	NO		-5	9	-4.9	5	50	0.000	_	
SizeSel_4P_1_NWFSC	70.57		109	35	100	40	75	50	0.004		4.625
SizeSel_4P_2_NWFSC	-1.43		110	-6	4	0	0	50	0.000		1.209
SizeSel_4P_3_NWFSC	5.40		111	-1	9	4	4	50	0.000		0.499
SizeSel_4P_4_NWFSC	5.34		112	-1	9	-0.99	5.5	50	0.000		1.339
SizeSel_4P_5_NWFSC	-1.23		113	-5	9	-2	-2	50	0.000		0.229
SizeSel_4P_6_NWFSC	-4.00	NO		-5	9	-4	5	50	0.000	_	
SizeSel_5P_1_CPUE	-1.00	NO		-2	0	-1	0	50	0.000	_	
SizeSel_5P_2_CPUE	-1.00	NO		-2	0	-1	0	50	0.000	_	
SizeSel_6P_1_Dock	-1.00	NO		-2	0	-1	0	50	0.000	_	
SizeSel_6P_2_Dock	-1.00	NO		-2	0	-1	0	50	0.000	_	
SizeSel_1P_1_COMM_BLK	69.87		114	35	100	45	60	50	0.019		1.617
Retain_1P_1_COMM_BLK	56.94		115	31	100	40	55	99	0.000		0.528
Retain_1P_3_COMM_BLK	0.66		116	0.1	1	0.9	0.9	99	0.000		0.023
SizeSel_2P_1_REC_BLK	63.26		117	35	100	45	75	50	0.028		0.314

Table 16. Time series of total and summary biomass, spawning biomass, depletion, recruitment and Fs for Washington and Oregon.

Year	Total Biomass	Summary Biomass	Spawning Biomass	Depletion	Recruitment	Commercial F	Recreational F
1928	44,190	43,711	32,760	99.0%	3,185	0.0017	0.0000
1929	44,184	43,701	32,753	99.0%	3,189	0.0051	0.0000
1930	44,088	43,604	32,671	98.8%	3,192	0.0041	0.0000
1931	44,031	43,547	32,611	98.6%	3,196	0.0022	0.0000
1932	44,036	43,552	32,595	98.5%	3,200	0.0025	0.0000
1933	44,044	43,559	32,583	98.5%	3,206	0.0038	0.0000
1934	44,024	43,538	32,553	98.4%	3,212	0.0027	0.0000
1935	44,042	43,555	32,553	98.4%	3,219	0.0026	0.0000
1936	44,072	43,583	32,563	98.5%	3,226	0.0038	0.0000
1937	44,077	43,588	32,555	98.4%	3,235	0.0027	0.0000
1938	44,120	43,629	32,576	98.5%	3,245	0.0057	0.0000
1939	44,088	43,596	32,538	98.4%	3,256	0.0059	0.0000
1940	44,063	43,569	32,501	98.3%	3,269	0.0084	0.0000
1941	43,981	43,485	32,418	98.0%	3,283	0.0227	0.0000
1942	43,522	43,024	32,035	96.9%	3,298	0.0189	0.0000
1943	43,207	42,707	31,743	96.0%	3,316	0.0249	0.0000
1944	42,773	42,270	31,347	94.8%	3,336	0.0483	0.0000
1945	41,766	41,260	30,497	92.2%	3,354	0.0307	0.0000
1946	41,329	40,820	30,051	90.9%	3,376	0.0344	0.0000
1947	40,872	40,360	29,591	89.5%	3,399	0.0136	0.0000
1948	41,027	40,512	29,599	89.5%	3,423	0.0211	0.0000
1949	41,037	40,518	29,524	89.3%	3,444	0.0482	0.0000
1950	40,391	39,869	28,960	87.6%	3,463	0.0373	0.0000
1951	40,104	39,579	28,650	86.6%	3,473	0.0432	0.0000
1952	39,730	39,203	28,275	85.5%	3,502	0.0340	0.0000
1953	39,657	39,126	28,127	85.0%	3,541	0.0188	0.0000
1954	40,021	39,484	28,322	85.6%	3,598	0.0312	0.0000
1955	40,105	39,559	28,327	85.6%	3,658	0.0539	0.0000
1956	39,644	39,089	27,913	84.4%	3,697	0.0388	0.0000
1957	39,653	39,093	27,820	84.1%	3,681	0.0457	0.0008
1958	39,533	38,976	27,633	83.5%	3,614	0.0438	0.0016
1959	39,499	38,951	27,527	83.2%	3,619	0.0673	0.0024
1960	38,884	38,330	27,012	81.7%	4,280	0.0851	0.0033
1961	37,968	37,313	26,206	79.2%	4,999	0.0788	0.0042
1962	37,516	36,775	25,576	77.3%	2,796	0.0517	0.0051
1963	37,776	37,354	25,506	77.1%	2,632	0.0374	0.0057
1964	38,303	37,821	25,819	78.1%	13,763	0.0466	0.0061
1965	39,773	37,741	26,144	79.0%	6,368	0.0580	0.0070
1966	41,759	40,831	26,320	79.6%	1,345	0.0547	0.0077
1967	43,764	43,559	26,575	80.3%	1,428	0.0740	0.0064
1968	44,469	44,249	27,045	81.8%	1,842	0.0693	0.0062
1969	44,199	43,905	28,557	86.3%	3,760	0.0448	0.0072

Table 16 (Continued). Time series of total and summary biomass, spawning biomass, depletion, recruitment and Fs for Washington and Oregon.

Year	Total Biomass	Summary Biomass	Spawning Biomass	Depletion	Recruitment	Commercial F	Recreational F
1970	43,945	43,339	30,565	92.4%	8,512	0.0300	0.0093
1971	44,383	43,142	31,867	96.3%	1,855	0.0348	0.0119
1972	44,561	44,282	31,906	96.5%	1,539	0.0351	0.0134
1973	44,408	44,176	31,424	95.0%	1,311	0.0504	0.0124
1974	43,234	43,027	30,845	93.3%	2,454	0.0567	0.0132
1975	41,444	41,072	30,543	92.3%	2,428	0.0593	0.0156
1976	39,351	38,993	29,962	90.6%	1,139	0.0624	0.0154
1977	37,053	36,866	28,749	86.9%	3,014	0.0618	0.0190
1978	34,944	34,479	27,181	82.2%	4,066	0.0613	0.0190
1979	33,314	32,695	25,579	77.3%	4,405	0.1048	0.0256
1980	31,403	30,757	23,343	70.6%	1,518	0.1161	0.0388
1981	29,684	29,455	21,209	64.1%	1,353	0.1209	0.0733
1982	27,908	27,686	19,510	59.0%	3,581	0.1531	0.1618
1983	25,395	24,872	17,905	54.1%	960	0.2186	0.0538
1984	22,474	22,329	16,006	48.4%	903	0.2347	0.0419
1985	19,612	19,449	13,992	42.3%	4,371	0.2760	0.0823
1986	16,838	16,204	11,778	35.6%	491	0.1411	0.0871
1987	15,928	15,852	10,937	33.1%	775	0.1872	0.1379
1988	14,496	14,377	9,793	29.6%	964	0.2056	0.1069
1989	12,978	12,830	8,782	26.6%	1,310	0.2857	0.0997
1990	10,893	10,685	7,560	22.9%	2,506	0.2716	0.0815
1991	9,496	9,111	6,479	19.6%	3,152	0.4070	0.1631
1992	7,954	7,484	4,835	14.6%	2,119	0.3126	0.2023
1993	7,763	7,449	3,996	12.1%	1,089	0.3953	0.1444
1994	7,474	7,302	3,349	10.1%	1,970	0.3390	0.1281
1995	7,362	7,066	3,217	9.7%	1,612	0.2106	0.0663
1996	7,714	7,470	3,559	10.8%	1,607	0.2113	0.0677
1997	7,876	7,635	3,825	11.6%	1,257	0.1948	0.0799
1998	7,953	7,761	3,992	12.1%	1,407	0.0631	0.0445
1999	8,743	8,508	4,610	13.9%	4,235	0.0607	0.0509
2000	9,824	9,176	5,244	15.9%	4,972	0.0236	0.0305
2001	11,776	11,023	6,030	18.2%	4,836	0.0228	0.0330
2002	14,364	13,635	6,840	20.7%	4,256	0.0274	0.0534
2003	17,283	16,655	7,837	23.7%	1,960	0.0189	0.0468
2004	20,215	19,903	9,437	28.5%	3,908	0.0154	0.0315
2005	23,078	22,498	11,689	35.3%	2,138	0.0149	0.0279
2006	25,551	25,198	14,271	43.1%	6,004	0.0181	0.0226
2007	27,979	27,093	16,710	50.5%	2,771	0.0165	0.0214
2008	30,235	29,813	18,774	56.8%	3,018	0.0183	0.0171
2009	32,222	31,764	20,484	61.9%	3,045		

Table 17. Time series of total and summary biomass, spawning biomass, depletion, recruitment and Fs for California.

Year	Total Biomass	Summary Biomass	Spawning Biomass	Depletion	Recruitment	Commercial F	Recreational F
1928	32,394	31,991	22,579	89.2%	3,396	0.0132	0.0000
1929	32,334	31,944	22,542	89.1%	3,392	0.0181	0.0002
1930	32,120	31,731	22,398	88.5%	3,386	0.0201	0.0003
1931	31,841	31,453	22,210	87.7%	3,380	0.0193	0.0005
1932	31,583	31,195	22,037	87.1%	3,373	0.0140	0.0007
1933	31,476	31,089	21,974	86.8%	3,367	0.0223	0.0008
1934	31,138	30,751	21,725	85.8%	3,358	0.0138	0.0010
1935	31,046	30,661	21,657	85.6%	3,351	0.0164	0.0012
1936	30,884	30,500	21,532	85.1%	3,342	0.0123	0.0014
1937	30,839	30,455	21,496	84.9%	3,333	0.0158	0.0021
1938	30,687	30,304	21,379	84.5%	3,323	0.0126	0.0025
1939	30,618	30,237	21,326	84.3%	3,313	0.0095	0.0036
1940	30,618	30,238	21,330	84.3%	3,302	0.0113	0.0037
1941	30,561	30,182	21,292	84.1%	3,291	0.0087	0.0034
1942	30,575	30,197	21,312	84.2%	3,279	0.0052	0.0018
1943	30,704	30,328	21,424	84.6%	3,266	0.0118	0.0017
1944	30,642	30,267	21,394	84.5%	3,251	0.0122	0.0014
1945	30,566	30,193	21,353	84.4%	3,233	0.0115	0.0019
1946	30,495	30,124	21,316	84.2%	3,214	0.0190	0.0033
1947	30,191	29,822	21,099	83.4%	3,191	0.0322	0.0121
1948	29,398	29,032	20,501	81.0%	3,161	0.0340	0.0136
1949	28,593	28,231	19,877	78.5%	3,129	0.0274	0.0152
1950	27,993	27,634	19,398	76.6%	3,097	0.0330	0.0140
1951	27,325	26,970	18,863	74.5%	3,062	0.0320	0.0147
1952	26,726	26,374	18,379	72.6%	3,025	0.0254	0.0107
1953	26,389	26,042	18,099	71.5%	2,987	0.0174	0.0080
1954	26,298	25,956	18,019	71.2%	2,949	0.0171	0.0128
1955	26,140	25,802	17,908	70.8%	2,906	0.0180	0.0138
1956	25,944	25,611	17,780	70.2%	2,861	0.0177	0.0189
1957	25,672	25,344	17,605	69.6%	2,811	0.0321	0.0221
1958	25,026	24,704	17,147	67.7%	2,756	0.0307	0.0249
1959	24,401	24,085	16,700	66.0%	2,705	0.0280	0.0201
1960	23,931	23,620	16,364	64.7%	2,656	0.0258	0.0172
1961	23,562	23,257	16,106	63.6%	2,608	0.0291	0.0172
1962	23,132	22,833	15,806	62.4%	2,571	0.0228	0.0170
1963	22,842	22,547	15,616	61.7%	2,550	0.0231	0.0172
1964	22,545	22,252	15,421	60.9%	2,549	0.0181	0.0170
1965	22,354	22,061	15,303	60.5%	2,575	0.0177	0.0249
1966	22,074	21,778	15,112	59.7%	2,637	0.0180	0.0354
1967	21,680	21,376	14,816	58.5%	2,750	0.0214	0.0383
1968	21,245	20,928	14,451	57.1%	2,941	0.0253	0.0378
1969	20,840	20,500	14,057	55.5%	3,251	0.0293	0.0300

Table 17 (Continued). Time series of total and summary biomass, spawning biomass, depletion, recruitment and Fs for California.

Year	Total Biomass	Summary Biomass	Spawning Biomass	Depletion	Recruitment	Commercial F	Recreational F
1970	20,598	20,222	13,715	54.2%	3,693	0.0409	0.0467
1971	20,141	19,715	13,134	51.9%	3,996	0.0549	0.0559
1972	19,599	19,144	12,398	49.0%	3,475	0.0903	0.0704
1973	18,540	18,149	11,272	44.5%	2,392	0.1078	0.0737
1974	17,349	17,081	10,189	40.3%	1,566	0.1224	0.0782
1975	15,918	15,740	9,209	36.4%	1,319	0.1123	0.0885
1976	14,502	14,321	8,486	33.5%	5,233	0.1176	0.0967
1977	13,243	12,663	7,739	30.6%	2,385	0.0751	0.0782
1978	12,941	12,671	7,442	29.4%	1,844	0.0871	0.1127
1979	12,344	12,123	6,831	27.0%	2,975	0.1472	0.1329
1980	11,172	10,842	5,864	23.2%	1,468	0.1492	0.1984
1981	9,662	9,496	4,922	19.4%	1,219	0.1586	0.1892
1982	8,298	8,159	4,174	16.5%	1,074	0.2011	0.1595
1983	6,978	6,824	3,476	13.7%	5,117	0.1694	0.1064
1984	6,643	6,072	3,187	12.6%	2,802	0.1748	0.1143
1985	6,592	6,269	2,862	11.3%	2,976	0.1407	0.2659
1986	6,508	6,173	2,358	9.3%	2,130	0.1170	0.2797
1987	6,743	6,491	2,198	8.7%	3,215	0.1718	0.2421
1988	6,717	6,360	2,186	8.6%	1,646	0.1996	0.2446
1989	6,298	6,108	2,100	8.3%	1,814	0.2621	0.2357
1990	5,535	5,320	1,832	7.2%	2,621	0.2497	0.2190
1991	5,077	4,773	1,669	6.6%	2,975	0.2017	0.2435
1992	4,896	4,571	1,572	6.2%	743	0.1707	0.2597
1993	4,787	4,697	1,495	5.9%	1,295	0.1986	0.1605
1994	4,790	4,632	1,559	6.2%	2,429	0.1516	0.0822
1995	5,083	4,817	1,853	7.3%	730	0.1297	0.0784
1996	5,275	5,173	2,139	8.4%	3,215	0.1105	0.0992
1997	5,530	5,170	2,316	9.2%	2,012	0.1141	0.0725
1998	5,922	5,693	2,485	9.8%	1,740	0.0622	0.0722
1999	6,686	6,426	2,809	11.1%	9,703	0.0526	0.0915
2000	8,130	7,043	3,157	12.5%	6,049	0.0184	0.0471
2001	10,581	9,878	3,809	15.0%	7,217	0.0172	0.0335
2002	13,718	12,917	4,693	18.5%	3,452	0.0182	0.0876
2003	16,652	16,229	5,788	22.9%	6,988	0.0088	0.1244
2004	19,341	18,576	7,278	28.8%	1,926	0.0083	0.0118
2005	22,448	22,224	9,699	38.3%	2,305	0.0061	0.0208
2006	24,822	24,565	12,233	48.3%	1,298	0.0051	0.0206
2007	26,488	26,240	14,652	57.9%	14,459	0.0057	0.0092
2008	28,779	27,201	16,861	66.6%	3,411	0.0045	0.0051
2009	31,266	30,875	18,656	73.7%	3,441		

Table 18. Pre-STAR North Model sensitivity analyses.

North Model	Base	likebase	noCPUE	noTri	noNW	Lmin32	noAgebase	noAgealt
Estimated parameters	83	91	91	91	91	91	89	89
Final gradient	0.00016	31.9155	3.36313	3.99032	4.7776	0.00223	1.92E+00	0.44095
Negative log-likelihoods								
Total	14,503.00	14,500.60	14,526.20	13,258.90	13,272.20	14,902.90	1,833.41	1,733.68
Indices	-31.55	-27.01	-0.77	-21.29	-31.36	-26.64	-24.49	-25.88
Length-frequency data	2,218.69	2,211.71	2,211.79	1,995.31	2,065.97	2,311.34	1,853.89	1,755.23
Age-frequency data	12,326.40	12,326.10	12,325.50	11,297.00	11,246.20	12,628.10	0	0
Discard	-2.89	-2.77	-2.81	-3.69	-2.04	-1.97	-5.81	-4.51
Recruitment	-7.84	-7.69	-7.72	-8.63	-6.78	-8.19	9.59	8.53
Priors	0.15	0.23	0.23	0.2	0.19	0.31	0.22	0.31
Select parameters								
Stock-recruit, productivity								
Rzero	8.03	8.04	8.03	8.02	8.05	8.01	8.1	8.04
Steepness (h)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Sigma r out	0.49	0.5	0.5	0.48	0.51	0.49	0.69	0.68
Female M	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Male M	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Survey caachability							9999	9999
Triennial survey q	0.78	0.77	0.78	0.6	0.77	0.66	0.64	0.56
NWFSC survey q	0.83	0.8	0.83	0.87	0.85	0.87	0.61	0.56
Growth parameters								
Female length at age 1	30	30	30	30	30	32	30	30
Female length at age 20	126.64	126.68	126.66	126.47	126.65	129.85	126.6	115
Female von Bertalanffy k	0.09	0.09	0.09	0.09	0.09	0.08	0.1	0.14
F L-at-age SD age 1	0.14	0.14	0.14	0.14	0.14	0.13	0.09	0.1
F L-at-age SD age 20	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03
Male length at age 1	30	30	30	30	30	32	30	30
Male length at age 20	97.61	97.7	97.64	98.1	98.11	102.47	97.6	85
Male von Bertalanffy k	0.13	0.13	0.13	0.13	0.13	0.11	0.15	0.23
M L-at-age SD age 1	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.09
M L-at-age SD age 20	0.06	0.06	0.06	0.06	0.06	0.06	0.03	0.07
Management quantities								
SBzero	34,253	34,496	34,177	33,661	34,766	34,106	38,367	31,030
SB2009	21,264	21,813	21,106	19,976	20,773	19,891	29,624	26,310
2009 Depletion	62%	63%	62%	59%	60%	58%	77%	85%
F 2008	0.20473	0.19997	0.20625	0.21846	0.20783	0.2226	0.14245	0.13912
SSB msy	7,869	7,915	7,839	7,728	7,969	7,781	9,019	7,310
1-spr MSY	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Fmsy	0.14	0.14	0.14	0.14	0.14	0.13	0.14	0.15
2009 %BMSY	270%	276%	269%	258%	261%	256%	328%	360%
MSY catch	1,821	1,832	1,817	1,792	1,842	1,772	2,033	1,962

Table 18 (Continued). North Model sensitivity analyses.

North Model	Base	likebase	Mfem.2	Mfem.23	h.75	h.85	Asym	Disc.5
Estimated parameters	83	91	91	91	91	91	90	91
Final gradient	0.00016	31.9155	4.18614	7.00E-04	4.1873	59.4968	0.00206	1.06878
Negative log-likelihoods								
Total	14,503	14,500.6	14,845.7	14,611.9	14,525.7	14,503.8	14,656.8	14,514.5
Indices	-31.55	-27.01	-24.36	-25.1	-28.99	-27.4	-9.49	-27.23
Length-frequency data	2,218.69	2,211.71	2,471.16	2,287.88	2,247.13	2,213.71	2,334.2	2,230.23
Age-frequency data	12,326.4	12,326.1	12,410.3	12,359.8	12,315.4	12,327.6	12,339	12,326.6
Discard	-2.89	-2.77	-3.2	-3.97	-1.07	-2.72	-2.87	-7.05
Recruitment	-7.84	-7.69	-8.55	-6.87	-7.19	-7.66	-4.33	-8.3
Priors	0.15	0.23	0.3	0.22	0.39	0.23	0.3	0.29
Select parameters								
Stock-recruit, productivity								
Rzero	8.03	8.04	8.06	8.33	8.05	8.01	7.64	8.01
Steepness (h)	0.8	0.8	0.8	0.8	0.75	0.85	0.8	0.8
Sigma r out	0.49	0.5	0.48	0.51	0.5	0.5	0.54	0.49
Female M	0.18	0.18	0.2	0.23	0.18	0.18	0.18	0.18
Male M	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Survey catchability								
Triennial survey	0.78	0.77	0.77	0.79	0.76	0.76	1.15	0.78
NWFSC survey	0.83	0.8	0.99	0.73	0.75	0.75	2.78	0.85
Growth parameters								
Female length at age 1	30	30	30	30	30	30	30	30
Female length at age 20	126.64	126.68	124.61	125.17	126.54	126.63	123.68	126.52
Female von Bertalanffy k	0.09	0.09	0.1	0.09	0.09	0.09	0.1	0.09
F L-at-age SD age 1	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
F L-at-age SD age 20	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.04
Male length at age 1	30	30	30	30	30	30	30	30
Male length at age 20	97.61	97.7	97.29	98.25	97.76	97.69	95.44	96.85
Male von Bertalanffy k	0.13	0.13	0.14	0.13	0.13	0.13	0.14	0.14
M L-at-age SD age 1	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
M L-at-age SD age 20	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Management quantities								
SBzero	34,253	34,496	26,113	23,376	34,856	33,651	22,373	33,564
SB2009	21,264	21,813	15,133	18,147	20,673	23,347	5,566	20,642
2009 Depletion	62%	63%	58%	78%	59%	69%	25%	61%
F 2008	0.20473	0.19997	0.23633	0.15698	0.2122	0.18646	0.7308	0.19612
SSB msy	7,869	7,915	6,062	5,301	8,782	6,892	5,270	7,758
1-spr MSY	0.72	0.72	0.72	0.72	0.69	0.76	0.72	0.72
Fmsy	0.14	0.14	0.15	0.17	0.12	0.16	0.14	0.14
2009 %BMSY	270%	276%	250%	342%	235%	339%	106%	266%
MSY catch	1,821	1,832	1730	2041	1720	1920	1251	1787

Table 19. Pre-STAR South Model sensitivity analyses.

South Model	Base	likebase	noCPUE	noTri	no NW	Lmin35	estLmax	noAge
Estimated parameters	77	81	81	81	81	81	83	81
Final gradient	0.0441	0.00102	0.01562	0.01883	0.00105	0.00268	1.00E-04	0.00019
Negative log-likelihoods								
Total	4,059.96	4,057.61	3,996.5	3,402.37	2,861.76	4,535.26	3,919.42	1,277.37
Indices	22.18	19.71	22.19	21.23	-7.47	-0.81	9.17	-5.83
Length-frequency data	1,307.19	1,306.37	1,319.02	1,159.95	1,119.41	1,506.63	1,302.1	1,289.43
Age-frequency data	2,730.16	2,731.21	2,657.39	2,221.41	1,755.96	3,033.66	2,605.81	0
Discard	-7.25	-7.27	-7.03	-7	-7.79	-7.82	-7.7	-7.96
Recruitment	7.45	7.35	4.64	6.59	1.45	3.03	9.69	1.28
Priors	0.23	0.23	0.28	0.19	0.2	0.57	0.36	0.45
Select parameters								
Stock-recruit, productivity								
Rzero	8.13	8.14	8	8.15	8.19	8.11	9.39	8.09
Steepness (h)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Sigma r out	0.71	0.71	0.66	0.7	0.61	0.64	0.74	0.61
male M	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
male M	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Survey catchability								
Triennial survey	0.26	0.32	0.46	0.44	0.31	0.26	0.05	0.2
NWFSC survey	0.89	0.88	2.86	0.91	0.89	0.66	0.11	0.44
Growth parameters								
Female length at age 1	30	30	30	30	30	35	30	30
Female length at age 20	108	108	108	108	108	108	140	108
Female von Bertalanffy k	0.11	0.11	0.1	0.11	0.1	0.09	0.05	0.15
F L-at-age SD age 1	0.12	0.12	0.12	0.11	0.1	0.14	0.13	0.16
F L-at-age SD age 20	0.09	0.09	0.1	0.1	0.1	0.07	0.07	0.08
Male length at age 1	30	30	30	30	30	35	30	30
Male length at age 20	81	81	81	81	81	81	96.2	81
Male von Bertalanffy k	0.18	0.18	0.17	0.18	0.17	0.15	0.11	0.26
M L-at-age SD age 1	0.11	0.11	0.11	0.09	0.11	0.14	0.12	0.15
M L-at-age SD age 20	0.12	0.12	0.13	0.12	0.12	0.09	0.1	0.11
Management quantities								
SBzero	25,795	26,058	22,284	26,230	25,741	24,214	136,980	30,895
SB2009	13,420	13,912	5,131	13,712	15,602	16,142	151,704	23,286
2009 Depletion	52%	53%	23%	52%	61%	67%	11%	75%
F 2008	0.13747	0.13307	0.31152	0.13547	0.11919	0.11328	0.01848	0.08397
SSB msy	10,662	10,770	9,210	10,842	10,640	10,008	56,618	12,770
1-spr MSY	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Fmsy	0.08	0.08	0.09	0.08	0.08	0.08	0.06	0.08
2009 %BMSY	126%	129%	056%	126%	147%	161%	268%	182%
MSY catch	1,438	1,448	1,350	1,451	1,403	1,378	4,889	1,590

Table 19 continued. South Model sensitivity analyses.

South Model	Base	likebase	Mfem.2	Mfem.23	h.7	h.9	Asym	Disc.5
Estimated parameters	77	81	81	81	81	81	80	81
Final gradient	0.0441	0.00102	0.00336	0.00082	0.0012	0.00087	0.00018	0.00331
Negative log-likelihoods								
Total	4,059.96	4,057.61	4,030.36	3,998.31	4,068.22	4,052.78	4,225.32	4,017.15
Indices	22.18	19.71	21.16	15.25	15.33	20.91	-1.15	9.03
Length-frequency data	1,307.19	1,306.37	1,290.03	1,272.21	1,305.39	1,307.44	1,438.4	1,320.18
Age-frequency data	2,730.16	2,731.21	2,718.55	2,708.88	2,746.48	2,723.3	2,779.41	2,680.75
Discard	-7.25	-7.27	-7.25	-7.41	-7.43	-7.3	5.56	4.91
Recruitment	7.45	7.35	7.65	9.15	8.2	8.18	2.72	2.03
Priors	0.23	0.23	0.22	0.23	0.24	0.24	0.37	0.25
Select parameters								
Stock-recruit, productivity								
Rzero	8.13	8.14	8.24	8.5	8.24	8.08	8.17	8.13
Steepness (h)	0.8	0.8	0.8	0.8	0.7	0.9	0.8	0.8
Sigma r out	0.71	0.71	0.71	0.73	0.72	0.72	0.63	0.62
male M	0.18	0.18	0.2	0.23	0.18	0.18	0.18	0.18
male M	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Survey catchability								
Triennial survey q	0.26	0.32	0.36	0.25	0.27	0.31	0.25	0.32
NWFSC survey q	0.89	0.88	0.81	0.62	0.78	0.7	0.52	2.57
Growth parameters								
Female length at age 1	30	30	30	30	30	30	30	30
Female length at age 20	108	108	108	108	108	108	108	108
Female von Bertalanffy k	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
F L-at-age SD age 1	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.11
F L-at-age SD age 20	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.11
Male length at age 1	30	30	30	30	30	30	30	30
Male length at age 20	81	81	81	81	81	81	81	81
Male von Bertalanffy k	0.18	0.18	0.18	0.17	0.18	0.18	0.19	0.18
M L-at-age SD age 1	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.11
M L-at-age SD age 20	0.12	0.12	0.12	0.12	0.12	0.12	0.1	0.12
Management quantities								
SBzero	25,795	26,058	22,086	19,805	29,024	24,317	27,303	25,414
SB2009	13,420	13,912	13,732	18,012	13,523	17,093	17,586	4,431
2009 Depletion	52%	53%	62%	91%	47%	70%	64%	17%
F 2008	0.13747	0.13307	0.11636	0.07424	0.13976	0.10694	0.12115	1.37654
SSB msy	10,662	10,770	9,129	8,186	11,145	10,561	11,285	10,504
1-spr MSY	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Fmsy	0.08	0.08	0.09	0.1	0.08	0.08	0.08	0.08
2009 %BMSY	126%	129%	150%	220%	121%	162%	156%	42%
MSY catch	1,438	1,448	1,474	1,670	1,474	1,436	1,380	1,456

Table 20. North Model sensitivity analyses.

North Model	NBASE	NM.16.285	N.2.355	N.22.39	Nh.7	Nh.9
Estimated parameters	122	122	122	122	122	122
Final gradient	0.00186	14.2868	0.00079	0.00035	0.00075	0.00028
Negative log-likelihoods						
Total	1,608.25	1,614.77	1,612.76	1,626.69	1,608.55	1,608.92
Indices	-26.47	-26.39	-25.87	-24.9	-26.45	-26.44
Length-frequency data	1,632.60	1,640.63	1,634.13	1,644.42	1,632.84	1,632.40
Age-frequency data	0	0	0	0	0	0
Discard	-6.23	-6.24	-6.19	-6.12	-6.24	-6.23
Recruitment	8.16	6.6	10.51	13.12	8.22	9.01
Priors	0.17	0.17	0.17	0.16	0.17	0.17
Select parameters						
Stock-recruit, productivity						
Rzero	8.06	7.82	8.29	8.5	8.13	8
Steepness (h)	0.8	0.8	0.8	0.8	0.7	0.9
Sigma r out	0.52	0.51	0.53	0.55	0.52	0.52
Female M	0.18	0.16	0.2	0.22	0.18	0.18
male M	0.32	0.28	0.36	0.39	0.32	0.32
Survey catchability						
Triennial survey	0.64	0.72	0.58	0.53	0.65	0.64
NWFSC survey	0.82	0.94	0.74	0.68	0.86	0.79
Growth parameters						
Female length at age 1 (or 0)	28.1	28.2	27.97	27.83	28.1	28.1
Female length at age 20	118	118	118	118	118	118
Female von Bertalanffy k	0.13	0.13	0.13	0.13	0.13	0.13
F L-at-age SD age 1	0.09	0.09	0.09	0.1	0.09	0.09
F L-at-age SD age 20	0.04	0.05	0.04	0.04	0.04	0.04
Male length at age 1	29.73	29.82	29.7	29.75	29.74	29.73
Male length at age 20	86	86	86	86	86	86
Male von Bertalanffy k	0.22	0.21	0.23	0.23	0.22	0.22
M L-at-age SD age 1	0.09	0.08	0.09	0.09	0.09	0.09
M L-at-age SD age 20	0.06	0.07	0.06	0.05	0.06	0.06
Mangement quantitaties						
Sbzero	33,075	34,130	32,254	31,722	35,498	31,320
SB2009	20,484	18,594	21,868	23,030	19,539	21,413
2009 Depletion	0.62	0.54	0.68	0.73	0.55	0.68
F 2008	0.20685	0.2545	0.17514	0.15129	0.2171	0.19794
SSB msy	7,781	8,147	7,488	7,275	9,850	5,755
1-spr MSY	0.72	0.71	0.72	0.72	0.65	0.79
Fmsy	0.14	0.13	0.16	0.17	0.11	0.19
2009 %BMSY	2.63	2.28	2.92	3.17	1.98	3.72
MSY catch	1,909	1,701	2,132	2,380	1,778	2,072

Table 21. South Model sensitivity analyses.

South Model	SBASE	SM.16.285	SM.2.355	SM.22.39	Sh.7	Sh.9
Estimated parameters	117	117	117	117	117	117
Final gradient	0.01007	0.02206	0.00712	0.00145	0.00094	0.00078
Negative log-likelihoods						
Total	1,249.65	1,257.37	1,248.80	1,331.21	1,262.15	1,296.19
Indices	7.95	10.2	8.08	0.39	6.7	6.64
Length-frequency data	1,243.81	1,245.11	1,246.42	1,329.39	1,254.98	1,295.70
Age-frequency data	0	0	0	0	0	0
Discard	-7.59	-7.55	-7.73	3.71	-7.81	-5.84
Recruitment	5.32	9.44	1.88	-2.86	8.1	-0.59
Priors	0.16	0.17	0.15	0.58	0.18	0.29
Select parameters						
Stock-recruit, productivity						
Rzero	8.17	8	8.3	8.39	8.24	7.98
Steepness (h)	0.8	0.8	0.8	0.8	0.7	0.9
Sigma r out	0.46	0.48	0.43	0.4	0.48	0.41
Female M	0.18	0.16	0.2	0.22	0.18	0.18
male M	0.32	0.28	0.36	0.39	0.32	0.32
Survey catchability						
Triennial survey	0.32	0.33	0.3	0.27	0.3	0.31
NWFSC survey	0.55	0.53	0.46	0.43	0.49	0.43
Growth parameters						
Female length at age 1 (or 0)	26.9	27.05	26.49	26.18	26.34	26.11
Female length at age 20	108	108	108	108	108	108
Female von Bertalanffy k	0.11	0.1	0.12	0.14	0.12	0.14
F L-at-age SD age 1	0.11	0.11	0.11	0.12	0.12	0.12
F L-at-age SD age 20	0.12	0.11	0.08	0.04	0.07	0.05
Male length at age 1	25.98	26.24	25.54	24.46	25.52	24.84
Male length at age 20	81	81	81	81	81	81
Male von Bertalanffy k	0.23	0.21	0.25	0.3	0.25	0.27
M L-at-age SD age 1	0.07	0.07	0.08	0.09	0.08	0.08
M L-at-age SD age 20	0.14	0.15	0.14	0.13	0.15	0.13
Mangement quantitaties						
Sbzero	25,311	28,168	23,390	21,633	29,078	23,819
SB2009	18,656	18,752	19,392	18,418	18,739	20,153
2009 Depletion	0.74	0.67	0.83	0.85	0.64	0.85
F 2008	0.09267	0.10093	0.08093	0.08838	0.09287	0.08753
SSB msy	10,462	11,643	9,668	8,942	11,166	10,344
1-spr MSY	0.55	0.55	0.55	0.55	0.55	0.55
Fmsy	0.08	0.08	0.09	0.1	0.09	0.09
2009 %BMSY	1.78	1.61	2.01	2.06	1.68	1.95
MSY catch	1,492	1,463	1,568	1,531	1,569	1,436

Table 21 (cont). South Model sensitivity analyses.

South Model	SBASE	NoDock	w/ages	w/extraindices
Estimated parameters	117	116	124	139
Final gradient	0.01007	1.36035	0.03029	0.00113
Negative log-likelihoods				
Total	1,249.65	1,217.25	3,838.40	1,772.19
Indices	7.95	-4.98	17.45	-2.36
Length-frequency data	1,243.81	1,229.00	1,354.67	1,763.72
Age-frequency data	0	0	2462.09	0
Discard	-7.59	-7.75	-7.52	-7.52
Recruitment	5.32	0.74	11.47	17.94
Priors	0.16	0	0.24	0.41
Select parameters				
Stock-recruit, productivity				
Rzero	8.17	7.92	8.2	7.95
Steepness (h)	0.8	0.8	0.8	0.8
Sigma r out	0.46	0.42	0.5	0.54
Female M	0.18	0.18	0.18	0.18
male M	0.32	0.32	0.32	0.32
Survey catchability				
Triennial survey	0.32	0.54	0.31	0.27
NWFSC survey	0.55	1.2	0.48	0.47
Growth parameters				
Female length at age 1 (or 0)	26.9	25.96	25.27	26.75
Female length at age 20	108	108	108	108
Female von Bertalanffy k	0.11	0.14	0.13	0.11
F L-at-age SD age 1	0.11	0.12	0.14	0.13
F L-at-age SD age 20	0.12	0.09	0.07	0.06
Male length at age 1	25.98	25.51	25.51	25.66
Male length at age 20	81	81	81	81
Male von Bertalanffy k	0.23	0.25	0.21	0.24
M L-at-age SD age 1	0.07	0.08	0.11	0.08
M L-at-age SD age 20	0.14	0.15	0.12	0.14
Mangement quantitaties				
Sbzero	25,311	23,019	28,588	20,620
SB2009	18,656	8,684	25,603	17,712
2009 Depletion	0.74	0.38	0.9	0.86
F 2008	0.09267	0.18712	0.06862	0.09786
SSB msy	10,462	9,514	11,816	8,523
1-spr MSY	0.55	0.55	0.55	0.55
Fmsy	0.08	0.09	0.09	0.09
2009 %BMSY	1.78	0.91	2.17	2.08
MSY catch	1,492	1,392	1,657	1,223

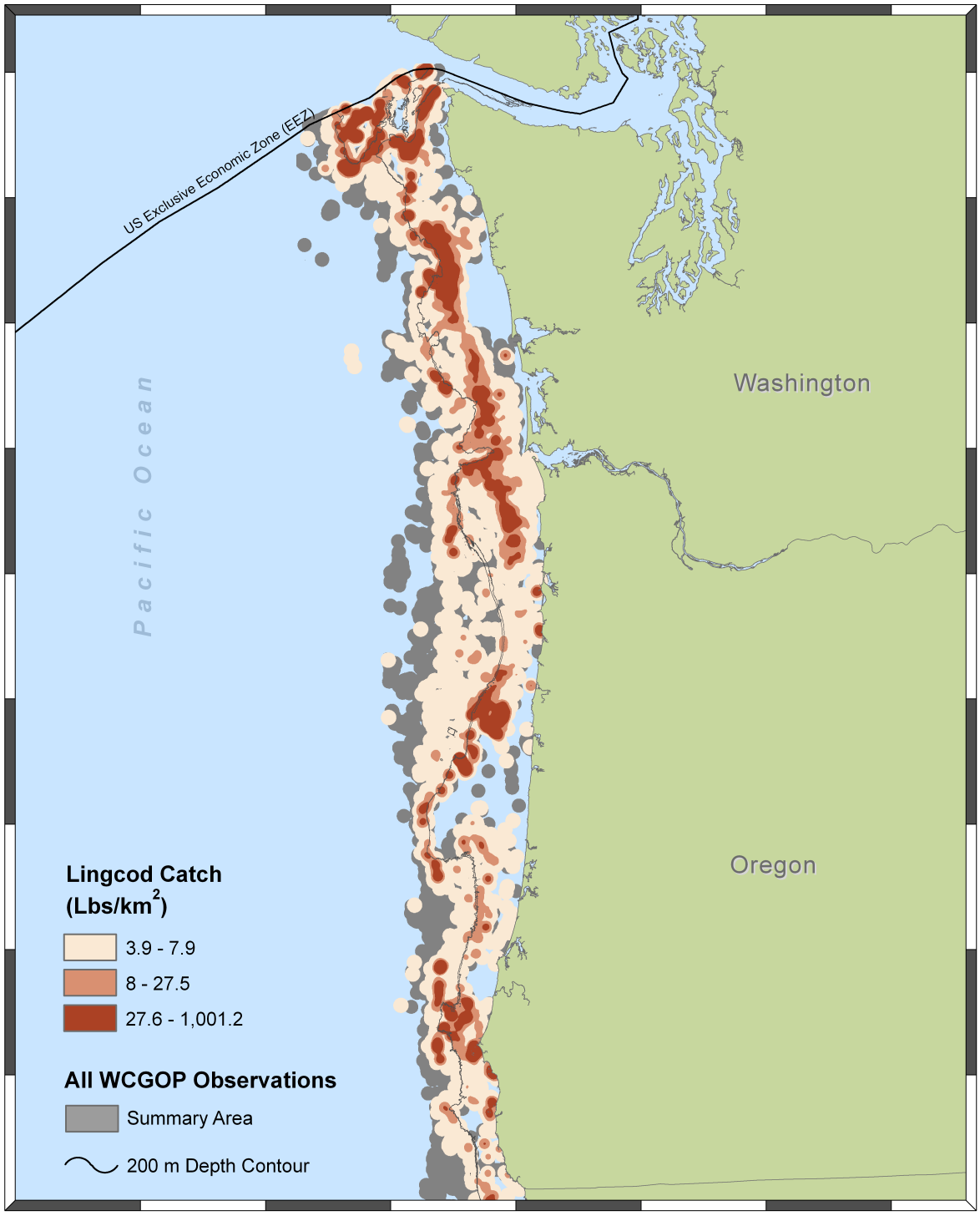

US Exclusive Economic Zone (EEZ)
Pacific Ocean
Washington
Oregon
Lingcod Catch
(Lbs/km2)
3.9 - 7.9
8 - 27.5
27.6 - 1,001.2
All WCGOP Observations
Summary Area
200 m Depth Contour
2002 - April 2008
West Coast Groundfish Observer Program
M. Bellman
04/03/2009
0 25 50 Kilometers
Albers Projection NAD 83
NOAA

Figure 1. Map of density of occurrence of Lingcod in the observed fishery off of (A) Washington and Oregon and (B) California (next page),.

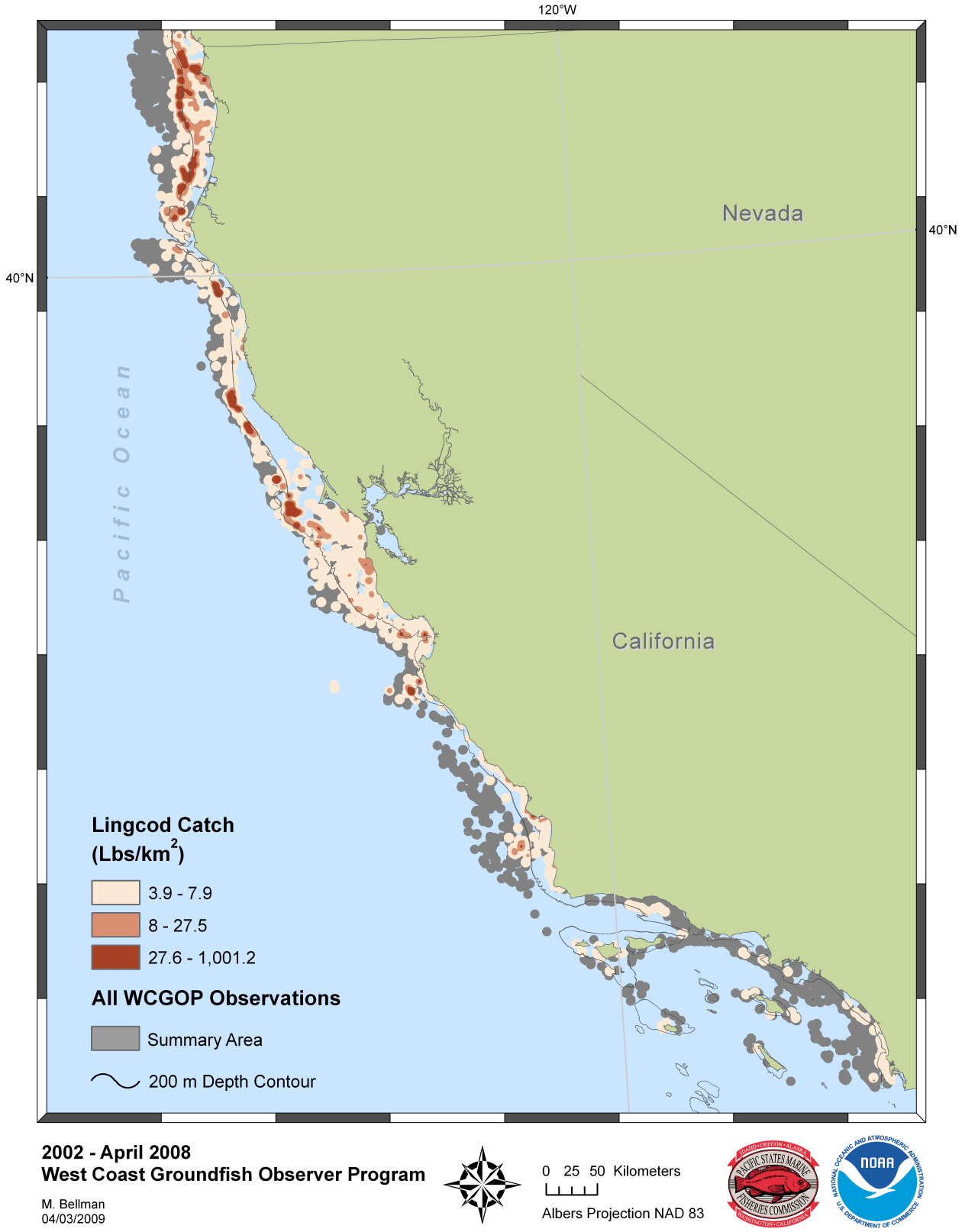
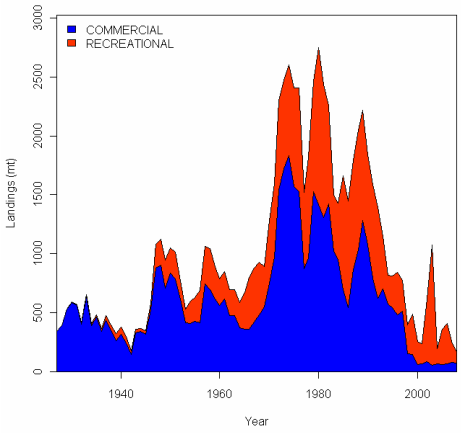


Figure 1 (cont.

California



Washington/Oregon

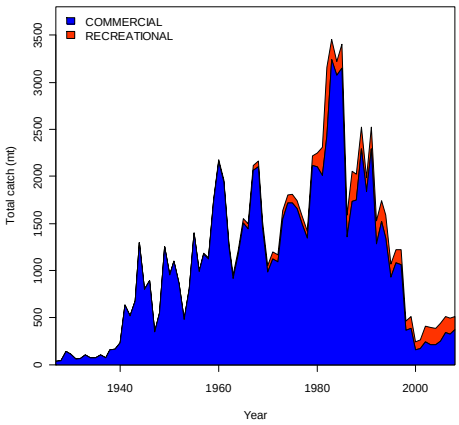


Figure 2. Time series of estimated fishery landings.

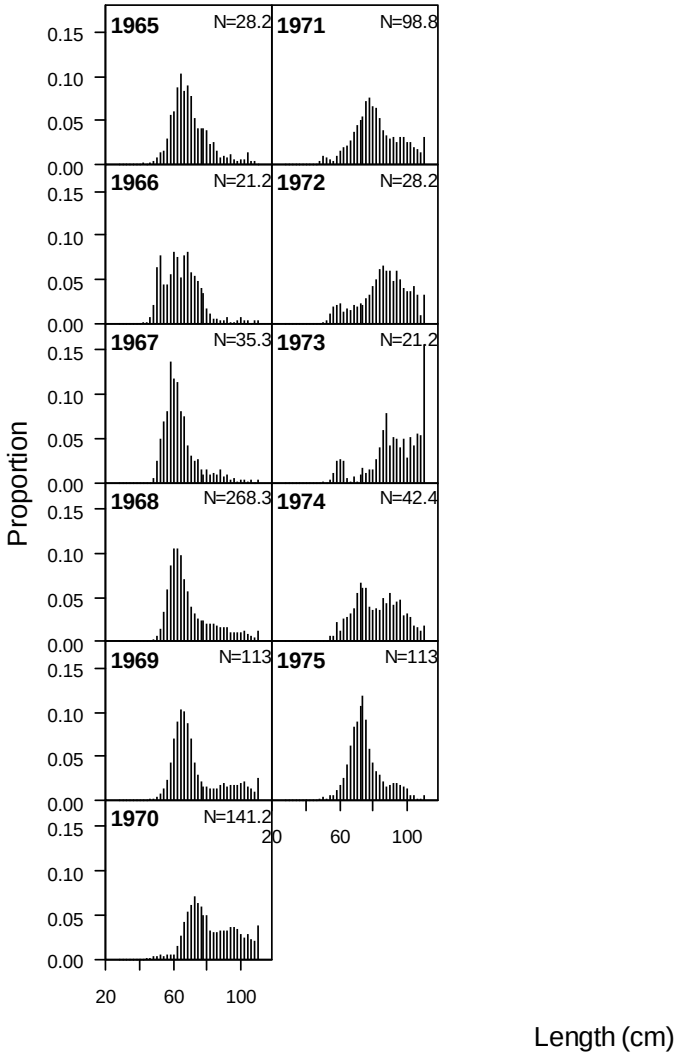


Figure 3. Washington/Oregon commercial retained combined-sex length compositions 1965-1975.

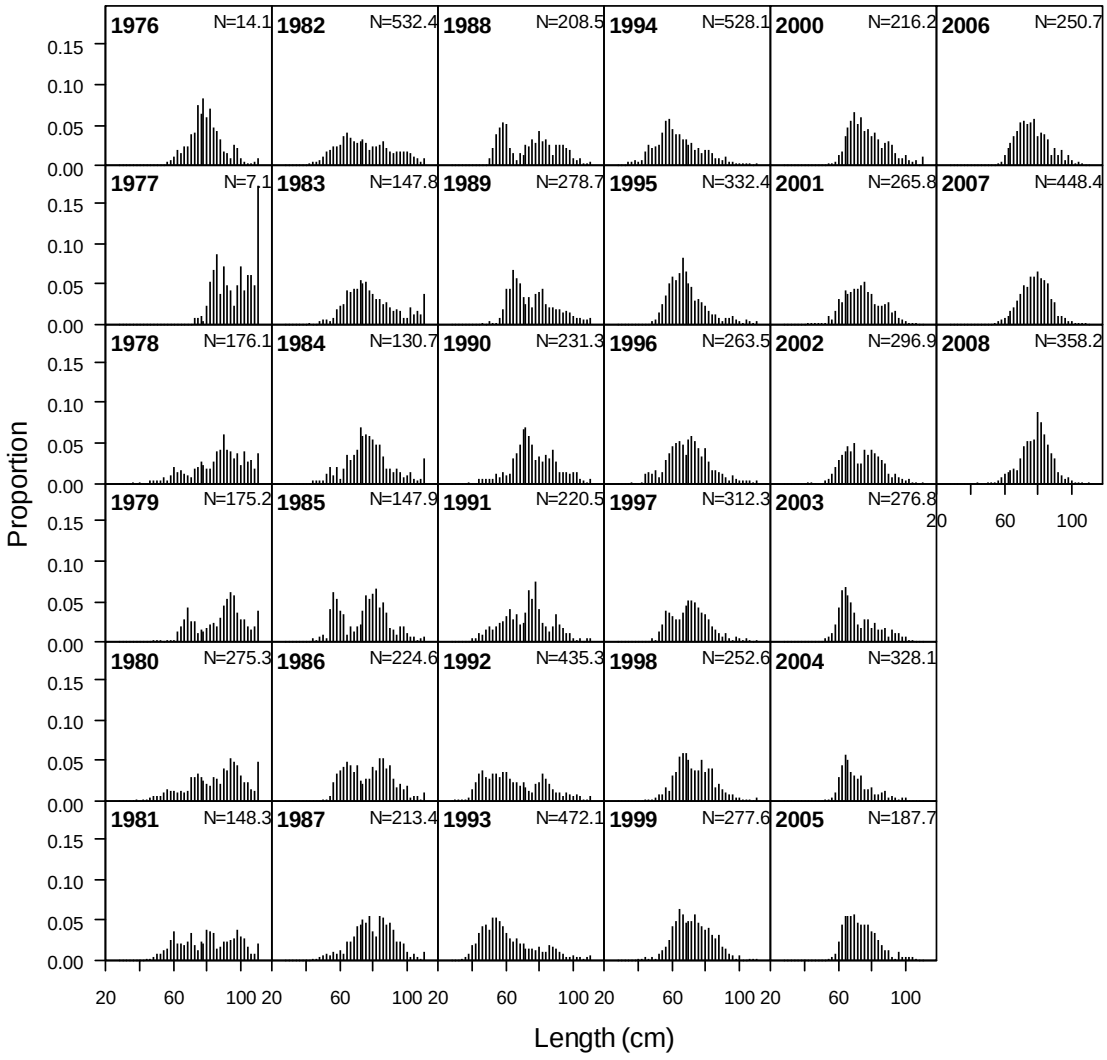


Figure 4. Washington/Oregon commercial retained female length compositions 1976-2008.

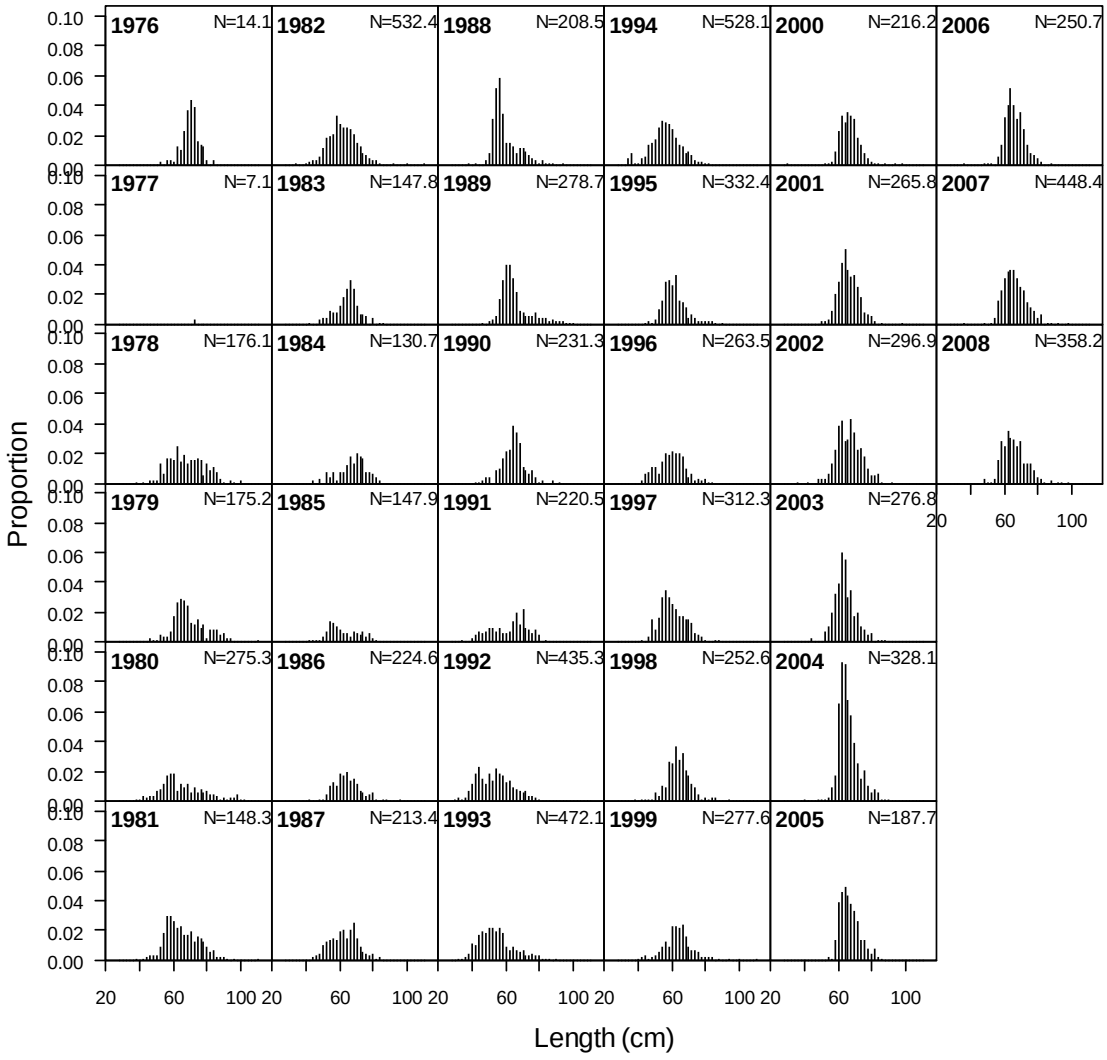


Figure 5. Washington/Oregon commercial retained male length compositions 1976-2008.

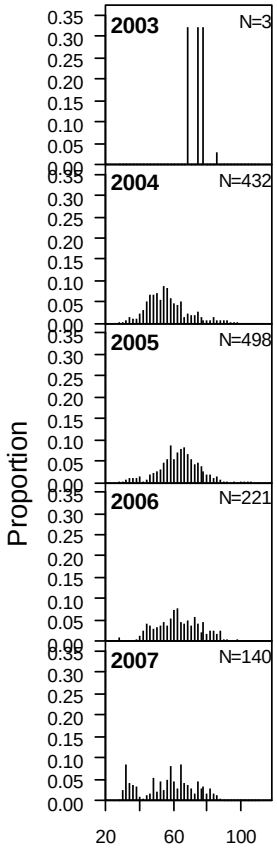


Figure 6. Washington/Oregon commercial discard combined-sex length compositions 2003-2007.

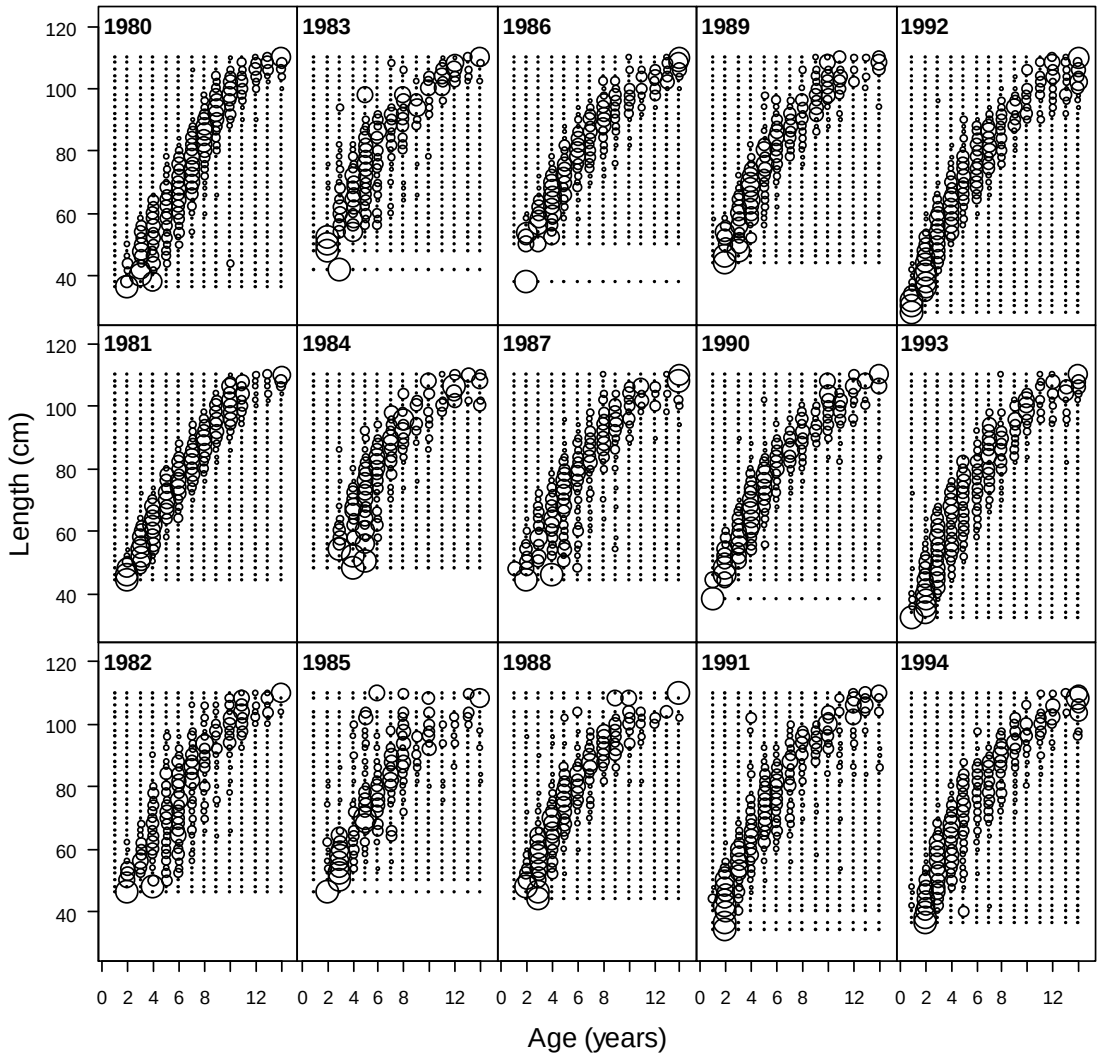


Figure 7. Washington/Oregon commercial retained female conditional age-at-length compositions 1980-1994.

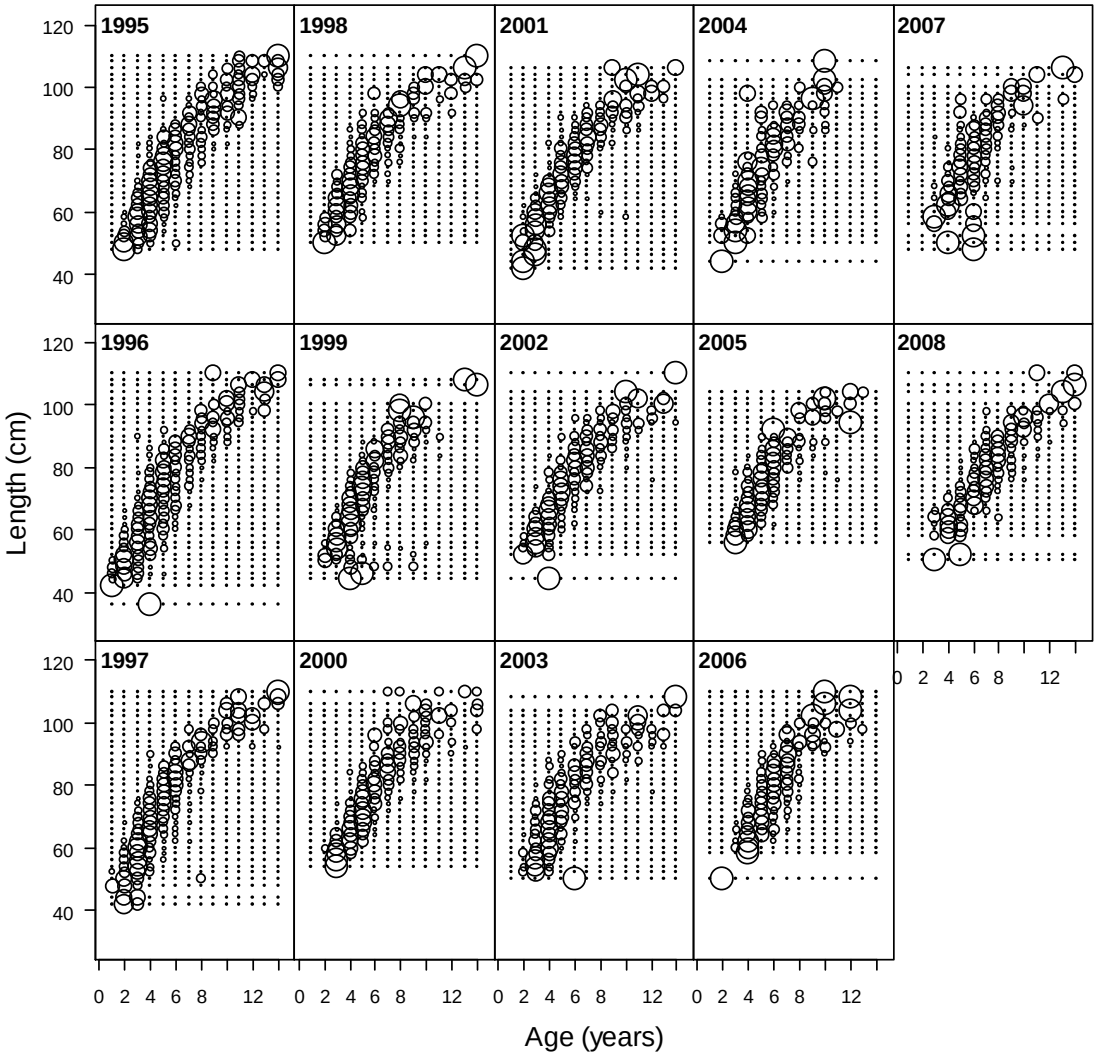


Figure 8. Washington/Oregon commercial retained female conditional age-at-length compositions 1995-2008.

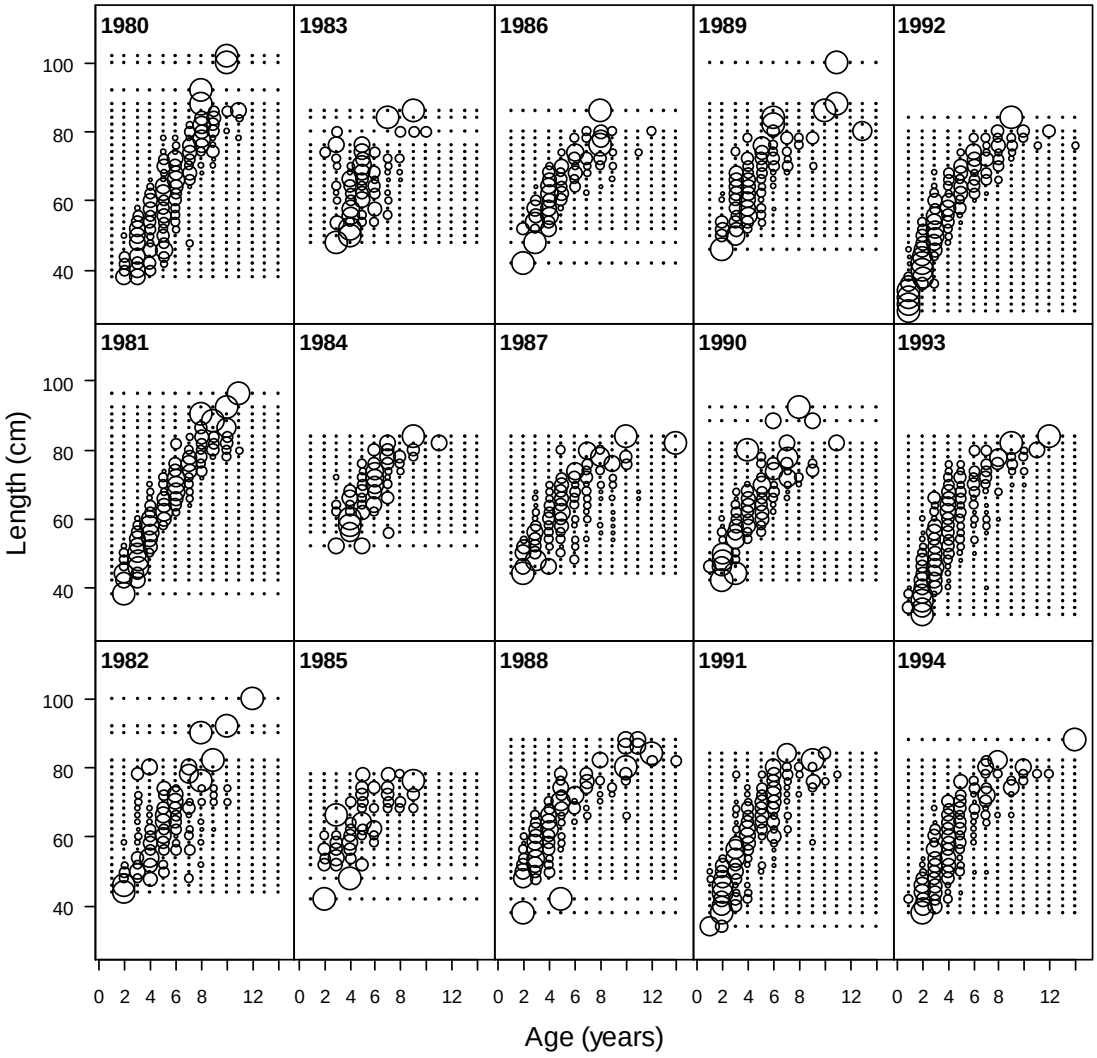


Figure 9. Washington/Oregon commercial retained male conditional age-at-length compositions 1980-1994.

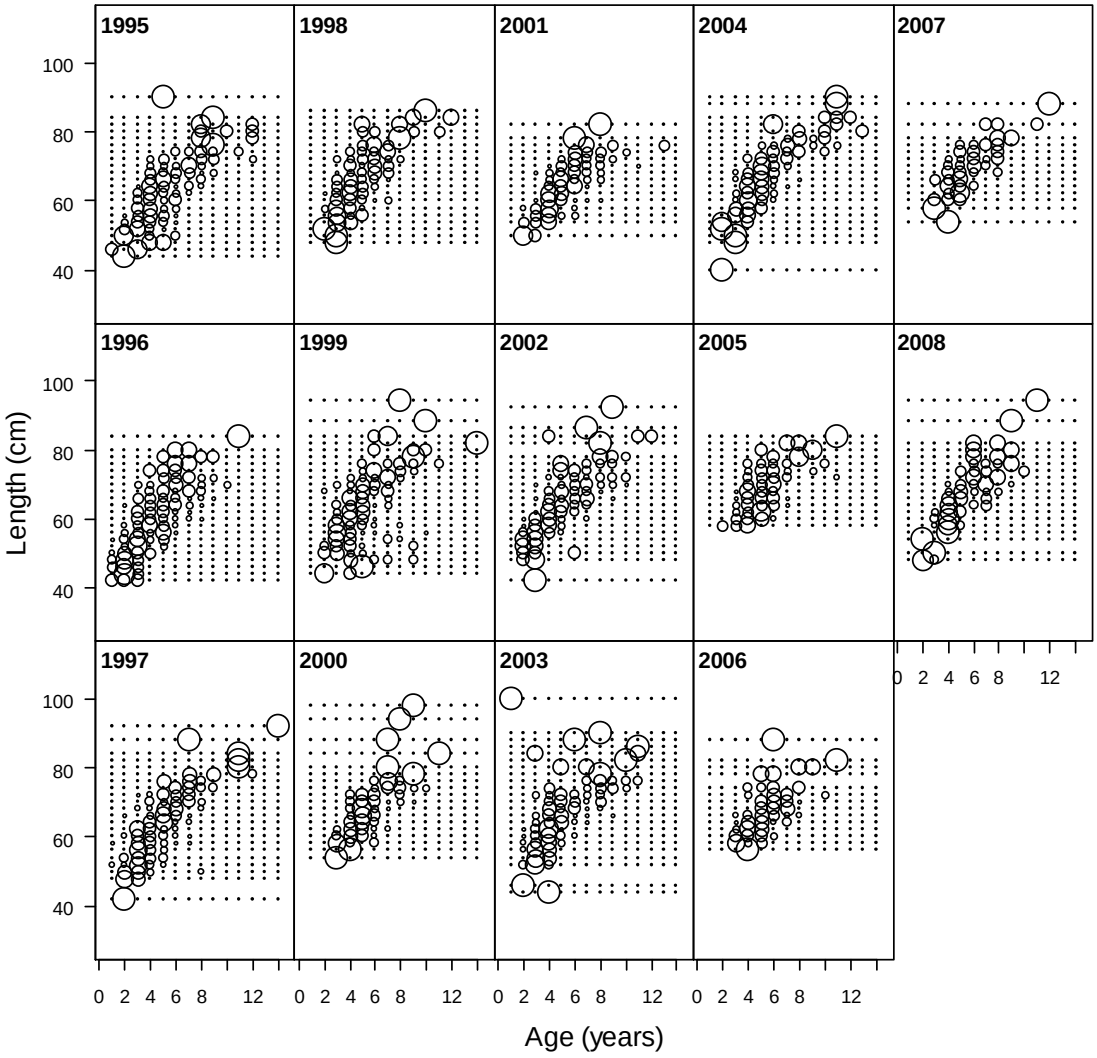


Figure 10. Washington/Oregon commercial retained male conditional age-at-length compositions 1995-2008.

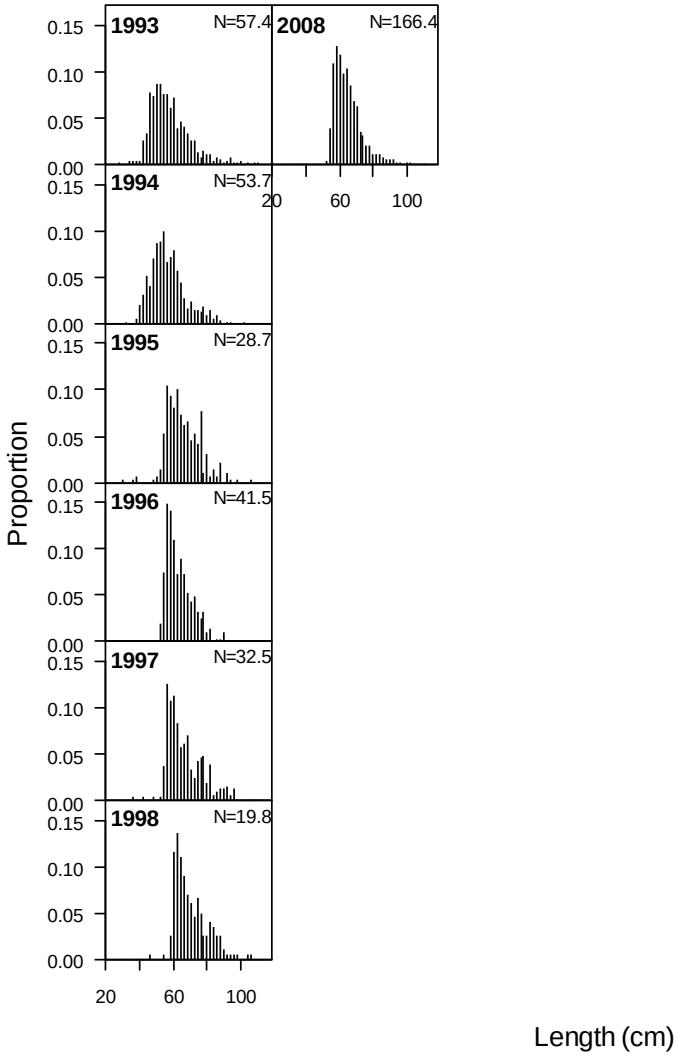


Figure 11. Washington/Oregon recreational combined-sex landings 1993-1998 and 2008.

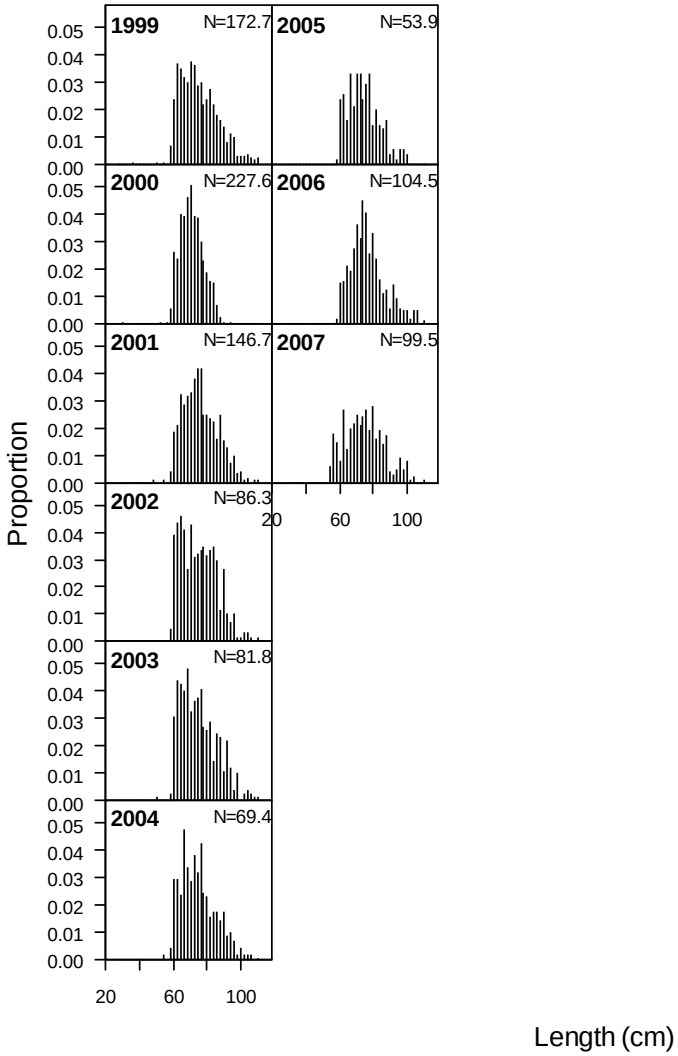


Figure 12. Washington/Oregon recreational female length compositions 1993-2007.

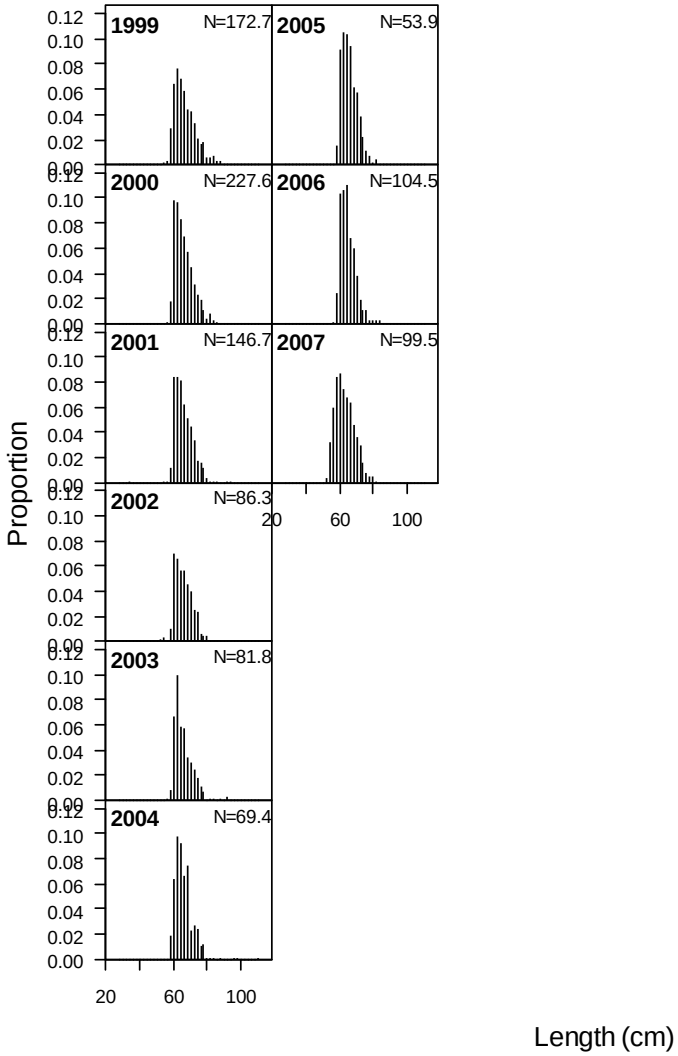


Figure 13. Washington/Oregon recreational male length compositions 1999-2007.

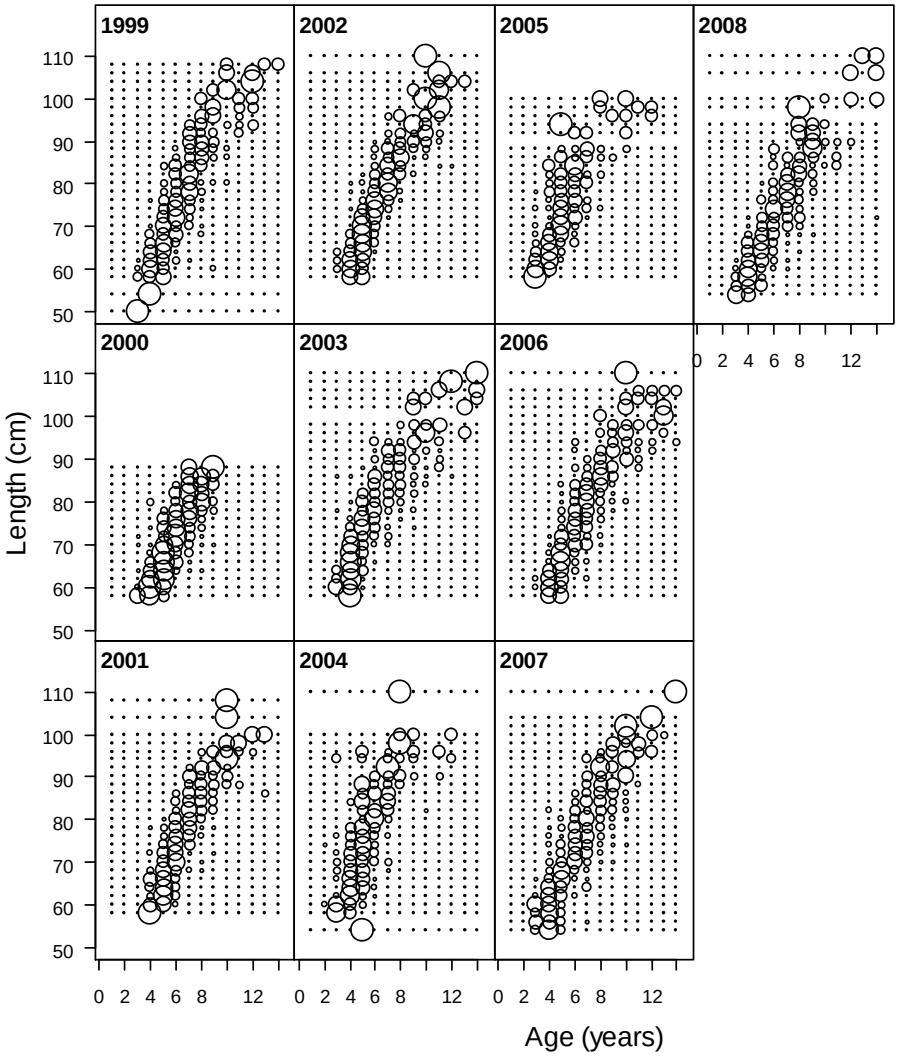


Figure 14. Washington/Oregon recreational female conditional age-at-length compositions 1999-2007.

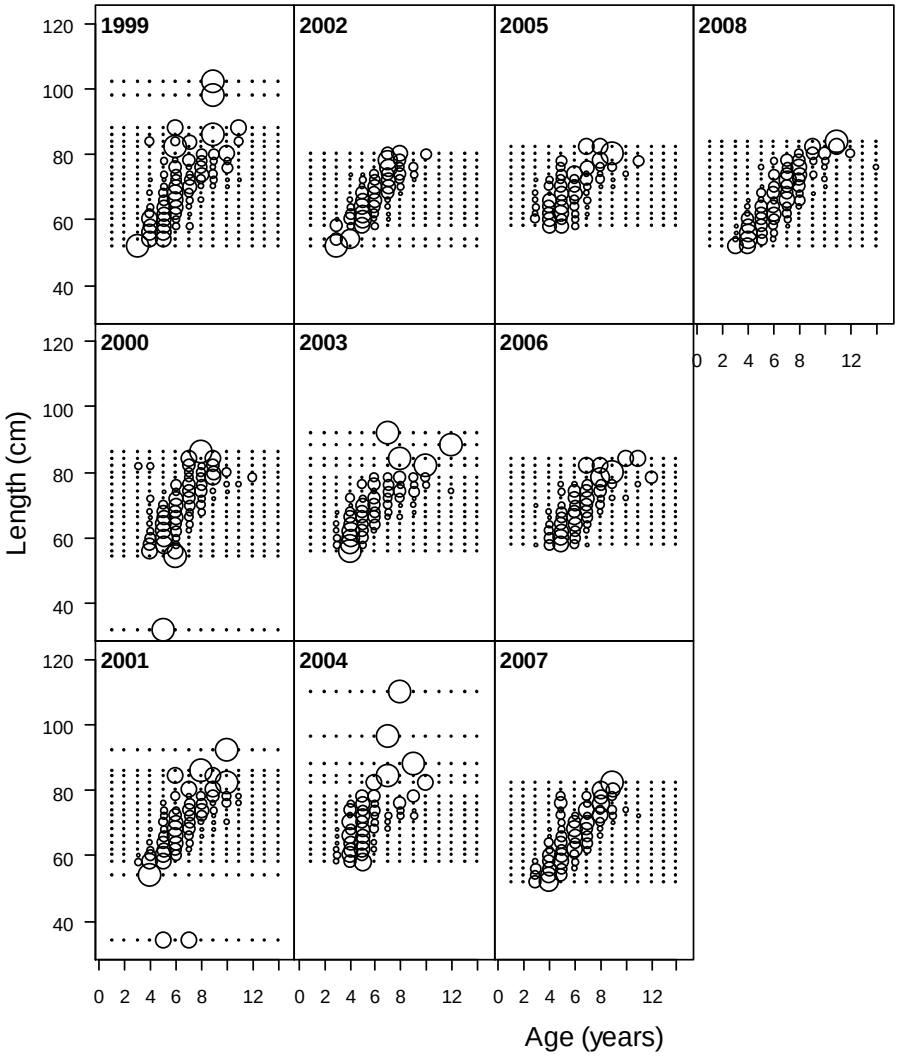


Figure 15. Washington/Oregon recreational male conditional age-at-length compositions 1999-2007.

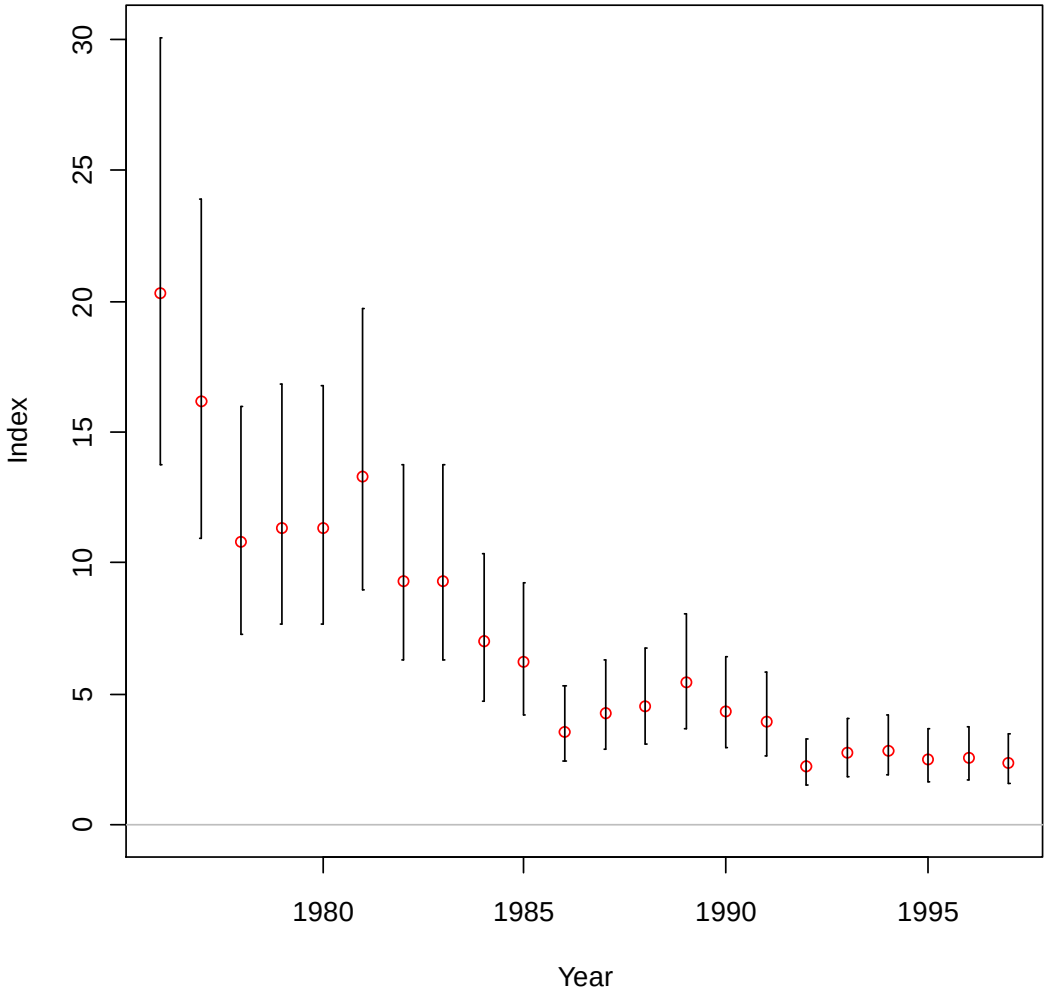


Figure 16. Northern commercial CPUE series for Washington/Oregon assessment.

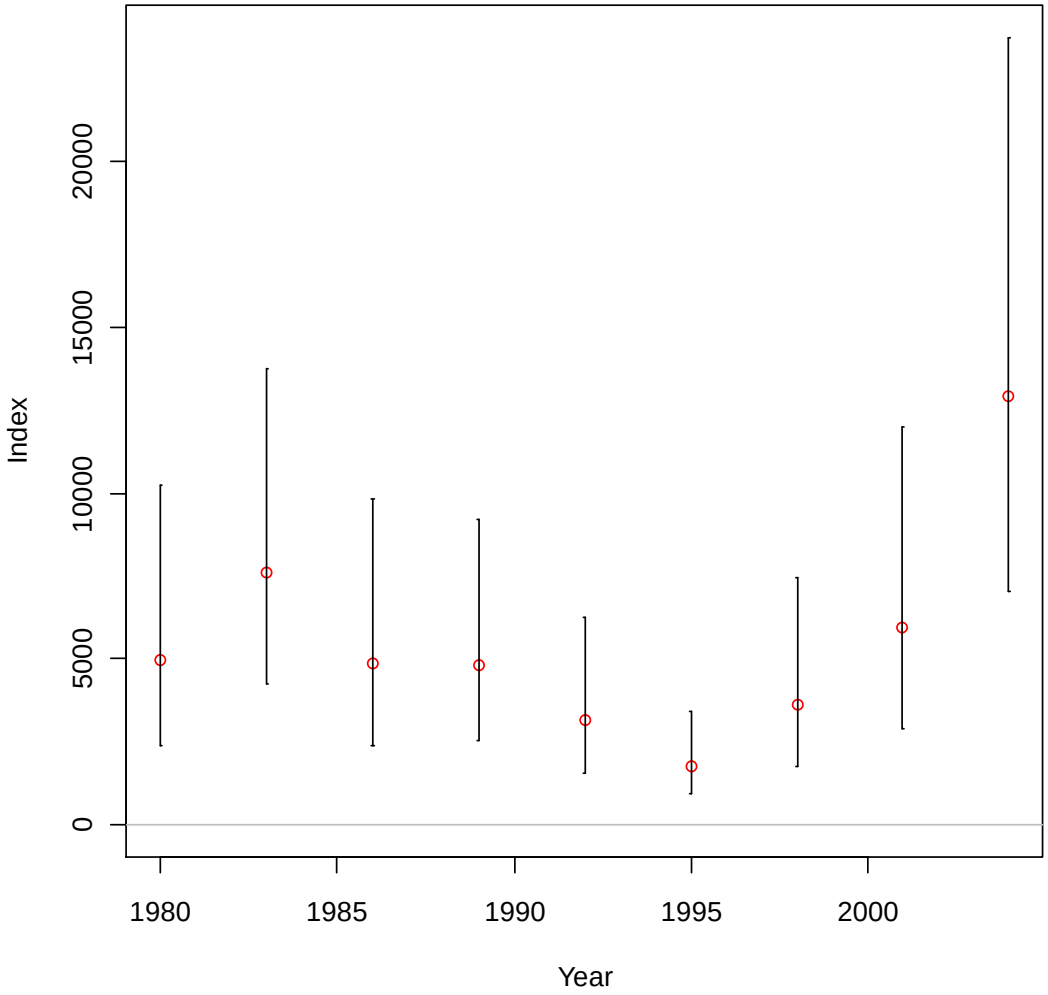


Figure 17. Washington/Oregon Triennial Survey Time Series.

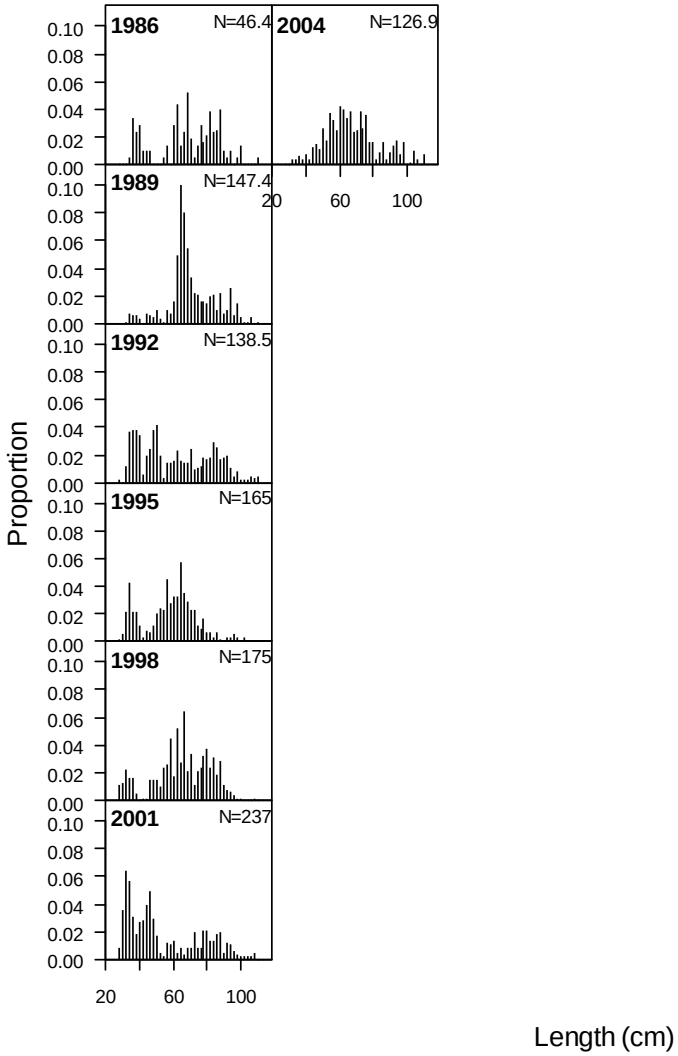


Figure 18. Washington/Oregon Triennial survey female length compositions 1986-2004.

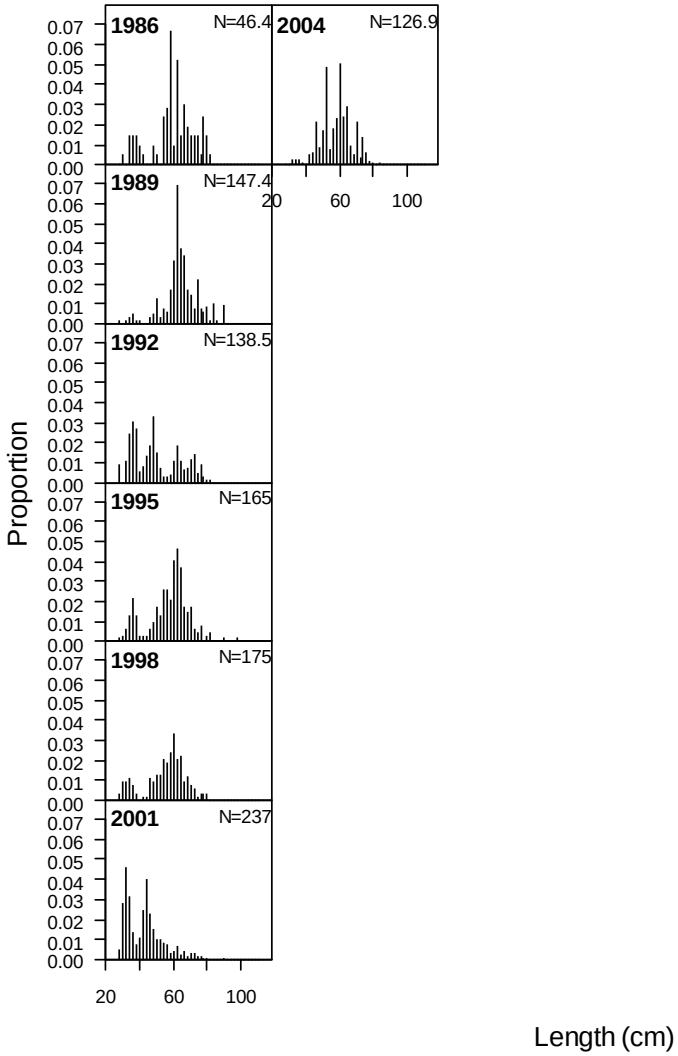


Figure 19. Washington/Oregon Triennial survey male length compositions 1986-2004.

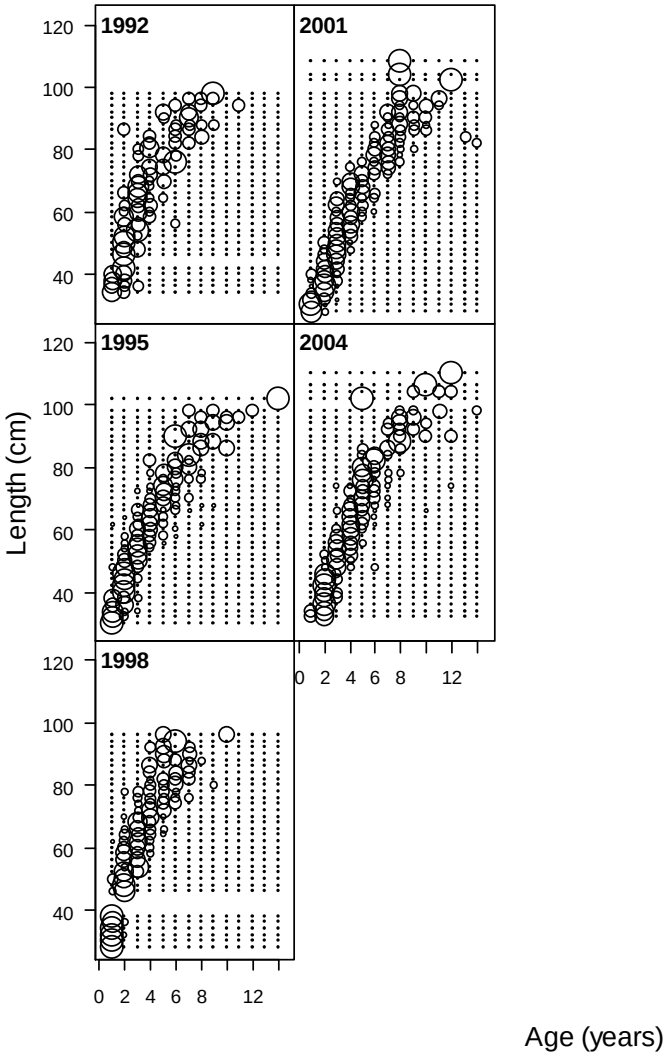


Figure 20. Washington/Oregon Triennial female conditional age-at-length compositions 1999-2007.

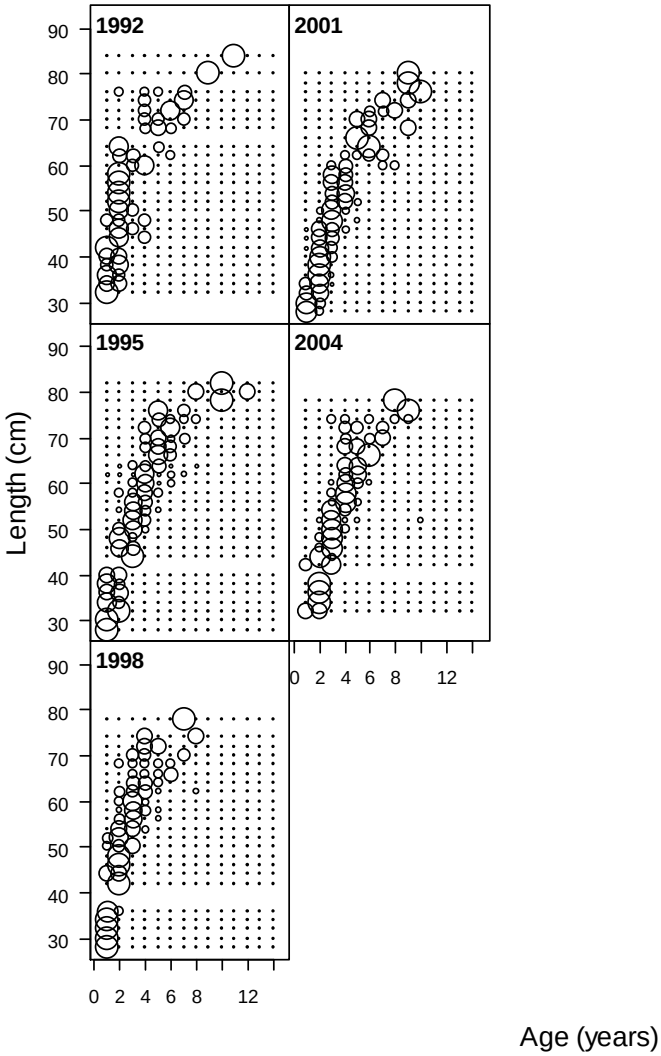


Figure 21. Washington/Oregon Triennial male conditional age-at-length compositions 1999-2007.

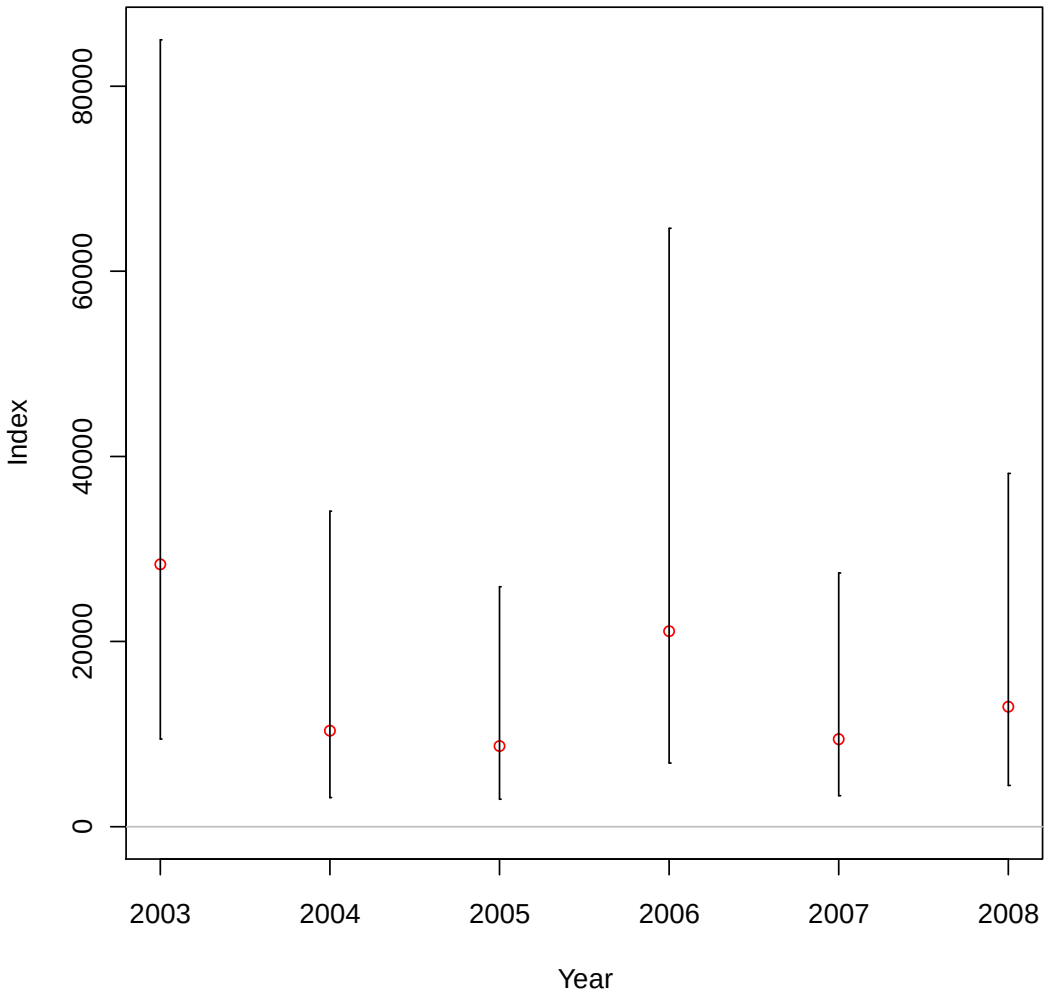


Figure 22. Washington/Oregon NWFSC Survey Time Series.

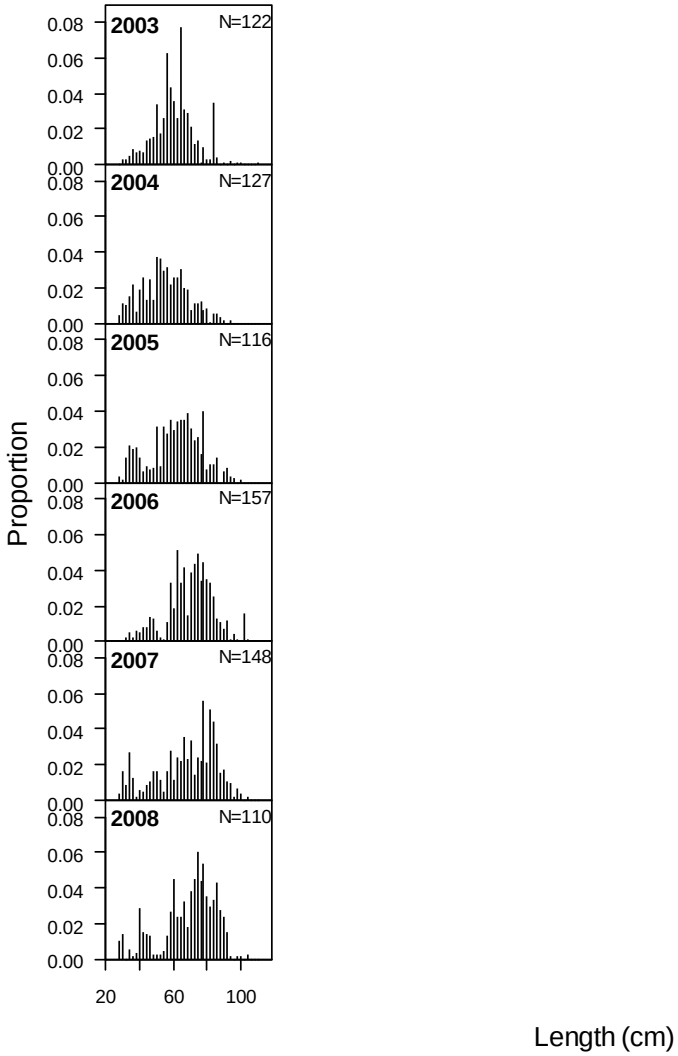


Figure 23. Washington/Oregon NWFSC survey female length compositions 2003-2008.

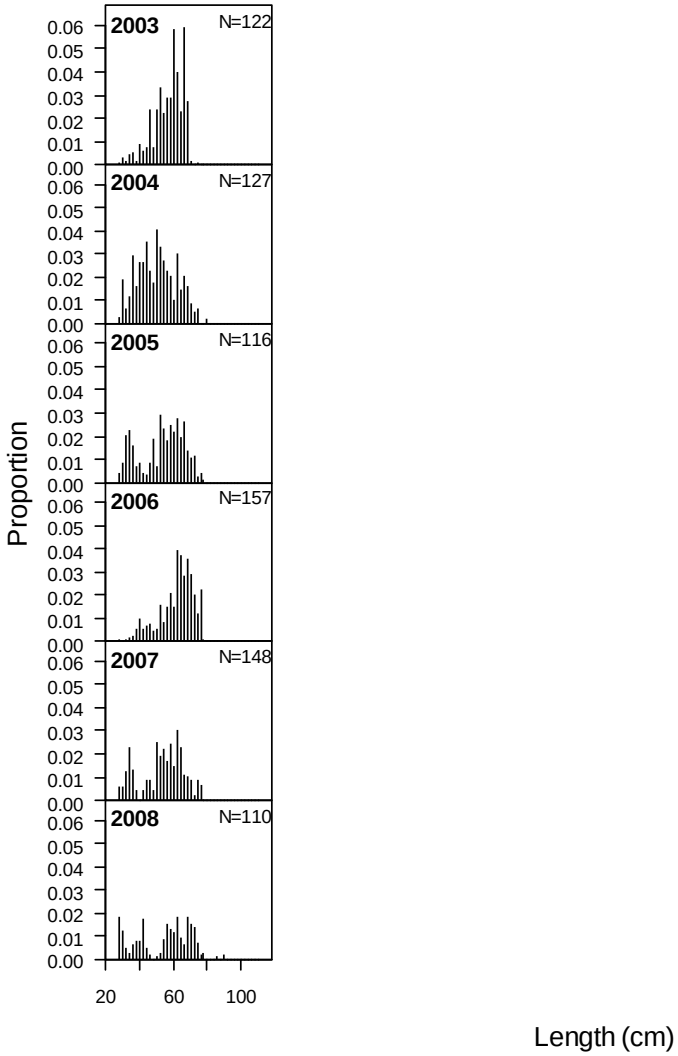


Figure 24. Washington/Oregon NWFSC survey male length compositions 2003-2008.

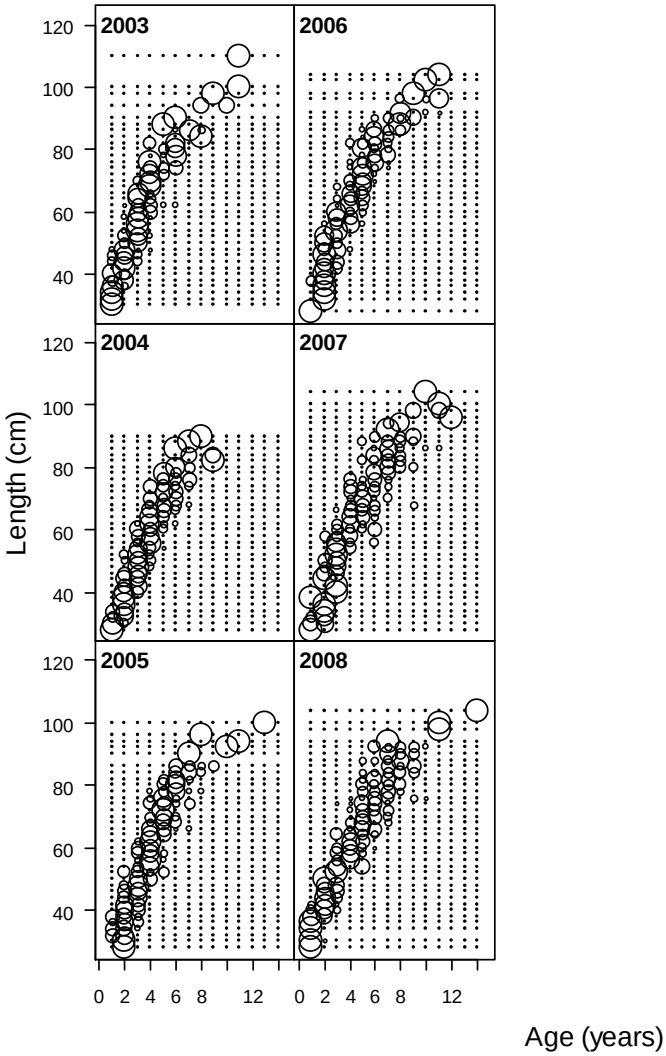


Figure 25. Washington/Oregon NWFSC female conditional age-at-length compositions 2003-2008.

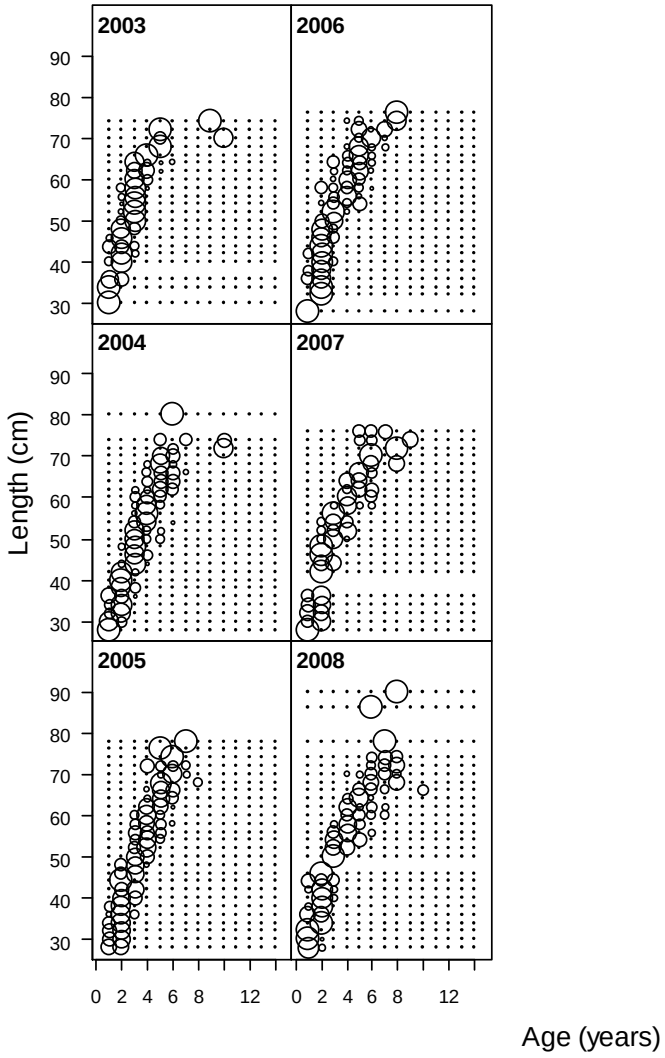


Figure 26. Washington/Oregon NWFSC male conditional age-at-length compositions 2003-2008.

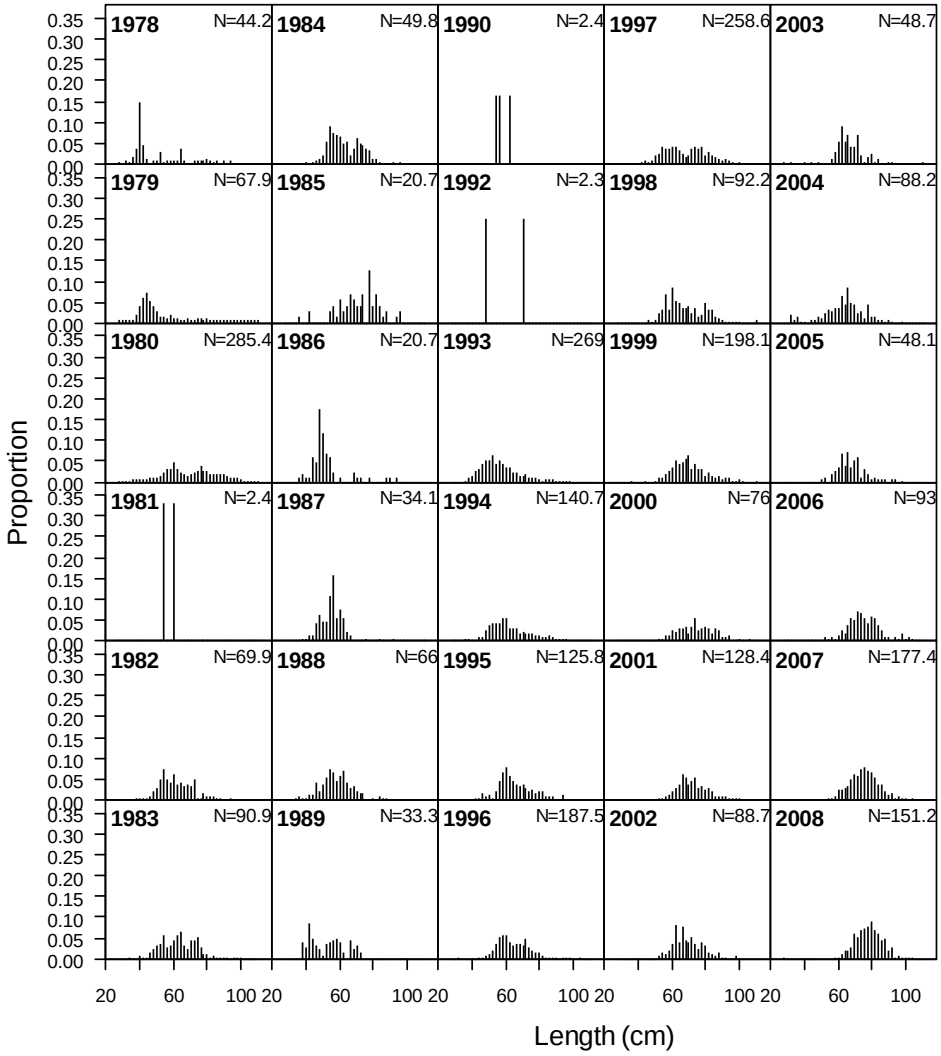


Figure 27. California commercial retained female length compositions 1978-2008.

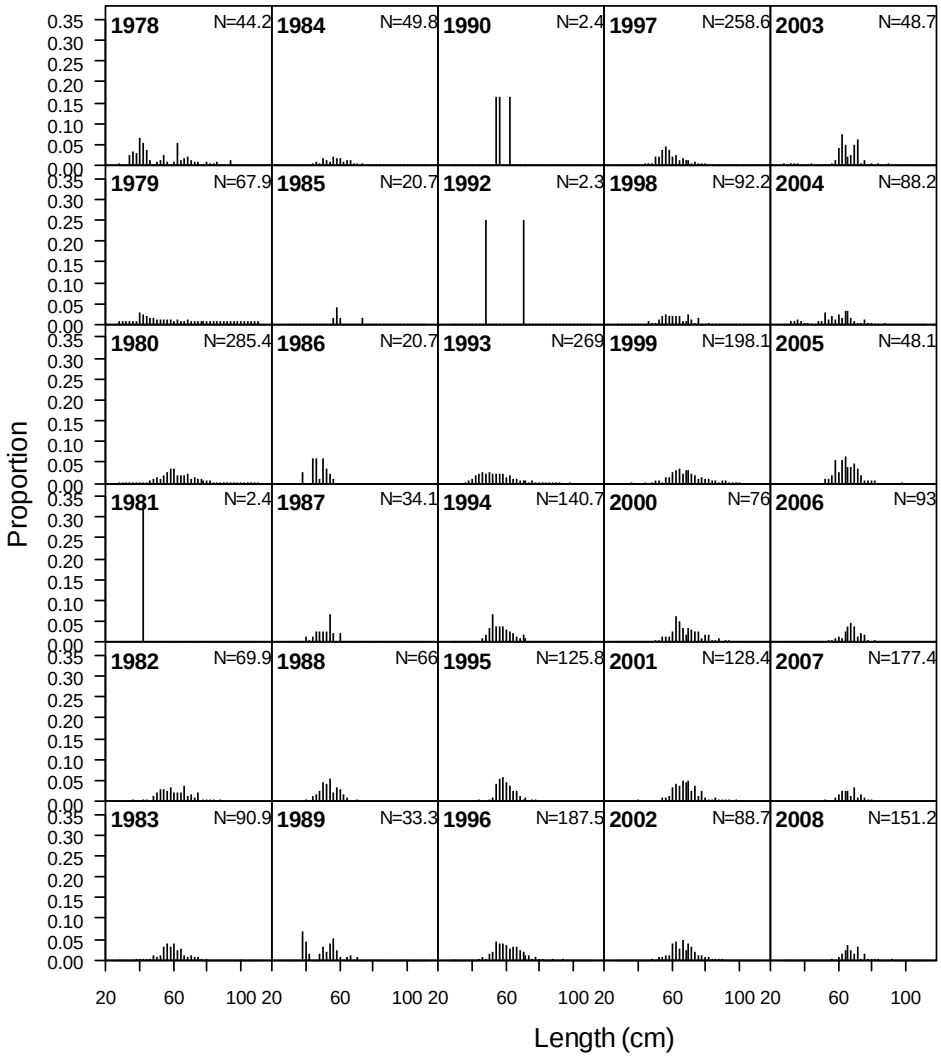


Figure 28. California commercial retained male length compositions 1976-2008.

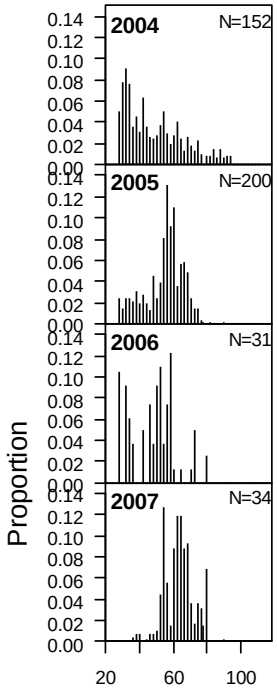


Figure 29. California commercial discard combined-sex length compositions 2004-2007.

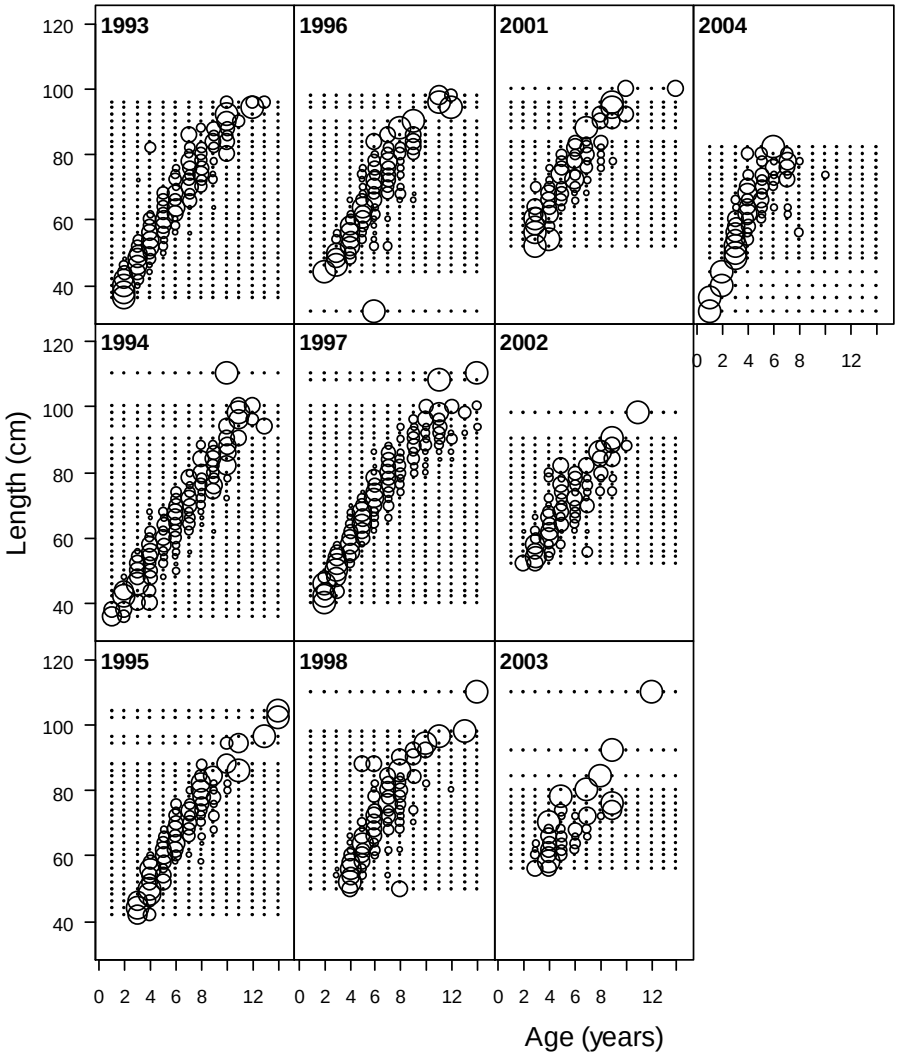


Figure 30. California commercial retained female conditional age-at-length compositions 1987-2004.

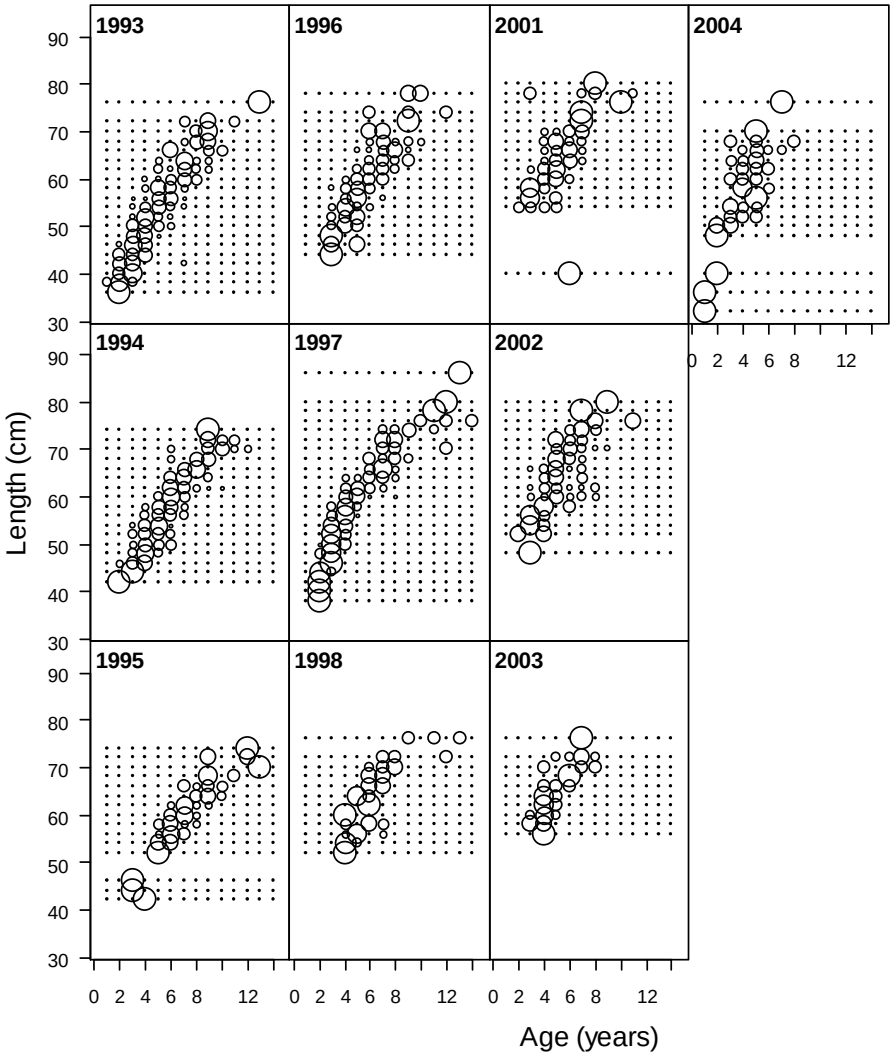


Figure 31. California commercial retained male conditional age-at-length compositions 1987-2004.

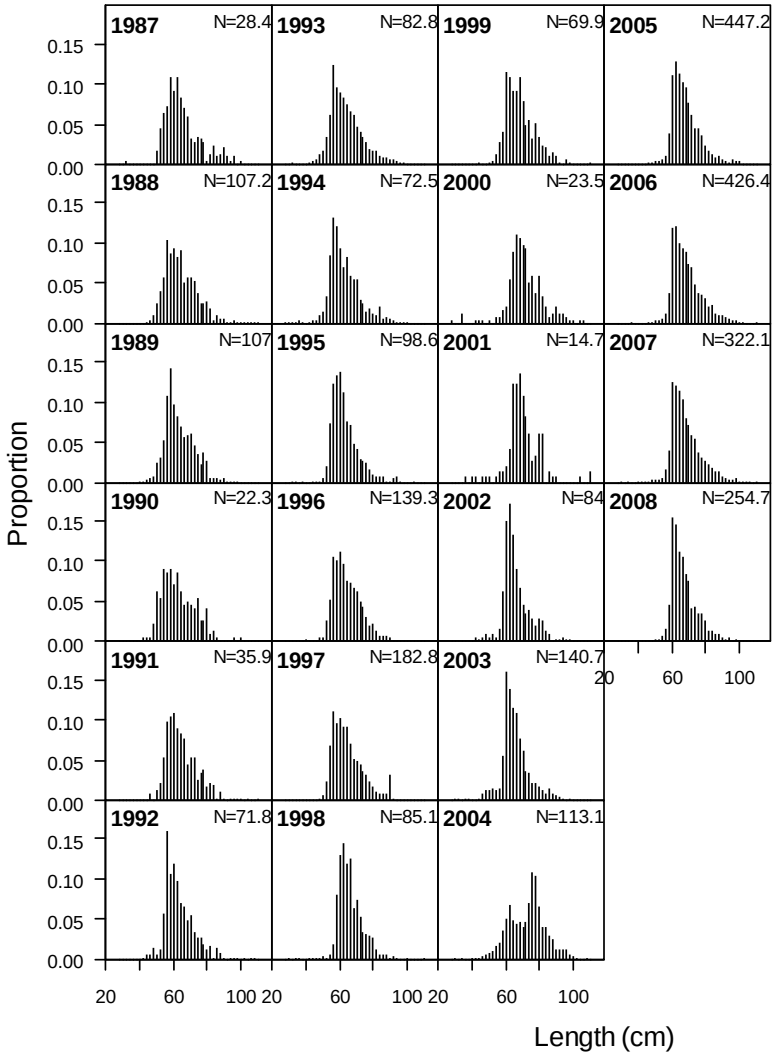


Figure 32. California recreational combined-sex length compositions 1987-2008.

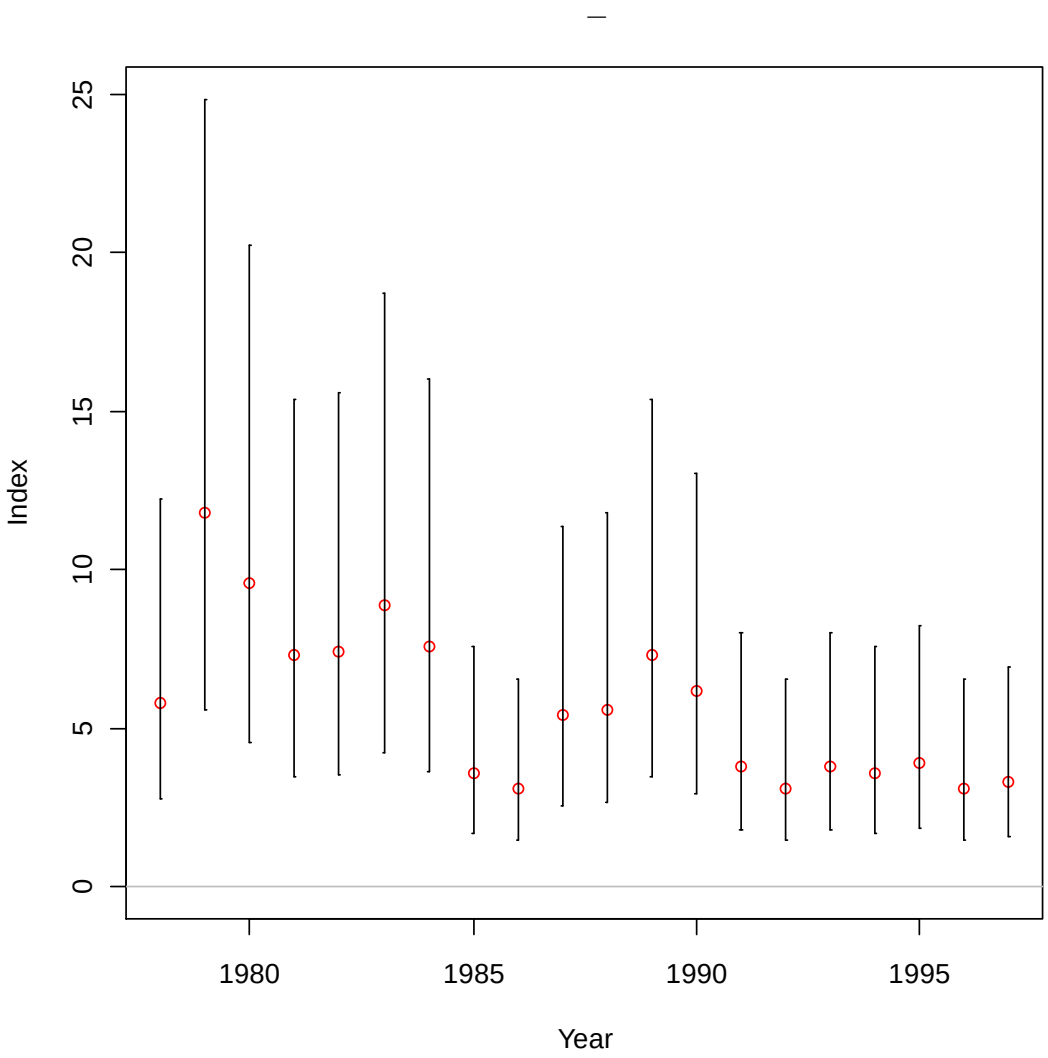


Figure 33. Southern commercial CPUE series for California assessment.

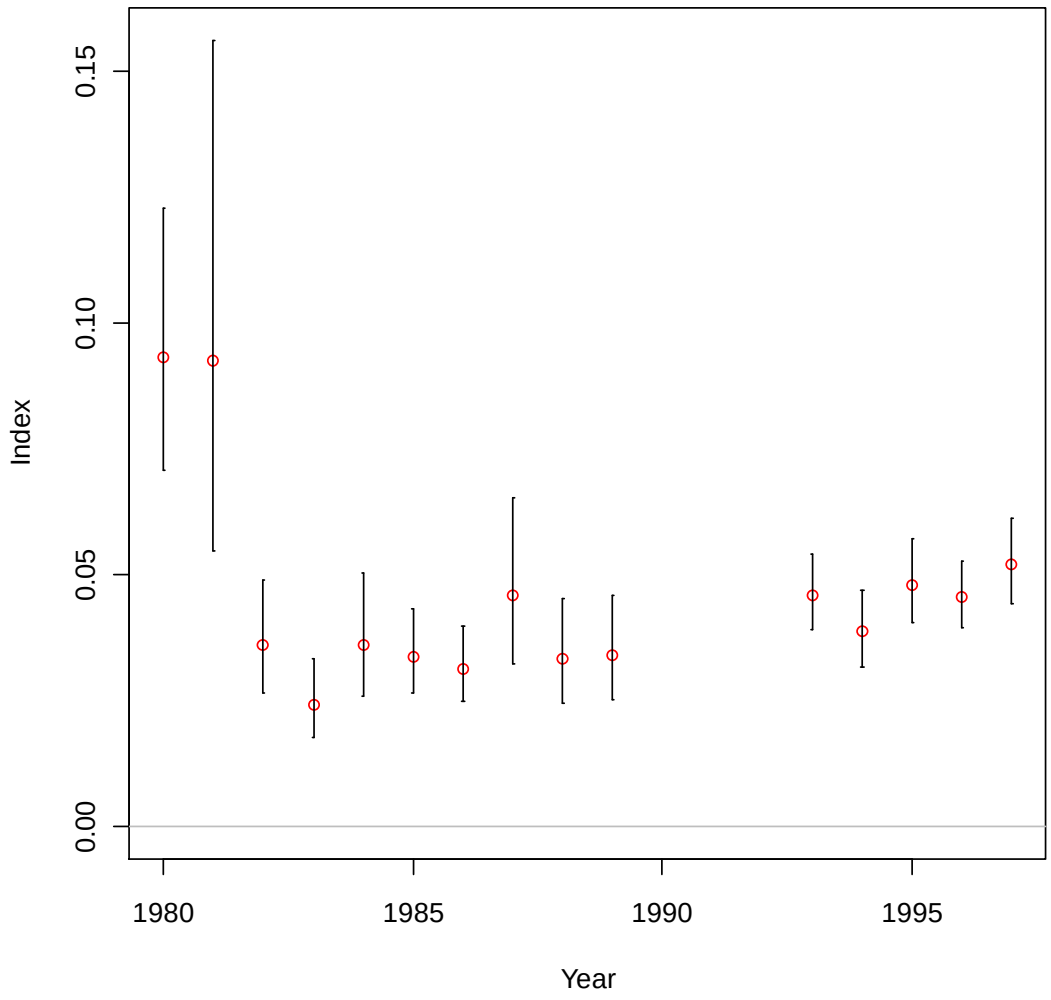


Figure 34. Southern recreational CPUE series for California assessment

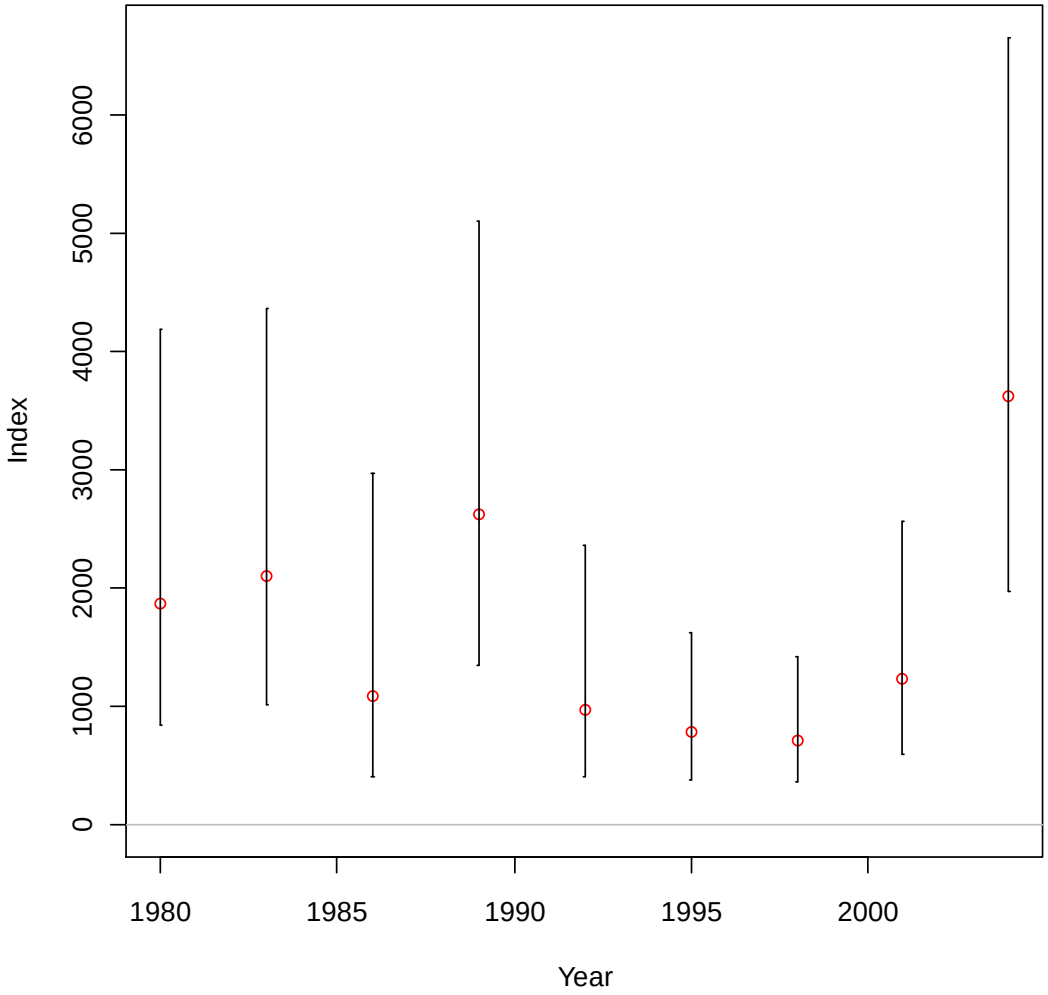


Figure 35. California Triennial Survey Time Series.

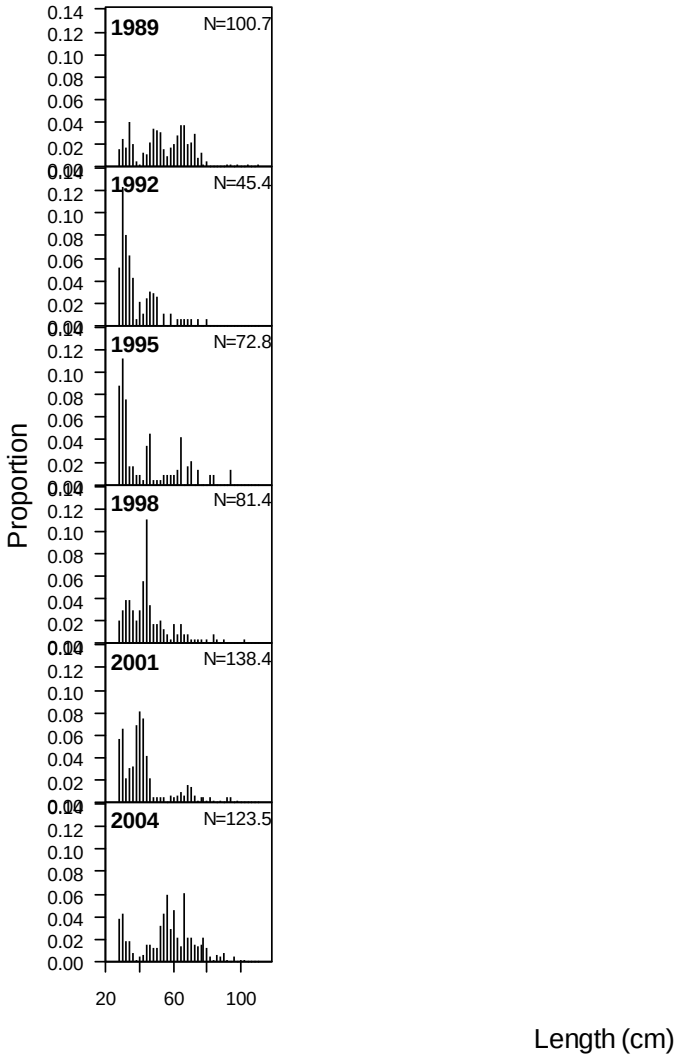


Figure 36. California Triennial survey female length compositions 1989-2004.

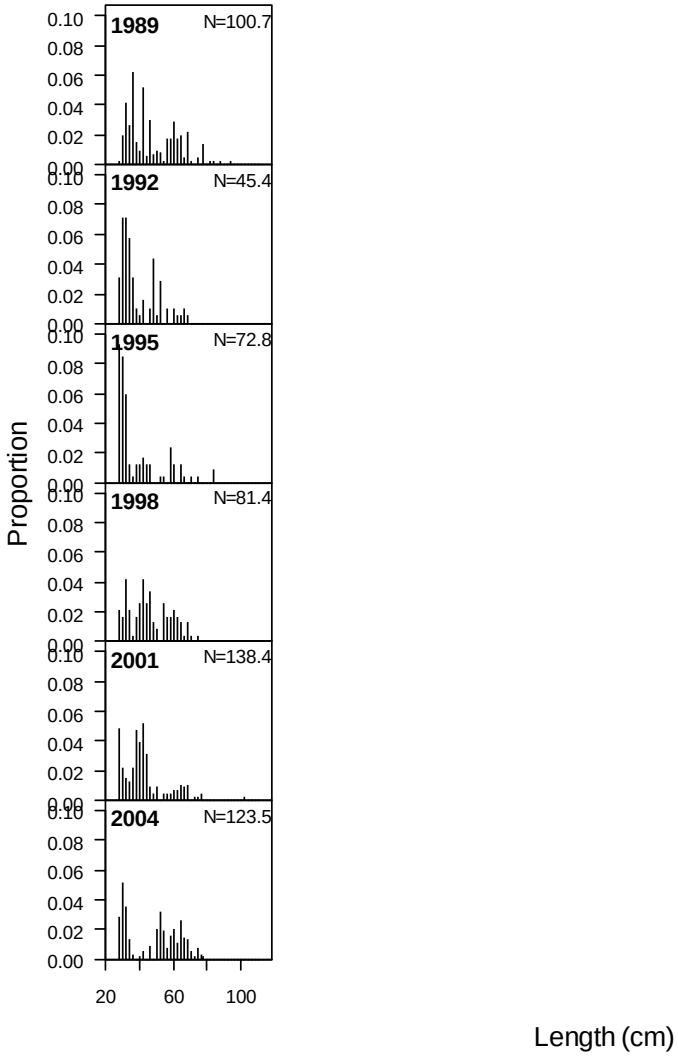


Figure 37. California Triennial survey male length compositions 1989-2004.

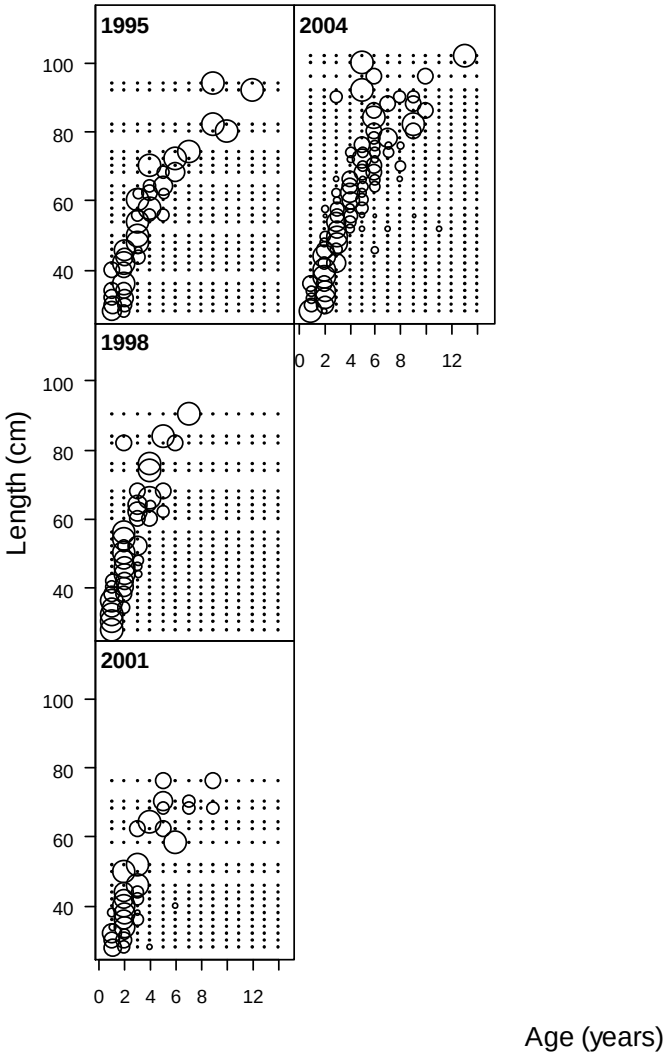


Figure 38. California Triennial female conditional age-at-length compositions 1995-2004.

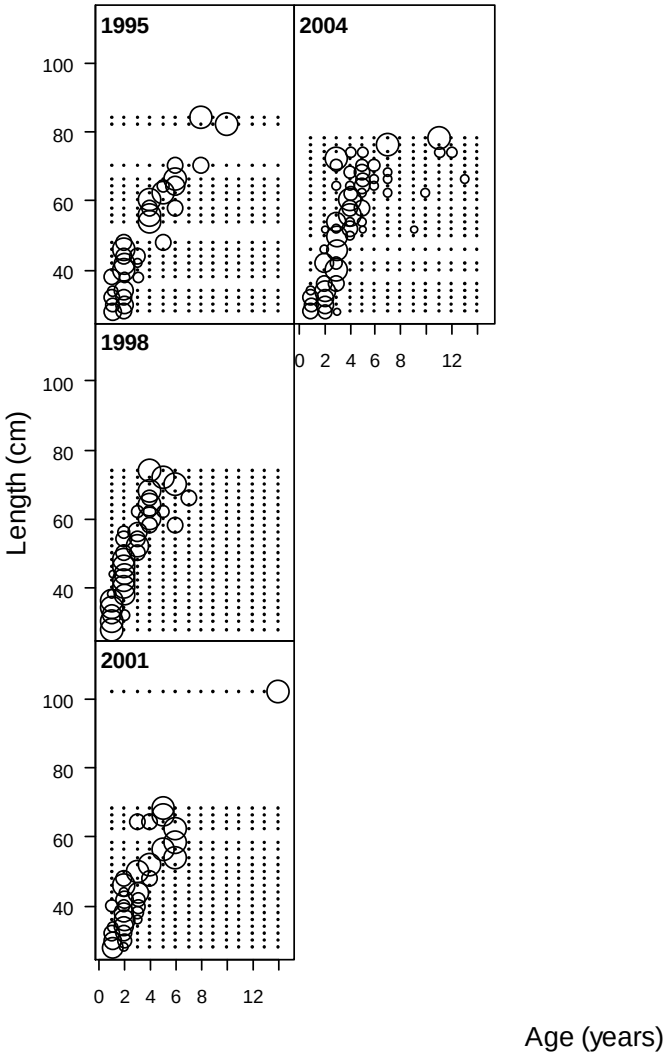


Figure 39. California Triennial male conditional age-at-length compositions 1989-2004.

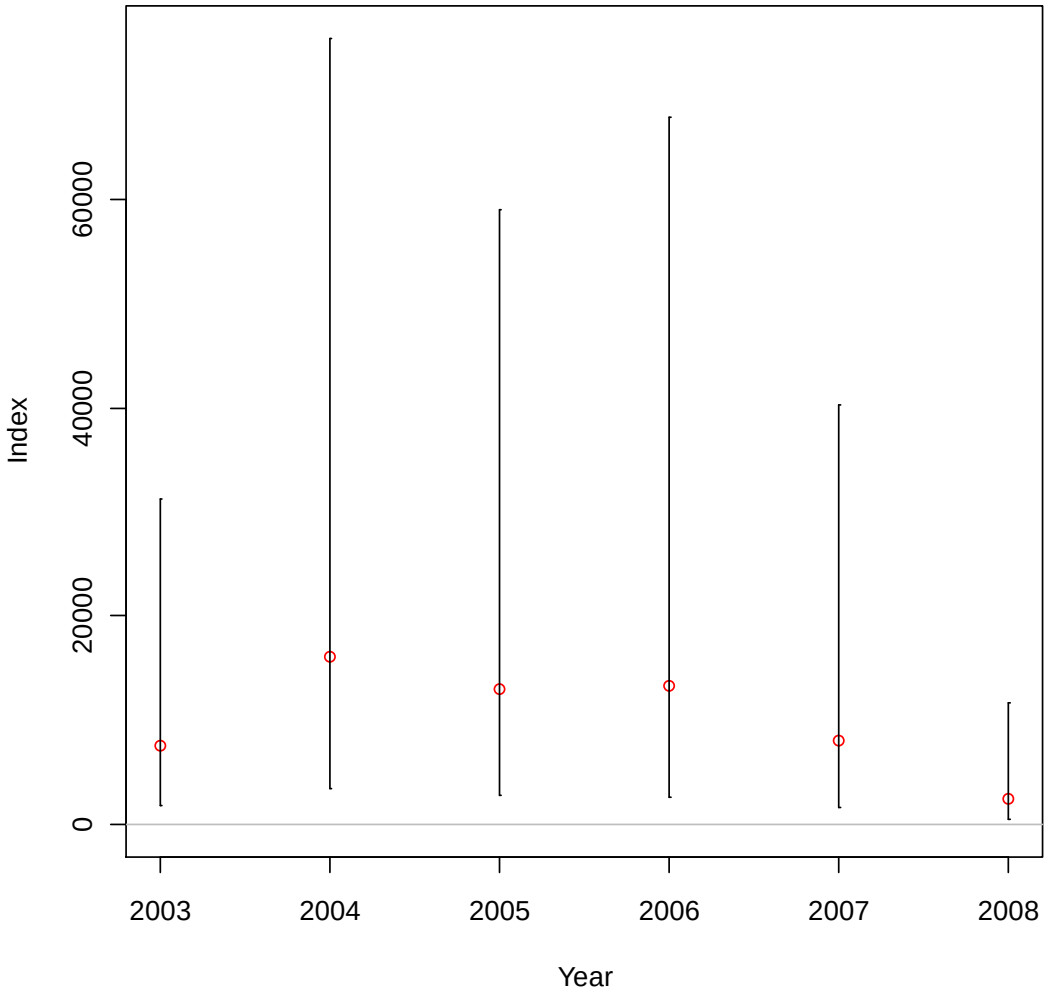


Figure 40. California NWFSC Survey Time Series.

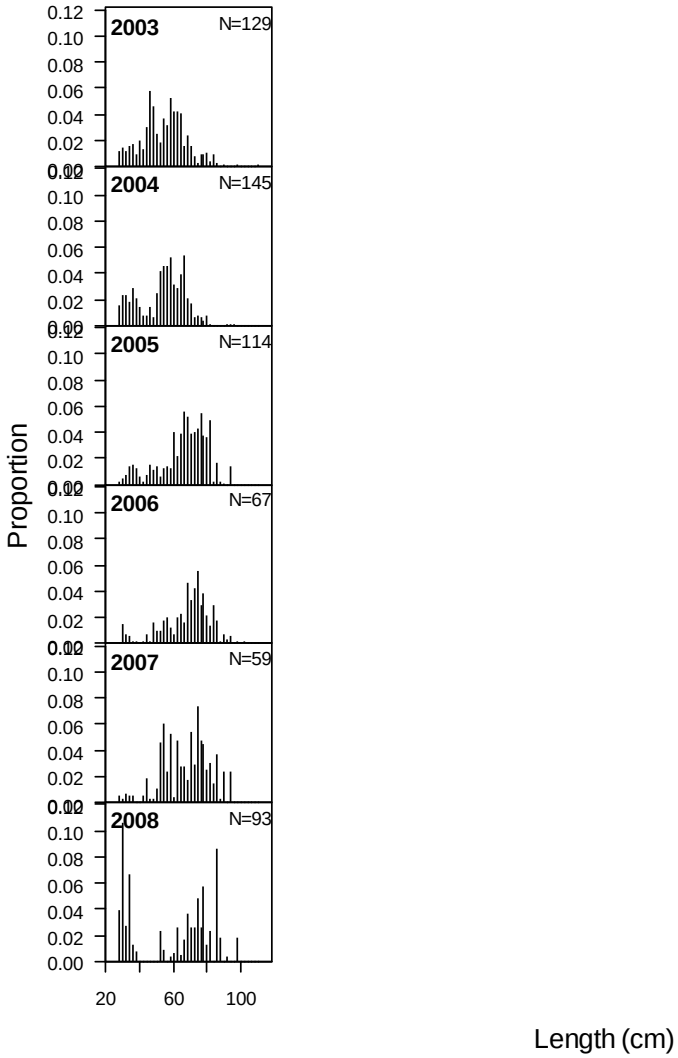


Figure 41. California NWFSC survey female length compositions 2003-2008.

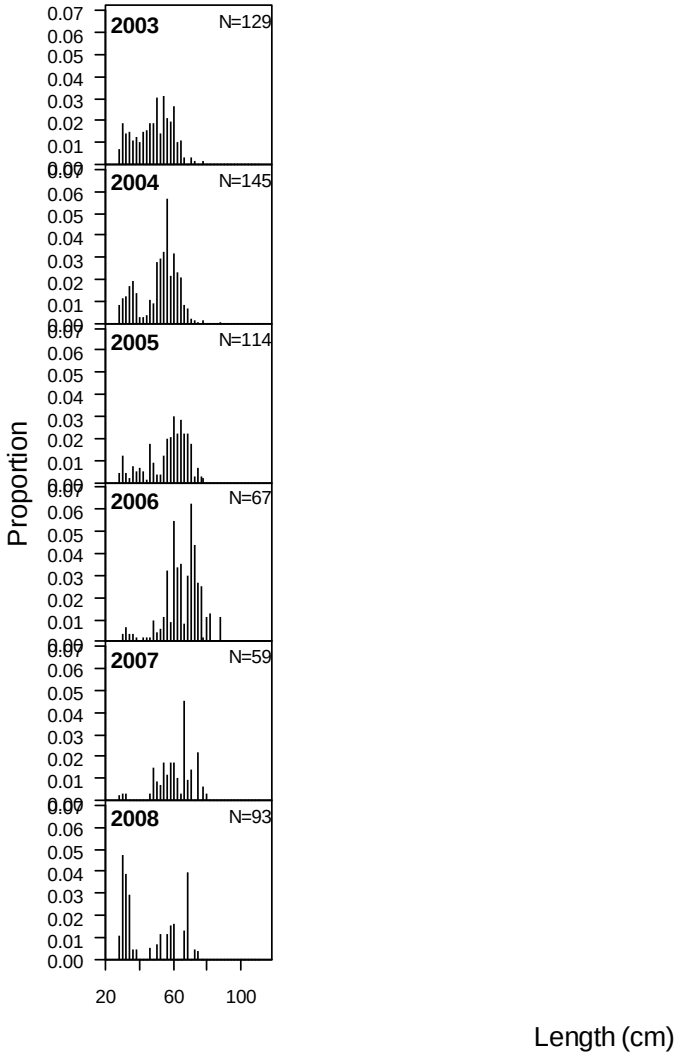


Figure 42. California NWFSC survey male length compositions 2003-2008.

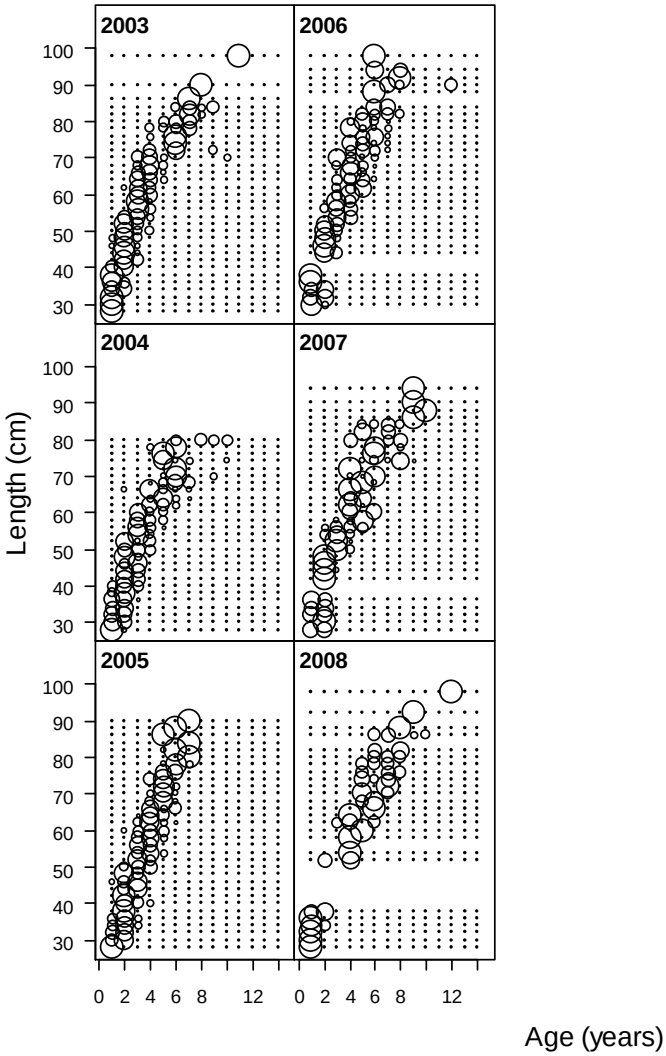


Figure 43. California NWFSC female conditional age-at-length compositions 2003-2008.

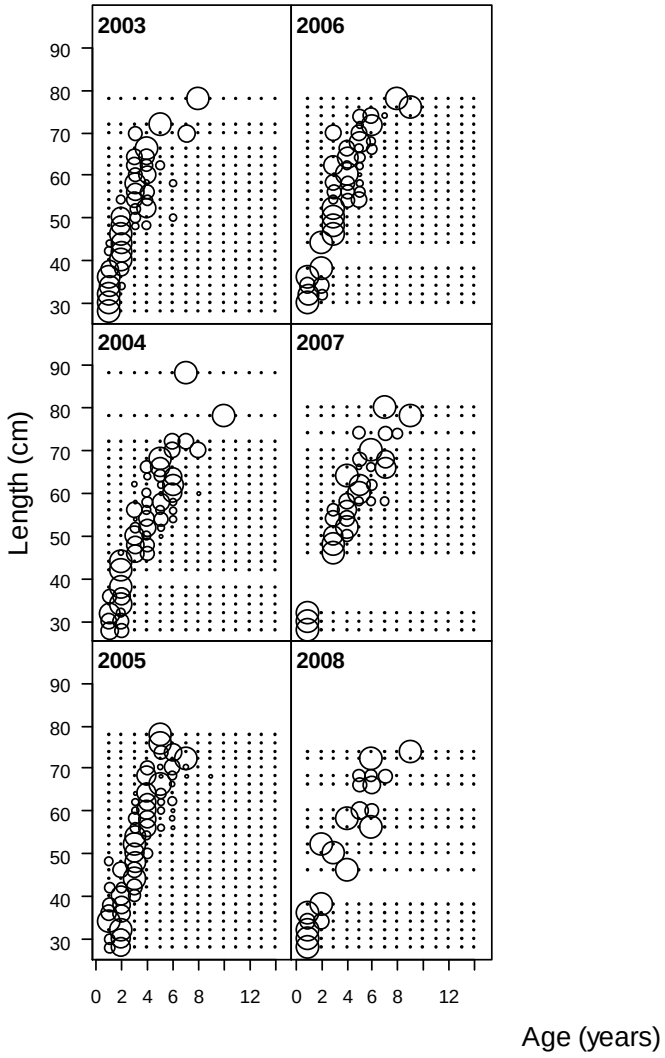


Figure 44. California NWFSC male conditional age-at-length compositions 2003-2008.

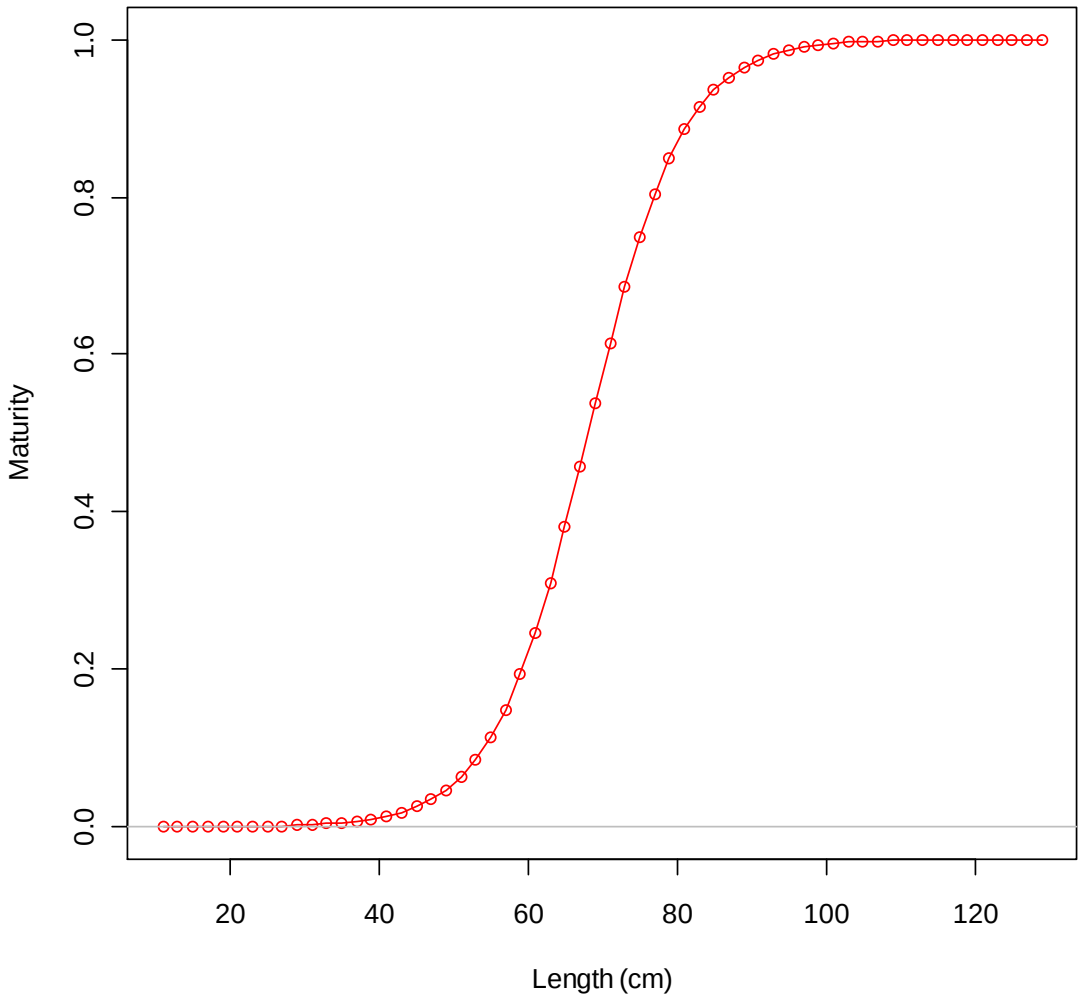


Figure 45. Maturity ogive for female lingcod in Washington/Oregon.

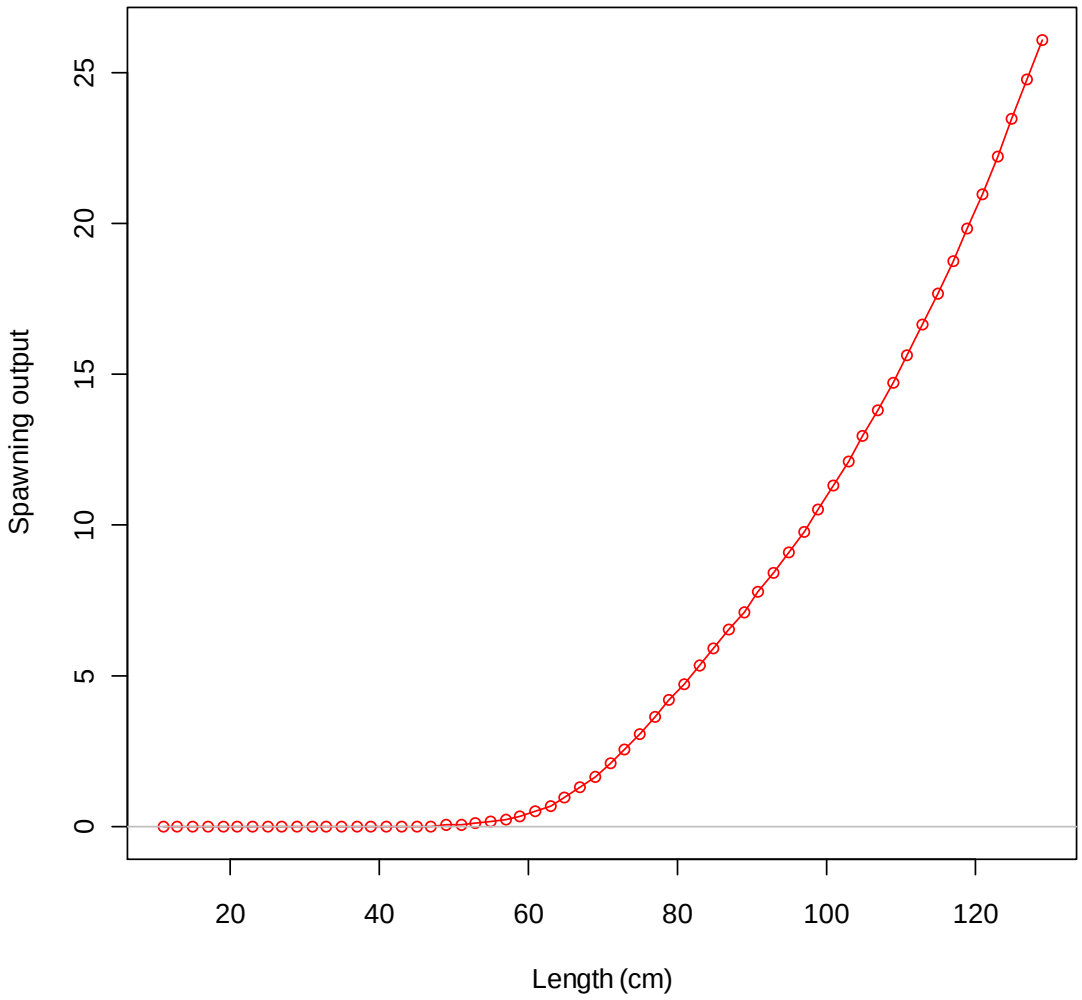


Figure 46. Length to spawning output relationship in Washington/Oregon.

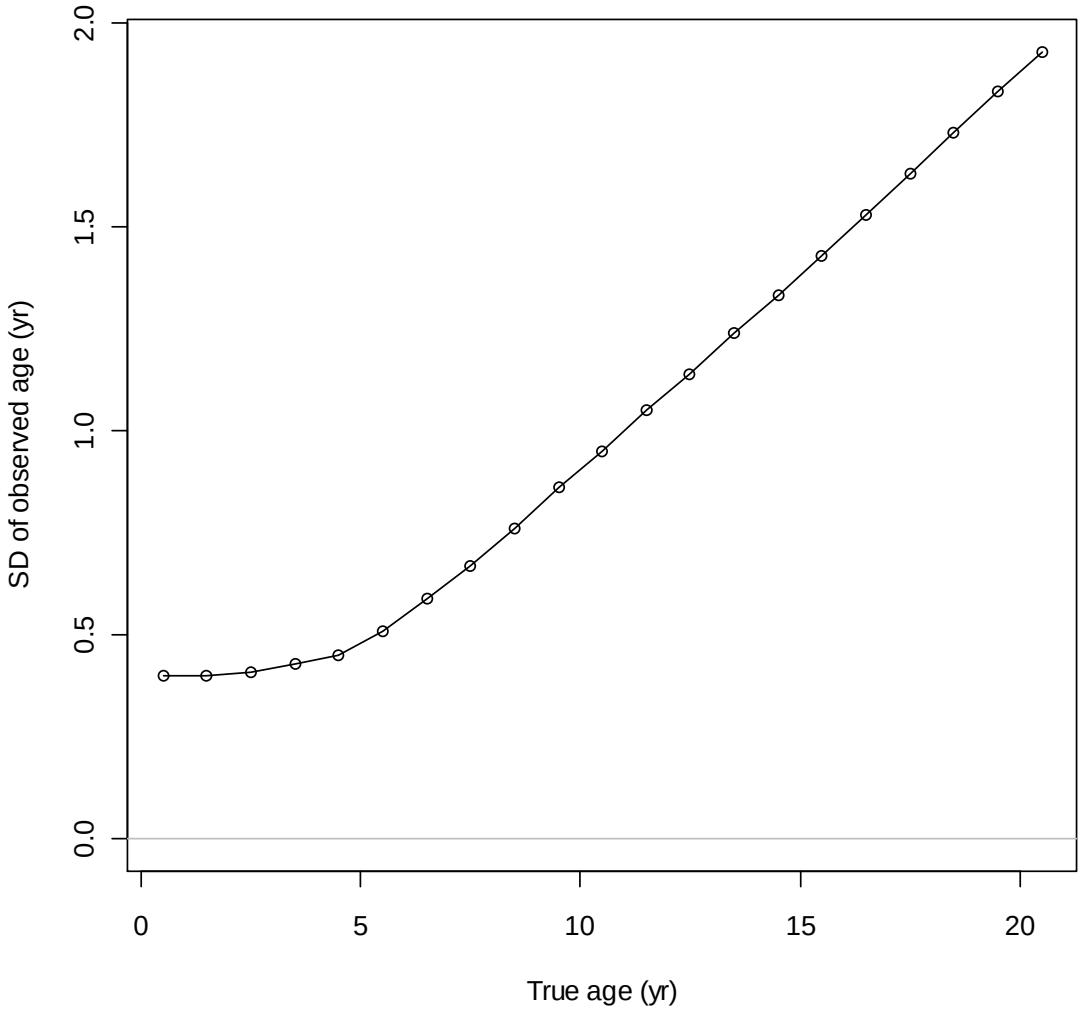


Figure 47. Ageing error assumed for both North and South lingcod assessments (no bias assumed).

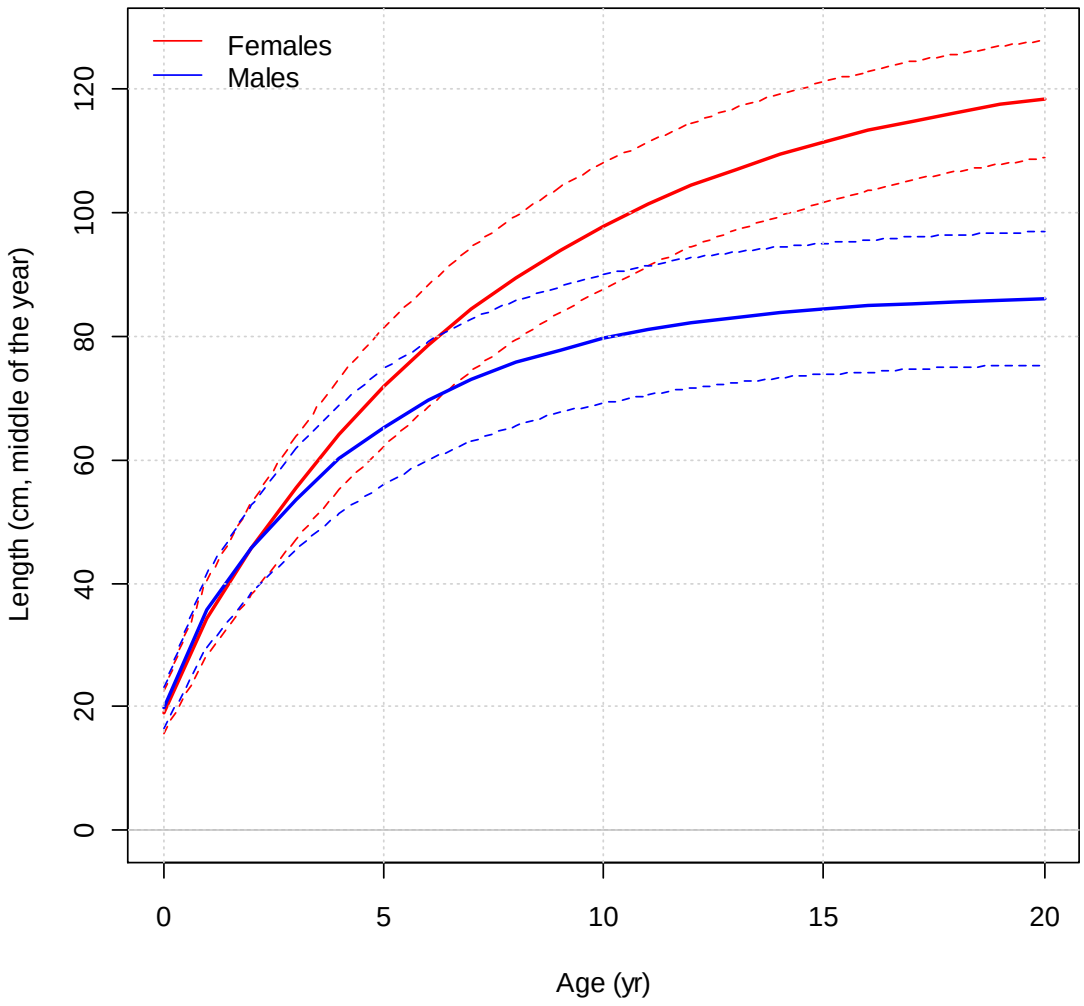


Figure 48. Growth curve for female (upper) and male (lower) lingcod estimated in the Washington/Oregon model.

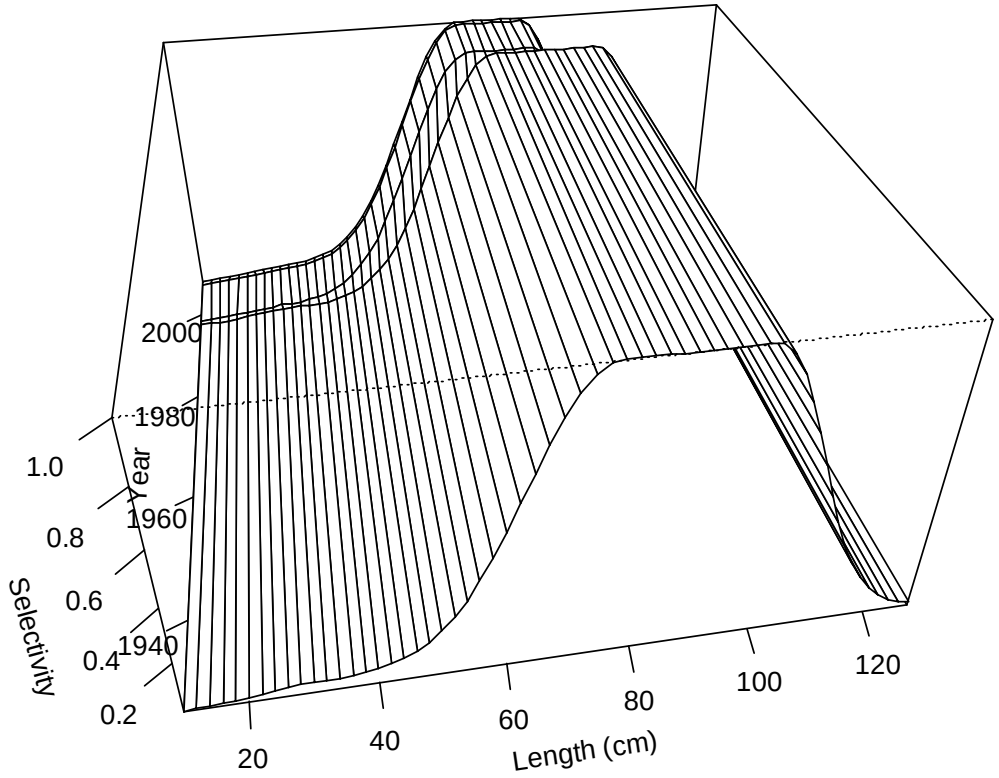


Figure 49. Time varying selectivity for the Washington/Oregon commercial fishery.

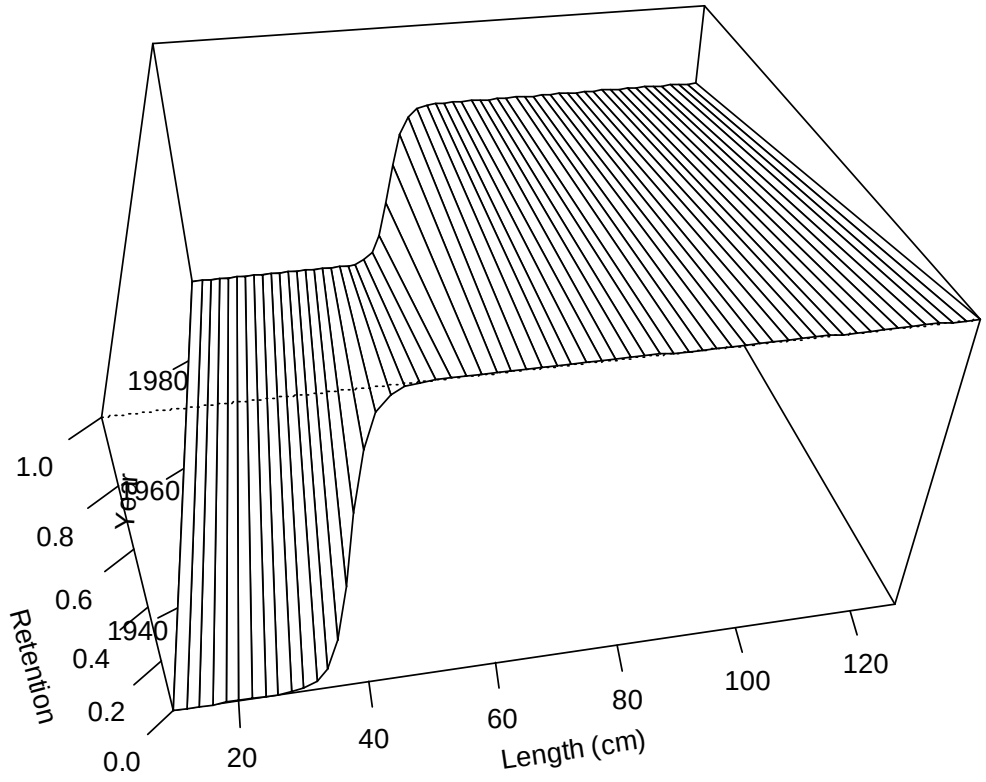


Figure 50. Time varying retention for the Washington/Oregon commercial fishery.

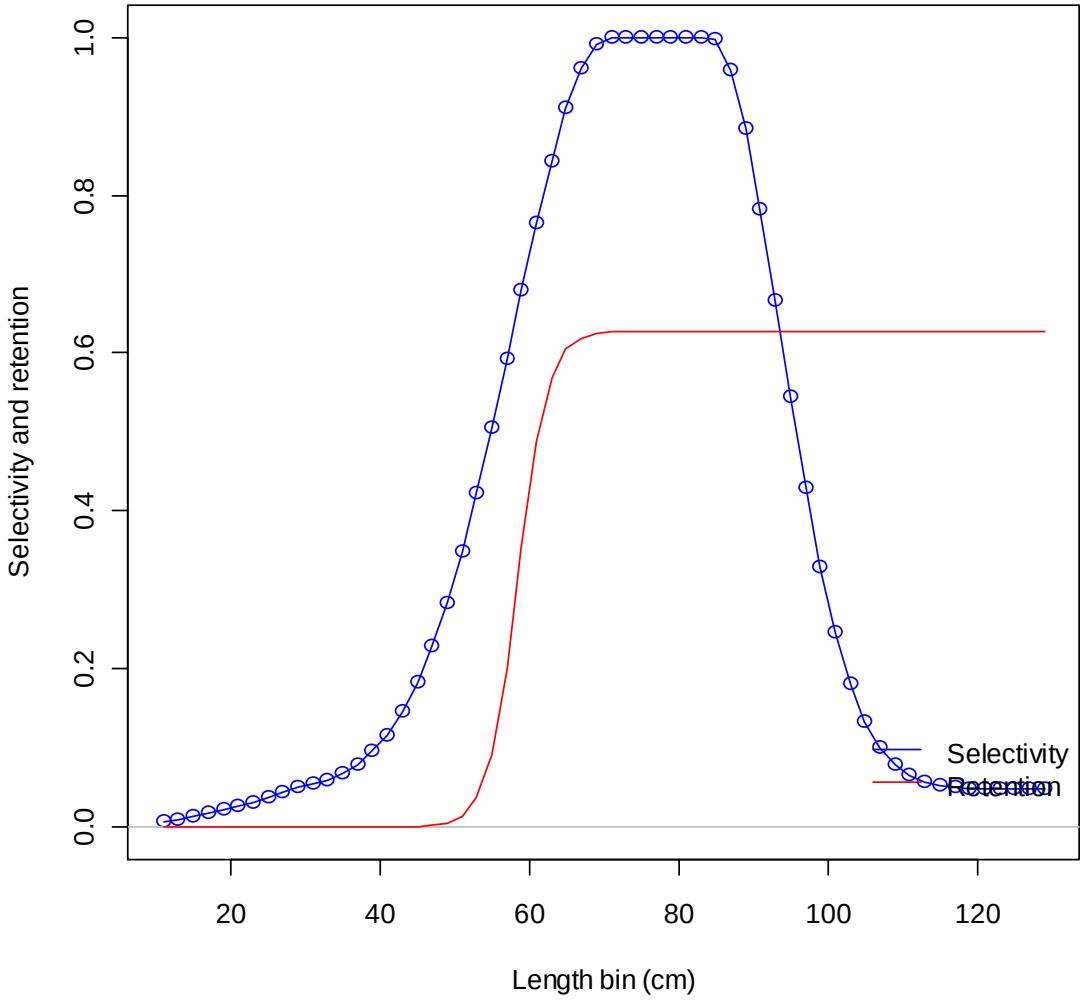


Figure 51. Washington/Oregon 1998-2008 commercial fishery selectivity and retention (as the proportion retained at length).

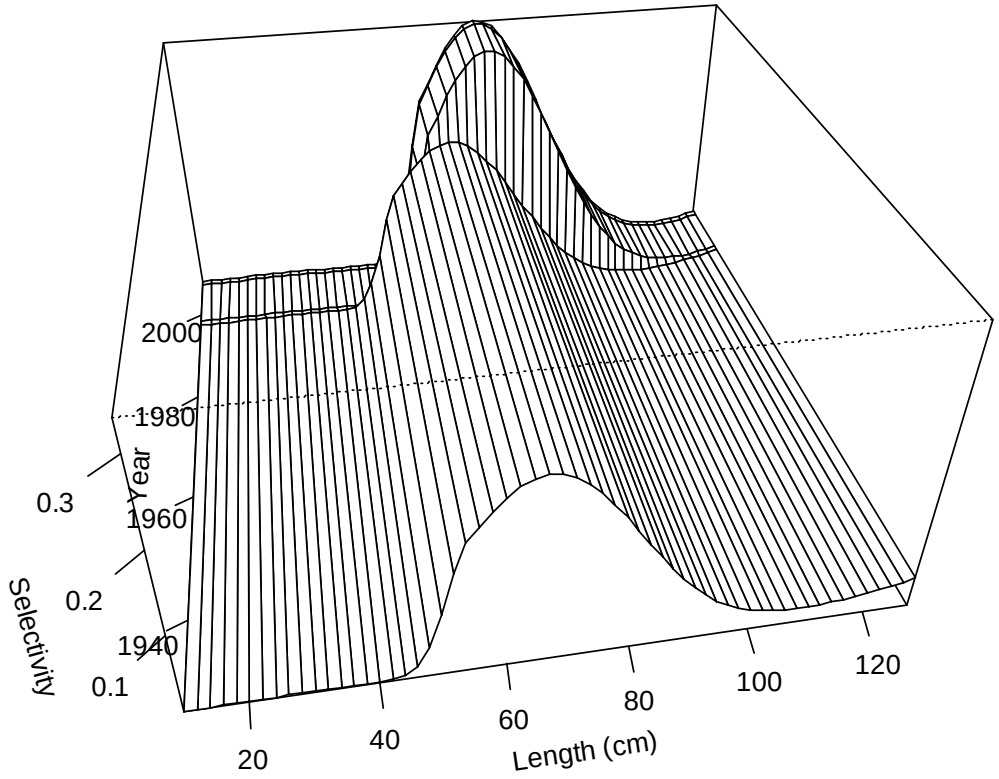


Figure 52. Female time-varying selectivity for the Washington/Oregon recreational fishery. Note the scale is far below 1.0, indicating less selection of females vs. males (at least at peak selectivity).

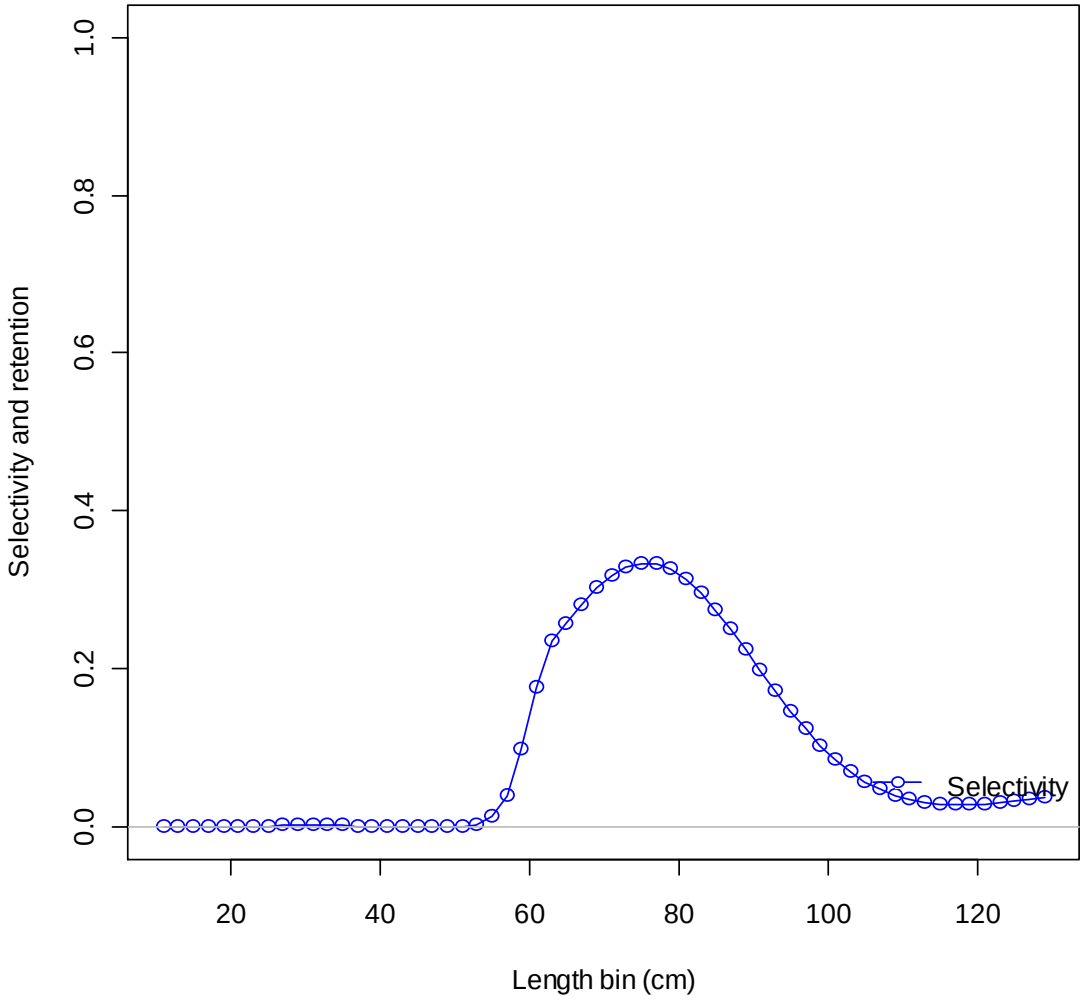


Figure 53. Female ending year selectivity (1998-2008) for the Washington/Oregon recreational fishery.

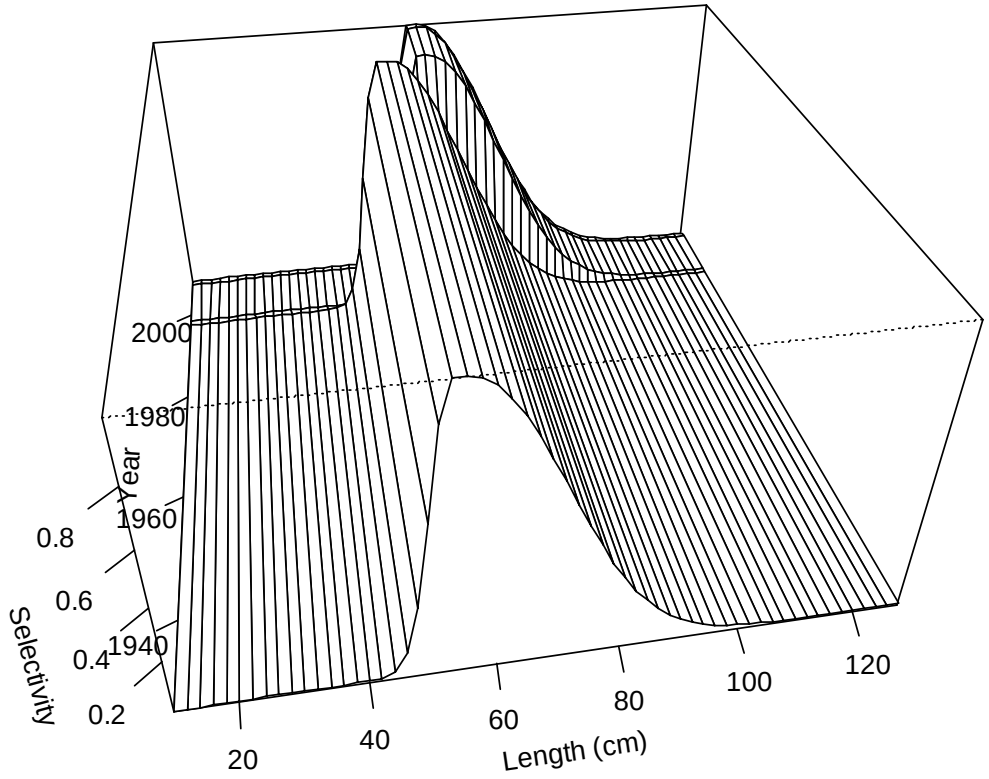


Figure 54. Male time-varying selectivity for the Washington/Oregon recreational fishery.

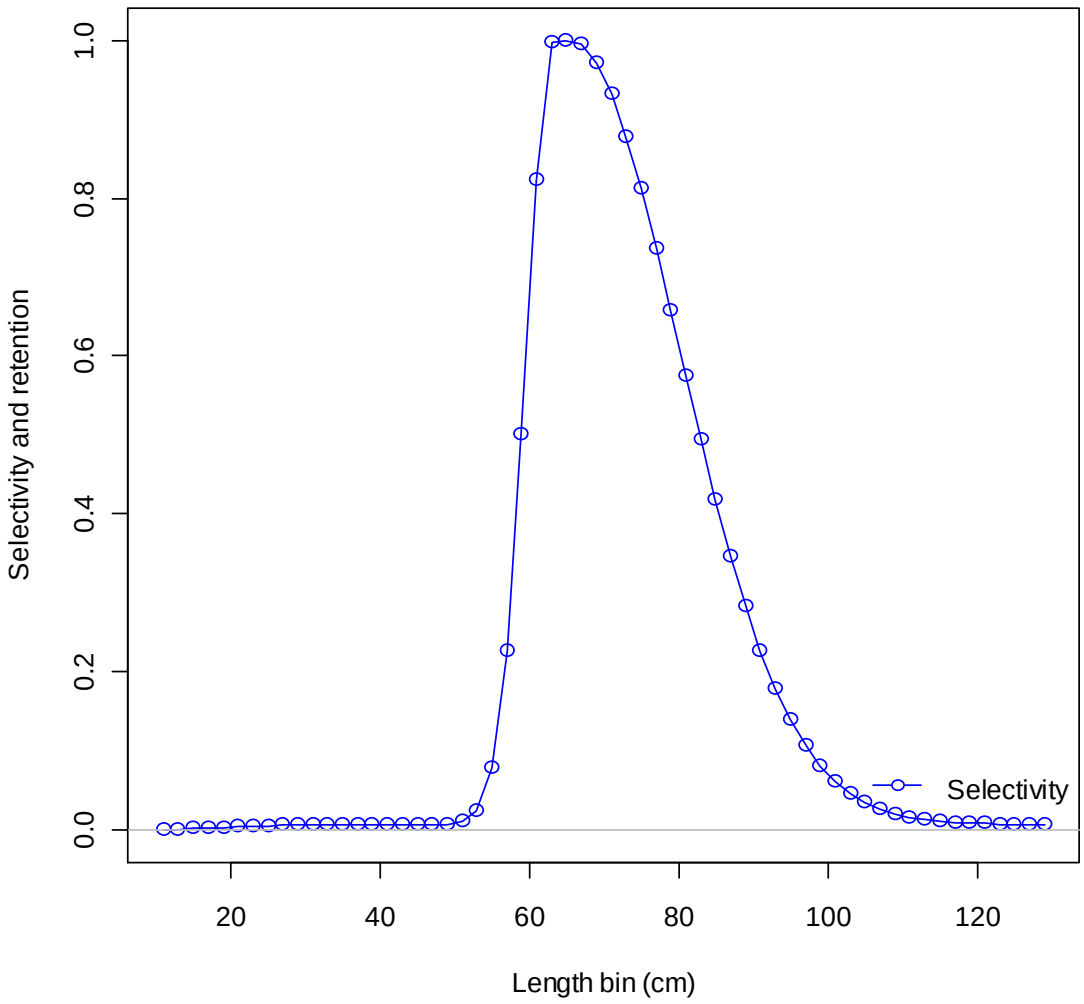


Figure 55. Male ending years selectivity (1998-2008) for the Washington/Oregon recreational fishery.

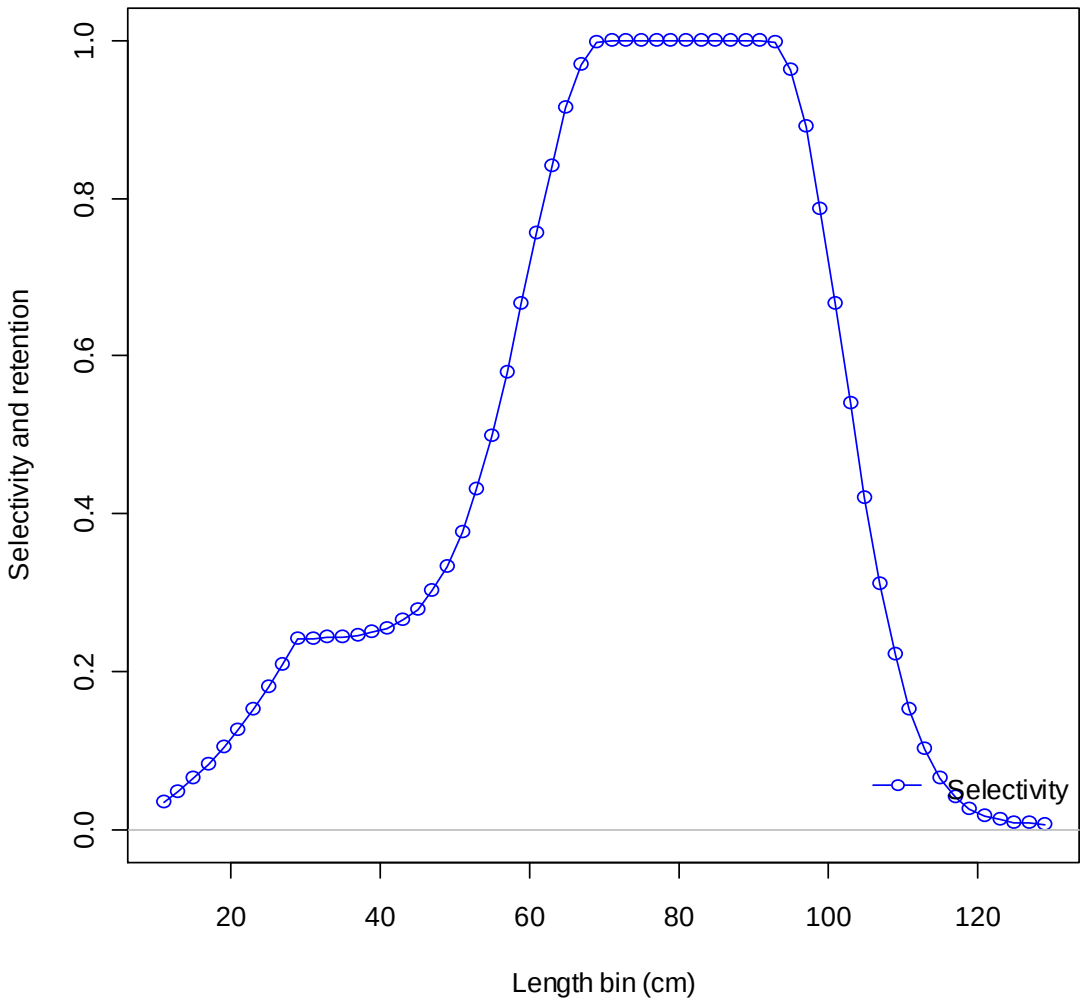


Figure 56. Triennial survey selectivity for the Washington/Oregon assessment.

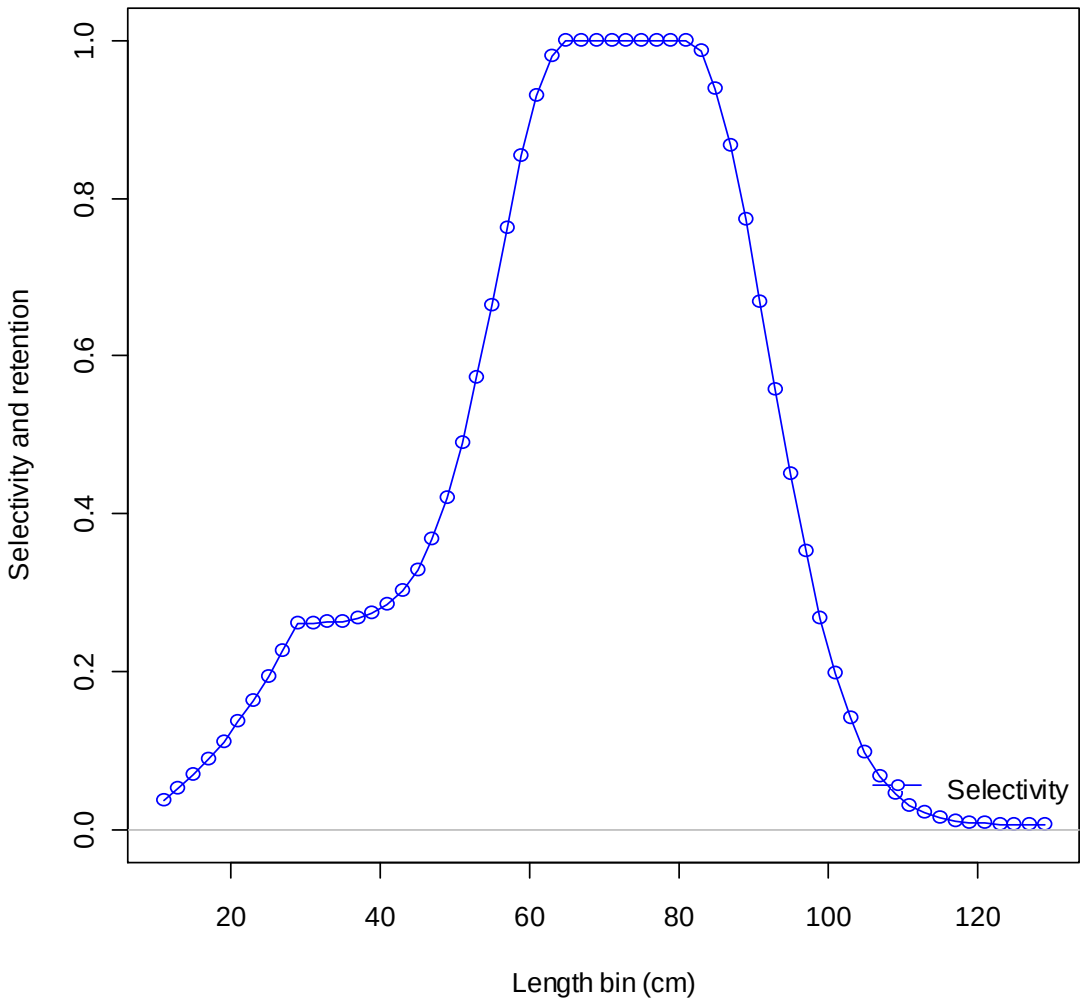


Figure 57. NWFSC survey selectivity for the Washington/Oregon assessment.

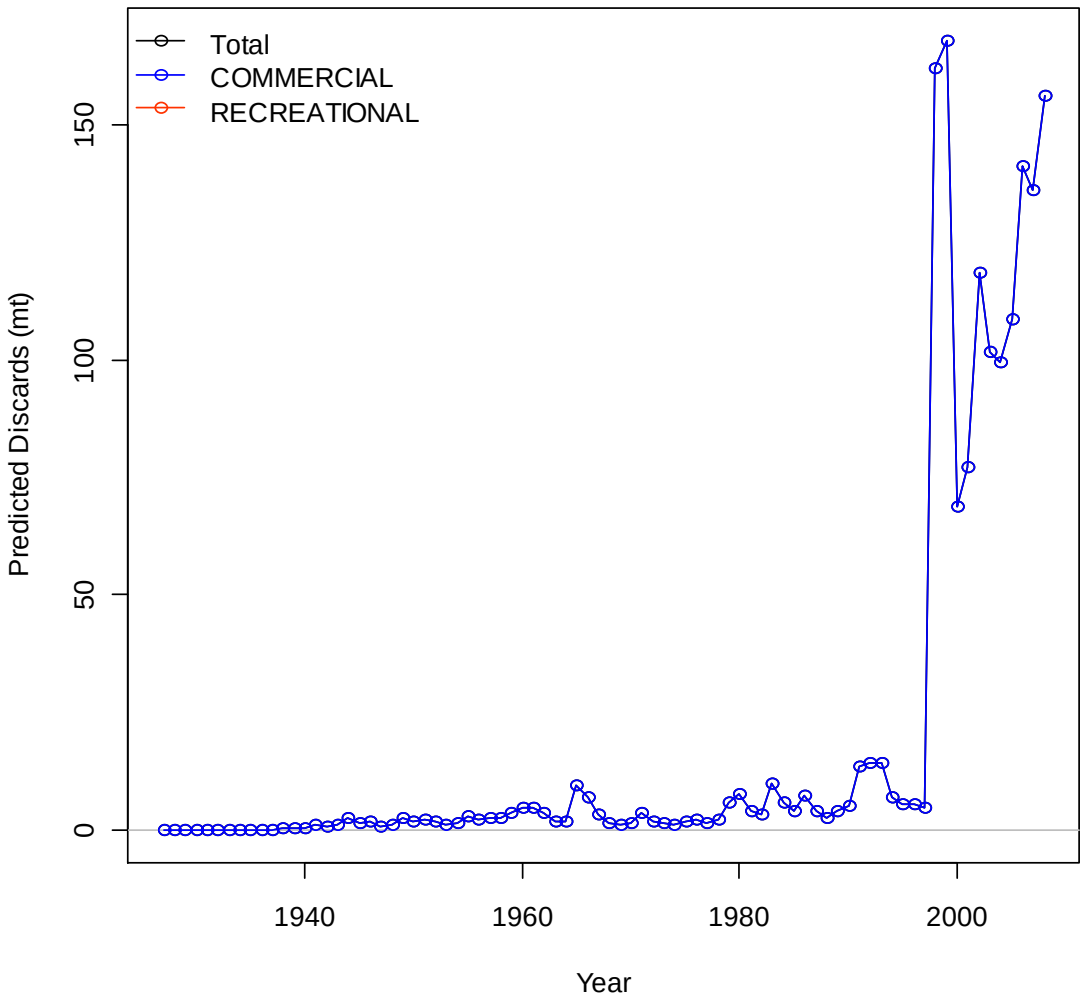


Figure 58. Time series of estimated discard mortalities from Washington/Oregon assessment.

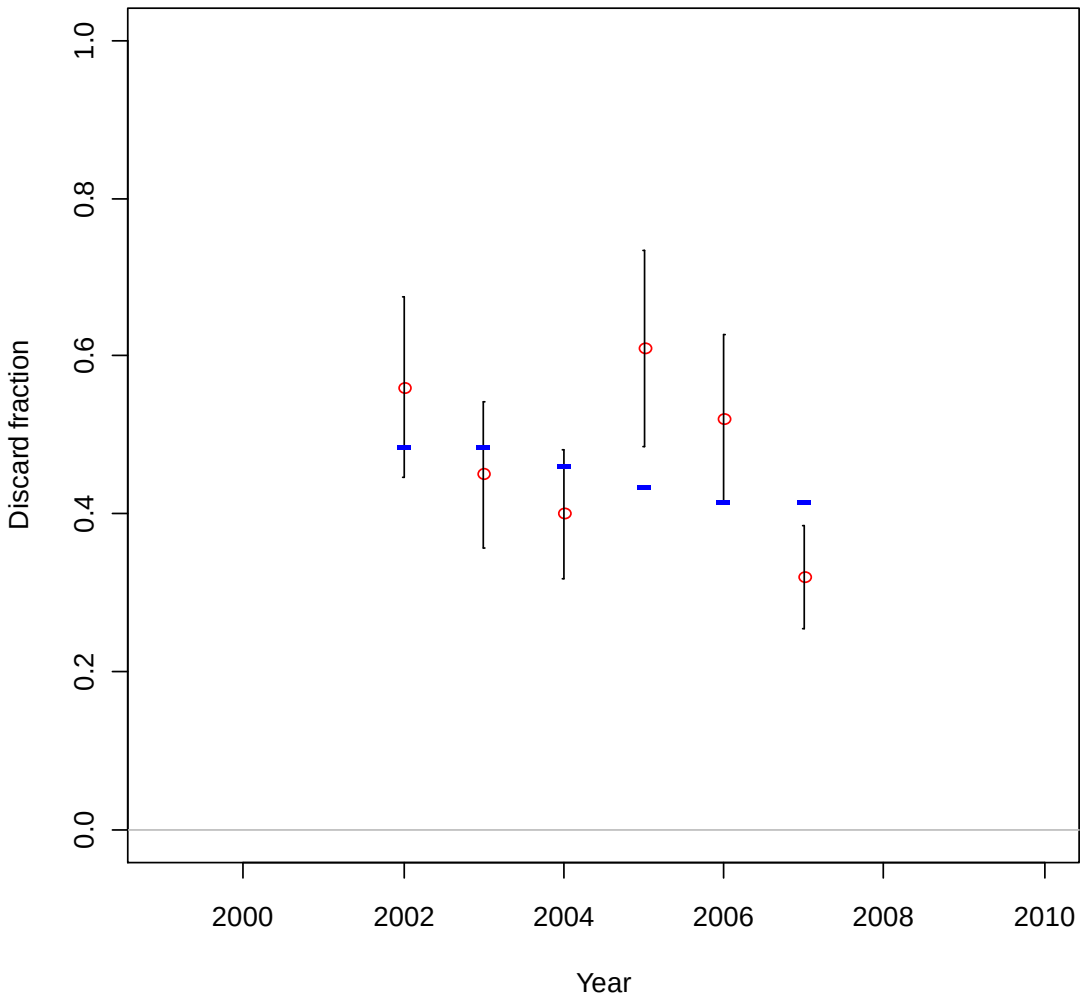


Figure 59. Fit to discard fraction data for Washington/Oregon.

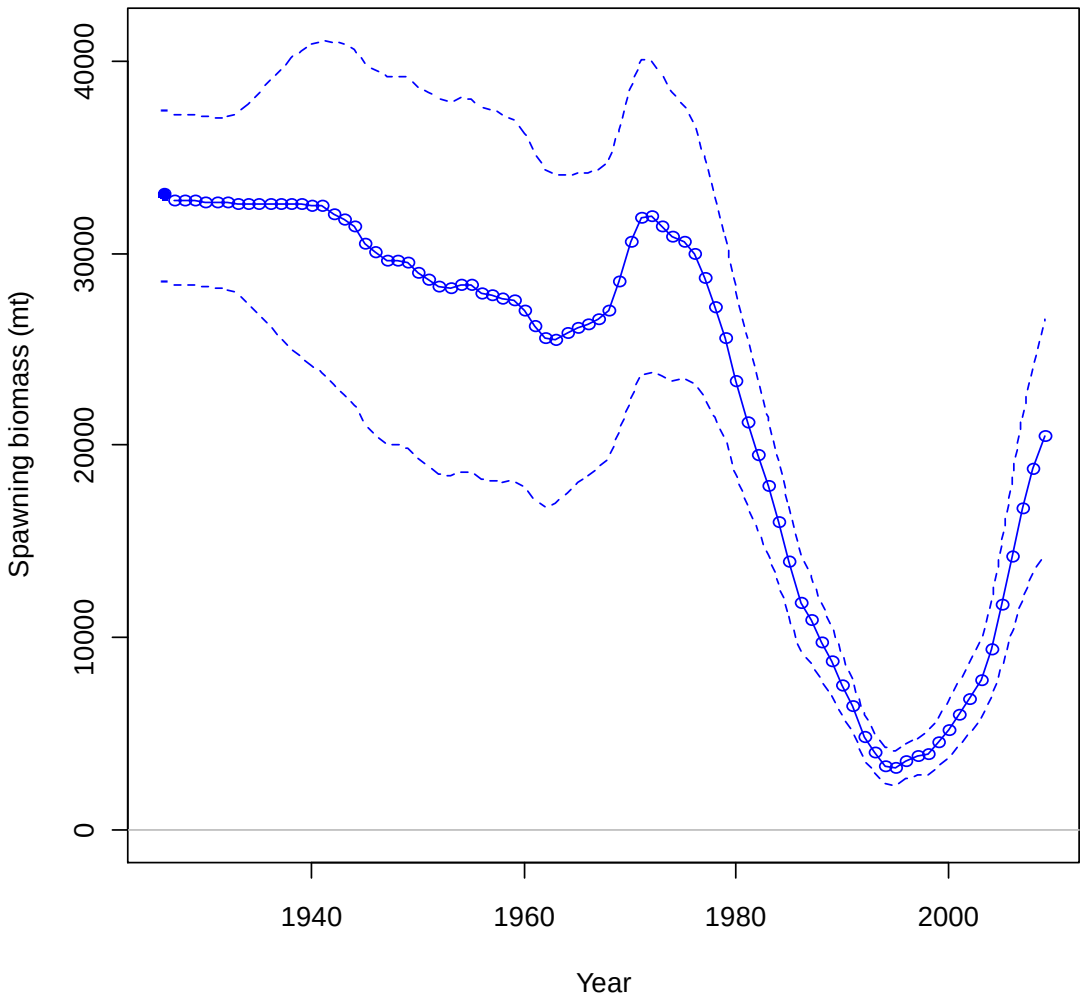


Figure 60. Time series of summary (2+) biomass for Washington/Oregon.

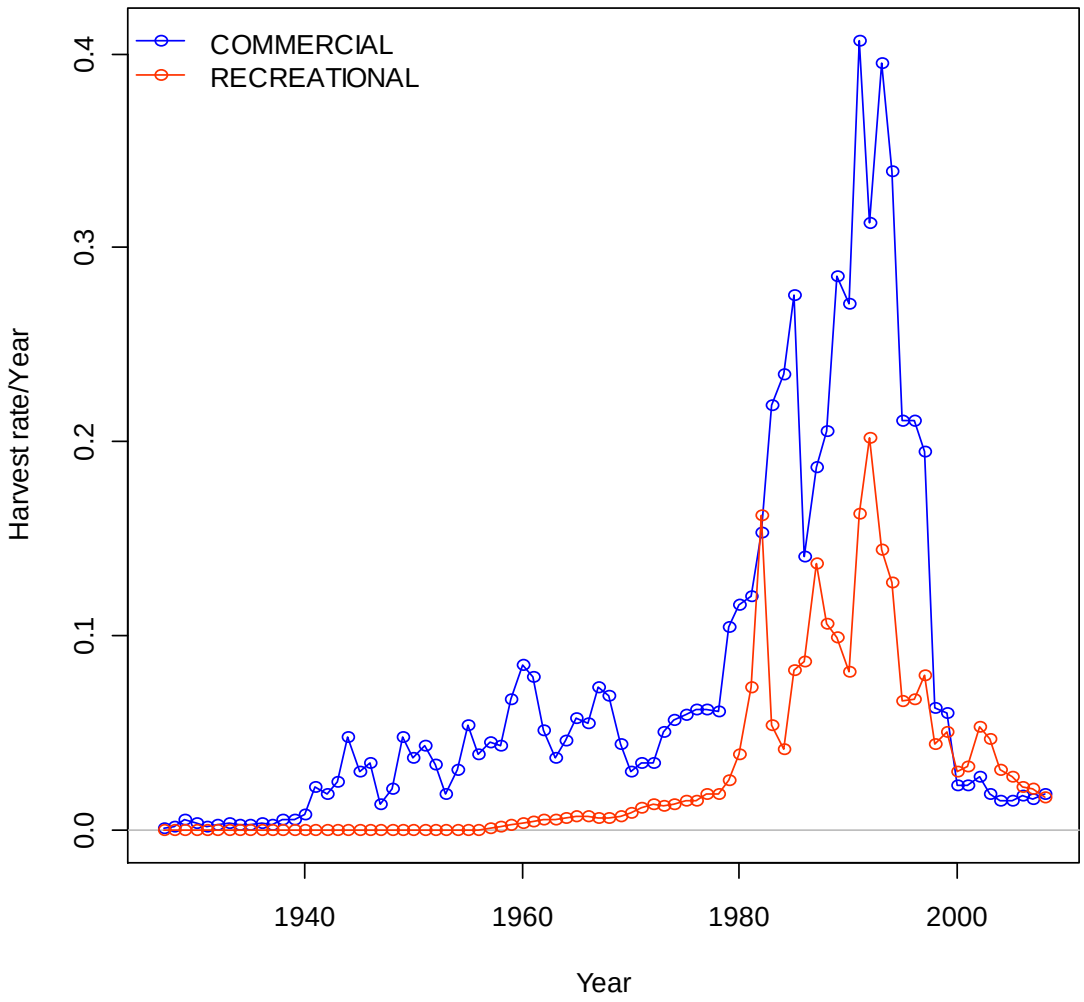


Figure 61. Time series of exploitation rate (catch/summary biomass) for Washington/Oregon.

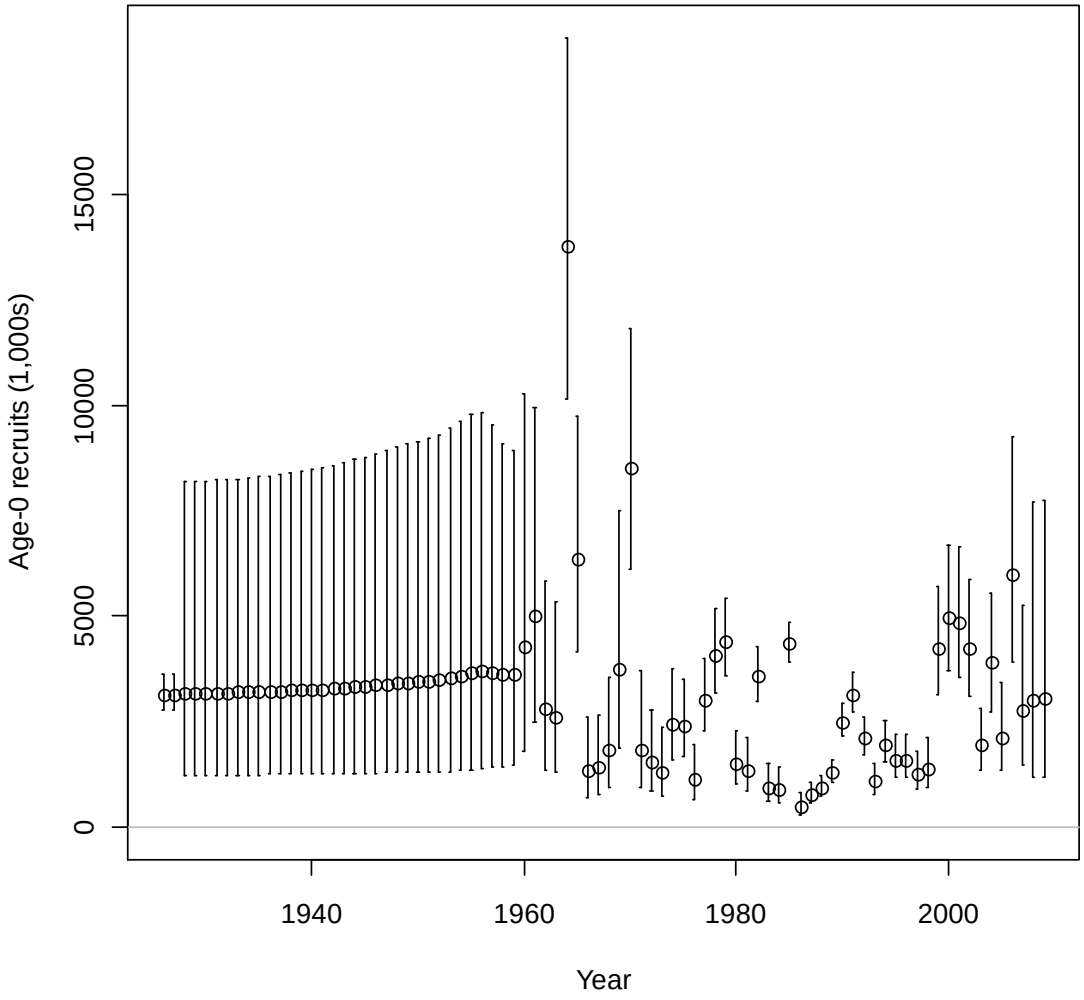


Figure 62. Time series of recruitment for Washington/Oregon.

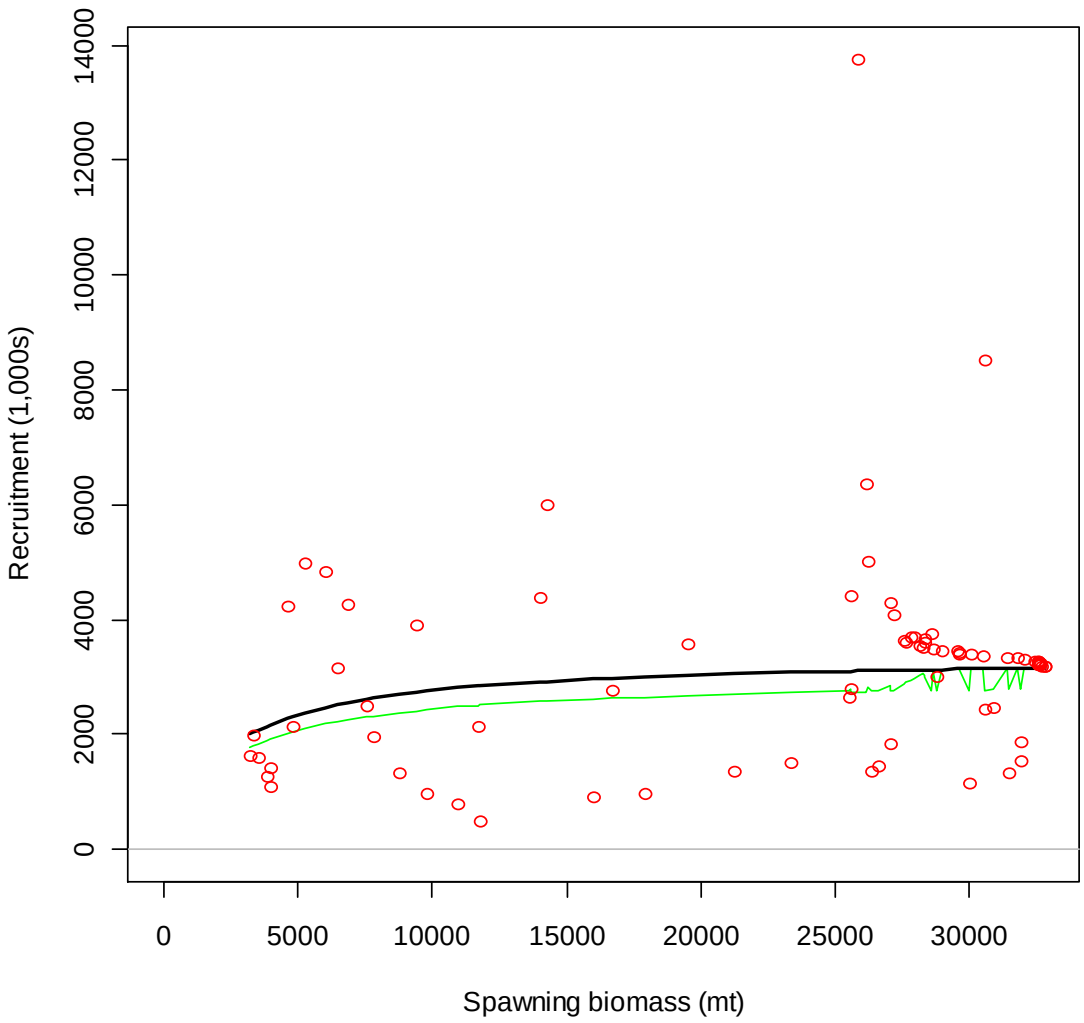


Figure 63. Fit to stock-recruitment relationship for Washington/Oregon.

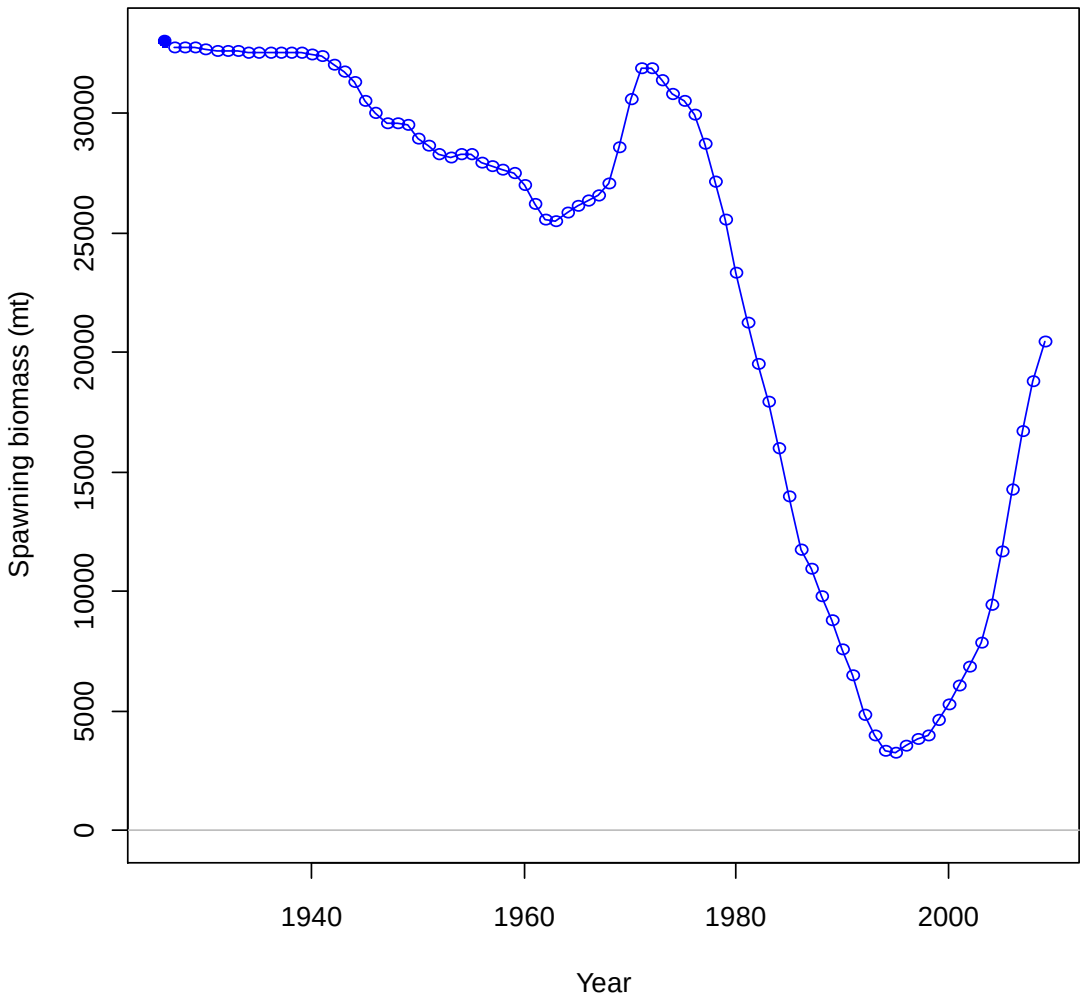


Figure 64. Time series of spawning biomass for Washington/Oregon.

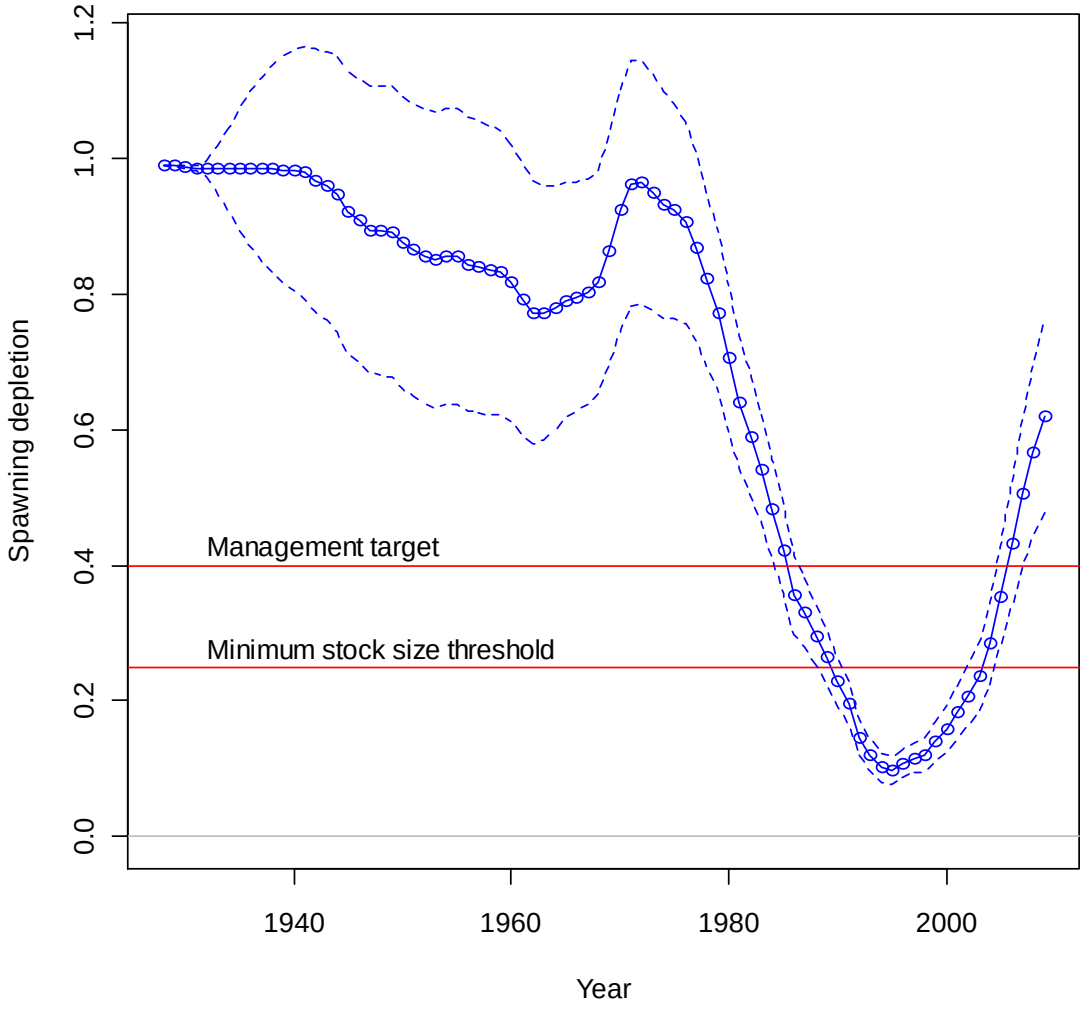


Figure 65. Time series of spawning depletion for Washington/Oregon.

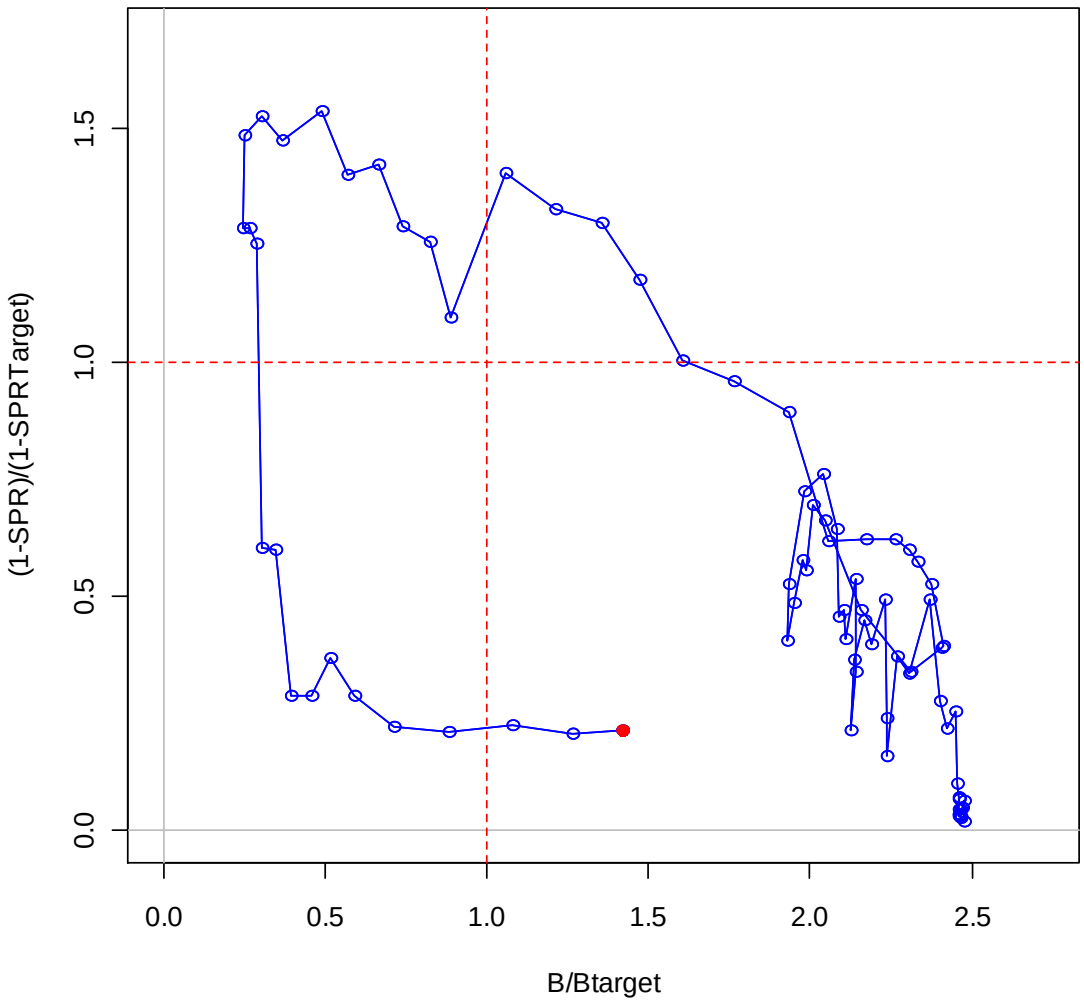


Figure 66. Time series of relative harvest rate (1-SPR) vs. relative spawning biomass.

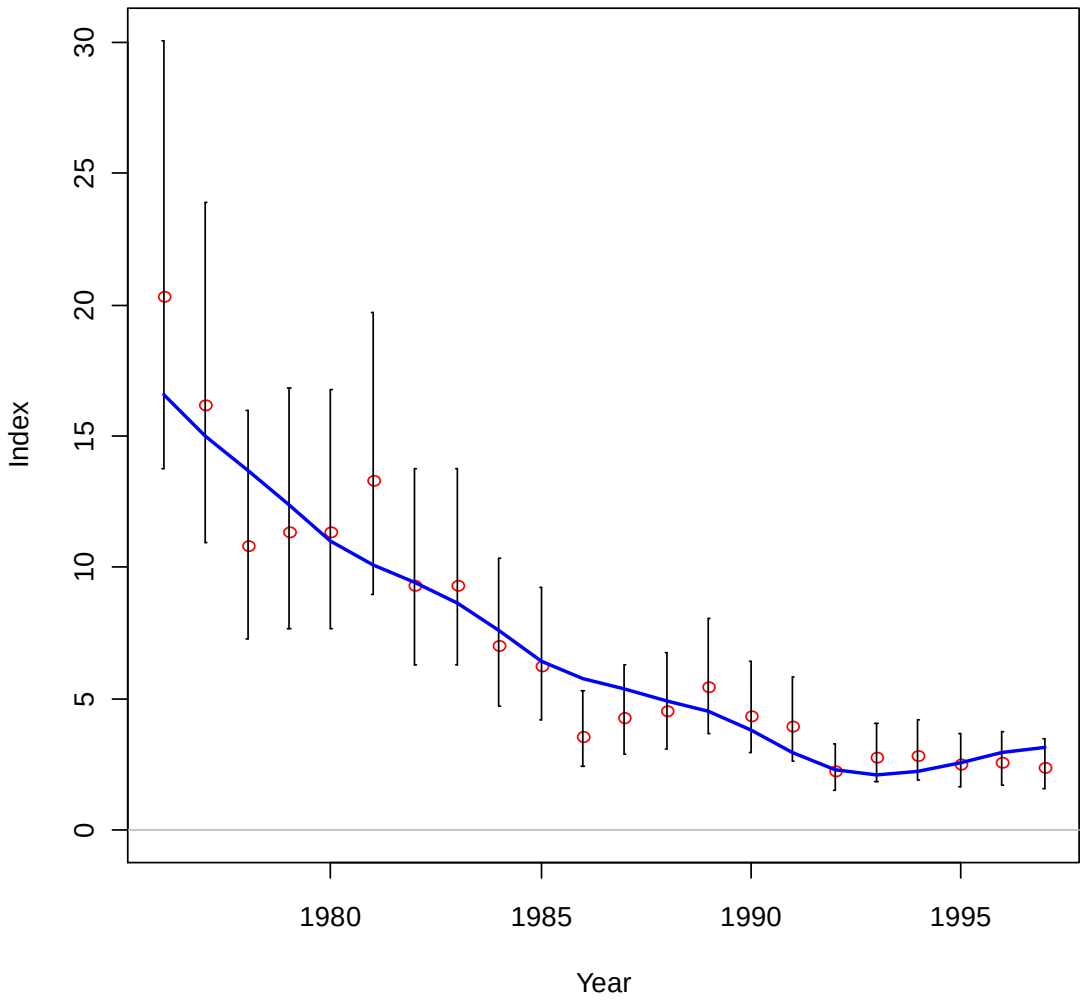


Figure 67. North model fit to commercial CPUE index.

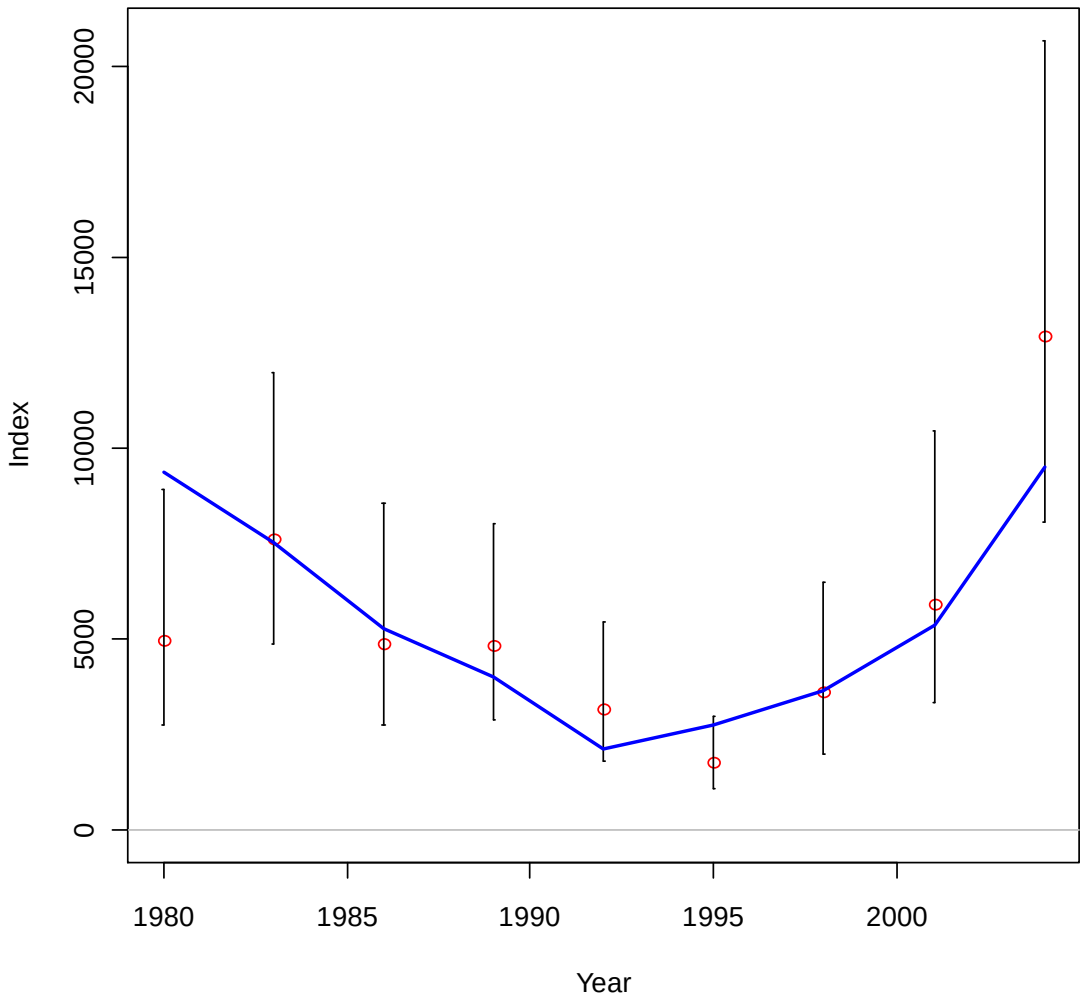


Figure 68. Washington/Oregon model fit to Triennial survey index.

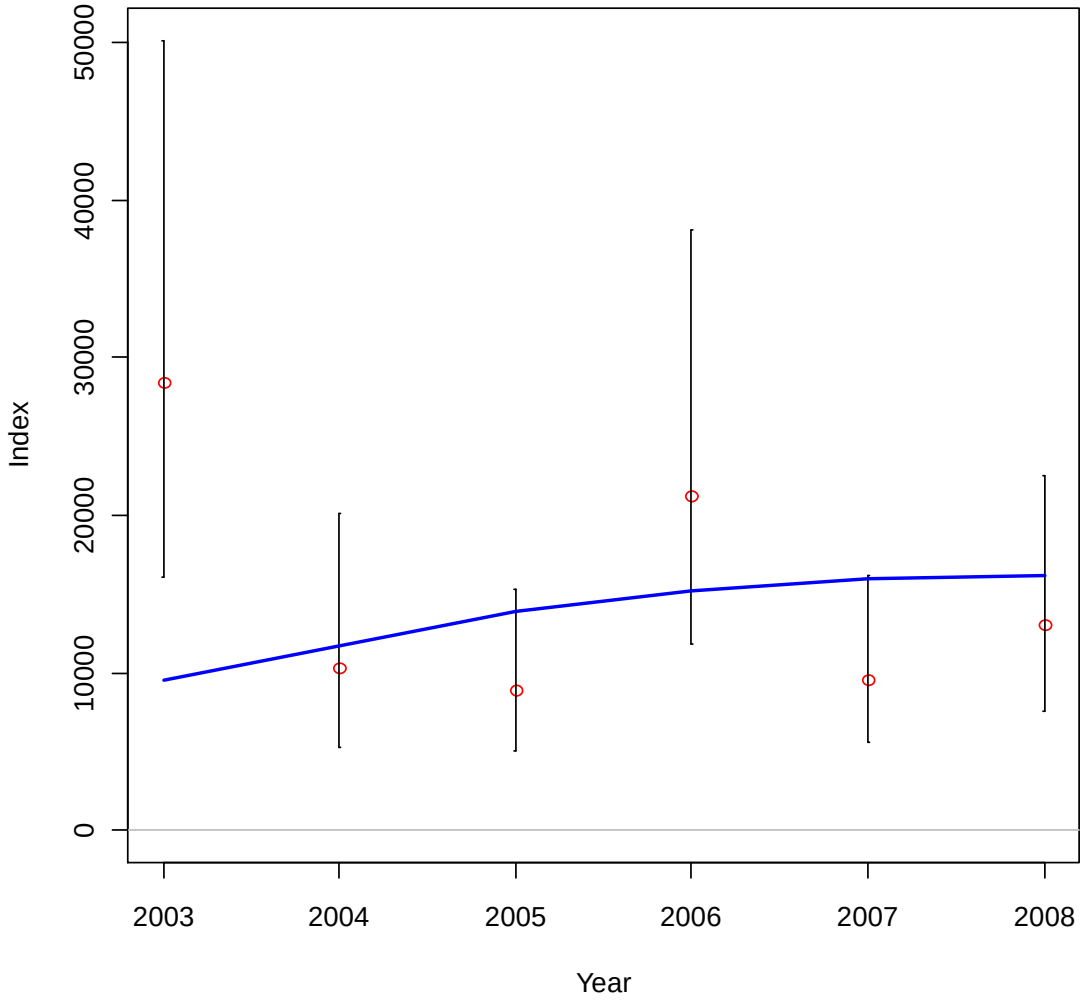


Figure 69. Washington/Oregon model fit to NWFSC survey index.

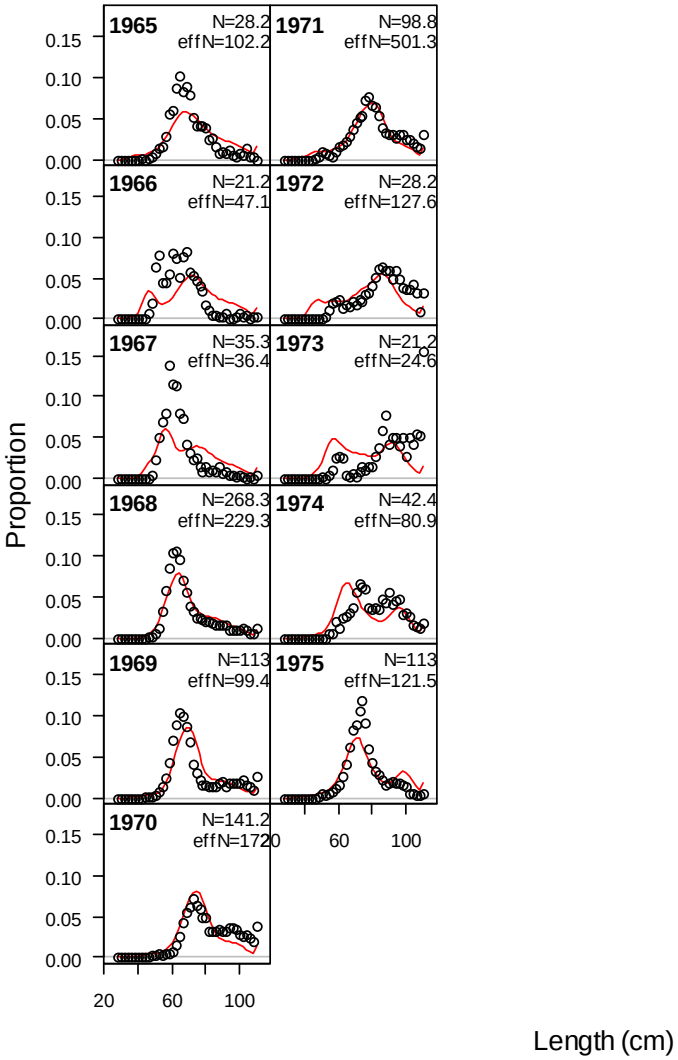


Figure 70. Model fits to commercial retained combined-sex length compositions for Washington/Oregon for 1965-1975.

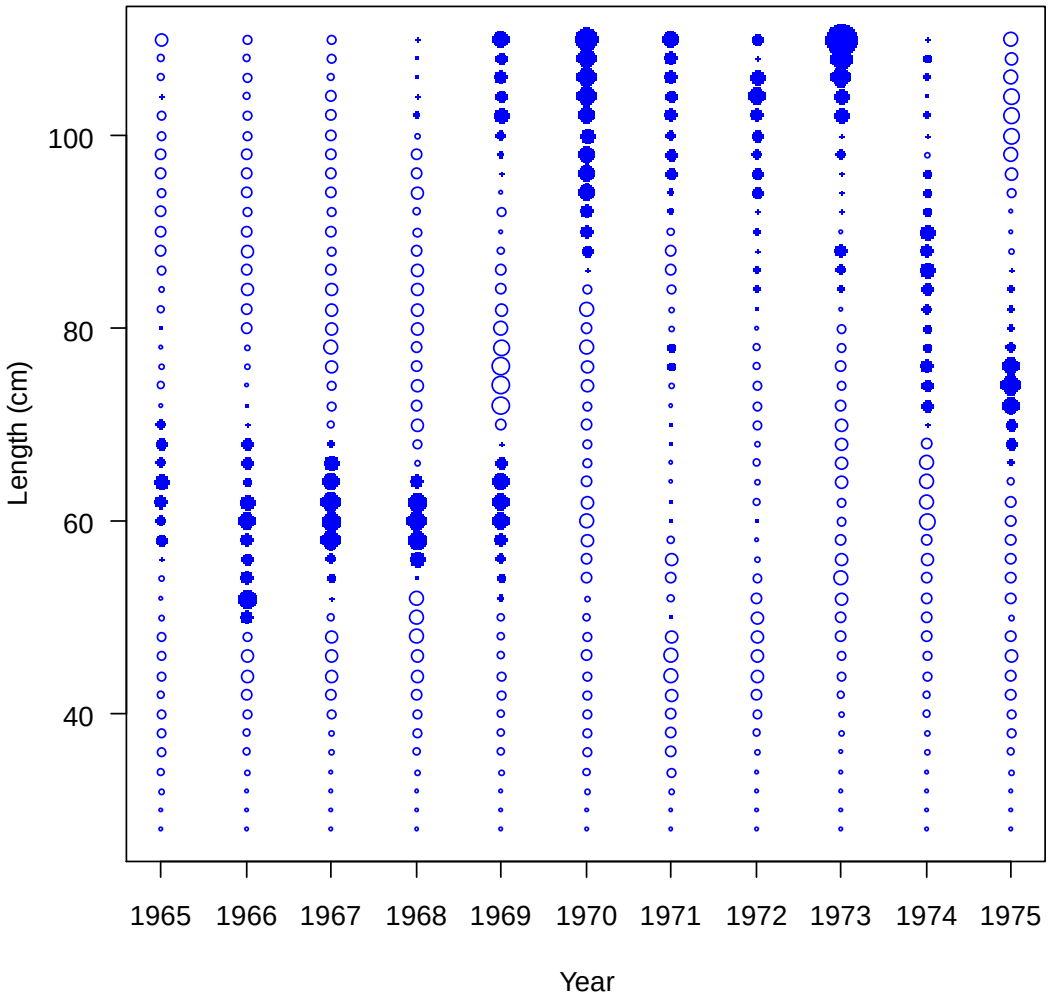


Figure 71. Pearson residuals for fits to commercial retained combined-sex length compositions for Washington/Oregon (max = 5.35) for 1965-1975.

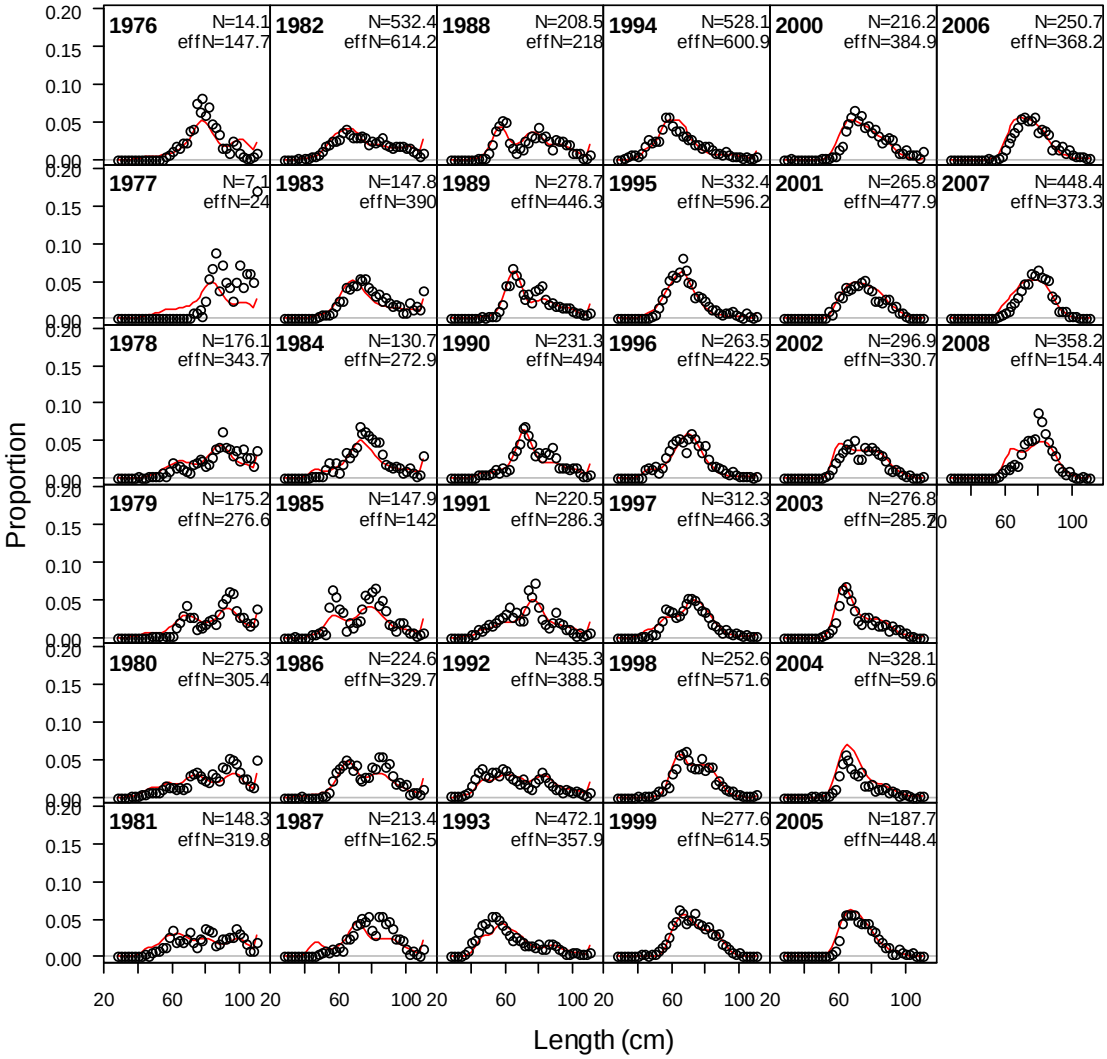


Figure 72. Fits to commercial retained female length compositions for Washington/Oregon for 1976-2008.

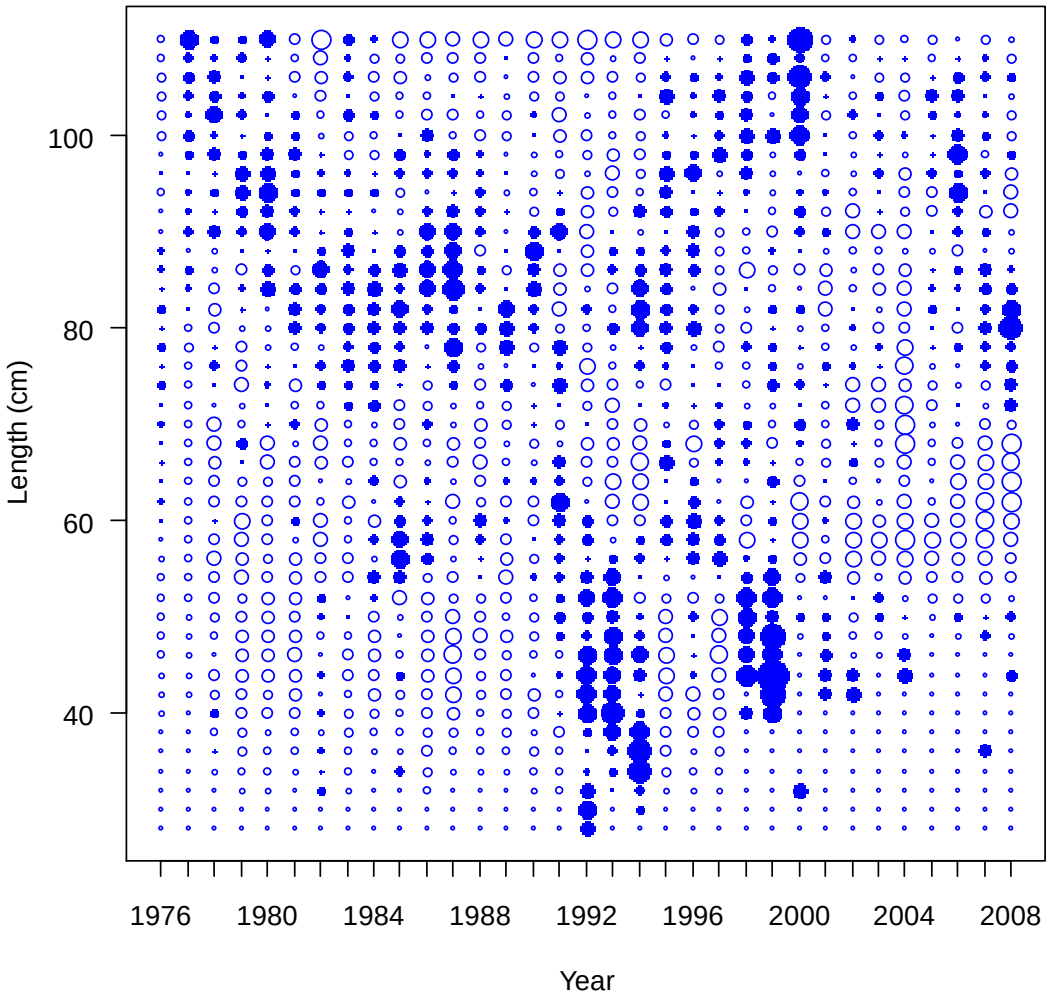


Figure 73. Pearson residuals for fits to commercial retained female length compositions for Washington/Oregon (max = 6.58) for 1976-2008.

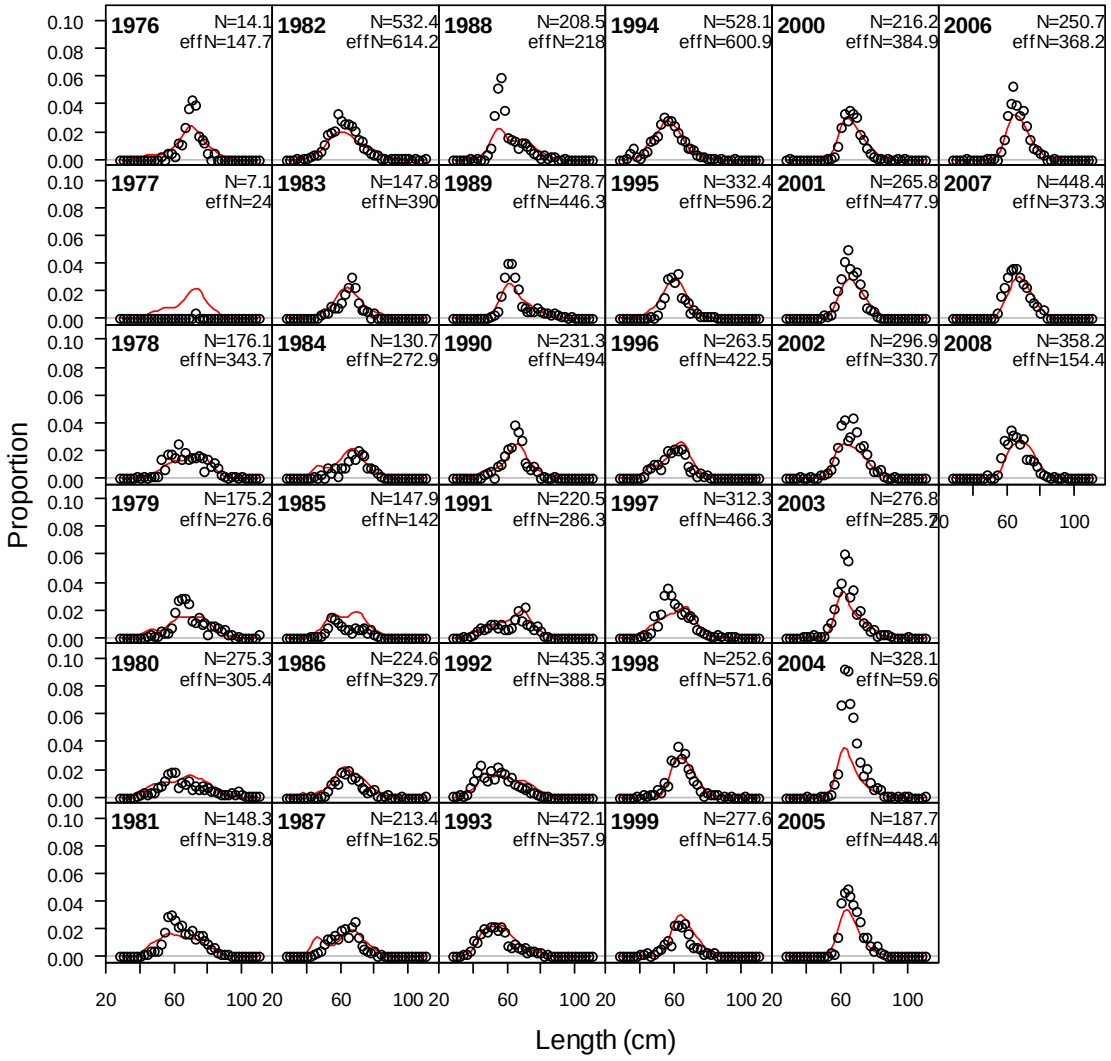


Figure 74. Fits to commercial retained male length compositions for Washington/Oregon for 1976-2008.

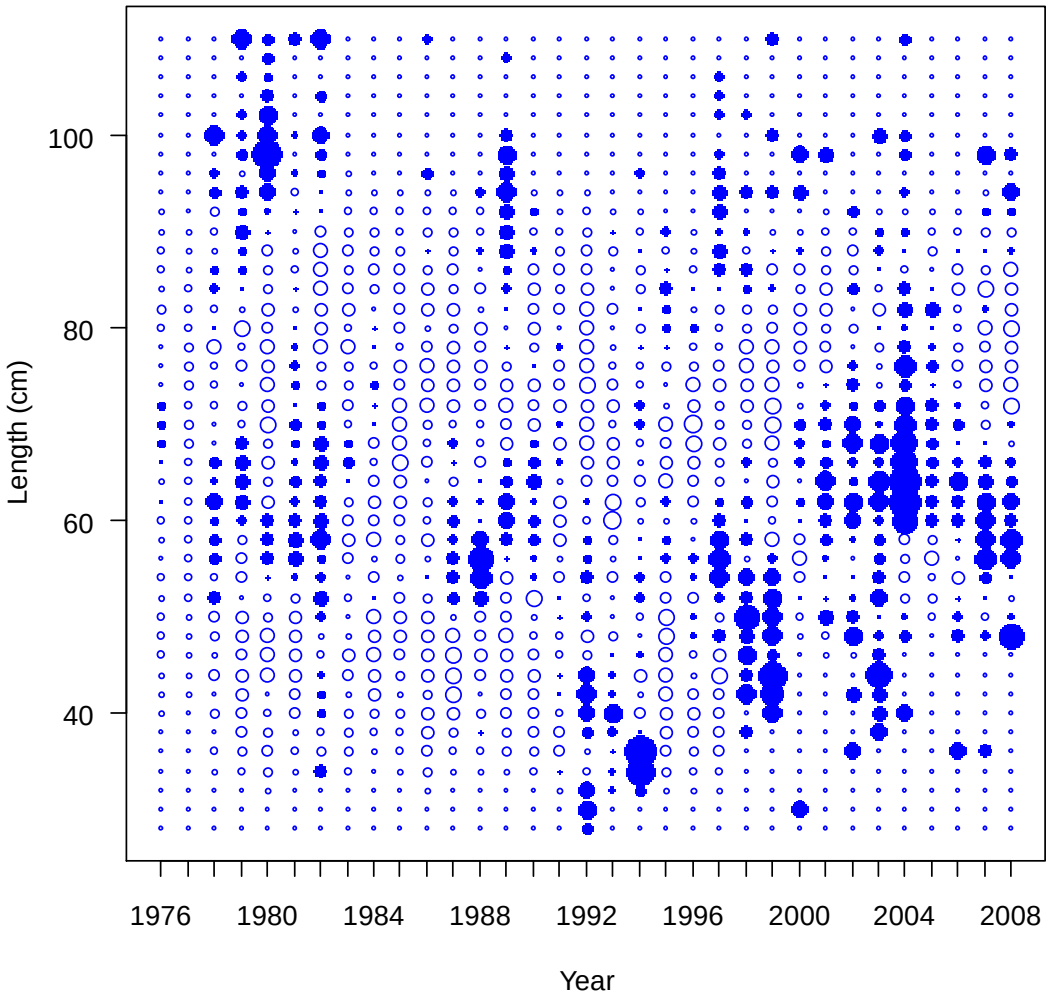


Figure 75. Pearson residuals for fits to commercial retained male length compositions for Washington/Oregon (max = 5.71) for 1976-2008.

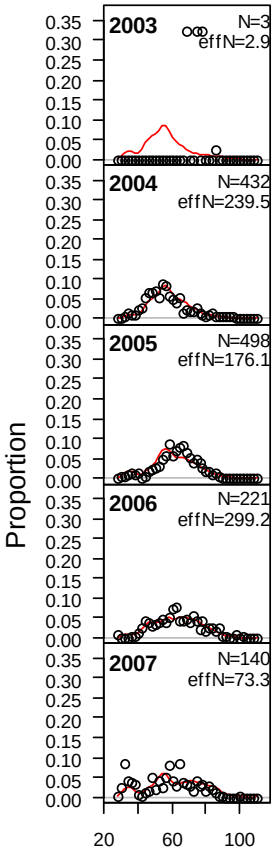


Figure 76. Fits to commercial discarded combined-sex length compositions for Washington/Oregon for 2003-2007.

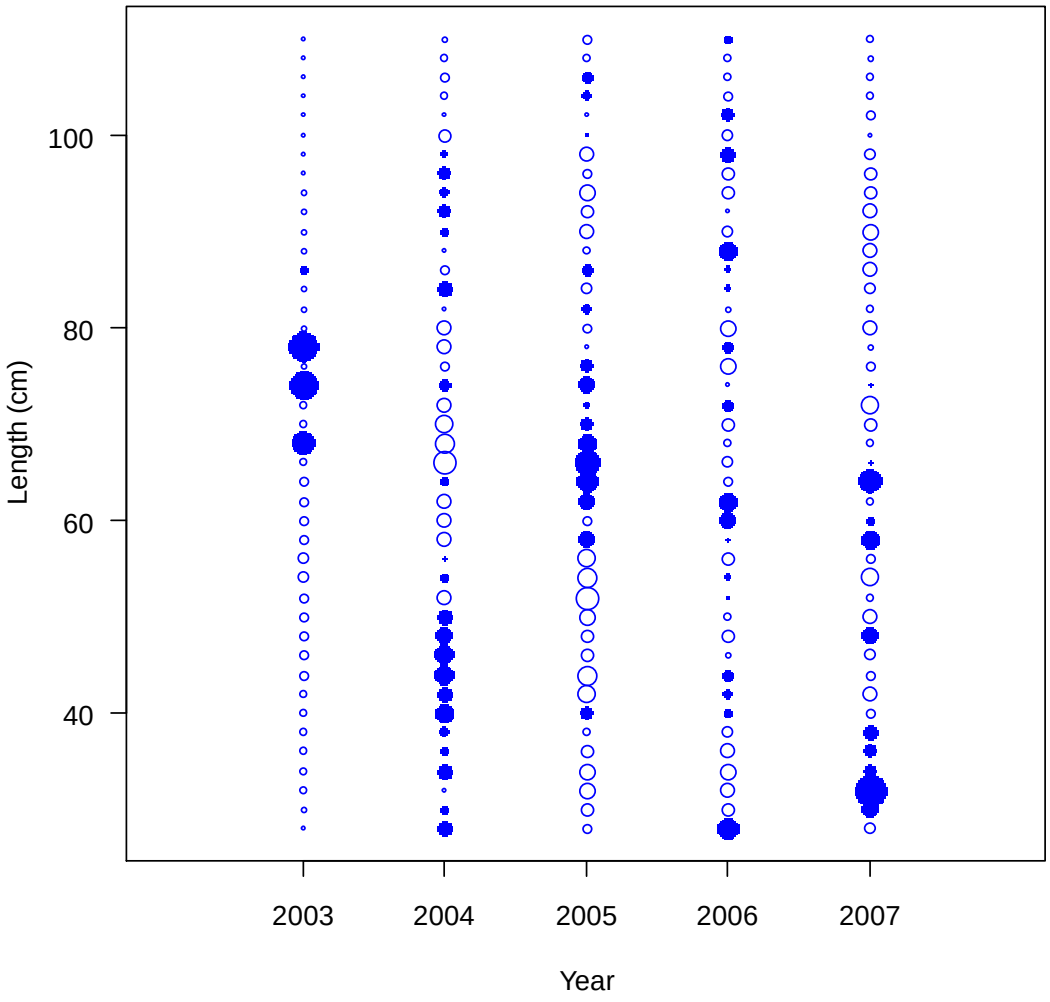


Figure 77. Pearson residuals for fits to commercial discarded combined-sex length compositions for Washington/Oregon (max = 5.72) for 2003-2007.

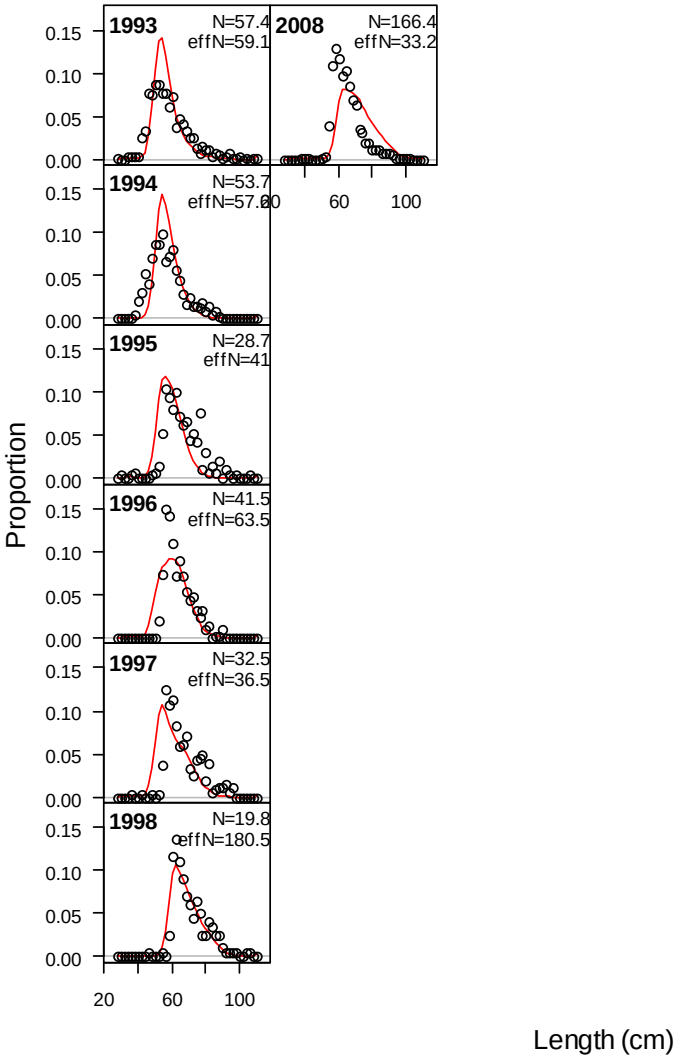


Figure 78. Fits to recreational combined-sex length compositions for Washington/Oregon.

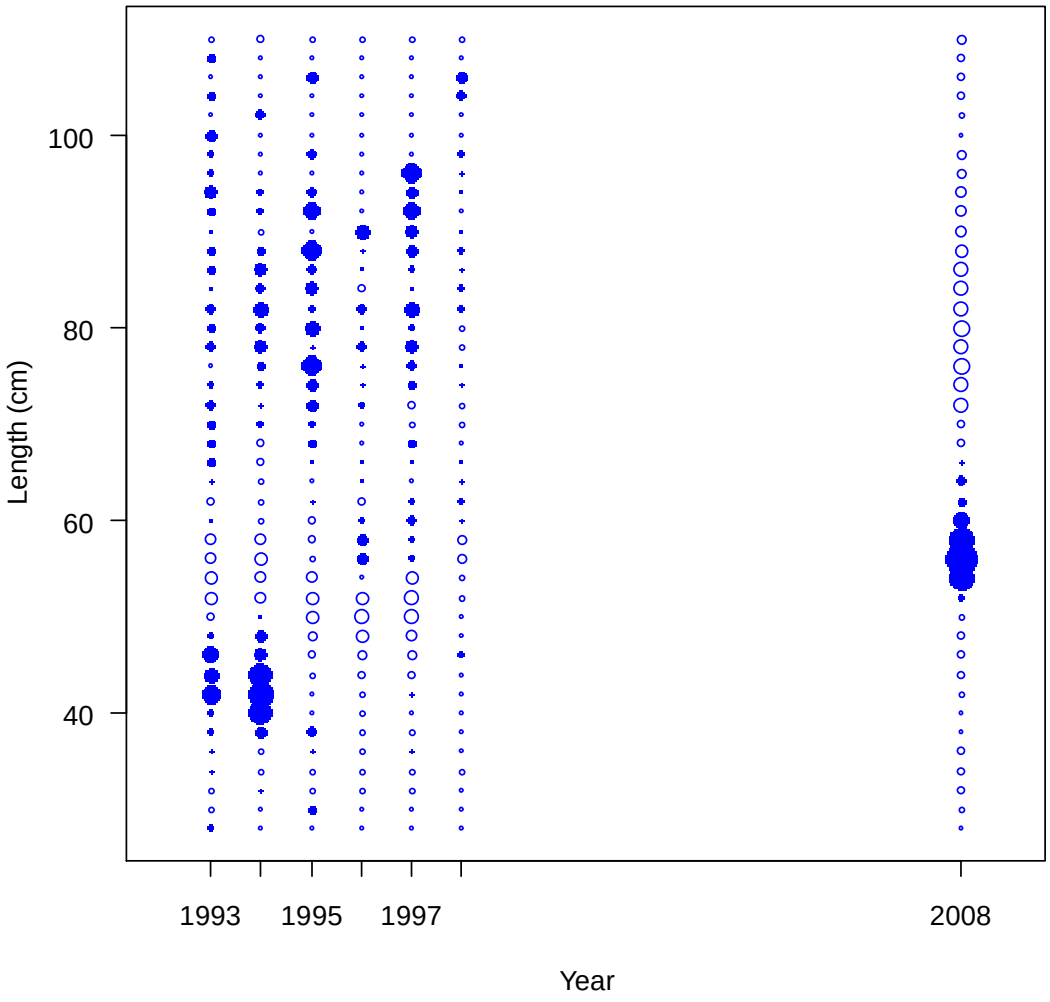


Figure 79. Pearson residuals for fits to commercial discarded combined-sex length compositions for Washington/Oregon (max = 9.1).

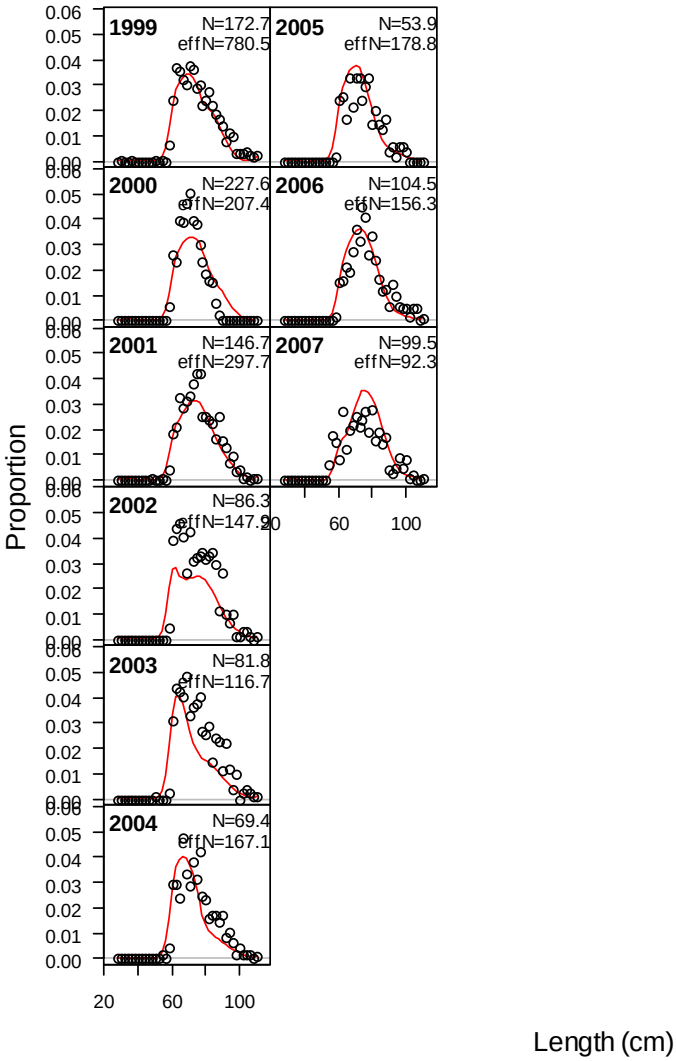


Figure 80. Fits to recreational female length compositions for Washington/Oregon.

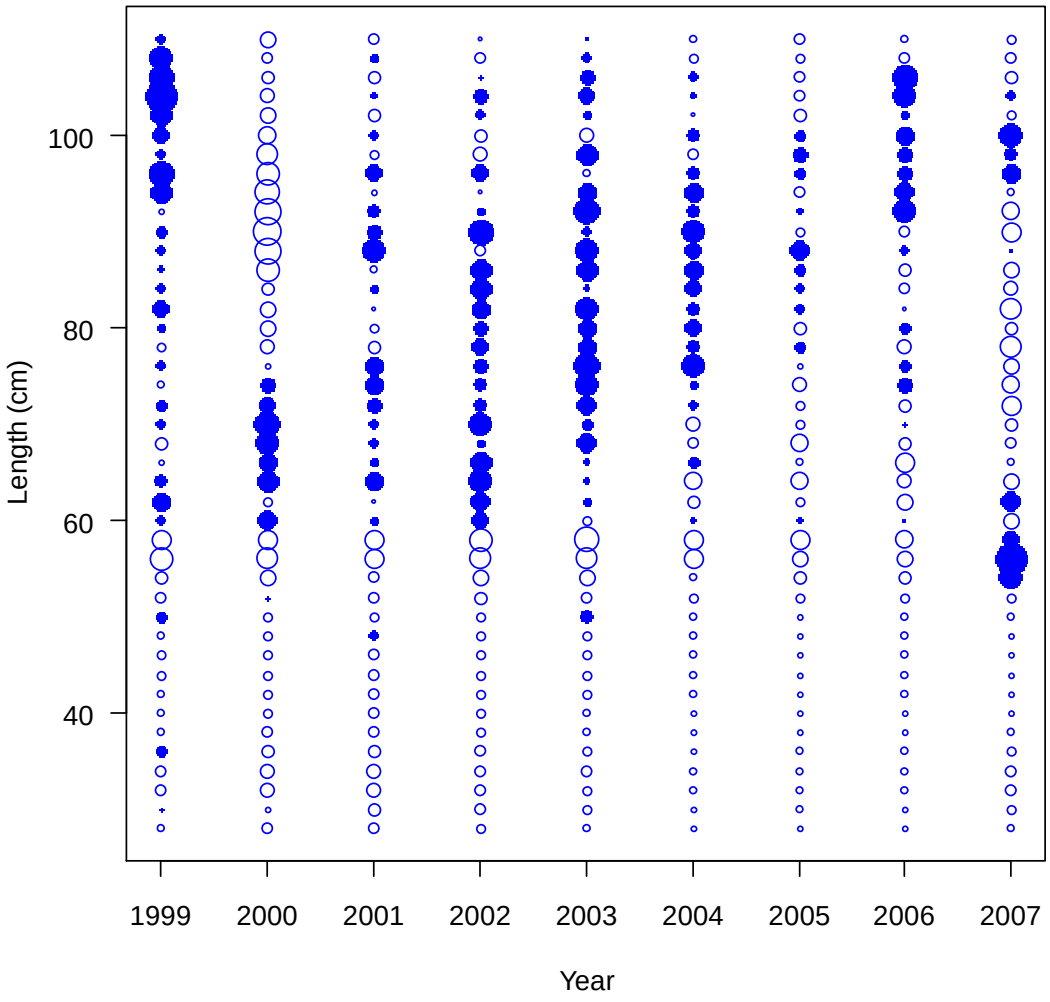


Figure 81. Pearson residuals for fits to recreational female length compositions for Washington/Oregon (max = 2.14).

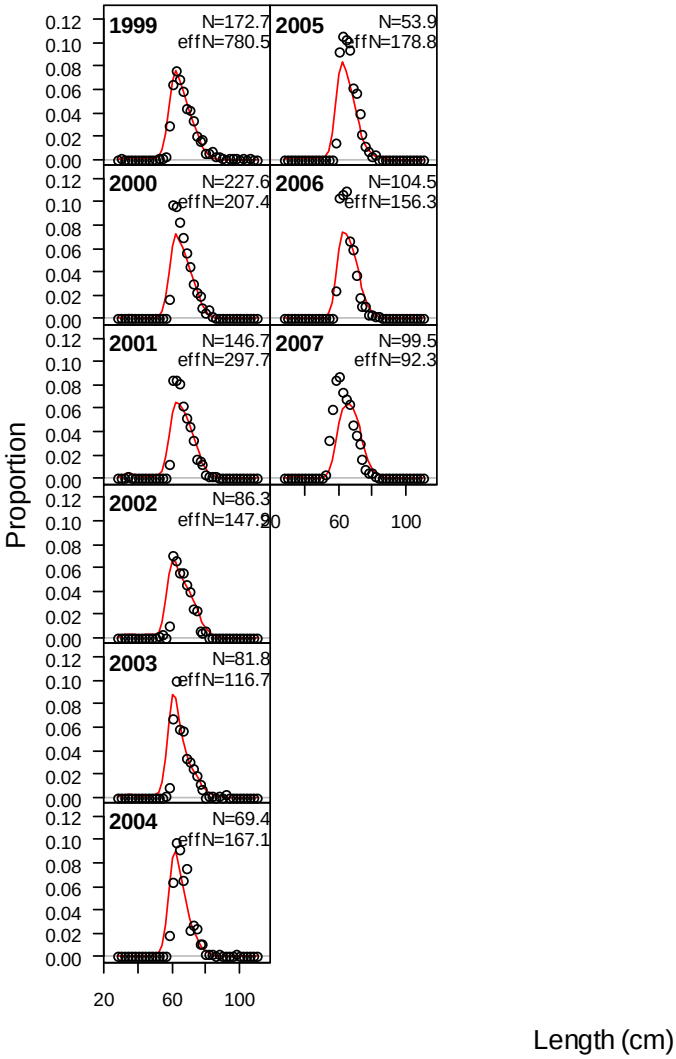


Figure 82. Fits to recreational male length compositions for Washington/Oregon.

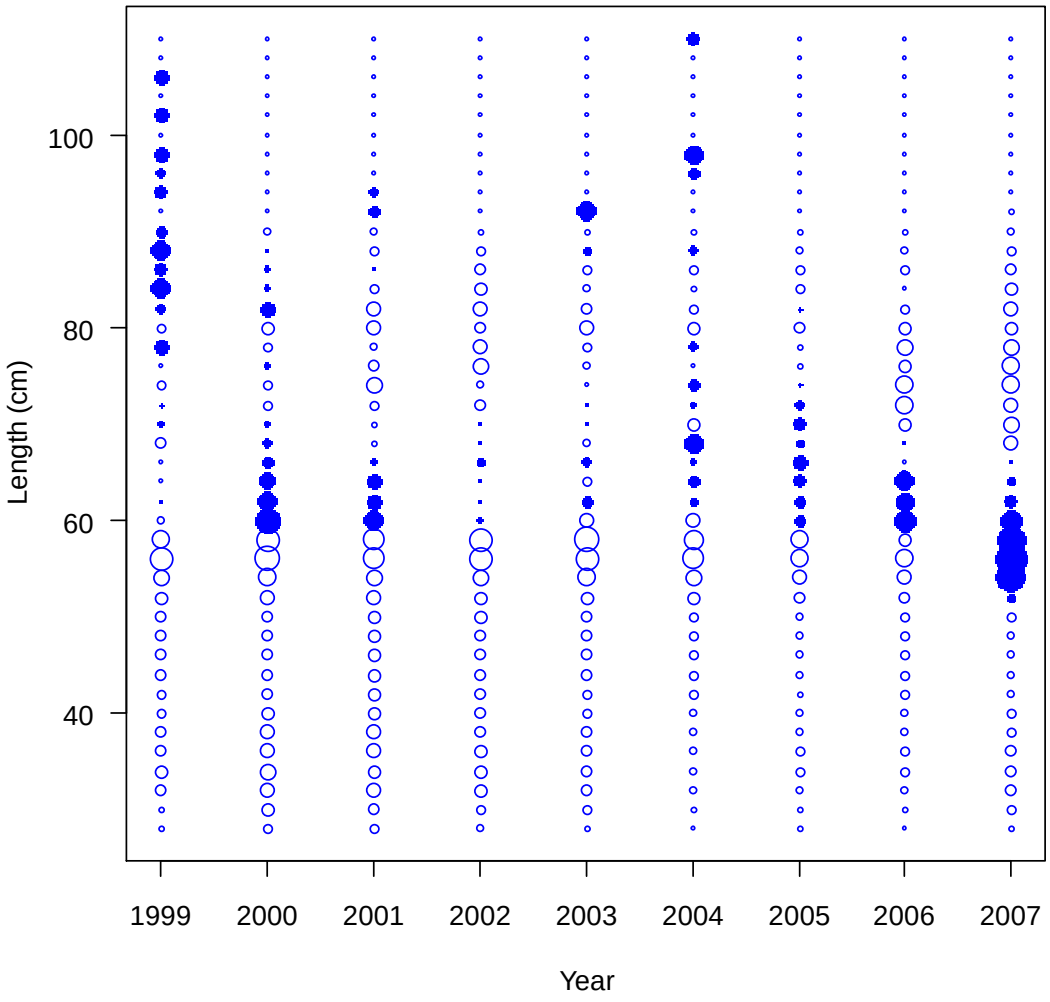


Figure 83. Pearson residuals for fits to recreational male length compositions for Washington/Oregon (max =3.63).

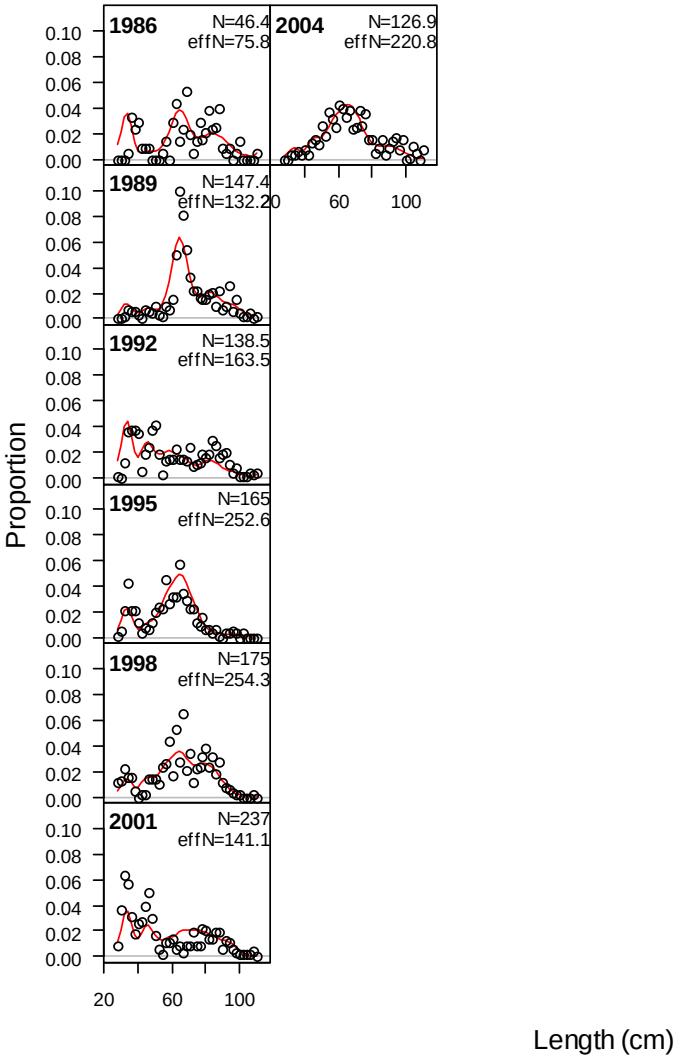


Figure 84. Fits to triennial female length compositions for Washington/Oregon.

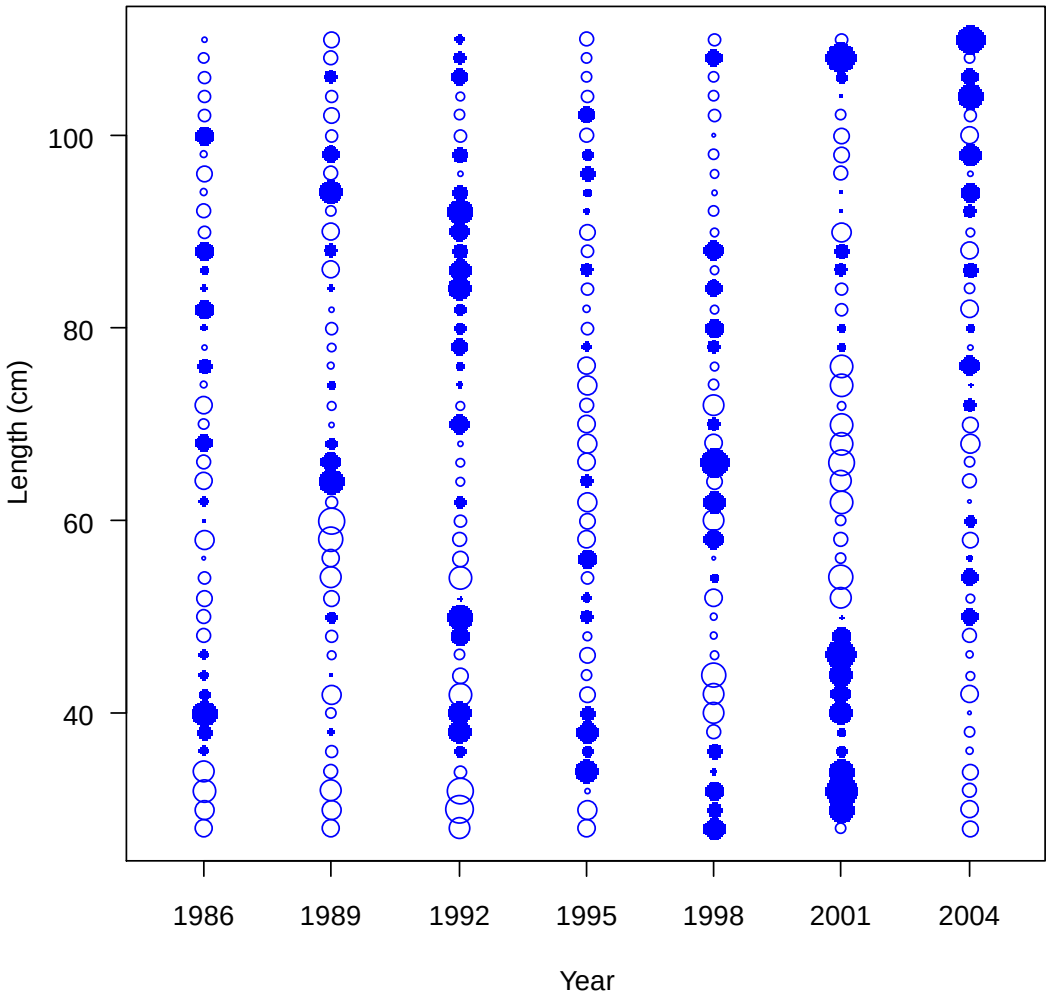


Figure 85. Pearson residuals for fits to triennial survey female length compositions for Washington/Oregon (max = 2.75).

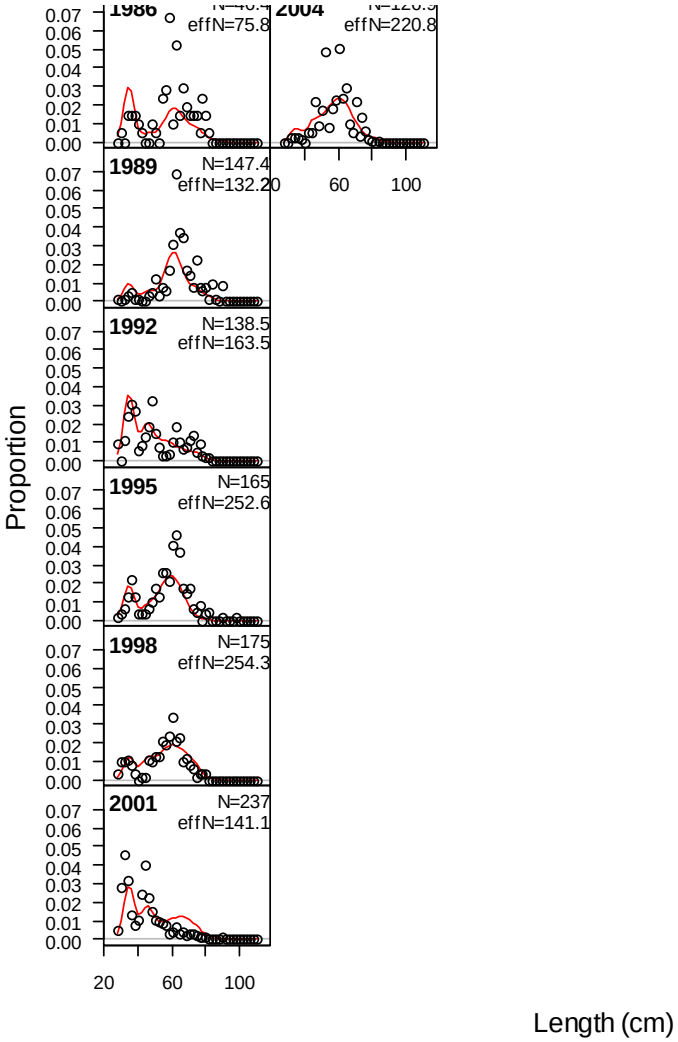


Figure 86. Fits to triennial survey male length compositions for Washington/Oregon.

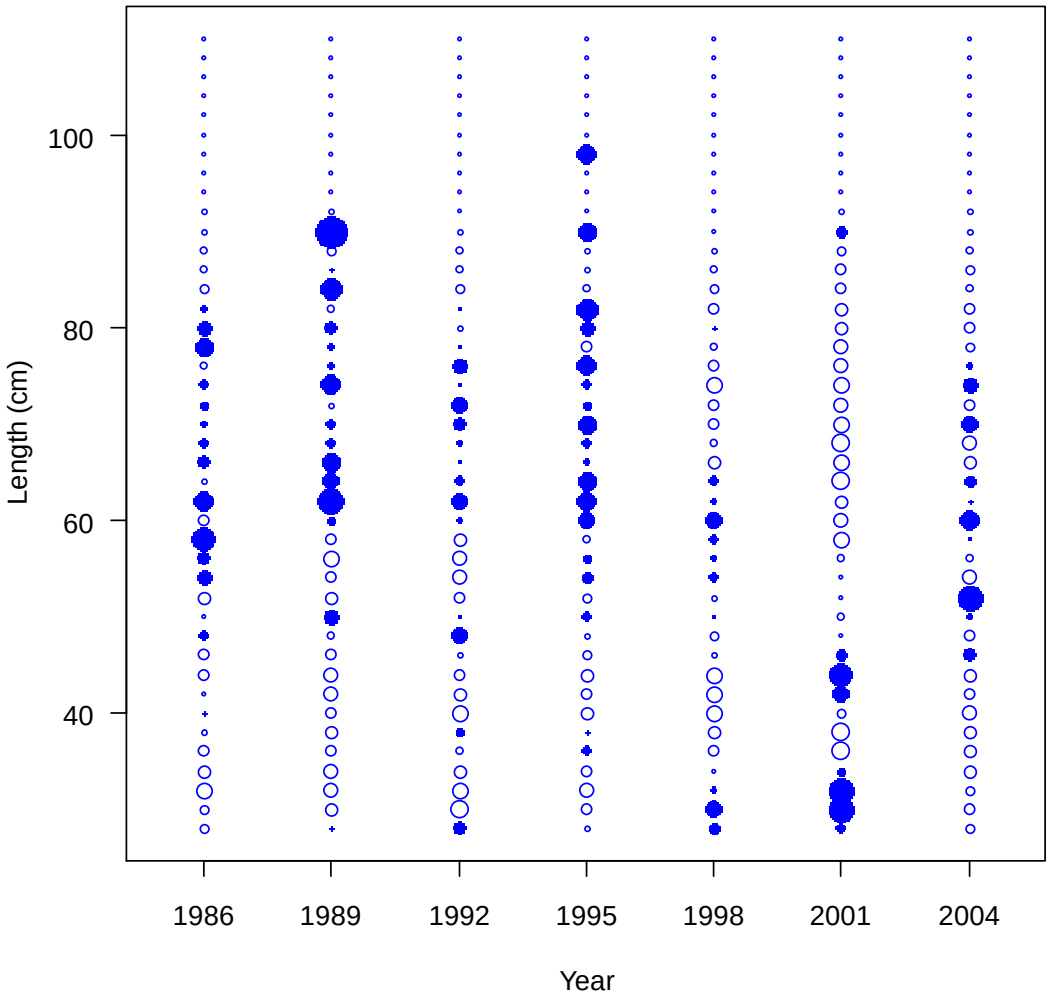


Figure 87. Pearson residuals for fits to triennial survey male length compositions for Washington/Oregon (max = 4.73).

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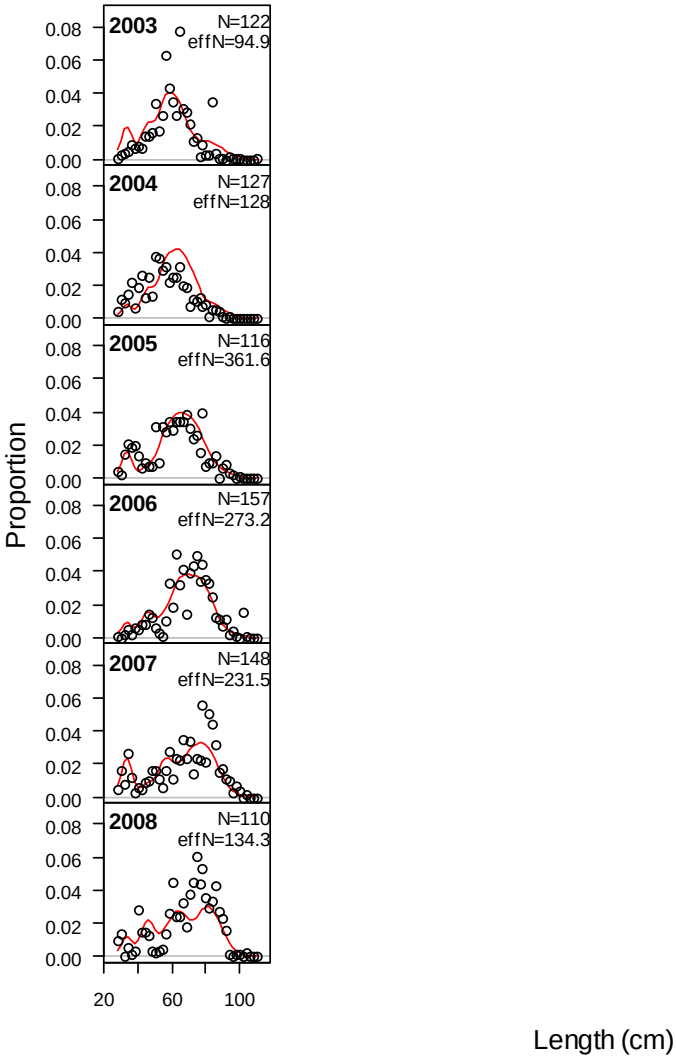

Figure 88. Fits to NWFSC survey female length compositions for Washington/Oregon..

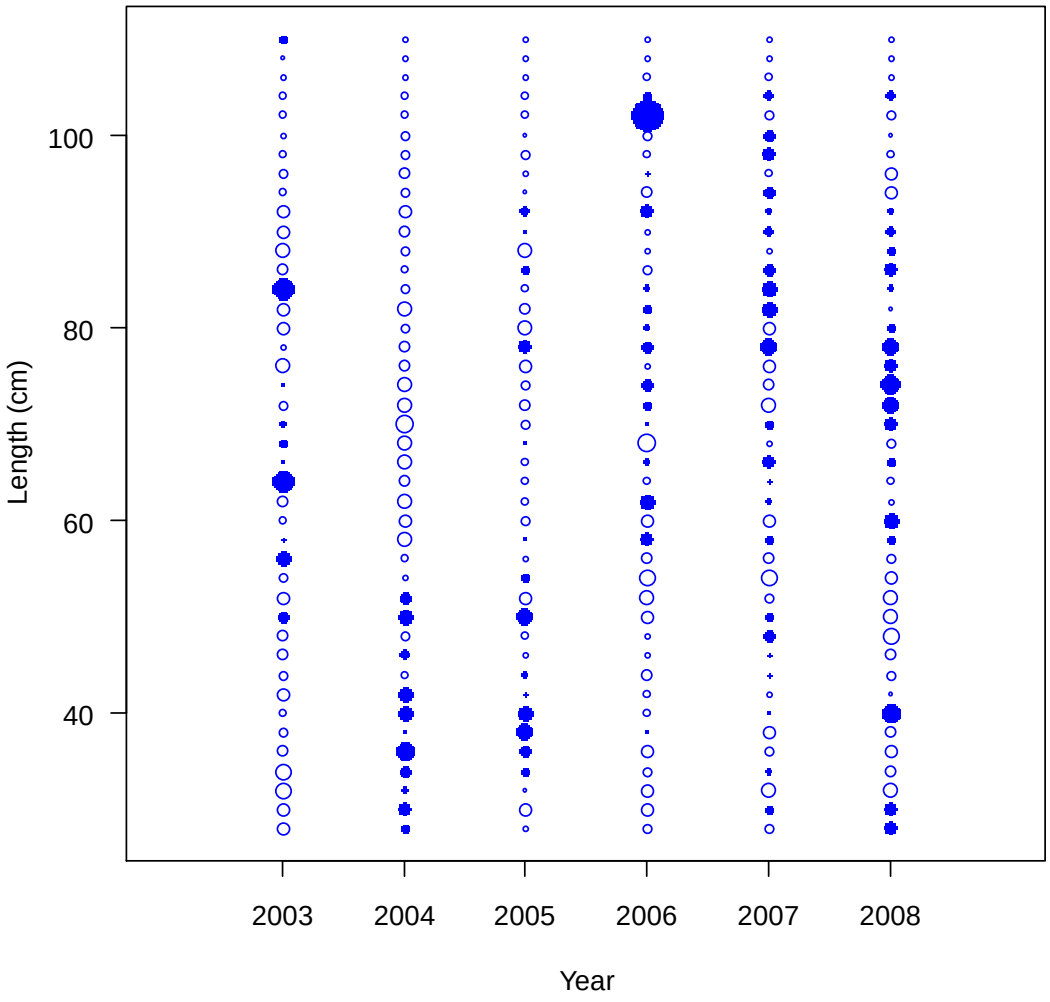

Figure 89. Pearson residuals for fits to NWFSC survey female length compositions for Washington/Oregon (max = 5.71).

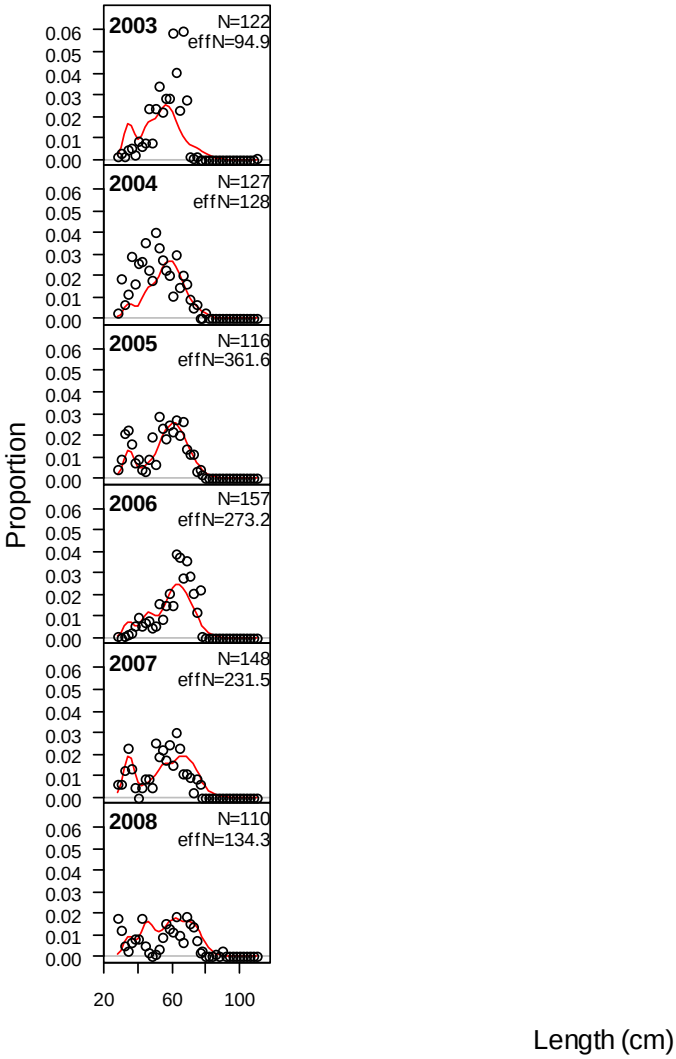

Figure 90. Fits to NWFSC survey male length compositions for Washington/Oregon.

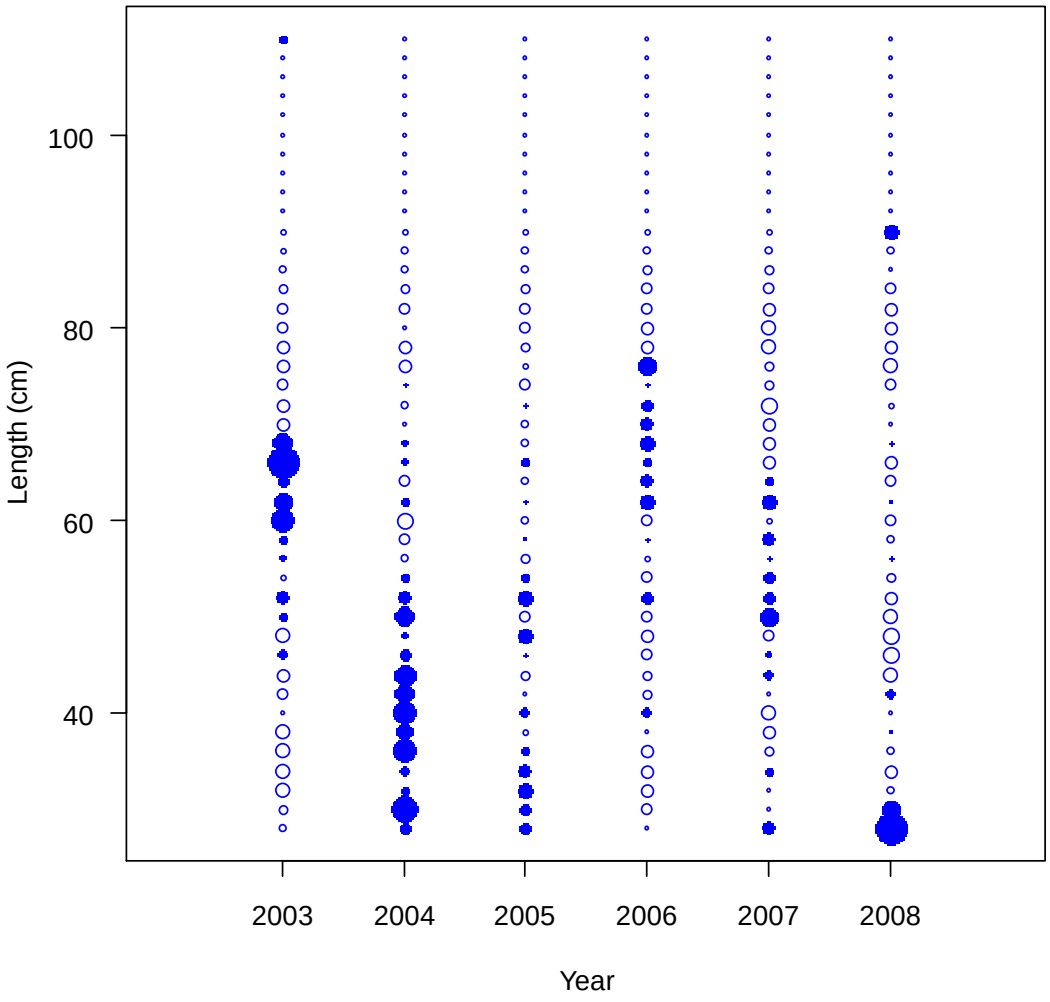

Figure 91. Pearson residuals for fits to NWFSC survey male length compositions for Washington/Oregon (max = 5.21).

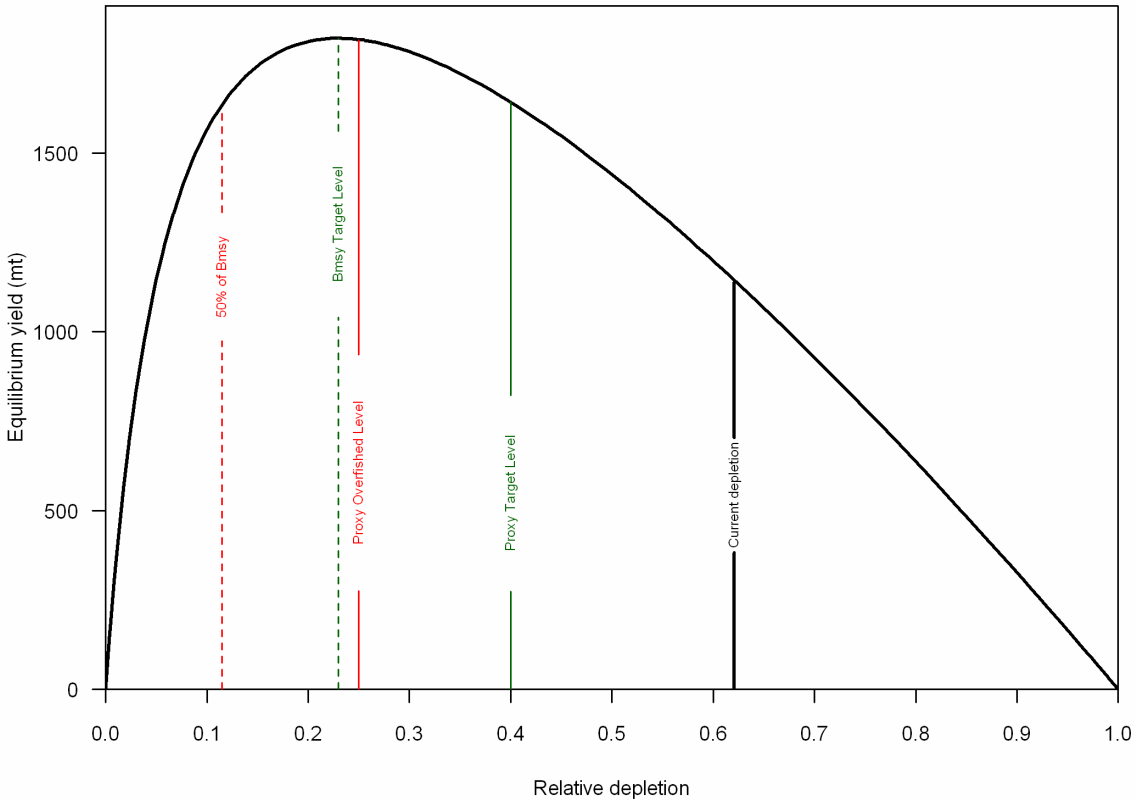

Figure 92. Equilibrium yield plot for Washington/Oregon

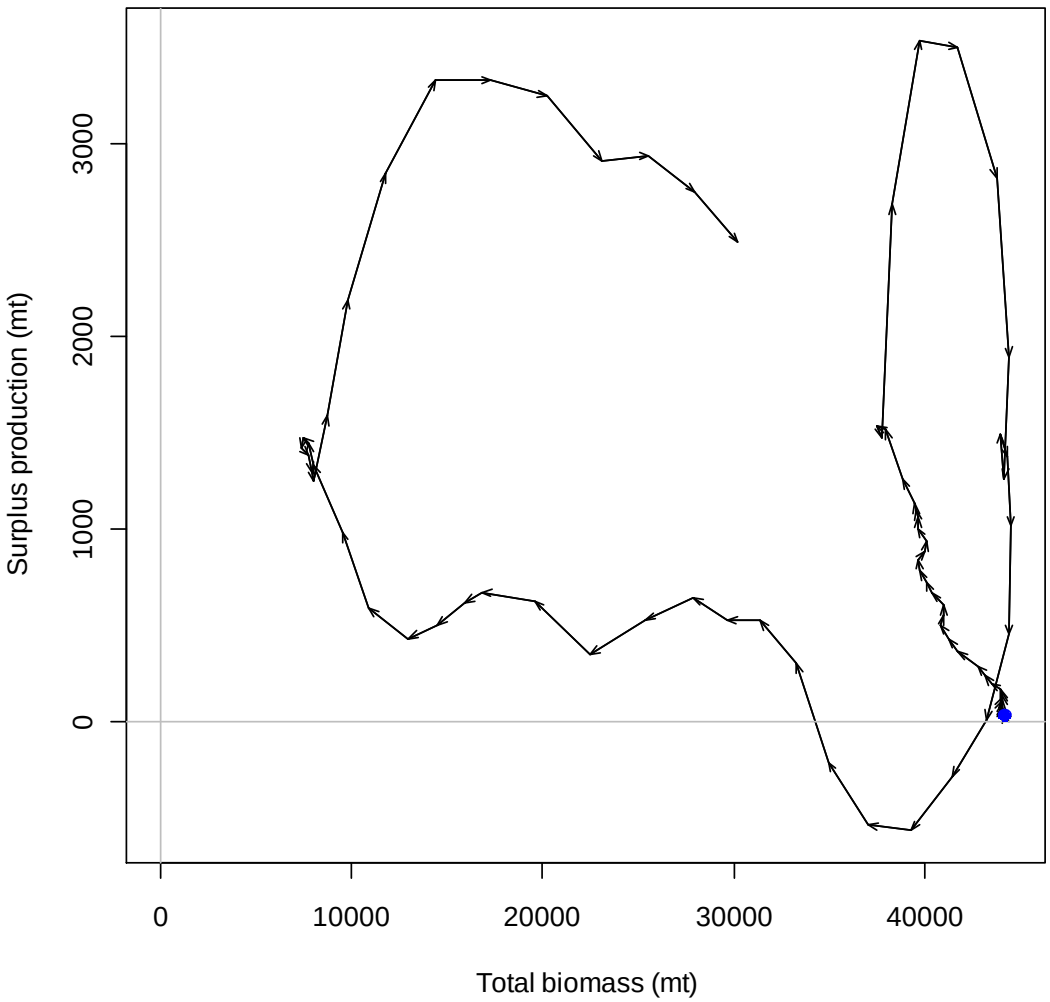

Figure 93. Time series of surplus production for Washington/Oregon

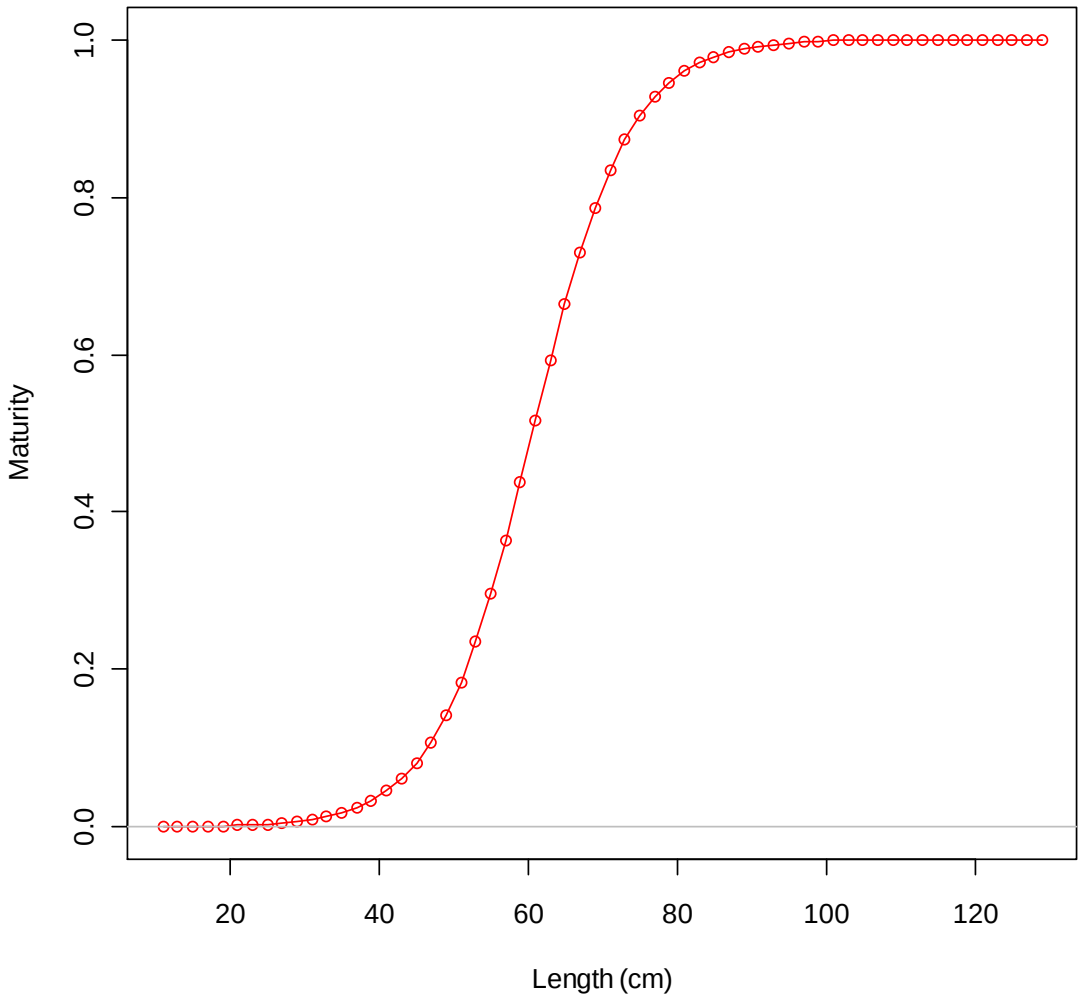

Figure 94. Maturity ogive for female lingcod in California

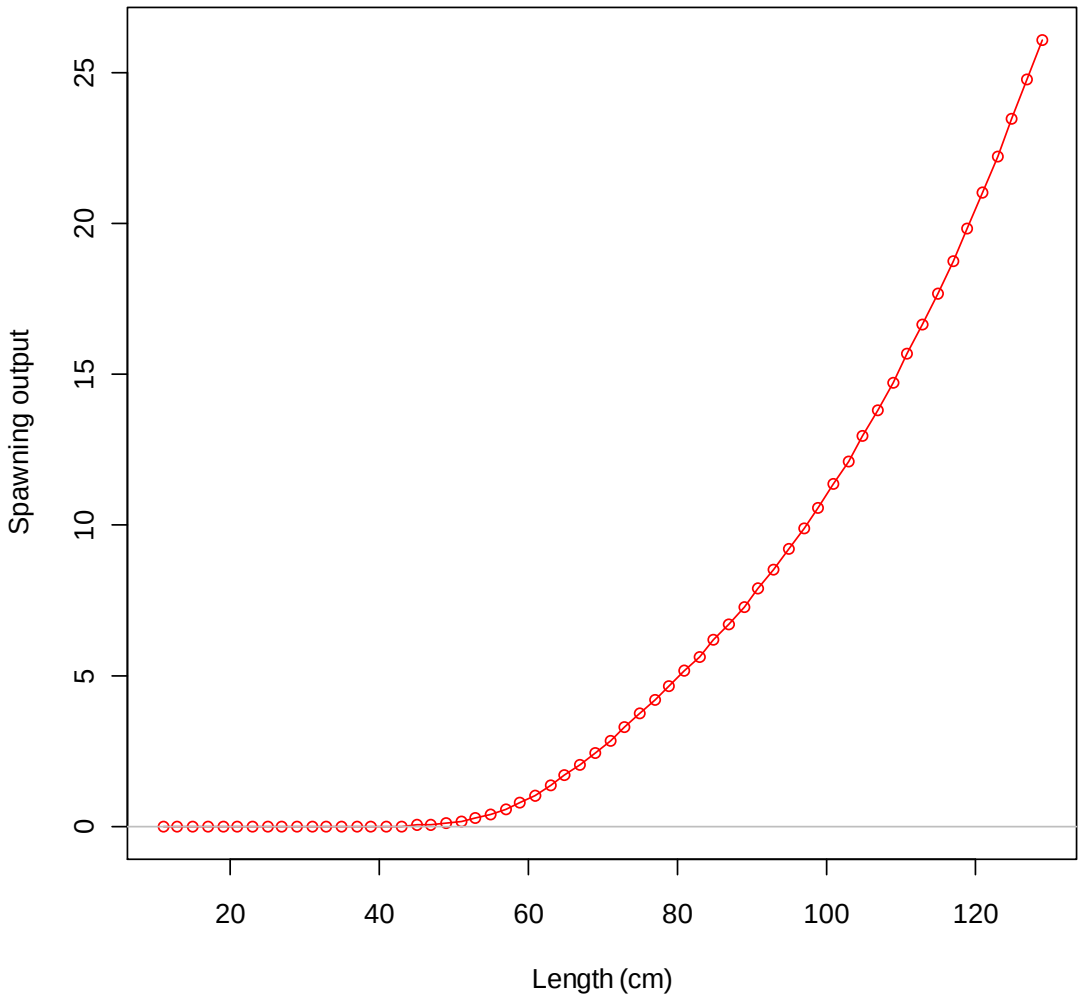

Figure 95. Length to spawning output relationship in California.

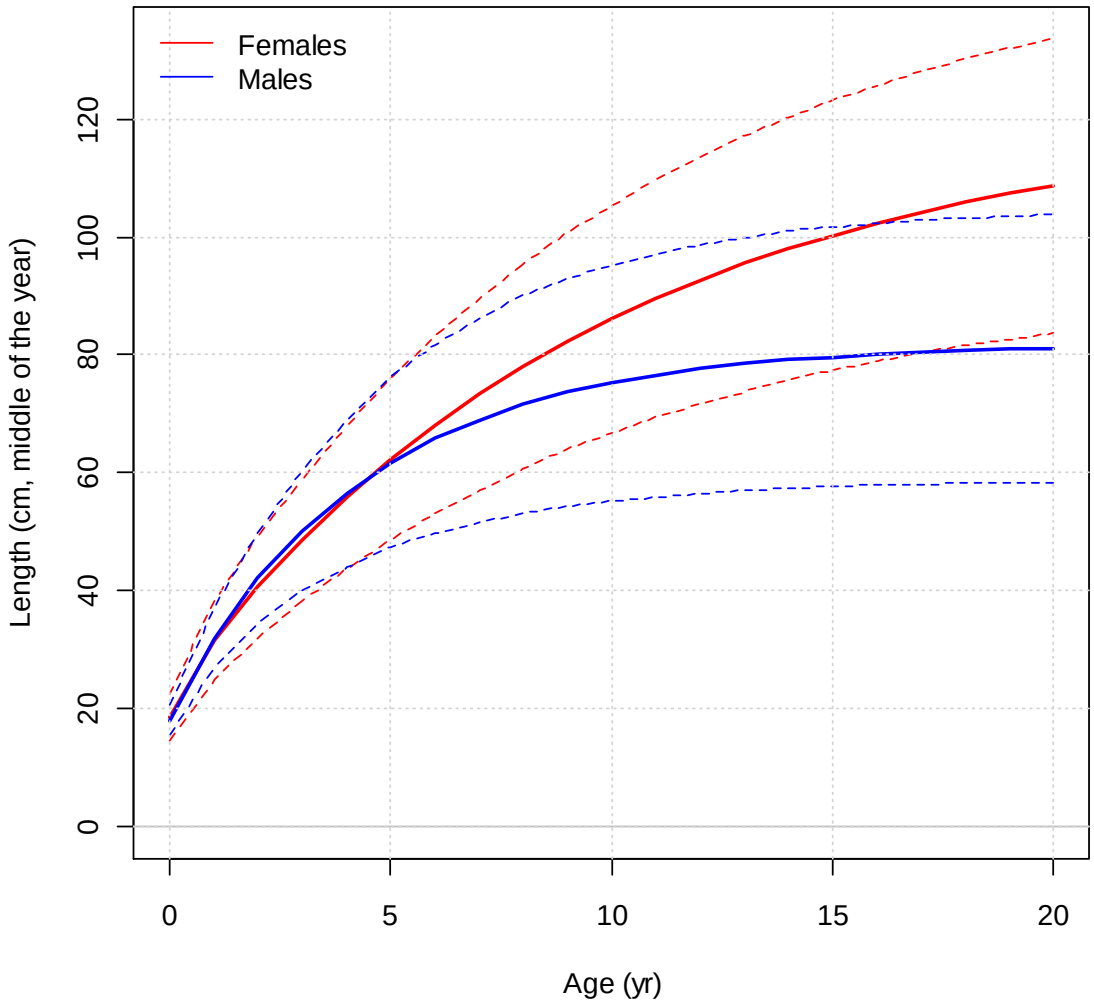

Figure 96. Growth curve for female (upper) and male (lower) lingcod estimated in the California model (length at age 1 and 20 is fixed, but k and cvs are estimated).

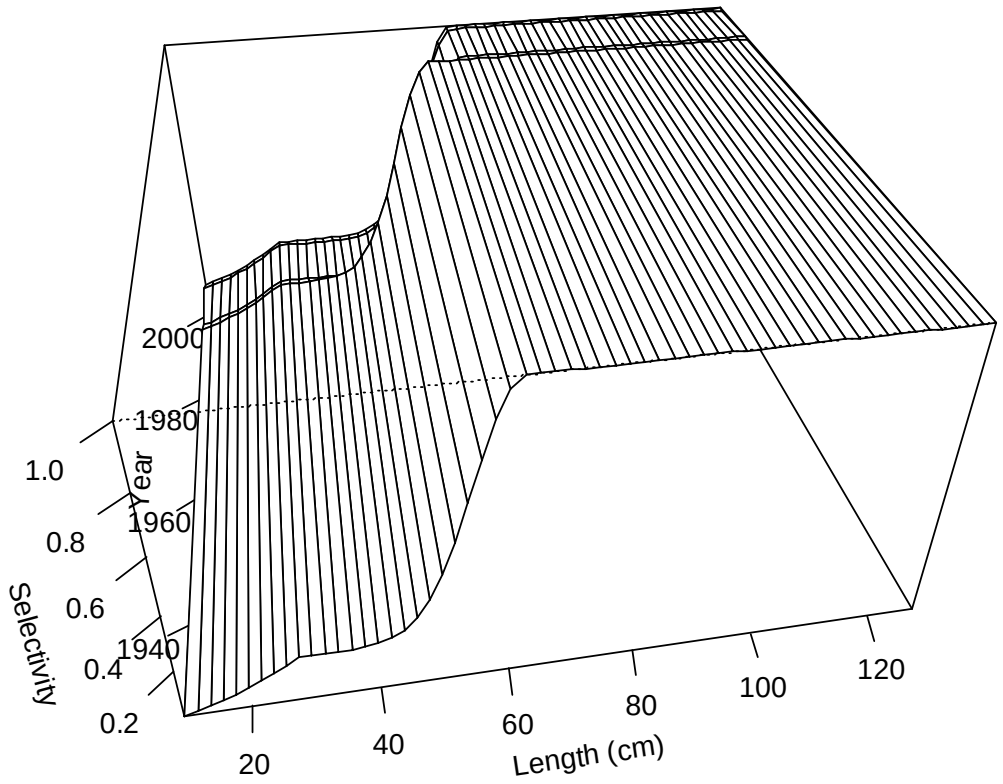

Figure 97. Time varying selectivity for the California commercial fishery.

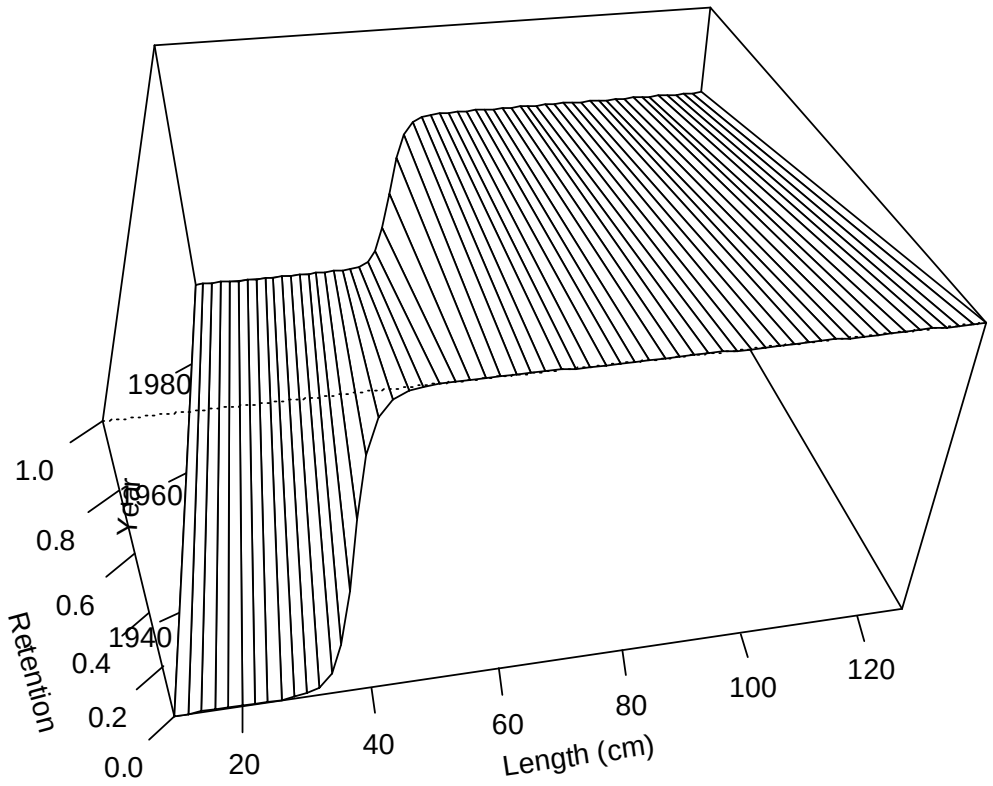

Figure 98. Time varying retention for the California commercial fishery.

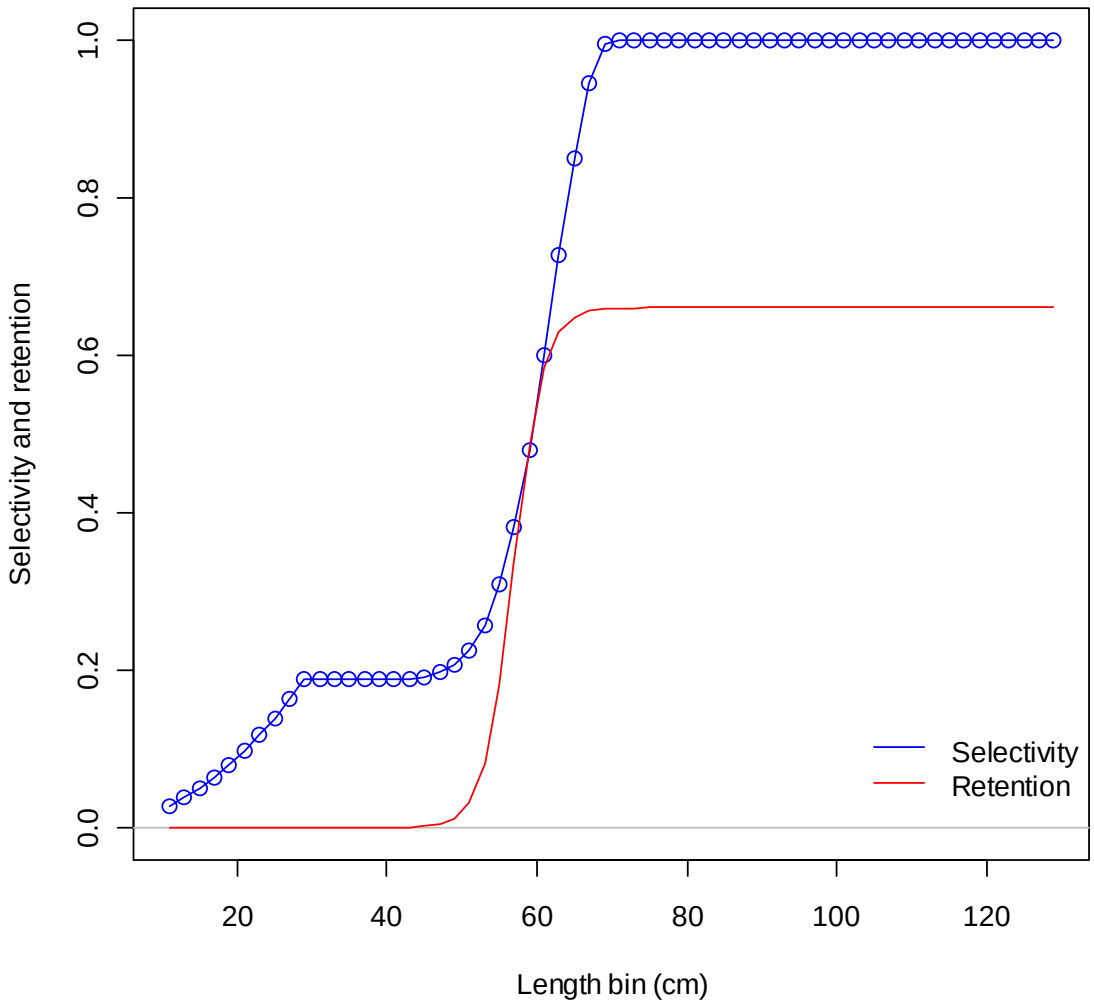

Figure 99. California 1998-2008 commercial fishery selectivity and retention (as the proportion retained at length).

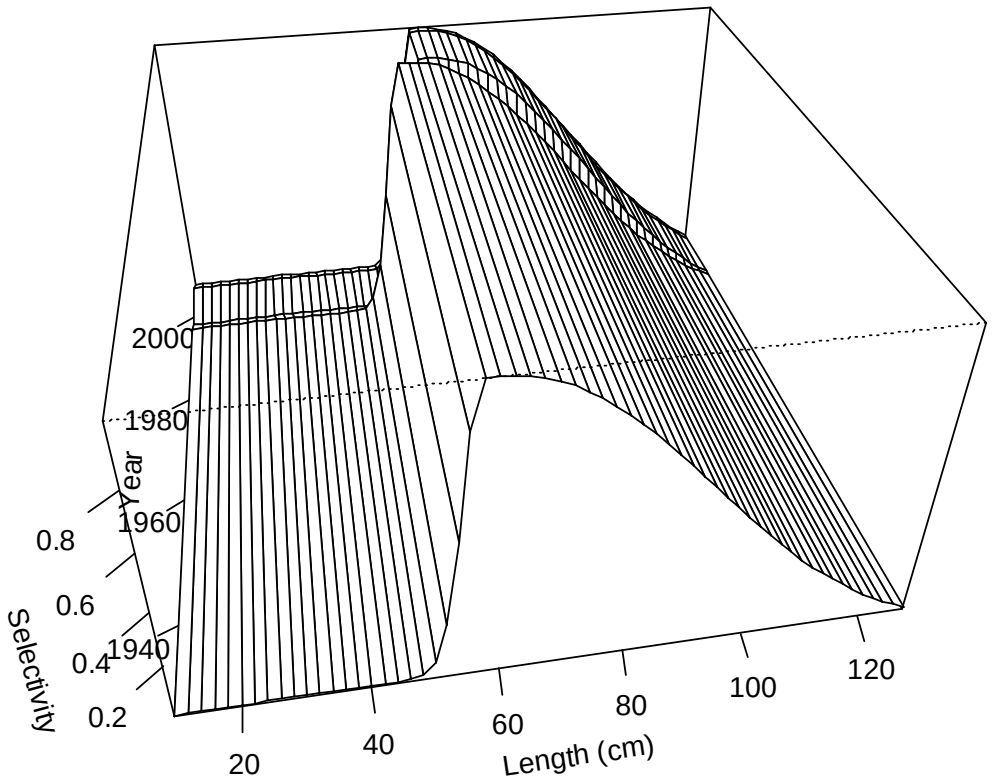

Figure 100. Combined-sex time-varying selectivity for the California recreational fishery.

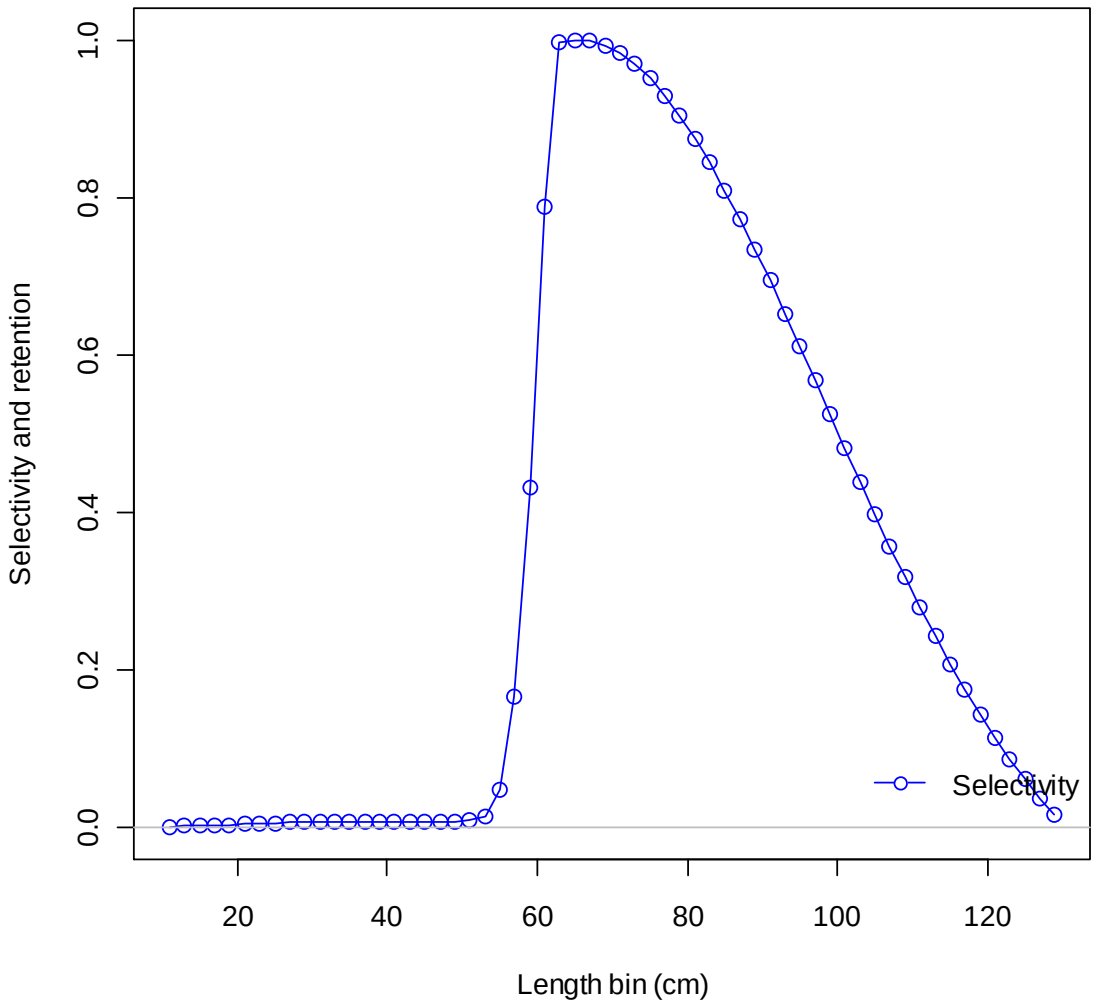

Figure 101.. Ending year selectivity (1998-2008) for the California recreational fishery.

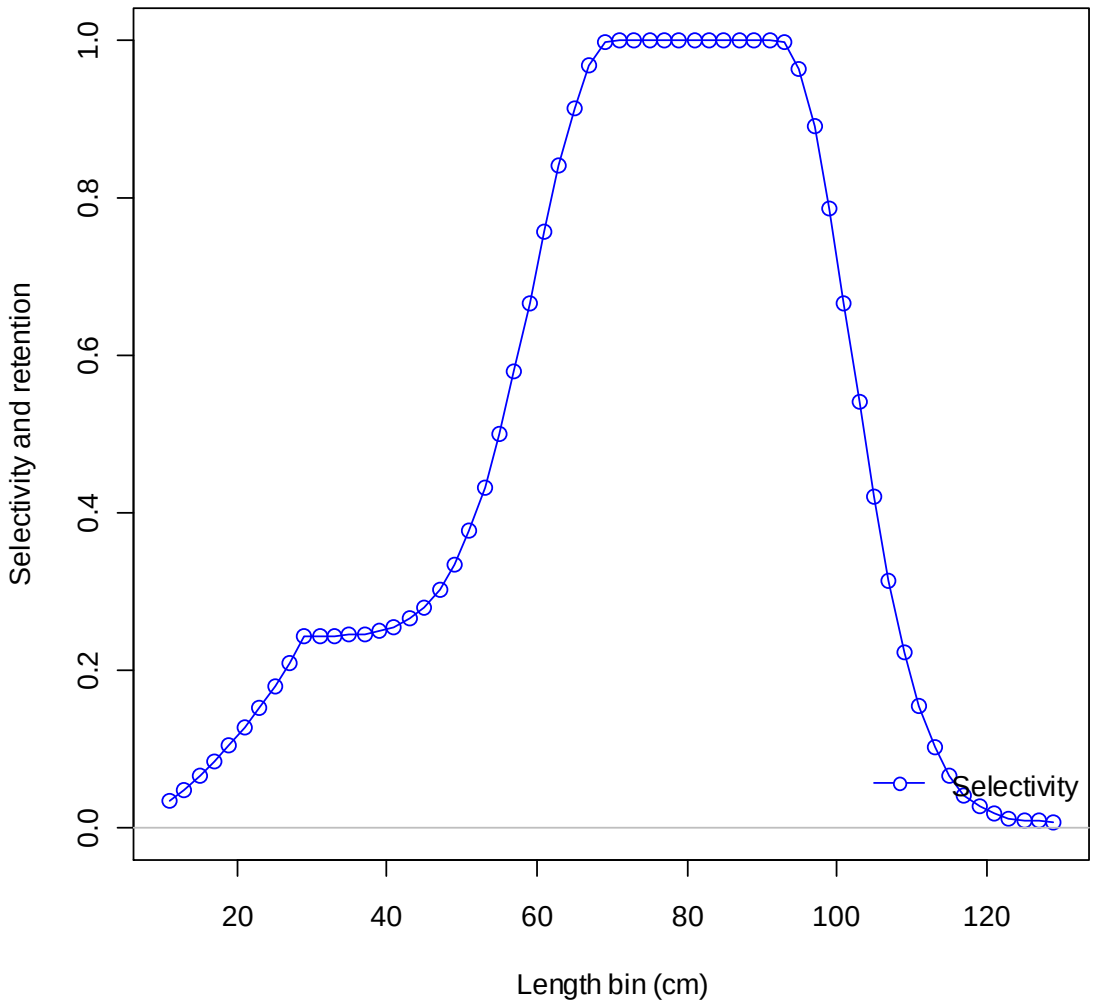

Figure 102. Triennial survey selectivity for the California assessment (forced to mimic the triennial survey selectivity for the North).

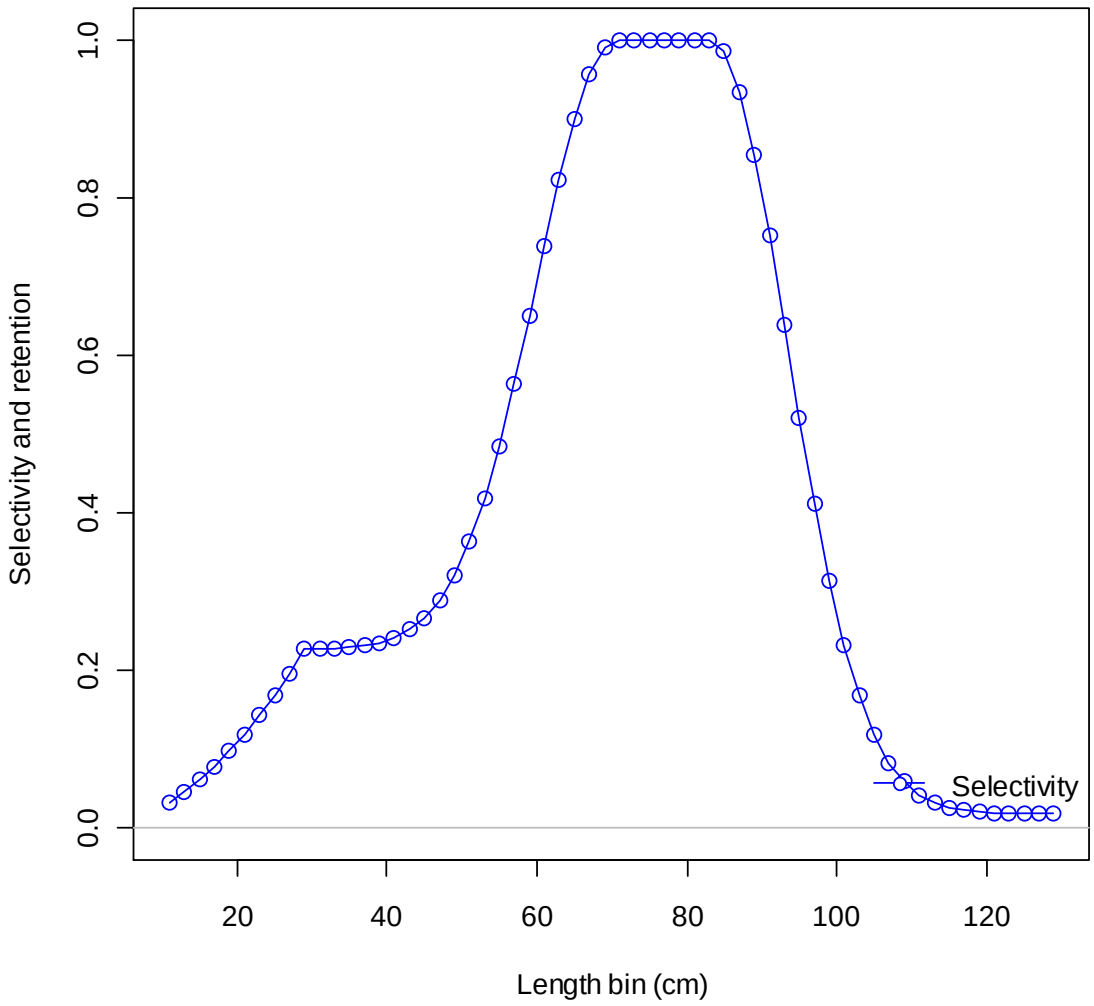

Figure 103. NWFSC survey selectivity for the California assessment.

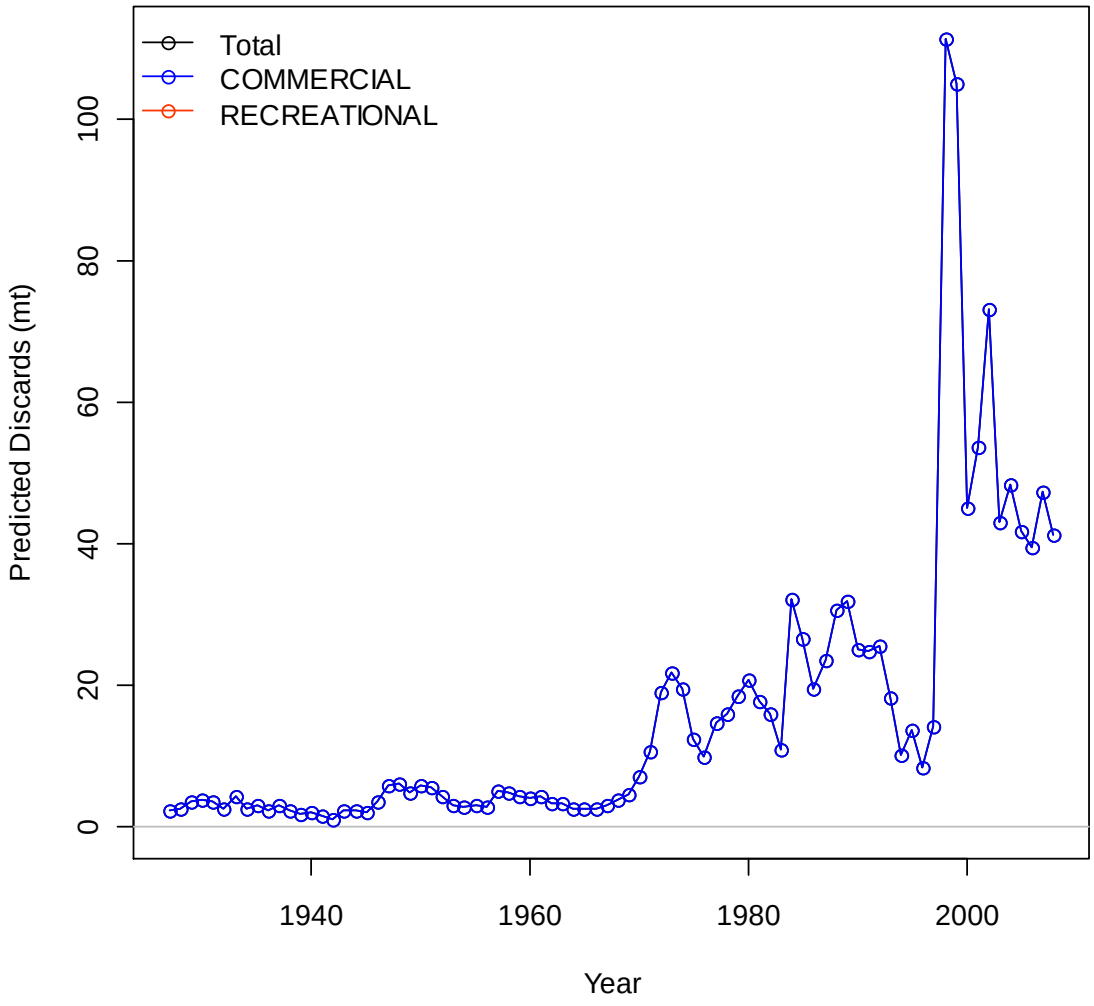

Figure 104. Time series of estimated discard mortalities for California assessment.

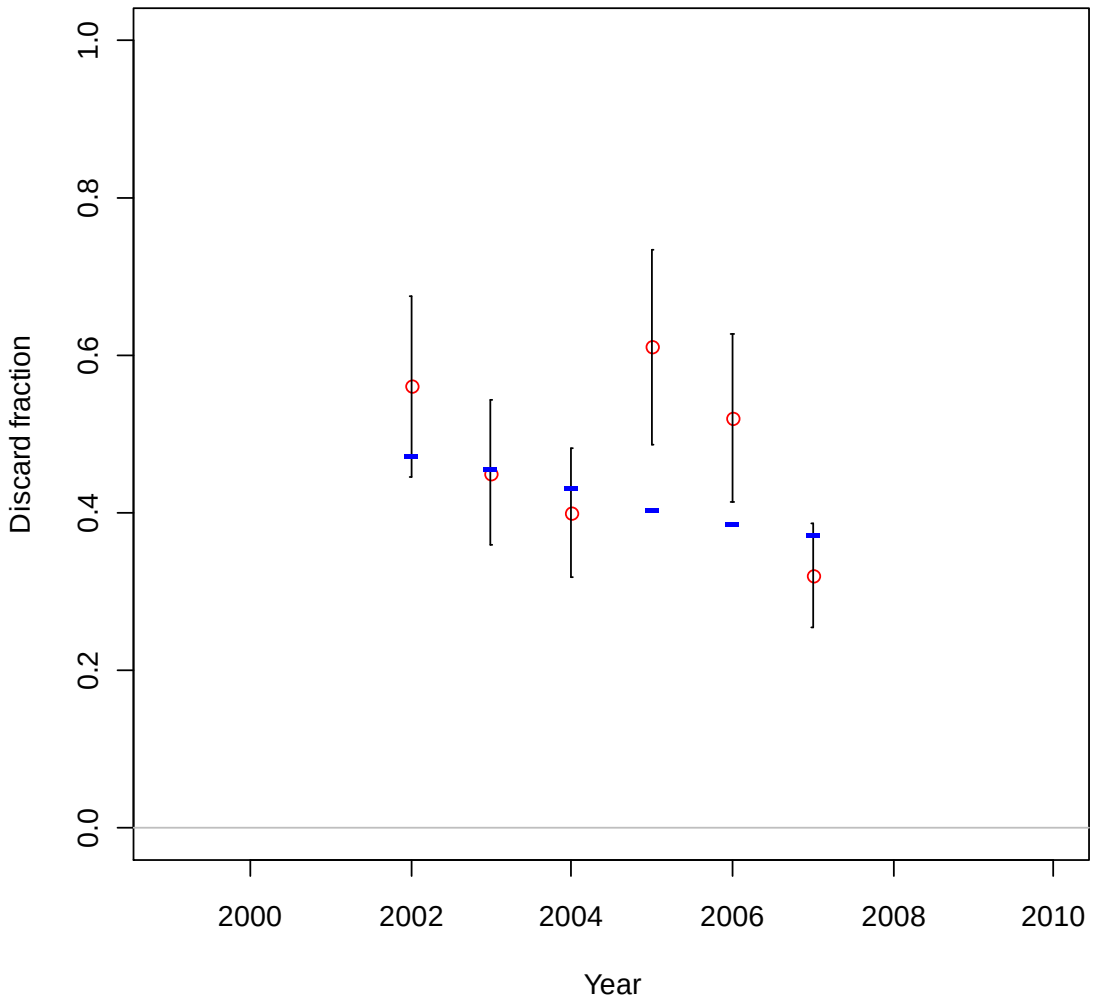

Figure 105. Fit to discard fraction data for California.

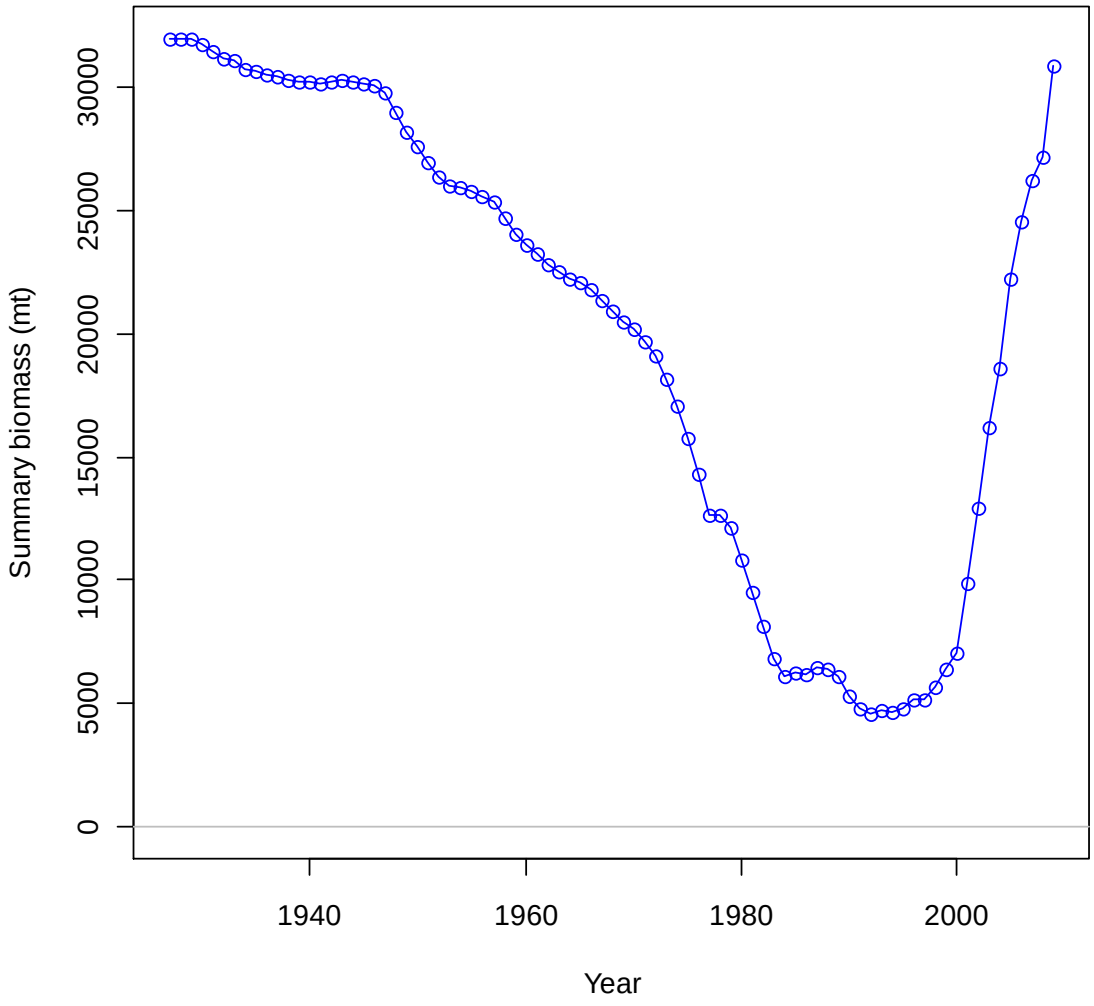

Figure 106. Time series of summary (2+) biomass for California.

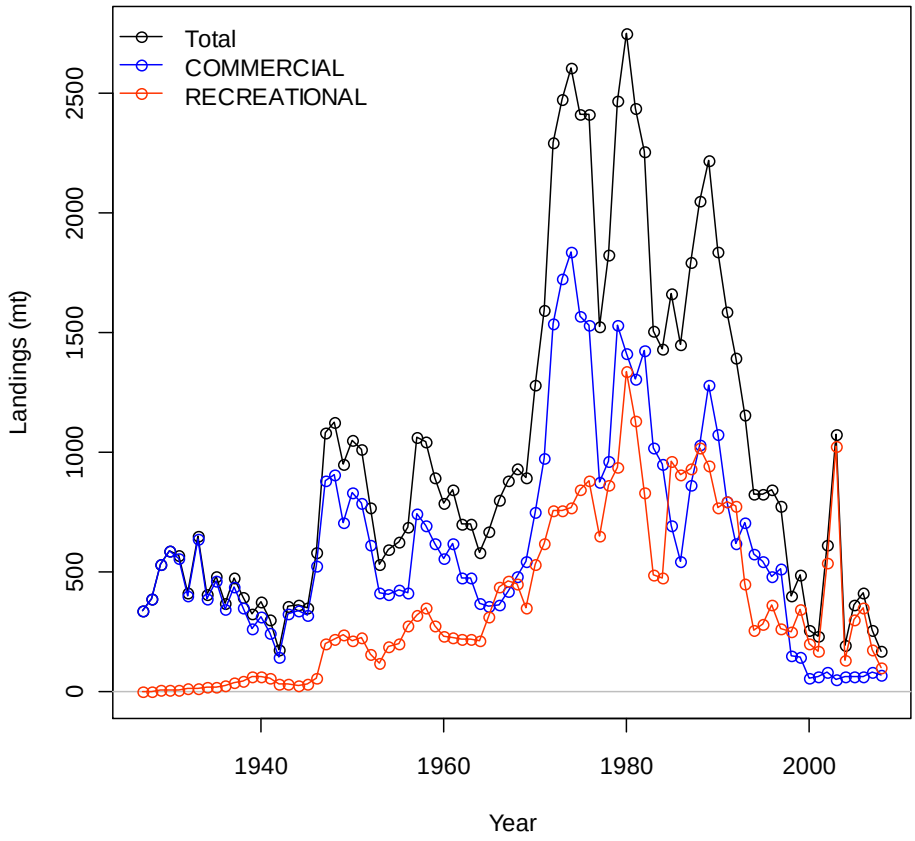

Figure 107. Time series of exploitation rate (catch/summary biomass) for California.

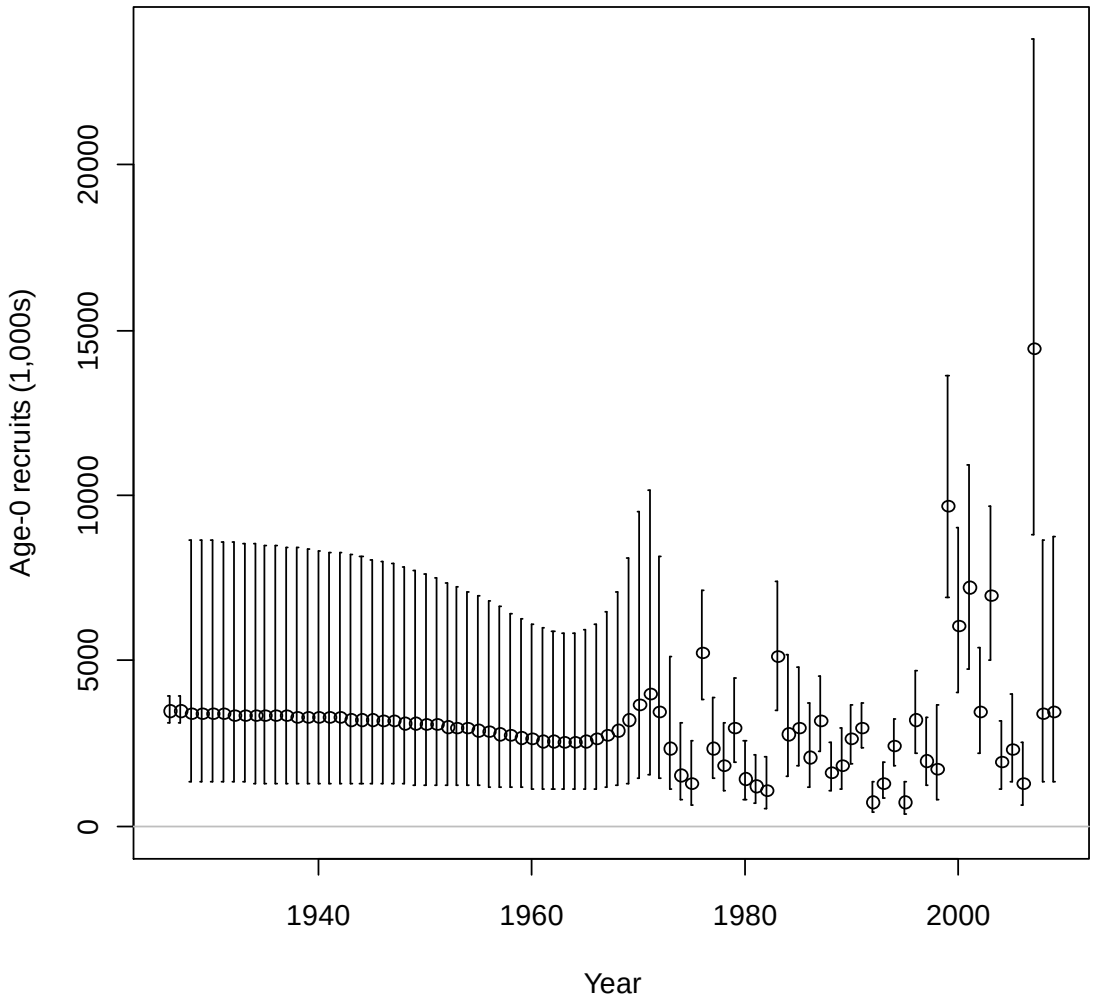

Figure 108. Time series of recruitment for California.

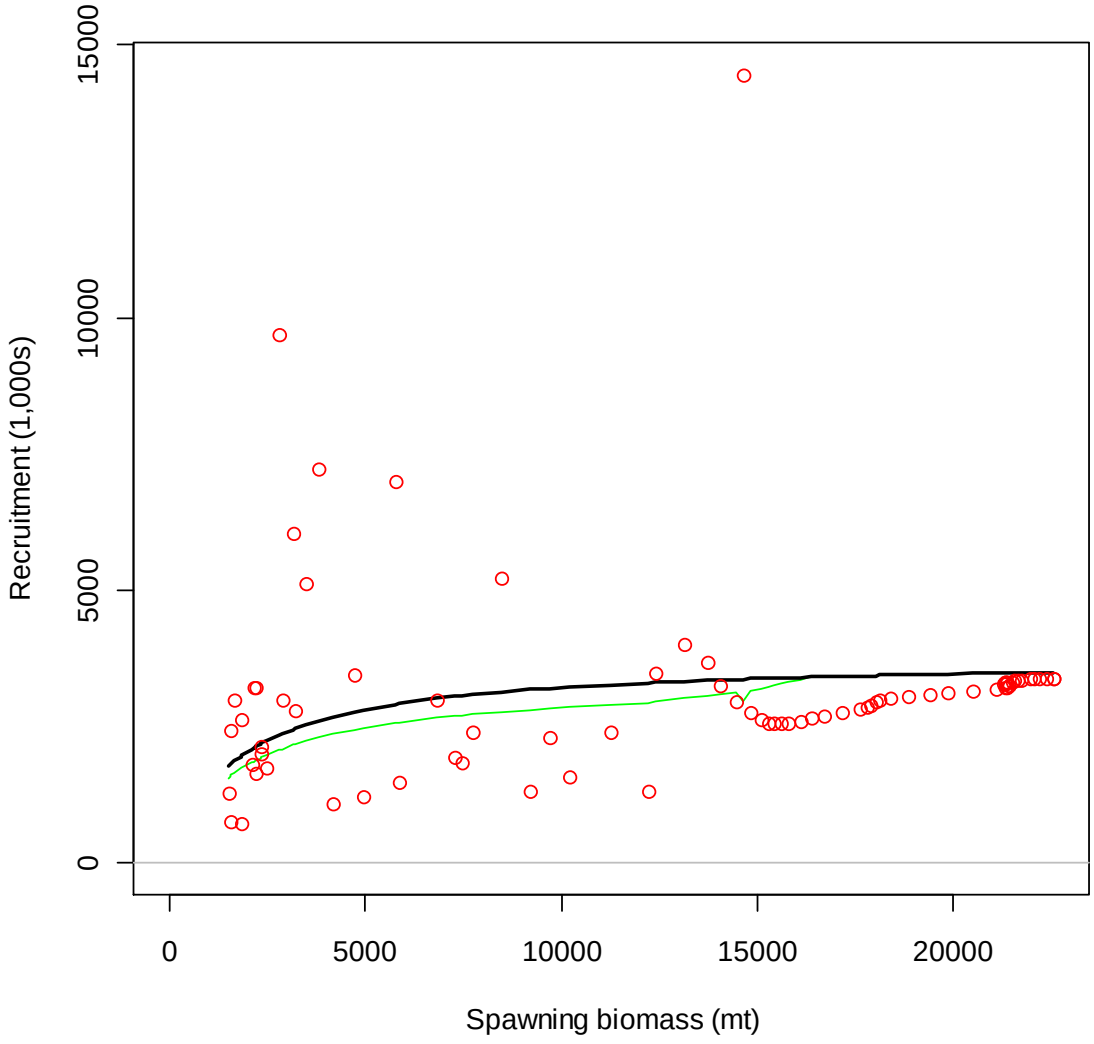

Figure 109. Fit to stock-recruitment relationship for California.

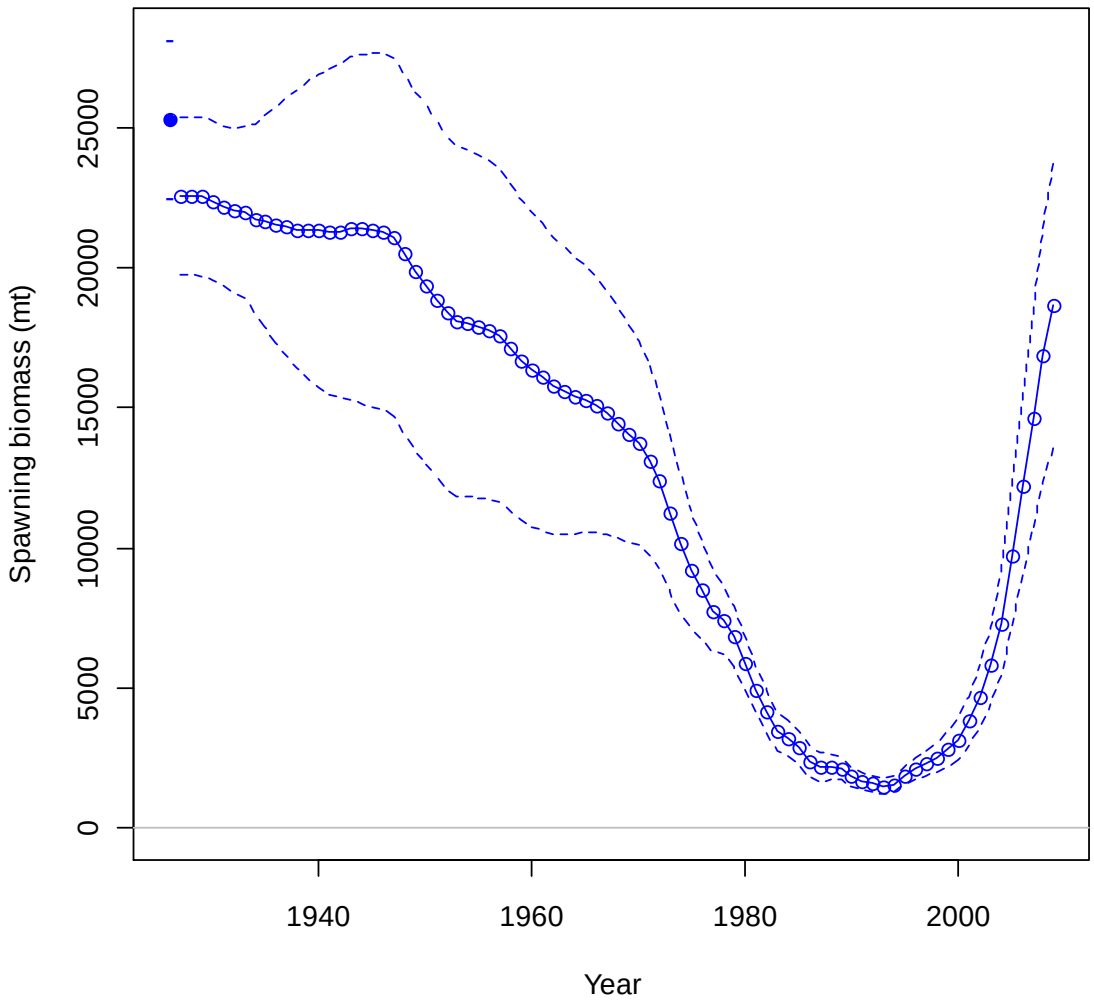

Figure 110. Time series of spawning biomass for California.

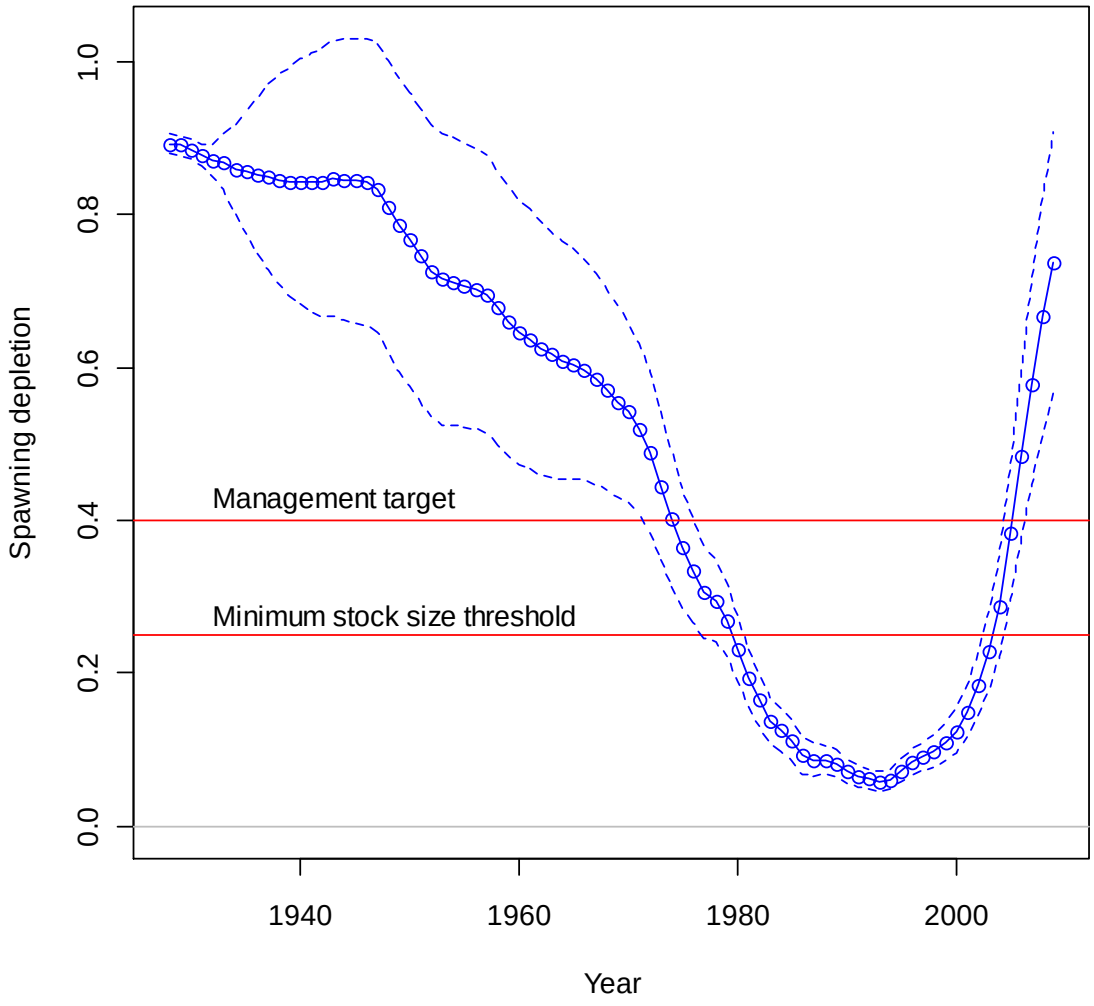

Figure111. Time series of spawning depletion for California.

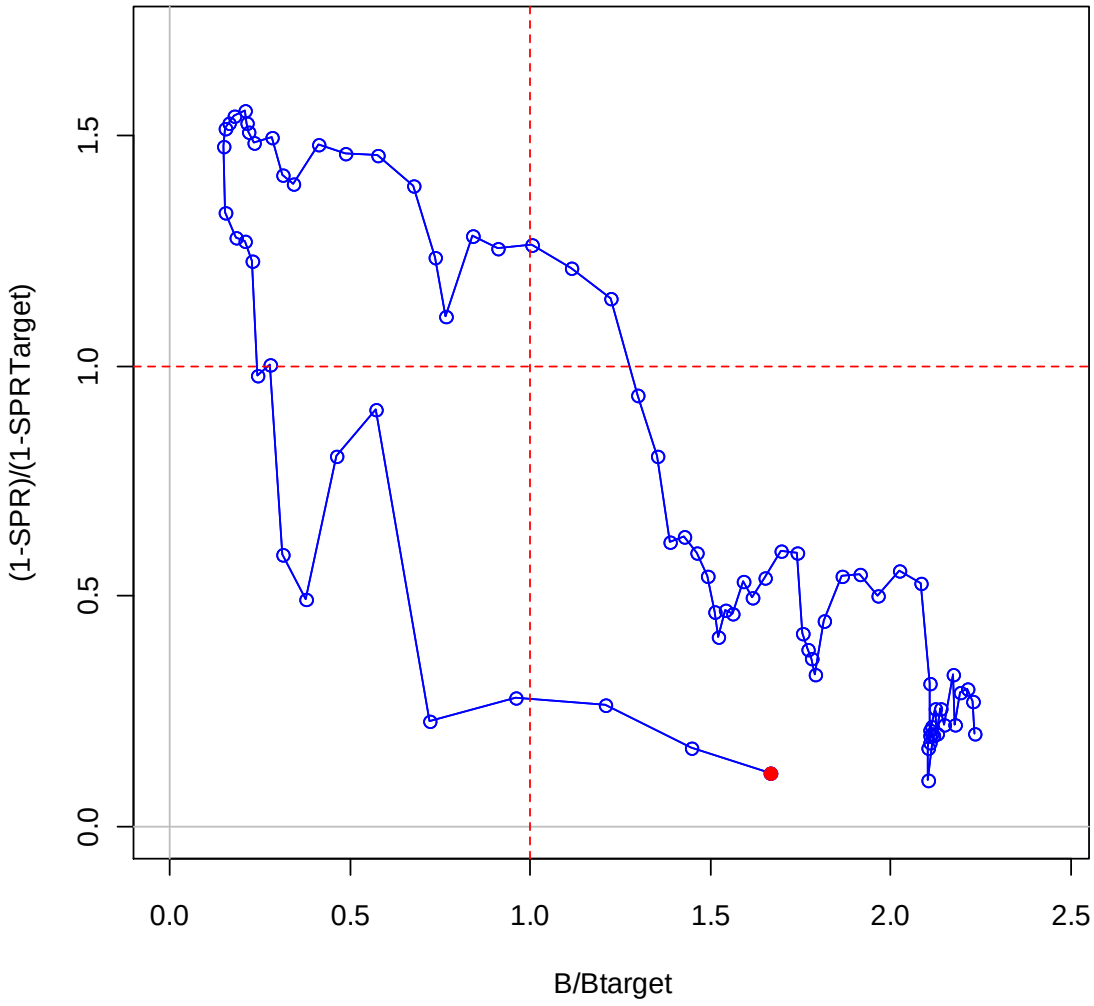

Figure 112. Time series of relative harvest rate (1-SPR) vs. relative spawning biomass.

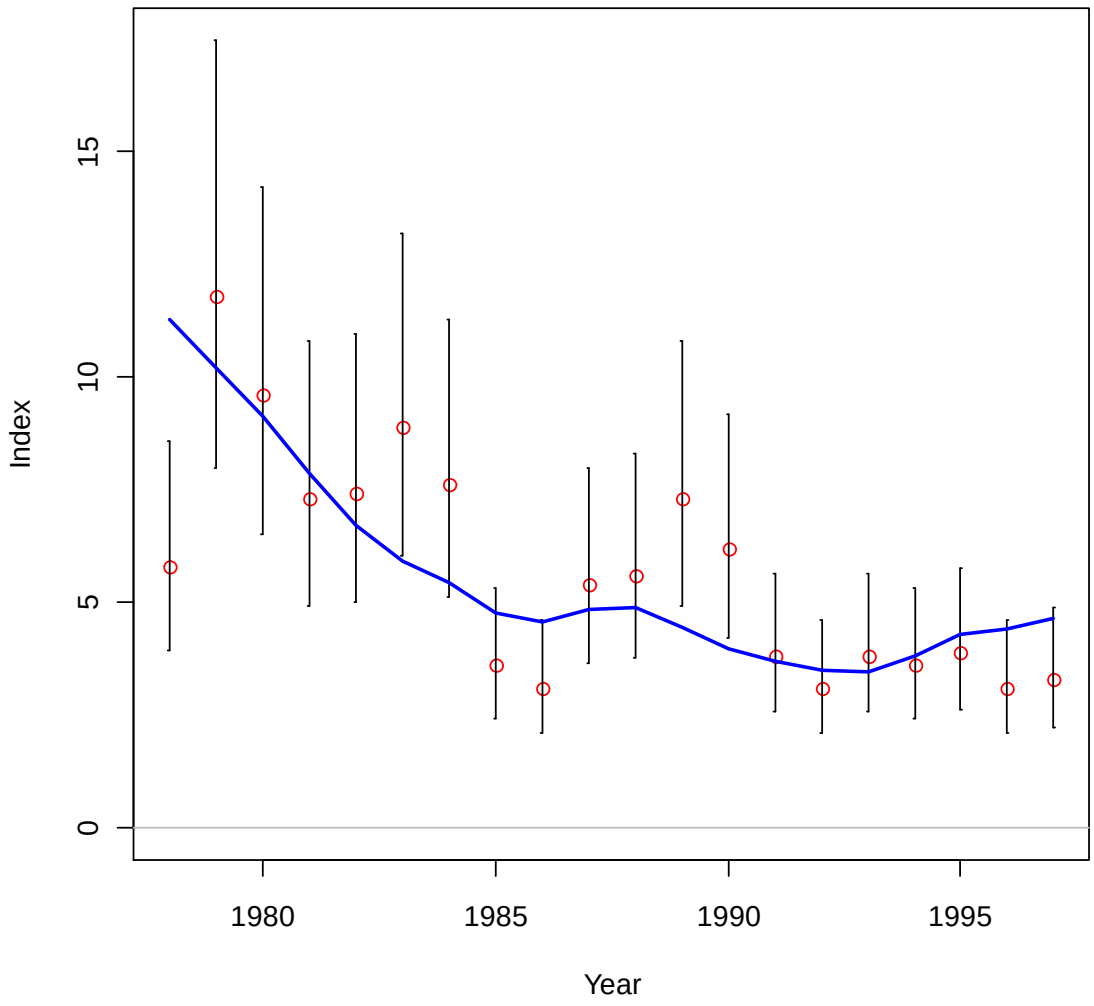

Figure 113. Model fit to commercial CPUE index for California.

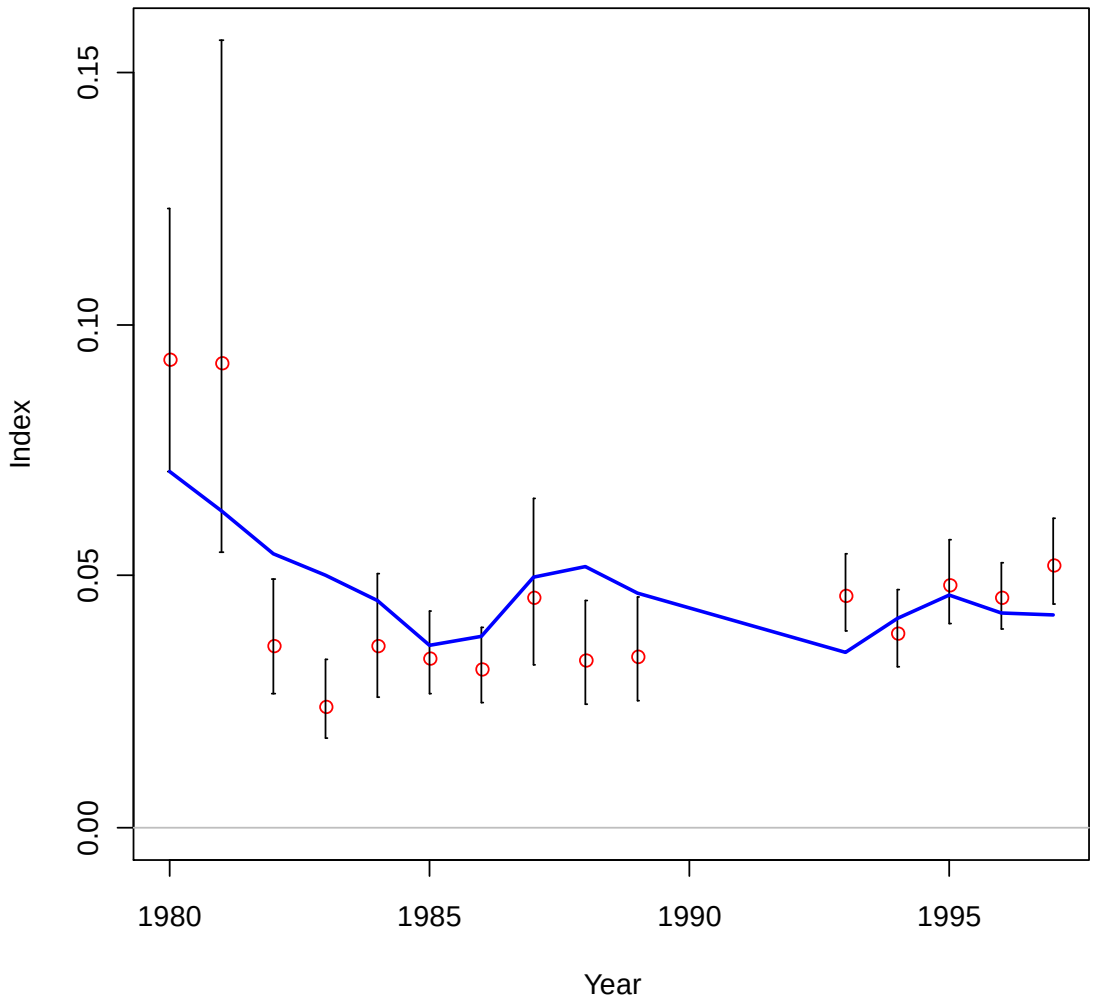

Figure 114. Model fit to recreational CPUE index for California.

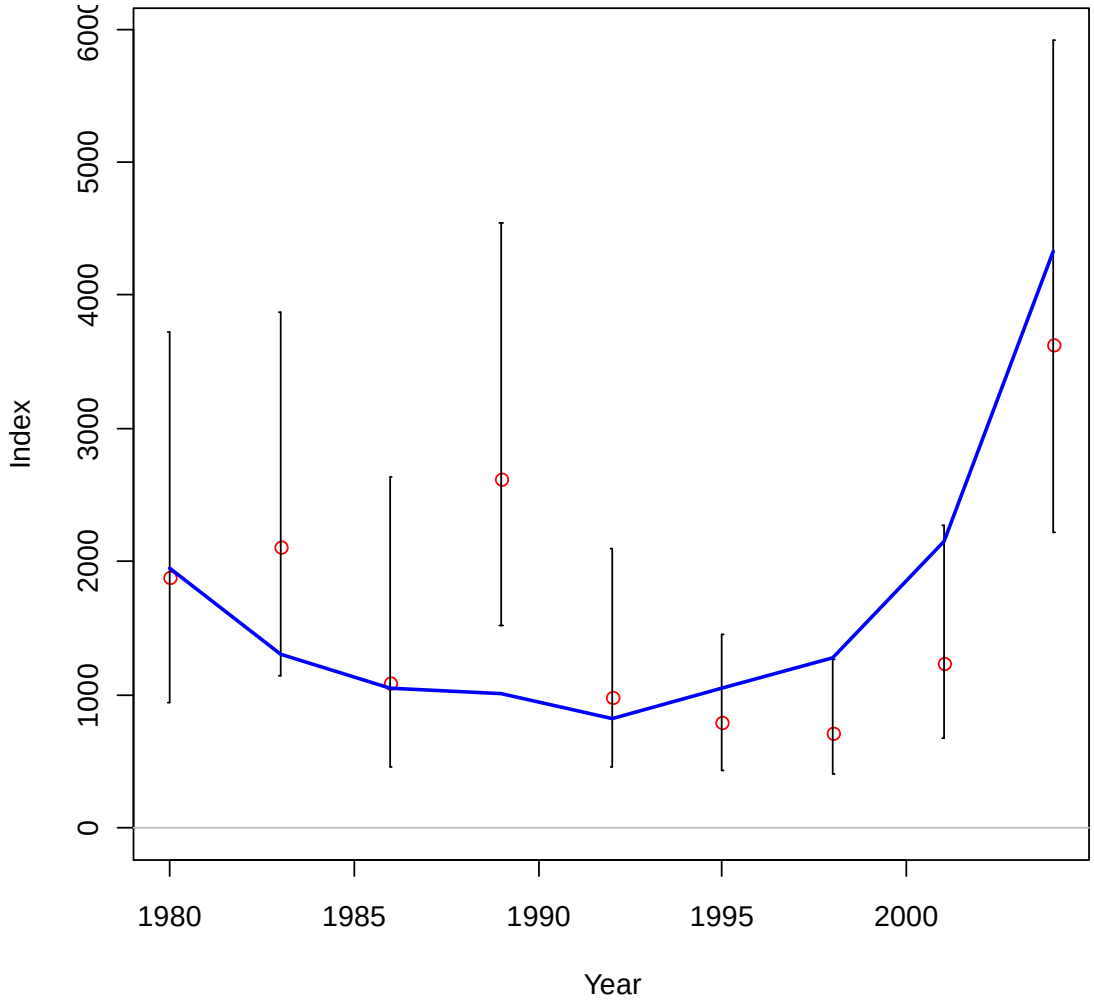

Figure 115. California model fit to Triennial survey index.

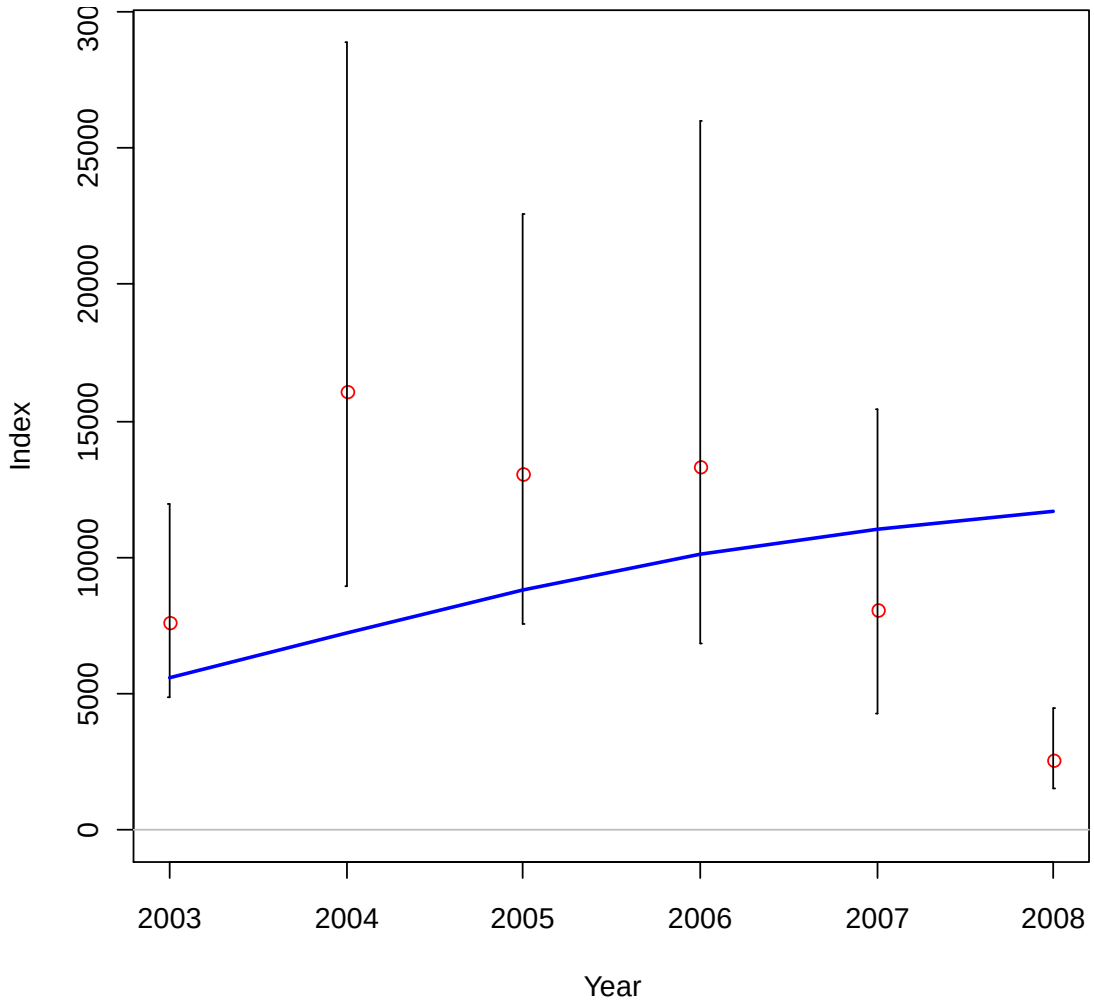

Figure116. California model fit to NWFSC survey index.

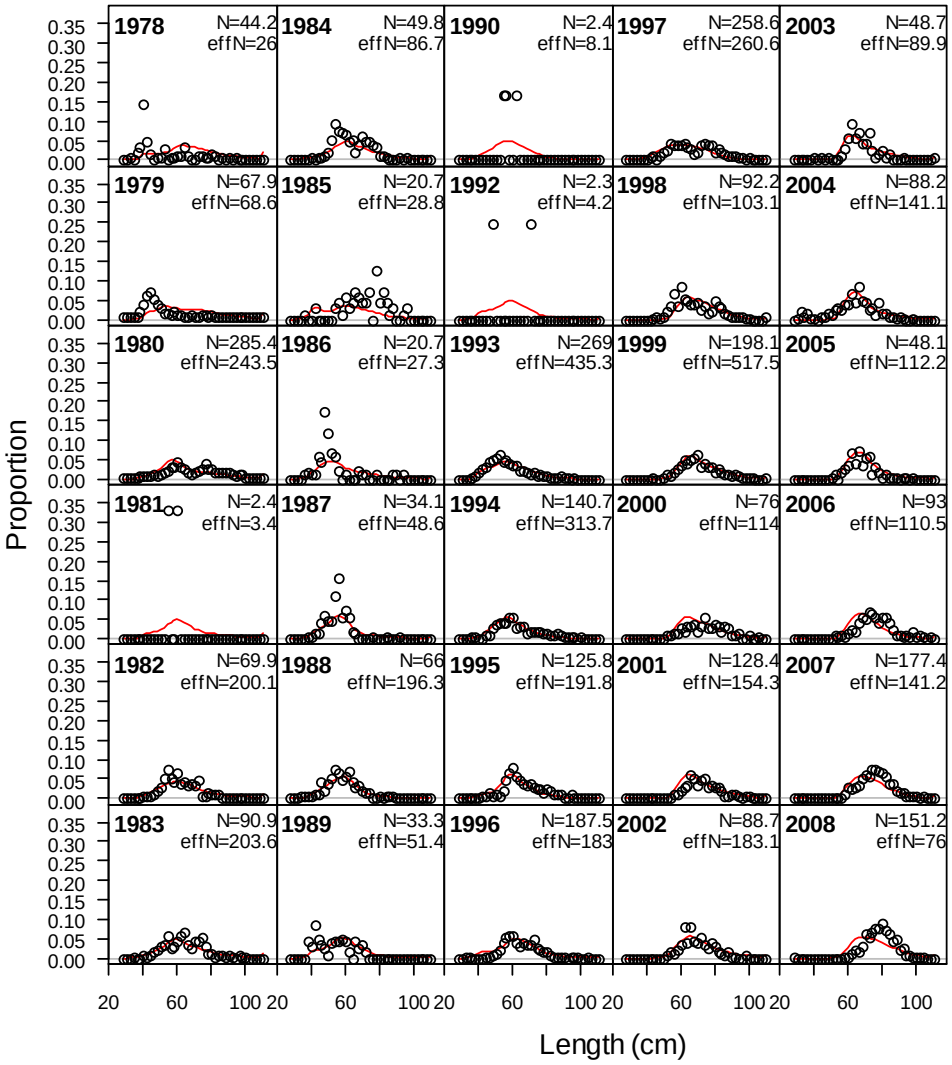

Figure 117. Fits to commercial retained female length compositions for California for 1978-1990 and 1992-2008.

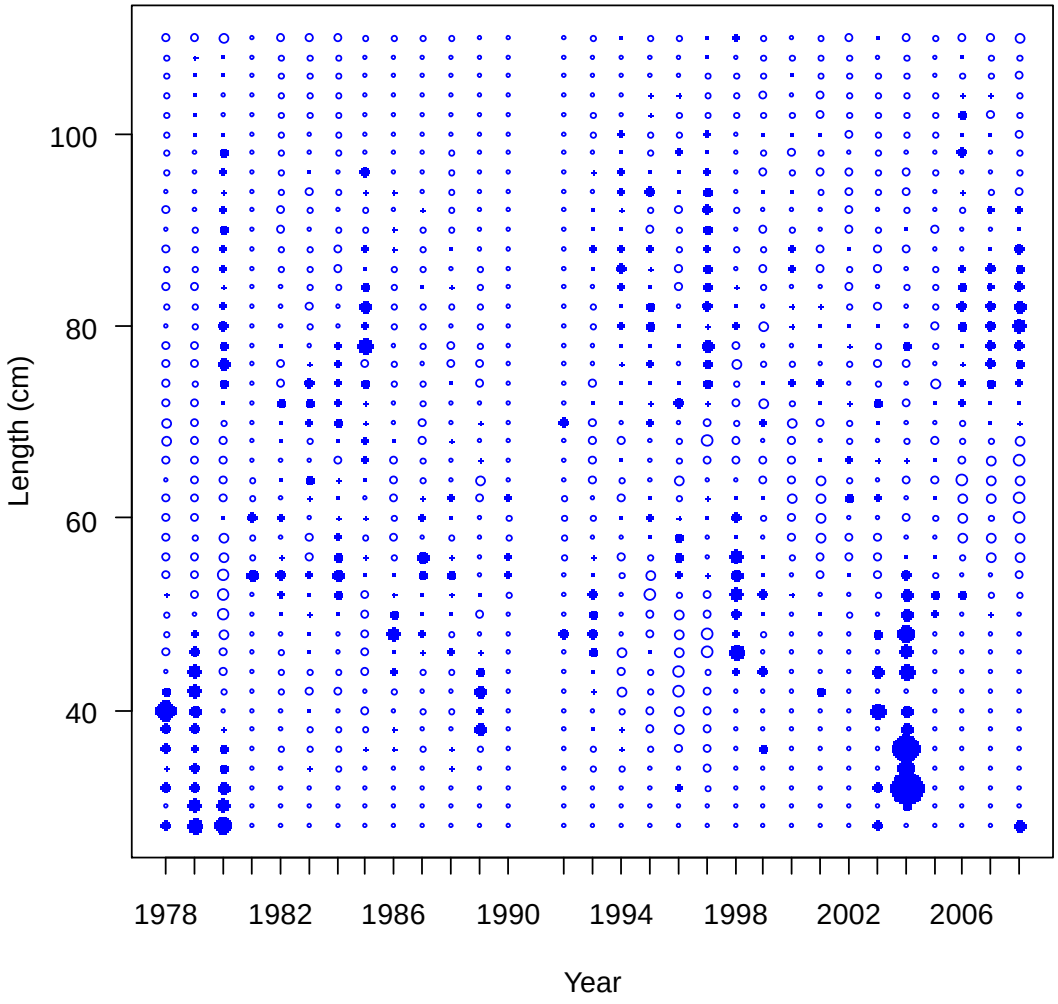

Figure 118. Pearson residuals for fits to commercial retained female length compositions for California (max = 18.13) for 1978-2008.

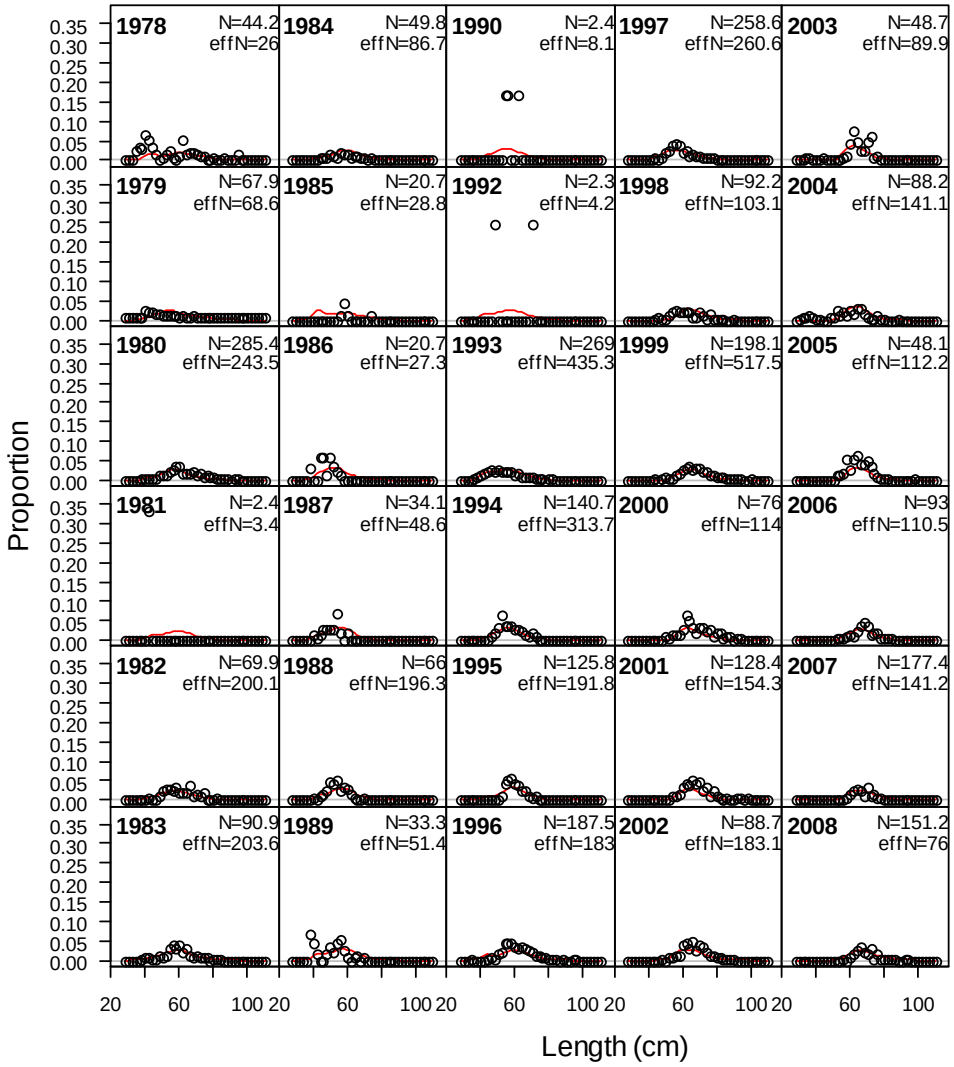

Figure 119. Fits to commercial retained male length compositions for California for 1978-1990 and 1992-2008.

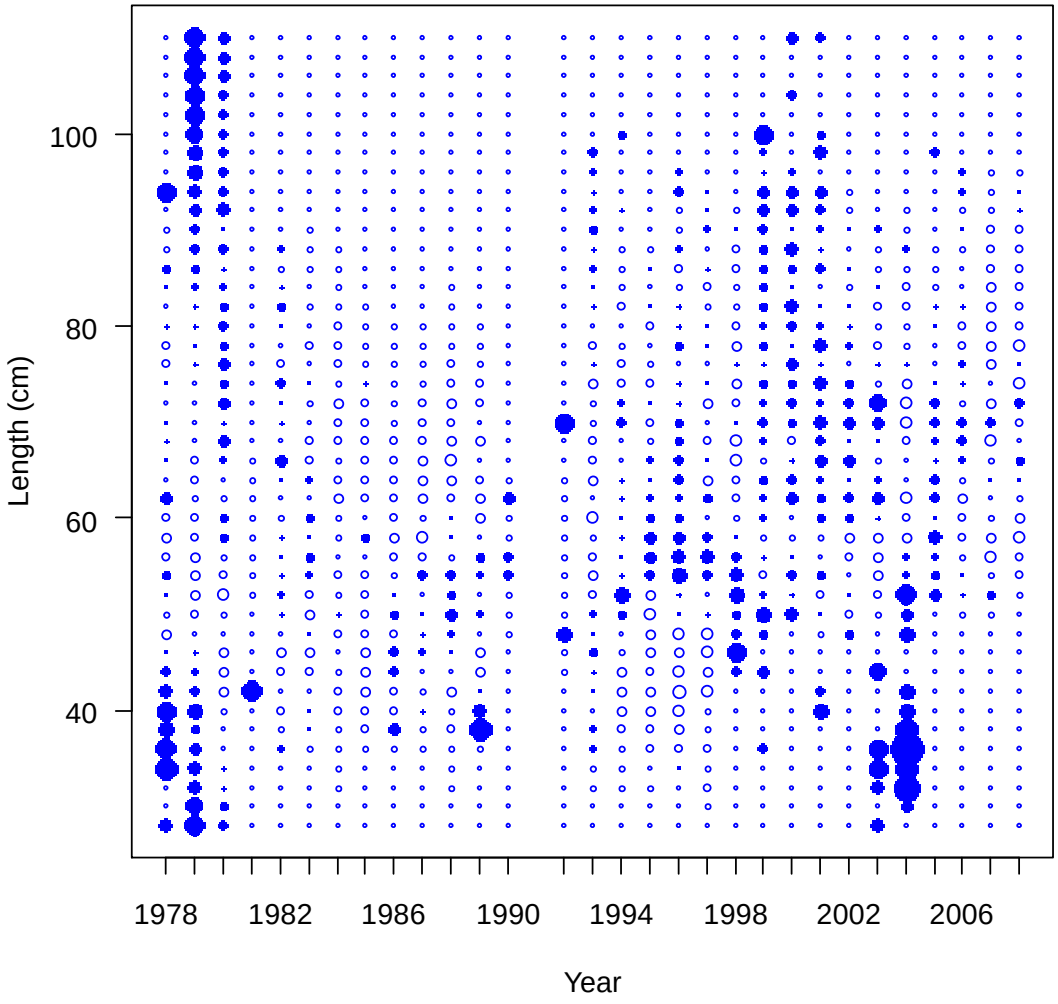

Figure 120. Pearson residuals for fits to commercial retained male length compositions for California (max = 11.14) for 1978-2008.

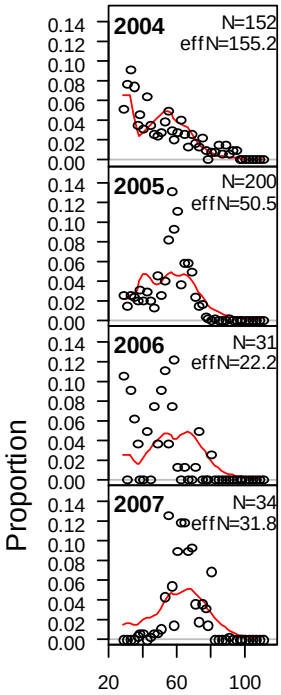

Figure 121. Fits to commercial discarded combined-sex length compositions for California for 2004-2007.

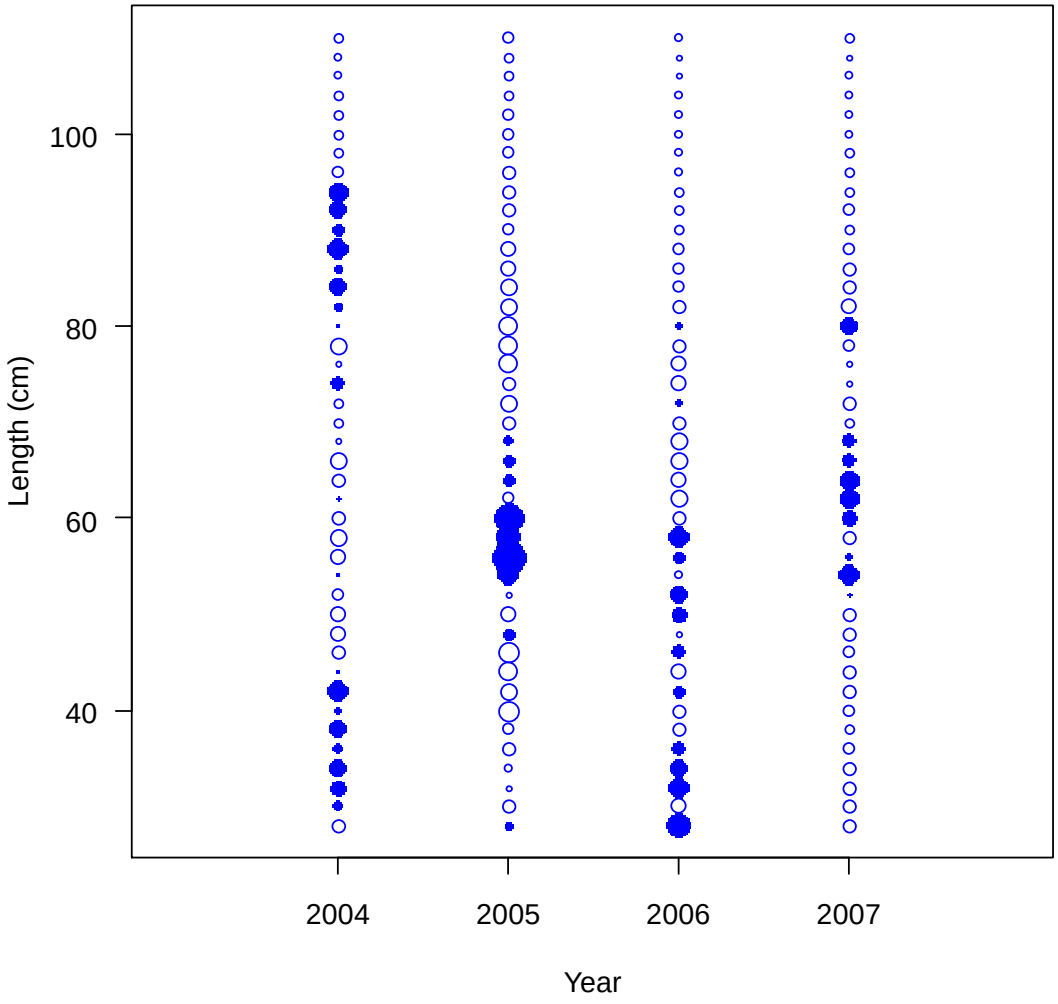

Figure 122. Pearson residuals for fits to commercial discarded combined-sex length compositions for California (max = 5.49) for 2003-2007.

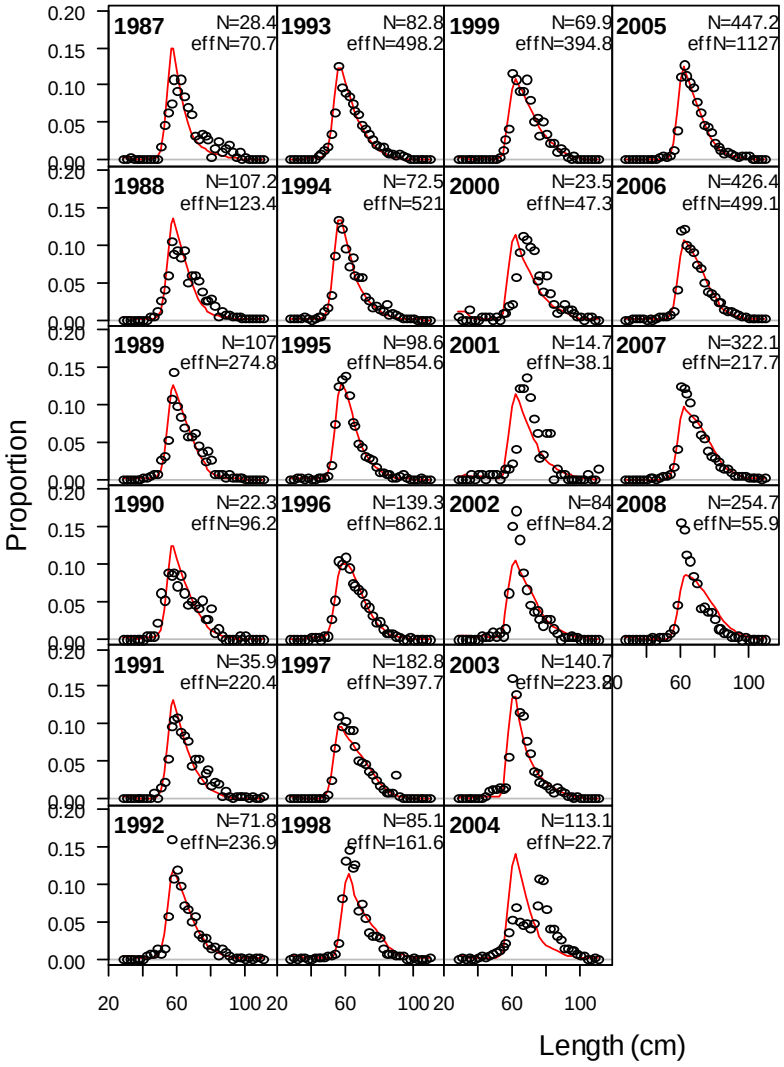

Figure 123. Fits to recreational combined-sex length compositions for California.

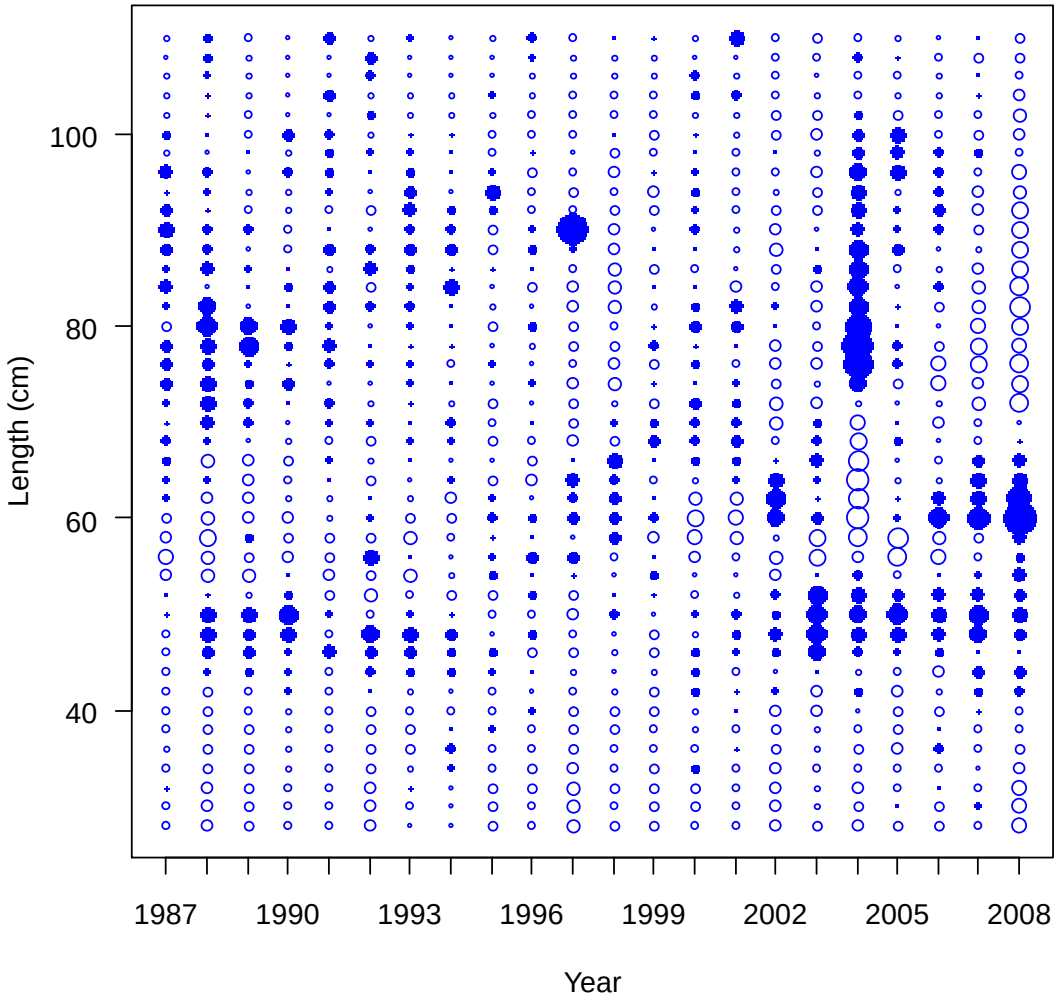

Figure 124. Pearson residuals for fits to commercial discarded combined-sex length compositions for California (max = 5.83).

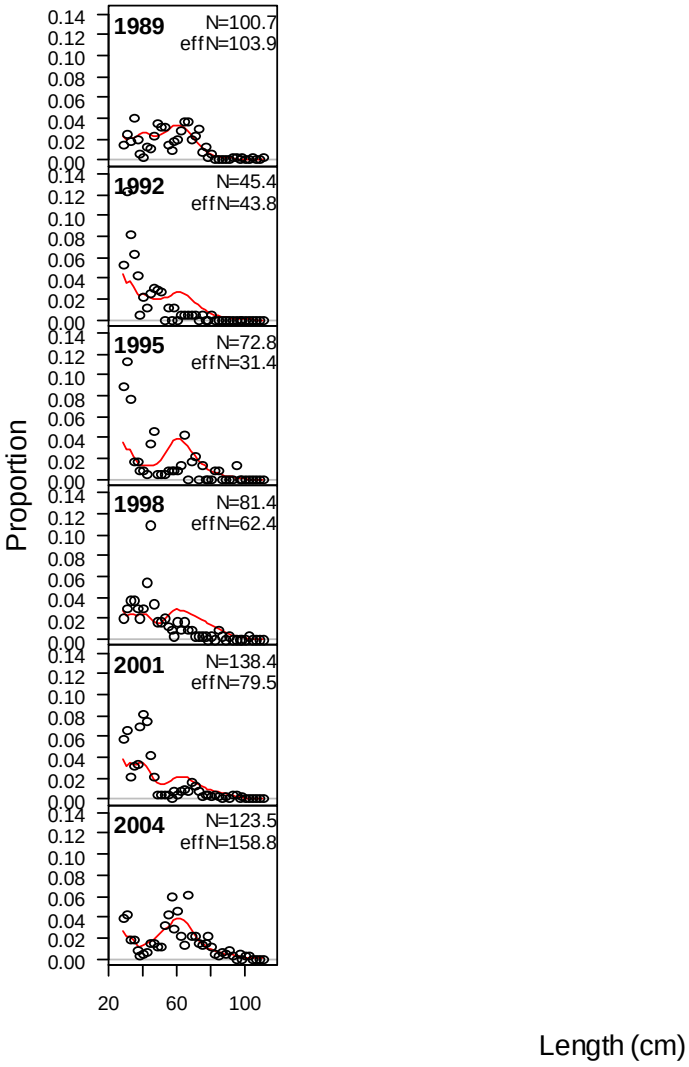

Figure 125. Fits to triennial female length compositions for California.

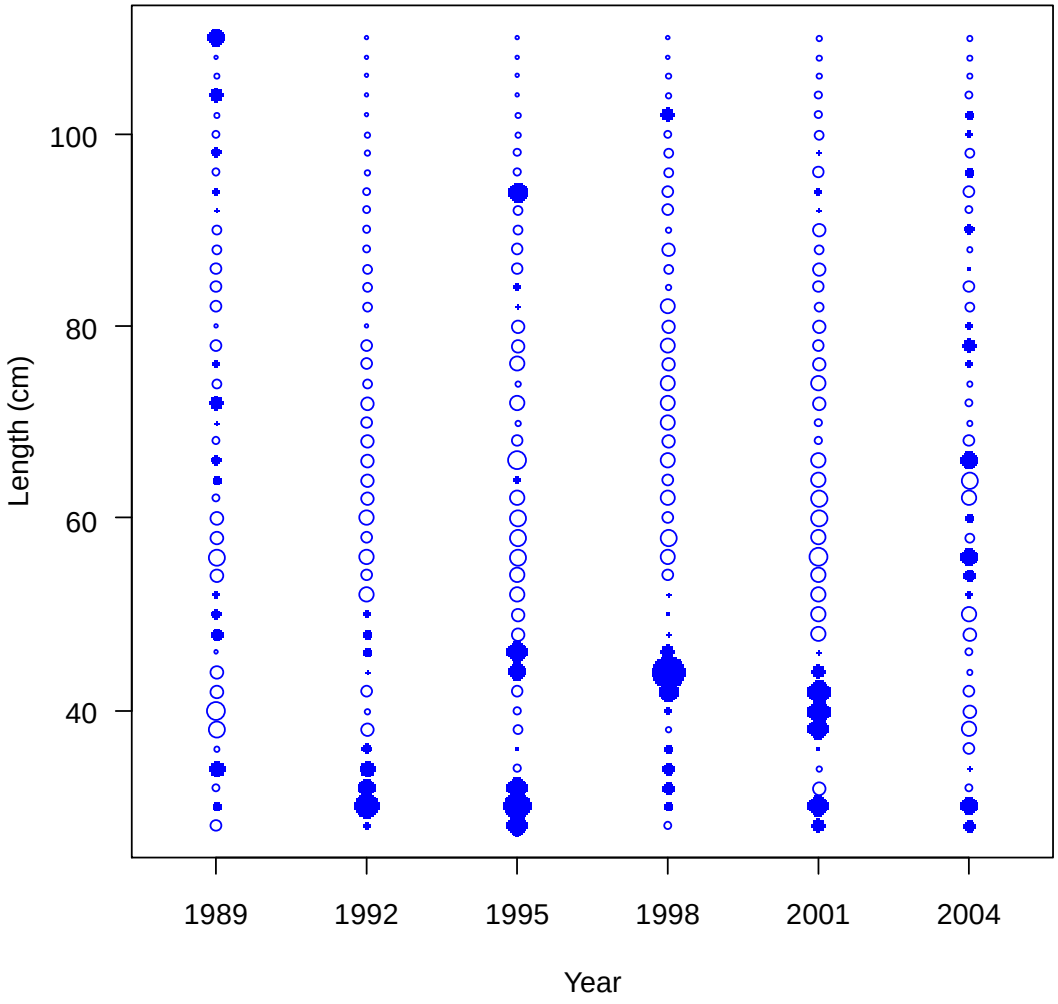

Figure 126. Pearson residuals for fits to triennial survey female length compositions for California (max = 5.76).

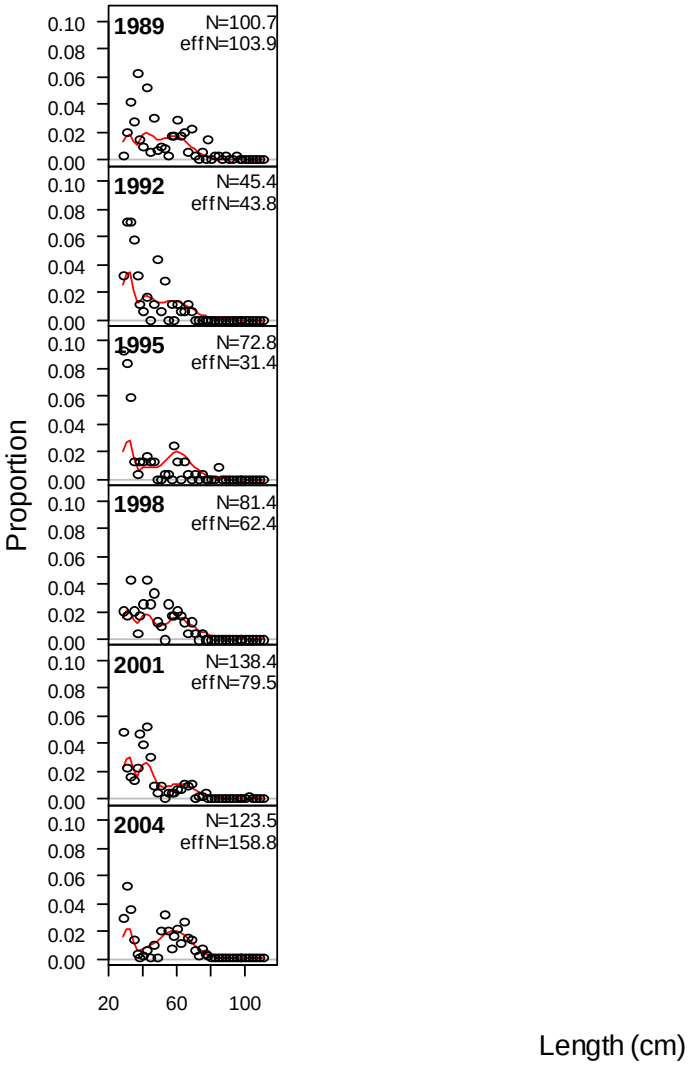

Figure 127. Fits to triennial survey male length compositions for California.

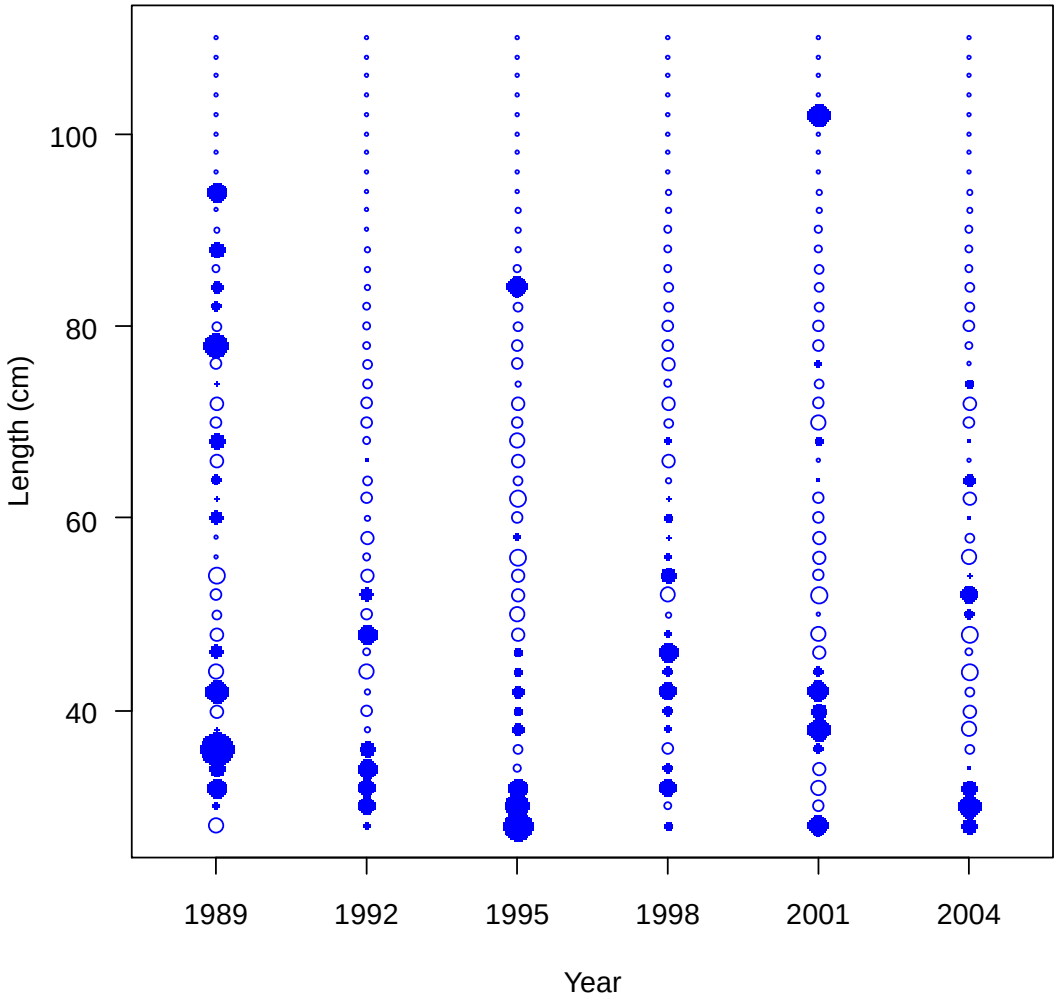

Figure 128. Pearson residuals for fits to triennial survey male length compositions for California (max = 5.02).

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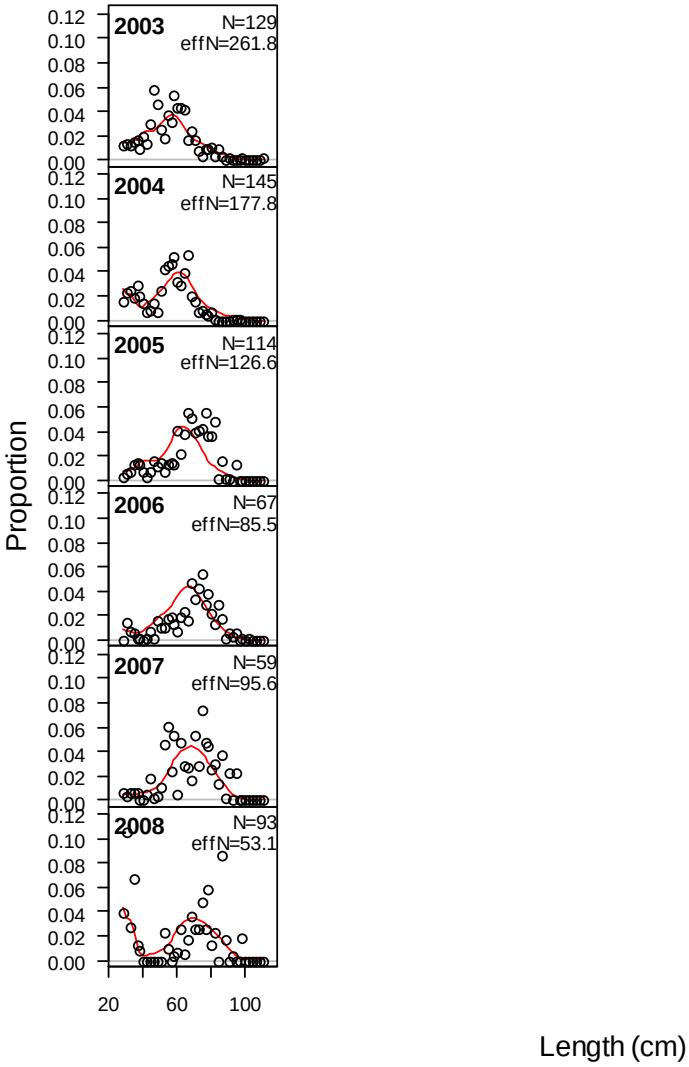

Figure 129. Fits to NWFSC survey female length compositions for California..

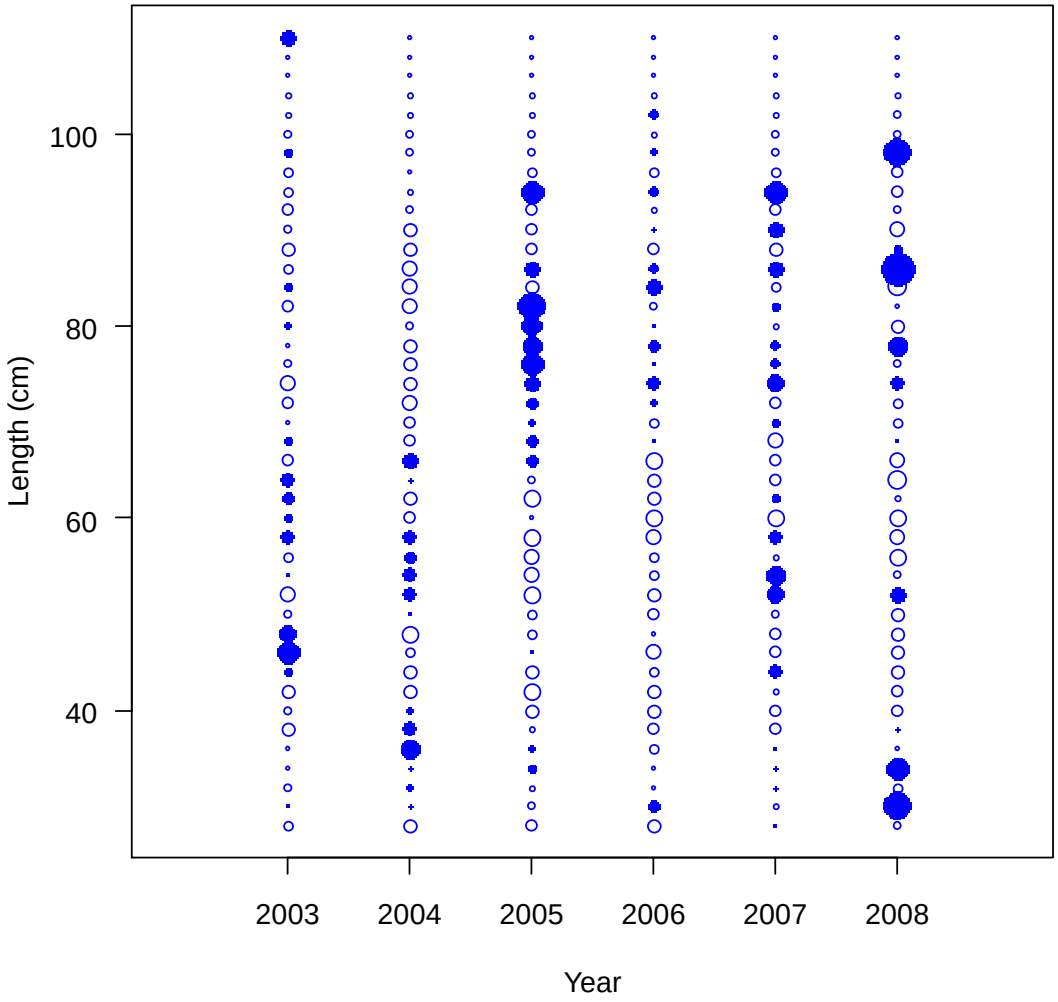

Figure 130. Pearson residuals for fits to NWFSC survey female length compositions for California (max = 5.3).

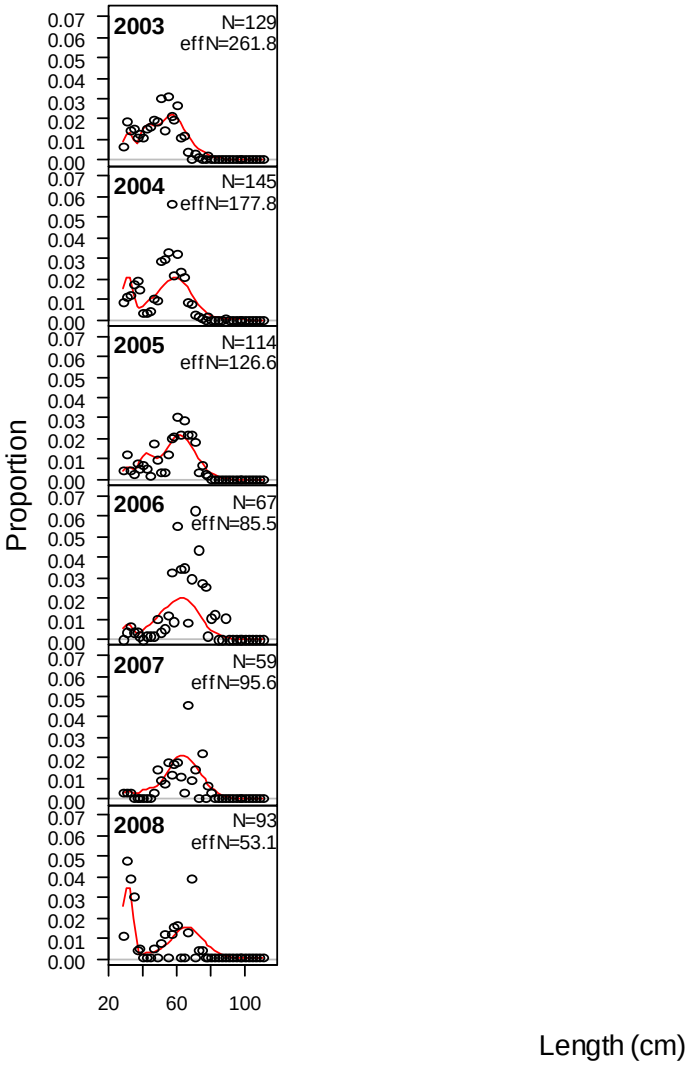

Figure 131. Fits to NWFSC survey male length compositions for California.

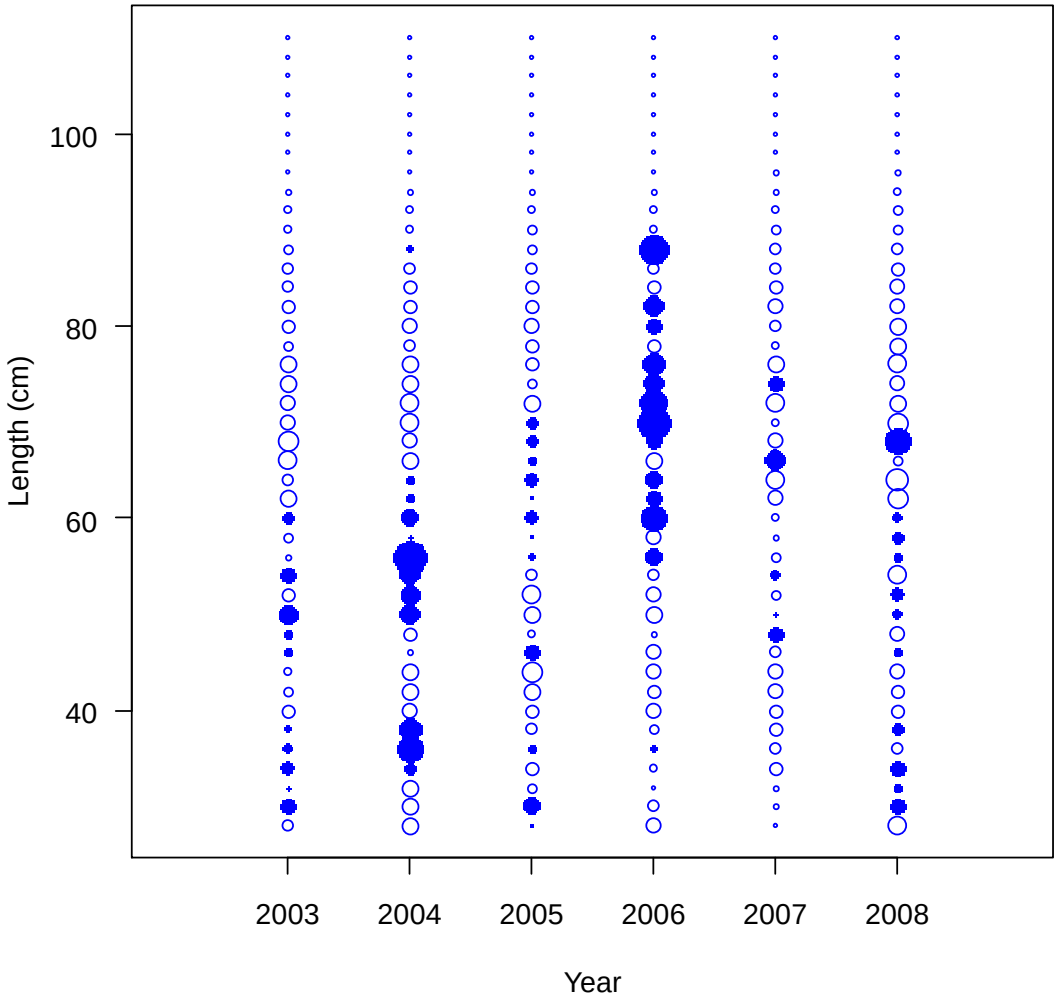

Figure 132. Pearson residuals for fits to NWFSC survey male length compositions for California (max = 3.13).

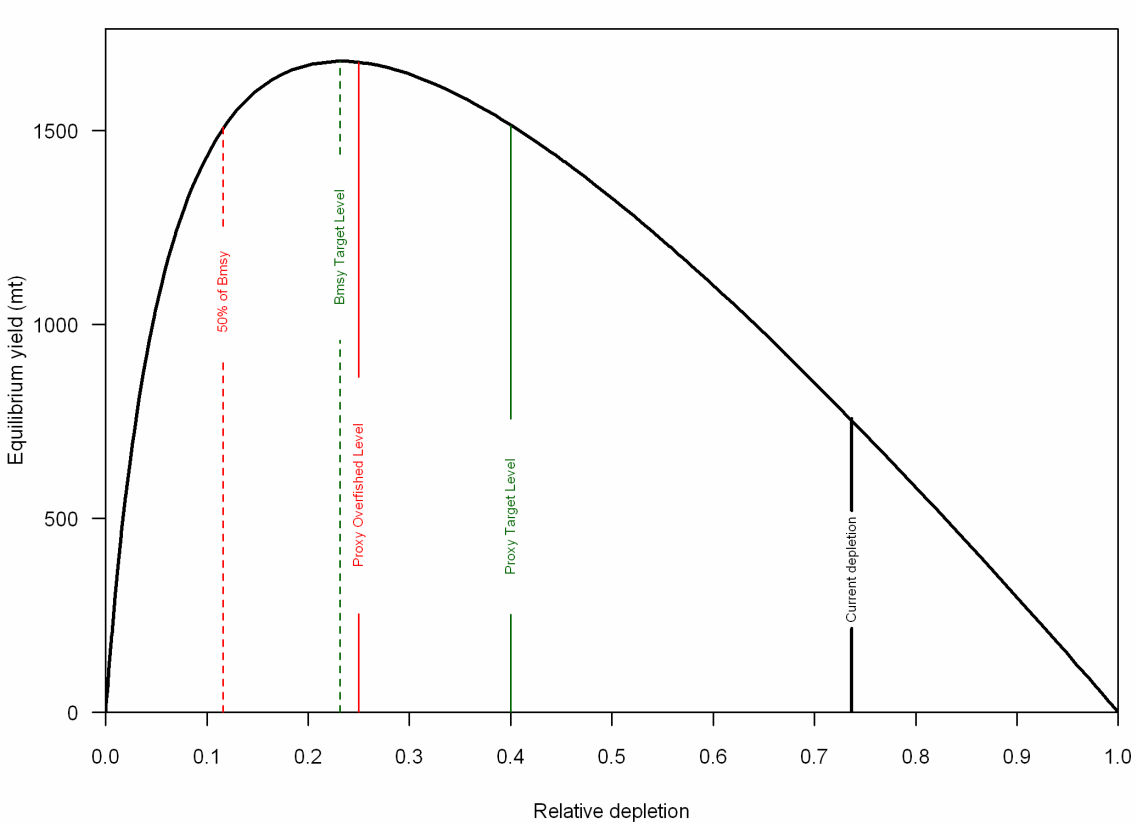

Figure 133. Equilibrium yield plot for California

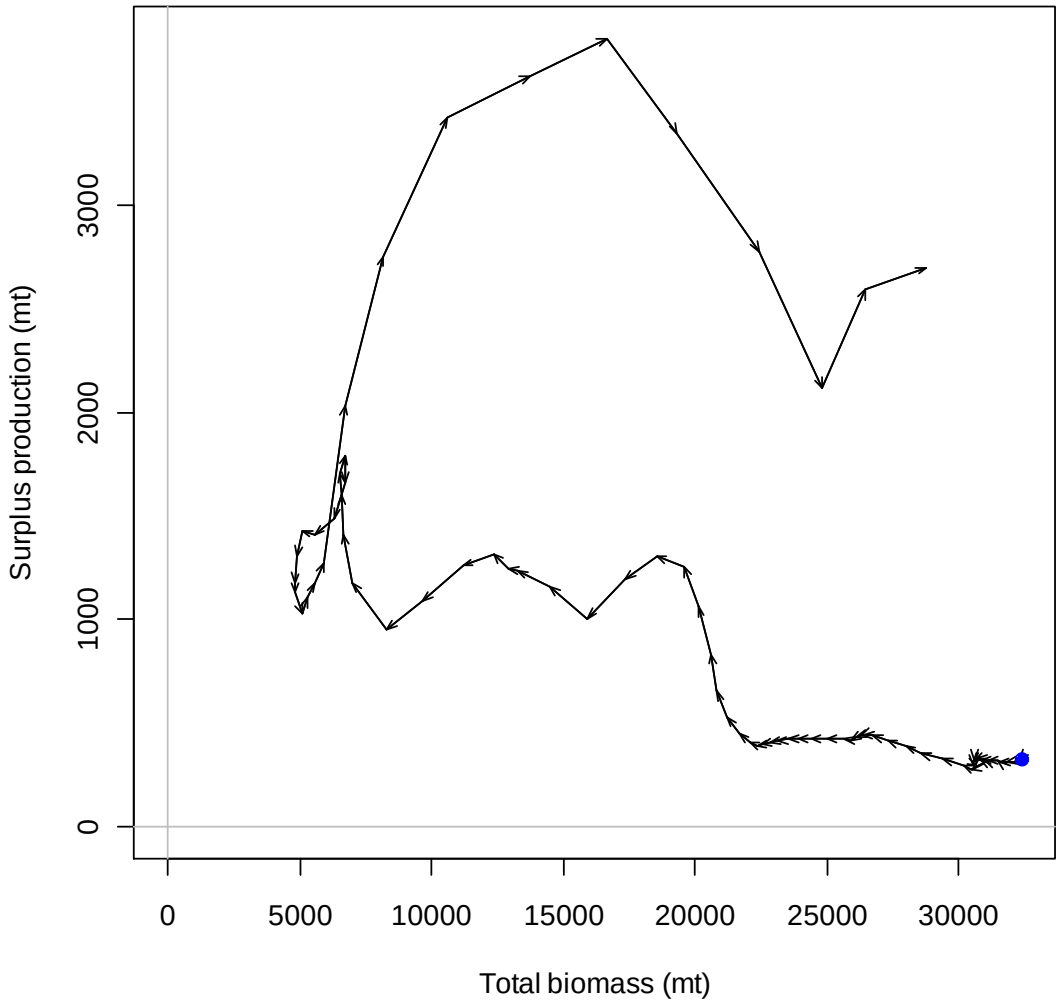

Figure 134. Time series of surplus production for California

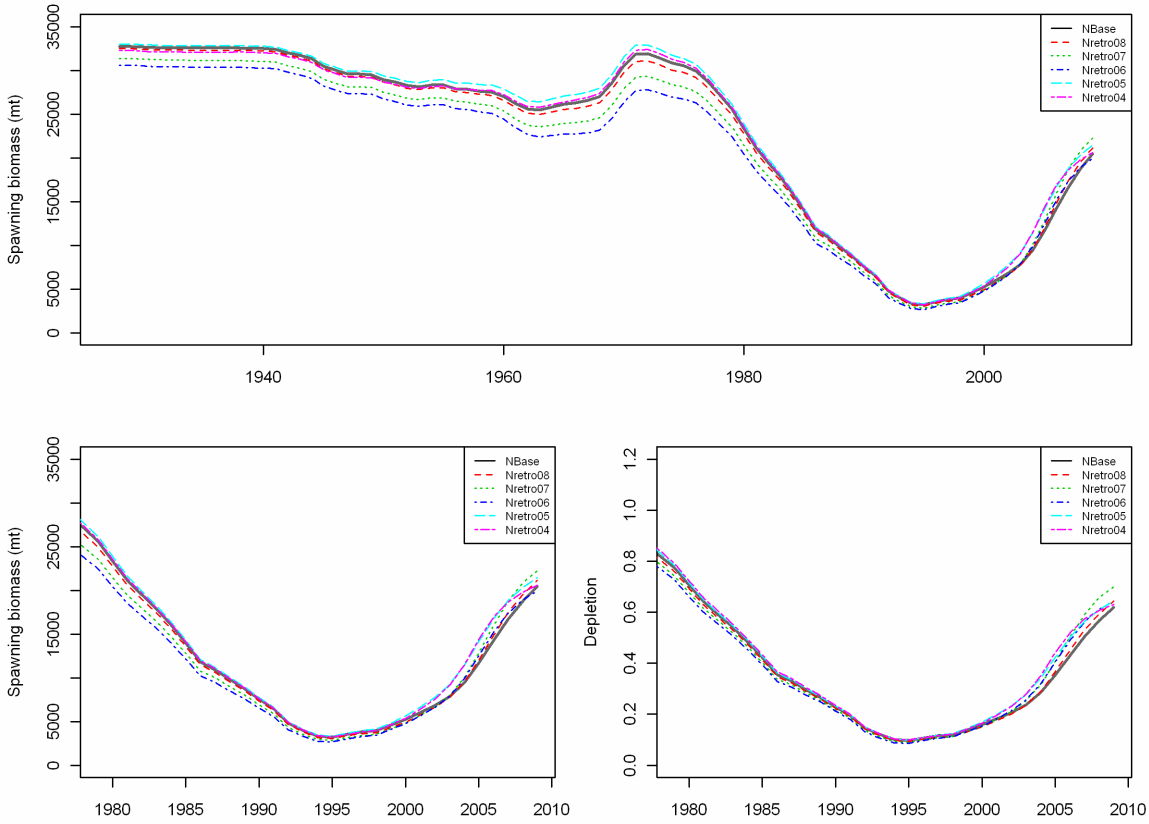

Figure 135. Retrospective analysis for North Model.

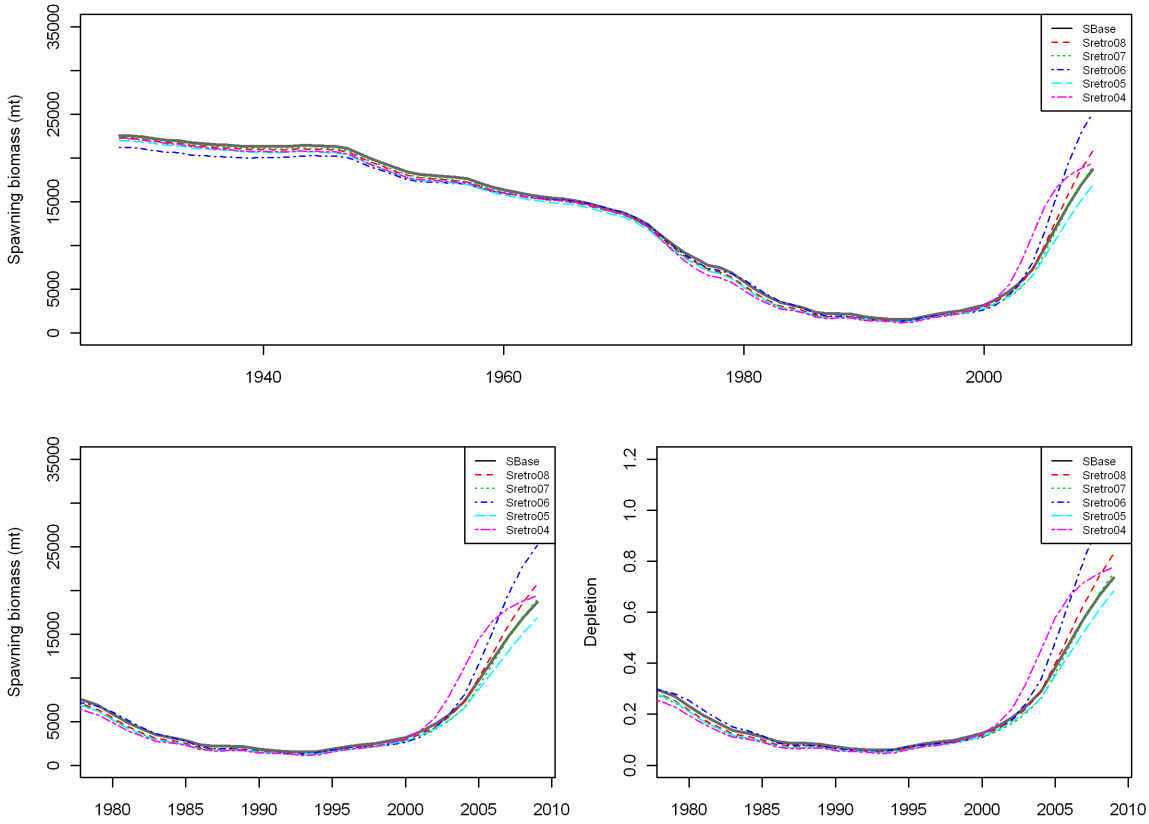

Figure 136. Retrospective analysis for South Model.

Appendix 1. Indices of Abundance for Central California.

Thomas Wadsworth

1.1. Study area

The study area extended from Cape Mendocino (40°38 N, 124°35' W) southward to Point Conception (34°27' N, 120°28' W) (Fig. A1.1.). This area, often designated as 'central California', is used commonly for management by the Pacific Fishery Management Council. The nearshore marine environment has been defined by the CDFG California Nearshore Fishery Management Plan (2002) as beginning at the high-tide line and extending to 120 feet (~37 m). However, my study area began at the low tide line, therefore only including the subtidal nearshore areas. The study area was further defined as including all rocky reef habitats in the nearshore environment and some deeper reefs where some surveys collect data on nearshore rocky reef fishes. This habitat is defined as areas of consolidated hard rock covering the seafloor as opposed to sand or mud substrate (Allen 2006).

1.3. Abundance surveys

1.3.1. Survey selection

Determining which current or historic surveys to include in this study required employing several criteria. Survey datasets had to: 1) include abundance measurements in the form of count and effort for at least one of the study species; 2) collect at least two samples each year within the boundaries of central California; 3) conduct at least some sampling in nearshore rocky reef habitats; and 4) contain at least four years of data using the same methodology. Abundance data spanning less than a few years does not provide enough information to satisfactorily depict a population trend for species living multiple years (Edward Dick, National Marine Fisheries Service, pers. comm.). Most nearshore rocky reef species require at least a few years to recruit to the fishery (Allen 2006). Therefore, a minimum criterion of at least four years of data was set for an abundance survey to be analyzed in this study, enough time to assess the impact of a few years of recruitment pulses on the stock.

I initially identified 35 surveys of abundance that collected data on nearshore rocky reef species in central California. Many of these surveys consolidated their datasets into centralized databases, the California Commercial Port Sampling Program (CALCOM) and Recreational Fisheries Information Network (RecFIN). Several surveys were not included in this study because: 1) data were not digitized; 2) permission for use could not be obtained; 3) effort data were not consistently collected; or 4) they did not sample study area and species. Of the 35 surveys I reviewed, nine fit the necessary criteria to be analyzed in this study (Table A1.1.).

1.3.2. Survey Data Organization

For each survey used in analyses, data were organized by excluding all species, samples and explanatory variables that did not fit the criteria for my study. Stephens and MacCall (2004) refer to this process as 'subsetting' the data, or determining what information is useful for the project. Some records or entire survey years within the dataset were removed prior to analysis because a record: 1) did not have sufficient effort data; 2) was collected outside the spatial boundaries of the study; 3) did not have data on one or more of the explanatory variables chosen to include in

models; 4) was collected in a variable level with little or no intra-annual replication (e.g. all winter records were removed if only a few samples were collected across the entire survey time-series); or 5) was the only sample for that respective year (only years with more than one sample were used to allow for precision analysis).

Catch and effort data were sorted separately from one another. For fishing surveys, every distinct site recorded was considered a sample. Some surveys recorded catch at several sites fished by a given boat in one day, in others only the port location was recorded and a single trip was a sample. Each transect was considered a sample for SCUBA surveys. For each sample, a positive or zero count (catch or observation) was included for a given species. Effort data often had to be re-formatted before analysis could proceed. All fishing time that was recorded in boat hours at a given site was converted to decimal hours and multiplied by the number of anglers actively fishing to calculate fish catch-per-angler-hour. An assumption of the model was that the amount of sampling effort alone did not change the probability of counting a fish species. In surveys where researchers did not record the number of anglers fishing at each site, it was assumed that all anglers fished the entire trip. The volume of water surveyed in each SCUBA transect was determined in order to calculate fish count density. Once the final set of samples was identified for each dataset, I calculated the proportion of total samples where each study species was counted at least once.

I also selected categorical explanatory variables to include in analysis, based on information contained in each survey database. Only those variables that I deemed likely to influence the abundance count of a given survey were considered. I created categories for 'year' and 'season' based on sampling dates in all cases. Season was based on calendar dates: winter (December 22nd – March 20th), spring (March 21st – June 21st), summer (June 22nd – September 21st) or fall (September 22nd – December 21st). I grouped survey sampling locations into 'subregions' in most cases, due to the lack of appropriate replication at the more specific sampling sites recorded by the survey. Each additional variable (if applicable) was divided into 2-4 categories, defined with regard to the distribution of samples among levels. In some cases, categories were already chosen by samplers, and these were preserved. In all cases, variables (aside from year, season and location) were only considered for inclusion in models if they were regularly recorded by a given survey. In some cases where a small percentage of samples did not have information on a given explanatory variable, those samples were removed from analysis so that each sample had information on all categories.

Orthogonality in sampling was assessed for each survey dataset by creating tables of sample distributions across explanatory variable levels. I considered sampling to be orthogonal if all data cells for explanatory variable level combinations had at least five samples (e.g. every location in every year must have at least five samples in all seasons sampled). Samples from variable levels were not removed unless the number of samples was extremely small (< 10 samples) across all years. If sampling was non-orthogonal for an explanatory variable in a given year, all data for that year was removed only if sampling was very unbalanced (i.e. many samples in one level, few or none in other levels) *and* the time-series was not broken (e.g. it was the first year of a time-series). It was assumed that if sampling was non-orthogonal for a given explanatory variable, any results indicating differences in densities among levels could be incorrect due to missing information. In some cases, sampling was orthogonal for some or all variable pairs (e.g. all locations sampled in all years) but not for multiple variable combinations.

The sections below describe the nine surveys analyzed in this survey (and the one dataset I created by combining two surveys). Each section summarizes information on: the groups

responsible for collecting data, survey methodologies, survey timespan and how I organized data for each to be analyzed.

1.4.3. CDFG Marine Reserve Fish Density and Habitat Associations (CDFG SCUBA)

The CDFG SCUBA survey was a fishery-independent study by CDFG personnel during 7 years from 1992 to 98. However, only the years 1995-98 (4 years total) were used for my analyses because variable methodologies were used in early years. Samples were collected using different types of SCUBA transects from Monterey to Lopez Pt. (Big Sur). Only samples collected using the 30 m transect method were used for analysis. The 30 m transects were not conducted in the years 1992-94, so those years were removed from analysis. In 30 m transects, dive buddy pairs swam the length of a benthic transect (near the bottom) and counts for each species were *combined* for the two divers (for detailed methods, see VenTresca et al. 2001). The measure of effort for this survey was the 360 m^3 volume surveyed.

Explanatory variables included in models of species for the CDFG SCUBA survey (if significant) were: 'Year', 'Season', 'Subregion', 'Depth Zone' and 'Visibility.' Sampling season were assigned in models as: summer or fall. Study sites were all rocky reef habitats (as defined by side-scan sonar) and transects were located at random within these areas. Sampling sites were grouped into subregions, assigned in the models as: Monterey Peninsula, Pt. Lobos Ecological Reserve (PLER), Pt. Sur-North BCER border, BCER, or South BCER Border-Lopez Point. Depth zones were: deep (15.0-23.0 m), medium (12.0-14.99 m), or shallow (4.0-11.99 m). Visibility was: good (6.6-12.2 m), low (0.9-3.99 m), or moderate (4.0-6.5 m). Sampling was non-orthogonal across all levels for variable pairs, so interactions were not tested.

1.4.4. PISCO Collaborative Central Coast Abundance Surveys (PISCO SCUBA)

The PISCO SCUBA survey is an ongoing fishery-independent study by University of California personnel. Data for 1999-2007 were used in my study (9 years total) from Santa Cruz County to Pt. Conception. The Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) utilizes SCUBA surveys to collect data on nearshore fishes following their protocols (http://www.piscoweb.org/). Individual divers swam transects 30 m long by 2 m wide by 2 m high and counted all fish (including juveniles), but only fish above 15 cm were included in this study. The measure of effort for this survey was the 120 m^3 volume surveyed.

Explanatory variables included in the models of species for the PISCO SCUBA survey (if significant) were: 'Year', 'Season', 'Subregion', 'Level/Depth Zone', 'Visibility' and 'Transect Replicate.' Sampling season was assigned in modelS as: summer and fall. Study sites were all rocky reef habitats and transects were located at random within these areas. Sampling sites were grouped into subregions, assigned in the models as: Santa Cruz County, Monterey Peninsula, South PLER Border-North BCER border, BCER, or Pt. Buchon-Pt. Conception. Depth was recorded for each benthic or midwater transect, I split these into the transect level (benthic or midwater) and the depth zones within which the measurements fell. Level/depth zones were assigned as: Bottom (2.0-10.99 m), Bottom (11-25 m), Midwater (1.0-7.99 m), or Midwater (8.0-19 m). Visibility was recorded in meters for each transect, I categorized measurements as: poor (0-2.99 m), medium (3.0-5.99 m), or good (6.0-26 m). 'Transect Replicate' was a category to indicate whether a given SCUBA transect sample was conducted first or subsequently (i.e. second or higher) for a given date, site and level/depth zone. Transect replicates were included as: 1st transect or repeat transect. Sampling was orthogonal only for the variable pair 'Year' and 'Season', therefore this was the only interaction tested.

1.4.5. TENERA Inc. Diablo Canyon Nearshore Reef SCUBA Survey (TENERA SCUBA)

This ongoing fishery-independent survey, was designed and carried out by Tenera Environmental, Inc. The survey utilized SCUBA survey methods (CRANE 2004), and was limited to a small cove near Diablo Canyon, California. Data from 1976-2007 were included in my study (32 years total). Survey methodology consisted of two divers surveying a single 50 m x 2 m x 2 m (200 m^3) transect at the same time but starting at opposite ends. A sample consisted of the total fish count for both divers on each transect.

Explanatory variables included in models of species for the TENERA SCUBA survey (if significant) were: 'Year', 'Season', and 'Transect Replicate'. Sampling 'Season' was assigned in models as: winter, spring, summer and fall. 'Transect Replicate' was: 1st Transect or Repeat Transect. Depth ranges of transects were recorded but not included in models for this survey because ranges overlapped and differed very little. A location variable was not included in the model for this survey, since transects were all within the same small cove. Sampling was non-orthogonal across all levels for all variable pairs, so interactions were not tested.

1.4.6. CDFG Central California Marine Sportfish Hook-and-Line Survey (CDFG H&L)

This fishery-independent survey chartered fishing vessels to take scientists to fishing locations as directed from Monterey to Pt. Estero (north of Morro Bay). All fish were identified, measured and counted by scientists aboard fishing vessels. Effort was recorded by CDFG personnel as the number of minutes and anglers fishing at a given site during a trip. The survey was conducted during 17 years: 1978-82, 1985, 1987-89, 1991-94 and 1995-98. Only samples from 1978-82 and 1995-98 were included in my analyses, because other years did not include effort data. All samples without effort were removed from the dataset, including every sample from 1985-94 and some samples for 1995-98. This survey was split into two different datasets for analysis: 1978-82 (5 years) and 1979-82; 1995-98 (8 years). During 1978-82 samples were taken in all seasons from Monterey to Pt. Estero (Big Sur), while during 1995-98 sampling was only during fall months in Big Creek Ecological Reserve (BCER). Therefore, the time-series 1979-98 represents trends only within BCER (1978 was not included because only one sample was taken in BCER).

Explanatory variables included in models of species for the CDFG H&L 1978-82 time-series (if significant) were: 'Year', 'Season' and 'Subregion.' Season of sampling was assigned in models as: winter, spring, summer, or fall. Sampling sites recorded by the survey were grouped into subregions, included in models as: Monterey, Pt. Pinos-Carmel, Pt. Lobos-Soberanes, BCER, Lopez, Pt. Sur-Partington Pt., Jade Cove-Ragged Point or Pt. Sierra Nevada-Pt. Estero. Sampling was non-orthogonal across all levels for variable combinations, meaning interactions between variables were not assessed. The model for the 1979-98 time-series did not include 'Subregion' or 'Season' as variables.

1.4.7. CDFG Creel Survey of CENCAL Spearfish Tournaments (CDFG CENCAL)

The Central California Council of Diving Clubs (known as CENCAL) organized several annual recreational spearfishing tournaments for decades from Cape Mendocino to Pismo Beach. California Department of Fish and Game (CDFG) personnel identified, counted and measured all fishes caught at CENCAL tournaments since 1958, and the survey was ongoing as of 2007. However, several years were not included in my analysis because one or zero samples were taken. A few other years could not be used because the survey did not record all variables included in the final model for this survey. In summary, years included in analyses were 1959-68, 1973, 1975-77, 1980-96, 1998-2006 (40 years total). Individual spearfisher effort expended

was the number of hours divers spent searching for and spearing fish. All individual effort times was summed to find the total effort for the meet. A sample for this survey was defined as a single tournament. All of these tournaments required that divers capture fish using the free diving method. Most divers employ kayaks (or other human-powered boats) to aid in searching for fish during the tournament time limit. Prizes are awarded to divers with the largest, most numerous and most diverse fish catches.

Explanatory variables included in models of species in the CDFG CENCAL survey (if significant) were: 'Year', 'Season', 'Subregion' and 'Water Conditions.' Sampling season was assigned in models as: spring, summer or fall. Only 2 samples were collected from winter months and these were removed because any assumptions made on so few samples for this season across 40 years would be statistically unsupportable. The tournament locations were grouped into subregions to increase the very low replication rate, and were included in models as: north (Fort Bragg-San Francisco Bay), central (San Francisco-Carmel), or south (Pt. Lobos-Pismo Beach). 'Water Conditions' was a qualitative rating combining visibility and surge, defined by divers as: poor (low visibility, high surge), fair (moderate visibility and surge), or good (high visibility, low surge). Sampling was non-orthogonal across all levels for variable combinations, meaning interactions between variables were not assessed.

1.4.8. CDFG Commercial Party Fishing Vessel Logbooks (CPFV Logbooks)

The commercial party fishing vessel (CPFV) fishery includes not only the nearshore, but also deeper waters within a few hours boat ride from California harbors. Fish were identified and recorded in logbooks by CPFV crew. The total of kept and released fish was used as a measure of catch by species for analysis. Effort was recorded by CPFV crew as the total number of minutes spent fishing for an entire trip and total number of anglers onboard.

Logbooks were compiled and digitized by CDFG personnel for 1980-2007 (28 years). However, only two nearshore rocky reef species (*O. elongatus* and *S. marmoratus)* were recorded to the species-level before 2001. Therefore, only data for 2001-07 were used for analysis (7 years total). Data for unused years (1980-2001) were grouped under the category 'rockfish' for rockfish species, whereas all seaperches were recorded as 'surfperch. ' In 2001, three species of nearshore rockfish (*S. mystinus*, *S. carnatus* and *S. pinniger*) as well as *H. decagrammus*, were added as categories on the logbook forms. In 2005, *S. melanops* was added as a category, however, three years of data collection (2005-07) was not enough to include this species in my analysis. Although the category 'rockfish' still remained in logbooks, the assumption was that CPFV crew recorded fish to the species-level where these categories existed.

Explanatory variables included in models for the CPFV Logbooks survey (if significant) were: 'Year', 'Season' and 'Subregion.' The season of the sample was assigned in models as: winter, spring, summer, or fall. Subregions were constructed using block numbers recorded by CPFV crew indicating where the majority of fishing occurred. Subregions used for this survey were: Cape Mendocino-Pt. Reyes, Pt. Reyes-Pillar Pt., Pillar Pt.-Santa Cruz Lighthouse, Santa Cruz Lighthouse-Pt. Sur, Pt. Sur-Pt. Buchon, or Pt. Buchon-Pt. Conception. Sampling was orthogonal across all levels for variable pairs, but not for 'Year', 'Season' and 'Subregion' together. Interactions between the 'Year' and 'Season', 'Year' and 'Subregion', and 'Season' and 'Subregion' were tested.

1.4.9. PSMFC MRFS / CRFS Dockside Boat Survey (PSMFC Dockside)

In this survey, the Pacific States Marine Fisheries Commission (PSMFC) interviewed recreational anglers at harbors throughout the study area for 1980-2007 (25 years total). Each interview of a Commercial Party Fishing Vessel (CPFV) or private fishing boat was considered a sample for my analyses. Shore based fishing data was collected by this survey, but not included in my analyses due to the low likelihood of catching study species from shore. The recreational boat fishery covers nearshore waters, but also deeper areas within a few hours boat ride from California harbors. When fishing for rocky reef species, both private and CPFV anglers primarily used similar methods of anchoring or drifting (not trolling) and jigging baits or lures. CPFV trips typically have 20-80 passengers, whereas passenger vessels have 2-5 anglers, both vessel types may fish for up to 8 hours in a day. Effort was recorded by CDFG personnel as the number of minutes and anglers fishing for an entire trip (as reported by interviewees). Only fish kept by anglers and identified by PSMFC interviewers were used to calculate catch per hour for a sample. Released fish were not included in catch totals because this information was reliant on angler identifications. Samples were included in analyses if the primary or secondary target species or group (i.e. rockfish) reported to interviewers was any study species or 'group.' A small percentage of anglers told interviewers they were fishing for anything they could catch, often recorded by PSFMC as 'unidentified.' These trips were included for analysis, although anglers could have been fishing in locations unlikely to contain nearshore rocky reef species.

The Marine Recreational Fisheries Statistical Survey (MRFSS) covered the years 1980-89 and 1993-2003, whereas the California Recreational Fisheries Survey (CRFS) extended from 2004-2007. Both monitored the same fishery, but the CRFS program sampled more sites, more regularly. Whereas the MRFSS survey recorded the effort of anglers in hours, the CRFS survey used anglers per trip as a measure of effort at high traffic sites and angler hours at less popular sites. To combine these two programs into one survey, I used all sites surveyed by the MRFSS program and only the lower traffic sites (that recorded angler hours) from the CRFS program.

Explanatory variables included in models of species for the PSMFC Dockside survey (if significant) were: 'Year', 'Season', 'Subregion', 'Distance From Shore' and 'Boat Type.' Sampling season was assigned in models as: winter, spring, summer and fall. The location of each dockside sample was recorded by this survey, but not the location of fishing. Samples were split into several subregions based on the dockside interview location, included in models as: Cape Mendocino-Pt. Reyes, Pt. Reyes-South San Francisco, Pacifica-Capitola, Moss Landing-Ragged Pt., or Pt. Piedras Blancas-Pt. Conception. The distance from shore fished during the majority of a boat trip was included in models as: less than three miles or more than three miles. The type of fishing boat was: private or charter (CPFV). Sampling for the PSMFC Dockside survey was orthogonal for year and all variable levels, but not for multiple variable combinations (e.g. all subregions and seasons were sampled in 1989, but not all seasons were sampled in the subregion Moss Landing-Ragged Pt.). Therefore, I tested for interactions between 'Year' and 'Season', 'Year' and 'Subregion', and 'Season' and 'Subregion'.

1.4.10. CDFG CPFV On-Board Sampling Program (CDFG Observers)

The CDFG Observers survey was based on the observations of CDFG personnel while onboard CPFVs from 1987-1998. Data for 1987 were not included in my analyses due to non-orthogonality in sampling, leaving a time-series of 11 years. Trips were chosen to carry observers at random for each of the major ports in the state. CPFV trips included nearshore waters, but also deeper areas within a few hours' boat ride from California harbors. Although CPFV trips targeted many different species, the CDFG Observers survey only monitored trips

targeting rocky reef species. Therefore, all samples inside the latitudinal range of central California were included in analysis. General fishing methods mirrored those defined for CPFV vessels in the PSFMC Dockside survey. However, effort was recorded by observers, as the number of minutes and anglers fishing at a given site during a trip. In addition, observers recorded, identified and counted any fish caught and returned to the ocean, as well as those kept by anglers. In many cases, only a portion of the anglers were observed on each trip. The sum of released and kept fish for observed anglers was used to determine the catch rate of each sample.

Explanatory variables included in models of species for the CDFG Observers survey (if significant) were: 'Year', 'Season', 'Subregion' and 'Depth Zone.' Sampling season was assigned in models as: winter, spring, summer, or fall. Locations were recorded by the PSFMC Observers survey as sites with coordinates. I grouped these locations into the same subregions as the CPFV Logbooks survey. The depth range fished was recorded by observers as a maximum and minimum depth for each site, but this could not be included in models because the time fished at each depth was not recorded. However, observers also recorded whether most fishing occurred deeper or shallower than 40 fathoms (~73 meters) for each sample. This 'Depth Zone' category was included as: less than 73 meters or more than 73 meters. The depth range of samples used for this survey was 3-275 meters, however only 3% were over 150 meters. Sampling was non-orthogonal across all levels for variable combinations except for 'Year' and 'Subregion', therefore only these interactions were tested.

1.4.11. PSMFC MRFSS/CRFS CPFV Observers Survey (PSMFC Observers)

The PSMFC Observers survey was based on the observations of PSMFC personnel onboard CPFVs across California. The Marine Recreational Fisheries Statistical Survey (MRFSS) covered the years 1999-2003, while the California Recreational Fisheries Survey (CRFS) extended from 2004-present. Together, the MRFS and CRFS observer surveys spanned a total of 9 years. Both monitored the same fishery, but the CRFS program sampled more CPFV trips in a given year. The survey was basically an extension of the CDFG Observers survey, using similar methods except in choosing samples to include. Unlike the CDFG Observers survey, all types of CPFV trips were observed by PSMFC. These included trips targeting salmon (*Oncorhynchus* spp.), tuna (family Scombridae), flatfish (order Pleuronectiformes) as well as nearshore and shelf rocky reef species. Because observers did not record the target group for the trips, it was difficult to sort out the trips focusing on the rocky reef assemblage. All trolling trips were removed, which accounted for most the salmon and tuna trips. Any trip that did not catch at least one species of nearshore rocky reef species was eliminated.

Explanatory variables included in the models for this survey (if significant) were: 'Year', 'Season' and 'Subregion'. Variables were collected and categories defined using the same methods as for the CDFG CPFV Observers survey. The depth range of samples used for this survey was 5-340 meters, however only ~0.4% of samples were at depths over 150 meters. Sampling was non-orthogonal across all levels for variable combinations except for 'Year and 'Season', therefore only interactions between those variables were tested.

1.4.12. CDFG/PSFMC CPFV Observers dataset (All Observers)

I created the All Observers survey by combined data from the CDFG and PSMFC CPFV surveys into a single dataset (1988-2007). The close similarities in all aspects of methods for the two surveys make it reasonable to analyze all 20 years of data together. Results did not replace either original (separated) Observers survey, instead results were compared with original surveys and other surveys that sampled the same time-span. The explanatory variables used for this GLM

(if significant) were: 'Year', 'Season' and 'Subregion' (defined in CDFG Observers description). This time-series was non-orthogonal for all variable pairs.

1.5. Analysis

I used GLMs to create time-series of relative yearly abundance from population abundance data collected for each study species by field surveys. A GLM that included sampling or environmental variables specific to each survey was fit to abundance data (i.e. fish count and effort). The yearly index values generated by a GLM depict the stock abundance trends as measured by a given survey after removing bias introduced by explanatory variables. Each index value represented the mean of modeled samples within a year.

I chose the negative binomial (NB) with a log link, for all GLMs. A primary reason for choosing the NB distribution is its usefulness for datasets containing few or many zero counts to be analyzed (Maunder and Punt 2004). If not included in models, zero records may invalidate assumptions of the analysis as well as creating difficulties in computations (Lambert 1992, Maunder and Punt 2004). However, some distributions that allow for zeros do not function correctly if the number of zeros is very low (e.g. binomial) (Edward Dick pers. comm.). The NB distribution is not negatively affected by data with many or few zeros.

An abundance survey sample (*i*) can be modeled by a GLM with negative binomial distribution and log link as:

$$\log(\mu) = x_i\beta$$

Where x = design matrix composed of all observations and explanatory variables, β = all coefficients (or levels) for each variable (e.g. spring, summer, fall for the season variable) and μ = the true mean response (Dick 2004). Fitted model values are found by: $\mu_{i} = \mu D_i$, where D is an error term drawn at random from the NB distribution (Dick 2004). To extract the 'year effect' from this model, the index of abundance for each year of a given study (μ_y) was calculated by the equation:

$$\mu_y = \exp(\alpha + \beta_y)$$

where α is the model intercept and β_y is the regression coefficient for the 'year' variable both back-transformed to display original data scale measurements (Ralston and Dick 2003).

The intra-annual precision of fish count and effort samples was characterized in this study for each species in each survey using a coefficient of variation (CV). To calculate the CV for each year in a given dataset, I used a jackknife procedure, which has been used in existing stock assessments (e.g. Ralston and Dick 2003). The jackknife (Tukey 1958) is a specialized form of the bootstrap technique, which estimates standard errors for the GLM index values using the same number of iterations as data points (Efron and Tibshirani 1993). Both the jackknife and the bootstrap approximate the bias and standard error of a dataset. Meyer et al. (1986) suggested the jackknife requires a smaller number of computations necessary to achieve a similar result.

GLMs for each species in a given survey were simplified by including only explanatory variables that significantly affected the dependent variable. A few different methods for selecting variables to include in GLMs were compared in this study, however, ANOVAs were used to make the final choice of explanatory variables. This model selection method was used based primarily on clarity and efficiency in displaying results. Every variable that was significant using an F-test (α

< 0.05) was included in the final GLM. The only exception is that I included the variable 'Year' in all GLMs, because the purpose of using GLMs in my study was to detect a trend in abundance data over a time-series.

The GLMs I used tested 'main effects' only. Although methods exist for reformatting data to remove interactions, these are often complex and may also bias results, especially for year and area interactions. Interaction terms were not used in GLMs in my study, but they were tested where appropriate. I tested the interaction terms for the most commonly included variables: 'Year' and 'Season', 'Year' and 'Subregion', and 'Season' and 'Subregion.' Interaction models were tested using ANOVAs, indicating whether interaction terms were significant. The Bayesian Information Criteria (BIC) was employed in addition to ANOVAs for testing interactions when sample sizes were greater than 1000, and results are given for comparison. The significance of interaction terms was reported unless sampling was non-orthogonal among variable levels.

The downloadable statistical program, R (http://www.r-project.org/), was used for selecting data distributions and explanatory variables and computing GLMs. I created a generic R-script that was tailored to suit each survey's dependent and explanatory variables in calculating the yearly index values and CVs based on original survey data. Each GLM was run in R and output was organized into yearly abundance index values and coefficients (variable levels).

A plot was created from yearly indices of abundance values generated through GLMs in R to evaluate trends qualitatively (Fig. A1.2.). In order to plot several survey results on the same scale, yearly index values were standardized before plotting. Standardization was achieved by dividing the mean of all yearly index values for a given species in a given survey into each yearly index value. The resulting yearly values, standardized to the mean, could then be plotted and compared to other surveys of the same species. Unlike other standardization methods (e.g. z-scores) this method of standardization preserves variability among yearly index values by not setting the standard deviation for yearly values.

\

Table A1.1. The nine historical and ongoing abundance surveys of nearshore rocky reef fishes within central California used in my study. Survey time-span indicates the range of years for data included in my analysis. The first 4 surveys listed were fishery-independent, the final 5 surveys were fishery-dependent.

Short Survey Name	Research Body/Data Managers	Dataset/Study Title	Spatial coverage	Survey time-span
CDFG SCUBA	CDFG / Ventresca and Osorio	Marine reserve fish density monitoring and habitat associations	Monterey - Big Sur	1995-1998
PISCO SCUBA	UCSC / Carr and Malone	PISCO Collaborative Central Coast Abundance SCUBA Surveys	Santa Cruz - Pt. Conception	1999-2007*
TENERA SCUBA	TENERA / Jay Carroll	Diablo Canyon Nearshore Reef SCUBA Survey	Diablo Canyon (Patton Cove)	1976-2007*
CDFG H&L	CDFG / VenTresca and Lea	Central California Marine Sportfish Hook-and-Line Survey	Monterey - Big Sur	1978-82 (all sites) 1979-82; 1995-98 (BCER)
CDFG CENCAL	CDFG / Ventresca	CENCAL Spearfish Tournaments Creel Survey	Fort Bragg - Pismo Beach	1959-2006 (most years)*
CPFV Logbooks	CDFG/ Dunlap-Harding	Commercial Party Fishing Vessel Logbooks	All California	2001-2007*
PSMFC Dockside	PSMFC / Van Buskirk	Marine Recreational Fishery Statistical Survey / California Recreational Fisheries Survey - dockside boat interviews	All California	MRFSS 1980-2003 / CRFS 2004-2007*
CDFG Observers	CDFG / Wilson-Vandenberg	CPFV On-Board Sampling Program	All California	1988-1998
PSMFC Observers	PSMFC / Van Buskirk	Marine Recreational Fishery Statistical Survey / California Recreational Fisheries Survey - onboard observers survey	All California	MRFSS 1999-2003 / CRFS 2004-2007 *
All Observers	CDFG / PSMFC (same as above)	Combined CDFG and PSMFC Observers datasets	All California	1988-2007*

* Ongoing survey

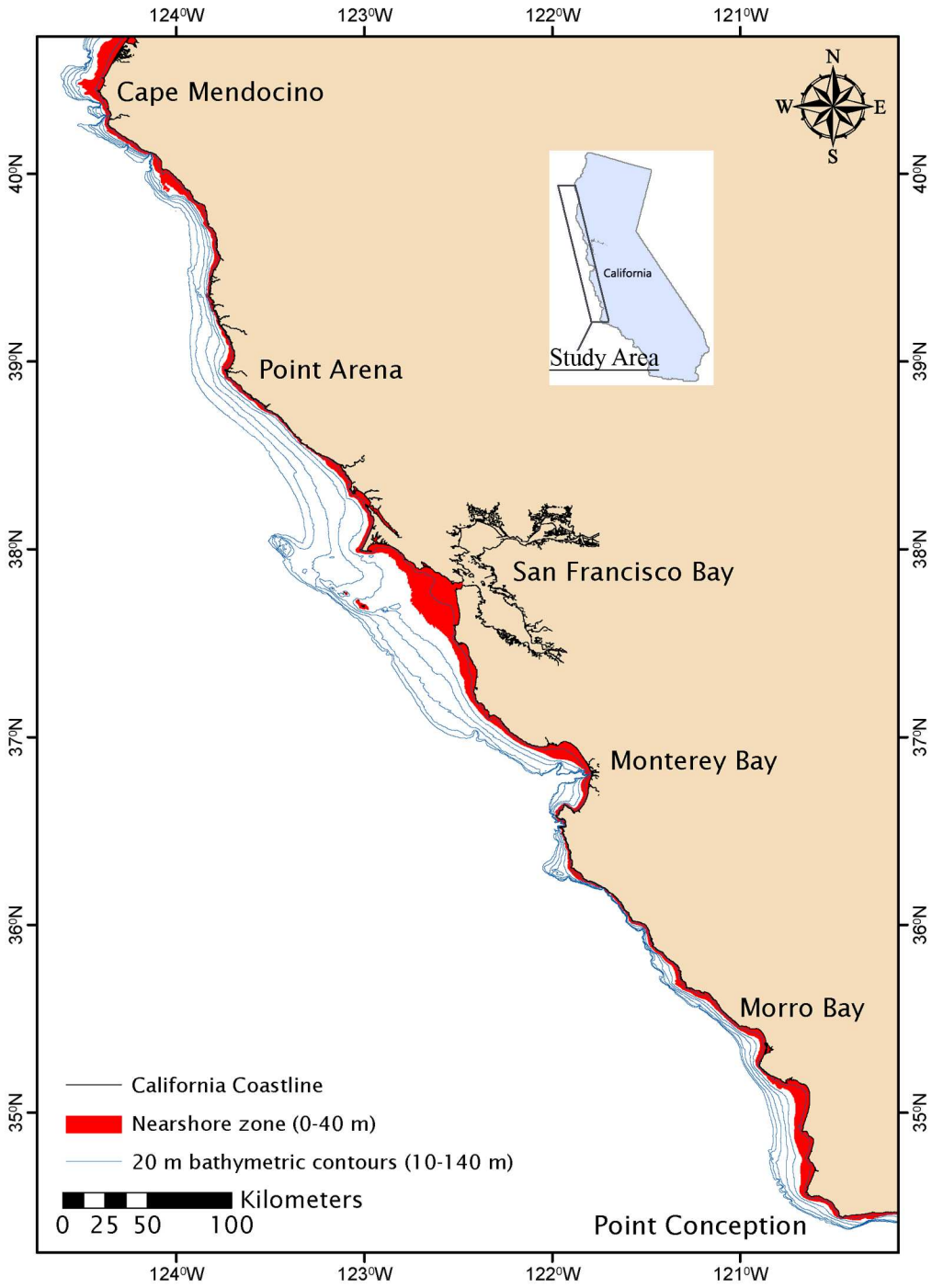

Figure A1.1. The project study area, central California nearshore (3-40 meters), is highlighted in red. The rocky reef habitats comprise a portion of these depths. Deeper areas are included in some of the surveys analyzed here if they sample the correct species assemblage. The region extends from Cape Mendocino (N40°38 W124°35') at the north end to Point Conception (N 34° 26' W 120° 35') at the south end. Important landmarks in the region and 20-meter ocean bathymetry lines are included.

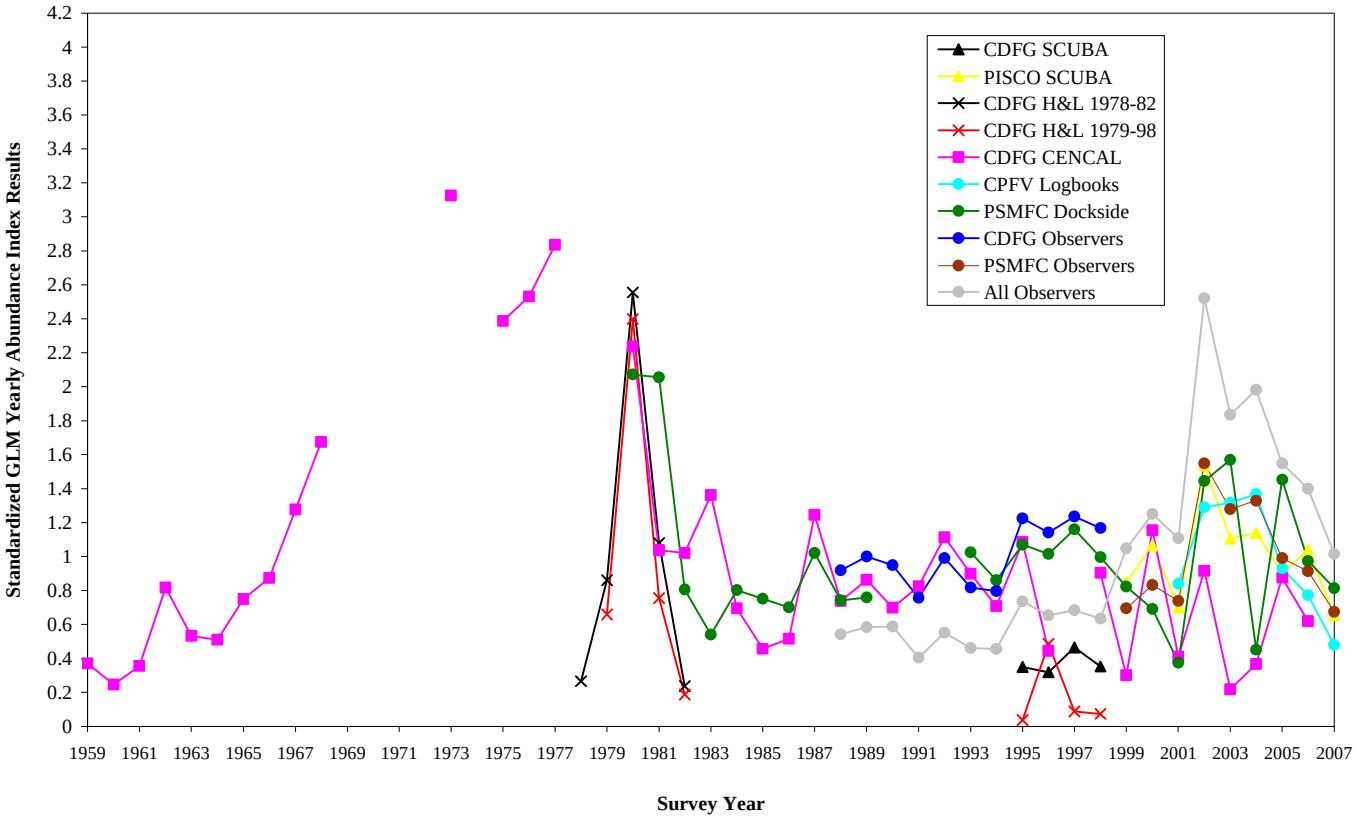

Figure A1.2 Standardized yearly index GLM model results for Ophiodon elongatus, as sampled by all surveys in the study except the TENERA SCUBA survey. Each set of yearly index values were standardized by dividing each value by the average of all values for a given survey resulting in a distribution with mean of 1, enabling comparisons among surveys with different index value magnitudes, but still displaying yearly variability.

Appendix 2. Input files for Stock Synthesis.

A. North Model

Starter File

```
# lingcod starter file for SS v3.x
# North Model

LingN_data.SS                          # Data file
LingN_ctl.SS                           # Control file

0  # Read initial values from .par file: 0=no,1=yes
1  # DOS display detail: 0,1,2
2  # Report file detail: 0,1,2
0  # Detailed checkup.sso file (0,1)
0  # Write parameter iteration trace file during minimization
2  # Write cumulative report: 0=skip,1=short,2=full
0  # Include prior likelihood for non-estimated parameters
0   # Use Soft Boundaries to aid convergence (0,1) (recommended)
0   # N bootstrap datafiles to create
25   # Last phase for estimation
1    # MCMC burn-in
1   # MCMC thinning interval
0   # Jitter initial parameter values by this fraction
-1  # Min year for spbio sd_report (neg val = styr-2, virgin state)
-2  # Max year for spbio sd_report (-1=endyr+1, -2=entire forecast)
0  # N individual SD years
0.0001  # Ending convergence criteria
0   # Retrospective year relative to end year
2   # Min age for summary biomass
1  # Depletion basis: denom is: 0=skip; 1=rel X*B0; 2=rel X*Bmsy; 3=rel X*B_styr
1.0   # Fraction (X) for Depletion denominator (e.g. 0.4)
1  # (1-SPR)_reporting:  0=skip; 1=rel(1-SPR); 2=rel(1-SPR_MSY); 3=rel(1-SPR_Btarget);
4=notrel
1 # F_std reporting: 0=skip; 1=exploit(Bio); 2=exploit(Num); 3=sum(frates)
1 # F_report_basis: 0=raw; 1=rel Fspr; 2=rel Fmsy ; 3=rel Fbtgt

999 # end of file marker
```

Forecast File

```
# Forecast specifications
# lingcod in SS v3.x
# North Model

2 # Forecast: 0=none; 1=F(SPR); 2=F(MSY) 3=F(Btgt); 4=F(endyr); 5=Ave F (enter yrs); 6=read
Fmult
2000  # First year for averaging selex to use in forecast (e.g. 2004; or use -x to be rel endyr)
2008                    # Last year for averaging selex to use in forecast
1                       # Benchmarks:0=skip, 1=calc Fspr, Fbtgt, Fmsy
2           # MSY: 0=none,1=F(SPR),2=calc F(MSY),3=F(Btgt),4=set to F(endyr)
```

```
0.45                    # SPR target (e.g. 0.40)
0.40                    # Biomass target (e.g. 0.40)
10                      # Number of forecast years
1    # Read advanced options add indents below if 1
0                       # Puntalyzer output: 0=no,1=yes
1999            # Rebuilder:  first year catch could have been set to zero (Ydecl)
2009                    # Rebuilder:  year for current age structure (Yinit)
1                # Control rule method (1=west coast adjust catch; 2=adjust F)
0.4           # Control rule Biomass level for constant F (as frac of Bzero, e.g. 0.40)
0.1              # Control rule Biomass level for no F (as frac of Bzero, e.g. 0.10)
1                       # Control rule fraction of Flimit (e.g. 0.75)
-1                   # maximum annual catch during forecast (not coded yet)
0       # 0= no implementation error; 1=use implementation error in forecast (not coded yet)
0.1                  # stddev of log(realized F/target F) in forecast (not coded yet)
2          # fleet allocation (in terms of F) (1=use endyr pattern, no read; 2=read below)
1.0 1.0          # relative F for forecast when using F;  seasons; fleets within season
0 # Number of manual forecast catches to input
# basis for forecatch:  1=retained catch; 2=total dead catch (if line above > 0)
# Year Seas Fleet Catch

999 # end of forecast file
```

Data File

```
# data file for Lingcod in SS v3.x 2008
# Northern Area = Washington and Oregon
# June 28, 2009

### Global model specifications ###
1928    # Start year
2008    # End year
1       # N seasons per year
12      # Months per season
1       # Spawning Season
2       # N fishing fleets
3       # N surveys
1       # Number of areas
COMMERCIAL%RECREATIONAL%TRIENNIAL%NWFSC%CPUE #Names divided by "%"
0.5  0.5  0.7  0.6  0.5 #Timing of each fishery/survey (.42 POP)
1 1 1 1 1      # Area of each fleet
1 1    # Units for catch by fishing fleet: 1=Biomass(mt),2=Numbers(1000s)
0.01  0.01     # SE of log(catch) by fleet for equilibrium and continuous options
2       # Number of Genders
20      # Accumulator age

### Catch section ###
# Initial equilibrium catch (landings + discard) by fishing fleet
36   0  # Fleet 1,2

81 # Number of lines catch data
# Landed catch (only) time series by fleet
# Catch(by fleet) Year Season
46      0       1928    1
142     0       1929    1
113     0       1930    1
61      0       1931    1
68      0       1932    1
104     0       1933    1
76      0       1934    1
72      0       1935    1
104     0       1936    1
75      0       1937    1
158     0       1938    1
```

```
163     0       1939    1
232     0       1940    1
628     0       1941    1
517     0       1942    1
676     0       1943    1
1296    0       1944    1
801     0       1945    1
889     0       1946    1
348     0       1947    1
546     0       1948    1
1251    0       1949    1
955     0       1950    1
1100    0       1951    1
860     0       1952    1
478     0       1953    1
803     0       1954    1
1397    0       1955    1
993     0       1956    1
1173    5       1957    1
1122    10      1958    1
1729    15      1959    1
2151    20      1960    1
1937    25      1961    1
1247    30      1962    1
913     35      1963    1
1174    40      1964    1
1498    45      1965    1
1439    50      1966    1
2061    55      1967    1
2103    60      1968    1
1452    65      1969    1
985     70      1970    1
1118    75      1971    1
1089    80      1972    1
1545    85      1973    1
1714    90      1974    1
1715    94      1975    1
1658    78      1976    1
1487    85      1977    1
1343    78      1978    1
2114    96      1979    1
2095    144     1980    1
2002    301     1981    1
2429    727     1982    1
3230    213     1983    1
3071    140     1984    1
3142    257     1985    1
1354    225     1986    1
1726    323     1987    1
1747    274     1988    1
2285    232     1989    1
1839    145     1990    1
2279    233     1991    1
1270    244     1992    1
1509    216     1993    1
1336    243     1994    1
928     135     1995    1
1080    137     1996    1
1059    160     1997    1
200     98      1998    1
216     125     1999    1
90      80      2000    1
93      92      2001    1
124     166     2002    1
107     189     2003    1
115     171     2004    1
140     190     2005    1
197     174     2006    1
190     168     2007    1
216     134     2008    1
```

```
37   # number of Survey data points
# Triennial
1980    1       3       4957    0.30
1983    1       3       7631    0.23
1986    1       3       4860    0.29
1989    1       3       4814    0.26
1992    1       3       3143    0.28
1995    1       3       1779    0.26
1998    1       3       3608    0.30
2001    1       3       5930    0.29
2004    1       3       12934   0.24
 #NWFSC combo
2003    1       4       28400   0.29
2004    1       4       10330   0.34
2005    1       4       8812    0.28
2006    1       4       21181   0.30
2007    1       4       9508    0.27
2008    1       4       13021   0.28
#Logbook       GLM
1976    1       5       20.33   0.2
1977    1       5       16.16   0.2
1978    1       5       10.79   0.2
1979    1       5       11.37   0.2
1980    1       5       11.32   0.2
1981    1       5       13.33   0.2
1982    1       5       9.29    0.2
1983    1       5       9.32    0.2
1984    1       5       6.99    0.2
1985    1       5       6.26    0.2
1986    1       5       3.58    0.2
1987    1       5       4.24    0.2
1988    1       5       4.56    0.2
1989    1       5       5.45    0.2
1990    1       5       4.36    0.2
1991    1       5       3.94    0.2
1992    1       5       2.23    0.2
1993    1       5       2.74    0.2
1994    1       5       2.82    0.2
1995    1       5       2.47    0.2
1996    1       5       2.54    0.2
1997    1       5       2.36    0.2



2   # Discards Type 1 = biomass(mt), 2 = fraction of total
6   # Discards N observations
2002  1  1  0.56  0.1
2003  1  1  0.45  0.1
2004  1  1  0.40  0.1
2005  1  1  0.61  0.1
2006  1  1  0.52  0.1
2007  1  1  0.32  0.1
0   # Mean Body Weight

## Population size structure
3  # Length bin method: 1=Use data bins,
  # 2=generate from min/max/width read below
  # 3=Read count and vector below
60 # Count of population bins
# Lower edge of bins
10      12      14      16      18      20      22      24      26      28      30      32
        34      36      38      40      42      44      46      48      50      52      54
        56      58      60      62      64      66      68      70      72      74      76
        78      80      82      84      86      88      90      92      94      96      98
        100     102     104     106     108     110     112     114     116     118     120
        122     124     126     128

-1      # Minimum proportion for compressing tails of observed compositional data
0.0001  # Constant added to expected frequencies
```

```
0       # Combine males and females at and below this bin number

42 # Number of Length Bins

28      30      32      34      36      38      40      42      44      46      48      50
        52      54      56      58      60      62      64      66      68      70      72
        74      76      78      80      82      84      86      88      90      92      94
        96      98      100     102     104     106     108     110

78   # Length Composition Observations
#Year   Seas    Fleet   Gender  Part    effn
#Commercial 44 years, first 11 combined sex
1965    1       1       0       2       28.2    0       0       0       0       0       0
        0       1       0       1       2       5       8       9       17      32      35
        50      59      48      51      45      30      24      24      24      22      14
        15      9       5       6       5       7       3       2       4       3       8
        2       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1966    1       1       0       2       21.2    0       0       0       0       0       0
        0       1       1       6       15      47      57      33      33      41      59
        55      38      56      60      42      39      35      30      26      13      8
        4       4       2       2       5       1       1       2       5       2       3
        0       2       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1967    1       1       0       2       35.3    0       0       0       0       0       0
        0       0       0       0       5       25      52      72      84      143     121
        117     83      77      43      32      25      27      16      9       15      10
        11      9       15      7       10      4       5       2       4       3       1
        3       0       4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1968    1       1       0       2       268.3   0       0       0       0       0       0
        1       0       4       11      18      63      135     338     597     859     1058
        1067    978     713     564     405     327     256     243     232     199     199
        194     177     171     170     162     108     107     107     112     123     94
        69      54      122     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1969    1       1       0       2       113.0   0       0       0       0       0       0
        0       0       3       8       10      14      38      64      109     195     312
        396     464     451     391     311     188     134     97      72      73      63
        65      61      82      87      66      80      82      77      84      96      70
        61      44      115     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1970    1       1       0       2       141.2   0       0       0       0       0       0
        0       2       6       5       12      18      24      16      26      26      29
        71      123     193     249     279     327     295     277     225     228     145
        144     143     153     149     151     165     163     161     128     116     133
        108     94      178     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1971    1       1       0       2       98.8    0       0       0       0       0       0
        0       0       0       2       13      37      26      20      12      37      57
        70      79      103     134     167     188     201     265     279     242     234
        195     147     119     110     114     97      117     112     92      93      74
        63      50      112     0       0       0       0       0       0       0       0
```

```
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1972    1       1       0       2       28.2    0       0       0       0       0       0
        0       0       0       0       0       1       3       10      18      19      21
        12      16      14      20      17      21      19      27      29      38      46
        57      59      54      54      44      54      45      36      33      34      39
        30      8       29      0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1973    1       1       0       2       21.2    0       0       0       0       0       0
        0       0       0       0       0       1       0       2       6       14      15
        14      3       1       4       1       5       9       6       8       8       15
        22      33      44      24      29      28      23      28      16      29      24
        31      30      88      0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1974    1       1       0       2       42.4    0       0       0       0       0       0
        0       0       0       0       0       0       1       8       9       31      18
        37      39      45      54      79      95      88      86      55      51      53
        51      69      62      79      60      64      67      43      45      40      25
        22      18      27      0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1975    1       1       0       2       113.0   0       0       0       0       0       0
        0       0       0       1       6       19      11      23      28      50      69
        106     168     255     343     364     437     484     372     243     178     138
        119     90      65      70      79      78      75      64      53      27      22
        12      11      23      0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1976    1       1       3       2       14.1    0       0       0       0       0       0
        0       0       0       0       0       0       0       0       2       3       5
        9       7       11      11      19      20      36      31      40      29      34
        23      21      16      8       7       4       12      10      4       2       1
        1       2       4       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       2       2       1       6       5
        11      18      21      19      8       7       6       2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1977    1       1       3       2       7.1     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       2       3       1       6       14
        18      23      10      19      13      11      6       13      19      11      16
        16      13      45      0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1978    1       1       3       2       176.1   0       0       0       0       1       0
        2       0       0       3       3       3       3       7       3       10      22
        14      17      13      10      8       19      21      27      24      18      20
        28      40      44      64      44      41      32      38      24      42      28
        29      18      38      0       0       0       0       0       1       0       1
        0       2       2       2       14      7       18      18      16      26      15
        20      14      16      16      17      16      5       14      9       12      8
        3       1       0       2       1       0       2       0       0       0       0
        0
1979    1       1       3       2       175.2   0       0       0       0       0       0
        0       1       0       1       2.5     2.5     3.5     0.5     3.5     3       3.5
        15.5    22      31      46      28.5    28.5    11.5    17      14.5    18.5    23.5
        27      20.5    33.5    49      57.5    66.5    63      40      29.5    29.5    21
```

```
      16.5  21    41    0     0     0     0     0     0     0     0
      1     3     1.5   1.5   5.5   3.5   4.5   8     19.5  29.5  31
      30    26    13.5  12.5  16.5  10    12.5  2.5   9.5   9     8.5
      5.5   7     2.5   2.5   0     1     0.5   0.5   0     0.5   0
      2
1980  1     1     3     2     275.3 0     0     0     0     1     3
      2     8     8     13    16    16    15    25    34    33    30
      28    33    24    29    71    73    80    72    59    53.5  48
      73.5  65    51.5  94.5  93    125.5 118.5 106.5 78    57    58.5
      37.5  31    117   0     0     0     0     0     2     4     9
      5     8     9     16    20    28    41    44    44    16    27
      22    29    15    21    15    19    13    16.5  11    11.5  8
      3.5   5.5   4     6.5   4.5   10.5  4     3     1.5   0.5   1
      1
1981  1     1     3     2     148.3 0     0     0     0     0     0
      0     0     4     2     8     13    13    20    22    42    57.5
      33    35.5  32    39    54    30    19    38.5  33.5  61    59.5
      53.5  24    28.5  37.5  38    41    44    62    48.5  43    28
      12    14    32.5  0     0     0     0     0     1     0     2
      3     6     6     6     14    29    48    49    42.5  35    36.5
      27    28    32    21    25    24.5  19.5  14    9.5   10.5  4
      3.5   2.5   2     0     1     0     0.5   0     0     0     0
      1.5
1982  1     1     3     2     532.4 0     0     1     1     2     1
      4.5   6     14    15.5  19    38.5  60    63    78.5  77.5  87.5
      117.5 132   113.5 96    94    98    104.5 94    64    77.5  74.5
      82.5  96    69    57.5  52.5  55.5  56.5  57.5  53.5  49    39
      28    15    31.5  0     0     0     3     0     1     4.5   8
      11    11.5  18    36.5  61    63    67.5  109.5 92.5  84.5  83
      78.5  68    49    43    27.5  23    14    11.5  10.5  4.5   1
      0     1.5   2.5   1.5   1.5   1.5   2.5   0     1     0     0
      3.5
1983  1     1     3     2     147.8 0     0     0     0     0     0
      0     1     0     0     3     5     6     4     7     16    21
      22    37    35    40    40    49    45    48    37    34    28
      29    22    25    19    15    17    15    8     8     19    12
      15    11    33    0     0     0     0     0     0     0     1
      0     0     3     4     4     8     7     7     11    16    21
      27    21    11    6     6     5     0     4     0     1     1
      0     0     0     0     0     0     0     0     0     0     0
      0
1984  1     1     3     2     130.7 0     0     0     0     0     0
      0     0     3     2     3     3     10    17    8     16    5
      15    28    23    28    34    56    47    49    46    43    38
      38    26    15    14    11    14    12    6     7     12    5
      3     4     24    0     0     0     0     0     0     0     0
      1     0     2     0     6     3     6     1     6     6     10
      14    11    16    14    13    6     6     5     3     1     0
      0     0     0     0     0     0     0     0     0     0     0
      0
1985  1     1     3     2     147.9 0     0     0     1     0     0
      0     0     5     3     6     9     5     37    58    50    35
      31    9     18    12    18    20    36    53    49    56    61
      40    46    34    17    14    8     18    19    10    6     6
      2     4     7     0     0     0     0     0     0     0     1
      1     1     1     3     7     13    12    10    8     6     6
      3     7     6     5     7     3     6     2     1     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0
1986  1     1     3     2     224.6 0     0     0     0     0     1
      0     0     0     0     0     3     3     9     30    43    50
      56    65    58.5  48    57    33    28    36    35    54    50
      70    69    52    59    37    23    27    19    24    6     8
      8     4     13.5  0     0     0     0     0     0     0     1
      0     0     1     1     6     13    16    13    24    22    26
      17.5  19    15    9     8     4     6     7     1     0     1
      2     0     0     0     1     0     0     0     0     0     0
      0.5
1987  1     1     3     2     213.4 0     0     0     0     0     0
      0     0     2     2     3.5   6.5   10    7     12    10    14.5
      9     27    28    34.5  51    53    60    55    65    42    34
```

```
      64     63     52     55     44     27     28     26     11      5      9
       4      2     12      0      0      0      0      0      0      0      0
       2      4    5.5   11.5     15     16     18     16   22.5     24     17
      25   29.5     17     10      6      5      4      5      1      2      0
       0      0      0      0      0      0      0      0      0      0      0
       0
1988   1      1      3      2  208.5      0      0      0      0      0      0
       0      0      1      1      1     11     24     44     54     62     59
      26     17      9     18     16     29     27     38     33     50     34
      38     29     16     31     30     29     24     22     10      9     10
       3      2      6      0      0      0      0      0      1      0      1
       0      0      4     10     37     60     69     41     18     17     15
      10     14     14     11      8      5      4      1      4      1      2
       2      0      0      1      0      0      0      0      0      0      0
       0
1989   1      1      3      2  278.7      0      0      0      0      0      0
       0      0      1      4      1      5      4    4.5     15     30     71
    71.5    110   94.5   81.5     55   41.5   53.5   35.5   62.5     65   73.5
    42.5     33     35     29     29   23.5   25.5     24     16     13     12
      10    8.5     14      0      0      0      0      0      0      0      0
       0      1      0      3      5    8.5     27     49     66   65.5     50
    35.5   15.5     13    8.5    8.5    9.5   12.5      8    6.5    7.5      4
       6      4      3    3.5    1.5      2      1      0      0      0    0.5
       0
1990   1      1      3      2  231.3      0      0      0      0      0      1
       0      0      6      6      6      6      8     15     10     17     13
    16.5     40     48     61     87     90     75     61     38     44     36
      46     41     53     36     19     19     18     16     17     17      8
       4      3      6      0      0      0      0      0      0      0      1
       1      3      5      6      0     11     13     22     27   28.5     50
      44     35     15     12      8     11      6      1      2      0      0
       2      0      1      0      0      0      0      0      0      0      0
       0
1991   1      1      3      2  220.5      0      0      0    0.5      1      0
       5      5     13     11     18   23.5     20   25.5   29.5   33.5     39
      50     34   42.5     28     29     45     79     67   91.5     50     30
    23.5     16     25     43     26     22     15     14      7      4      7
       2      6      7      0      0      0    1.5      0      1      3      6
       9      8      9   12.5     12    8.5   12.5    7.5      8      9     17
    24.5     15     27     12     11      7   10.5      6      1    1.5      0
       0      0      0      0      0      0      0      0      0      0      0
       0
1992   1      1      3      2  435.3      2      4      6      5    7.5   13.5
      37   61.5     87     97   72.5   69.5     85   84.5     73   93.5   89.5
    70.5     61   56.5     46     61   45.5   34.5     25     51     61   86.5
      69     51     38     27     25     18     27     22     18     20     18
       8      6     14      1      3      5      2    6.5   18.5     29   46.5
      59     37   29.5   47.5     34   54.5     45   43.5   31.5   35.5     23
    19.5     17     14   16.5    9.5      9      6      3    0.5      1      0
       0      0      0      0      0      0      0      0      0      0      0
       0
1993   1      1      3      2  472.1      0      0      1      4      9   21.5
    50.5     59     90  114.5  122.5  105.5    146    146  133.5  117.5   94.5
      77     62     73   59.5     56     38     38   38.5     35   48.5     29
      26     50     46     39     28     21      9     11     15     13     10
       6      9     16      0      0      1      3      6   12.5   30.5     28
      46   54.5   50.5   58.5     61     53   60.5   49.5   23.5     19     26
      18   14.5     17      8     10   10.5      9    7.5      2      3      2
       0      1      0      0      0      0      0      0      0      0      0
       0
1994   1      1      3      2  528.1      0      1      2     12     18     19
    13.5     25     58     85     73   80.5   81.5    133  182.5    188    149
     127    123    104    105     86     90     65     68     47     60     60
      46     31     26     20     36     18     14     10     10      5     10
       5      3     10      0      0      2     15     27      5    4.5     16
      19     45     49   55.5   84.5     99   92.5     90     78     62     46
      42     28     29     22     10      7      8      3      4      1      0
       1      0      0      0      1      0      0      0      0      0      0
       0
1995   1      1      3      2  332.4      0      0      0      0      0      0
       0      0      0      0      6     10     29     48     68     96    111
```

```
      106   119   155   123   95    90    56    58    52    45    32
      25    22    15    9     15    17    18    11    8     4     13
      7     4     6     0     0     0     0     0     0     0     0
      1     3     2     6     20    30    54    57    50    62    30
      28    22    9     12    8     3     4     4     3     4     1
      0     1     0     0     0     0     0     0     0     0     0
      0
1996  1     1     3     2     263.5 0     0     0     0     1     0
      0     1     17    20    19    23    12    21    42    55    69
      76    79    72    53    80    89    79    67    51    66    40
      23    25    21    17    10    6     14    7     5     5     4
      4     2     4     0     0     0     0     0     0     0     3
      9     11    16    16    9     21    30    28    32    30    31
      27    14    7     9     3     5     3     4     1     1     0
      0     0     0     0     0     0     0     0     0     0     0
      0
1997  1     1     3     2     312.3 0     0     0     0     0     0
      0     3     2     1     8.5   6.5   24    39.5  68.5  65.5  58
      48.5  51    64.5  80.5  91.5  91    87    76    64    59.5  49
      33.5  29    21.5  13.5  18.5  10.5  6     13.5  8     5.5   7.5
      3.5   3     5     0     0     0     0     0     0     1     3
      1     6     27.5  15.5  29    53.5  61.5  53.5  44    39.5  30
      31.5  26.5  27.5  23    11    8     6     3.5   1     1.5   3
      2.5   0.5   1.5   1.5   1     0.5   0     0.5   0.5   0.5   0
      0
1998  1     1     3     2     252.6 0     0     0     0     0     0
      1     0     3     2     3     6     12    13    23    17    44
      51.5  77    82    83    70    56    52    54    70.5  49    55
      55    23.5  30    20.5  16    11    11    6     6     3.5   2
      3     1     6     0     0     0     0     0     1     0     2
      1     2     2     8     5     15    12    37    35    50.5  38
      44    28    24    16    13    6     1.5   4     2     3     3.5
      0     0.5   0     1     0     0     0     0.5   0     0     0
      0
1999  1     1     3     2     277.6 0     0     0     0     0     0
      2     4     6.5   3     6.5   3.5   12.5  19.5  24.5  40    63.5
      73    96    88    70    75    74    88    70    65    57    60
      49    43    49    26    21    14    8     4     9     1     0
      2     2     3     0     0     0     0     0     0     2     3
      4.5   1     3.5   5.5   8.5   14.5  18.5  13    34.5  35    34
      37    25    14    10    10    9     3     4     3     4     0
      1     0     0     1     0     0     1     0     0     0     0
      1
2000  1     1     3     2     216.2 0     0     1     0     0     0
      0     0     0     0     0     1     1     2     3     4     13
      17    35    44    52.5  62    48    55.5  41    43    34    38
      30    20    26    28    25    15    8     9     13    6     5
      6     1     11    0     1     0     0     0     0     0     0
      0     0     0     0     1     1     2     9     22    31    27
      34    31.5  29    17    13.5  8     4     2     1     1     0
      1     0     0     1     0     1     0     0     0     0     0
      0
2001  1     1     3     2     265.8 0     0     0     0     0     0
      0     1     1     1     1     2     2     11    7     19    35
      32    47    44    46    51    50    56    59    46    44    28
      27    25    29    31    16    19    10    8     5     1     2
      2     0     0     0     0     0     0     0     0     0     0
      0     0     0     3     2     4     10    23    33    47    57
      41    36    38    29    21    9     8     6     2     0     1
      0     0     0     0     0     1     0     0     0     0     0
      0
2002  1     1     3     2     296.9 0     0     0     0     0     0
      0     1     1     0     0     0     4     6     13    24    33
      40.5  46    52    46.5  58    29    29.5  48    41.5  47.5  42
      37    34    28    14    10    13    10    7     4     6     1
      1     0     2     0     0     0     0     1     0     0     1
      0     0     3     3     4     8     15    26    44    48.5  32
      34    49.5  39    26    27.5  20    11.5  6.5   6     7     1
      0     0     1     0     0     0     0     0     0     0     0
      0
```

```
2003    1       1       3       2       276.8   0       0       0       0       0       0
        0       0       0       0       0       2       6       8       13      24      49
        73      77      66      56      42      25      20.5    32      32      20      26
        18      18      20      9       17      12      12      7       7       3       3
        0       1       0       0       0       0       0       0       1       1       1
        3       1       1       1       8       12      23      37      44      68      63
        34      39      20      22      12.5    10      6       7       1       2       2
        2       1       0       0       0       0       1       0       0       0       0
        0
2004    1       1       3       2       328.1   0       0       0       0       0       0
        0       0       1       1       0       1       2       2       6       12      34.5
        54      68      60      44      37      34      39      17      18      20      11
        11.5    13      16      6       9       6.5     2       4.5     4.5     1       0
        0       1       0.5     0       0       0       0       0       0       1       0
        0       0       1       1       1       3       11      20      78.5    110     109
        81      69      46      30      18      25      13      7       9       6.5     1
        1       1       0       0.5     0       0.5     0.5     0       0       0       0
        0.5
2005    1       1       3       2       187.7   0       0       0       0       0       0
        0       0       0       0       0       0       0       1       3       6       19
        38      47      47      47      48      40      38      38      37      30      29
        21      16      10      10      3       2       8       4       3       3       4
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       1       12      33      39      42
        37      32      28      22      12      12      7       4       7       2       1
        0       0       0       0       0       0       0       0       0       0       0
        0
2006    1       1       3       2       250.7   0       0       0       0       0       0
        0       0       0       0       0       1       0       0       2       4       14.5
        23      30      39.5    46.5    58      60      55      56      61      39      44
        42      35      15      22      15      20      8       15      7       3       4
        3       1       1       0       0       0       0       1       0       0       0
        0       0       1       1       1       0       6       15      34.5    43      56
        42.5    33.5    38      26      15      9       7       5       3       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0
2007    1       1       3       2       448.4   0       0       0       0       1       0
        0       0       0       0       1       1       1       2       7.5     11.5    17.5
        20.5    33      40      56      75.5    92.5    92      117     114     126     110
        106     99      62      53      21      21      18      7       8       5       3
        4       2       1       0       0       0       0       1       0       0       0
        0       0       1       0       2       9       31.5    44.5    59.5    68.5    71
        72      59      48.5    45.5    29      23      17      8       12      0       2
        2       0       1       0       0       2       0       0       0       0       0
        0
2008    1       1       3       2       358.2   0       0       0       0       0       0
        0       0       1       0       0       2       1       1       6       12      19
        21      26      29.5    26      51      74.5    83      83      86.5    143     122
        98      79      61      49      22      15      9       14      4       2       2
        3       0       2       0       0       0       0       0       0       0       0
        0       0       5       1       1       4       25      45      41      57      50
        48.5    40      46      21.5    22      21      14.5    6       5       2       0
        3       0       1       2       0       1       0       0       0       0       0
        0

#Recreational 16 years Note these are from RECfin and Oregon data which has sex info fpr
1999-2007
1993    1       2       0       2       57.4    1       0       0       2       2       2
        2       15      19      45      43      50      50      44      44      35      42
        22      27      24      19      15      15      8       4       9       6       6
        2       4       3       1       2       4       1       1       2       0       1
        0       1       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1994    1       2       0       2       53.7    0       0       1       0       0       3
        11      17      28      22      38      46      47      53      36      39      43
        31      24      15      9       13      8       8       7       10      5       8
        3       5       2       0       1       1       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
```

```
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1995    1       2       0       2       28.7    0       1       0       0       1       2
        0       0       0       0       1       2       4       15      30      27      23
        29      21      18      19      13      15      12      22      3       9       2
        4       2       6       0       3       1       0       1       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1996    1       2       0       2       41.5    0       0       0       0       0       0
        0       0       0       0       0       0       8       31      62      59      46
        30      37      30      22      18      20      13      10      13      4       6
        0       1       1       4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1997    1       2       0       2       32.5    0       0       0       0       1       0
        0       1       0       0       1       0       1       12      41      35      37
        27      19      20      23      11      8       14      15      16      6       13
        2       3       4       4       5       2       4       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1998    1       2       0       2       19.8    0       0       0       0       0       0
        0       0       0       1       0       0       0       1       0       5       23
        27      22      18      14      12      9       13      10      5       5       8
        7       5       5       2       1       1       1       1       0       0       1
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
1999    1       2       3       2       172.7   0       0.5     0       0       1       0
        0       0       0       0       0       1       0       1       0       11.5    41.5
        64.5    61.5    56      52.5    65      63.5    50      52.5    38.5    42      47.5
        38      32      28.5    24      14      20      17.5    5       5       5       7
        4       3       4       0       0.5     0       0       0       0       0       0
        0       0       0       0       1       3       4       49.5    111.5   133.5   118.5
        102     75.5    74      57.5    36      28.5    30.5    9       9.5     11      4
        4.5     1       0       1       0.5     1       0       1       0       1       0
        0
2000    1       2       3       2       227.6   0       1       0       0       0       0
        0       0       0       0       0       0       1       0       1       13      59.5
        54      91      89.5    106.5   115.5   90.5    88      69      53      43      36
        34      16      5       1       0       1       0       0       0       0       0
        0       0       0       0       0       1       0       1       0       0       0
        0       0       0       0       0       1       2       39      225.5   222     191
        159.5   130.5   102.5   70.5    53      44      23      10      18      6       3
        1       0       0       0       0       0       0       0       0       0       0
        0
2001    1       2       3       2       146.7   0       0       0       0       0       0
        0       0       0       0       1       0       0       1       0       6       27
        31.5    48      42.5    46.5    49      56      62      62      37      37      35
        33      24      37      23      19      10.5    14      5       6       1       2
        0       1       1       0       0       0       2       0       0       0       0
        0       0       0       0       0       1       1       17      124     123.5   120
        92.5    75.5    65      49      25      23      18      5       2       2       2
        0       0       1       0.5     0       0       0       0       0       0       0
        0
2002    1       2       3       2       86.3    0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       4       34
        38      40      35.5    23      37      27      28      29      30      27.5    29
        30      26      10      23      9       6       9       1       1       3       3
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```
        1       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       1       3       0       9       61      57      49
        48.5    39      35      22      20      5       4       4.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
2003    1       2       3       2       81.8    0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       2       25.5
        36      35      33      40      27      30      31      33.5    22      21      24
        12      20      19      9       18      10      3       8       0       2       3
        2       1       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       7       55.5    82      48
        47      28      25      20      15      9.5     6       0       1       1       0
        1       0       2       0       0       0       0       0       0       0       0
        0
2004    1       2       3       2       69.4    0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       3       20.5
        20.5    16.5    33      23.5    20      26.5    22      29.5    17      16      11
        12      12      10      12      6       7       4.5     1       3       1       1
        1       0       0.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       13      44.5    68.5    64.5
        46      52.5    16      18.5    17      7.5     8       1       1       1       0
        1       0       0       0       0.5     1       0       0       0       0       0
        0.5
2005    1       2       3       2       53.9    0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       13
        14      9       18      11.5    18      18      13      16      18      8       11
        8       7       9       2       3       1       3       3       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       8       50      57      56
        51      33.5    31      21      12      6       4       1       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
2006    1       2       3       2       104.5   0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       2       16
        16.5    22.5    20      29      38      33      47      43      27      35      25
        17      12      13      6       15      10      6       5       5       2       5
        5       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       25      109     111.5   115.5
        71      63      40      20      11      11      3       3       2       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0
2007    1       2       3       2       99.5    0       0       0       0       0       0
        0       0       0       0       0       0       0       6       18      15      8
        27      12      20      22      25      21      24      27      19      28      16
        19      14      17      4       3       5       9       5       8       1       2
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       3       32      60      84      87      74      68
        64      46      37      30      16      7       5       5       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0
2008    1       2       0       2       166.4   0       0       0       0       0       1
        1       1       0       0       0       1       6       66      183     214     197
        163     173     142     116     106     60      52      33      34      20      18
        18      12      11      11      10      4       4       1       4       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0


# Discard 5 years
2003    1       1       0       1       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.324324324     0       0       0.324324324     0
        0.324324324     0       0       0       0.027027027     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

```
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       1       0       1       432     0.004121729     0.004211333     0.006182595
        0.014566944     0.010828501     0.011448079     0.023654473     0.030243413
        0.053309271     0.067026003     0.066101288     0.072320805     0.055136548
        0.086935948     0.084909846     0.059315654     0.048716073     0.042101663
        0.053159577     0.016005663     0.022101351     0.020147789     0.020142295
        0.028479448     0.016510803     0.008692442     0.006230756     0.009640331
        0.014333631     0.006146814     0.006744372     0.007426473     0.00827994
        0.005591216     0.005466892     0.002372235     0       0.000860187     0.000268808
        0       0       0.000268808     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0
2005    1       1       0       1       498     0.001863424     0.003437508     0.005550459
        0.00933437      0.012234273     0.010303187     0.013047708     0.002599616
        0.005708499     0.017459185     0.024139033     0.028705762     0.029180208
        0.048278593     0.056463841     0.088354388     0.055281823     0.071994421
        0.07988554      0.085028377     0.067060329     0.053503101     0.041140112
        0.047919382     0.038090035     0.025083526     0.017578296     0.019503452
        0.009879778     0.013131421     0.006471289     0.001885059     0.002262616
        0.000429689     0.001967832     0.000107422     0.001506016     0.000907478
        0.001375003     0.001347948     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       1       0       1       221     0.008736678     0.000620638     0.001025036
        0.001468048     0.002339329     0.005035117     0.014943051     0.02680891
        0.041116714     0.037034538     0.028054534     0.033589718     0.038149362
        0.046159669     0.037942985     0.052811633     0.072018483     0.077968509
        0.044670172     0.043396936     0.047781978     0.038240829     0.057756796
        0.041706826     0.020903909     0.044019498     0.016184337     0.025260309
        0.02453224      0.019199496     0.027375985     0.004678667     0.005913107
        0.000907087     0       0.006779255     0       0.00338964      0       0       0
        0.001479984     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2007    1       1       0       1       140     0.001103        0.023188891     0.085095743
        0.041066176     0.036897031     0.033089986     0.008493096     0.003625385
        0.012574195     0.01720567      0.052077398     0.020299227     0.044130924
        0.02450231      0.049654943     0.081685973     0.044193089     0.030479577
        0.086683237     0.03960648      0.034836401     0.028388611     0.015358238
        0.042871768     0.029935035     0.033200309     0.015300848     0.027023488
        0.018240223     0.010982614     0.005011438     0.001654499     0       0       0
        0       0.001544199     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0

#Triennial 7 years
1986    1       3       3       0       46.35763581     0       0       0       1       7
        5       6       2       2       2       0       0       0       1       3       0
        6       9       3       5       11      4       1       3       6       3.383161867
        4.383161867     8       5       5.191669106     8.191669106     2       1       2
        0       1       3       0       0       0       0       1       0       1       0
        3       3       3       2       1       0       0       2       1       0       5
        6       14      2       11      3       6.191669106     4       3       3       3
        1       5       3       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1989    1       3       3       0       147.3538168     0       0       1       5       4
        4       2       0       5       4       3       6       2       1       6.488169816
        5       10      32      64.04155        51.64055662     34.84137759     21
        13.82248415     13.72023493     10.27161463     9.920688793     9.488169816
        12.48816982     13.58138302     6       13.97633963     4.488169816     6.488169816
        16.27130694     4       9.783137122     3       1       1       3       0       1
        1       0       1       2       3       1       1       0       0       2       3
        7.920688793     2       5       4       11      20.05590264     44.27161463
```

```
        23.92068879    21.99184955    10.92068879    9       5       14.19230342    5
        4       5.271614627    1       6.299546135    1       0       5.799546135    0
        0       0       0       0       0       0       0       0       0
1992    1       3       3       0       138.5385437    1       0       8       24.03143313
        24.99414405    24.657031      22.58138302    3.5     12.24110113    16.03143313
        24.99258343    27.15989852    12.74110113    2       9.081383019    9.746291714
        10      15      10      9.5     9       15.5    6       7.246291714    7.741101127
        12      11      12      19.08138302    17      11      12      13      7       3
        5       1       1       1       3       2       3       6.062866266    0
        7.081383019    16.03143313    19.8813279     17.657031      3.5     5.5     8.5
        12.03143313    21.5    9.819616629    5       2       2       2.5     7       12
        7       4.241101127    5       7.5     9.031433133    3       6       2       1
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       3       0       164.9923619    1       3       13      26.40822469
        13      13      7       2       5       4       7       12.74110113    15      14
        28.40822469    17      20      20      35.74110113    22      18      14.48220225
        14      7       6       10      4       4       2       4       1       0       2
        2       3       2       0       2       0       0       0       0       1       2
        4       8       13.74110113    8       2       2       2       4       6       11
        8       16      16      13      25      29      23      11      9       11      4
        3       5       0       2       3       0       0       0       1       0       0
        0       1       0       0       0       0       0       0
1998    1       3       3       0       174.9609076    7       8       14      10      10
        3       0       1       1       9       9       9       6       15.1349555
        16.1349555     27.70243325    10.56747775    32.83738875    17.1349555
        40.59624257    13      21.1349555     7       13.56747775    14.56747775
        20.1349555     23.56747775    14.56747775    19.70243325    11.56747775
        17.56747775    7       5       4       2       1       1       0       0       0
        1       0       2       6       6       7       5       2       0       1       1
        7       6       8       8       13.1349555     12      15      21.1349555     13
        14      6       7.567477751    5       4       1       2       2       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       3       3       0       237.0003609    10      41      72.60659995
        64.01649988    35.07106663    20.80329998    30.26776666    31.53553332
        44.87436661    56.24671809    33.67766659    19.26776666    6       2
        13.26776666    13      15.26776666    6       9.527901542    4       9.527901542
        10      22.00204391    9.209169643    10.13248636    24.42536063    23.10662873
        15.89745909    15.21619099    21.57872719    21.74409253    6.055803083
        13.94624083    12.52292411    7.313754464    4.209169643    2.527901542
        2.527901542    2.104584821    2       5.209169643    0       6       32.26776666
        52.07106663    36.33883329    15.53553332    9       12      27.80329998
        45.33883329    25.80329998    17      11.53553332    11      10      9       4
        5       8       3       5       2       4       4       2       1.5     1       1
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0       0
2004    1       3       3       0       126.8587259    0       0       3       3
        4.827594605    3       5.827594605    3       10.03769562    11.9989253     9
        20.74629171    13.94859379    28.72322219    25.15259841    19.25218531
        33.46454757    30.92203623    25.88470692    29.96208154    18.75218531
        19.49328644    30.23746877    20.9564054     28.46122429    12.5    12.25263358
        3.478202699    6.5     12.23083628    3       6.478202699    10.98257332
        13.70903898    5.478202699    12.23083628    0       1       7.752633585
        3.478202699    0       5.752633585    0       0       2       2       2       1
        0       3.741101127    4.413797302    17.14822168    7       13.25263358
        38.3096322     6       14.03143313    17.99590998    39.81764655    18.93312041
        23.00526717    7.743276394    4       17.08359814    3       10.79954613
        4.75218531     1.5     0.5     0       0.5     0       0       0       0       0
        0       0       0       0       0       0       0       0

#NWFSC 6 years
2003    1       4       3       0       122     9.9     86.2    97.1    139.2   258.1   184.1
        219.6   183.7   399.8   404.9   455.3   962.1   484.3   754.2   1801.0  1249.0  1010.7
        756.6   2214.2  873.0   823.3   608.3   322.6   383.8   35.0    271.1   92.0    79.1
        996.6   120.7   9.2     18.1    0.0     55.7    13.6    20.4    19.2    0.0     0.0
        0.0     0.0     18.8    30.7    77.1    39.8    129.2   157.6   49.7    248.0   168.2
        222.2   687.1   213.2   675.2   962.1   633.9   819.0   820.6   1673.3  1144.2  650.2
        1701.1  780.0   36.6    11.5    29.0    0.0     0.0     0.0     0.0     0.0     0.0
        0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
        9.6
```

```
2004    1       4       3       0       127     46.3    121.8   104.3   155.5   226.7   65.4
        196.2   270.0   137.6   260.1   140.7   392.6   379.0   304.6   323.9   227.1   268.8
        263.9   323.2   206.4   198.4   83.0    120.2   113.4   131.0   81.5    86.6    12.6
        57.4    58.3    43.0    13.6    0.0     20.0    0.0     0.0     0.0     0.0     0.0
        0.0     0.0     0.0     26.5    194.8   71.0    120.4   304.5   167.5   272.3   273.9
        368.7   237.6   183.5   417.7   340.9   282.9   237.5   210.5   107.4   313.3   149.4
        212.3   166.8   93.2    52.7    67.2    0.0     0.0     24.1    0.0     0.0     0.0
        0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
        0.0
2005    1       4       3       0       116     34.6    17.3    127.2   181.6   170.0   178.1
        121.5   55.5    79.6    64.0    69.5    275.0   84.4    279.4   247.5   307.7   260.6
        301.1   308.3   309.1   346.7   266.3   209.7   230.4   138.3   353.7   63.9    87.2
        87.0    125.3   0.0     57.2    72.9    30.7    17.8    0.0     11.3    0.0     0.0
        0.0     0.0     0.0     34.7    78.8    183.6   201.4   142.4   64.6    76.3    35.9
        27.8    76.2    167.2   60.7    258.5   208.5   161.1   218.1   194.6   243.7   176.3
        232.4   123.5   97.5    100.5   25.6    39.5    12.3    0.0     0.0     0.0     0.0
        0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
        0.0
2006    1       4       3       0       157     15.5    0.0     40.0    112.9   39.0    130.0
        110.0   179.5   164.8   297.4   271.1   131.5   56.0    17.9    223.7   703.5   391.0
        1083.5  693.6   883.6   313.4   827.7   924.1   1055.2  728.1   939.2   749.2   704.5
        538.5   270.5   230.3   158.5   246.6   32.5    79.5    18.3    0.0     338.1   28.6
        0.0     0.0     0.0     15.5    0.0     18.4    37.1    55.8    115.1   202.7   111.7
        145.2   162.0   93.9    111.3   340.0   179.8   313.7   439.0   326.5   835.6   794.4
        597.0   764.0   612.9   436.3   256.2   471.8   18.3    0.0     0.0     0.0     0.0
        0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
        0.0
2007    1       4       3       0       148     41.3    158.7   80.2    253.9   117.7   22.9
        56.5    45.2    85.9    100.4   158.8   157.5   108.4   50.8    154.1   269.1   107.5
        228.6   215.7   338.5   225.0   324.5   135.6   225.9   213.4   535.1   202.9   484.9
        426.5   304.2   147.5   169.9   104.4   94.6    23.1    61.8    36.8    0.0     18.4
        0.0     0.0     0.0     60.0    54.9    122.8   218.9   126.3   41.9    0.0     45.8
        84.3    83.7    42.6    241.4   181.6   211.3   162.3   233.2   143.5   286.8   219.9
        104.6   102.0   87.2    22.9    83.8    60.2    0.0     0.0     0.0     0.0     0.0
        0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
        0.0
2008    1       4       3       0       110     129.6   182.6   0.0     68.4    21.3    46.1
        373.7   197.6   192.4   170.1   40.4    28.8    39.0    64.7    175.7   347.6   589.8
        317.2   311.3   426.4   232.4   498.5   589.8   795.8   572.1   701.2   462.3   387.1
        435.2   563.2   356.6   306.4   204.5   20.1    0.0     20.6    24.9    0.0     28.7
        0.0     0.0     0.0     234.9   159.4   64.7    39.0    85.4    106.2   102.9   230.8
        62.9    25.3    0.0     18.5    40.2    115.7   204.1   169.0   148.8   242.1   128.0
        87.7    239.8   204.1   184.0   98.2    25.2    36.4    0.0     0.0     0.0     14.3
        0.0     30.7    0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
        0.0


14 # Number of Age Bins
1  2  3  4  5  6  7  8  9  10  11  12  13  14

1 # Number of Aging Error Matrices
0.5     1.5     2.5     3.5     4.5     5.5     6.5     7.5     8.5     9.5     10.5    11.5
        12.5    13.5    14.5    15.5    16.5    17.5    18.5    19.5    20.5
0.4     0.4     0.41    0.43    0.45    0.51    0.59    0.67    0.76    0.86    0.95    1.05
        1.14    1.24    1.33    1.43    1.53    1.63    1.73    1.83    1.93

2618  # Number of age comp observations using restricted length ranges ***
2   # Length bin refers to: 1=population length bin indices; 2=data length bin indices;
3= actual pop? data? lengths match bins?
0 #_combine males into females at or below this bin number
# Year  Seas    Fleet   Gender  Part
# Commerical 1554 lines
1980    1       1       1       0       1       5       5       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       6       6       3       0       1       0
        2       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
```

```
1980    1       1       1       0       1       7       7       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       8       8       8       0       1       6
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       9       9       8       0       2       1
        3       1       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       10      10      12      0       1       5
        4       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       11      11      15      0       0       9
        3       3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       12      12      15      0       1       6
        4       2       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       13      13      15      0       0       4
        6       4       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       14      14      23      0       0       7
        6       3       5       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       15      15      33      0       0       8
        13      8       4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       16      16      33      0       0       2
        11      11      8       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       17      17      29      0       0       0
        9       8       9       2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       18      18      25      0       0       0
        6       8       7       4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       19      19      30      0       0       0
        8       9       12      1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       20      20      21      0       0       0
        1       5       6       7       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       21      21      25      0       0       0
        0       8       9       7       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       22      22      66      0       0       0
        1       5       21      35      3       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       23      23      69      0       0       0
        0       5       25      31      8       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       24      24      69      0       0       0
        0       7       19      34      7       1       1       0       0       0       0
```

```
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       25      25      59      0       0       0
        0       3       24      24      8       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       26      26      53      0       0       0
        0       4       12      24      12      1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       27      27      44      0       0       0
        0       0       5       14      19      5       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       28      28      43      0       0       0
        0       0       2       14      22      5       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       29      29      66      0       0       0
        0       0       3       19      31      11      1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       30      30      55      0       0       0
        0       0       0       13      30      10      1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       31      31      46      0       0       0
        0       0       0       5       25      10      4       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       32      32      79      0       0       0
        0       0       0       4       28      32      9       3       3       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       33      33      80      0       0       0
        0       0       0       1       17      38      20      2       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       34      34      106     0       0       0
        1       0       0       0       15      64      19      6       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       35      35      102     0       0       0
        0       0       0       1       13      39      35      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       36      36      78      0       0       0
        0       0       0       0       5       24      35      13      1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       37      37      64.5    0       0       0
        0       0       0       0       0       13      25.5    14      9       1       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       38      38      49      0       0       0
        0       0       0       0       0       7       18      14      7       2       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       39      39      51      0       0       0
        0       0       0       0       0       8       11      8       13      5       6
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       40      40      31      0       0       0
        0       0       0       1       0       0       4       4       9       8       5
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       1       0       1       41      41      21      0       0       0
        0       0       0       0       0       0       0       4       5       7       5
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
```

```
1980    1       1       1       0       1       42      42      105     0       0       0
        0       0       0       0       0       0       4       3       8       20      70
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       6       6       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       1       0       0       0       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       7       7       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       2       1       0       0       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       8       8       9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       3       3       1       0       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       9       9       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       2       0       1       0       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       10      10      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       3       0       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       11      11      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       1       2       0       1       0       0       0       0
        0       0       0
1980    1       1       2       0       1       12      12      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       8       2       5       0       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       13      13      19      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       10      4       3       2       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       14      14      28      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       8       9       6       5       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       15      15      37      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       8       8       14      6       1       0       0       0       0
        0       0       0
1980    1       1       2       0       1       16      16      43      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       18      13      7       1       0       0       0       0
        0       0       0
1980    1       1       2       0       1       17      17      41      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       15      11      13      1       1       0       0       0
        0       0       0
1980    1       1       2       0       1       18      18      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       4       7       4       0       0       0       0       0
        0       0       0
1980    1       1       2       0       1       19      19      24      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       11      9       1       0       0       0       0
        0       0       0
1980    1       1       2       0       1       20      20      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       2       13      5       0       0       0       0
        0       0       0
1980    1       1       2       0       1       21      21      25      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       11      10      1       0       0       0
        0       0       0
1980    1       1       2       0       1       22      22      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       5       4       2       1       1       0       0
        0       0       0
1980    1       1       2       0       1       23      23      19      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       4       9       5       0       1       0       0
        0       0       0
1980    1       1       2       0       1       24      24      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       5       2       4       0       0
        0       0       0
1980    1       1       2       0       1       25      25      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       7       6       1       0       0
        0       0       0
1980    1       1       2       0       1       26      26      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       1       6       1       0       1
        0       0       0
1980    1       1       2       0       1       27      27      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       3       6       4       1       0
        0       0       0
1980    1       1       2       0       1       28      28      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       6       3       0       0
        0       0       0
1980    1       1       2       0       1       29      29      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       3       3       0       1
        0       0       0
1980    1       1       2       0       1       30      30      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       1       2
        0       0       0
1980    1       1       2       0       1       31      31      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
1980    1       1       2       0       1       33      33      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
1980    1       1       2       0       1       37      37      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0.5     0
        0       0       0
1980    1       1       2       0       1       38      38      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
1981    1       1       1       0       1       9       9       4       0       4       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       10      10      2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       11      11      7       0       5       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       12      12      11      0       3       7
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       13      13      12      0       1       10
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1981    1       1       1       0       1       14      14      19      0       1       14
        4       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       15      15      22      0       0       13
        9       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       16      16      40      0       0       19
        18      3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       17      17      52      0       0       22
        27      3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       18      18      33      0       0       7
        25      0       0       0       0       0       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       19      19      33      0       0       3
        17      8       5       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       20      20      32      0       0       0
        14      16      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       21      21      38      0       0       0
        19      15      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       22      22      53      0       0       0
        11      31      8       3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       23      23      29      0       0       1
        1       14      11      2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       24      24      19      0       0       0
        1       5       10      3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       25      25      38      0       0       0
        0       11      17      8       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       26      26      33      0       0       0
        0       12      7       12      2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       27      27      58      0       0       0
        1       5       22      18      11      1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       28      28      54      0       0       0
        0       0       15      26      10      3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       29      29      52      0       0       0
        0       1       14      24      11      2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       30      30      22      0       0       0
        0       0       2       8       9       2       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1       31      31      27      0       0       0
        0       0       4       7       13      3       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      32      32      37       0       0       0
        0       0       1       4      17      12       3       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      33      33      38       0       0       0
        0       0       0       4      13      16       4       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      34      34      40       0       0       0
        0       0       0       4      10      12      11       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      35      35      44       0       0       0
        0       0       0       0       7      17      16       3       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      36      36      61       0       0       0
        0       0       0       0       6      20      23      11       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      37      37      47       0       0       0
        0       0       0       0       1      14      19      10       2       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      38      38      43       0       0       0
        0       0       0       0       0      11      20       7       3       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      39      39      27       0       0       0
        0       0       0       0       0       2       9      10       1       4       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      40      40      12       0       0       0
        0       0       0       0       0       0       6       2       1       1       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      41      41      14       0       0       0
        0       0       0       0       0       0       3       5       1       1       4
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       1       0       1      42      42      28       0       0       0
        0       0       0       0       0       0       1       0       4       5      18
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1       6       6       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1       8       8       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       1       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1       9       9       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       1       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1      10      10       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       5       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1      11      11       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       5       0       0       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1      12      12       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       4       1       0       0       0       0       0       0       0
        0       0       0
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1981    1       1       2       0       1       13      13      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       7       6       0       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1       14      14      28      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       15      13      0       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1       15      15      48      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       15      31      1       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1       16      16      47      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       9       31      7       0       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1       17      17      42      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       20      18      1       0       0       0       0       0
        0       0       0
1981    1       1       2       0       1       18      18      34      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       9       19      5       1       0       0       0       0
        0       0       0
1981    1       1       2       0       1       19      19      35      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       9       13      11      2       0       0       0       0
        0       0       0
1981    1       1       2       0       1       20      20      27      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       11      11      3       0       0       0       0
        0       0       0
1981    1       1       2       0       1       21      21      27      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       4       4       15      4       0       0       0       0
        0       0       0
1981    1       1       2       0       1       22      22      31      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       5       19      5       0       0       0       0
        0       0       0
1981    1       1       2       0       1       23      23      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       4       12      4       1       0       0       0
        0       0       0
1981    1       1       2       0       1       24      24      18      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       6       7       4       0       0       0
        0       0       0
1981    1       1       2       0       1       25      25      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       6       8       3       0       0       0
        0       0       0
1981    1       1       2       0       1       26      26      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       5       4       1       2       0
        0       0       0
1981    1       1       2       0       1       27      27      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       2       2       3       2       1
        0       0       0
1981    1       1       2       0       1       28      28      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       0       2       2       3       0
        0       0       0
1981    1       1       2       0       1       29      29      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       3       2       2       0
        0       0       0
1981    1       1       2       0       1       30      30      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       1       0       2       0
        0       0       0
1981    1       1       2       0       1      31      31       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1981    1       1       2       0       1      32      32       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
1981    1       1       2       0       1      33      33       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
1981    1       1       2       0       1      35      35       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
1982    1       1       1       0       1      10      10       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      11      11       1       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      12      12       4       0       2       0
        1       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      13      13       5       0       2       1
        0       1       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      14      14      16       0       7       5
        1       1       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      15      15      15       0       1       7
        1       3       2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      16      16      16       0       0       4
        3       3       5       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      17      17      29       0       1       7
        9       6       5       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      18      18      25       0       2       6
        8       5       3       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      19      19      32       0       0       2
        7       4      15       3       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      20      20      22       0       0       2
        4       3       7       4       1       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      21      21      18       0       0       2
        5       4       6       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      22      22      17       0       0       0
        3       5       5       2       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1982    1       1       1       0       1       23      23      13      0       0       0
        2       5       4       1       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       24      24      19      0       0       0
        4       4       5       3       2       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       25      25      9       0       0       0
        1       1       5       1       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       26      26      11      0       0       0
        3       2       3       1       1       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       27      27      20      0       0       0
        2       4       6       2       5       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       28      28      17      0       0       0
        0       0       7       8       1       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       29      29      17      0       0       0
        0       5       6       5       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       30      30      27      0       0       0
        0       2       3       13      7       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       31      31      21      0       0       0
        0       2       7       6       5       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       32      32      22      0       0       0
        2       0       3       7       6       2       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       33      33      15      0       0       0
        0       1       2       2       4       4       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       34      34      9       0       0       0
        0       0       0       1       5       0       3       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       35      35      20      0       0       0
        0       2       1       3       2       4       4       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       36      36      17      0       0       0
        0       1       0       2       1       6       3       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       37      37      13      0       0       0
        0       0       0       0       1       2       4       4       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       38      38      20      0       0       0
        0       0       0       0       2       0       8       5       4       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       39      39      13      0       0       0
        0       0       0       0       0       1       1       6       1       3       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1       40      40      15      0       0       0
        0       0       0       1       2       1       3       5       2       1       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      41      41       6       0       0       0
        0       0       0       0       0       0       1       3       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       1       0       1      42      42      12       0       0       0
        0       0       0       0       0       0       0       1       1       1       9
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       2       0       1       9       9       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       2       0       1      10      10       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3       0       0       0       0       0       0       0       0       0
        0       0       0
1982    1       1       2       0       1      11      11       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       1       2       0       0       1       0       0       0       0
        0       0       0
1982    1       1       2       0       1      12      12       8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       4       0       2       0       0       0       0       0       0
        0       0       0
1982    1       1       2       0       1      13      13      16       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       3       7       3       0       0       1       0       0       0
        0       0       0
1982    1       1       2       0       1      14      14      10       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       7       0       0       0       0       0       0       0
        0       0       0
1982    1       1       2       0       1      15      15       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       1       1       0       0       0       0
        0       0       0
1982    1       1       2       0       1      16      16      16       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       1       6       5       2       0       1       0       0       0
        0       0       0
1982    1       1       2       0       1      17      17      18       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       4       8       1       3       0       0       0       0
        0       0       0
1982    1       1       2       0       1      18      18      17       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       4       4       4       2       1       1       0       0
        0       0       0
1982    1       1       2       0       1      19      19      13       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       6       4       0       1       0       0       0
        0       0       0
1982    1       1       2       0       1      20      20      15       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       8       4       1       0       0       0       0
        0       0       0
1982    1       1       2       0       1      21      21      14       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       4       4       4       0       0       0       0
        0       0       0
1982    1       1       2       0       1      22      22       9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       4       1       1       1       1       0
        0       0       0
1982    1       1       2       0       1      23      23       8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       2       4       0       0       1       0       0
        0       0       0
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1982    1       1       2       0       1       24      24      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       1       0       1       1       1       0
        0       0       0
1982    1       1       2       0       1       25      25      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
1982    1       1       2       0       1       26      26      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       2       0       0       0       0
        0       0       0
1982    1       1       2       0       1       27      27      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       1       0       0       0       0
        0       0       0
1982    1       1       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1982    1       1       2       0       1       32      32      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
1982    1       1       2       0       1       33      33      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
1982    1       1       2       0       1       37      37      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0
1983    1       1       1       0       1       8       8       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       11      11      2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       12      12      2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       13      13      1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       14      14      3       0       0       1
        2       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       15      15      6       0       0       2
        2       1       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       16      16      10      0       0       2
        6       1       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       17      17      13      0       0       5
        2       3       2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       18      18      16      0       0       6
        6       3       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       19      19      17      0       0       3
        8       4       1       0       1       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       20      20      21      0       0       1
        9       6       3       0       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       21      21      25      0       1       6
        7       6       4       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       22      22      22      0       1       2
        8       5       3       2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       23      23      28      0       0       1
        14      11      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       24      24      25      0       0       3
        5       11      5       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       25      25      28      0       1       2
        3       14      6       1       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       26      26      16      0       0       1
        3       7       2       2       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       27      27      22      0       0       1
        2       8       5       2       4       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       28      28      11      0       0       1
        1       4       0       3       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       29      29      10      0       0       0
        0       3       3       2       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       30      30      10      0       0       0
        0       2       7       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       31      31      10      0       0       0
        0       1       1       3       3       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       32      32      9       0       0       0
        0       1       2       2       3       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       33      33      7       0       0       0
        0       0       1       3       2       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       34      34      10      0       0       1
        0       0       0       1       1       6       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       35      35      7       0       0       0
        0       0       0       0       3       2       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       36      36      2       0       0       0
        0       1       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1983    1       1       1       0       1       37      37      2       0       0       0
        0       0       0       0       0       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       38      38      11      0       0       0
        0       0       0       0       0       1       2       3       3       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       39      39      9       0       0       0
        0       0       0       0       0       0       2       4       2       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       40      40      10      0       0       0
        0       0       0       0       1       0       0       3       5       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       41      41      7       0       0       0
        0       0       0       1       0       0       0       1       4       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       1       0       1       42      42      25      0       0       0
        0       0       0       0       0       0       0       1       1       4       19
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1       11      11      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1       12      12      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1       13      13      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       0       0       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1       14      14      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       1       1       1       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1       15      15      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       1       0       1       0       0       0       0
        0       0       0
1983    1       1       2       0       1       16      16      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       0       2       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1       17      17      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       2       4       0       1       0       0       0       0
        0       0       0
1983    1       1       2       0       1       18      18      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       3       4       3       1       0       0       0       0
        0       0       0
1983    1       1       2       0       1       19      19      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       6       3       5       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1       20      20      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       10      6       3       1       1       0       0       0
        0       0       0
1983    1       1       2       0       1       21      21      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       6       4       1       1       0       0       0
        0       0       0
1983    1       1       2       0       1       22      22      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       1       1       6       0       1       0       0       0       0
        0       0       0
1983    1       1       2       0       1      23      23       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       2       0       1       1       0       0       0
        0       0       0
1983    1       1       2       0       1      24      24       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       2       1       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1      25      25       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       0       2       0       0       0       0       0       0
        0       0       0
1983    1       1       2       0       1      27      27       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       1       1       1       0
        0       0       0
1983    1       1       2       0       1      29      29       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0
1983    1       1       2       0       1      30      30       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1984    1       1       1       0       1      11      11       1       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      12      12       1       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      13      13       2       0       0       0
        2       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      14      14       6       0       0       6
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      15      15       3       0       0       1
        0       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      16      16       8       0       0       3
        3       1       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      17      17       3       0       0       1
        0       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      18      18       6       0       0       1
        2       1       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      19      19      15       0       0       2
        4       7       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      20      20       6       0       0       0
        3       2       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      21      21      11       0       0       1
        7       3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1984    1       1       1       0       1       22      22      15      0       0       0
        5       8       1       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       23      23      37      0       0       1
        11      18      3       3       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       24      24      21      0       0       0
        4       9       5       2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       25      25      17      0       0       1
        1       8       6       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       26      26      23      0       0       0
        0       10      8       5       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       27      27      26      0       0       0
        2       10      12      2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       28      28      24      0       0       0
        0       5       11      7       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       29      29      27      0       0       0
        0       4       14      6       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       30      30      16      0       0       1
        0       1       5       5       3       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       31      31      13      0       0       0
        0       0       3       6       3       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       32      32      9       0       0       0
        0       1       1       4       2       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       33      33      6       0       0       0
        0       1       0       1       3       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       34      34      9       0       0       0
        0       0       1       2       2       3       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       35      35      9       0       0       0
        0       0       0       1       7       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       36      36      5       0       0       0
        0       0       0       2       1       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       37      37      3       0       0       0
        0       0       0       0       0       1       0       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       38      38      8       0       0       0
        0       0       0       0       0       2       0       1       3       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1       39      39      4       0       0       0
        0       0       0       0       1       0       1       0       2       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      40      40       1       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      41      41       2       0       0       0
        0       0       0       0       0       0       1       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       1       0       1      42      42      16       0       0       0
        0       0       0       0       0       0       0       1       4       7       4
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1984    1       1       2       0       1      13      13       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       1       0       0       0       0       0       0
        0       0       0
1984    1       1       2       0       1      15      15       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       0       0       1       0       0       0       0
        0       0       0
1984    1       1       2       0       1      16      16       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0
1984    1       1       2       0       1      17      17       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       0       0       0       0       0       0       0
        0       0       0
1984    1       1       2       0       1      18      18       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       2       1       0       0       0       0       0
        0       0       0
1984    1       1       2       0       1      19      19       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       1       3       0       0       0       0       0
        0       0       0
1984    1       1       2       0       1      20      20       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       1       0       2       0       0       0       0
        0       0       0
1984    1       1       2       0       1      21      21       7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       2       3       0       0       0       0       0
        0       0       0
1984    1       1       2       0       1      22      22      11       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       6       2       0       0       0       0
        0       0       0
1984    1       1       2       0       1      23      23      11       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       2       7       1       0       0       0       0
        0       0       0
1984    1       1       2       0       1      24      24       8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       5       1       1       0       0       0
        0       0       0
1984    1       1       2       0       1      25      25       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       2       2       1       0       0       0
        0       0       0
1984    1       1       2       0       1      26      26       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       3       2       1       0       0
        0       0       0
1984    1       1       2       0       1      27      27       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       0       1       0       0
        0       0       0
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1984    1       1       2       0       1       28      28      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       1
        0       0       0
1984    1       1       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1985    1       1       1       0       1       10      10      1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       12      12      1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       13      13      2       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       14      14      17      0       2       12
        2       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       15      15      29      0       2       22
        3       1       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       16      16      30      0       0       25
        3       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       17      17      24      0       1       15
        6       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       18      18      16      0       3       6
        3       3       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       19      19      4       0       0       2
        1       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       20      20      8       0       0       1
        2       1       2       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       21      21      4       0       0       0
        0       3       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       22      22      3       0       0       0
        0       3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       23      23      9       0       0       0
        2       3       3       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       24      24      14      0       1       0
        1       6       5       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       25      25      21      0       0       1
        1       6       8       3       1       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       26      26      24      0       0       0
        0       7       12      3       2       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       27      27      22      0       1       0
        0       3       7       7       2       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       28      28      28      0       1       0
        1       0       5       15      3       1       0       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       29      29      22      0       0       0
        0       2       3       11      4       1       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       30      30      21      0       0       1
        1       1       3       4       6       3       0       0       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       31      31      25      0       0       0
        0       2       2       9       9       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       32      32      10      0       0       0
        1       0       0       4       3       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       33      33      11      0       0       0
        0       1       1       2       1       1       4       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       34      34      7       0       0       0
        0       1       0       0       3       0       1       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       35      35      13      0       0       0
        1       1       1       0       2       3       4       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       36      36      11      0       0       0
        0       1       0       2       4       0       3       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       37      37      8       0       0       0
        1       0       0       0       2       0       2       1       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       38      38      5       0       0       0
        0       2       0       0       1       0       0       0       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       39      39      4       0       0       0
        0       1       0       0       1       0       1       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       41      41      3       0       0       0
        0       0       0       0       0       0       1       0       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       1       0       1       42      42      4       0       0       0
        0       0       2       0       1       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       8       8       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       11      11      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0
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1985    1       1       2       0       1       13      13      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       1       0       1       0       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       14      14      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       2       1       0       0       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       15      15      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       2       2       0       0       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       16      16      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       3       0       1       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       17      17      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       1       2       1       1       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       18      18      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       2       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       19      19      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3       0       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       20      20      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
1985    1       1       2       0       1       21      21      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       1       1       1       0       0
        0       0       0
1985    1       1       2       0       1       22      22      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       0       1       1       0       0       0
        0       0       0
1985    1       1       2       0       1       23      23      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       1       0       1       0       0
        0       0       0
1985    1       1       2       0       1       24      24      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       1       0       0       0       0
        0       0       0
1985    1       1       2       0       1       25      25      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1985    1       1       2       0       1       26      26      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       0       2       1       0       0       0
        0       0       0
1986    1       1       1       0       1       6       6       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       12      12      2       0       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       13      13      2       0       1       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       14      14      5       0       4       0
        1       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       15      15      23      0       0       16
        7       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       16      16      31      0       2       19
        7       2       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       17      17      42      0       2       16
        23      0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       18      18      47      0       0       19
        21      5       1       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       19      19      55      0       0       12
        31      10      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       20      20      50      0       0       2
        29      18      1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       21      21      39      0       0       2
        24      6       6       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       22      22      46      0       0       1
        22      17      4       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       23      23      27      0       0       1
        8       13      3       1       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       24      24      25      0       0       0
        3       11      5       5       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       25      25      30      0       0       0
        2       12      8       6       0       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       26      26      28      0       0       0
        2       4       13      7       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       27      27      45      0       0       0
        0       5       23      11      6       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       28      28      37      0       0       0
        0       8       15      6       4       2       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       29      29      55      0       0       0
        1       3       21      14      10      3       2       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       30      30      59      0       0       0
        1       3       14      24      9       6       0       0       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       31      31      40      0       0       0
        0       2       2       10      19      4       1       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1986    1       1       1       0       1       32      32      45      0       0       0
        0       0       5       13      16      7       2       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       33      33      31      0       0       0
        0       0       1       7       12      5       5       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       34      34      18      0       0       0
        0       0       1       2       6       3       3       2       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       35      35      22      0       0       0
        0       0       0       1       8       6       6       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       36      36      14      0       0       0
        0       0       0       0       2       4       3       2       3       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       37      37      22      0       0       0
        0       0       0       0       1       3       6       5       5       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       38      38      5       0       0       0
        0       0       0       0       1       1       0       0       1       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       39      39      8       0       0       0
        0       0       0       0       0       0       0       2       3       2       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       40      40      8       0       0       0
        0       0       0       0       0       0       1       1       2       1       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       41      41      4       0       0       0
        0       0       0       0       0       0       0       0       0       1       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       1       0       1       42      42      11      0       0       0
        0       0       0       0       0       0       1       0       0       1       9
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       2       0       1       8       8       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       2       0       1       11      11      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
1986    1       1       2       0       1       13      13      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       1       3       0       0       0       0       0       0       0
        0       0       0
1986    1       1       2       0       1       14      14      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       2       0       0       0       0       0       0       0
        0       0       0
1986    1       1       2       0       1       15      15      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       7       0       0       0       0       0       0       0
        0       0       0
1986    1       1       2       0       1       16      16      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       5       5       1       0       0       0       0       0       0
        0       0       0
1986    1       1       2       0       1       17      17      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       4       7       5       0       0       0       0       0       0
        0       0       0
1986    1       1       2       0       1       18      18      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       9       6       0       1       0       0       0       0
        0       0       0
1986    1       1       2       0       1       19      19      19      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       9       4       4       0       1       0       0       0
        0       0       0
1986    1       1       2       0       1       20      20      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       6       5       3       0       0       1       0       0
        0       0       0
1986    1       1       2       0       1       21      21      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       2       4       1       0       0       0       0
        0       0       0
1986    1       1       2       0       1       22      22      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       4       1       1       2       1       0       0
        0       0       0
1986    1       1       2       0       1       23      23      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       1       0       0       0
        0       0       0
1986    1       1       2       0       1       24      24      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       4       0       0       1       0       1
        0       0       0
1986    1       1       2       0       1       25      25      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       2       0       0       0
        0       0       0
1986    1       1       2       0       1       26      26      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       3       0       0       0
        0       0       0
1986    1       1       2       0       1       27      27      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       2       1       0       0
        1       0       0
1986    1       1       2       0       1       30      30      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
1987    1       1       1       0       1       9       9       2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       10      10      1       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       11      11      2.5     1       1       0
        0       0       0.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       12      12      5       0       2       1.5
        0       1.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       13      13      8       0       2       3.5
        1.5     0.5     0.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       14      14      7       0       2       0
        1.5     2.5     0.5     0       0       0.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1987    1       1       1       0       1       15      15      11      0       2       3
        1.5     3       1.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       16      16      9       0       0       5
        2       1.5     0       0       0       0.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       17      17      14.5    0       2       2
        5       1.5     3.5     0.5     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       18      18      9       0       0       2
        4       1.5     1       0.5     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       19      19      26      0       1       4
        15      2       1       1       1.5     0.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       20      20      26      0       0       7
        6       9       2       1.5     0       0.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       21      21      31.5    0       0       5
        10      14      1       0       0       1.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       22      22      46      0       0       4
        14      15      6       4       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       23      23      43      0       0       6
        5       23      3       6       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       24      24      53      0       0       1
        11      24      10      3       1       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       25      25      51      0       0       0
        4       27      15      4       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       26      26      62      0       0       0
        4       23      28      6       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       27      27      39      0       0       0
        0       9       17      4       4       3       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       28      28      33      0       0       0
        1       6       8       13      3       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       29      29      56      0       0       0
        0       7       12      19      14      2       1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       30      30      56      0       0       0
        0       3       6       19      16      9       0       1       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       31      31      46      0       0       0
        0       2       8       11      19      3       2       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       32      32      50      0       0       0
        0       1       6       12      15      6       6       1       2       0       1
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       33      33      43      0       0       0
        0       0       2       11      15      13      2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       34      34      25      0       0       0
        0       0       1       2       8       10      3       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       35      35      28      0       0       0
        0       1       0       2       7       10      8       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       36      36      22      0       0       0
        0       0       0       3       6       7       2       2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       37      37      9       0       0       0
        0       0       0       0       0       3       2       1       2       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       38      38      5       0       0       0
        0       0       0       0       1       0       1       2       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       39      39      7       0       0       0
        0       0       0       0       1       1       2       1       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       40      40      4       0       0       0
        0       0       0       0       0       0       1       2       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       41      41      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       1       0       1       42      42      12      0       0       0
        0       0       0       0       1       0       0       0       0       1       10
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       2       0       1       9       9       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1987    1       1       2       0       1       10      10      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       1       0       0       0       0       0       0       0
        0       0       0
1987    1       1       2       0       1       11      11      2.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       0       0       0.5     0       0       0       0       0
        0       0       0
1987    1       1       2       0       1       12      12      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       4       2.5     0       1.5     0       0       0       0       0       0
        0       0       0
1987    1       1       2       0       1       13      13      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       6       4.5     1.5     0.5     1.5     0       0       0       0       0
        0       0       0
1987    1       1       2       0       1       14      14      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       5       2.5     2.5     1.5     1       0       0.5     0       0
        0       0       0
1987    1       1       2       0       1       15      15      18      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       9       3.5     3       0.5     0       1       1       0       0
        0       0       0
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1987    1       1       2       0       1       16      16      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       3       6.5     1       0       1       0.5     0       0
        0       0       0
1987    1       1       2       0       1       17      17      22.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       7       7.5     2.5     2.5     0       1       0       0
        0       0       0
1987    1       1       2       0       1       18      18      24      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       5       13.5    0       1.5     0       1       0       0
        0       0       0
1987    1       1       2       0       1       19      19      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       4       6       3       2       0.5     0.5     0       0
        0       0       0
1987    1       1       2       0       1       20      20      24      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       3       9       4       2.5     1       1.5     0       1
        0       0       0
1987    1       1       2       0       1       21      21      25.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       3       9       6       4       1       0.5     0       1
        0       0       0
1987    1       1       2       0       1       22      22      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       5       2       1       2       2       0       0
        0       0       0
1987    1       1       2       0       1       23      23      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       3       3       0       1       0       0
        0       0       0
1987    1       1       2       0       1       24      24      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       3       1       1       0       0       0
        0       0       0
1987    1       1       2       0       1       25      25      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       2       1       0
        0       0       0
1987    1       1       2       0       1       26      26      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       2       0       1       0
        0       0       0
1987    1       1       2       0       1       27      27      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       3       1       0       0       0
        0       0       0
1987    1       1       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1
1987    1       1       2       0       1       29      29      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       2       0
        0       0       0
1988    1       1       1       0       1       9       9       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       10      10      1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       11      11      1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       12      12      11      0       6       5
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       13      13      23      0       7       10
        5       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       14      14      43      0       11      24
        8       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       15      15      49      0       6       30
        11      0       1       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       16      16      54      0       8       38
        6       1       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       17      17      49      0       2       29
        13      3       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       18      18      21      0       0       10
        11      0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       19      19      14      0       0       7
        5       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       20      20      7       0       0       1
        4       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       21      21      13      0       0       1
        6       5       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       22      22      14      0       0       0
        10      3       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       23      23      21      0       1       2
        7       8       2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       24      24      17      0       0       1
        3       8       3       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       25      25      27      0       0       0
        3       14      7       3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       26      26      25      0       0       1
        3       13      7       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       27      27      36      0       1       1
        3       14      13      2       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       28      28      27      0       0       0
        1       7       9       5       3       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       29      29      29      0       0       0
        1       8       13      5       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1988    1       1       1       0       1       30      30      18      0       0       0
        0       3       3       7       3       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       31      31      10      0       0       0
        0       0       1       6       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       32      32      24      0       0       1
        0       0       1       7       7       7       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       33      33      25      0       0       0
        0       0       2       4       9       9       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       34      34      22      0       0       0
        1       1       0       2       7       4       5       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       35      35      17      0       1       0
        1       0       0       2       7       4       0       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       36      36      18      0       0       0
        0       0       1       2       7       5       2       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       37      37      6       0       0       0
        0       0       0       0       0       2       2       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       38      38      8       0       0       0
        0       1       0       0       0       1       2       1       2       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       39      39      6       0       0       0
        0       0       1       0       0       0       2       1       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       41      41      2       0       0       0
        0       0       0       0       0       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       1       0       1       42      42      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       6       6       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       8       8       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       11      11      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3       1       0       0       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       12      12      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       4       3       2       0       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       13      13      36      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       10      19      6       0       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       14      14      57      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       14      34      7       1       0       0       1       0       0       0
        0       0       0
1988    1       1       2       0       1       15      15      64      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       11      29      20      4       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       16      16      37      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       19      12      4       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       17      17      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       6       5       2       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       18      18      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       10      0       0       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       19      19      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       8       2       1       0       0       0       0       0
        0       0       0
1988    1       1       2       0       1       20      20      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       5       1       0       1       0       0       1       0
        0       0       0
1988    1       1       2       0       1       21      21      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       5       4       1       0       0       0       0
        0       0       0
1988    1       1       2       0       1       22      22      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       8       1       0       1       0       0       0
        0       0       0
1988    1       1       2       0       1       23      23      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       6       0       1       1       0       0
        0       0       0
1988    1       1       2       0       1       24      24      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       0       2       0       1       0       0
        0       0       0
1988    1       1       2       0       1       25      25      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       2       1       0       1       0
        0       0       0
1988    1       1       2       0       1       26      26      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       1       0       0       1       0
        0       0       0
1988    1       1       2       0       1       27      27      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
1988    1       1       2       0       1       28      28      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       2       0       0       0
        1       0       1
1988    1       1       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0
1988    1       1       2       0       1       30      30      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       1
        0       0       0
1988    1       1       2       0       1       31      31      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       1
        0       0       0
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1989    1       1       1       0       1       9       9       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       10      10      4       0       4       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       11      11      1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       12      12      5       0       2       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       13      13      4       0       2       1
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       14      14      4       0       3       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       15      15      12      0       3       7
        1       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       16      16      23      1       2       9
        9       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       17      17      59      0       1       31
        22      4       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       18      18      61      0       0       24
        28      7       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       19      19      92      0       1       26
        52      11      1       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       20      20      81.5    0       0       21
        43      11.5    4       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       21      21      69      0       1       7
        45      13      2       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       22      22      42      0       0       2
        29      8       3       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       23      23      28      0       0       2
        15      8       3       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       24      24      34      0       0       0
        14      15      5       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       25      25      20      0       0       0
        2       12      5       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       26      26      34      0       0       1
        4       9       10      7       2       0       1       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       27      27      37      0       0       0
        1       18      11      4       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       28      28      46      0       0       0
        3       15      12      9       5       1       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       29      29      20.5    0       0       0
        0       1       9.5     7       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       30      30      15      0       0       0
        0       1       6       4       2       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       31      31      22      0       0       0
        0       1       6       9       4       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       32      32      19      0       0       0
        0       0       5       5       6       1       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       33      33      14      0       0       0
        0       0       1       4       2       6       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       34      34      14      0       0       0
        0       1       1       1       3       6       1       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       35      35      17      0       0       0
        0       0       3       2       5       4       3       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       36      36      10      0       0       0
        0       1       0       0       0       3       4       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       37      37      12      0       0       0
        0       0       0       0       1       3       4       3       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       38      38      9       0       0       0
        0       0       0       0       0       1       3       3       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       39      39      10      0       0       0
        0       0       0       0       0       2       3       4       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       40      40      7       0       0       0
        0       0       0       0       1       1       1       1       1       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       41      41      2       0       0       0
        0       0       0       0       0       0       1       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       1       0       1       42      42      14      0       0       0
        0       0       0       0       0       1       1       4       2       2       4
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       10      10      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
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1989    1       1       2       0       1       12      12      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       2       0       0       0       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       13      13      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       2       1       0       0       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       14      14      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       2       2       1       0       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       15      15      25      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       14      5       0       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       16      16      46      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       14      23      7       2       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       17      17      59      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       5       19      29      5       1       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       18      18      61      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3       25      23      10      0       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       19      19      47      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       18      19      5       4       0       1       0       0       0
        0       0       0
1989    1       1       2       0       1       20      20      33.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       12      13      5.5     3       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       21      21      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       3       3       1       1       0       0       0       0
        0       0       0
1989    1       1       2       0       1       22      22      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       2       2       2       0       1       0       0
        0       0       0
1989    1       1       2       0       1       23      23      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       2       2       1       0       0       0       0
        0       0       0
1989    1       1       2       0       1       24      24      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       2       1       1       0       0       0       0
        0       0       0
1989    1       1       2       0       1       25      25      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       1       0       1       0       0       0
        0       0       0
1989    1       1       2       0       1       26      26      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       2       1       2       0       0
        0       0       0
1989    1       1       2       0       1       27      27      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       2       0
1989    1       1       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1       29      29      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0     0.5       0       0       0       0       0
        0       0       0
1989    1       1       2       0       1      30      30       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
1989    1       1       2       0       1      31      31       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
1989    1       1       2       0       1      37      37       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
1990    1       1       1       0       1       6       6       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       9       9       6       3       3       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      10      10       5       0       5       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      11      11       6       0       6       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      12      12       6       0       3       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      13      13       8       0       4       4
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      14      14      13       0       6       4
        3       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      15      15       9       0       1       5
        2       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      16      16      14       0       3       8
        3       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      17      17      10       0       1       4
        5       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      18      18      12       0       0       4
        7       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      19      19      36       0       0      10
       21       4       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      20      20      46       0       0       8
       31       6       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      21      21      56       0       0       7
       29      16       3       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1990    1       1       1       0       1       22      22      81      0       0       4
        42      26      7       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       23      23      83      0       0       1
        28      36      13      4       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       24      24      66      0       0       1
        27      30      5       3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       25      25      48      0       0       1
        12      26      5       2       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       26      26      29      0       0       0
        6       16      6       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       27      27      32      0       0       0
        3       9       13      4       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       28      28      23      0       0       0
        0       4       7       7       3       0       0       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       29      29      27      0       0       0
        1       4       9       8       3       0       1       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       30      30      26      0       0       0
        0       1       6       15      4       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       31      31      30      0       0       0
        1       1       8       6       9       4       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       32      32      25      0       0       1
        0       0       3       8       6       4       3       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       33      33      13      0       0       0
        0       0       0       2       5       4       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       34      34      15      0       0       0
        0       0       1       0       3       4       4       2       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       35      35      13      0       0       0
        0       0       0       1       4       1       2       3       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       36      36      15      0       0       0
        0       0       0       0       3       3       4       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       37      37      15      0       0       0
        0       0       0       0       1       2       4       4       1       3       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       38      38      14      0       0       0
        0       1       0       0       0       0       5       5       2       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1       39      39      5       0       0       0
        0       0       0       0       0       0       3       1       1       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      40      40       4       0       0       0
        0       0       0       0       0       0       0       0       2       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      41      41       2       0       0       0
        0       0       0       0       0       0       1       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       1       0       1      42      42       4       0       0       0
        0       0       0       0       0       0       0       0       1       0       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1       8       8       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1       9       9       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      10      10       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       2       0       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      11      11       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       4       1       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      12      12       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       5       1       0       0       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      14      14      10       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       7       2       0       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      15      15      13       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       7       2       2       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      16      16      22       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       8       9       4       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      17      17      27       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       7       7      11       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      18      18      28       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       7       9      10       2       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1      19      19      49       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       8      21      15       4       1       0       0       0       0
        0       0       0
1990    1       1       2       0       1      20      20      42       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2      18      11       7       4       0       0       0       0
        0       0       0
1990    1       1       2       0       1      21      21      34       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       5      10       9       8       2       0       0       0       0
        0       0       0
1990    1       1       2       0       1      22      22      14       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       8       2       2       1       0       0       0
        0       0       0
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1990    1       1       2       0       1       23      23      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       0       6       2       0       0       0
        0       0       0
1990    1       1       2       0       1       24      24      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       4       1       0       2       0       0
        0       0       0
1990    1       1       2       0       1       25      25      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       3       3       0       2       0       0
        0       0       0
1990    1       1       2       0       1       26      26      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       4       0       0       0       0
        0       0       0
1990    1       1       2       0       1       27      27      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0
1990    1       1       2       0       1       28      28      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       1
        0       0       0
1990    1       1       2       0       1       31      31      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       1       0       0
        0       0       0
1990    1       1       2       0       1       33      33      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
1991    1       1       1       0       1       4       4       0.5     0       0.5     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       5       5       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       7       7       5       0       4       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       8       8       5       0       5       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       9       9       13      2       9       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       10      10      11      0       7       3.5
        0.5     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       11      11      17      1       13      2
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       12      12      23.5    0       18      2.5
        2       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       13      13      19      0       6       10
        2       0.5     0.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       14      14      24.5    0       5       15
        3       0       0.5     0       0       0       0       1       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       15      15      28.5    0       4       16
        5       2       0.5     1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       16      16      33.5    0       0       19
        12      0       0       1       0       1.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       17      17      37      0       0       19
        11      3       3       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       18      18      50      0       2       13
        15      16      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       19      19      34      0       1       5
        13      7       4       3       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       20      20      40.5    0       0       5
        15      10.5    10      0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       21      21      28      0       0       2
        7       11      5       3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       22      22      29      0       0       0
        7       11      3       6       1       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       23      23      44      0       0       1
        8       17      9       4       1       2       0       0       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       24      24      79      0       0       2
        8       29      26      8       3       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       25      25      67      0       0       1
        11      27      21      4       2       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       26      26      90.5    0       0       1
        5       39      28.5    7       7       1       1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       27      27      49      0       0       0
        1       13      17      14      1       1       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       28      28      28      0       0       0
        0       6       12      5       4       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       29      29      22.5    0       0       0
        3       5       5       4       2       0       1.5     0       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       30      30      14      0       0       0
        1       2       3       2       2       0       0       1       1       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       31      31      22      0       0       0
        0       2       3       10      2       4       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1991    1       1       1       0       1       32      32      43      0       0       0
        0       2       4       10      13      7       2       3       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       33      33      24      0       0       0
        0       2       2       3       3       6       5       1       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       34      34      20      0       0       0
        0       0       0       3       6       6       2       1       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       35      35      14      0       0       0
        0       0       0       1       5       3       4       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       36      36      12      0       0       0
        1       0       0       1       3       2       2       1       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       37      37      7       0       0       0
        0       0       0       1       0       1       5       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       38      38      4       0       0       0
        1       0       0       0       0       0       1       0       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       39      39      5       0       0       0
        0       0       0       0       0       0       2       1       0       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       40      40      2       0       0       0
        0       0       0       0       0       0       0       0       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       41      41      5       0       0       0
        0       0       0       0       0       0       0       1       2       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       1       0       1       42      42      6       0       0       0
        0       0       0       0       0       0       0       0       1       2       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       4       4       1.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0.5     0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       6       6       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       7       7       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       1       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       8       8       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3       2       1       0       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       9       9       9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       7       1       1       0       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       10      10      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       7       0.5     0.5     0       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       11      11      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        1       5       2       0       0       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       12      12      12.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       4       6.5     0       1       0       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       13      13      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       5       4       1       1.5     0.5     0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       14      14      8.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       6       1       0       0.5     0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       15      15      12.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       9       3       0       0.5     0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       16      16      7.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       3       0       1       0       0       0.5     0       0
        0       0       0
1991    1       1       2       0       1       17      17      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       4       1       3       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       18      18      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       4       2       1       1       0       0       0       0
        0       0       0
1991    1       1       2       0       1       19      19      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       5       6       5       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       20      20      24.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       6       10.5    3       3       0       0       0       0
        0       0       0
1991    1       1       2       0       1       21      21      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       4       4       4       0       0       0       0       0
        0       0       0
1991    1       1       2       0       1       22      22      27      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       3       10      11      2       0       0       0       0
        0       0       0
1991    1       1       2       0       1       23      23      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3       5       1       1       0       0       0
        0       0       0
1991    1       1       2       0       1       24      24      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3       4       1       0       2       0       0
        0       0       0
1991    1       1       2       0       1       25      25      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       1       0       3       1       0
        0       0       0
1991    1       1       2       0       1       26      26      9.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       1       3.5     2       1       0       0       1
        0       0       0
1991    1       1       2       0       1       27      27      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       3       1       1       1       0       0
        0       0       0
1991    1       1       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
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1991    1       1       2       0       1       29      29      1.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0.5     0
        0       0       0
1992    1       1       1       0       1       1       1       2       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       2       2       4       4       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       3       3       6       6       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       4       4       4       2       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       5       5       7       1       6       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       6       6       13.5    2       11.5    0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       7       7       35      2       33      0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       8       8       59.5    4       49      6
        0.5     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       9       9       86      3       56.5    25
        1.5     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       10      10      96.5    1       54      40.5
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       11      11      71      2       34      32.5
        1       0.5     0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       12      12      67      0       28      33
        5       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       13      13      82.5    1       27      37.5
        15      2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       14      14      83      0       10      43
        30      0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       15      15      71.5    0       1       30.5
        34      5       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       16      16      91      0       3       41
        33      12      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       17      17      86      0       3       32
        41      6       3       1       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       18      18      68.5    0       2       16
        36.5    9       2       1       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       19      19      58      0       0       9
        27      13      9       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       20      20      56      0       0       5
        20      19      9       2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       21      21      45      0       0       1
        12      14      15      2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       22      22      60      0       0       3
        17      16      17      5       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       23      23      45      0       0       0
        8       17      15      4       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       24      24      33      0       0       0
        2       10      11      10      0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       25      25      24      0       0       0
        2       7       5       7       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       26      26      50      0       0       0
        2       15      17      8       6       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       27      27      61      0       0       0
        1       4       15      25      14      2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       28      28      84      0       0       0
        3       5       25      34      12      5       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       29      29      69      0       0       0
        1       7       18      21      17      3       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       30      30      50      0       0       0
        0       2       8       26      8       4       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       31      31      36      0       0       0
        0       2       7       11      6       10      0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       32      32      27      0       0       0
        0       3       1       3       7       6       3       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       33      33      25      0       0       0
        0       0       0       3       6       3       7       2       2       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       34      34      17      0       0       0
        0       0       0       1       2       9       2       0       2       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1992    1       1       1       0       1       35      35      27      0       0       1
        0       0       0       0       3       7       5       1       4       4       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       36      36      21      0       0       0
        0       0       0       0       0       3       4       4       3       6       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       37      37      18      0       0       0
        0       0       0       0       1       1       4       3       2       1       6
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       38      38      20      0       0       0
        0       0       0       0       0       0       0       5       2       2       11
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       39      39      17      0       0       0
        0       0       0       0       0       1       0       3       7       2       4
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       40      40      8       0       0       0
        0       0       0       0       0       0       2       0       2       1       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       41      41      6       0       0       0
        0       0       0       0       0       0       0       1       3       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       1       0       1       42      42      13      0       0       0
        0       0       0       0       0       0       0       0       2       1       10
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       1       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       2       2       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        3       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       3       3       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        5       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       4       4       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        2       0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       5       5       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        3       2       1       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       6       6       18.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        3       15.5    0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       7       7       28      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       28      0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       8       8       45.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        2       42      1       0.5     0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       9       9       58      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        2       44.5    10      1.5     0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       10      10      36.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        3       19      14.5    0       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       11      11      29      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       12      14.5    2       0.5     0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       12      12      44      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       13      26      5       0       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       13      13      33.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       8       18.5    5       1       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       14      14      53      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       11      25      15      2       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       15      15      43.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       24.5    15      4       0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       16      16      42      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       11      19      12      0       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       17      17      30      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       11      13      5       1       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       18      18      33.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       4.5     13      7       2       1       0       0       0
        0       0       0
1992    1       1       2       0       1       19      19      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       4       8       7       0       0       0       0       0
        0       0       0
1992    1       1       2       0       1       20      20      19      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       4       3       5       5       2       0       0       0
        0       0       0
1992    1       1       2       0       1       21      21      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       3       5       2       3       0       0       0       0
        0       0       0
1992    1       1       2       0       1       22      22      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       6       5       0       3       0       0       0
        0       0       0
1992    1       1       2       0       1       23      23      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       5       5       3       1       0       0
        0       0       0
1992    1       1       2       0       1       24      24      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       4       1       1       1       0       0
        0       0       0
1992    1       1       2       0       1       25      25      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       3       2       0       1
        0       0       1
1992    1       1       2       0       1       26      26      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       1       1       1       0
        0       0       0
1992    1       1       2       0       1       27      27      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       1       0
        1       0       0
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1992    1       1       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1993    1       1       1       0       1       3       3       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       4       4       4       0       4       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       5       5       9       1       8       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       6       6       21      3       17      1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       7       7       50      4       37      9
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       8       8       58      1       35      21
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       9       9       87      0       41      43
        3       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       10      10      111.5   2       35      56.5
        15      3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       11      11      118     4       35      62.5
        13.5    3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       12      12      102     2       40      34.5
        18.5    6       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       13      13      143     3       28      48
        44      16      3       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       14      14      144     3       14      58
        56      11      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       15      15      131.5   0       13      51
        48      17.5    2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       16      16      113.5   0       5       56
        26      17.5    7       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       17      17      93      0       3       39
        20      23      8       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       18      18      74      0       2       28
        15      19      9       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       19      19      57      1       3       17
        15      12      8       0       1       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       20      20      67      0       2       10
        25      14      13      3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       21      21      58      1       1       6
        28      10      7       5       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       22      22      52      0       0       1
        16      16      9       7       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       23      23      35      2       0       1
        10      10      8       2       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       24      24      37      0       0       0
        7       11      9       8       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       25      25      36      0       0       0
        4       14      7       9       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       26      26      35      0       0       0
        1       13      8       10      2       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       27      27      43.5    0       0       0
        1       8       10      14      10      0       0.5     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       28      28      28      0       0       0
        0       8       9       1       8       1       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       29      29      24      0       0       0
        0       1       3       12      3       4       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       30      30      43      0       0       1
        0       1       6       14      13      7       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       31      31      42      0       0       0
        0       1       6       16      11      6       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       32      32      35      0       0       0
        0       0       1       13      14      4       1       0       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       33      33      25      0       0       0
        0       0       2       8       6       6       3       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       34      34      21      0       0       0
        0       0       0       8       2       5       3       0       2       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       35      35      8       0       0       0
        0       0       0       0       0       3       2       1       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       36      36      8       0       0       0
        0       0       0       1       1       0       4       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1993    1       1       1       0       1       37      37      15      0       0       0
        0       0       0       0       0       4       8       1       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       38      38      11      0       0       0
        0       0       0       0       0       1       5       2       1       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       39      39      9       0       0       0
        0       0       0       0       0       0       2       0       2       4       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       40      40      5       0       0       0
        0       0       0       0       0       0       0       1       0       2       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       41      41      7       0       0       0
        0       0       0       0       0       0       0       1       3       0       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       1       0       1       42      42      12      0       0       0
        0       0       0       0       1       0       0       1       1       0       9
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       3       3       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       4       4       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       2       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       5       5       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       6       0       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       6       6       12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        2       9       1       0       0       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       7       7       30      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       15      11      2       0       0       1       0       0       0       0
        0       0       0
1993    1       1       2       0       1       8       8       27      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       12      14      1       0       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       9       9       44      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       17      22      4       0       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       10      10      51.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       16      28.5    5       1       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       11      11      48      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       15      20.5    9.5     2       0       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       12      12      56      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       11      24.5    12.5    5       2       0       1       0       0       0
        0       0       0
1993    1       1       2       0       1       13      13      60      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       8       24      21      6       1       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       14      14      52      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       4       18      14      9       6       1       0       0       0       0
        0       0       0
1993    1       1       2       0       1       15      15      58.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       27      19      7.5     1       2       0       0       0       0
        0       0       0
1993    1       1       2       0       1       16      16      47.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       18      14      6.5     3       5       0       0       0       0
        0       0       0
1993    1       1       2       0       1       17      17      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       2       6       4       3       3       1       0       0       0
        0       0       0
1993    1       1       2       0       1       18      18      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       8       4       1       1       0       0       0       0
        0       0       0
1993    1       1       2       0       1       19      19      23      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       12      3       4       1       0       0       0       0
        0       0       0
1993    1       1       2       0       1       20      20      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       5       6       4       1       0       0       0       0       0
        0       0       0
1993    1       1       2       0       1       21      21      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       5       3       3       1       2       0       0       0
        0       0       0
1993    1       1       2       0       1       22      22      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       4       2       6       3       0       1       1       0
        0       0       0
1993    1       1       2       0       1       23      23      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       2       1       2       0       0       0       0
        0       0       0
1993    1       1       2       0       1       24      24      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       2       2       0       1       1       0
        0       0       0
1993    1       1       2       0       1       25      25      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       0       2       3       2       0       0
        0       0       0
1993    1       1       2       0       1       26      26      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       3       1       1       0
        0       0       0
1993    1       1       2       0       1       27      27      4.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       0       0       0.5     2
        0       0       0
1993    1       1       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1993    1       1       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0
1994    1       1       1       0       1       5       5       3       0       3       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       6       6       2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1994    1       1       1       0       1       7       7       7.5     0       5       0.5
        0       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       8       8       24      2       14      7
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       9       9       49      1       31      16.5
        0       0.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       10      10      71      3       32      34
        2       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       11      11      64      4       24      26
        7.5     2.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       12      12      59.5    1       17.5    22
        13.5    5.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       13      13      50.5    0       4       29
        9.5     6       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       14      14      74      0       11      32
        23      7       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       15      15      86.5    0       4       44
        31      5.5     2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       16      16      83      0       4       40
        31      5       2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       17      17      76      0       1       40
        20      11      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       18      18      76      0       2       34
        24      11      5       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       19      19      76      0       0       18
        39      12      4       3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       20      20      67      0       0       9
        32      15      9       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       21      21      68      0       0       11
        37      10      4       6       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       22      22      49      0       0       2
        17      12      7       10      0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       23      23      49      0       0       0
        12      15      7       9       3       2       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       24      24      40      0       0       2
        9       15      5       7       2       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       25      25      41      0       0       0
        4       13      7       9       6       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       26      26      31      0       0       0
        1       6       6       10      7       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       27      27      30      0       0       0
        2       9       4       6       6       1       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       28      28      34      0       0       0
        0       12      8       9       2       2       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       29      29      25      0       0       0
        0       6       6       5       5       1       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       30      30      18      0       0       0
        0       0       4       5       6       2       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       31      31      19      0       0       0
        0       2       2       6       6       2       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       32      32      16      0       0       0
        0       0       0       2       8       3       1       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       33      33      23      0       0       0
        0       0       1       2       10      6       3       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       34      34      12      0       0       0
        0       0       0       0       3       6       1       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       35      35      10      0       0       0
        0       0       0       0       2       1       3       2       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       36      36      8       0       0       0
        0       0       1       0       1       2       1       2       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       37      37      6       0       0       0
        0       0       0       0       0       1       2       2       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       38      38      4       0       0       0
        0       0       0       0       0       1       0       1       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       39      39      7       0       0       0
        0       0       0       0       0       0       0       1       1       1       4
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       40      40      5       0       0       0
        0       0       0       0       0       0       1       0       2       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       1       0       1       41      41      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1994    1       1       1       0       1       42      42      10      0       0       0
        0       0       0       0       0       0       0       1       1       2       6
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       6       6       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       7       7       3.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       1.5     0       0       0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       8       8       11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        2       4       3       2       0       0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       9       9       12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       6       4.5     1       0.5     0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       10      10      32      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       17      12      3       0       0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       11      11      26      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       8       9       8.5     0.5     0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       12      12      32.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3.5     11      10.5    5.5     1       1       0       0       0       0
        0       0       0
1994    1       1       2       0       1       13      13      46.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3       20      18.5    5       0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       14      14      47      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       20      21      4       0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       15      15      42.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       21      15      6.5     0       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       16      16      32      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       14      10      2       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       17      17      38      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       13      15      6       3       0       0       0       0       0
        0       0       0
1994    1       1       2       0       1       18      18      33      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       8       11      11      2       1       0       0       0       0
        0       0       0
1994    1       1       2       0       1       19      19      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       8       7       2       3       0       0       0       0
        0       0       0
1994    1       1       2       0       1       20      20      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       5       3       2       3       1       1       0       0
        0       0       0
1994    1       1       2       0       1       21      21      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       4       5       4       1       0       0       0       0
        0       0       0
1994    1       1       2       0       1       22      22      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       5       6       1       5       0       0       0       0
        0       0       0
1994    1       1       2       0       1      23      23      11       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       1       6       0       1       0       0
        0       0       0
1994    1       1       2       0       1      24      24       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       0       2       0       0
        0       0       0
1994    1       1       2       0       1      25      25       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       1       0       0       1       1       0
        0       0       0
1994    1       1       2       0       1      26      26       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       1       0       1       1
        1       0       0
1994    1       1       2       0       1      27      27       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       1       0
        0       0       0
1994    1       1       2       0       1      28      28       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       3       0       0       0
        0       0       0
1994    1       1       2       0       1      31      31       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1
1995    1       1       1       0       1      11      11       6       0       5       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      12      12      10       0       6       2
        1       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      13      13      28       0       7      13
        8       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      14      14      47       0       9      17
       19       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      15      15      62       0       4      32
       23       3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      16      16      85       0       6      47
       21       9       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      17      17      97       0       4      38
       36      17       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      18      18      96       0       2      26
       42      21       4       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      19      19     109       0       1      28
       45      28       6       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      20      20     146       0       0      21
       77      32      14       1       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1995    1       1       1       0       1       21      21      119     0       0       12
        58      26      19      4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       22      22      89      0       0       5
        35      22      21      6       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       23      23      82      0       0       2
        27      31      13      9       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       24      24      52      0       0       0
        19      20      5       7       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       25      25      51      0       0       0
        6       28      7       5       5       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       26      26      45      0       0       2
        3       23      7       5       5       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       27      27      39      0       0       0
        2       11      14      7       4       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       28      28      29      0       0       1
        2       3       12      5       4       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       29      29      23      0       0       0
        1       7       6       5       4       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       30      30      18      0       0       0
        0       1       5       5       2       4       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       31      31      12      0       0       0
        0       0       2       5       0       3       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       32      32      7       0       0       0
        0       0       0       1       1       2       0       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       33      33      13      0       0       0
        0       0       0       4       1       4       4       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       34      34      14      0       0       0
        0       0       0       1       3       5       3       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       35      35      17      0       0       0
        0       1       0       1       2       8       0       4       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       36      36      10      0       0       0
        0       0       0       0       3       1       3       2       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       37      37      7       0       0       0
        0       0       0       0       1       1       1       2       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1       38      38      4       0       0       0
        0       0       0       0       0       0       1       1       1       0       1
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      39      39      13       0       0       0
        0       0       0       0       0       2       0       2       5       1       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      40      40       5       0       0       0
        0       0       0       0       0       0       1       1       0       0       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      41      41       4       0       0       0
        0       0       0       0       0       0       0       1       1       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       1       0       1      42      42       5       0       0       0
        0       0       0       0       0       0       0       1       0       0       4
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1       9       9       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1      10      10       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       2       0       0       0       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1      11      11       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       0       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1      12      12       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       4       0       1       0       1       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1      13      13      20       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       5      10       4       1       0       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1      14      14      27       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       4       9       8       5       1       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1      15      15      52       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2      12      22      14       2       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1      16      16      48       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0      15      19       7       7       0       0       0       0       0
        0       0       0
1995    1       1       2       0       1      17      17      42       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       8      14       6      12       1       1       0       0       0
        0       0       0
1995    1       1       2       0       1      18      18      53       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       9      23       9       7       4       1       0       0       0
        0       0       0
1995    1       1       2       0       1      19      19      24       0       0       0
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        0       0       1      11       5       1       4       2       0       0       0
        0       0       0
1995    1       1       2       0       1      20      20      19       0       0       0
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        0       0       0       4       9       3       0       3       0       0       0
        0       0       0
1995    1       1       2       0       1      21      21      19       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       4       3       4       5       1       2       0       0
        0       0       0
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1995    1       1       2       0       1       22      22      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       1       4       1       0       0       0
        0       0       0
1995    1       1       2       0       1       23      23      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       2       0       0       2       2       0       0
        1       0       0
1995    1       1       2       0       1       24      24      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       2       1       0       1
        0       0       0
1995    1       1       2       0       1       25      25      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1995    1       1       2       0       1       26      26      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       2       0       0       0
        1       0       0
1995    1       1       2       0       1       27      27      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       1       0
        1       0       0
1995    1       1       2       0       1       28      28      3       0       0       0
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        0       0       0       0       0       0       0       2       0       0       0
        1       0       0
1995    1       1       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1995    1       1       2       0       1       32      32      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       5       5       1       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       8       8       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       9       9       17      2       12      3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       10      10      20      3       8       7
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       11      11      19      4       10      4
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        0       0       0
1996    1       1       1       0       1       12      12      23      3       15      5
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       13      13      12      0       6       3
        3       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       14      14      20      0       4       6
        8       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       15      15      40      0       8       20
        10      2       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      16      16      52       0       9      22
       10      10       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      17      17      66       0       7      23
       10      22       4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      18      18      67       0       3      27
       20      12       5       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      19      19      70       0       3      17
       26      17       6       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      20      20      66       0       3      15
       22      15      11       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      21      21      50       0       0       5
       23       8      12       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      22      22      72       0       0       6
       37      15      12       2       0       0       0       0       0       0       0
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        0       0       0
1996    1       1       1       0       1      23      23      78       0       0       4
       30      23      16       4       1       0       0       0       0       0       0
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        0       0       0
1996    1       1       1       0       1      24      24      71       0       2       2
       15      32       8      11       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      25      25      63       0       0       1
       12      27      13       7       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      26      26      48       0       0       2
        8      26       6       5       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      27      27      59       0       0       1
        6      25      17       7       2       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      28      28      37       0       0       0
        1      17       6       7       4       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      29      29      22       0       0       0
        2       3       7       5       4       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      30      30      23       0       0       0
        2       5       7       3       4       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      31      31      19       0       0       0
        0       1       6       6       2       2       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1      32      32      16       0       0       1
        0       0       0       8       3       2       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1996    1       1       1       0       1       33      33      9       0       0       0
        0       1       0       2       1       4       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       34      34      5       0       0       0
        0       0       0       0       2       1       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       35      35      14      0       0       0
        0       0       0       0       3       4       5       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       36      36      7       0       0       0
        0       0       0       0       2       0       1       1       1       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       37      37      4       0       0       0
        0       0       0       0       0       1       2       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       38      38      4       0       0       0
        0       0       0       0       0       0       2       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       39      39      4       0       0       0
        0       0       0       0       0       0       0       1       0       3       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       40      40      2       0       0       0
        0       0       0       0       0       0       0       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       41      41      2       0       0       0
        0       0       0       0       0       0       0       0       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       1       0       1       42      42      4       0       0       0
        0       0       0       0       0       2       0       0       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       8       8       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       1       1       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       9       9       9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       7       2       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       10      10      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        3       5       3       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       11      11      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        3       9       4       0       0       0       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       12      12      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       6       5       4       0       0       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       13      13      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       6       0       1       0       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       14      14      19      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       3       9       2       4       0       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       15      15      27      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       3       7       4       12      1       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       16      16      27      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       5       12      6       2       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       17      17      29      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       10      8       6       2       2       1       0       0       0
        0       0       0
1996    1       1       2       0       1       18      18      23      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       8       5       7       2       1       0       0       0       0
        0       0       0
1996    1       1       2       0       1       19      19      31      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       7       9       9       4       1       0       0       0
        0       0       0
1996    1       1       2       0       1       20      20      25      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       6       5       4       1       2       1       0       0
        0       0       0
1996    1       1       2       0       1       21      21      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       4       1       4       2       0       0       0
        0       0       0
1996    1       1       2       0       1       22      22      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       0       3       0       1       0       1       0
        0       0       0
1996    1       1       2       0       1       23      23      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       2       3       1       1       0       0
        0       0       0
1996    1       1       2       0       1       24      24      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       1       0       0       0       0       0
        0       0       0
1996    1       1       2       0       1       25      25      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       2       0       0       0       0
        0       0       0
1996    1       1       2       0       1       26      26      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       0       1       1       0       0
        0       0       0
1996    1       1       2       0       1       27      27      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       0       0       0       0
        0       0       0
1996    1       1       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
1997    1       1       1       0       1       8       8       3       0       2       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       9       9       2       0       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       11      11      2.5     1       1       0.5
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       12      12      3       0       1.5     1
        0       0       0       0       0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1997    1       1       1       0       1       13      13      12.5    1       3       6
        2.5     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       14      14      22.5    0       3.5     15.5
        2.5     0.5     0       0       0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       15      15      40      0       8       26
        2.5     3.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       16      16      40      0       7       19
        12.5    1.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       17      17      40      1       3       28
        6.5     1.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       18      18      32      0       2       18
        7.5     1.5     2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       19      19      31.5    0       0       10
        14.5    4.5     2.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       20      20      37.5    0       0       9
        19.5    6.5     2.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       21      21      47.5    0       2       12
        20      9.5     2.5     1.5     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       22      22      50      0       0       10
        21      15      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       23      23      46      0       0       6.5
        15      16      7       1.5     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       24      24      43      0       0       4
        14      17      6       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       25      25      35      0       0       2
        12      15      5       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       26      26      32.5    0       0       0
        6       13      10      1       2       0       0       0       0.5     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       27      27      35.5    0       0       0
        5       14      13      2       1       0       0       0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       28      28      33      0       0       0
        3       10      16      3       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       29      29      20.5    0       0       0
        0       5       11      3       1       0       0       0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       30      30      18      0       0       0
        1       4       7       5       1       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       31      31      10      0       0       0
        0       0       2       6       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       32      32      10      0       0       0
        1       0       3       1       3       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       33      33      12.5    0       0       0
        0       0       2       4       2       2       1       0       1       0       0.5
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       34      34      5       0       0       0
        0       0       0       0       4       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       35      35      3       0       0       0
        0       0       0       0       1       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       36      36      6       0       0       0
        0       0       0       1       0       1       1       2       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       37      37      4       0       0       0
        0       0       0       0       0       1       1       0       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       38      38      4       0       0       0
        0       0       0       0       0       0       0       2       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       39      39      4       0       0       0
        0       0       0       0       0       0       2       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       40      40      3       0       0       0
        0       0       0       0       0       0       1       0       0       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       41      41      2       0       0       0
        0       0       0       0       0       0       0       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       1       0       1       42      42      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       2       0       1       8       8       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3       0       0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       2       0       1       11      11      6.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       4       2.5     0       0       0       0       0       0       0       0
        0       0       0
1997    1       1       2       0       1       12      12      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2.5     3       1       0       0       0       0.5     0       0       0
        0       0       0
1997    1       1       2       0       1       13      13      15.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       1       10      2.5     1       0       0       0       0       0       0
        0       0       0
1997    1       1       2       0       1       14      14      23.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3.5     9.5     5.5     4.5     0       0       0.5     0       0       0
        0       0       0
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1997    1       1       2       0       1       15      15      32      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       20      7.5     4.5     0       0       0       0       0       0
        0       0       0
1997    1       1       2       0       1       16      16      25      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       11      8.5     2.5     1       1       0       0       0       0
        0       0       0
1997    1       1       2       0       1       17      17      24      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       8       6.5     4.5     2       1       0       0       0       0
        0       0       0
1997    1       1       2       0       1       18      18      24      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       11      7.5     3.5     2       0       0       0       0       0
        0       0       0
1997    1       1       2       0       1       19      19      15.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       4.5     8.5     1.5     1       0       0       0       0
        0       0       0
1997    1       1       2       0       1       20      20      17.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       2.5     8.5     4.5     1       0       0       0       0
        0       0       0
1997    1       1       2       0       1       21      21      16.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       6.5     6.5     0.5     1       0       0       0
        0       0       0
1997    1       1       2       0       1       22      22      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       2       4       6       2       0       0       0
        0       0       0
1997    1       1       2       0       1       23      23      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.5     1       5       4       4.5     0       0       0       0
        0       0       0
1997    1       1       2       0       1       24      24      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       2       1       1       0       0
        0       0       0
1997    1       1       2       0       1       25      25      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       0       2       1       0       0       0
        0       0       0
1997    1       1       2       0       1       26      26      2.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       1       0       0
        0.5     0       0
1997    1       1       2       0       1       27      27      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0.5
        0       0       0
1997    1       1       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
1997    1       1       2       0       1       29      29      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0.5
        0       0       0
1997    1       1       2       0       1       31      31      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0
1997    1       1       2       0       1       33      33      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.5
1998    1       1       1       0       1       12      12      2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       13      13      4       0       1       3
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       14      14      3       0       1       1
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       15      15      14      0       5       9
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       16      16      9       0       2       3
        3       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       17      17      24      0       0       13
        9       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       18      18      34      0       1       19
        13      1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       19      19      59      0       1       28
        20      10      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       20      20      63      0       0       17
        35      10      1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       21      21      61      0       0       16
        39      6       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       22      22      51      0       0       7
        24      16      2       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       23      23      43      0       0       9
        12      11      7       4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       24      24      35      0       1       1
        10      14      7       1       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       25      25      41      0       0       0
        10      17      5       6       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       26      26      52      0       0       1
        7       18      20      4       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       27      27      35      0       0       1
        4       13      8       3       6       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       28      28      37      0       0       0
        3       13      11      7       2       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       29      29      38      0       0       0
        2       3       18      9       2       2       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1998    1       1       1       0       1       30      30      11      0       0       0
        1       2       3       3       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       31      31      16      0       0       0
        0       3       2       8       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       32      32      10      0       0       0
        0       0       1       6       1       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       33      33      9       0       0       0
        0       1       1       2       0       2       2       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       34      34      4       0       0       0
        0       0       0       0       4       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       35      35      7       0       0       0
        0       0       0       0       4       2       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       36      36      3       0       0       0
        0       0       1       0       0       1       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       37      37      4       0       0       0
        0       0       0       0       0       1       2       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       38      38      3       0       0       0
        0       0       0       0       0       0       0       0       1       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       39      39      2       0       0       0
        0       0       0       0       0       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       40      40      1       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       1       0       1       42      42      1       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       11      11      1       0       0       0
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        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       12      12      1       0       0       0
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        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       13      13      1       0       0       0
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        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       14      14      5       0       0       0
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        0       0       3       2       0       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       15      15      7       0       0       0
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        0       0       4       1       2       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       16      16      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       3       10      6       2       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       17      17      18      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       6       3       1       2       0       0       0       0
        0       0       0
1998    1       1       2       0       1       18      18      28      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       5       15      7       0       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       19      19      19      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       8       5       2       0       0       0       0       0
        0       0       0
1998    1       1       2       0       1       20      20      19      0       0       0
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        0       0       5       7       3       3       1       0       0       0       0
        0       0       0
1998    1       1       2       0       1       21      21      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       2       3       7       4       0       0       0       0
        0       0       0
1998    1       1       2       0       1       22      22      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       4       1       6       3       0       0       0       0
        0       0       0
1998    1       1       2       0       1       23      23      9       0       0       0
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        0       0       1       1       2       3       1       1       0       0       0
        0       0       0
1998    1       1       2       0       1       24      24      6       0       0       0
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        0       0       0       1       1       1       3       0       0       0       0
        0       0       0
1998    1       1       2       0       1       25      25      4       0       0       0
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        0       0       0       0       1       2       1       0       0       0       0
        0       0       0
1998    1       1       2       0       1       26      26      1       0       0       0
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        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
1998    1       1       2       0       1       27      27      4       0       0       0
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        0       0       0       0       1       1       0       0       1       0       1
        0       0       0
1998    1       1       2       0       1       28      28      2       0       0       0
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        0       0       0       0       1       0       0       1       0       0       0
        0       0       0
1998    1       1       2       0       1       29      29      2       0       0       0
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        0       0       0       0       0       0       0       0       1       0       0
        1       0       0
1998    1       1       2       0       1       30      30      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0
1999    1       1       1       0       1       9       9       0.5     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       10      10      1       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       11      11      2.5     0       0       0
        1       0       0.5     0.5     0       0.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1999    1       1       1       0       1       12      12      2.5     0       1       0.5
        0.5     0.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       13      13      10.5    0       4       3
        2       0.5     0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       14      14      11.5    0       0       9
        1       0       0       1       0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       15      15      13.5    0       2       10
        0       0.5     0.5     0       0       0       0.5     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       16      16      22      0       0       12
        9       0       0.5     0       0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       17      17      34.5    0       0       18
        13      3       0       0.5     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       18      18      45      0       0       7
        35      3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       19      19      55      0       0       9
        39      5       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       20      20      49      0       0       2
        31      12      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       21      21      50      0       0       3
        24      20      3       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       22      22      39      0       0       1
        20      16      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       23      23      46      0       0       1
        11      26      8       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       24      24      58      0       0       1
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        0       0       0
1999    1       1       1       0       1       25      25      40      0       0       0
        5       25      7       2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       26      26      39      0       1       0
        4       17      12      4       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       27      27      34      0       0       0
        0       14      7       9       3       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       28      28      31      0       0       0
        0       4       17      4       4       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       29      29      23      0       0       0
        0       2       6       4       9       1       0       1       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       1       1       0       1       30      30      21      0       0       0
        0       0       12      4       4       1       0       0       0       0       0
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        0       0       0
1999    1       1       1       0       1       31      31      26      0       0       0
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        0       0       0
1999    1       1       1       0       1       32      32      10      0       0       0
        0       0       0       4       4       1       0       1       0       0       0
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        0       0       0
1999    1       1       1       0       1       33      33      10      0       0       0
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        0       0       0
1999    1       1       1       0       1       34      34      3       0       0       0
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        0       0       0
1999    1       1       1       0       1       35      35      4       0       0       0
        0       0       0       0       0       4       0       0       0       0       0
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        0       0       0
1999    1       1       1       0       1       36      36      2       0       0       0
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        0       0       0
1999    1       1       1       0       1       37      37      3       0       0       0
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        0       0       0
1999    1       1       1       0       1       40      40      1       0       0       0
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        0       0       0
1999    1       1       1       0       1       41      41      1       0       0       0
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        0       0       0
1999    1       1       2       0       1       9       9       1.5     0       0       0
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        0       0       0
1999    1       1       2       0       1       10      10      1       0       0       0
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        0       0       0
1999    1       1       2       0       1       11      11      2.5     0       0       0
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        0       0       0
1999    1       1       2       0       1       12      12      3.5     0       0       0
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        0       0       0
1999    1       1       2       0       1       13      13      6.5     0       0       0
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        0       0       0
1999    1       1       2       0       1       14      14      6.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0
1999    1       1       2       0       1       15      15      8.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       5       2       0.5     0.5     0       0       0       0.5     0
        0       0       0
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1999    1       1       2       0       1       16      16      6       0       0       0
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        0       0       3       1       1       0.5     0       0.5     0       0       0
        0       0       0
1999    1       1       2       0       1       17      17      22.5    0       0       0
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        0       0       6       10      5       1       0.5     0       0       0       0
        0       0       0
1999    1       1       2       0       1       18      18      16      0       0       0
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        0       0       0
1999    1       1       2       0       1       19      19      17      0       0       0
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        0       0       0
1999    1       1       2       0       1       20      20      17      0       0       0
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        0       0       0
1999    1       1       2       0       1       21      21      13      0       0       0
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        0       0       0
1999    1       1       2       0       1       22      22      8       0       0       0
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        0       0       0
1999    1       1       2       0       1       23      23      8       0       0       0
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        0       0       0
1999    1       1       2       0       1       24      24      8       0       0       0
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        0       0       0
1999    1       1       2       0       1       25      25      6       0       0       0
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1999    1       1       2       0       1       26      26      1       0       0       0
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        0       0       0
1999    1       1       2       0       1       27      27      3       0       0       0
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        0       0       0
1999    1       1       2       0       1       28      28      1       0       0       0
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        0       0       1
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        0       0       0
1999    1       1       2       0       1       31      31      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
1999    1       1       2       0       1       34      34      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
2000    1       1       1       0       1       14      14      1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       15      15      2       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      16      16       4       0       0       3
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      17      17       8       0       1       4
        3       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      18      18       9       0       0       3
        4       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      19      19      19       0       0       6
        7       5       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      20      20      26       0       0       1
       14      10       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      21      21      25       0       0       1
        9      14       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      22      22      32       0       0       0
        9      19       4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      23      23      28       0       0       0
        7      18       2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      24      24      27       0       0       1
        5       9      11       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      25      25      22       0       0       0
        1      12       6       2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      26      26      26       0       0       0
        1      11      10       3       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      27      27      17       0       0       0
        0       4       9       4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      28      28      21       0       0       0
        0       4       7       5       3       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      29      29      15       0       0       0
        1       2       2       7       2       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      30      30       9       0       0       0
        0       1       2       4       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      31      31      17       0       0       0
        0       0       4       5       5       2       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1      32      32      14       0       0       0
        0       0       0       4       4       3       2       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2000    1       1       1       0       1       33      33      17      0       0       0
        0       0       3       1       6       4       2       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       34      34      8       0       0       0
        0       0       0       1       1       2       3       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       35      35      5       0       0       0
        0       0       2       0       0       1       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       36      36      5       0       0       0
        0       0       0       1       1       1       1       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       37      37      5       0       0       0
        0       0       0       1       2       0       1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       38      38      4       0       0       0
        0       0       0       0       0       1       1       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       39      39      3       0       0       0
        0       0       0       0       0       0       1       0       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       40      40      4       0       0       0
        0       0       0       0       0       2       1       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       1       0       1       42      42      6       0       0       0
        0       0       0       1       1       0       0       1       0       2       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       2       0       1       14      14      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
2000    1       1       2       0       1       15      15      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0
2000    1       1       2       0       1       16      16      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       1       0       1       0       0       0       0       0
        0       0       0
2000    1       1       2       0       1       17      17      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       5       4       1       0       0       0       0       0
        0       0       0
2000    1       1       2       0       1       18      18      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       6       4       1       1       0       0       0       0
        0       0       0
2000    1       1       2       0       1       19      19      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       5       9       3       0       0       0       0       0
        0       0       0
2000    1       1       2       0       1       20      20      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       10      5       0       0       0       0       0
        0       0       0
2000    1       1       2       0       1       21      21      19      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       13      2       1       0       0       0       0
        0       0       0
2000    1       1       2       0       1       22      22      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       3       5       5       1       2       1       0       0
        0       0       0
2000    1       1       2       0       1      23      23       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       2       2       0       1       0       0       0
        0       0       0
2000    1       1       2       0       1      24      24       9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       3       3       1       1       0
        0       0       0
2000    1       1       2       0       1      25      25       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       3       1       0       0       0
        0       0       0
2000    1       1       2       0       1      26      26       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
2000    1       1       2       0       1      27      27       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0
2000    1       1       2       0       1      29      29       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
2000    1       1       2       0       1      31      31       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0
2000    1       1       2       0       1      34      34       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
2000    1       1       2       0       1      36      36       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
2001    1       1       1       0       1       8       8       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       9       9       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      10      10       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      11      11       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      12      12       2       0       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      13      13       2       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      14      14       9       0       1       6
        2       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      15      15       7       0       0       6
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2001    1       1       1       0       1       16      16      16      0       1       9
        4       1       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       17      17      27      0       0       13
        11      2       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       18      18      24      0       1       5
        14      4       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       19      19      32      0       0       6
        14      10      1       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       20      20      35      0       0       2
        26      5       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       21      21      29      0       0       1
        14      11      3       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       22      22      35      0       0       0
        11      15      8       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       23      23      39      0       0       2
        2       19      13      2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       24      24      41      0       0       0
        2       13      15      11      0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       25      25      47      0       0       1
        2       17      22      4       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       26      26      36      0       0       0
        1       7       18      9       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       27      27      31      0       0       0
        0       9       12      7       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       28      28      16      0       0       0
        1       1       5       6       2       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       29      29      22      0       0       0
        0       1       4       12      5       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       30      30      20      0       0       0
        0       1       2       7       6       1       2       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       31      31      21      0       0       0
        0       0       3       6       8       2       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       32      32      15      0       0       0
        0       1       1       3       3       2       5       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1       33      33      13      0       0       0
        0       0       0       3       2       4       3       1       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      34      34      13       0       0       0
        0       0       0       1       2       3       4       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      35      35       5       0       0       0
        0       0       0       0       0       3       0       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      36      36       2       0       0       0
        0       0       0       0       0       0       0       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      37      37       3       0       0       0
        0       0       0       0       0       0       1       0       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      38      38       1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      39      39       1       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       1       0       1      40      40       2       0       0       0
        0       0       0       0       0       1       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       2       0       1      12      12       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       1       0       0       0       0       0       0       0       0
        0       0       0
2001    1       1       2       0       1      14      14       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       1       2       0       0       0       0       0       0       0
        0       0       0
2001    1       1       2       0       1      15      15       8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       4       1       1       0       0       0       0       0
        0       0       0
2001    1       1       2       0       1      16      16      16       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       4      10       0       1       0       0       0       0       0
        0       0       0
2001    1       1       2       0       1      17      17      17       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       8       5       1       1       1       0       0       0
        0       0       0
2001    1       1       2       0       1      18      18      19       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0      12       7       0       0       0       0       0       0
        0       0       0
2001    1       1       2       0       1      19      19      19       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       6       9       1       0       0       0       0
        0       0       0
2001    1       1       2       0       1      20      20      19       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2      10       3       2       2       0       0       0
        0       0       0
2001    1       1       2       0       1      21      21      17       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       2       3       6       3       2       0       0       0
        0       0       0
2001    1       1       2       0       1      22      22      19       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       5       6       3       3       0       0       1
        0       0       0
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2001    1       1       2       0       1       23      23      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       4       2       2       1       0       0
        0       0       0
2001    1       1       2       0       1       24      24      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       3       2       2       0       1       0
        0       0       0
2001    1       1       2       0       1       25      25      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       2       0       1       0       0
        0       1       0
2001    1       1       2       0       1       26      26      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       0       0       0       0       0
        0       0       0
2001    1       1       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
2002    1       1       1       0       1       9       9       1       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       13      13      3       0       2       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       14      14      5       0       1       3
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       15      15      10      0       1       8
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       16      16      19      0       2       11
        6       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       17      17      27      0       0       14
        9       4       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       18      18      24      0       0       9
        10      3       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       19      19      35      0       1       11
        18      5       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       20      20      35      0       0       4
        23      5       3       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       21      21      37      0       0       1
        18      13      3       1       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       22      22      34      0       0       1
        15      13      5       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       23      23      21      0       0       0
        2       13      3       1       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       24      24      17      0       0       1
        0       8       3       5       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       25      25      30      0       0       0
        3       15      9       2       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       26      26      31      0       0       0
        6       11      6       8       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       27      27      32      0       0       0
        0       3       13      12      3       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       28      28      30      0       0       0
        0       6       14      7       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       29      29      23      0       0       0
        1       0       7       9       5       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       30      30      25      0       0       0
        0       0       7       9       4       4       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       31      31      21      0       0       0
        0       0       3       4       8       4       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       32      32      10      0       0       0
        0       1       2       3       2       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       33      33      9       0       0       0
        0       0       0       2       3       2       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       34      34      11      0       0       0
        0       0       0       1       1       1       3       3       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       35      35      8       0       0       0
        0       0       1       1       1       2       1       0       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       36      36      5       0       0       0
        0       0       0       0       1       2       1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       37      37      3       0       0       0
        0       0       0       0       0       0       1       0       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       38      38      3       0       0       0
        0       0       0       0       0       0       0       2       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       39      39      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       1       0       1       42      42      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       1       2       0       1       8       8       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
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2002   1      1      2      0      1      11     11     3      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      1      2      0      0      0      0      0      0      0      0
       0      0      0
2002   1      1      2      0      1      12     12     3      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      1      1      0      0      1      0      0      0      0      0
       0      0      0
2002   1      1      2      0      1      13     13     4      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      2      2      0      0      0      0      0      0      0      0
       0      0      0
2002   1      1      2      0      1      14     14     2      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      1      1      0      0      0      0      0      0      0      0
       0      0      0
2002   1      1      2      0      1      15     15     13     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      2      7      3      1      0      0      0      0      0      0
       0      0      0
2002   1      1      2      0      1      16     16     21     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      1      7      10     3      0      0      0      0      0      0
       0      0      0
2002   1      1      2      0      1      17     17     28     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      1      9      12     4      0      2      0      0      0      0
       0      0      0
2002   1      1      2      0      1      18     18     22     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      1      10     7      4      0      0      0      0      0
       0      0      0
2002   1      1      2      0      1      19     19     20     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      6      8      3      3      0      0      0      0
       0      0      0
2002   1      1      2      0      1      20     20     19     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      1      4      2      4      7      0      1      0      0
       0      0      0
2002   1      1      2      0      1      21     21     29     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      5      11     6      6      1      0      0      0
       0      0      0
2002   1      1      2      0      1      22     22     17     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      1      0      2      4      5      2      2      1      0
       0      0      0
2002   1      1      2      0      1      23     23     11     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      1      1      2      1      2      2      2      0
       0      0      0
2002   1      1      2      0      1      24     24     6      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      3      2      1      0      0      0      0
       0      0      0
2002   1      1      2      0      1      25     25     6      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      3      0      1      1      1      0      0
       0      0      0
2002   1      1      2      0      1      26     26     6      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      3      2      1      0
       0      0      0
2002   1      1      2      0      1      28     28     1      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      1      0      0      0
       0      0      0
2002   1      1      2      0      1      29     29     3      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
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        0       0       0       1       0       0       0       0       0       0       1
        1       0       0
2002    1       1       2       0       1      30      30       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0
2002    1       1       2       0       1      33      33       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
2003    1       1       1       0       1      12      12       1       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      13      13       5       0       1       3
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      14      14       7       0       1       5
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      15      15      12       0       0       8
        4       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      16      16      23       0       4      10
        9       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      17      17      40       0       1      11
       26       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      18      18      58       0       1      18
       30       7       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      19      19      69       0       4      14
       28      21       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      20      20      56       0       1      13
       33       5       3       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      21      21      49       0       0       9
       24      14       1       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      22      22      30       0       0       2
       12      12       4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      23      23      20       0       0       5
        6       8       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      24      24      17       0       0       2
        5       3       5       1       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      25      25      21       0       0       1
        8       8       3       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1      26      26      23       0       0       0
        1      10       6       3       1       1       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2003    1       1       1       0       1       27      27      17      0       0       1
        3       3       3       6       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       28      28      20      0       0       0
        2       6       5       4       2       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       29      29      14      0       0       0
        0       2       5       4       0       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       30      30      17      0       0       0
        2       1       6       5       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       31      31      16      0       0       0
        1       1       0       6       4       1       1       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       32      32      7       0       0       0
        0       1       0       2       0       3       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       33      33      13      0       0       0
        0       0       1       3       2       2       1       2       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       34      34      8       0       0       0
        0       0       2       0       2       1       2       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       35      35      9       0       0       0
        0       0       0       1       1       2       0       1       1       3       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       36      36      6       0       0       0
        0       0       0       1       0       1       1       2       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       37      37      6       0       0       0
        0       0       0       0       1       2       0       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       38      38      3       0       0       0
        0       0       0       0       1       0       0       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       39      39      3       0       0       0
        0       0       0       0       0       1       0       0       0       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       1       0       1       41      41      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       9       9       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       10      10      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       13      13      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       4       1       0       0       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       14      14      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       7       5       0       0       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       15      15      23      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       12      9       0       0       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       16      16      35      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       3       9       18      4       1       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       17      17      29      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       6       15      5       2       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       18      18      39      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       8       26      2       1       0       0       0       0       0
        0       0       0
2003    1       1       2       0       1       19      19      41      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       6       11      16      4       2       1       0       0       0
        0       0       0
2003    1       1       2       0       1       20      20      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       7       8       1       1       0       1       0       0
        0       0       0
2003    1       1       2       0       1       21      21      26      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       10      4       9       1       2       0       0       0
        0       0       0
2003    1       1       2       0       1       22      22      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       4       3       1       3       0       0       0
        0       0       0
2003    1       1       2       0       1       23      23      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       3       2       1       2       0       0       0
        0       0       0
2003    1       1       2       0       1       24      24      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       0       0       1       2       2       1       0
        0       0       0
2003    1       1       2       0       1       25      25      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       2       1       1       1
        0       0       0
2003    1       1       2       0       1       26      26      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
2003    1       1       2       0       1       27      27      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       1       0       0       0       0
        0       0       0
2003    1       1       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
2003    1       1       2       0       1       29      29      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       1
        0       0       0
2003    1       1       2       0       1       30      30      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
2003    1       1       2       0       1       31      31      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0
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2003    1       1       2       0       1       32      32      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
2003    1       1       2       0       1       37      37      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       9       9       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       12      12      1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       13      13      2       0       1       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       14      14      1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       15      15      6       0       2       4
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       16      16      12      0       1       5
        3       3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       17      17      23      0       0       4
        15      3       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       18      18      42      0       0       11
        23      7       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       19      19      51      0       0       10
        27      12      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       20      20      43      0       0       7
        25      9       1       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       21      21      31      0       0       3
        18      6       4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       22      22      22      0       0       0
        17      4       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       23      23      24      0       0       2
        8       9       5       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       24      24      13      0       0       0
        2       9       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       25      25      6       0       0       0
        4       0       0       1       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       1       1       0       1       26      26      7       0       0       0
        1       3       2       1       0       0       0       0       0       0       0
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      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      27     27     5      0      0      0
      0      1      3      0      1      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      28     28     5      0      0      0
      0      0      3      2      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      29     29     6      0      0      0
      0      1      3      2      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      30     30     8      0      0      0
      0      1      3      1      1      1      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      31     31     7      0      0      0
      0      0      1      3      2      0      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      32     32     3      0      0      0
      0      1      0      1      1      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      33     33     6      0      0      0
      0      2      0      3      0      0      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      34     34     5      0      0      0
      0      0      1      1      1      1      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      35     35     1      0      0      0
      0      0      0      0      0      1      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      36     36     2      0      0      0
      1      0      0      0      0      0      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      37     37     4      0      0      0
      0      0      0      0      1      0      2      1      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      38     38     1      0      0      0
      0      0      0      0      0      0      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      1      0      1      41     41     1      0      0      0
      0      0      0      0      0      0      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      2      0      1      7      7      1      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      1      0      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      2      0      1      11     11     1      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      1      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      2      0      1      12     12     1      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      1      0      0      0      0      0      0      0      0
      0      0      0
2004  1      1      2      0      1      13     13     1      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      1      0      0      0      0      0      0      0      0      0
      0      0      0
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2004    1       1       2       0       1       14      14      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       2       0       1       0       0       0       0       0       0       0
        0       0       0
2004    1       1       2       0       1       15      15      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       4       0       0       0       0       0       0       0
        0       0       0
2004    1       1       2       0       1       16      16      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       5       5       4       0       0       0       0       0       0
        0       0       0
2004    1       1       2       0       1       17      17      33      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       18      9       2       1       0       0       0       0
        0       0       0
2004    1       1       2       0       1       18      18      37      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       13      14      5       0       1       0       0       0
        0       0       0
2004    1       1       2       0       1       19      19      38      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       18      14      3       2       0       0       0       0
        0       0       0
2004    1       1       2       0       1       20      20      31      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       10      14      4       0       1       0       0       0
        0       0       0
2004    1       1       2       0       1       21      21      33      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       7       17      7       0       0       0       0       0
        0       0       0
2004    1       1       2       0       1       22      22      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       10      4       2       0       0       0       0
        0       0       0
2004    1       1       2       0       1       23      23      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       2       1       2       0       0       0       0
        0       0       0
2004    1       1       2       0       1       24      24      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       1       2       0       1       0
        0       0       0
2004    1       1       2       0       1       25      25      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       3       0       1       0       1
        0       0       0
2004    1       1       2       0       1       26      26      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       3       1       2       0
        0       0       0
2004    1       1       2       0       1       27      27      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       1       0
        0       1       0
2004    1       1       2       0       1       28      28      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       0       0       0       0       1
        0       0       0
2004    1       1       2       0       1       29      29      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       1
        1       0       0
2004    1       1       2       0       1       31      31      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
2004    1       1       2       0       1       32      32      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
2005    1       1       1       0       1      15      15       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      16      16       3       0       0       2
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      17      17      11       0       0       5
        6       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      18      18      28       0       0       9
       13       5       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      19      19      39       0       1       8
       21       8       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      20      20      40       0       0       4
       21      13       1       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      21      21      38       0       0       0
       19      11       7       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      22      22      40       0       0       2
       14      15       8       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      23      23      32       0       0       0
        7      18       7       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      24      24      35       0       0       0
       11      13      10       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      25      25      29       0       0       0
        4      13      10       0       1       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      26      26      31       0       0       2
        6      14       7       0       1       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      27      27      30       0       0       0
        2       8      12       8       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      28      28      25       0       0       0
        0       5      12       5       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      29      29      18       0       0       0
        1       3       9       3       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      30      30      15       0       0       0
        0       2       7       4       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1      31      31       9       0       0       0
        0       0       2       2       3       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2005    1       1       1       0       1       32      32      7       0       0       0
        0       1       1       4       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1       33      33      2       0       0       0
        0       0       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1       34      34      1       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1       35      35      8       0       0       0
        0       0       0       0       2       4       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1       36      36      4       0       0       0
        0       0       0       0       2       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1       37      37      3       0       0       0
        0       0       0       0       0       1       1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1       38      38      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       1       0       1       39      39      4       0       0       0
        0       0       0       0       0       0       1       0       2       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       1       2       0       1       16      16      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       1       2       0       0       0       0       0       0       0
        0       0       0
2005    1       1       2       0       1       17      17      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       4       5       1       0       0       0       0       0
        0       0       0
2005    1       1       2       0       1       18      18      18      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       4       12      0       0       0       0       0       0
        0       0       0
2005    1       1       2       0       1       19      19      20      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       7       5       5       1       0       0       0       0
        0       0       0
2005    1       1       2       0       1       20      20      24      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       7       7       8       1       0       0       0       0
        0       0       0
2005    1       1       2       0       1       21      21      19      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       10      5       3       0       0       0       0       0
        0       0       0
2005    1       1       2       0       1       22      22      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       3       5       0       0       0       0       0
        0       0       0
2005    1       1       2       0       1       23      23      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       3       3       2       0       0       0       1
        0       0       0
2005    1       1       2       0       1       24      24      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       2       2       1       0       1       0       0
        0       0       0
2005    1       1       2       0       1       25      25      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       1       1       1       1       0       0       1       0
        0       0       0
2005    1       1       2       0       1       26      26      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       2       0       0       0
        0       0       0
2005    1       1       2       0       1       27      27      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       0       0       2       0       0
        0       0       0
2005    1       1       2       0       1       28      28      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       1       0       0       0
        0       0       0
2005    1       1       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0
2006    1       1       1       0       1       12      12      1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       16      16      1       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       17      17      5       0       0       1
        4       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       18      18      11      0       0       1
        9       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       19      19      16      0       0       0
        8       7       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       20      20      21      0       0       3
        7       5       5       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       21      21      23      0       0       1
        10      10      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       22      22      32      0       0       0
        7       17      6       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       23      23      34      0       0       0
        14      10      5       4       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       24      24      33      0       0       0
        6       10      14      3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       25      25      24      0       0       0
        3       8       8       3       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       26      26      35      0       0       0
        3       8       15      9       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       27      27      28      0       0       0
        1       7       11      8       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2006    1       1       1       0       1       28      28      26      0       0       0
        0       5       10      7       4       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       29      29      25      0       0       0
        0       4       12      7       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       30      30      18      0       0       0
        0       1       7       9       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       31      31      7       0       0       0
        0       1       3       3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       32      32      14      0       0       0
        0       2       2       8       1       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       33      33      12      0       0       0
        0       0       1       4       2       2       3       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       34      34      11      0       0       0
        0       0       0       1       4       4       1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       35      35      2       0       0       0
        0       0       0       1       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       36      36      6       0       0       0
        0       0       0       1       0       1       0       3       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       37      37      4       0       0       0
        0       0       0       0       1       1       1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       38      38      3       0       0       0
        0       0       0       0       0       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       39      39      1       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       40      40      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       41      41      1       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       1       0       1       42      42      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       1       2       0       1       15      15      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       0       0       0       0       0       0       0
        0       0       0
2006    1       1       2       0       1       16      16      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       5       1       2       0       0       0       0       0       0
        0       0       0
2006    1       1       2       0       1       17      17      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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      0      0      2      2      2      1      0      0      0      0      0
      0      0      0
2006  1      1      2      0      1      18     18     8      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      1      4      3      0      0      0      0      0      0
      0      0      0
2006  1      1      2      0      1      19     19     25     0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      1      9      9      2      4      0      0      0      0
      0      0      0
2006  1      1      2      0      1      20     20     13     0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      1      2      5      3      1      1      0      0      0
      0      0      0
2006  1      1      2      0      1      21     21     7      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      0      2      2      3      0      0      0      0
      0      0      0
2006  1      1      2      0      1      22     22     18     0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      0      5      7      5      1      0      0      0
      0      0      0
2006  1      1      2      0      1      23     23     7      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      1      0      3      2      0      0      1      0
      0      0      0
2006  1      1      2      0      1      24     24     6      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      1      1      2      0      2      0      0      0
      0      0      0
2006  1      1      2      0      1      26     26     2      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      0      1      1      0      0      0      0      0
      0      0      0
2006  1      1      2      0      1      27     27     2      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      1      1      0      0
      0      0      0
2006  1      1      2      0      1      28     28     1      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      1
      0      0      0
2006  1      1      2      0      1      31     31     1      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      0      0      1      0      0      0      0      0
      0      0      0
2007  1      1      1      0      1      11     11     1      0      0      0
      0      0      1      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2007  1      1      1      0      1      12     12     1      0      0      0
      1      0      0      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2007  1      1      1      0      1      13     13     1      0      0      0
      0      0      1      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2007  1      1      1      0      1      15     15     2      0      0      1
      0      0      1      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2007  1      1      1      0      1      16     16     1      0      0      1
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2007  1      1      1      0      1      17     17     2      0      0      0
      1      0      1      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
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2007    1       1       1       0       1       18      18      1       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       19      19      12      0       0       1
        5       5       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       20      20      11      0       0       0
        7       3       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       21      21      16      0       0       1
        4       7       4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       22      22      30      0       0       0
        10      6       9       2       2       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       23      23      29      0       0       0
        2       12      10      5       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       24      24      23      0       0       0
        4       11      6       1       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       25      25      34      0       0       1
        2       11      13      6       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       26      26      37      0       0       0
        1       12      14      7       1       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       27      27      43      0       0       0
        3       10      15      10      3       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       28      28      40      0       0       0
        1       10      15      11      3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       29      29      38      0       0       2
        0       4       10      13      6       1       0       1       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       30      30      39      0       0       0
        0       3       18      12      3       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       31      31      28      0       0       0
        0       4       7       8       7       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       32      32      14      0       0       0
        0       0       1       6       4       0       0       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       33      33      7       0       0       0
        0       2       0       1       3       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       34      34      3       0       0       0
        0       0       0       0       1       0       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1       35      35      4       0       0       0
        0       1       0       1       1       0       0       0       0       1       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1      36      36       2       0       0       0
        0       0       0       0       0       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1      37      37       2       0       0       0
        0       0       0       0       0       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1      39      39       2       0       0       0
        0       0       0       0       0       0       0       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       1       0       1      40      40       1       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       2       0       1      14      14       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       0       0       0       0       0       0       0
        0       0       0
2007    1       1       2       0       1      16      16       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
2007    1       1       2       0       1      17      17       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       1       0       0       0       0       0       0
        0       0       0
2007    1       1       2       0       1      18      18       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3       0       0       0       0       0       0
        0       0       0
2007    1       1       2       0       1      19      19      10       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       5       3       2       0       0       0       0       0
        0       0       0
2007    1       1       2       0       1      20      20       4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       2       0       0       0       0       0       0
        0       0       0
2007    1       1       2       0       1      21      21       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       2       1       0       1       0       0       0
        0       0       0
2007    1       1       2       0       1      22      22       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       2       1       0       0       0       0
        0       0       0
2007    1       1       2       0       1      23      23       7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       2       1       2       0       0       0
        0       0       0
2007    1       1       2       0       1      24      24       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       0       1       0       0       0
        0       0       0
2007    1       1       2       0       1      25      25       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       2       2       0       0       0
        0       0       0
2007    1       1       2       0       1      26      26       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       1       0       0
        0       0       0
2007    1       1       2       0       1      28      28       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       1       0       0       1
        0       0       0
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2007   1      1      2      0      1      31     31     1      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       1      0      0
2008   1      1      1      0      1      12     12     1      0      0      1
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      13     13     1      0      0      0
       0      1      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      16     16     6      0      0      1
       3      2      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      17     17     8      0      0      0
       5      3      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      18     18     11     0      0      1
       6      4      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      19     19     10     0      0      3
       5      1      0      0      1      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      20     20     9      0      0      1
       3      3      1      1      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      21     21     11     0      0      0
       0      4      7      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      22     22     17     0      0      0
       3      3      8      3      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      23     23     22     0      0      0
       1      6      7      6      2      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      1      0      1      24     24     33     0      0      0
       1      6      9      13     3      0      1      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      25     25     29     0      0      0
       0      1      9      13     3      2      1      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      26     26     22     0      0      0
       0      1      6      7      5      3      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      27     27     44     0      0      0
       0      2      6      18     9      7      2      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      28     28     39     0      0      0
       0      2      3      13     14     6      0      0      1      0      0      0
       0      0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      29     29     28     0      0      0
       0      0      3      8      13     2      1      1      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2008   1      1      1      0      1      30     30     27     0      0      0
       0      0      6      5      10     5      0      1      0      0      0      0
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      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    31    31    22     0     0     0
      0     0     1     3     7     7     3     0     1     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    32    32    17     0     0     0
      0     0     0     3     6     6     0     2     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    33    33     9     0     0     0
      0     0     0     1     0     3     4     1     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    34    34     8     0     0     0
      0     0     0     0     0     4     2     1     0     1     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    35    35     3     0     0     0
      0     0     0     0     0     0     2     1     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    36    36    10     0     0     0
      0     0     0     1     0     2     2     2     1     2     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    37    37     3     0     0     0
      0     0     0     0     0     0     0     0     2     0     1
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    39    39     1     0     0     0
      0     0     0     0     0     0     0     0     0     1     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    40    40     1     0     0     0
      0     0     0     0     0     0     0     0     0     0     1
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     1     0     1    42    42     2     0     0     0
      0     0     0     0     0     0     0     1     0     0     1
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     2     0     1    11    11     5     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     4     1     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     2     0     1    12    12     1     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     1     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     2     0     1    14    14     1     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     1     0     0     0     0     0     0     0     0     0
      0     0     0
2008  1     1     2     0     1    15    15     1     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     0     1     0     0     0     0     0     0     0
      0     0     0
2008  1     1     2     0     1    16    16    11     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     1     8     2     0     0     0     0     0     0
      0     0     0
2008  1     1     2     0     1    17    17    12     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     2    10     0     0     0     0     0     0     0
      0     0     0
2008  1     1     2     0     1    18    18     9     0     0     0
      0     0     0     0     0     0     0     0     0     0     0
      0     0     1     5     3     0     0     0     0     0     0
      0     0     0
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2008    1       1       2       0       1       19      19      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       7       0       2       3       0       0       0       0
        0       0       0
2008    1       1       2       0       1       20      20      8       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       3       0       2       0       0       0       0
        0       0       0
2008    1       1       2       0       1       21      21      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3       1       1       1       0       0       0
        0       0       0
2008    1       1       2       0       1       22      22      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3       2       6       0       1       0       0
        0       0       0
2008    1       1       2       0       1       23      23      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       1       0       0       0
        0       0       0
2008    1       1       2       0       1       24      24      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       1       0       0       1       0
        0       0       0
2008    1       1       2       0       1       25      25      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       1       3       0       0
        0       0       0
2008    1       1       2       0       1       26      26      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       1       0       0       0
        0       0       0
2008    1       1       2       0       1       27      27      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       1       0       0
        0       0       0
2008    1       1       2       0       1       28      28      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       1       0       0       0
        0       0       0
2008    1       1       2       0       1       31      31      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       3       0       0
        0       0       0
2008    1       1       2       0       1       34      34      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0


# Recreational 406 lines
1999    1       2       1       0       1       12      12      1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       14      14      1       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       16      16      6       0       0       1
        2       3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       17      17      14      0       0       1
        8       4       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       18      18      23      0       0       1
        10      8       3       1       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       19      19      23      0       0       0
        10      12      1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       20      20      24      0       0       0
        5       15      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       21      21      16      0       0       0
        3       5       7       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       22      22      24      0       0       0
        1       13      5       4       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       23      23      25      0       0       0
        0       7       15      3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       24      24      17      0       0       0
        0       4       8       4       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       25      25      22      0       0       0
        1       6       8       6       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       26      26      18      0       0       0
        0       2       4       10      2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       27      27      14      0       0       0
        0       2       3       6       1       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       28      28      14      0       0       0
        0       0       4       10      0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       29      29      18      0       0       0
        0       2       6       4       6       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       30      30      14      0       0       0
        0       0       2       3       6       2       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       31      31      15      0       0       0
        0       0       1       4       6       3       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       32      32      8       0       0       0
        0       0       0       3       3       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       33      33      5       0       0       0
        0       0       0       2       1       1       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       34      34      9       0       0       0
        0       0       0       2       3       0       1       1       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       35      35      8       0       0       0
        0       0       0       0       3       4       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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1999    1       2       1       0       1       36      36      4       0       0       0
        0       0       0       0       0       2       0       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       37      37      3       0       0       0
        0       0       0       0       1       0       0       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       38      38      3       0       0       0
        0       0       0       0       0       1       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       39      39      1       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       40      40      2       0       0       0
        0       0       0       0       0       0       1       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       1       0       1       41      41      3       0       0       0
        0       0       0       0       0       0       1       0       0       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       2       0       1       13      13      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
1999    1       2       2       0       1       14      14      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       0       0       0       0       0       0
        0       0       0
1999    1       2       2       0       1       15      15      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       0       0       0       0       0       0
        0       0       0
1999    1       2       2       0       1       16      16      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       6       6       2       2       0       0       0       0
        0       0       0
1999    1       2       2       0       1       17      17      38      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       19      14      4       0       0       0       0       0
        0       0       0
1999    1       2       2       0       1       18      18      51      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       9       21      18      3       0       0       0       0
        0       0       0
1999    1       2       2       0       1       19      19      50      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       7       18      20      4       1       0       0       0
        0       0       0
1999    1       2       2       0       1       20      20      45      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       12      22      6       4       0       0       0
        0       0       0
1999    1       2       2       0       1       21      21      26      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       5       14      5       0       0       0       0
        0       0       0
1999    1       2       2       0       1       22      22      30      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       11      11      2       2       1       0
        0       0       0
1999    1       2       2       0       1       23      23      30      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       8       8       6       4       1       1
        0       0       0
1999    1       2       2       0       1       24      24      18      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       2       4       2       7       3       0       0
        0       0       0
1999    1       2       2       0       1       25      25      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       4       1       4       1       3       0
        0       0       0
1999    1       2       2       0       1       26      26      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       1       4       3       2       2       0
        0       0       0
1999    1       2       2       0       1       27      27      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       1       2       0
        0       0       0
1999    1       2       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0
1999    1       2       2       0       1       29      29      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       1       2       0       0       0       1
        0       0       0
1999    1       2       2       0       1       30      30      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       2       0       0
        0       0       0
1999    1       2       2       0       1       31      31      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       1
        0       0       0
1999    1       2       2       0       1       36      36      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
1999    1       2       2       0       1       38      38      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
2000    1       2       1       0       1       16      16      6       0       0       2
        3       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       17      17      23      0       0       1
        15      7       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       18      18      17      0       0       0
        7       10      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       19      19      33      0       0       1
        9       18      3       1       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       20      20      33      0       0       0
        6       18      8       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       21      21      47      0       0       0
        2       29      10      6       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       22      22      34      0       0       1
        1       14      12      4       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       23      23      35      0       0       1
        0       6       22      5       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2000    1       2       1       0       1       24      24      28      0       0       0
        1       8       12      5       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       25      25      26      0       0       0
        0       5       10      9       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       26      26      21      0       0       0
        0       2       6       8       3       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       27      27      15      0       0       0
        1       0       2       4       6       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       28      28      14      0       0       0
        0       0       3       7       4       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       29      29      13      0       0       0
        0       0       1       5       4       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       30      30      5       0       0       0
        0       0       0       2       2       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       1       0       1       31      31      3       0       0       0
        0       0       0       1       0       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2000    1       2       2       0       1       3       3       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0
2000    1       2       2       0       1       14      14      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0
2000    1       2       2       0       1       15      15      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       1       0       0       0       0       0
        0       0       0
2000    1       2       2       0       1       16      16      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       6       1       0       0       0       0       0
        0       0       0
2000    1       2       2       0       1       17      17      75      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       19      45      8       1       0       0       0       0
        0       0       0
2000    1       2       2       0       1       18      18      66      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       8       35      15      5       1       1       0       0
        0       0       0
2000    1       2       2       0       1       19      19      70      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       5       34      23      7       1       0       0       0
        0       0       0
2000    1       2       2       0       1       20      20      67      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       25      25      12      2       0       0       0
        0       0       0
2000    1       2       2       0       1       21      21      48      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       14      17      6       7       1       0       0
        0       0       0
2000    1       2       2       0       1       22      22      33      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       1       6      13       7       6       0       0       0
        0       0       0
2000    1       2       2       0       1      23      23      18       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       0       7       6       2       1       0       0
        0       0       0
2000    1       2       2       0       1      24      24      21       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       3       7       7       2       1       0
        0       0       0
2000    1       2       2       0       1      25      25      15       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       4       5       4       0       1       1
        0       0       0
2000    1       2       2       0       1      26      26       6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       1       3       0       0
        1       0       0
2000    1       2       2       0       1      27      27       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       1       2       1       0
        0       0       0
2000    1       2       2       0       1      28      28       7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       1       0       0       2       1       2       0       0
        0       0       0
2000    1       2       2       0       1      29      29       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       1       0       0
        0       0       0
2000    1       2       2       0       1      30      30       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
2001    1       2       1       0       1      16      16       2       0       0       0
        2       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1      17      17      16       0       0       0
        7       8       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1      18      18      17       0       0       0
        2      12       3       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1      19      19      25       0       0       0
        5      15       5       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1      20      20      11       0       0       0
        4       5       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1      21      21      21       0       0       0
        3      10       5       2       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1      22      22      20       0       0       0
        0       7      12       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1      23      23      28       0       0       0
        2       9      15       1       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1      24      24      34       0       0       0
        0       6      18       9       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2001    1       2       1       0       1       25      25      36      0       0       0
        1       5       14      11      3       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       26      26      19      0       0       0
        1       2       6       8       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       27      27      21      0       0       0
        0       1       7       9       4       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       28      28      17      0       0       0
        0       0       2       8       4       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       29      29      17      0       0       0
        0       0       3       5       6       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       30      30      10      0       0       0
        0       0       1       3       3       2       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       31      31      19      0       0       0
        0       0       0       3       6       5       3       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       32      32      11      0       0       0
        0       0       0       4       2       2       3       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       33      33      8       0       0       0
        0       0       0       1       3       3       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       34      34      2       0       0       0
        0       0       0       0       0       0       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       35      35      10      0       0       0
        0       0       0       0       1       3       3       2       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       36      36      2       0       0       0
        0       0       0       0       0       0       1       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       37      37      2       0       0       0
        0       0       0       0       0       0       0       0       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       39      39      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       1       0       1       41      41      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       2       2       0       1       4       4       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       1       0       0       0       0
        0       0       0
2001    1       2       2       0       1       14      14      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0
2001    1       2       2       0       1       16      16      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       1       4       4       0       0       0       0       0       0
        0       0       0
2001    1       2       2       0       1       17      17      42      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       11      19      9       1       0       0       0       0
        0       0       0
2001    1       2       2       0       1       18      18      49      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       7       21      16      3       1       1       0       0
        0       0       0
2001    1       2       2       0       1       19      19      40      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       14      17      5       1       0       0       0
        0       0       0
2001    1       2       2       0       1       20      20      36      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       9       17      6       2       0       1       0
        0       0       0
2001    1       2       2       0       1       21      21      28      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3       13      9       1       1       0       0
        0       0       0
2001    1       2       2       0       1       22      22      26      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       4       10      7       2       1       2       0
        0       0       0
2001    1       2       2       0       1       23      23      22      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       7       6       5       1       0       0
        0       0       0
2001    1       2       2       0       1       24      24      10      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       3       4       1       0       0
        0       0       0
2001    1       2       2       0       1       25      25      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       3       3       1       2       1
        0       0       0
2001    1       2       2       0       1       26      26      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       2       1       2       4       2       1
        0       0       0
2001    1       2       2       0       1       27      27      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       1       0       0
        0       0       0
2001    1       2       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
2001    1       2       2       0       1       29      29      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       1       0       0
        0       0       0
2001    1       2       2       0       1       30      30      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
2001    1       2       2       0       1       33      33      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
2002    1       2       1       0       1       16      16      4       0       0       0
        2       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       17      17      34      0       0       4
        19      10      1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2002    1       2       1       0       1       18      18      38      0       0       4
        17      16      1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       19      19      40      0       0       4
        12      22      2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       20      20      35.5    0       0       1
        8       21      5.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       21      21      23      0       0       0
        4       15      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       22      22      37      0       0       0
        1       26      9       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       23      23      27      0       0       0
        0       14      12      1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       24      24      28      0       0       0
        1       7       16      4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       25      25      29      0       0       0
        0       4       16      8       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       26      26      30      0       0       0
        1       1       9       17      2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       27      27      27.5    0       0       0
        1       2       6       18.5    0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       28      28      29      0       0       0
        0       1       8       9       9       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       29      29      30      0       0       0
        0       0       4       16      8       0       0       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       30      30      26      0       0       0
        0       0       2       6       15      1       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       31      31      10      0       0       0
        0       0       1       3       3       2       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       32      32      23      0       0       0
        0       0       1       2       5       7       6       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       33      33      9       0       0       0
        0       0       0       1       2       1       4       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       34      34      6       0       0       0
        0       0       0       0       0       4       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       35      35      9       0       0       0
        0       0       0       1       3       0       3       2       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       36      36      1       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       37      37      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       38      38      3       0       0       0
        0       0       0       0       0       1       0       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       39      39      3       0       0       0
        0       0       0       0       0       0       0       1       1       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       40      40      1       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       1       0       1       42      42      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       2       0       1       13      13      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0
2002    1       2       2       0       1       14      14      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       2       0       0       0       0       0       0       0
        0       0       0
2002    1       2       2       0       1       16      16      9       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       1       4       1       0       0       0       0       0
        0       0       0
2002    1       2       2       0       1       17      17      60      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       17      33      5       2       0       0       0       0
        0       0       0
2002    1       2       2       0       1       18      18      57      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       13      31      10      2       0       0       0       0
        0       0       0
2002    1       2       2       0       1       19      19      49      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       5       23      17      3       1       0       0       0
        0       0       0
2002    1       2       2       0       1       20      20      48.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       3       19      21.5    4       0       0       0       0
        0       0       0
2002    1       2       2       0       1       21      21      38      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       13      11      11      2       0       0       1
        0       0       0
2002    1       2       2       0       1       22      22      35      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       15      13      4       0       0       0
        0       0       0
2002    1       2       2       0       1       23      23      22      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       5       9       4       1       0       0
        0       0       0
2002    1       2       2       0       1       24      24      20      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       1       3       6       7       2       0       0
        0       0       0
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2002    1       2       2       0       1       25      25      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       3       1       1       0       0
        0       0       0
2002    1       2       2       0       1       26      26      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       2       1       0       0       0
        0       0       0
2002    1       2       2       0       1       27      27      4.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1.5     2       0       1       0
        0       0       0
2003    1       2       1       0       1       16      16      2       0       0       0
        2       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       17      17      25.5    0       0       13
        11.5    1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       18      18      36      0       0       6
        28      2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       19      19      33      0       0       5
        18      9       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       20      20      31      0       0       0
        24      6       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       21      21      39      0       0       1
        26      12      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       22      22      26      0       0       0
        16      6       2       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       23      23      30      0       0       0
        13      8       6       3       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       24      24      31      0       0       0
        6       14      7       3       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       25      25      33.5    0       0       0
        3       16.5    11      1       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       26      26      22      0       0       1
        0       5       10      3       1       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       27      27      21      0       0       0
        1       7       5       5       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       28      28      24      0       0       0
        0       5       6       6       4       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       29      29      12      0       0       0
        0       0       4       3       3       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       30      30      20      0       0       1
        1       0       8       3       3       2       1       0       1       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       31      31      18      0       0       0
        0       1       1       6       5       1       1       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       32      32      9       0       0       0
        0       0       1       2       3       2       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       33      33      18      0       0       0
        0       0       1       7       6       1       2       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       34      34      10      0       0       0
        0       0       2       1       1       4       0       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       35      35      3       0       0       0
        0       0       0       0       0       0       2       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       36      36      8       0       0       0
        0       0       0       0       1       2       2       3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       38      38      2       0       0       0
        0       0       0       0       0       1       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       39      39      3       0       0       0
        0       0       0       0       0       1       1       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       40      40      2       0       0       0
        0       0       0       0       0       0       0       1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       41      41      1       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       1       0       1       42      42      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2003    1       2       2       0       1       15      15      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0
2003    1       2       2       0       1       16      16      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       5       1       0       0       0       0       0       0
        0       0       0
2003    1       2       2       0       1       17      17      55.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       31.5    16      1       0       1       0       0       0
        0       0       0
2003    1       2       2       0       1       18      18      80      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       44      23      5       1       1       0       0       0
        0       0       0
2003    1       2       2       0       1       19      19      47      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       19      13      10      1       1       0       0       0
        0       0       0
2003    1       2       2       0       1       20      20      46      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       14      13      13      3       3       0       0       0
        0       0       0
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2003    1       2       2       0       1       21      21      27      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       5       9       7       4       0       1       0       0
        0       0       0
2003    1       2       2       0       1       22      22      25      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       9       8       4       1       2       0       0
        0       0       0
2003    1       2       2       0       1       23      23      20      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       2       7       3       4       1       0       0
        0       0       0
2003    1       2       2       0       1       24      24      15      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       4       5       4       0       0
        1       0       0
2003    1       2       2       0       1       25      25      9.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1.5     3       2       1       1       1       0
        0       0       0
2003    1       2       2       0       1       26      26      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       1       2       1       1       0
        0       0       0
2003    1       2       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0
2003    1       2       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0
2003    1       2       2       0       1       31      31      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0
2003    1       2       2       0       1       33      33      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       2       0       0       0       0
        0       0       0
2004    1       2       1       0       1       14      14      1       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       16      16      3       0       0       2
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       17      17      20.5    0       2       9.5
        6.5     2.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       18      18      20.5    0       0       2
        15      2.5     1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       19      19      16.5    0       0       0
        9.5     6       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       20      20      31      0       0       3
        15.5    11.5    1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       21      21      22.5    0       0       3
        9.5     9       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       22      22      20      0       0       2
        6       7       3       2       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       23      23      25.5    0       0       2
        9.5     10      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       24      24      22      0       1       0
        5       13      3       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       25      25      29.5    0       0       2
        7       13      5       2       0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       26      26      17      0       0       0
        4       9       4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       27      27      16      0       0       0
        0       2       12      2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       28      28      9       0       0       0
        0       2       3.5     3       0       0       0.5     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       29      29      9       0       0       0
        1       4       0       4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       30      30      11      0       0       0
        0       3       4       4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       31      31      6       0       0       0
        0       3       1       1       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       32      32      9       0       0       0
        0       0       2       2       3       1       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       33      33      4       0       0       0
        0       0       0       4       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       34      34      6       0       0       1
        0       1       0       1       1       1       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       35      35      3.5     0       0       0
        0       1       0       0.5     0       1       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       36      36      1       0       0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       37      37      3       0       0       0
        0       0       0       0       1       1       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       1       0       1       42      42      0.5     0       0       0
        0       0       0       0       0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       2       2       0       1       16      16      12      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       4       7       0       0       0       0       0       0
        0       0       0
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2004    1       2       2       0       1       17      17      40.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4.5     21.5    12.5    1       1       0       0       0       0
        0       0       0
2004    1       2       2       0       1       18      18      68.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       6       26      31.5    5       0       0       0       0       0
        0       0       0
2004    1       2       2       0       1       19      19      61.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       24.5    28      5       1       0       0       0       0
        0       0       0
2004    1       2       2       0       1       20      20      44      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       20.5    19.5    1       1       0       0       0       0
        0       0       0
2004    1       2       2       0       1       21      21      52.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       14.5    22      10      4       0       0       0       0
        0       0       0
2004    1       2       2       0       1       22      22      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       7       4       2       1       0       0       0       0
        0       0       0
2004    1       2       2       0       1       23      23      15.5    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1.5     6       2       2       2       2       0       0
        0       0       0
2004    1       2       2       0       1       24      24      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       6       4       4       0       2       1       0       0
        0       0       0
2004    1       2       2       0       1       25      25      7.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3       1       0       2.5     0       0       0
        0       0       0
2004    1       2       2       0       1       26      26      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       2       0       0       2       0       0
        0       0       0
2004    1       2       2       0       1       28      28      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.5     0       0       0       0.5     0
        0       0       0
2004    1       2       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0
2004    1       2       2       0       1       31      31      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
2004    1       2       2       0       1       35      35      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.5     0       0       0       0
        0       0       0
2004    1       2       2       0       1       42      42      0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.5     0       0       0
        0       0       0
2005    1       2       1       0       1       16      16      1       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       2       1       0       1       17      17      12      0       0       7
        5       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       2       1       0       1       18      18      13      0       0       4
        8       1       0       0       0       0       0       0       0       0       0
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      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      19     19     8      0      0      2
      5      1      0      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      20     20     17     0      0      2
      9      3      3      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      21     21     11     0      0      1
      4      5      1      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      22     22     15     0      0      1
      2      10     2      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      23     23     18     0      0      0
      1      9      7      1      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      24     24     13     0      0      1
      1      6      2      2      1      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      25     25     15     0      0      0
      1      6      6      2      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      26     26     17     0      0      1
      4      6      6      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      27     27     7      0      0      0
      1      2      2      2      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      28     28     10     0      0      0
      1      3      4      1      1      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      29     29     6      0      0      0
      2      0      4      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      30     30     7      0      0      0
      0      2      1      2      1      1      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      31     31     7      0      0      0
      0      1      1      3      1      0      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      33     33     3      0      0      0
      0      0      1      1      0      0      1      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      34     34     1      0      0      0
      0      1      0      0      0      0      0      0      0      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      35     35     3      0      0      0
      0      0      0      0      0      1      1      0      1      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
2005  1      2      1      0      1      36     36     3      0      0      0
      0      0      0      0      1      0      0      1      1      0      0
      0      0      0      0      0      0      0      0      0      0      0
      0      0      0
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2005    1       2       1       0       1       37      37      2       0       0       0
        0       0       0       0       1       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2005    1       2       2       0       1       16      16      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       3       3       1       0       0       0       0       0
        0       0       0
2005    1       2       2       0       1       17      17      43      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       8       18      11      5       0       0       0       0       0
        0       0       0
2005    1       2       2       0       1       18      18      54      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       5       16      25      6       2       0       0       0       0
        0       0       0
2005    1       2       2       0       1       19      19      56      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       7       16      22      9       2       0       0       0       0
        0       0       0
2005    1       2       2       0       1       20      20      49      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       4       18      13      8       5       1       0       0       0
        0       0       0
2005    1       2       2       0       1       21      21      31      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       1       12      13      3       0       0       0       0
        0       0       0
2005    1       2       2       0       1       22      22      29      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       5       10      9       3       1       1       0       0
        0       0       0
2005    1       2       2       0       1       23      23      18      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       2       3       3       5       3       1       0       0
        0       0       0
2005    1       2       2       0       1       24      24      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       5       1       1       0       1       0
        0       0       0
2005    1       2       2       0       1       25      25      5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       2       1       1       0       0
        0       0       0
2005    1       2       2       0       1       26      26      4       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       0       2       0       0       1
        0       0       0
2005    1       2       2       0       1       27      27      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
2005    1       2       2       0       1       28      28      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       1       0       0       0
        0       0       0
2006    1       2       1       0       1       16      16      2       0       0       0
        1       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       17      17      13      0       0       1
        8       4       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       18      18      15      0       0       1
        7       6       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       19      19      20      0       0       0
        8       10      2       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       20      20      16      0       0       0
        1       12      2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       21      21      21      0       0       0
        2       15      4       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       22      22      32      0       0       0
        1       9       12      9       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       23      23      27      0       0       0
        1       11      9       4       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       24      24      42      0       0       0
        1       6       21      12      1       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       25      25      43      0       0       0
        0       6       18      12      6       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       26      26      25      0       0       0
        0       3       9       9       3       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       27      27      30      0       0       0
        0       1       6       14      5       2       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       28      28      23      0       0       0
        0       1       6       11      4       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       29      29      14      0       0       0
        0       1       3       4       5       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       30      30      9       0       0       0
        0       0       0       2       5       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       31      31      10      0       0       0
        0       0       1       1       4       3       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       32      32      7       0       0       0
        0       0       0       1       2       0       3       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       33      33      14      0       0       0
        0       0       1       0       3       5       2       1       2       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       34      34      8       0       0       0
        0       0       1       0       0       2       2       1       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       35      35      6       0       0       0
        0       0       0       0       1       1       3       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       36      36      4       0       0       0
        0       0       0       0       0       1       1       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2006    1       2       1       0       1       37      37      3       0       0       0
        0       0       0       0       1       0       0       0       0       2       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       38      38      2       0       0       0
        0       0       0       0       0       0       1       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       39      39      3       0       0       0
        0       0       0       0       0       0       1       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       40      40      4       0       0       0
        0       0       0       0       0       0       0       1       1       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       1       0       1       42      42      1       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2006    1       2       2       0       1       16      16      20      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       5       9       4       1       0       0       0       0
        0       0       0
2006    1       2       2       0       1       17      17      74      0       0       0
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        0       0       0       18      37      18      1       0       0       0       0
        0       0       0
2006    1       2       2       0       1       18      18      76      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       15      32      21      6       0       0       0       0
        0       0       0
2006    1       2       2       0       1       19      19      81      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       10      27      35      9       0       0       0       0
        0       0       0
2006    1       2       2       0       1       20      20      51      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       13      25      11      0       0       0       0
        0       0       0
2006    1       2       2       0       1       21      21      31      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       7       10      10      2       0       0       0
        0       0       0
2006    1       2       2       0       1       22      22      29      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       4       8       10      6       0       0       0
        0       0       0
2006    1       2       2       0       1       23      23      16      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       5       7       2       1       1       0
        0       0       0
2006    1       2       2       0       1       24      24      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       2       2       2       0       0       0
        0       0       0
2006    1       2       2       0       1       25      25      11      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       1       3       3       2       0       1
        0       0       0
2006    1       2       2       0       1       26      26      3       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       2       0       0       0
        1       0       0
2006    1       2       2       0       1       27      27      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       2       0       0
        0       0       0
2006    1       2       2       0       1       28      28      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       1       1       0       0       0
        0       0       0
2006    1       2       2       0       1       29      29      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       1
        0       0       0
2007    1       2       1       0       1       14      14      6       0       0       1
        4       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       15      15      19      0       0       7
        8       3       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       16      16      16      0       0       3
        10      3       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       17      17      9       0       0       4
        4       1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       18      18      27      0       0       2
        14      9       2       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       19      19      12      0       0       0
        6       4       0       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       20      20      21      0       0       1
        4       13      2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       21      21      22      0       0       0
        3       13      4       2       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       22      22      27      0       0       0
        3       6       13      3       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       23      23      24      0       0       0
        1       4       10      7       2       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       24      24      24      0       0       0
        2       4       9       5       2       1       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       25      25      28      0       0       0
        2       1       10      10      4       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       26      26      21      0       0       0
        1       3       6       5       4       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       27      27      30      0       0       0
        0       2       5       15      5       2       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       28      28      15      0       0       0
        1       0       4       2       4       3       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2007    1       2       1       0       1       29      29      21      0       0       0
        0       0       3       6       7       3       2       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2007   1      2      1      0      1      30     30     15     0      0      0
       0      0      2      3      5      4      1      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      31     31     16     0      0      0
       0      0      0      3      6      6      0      1      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      32     32     4      0      0      0
       0      0      0      1      1      0      2      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      33     33     3      0      0      0
       0      0      0      0      2      1      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      34     34     5      0      0      0
       0      0      0      1      1      0      3      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      35     35     9      0      0      0
       0      0      0      0      1      3      0      2      3      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      36     36     5      0      0      0
       0      0      0      0      0      2      1      2      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      37     37     8      0      0      0
       0      0      0      0      0      0      5      0      2      1      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      38     38     1      0      0      0
       0      0      0      0      0      0      1      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      39     39     1      0      0      0
       0      0      0      0      0      0      0      0      1      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      1      0      1      42     42     1      0      0      0
       0      0      0      0      0      0      0      0      0      0      1
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0
2007   1      2      2      0      1      13     13     3      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      1      2      0      0      0      0      0      0      0
       0      0      0
2007   1      2      2      0      1      14     14     27     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      5      13     9      0      0      0      0      0      0
       0      0      0
2007   1      2      2      0      1      15     15     33     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      9      13     8      3      0      0      0      0      0
       0      0      0
2007   1      2      2      0      1      16     16     54     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      5      16     25     7      1      0      0      0      0
       0      0      0
2007   1      2      2      0      1      17     17     45     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      17     19     8      1      0      0      0      0
       0      0      0
2007   1      2      2      0      1      18     18     48     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      7      11     24     5      1      0      0      0
       0      0      0
2007   1      2      2      0      1      19     19     45     0      0      0
       0      0      0      0      0      0      0      0      0      0      0
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        0       0       0       9      14      11      10       1       0       0       0
        0       0       0
2007    1       2       2       0       1      20      20      40       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       9      15      11       3       0       0       0
        0       0       0
2007    1       2       2       0       1      21      21      27       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       3      13       8       2       0       0       0
        0       0       0
2007    1       2       2       0       1      22      22      27       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       8      10       5       1       0       0
        0       0       0
2007    1       2       2       0       1      23      23      18       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       3       2       2       8       2       0       1
        0       0       0
2007    1       2       2       0       1      24      24      13       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       7       2       2       1       0
        0       0       0
2007    1       2       2       0       1      25      25       7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       2       0       1       4       0       0       0
        0       0       0
2007    1       2       2       0       1      26      26       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0
2007    1       2       2       0       1      27      27       5       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       3       2       0       0
        0       0       0
2007    1       2       2       0       1      28      28       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0
2008    1       2       1       0       1      14      14       7       0       0       4
        3       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1      15      15      12       0       0       3
        5       4       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1      16      16      18       0       0       3
       13       2       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1      17      17      25       0       0       2
       16       4       2       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1      18      18      29       0       0       1
       11      12       4       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1      19      19      24       0       0       0
        7      12       4       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1      20      20      27       0       0       0
        8      13       5       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1      21      21      20       0       0       0
        2       8       7       1       1       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
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2008    1       2       1       0       1       22      22      23      0       0       0
        1       6       8       5       3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       23      23      18      0       0       0
        1       4       4       4       4       0       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       24      24      14      0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       25      25      19      0       0       0
        0       3       3       10      3       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       26      26      18      0       0       0
        0       0       3       11      2       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       27      27      23      0       0       0
        0       1       4       11      4       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       28      28      11      0       0       0
        0       0       0       4       5       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       29      29      11      0       0       0
        0       0       2       1       4       1       1       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       30      30      12      0       0       0
        0       0       1       3       3       3       0       2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       31      31      4       0       0       0
        0       0       1       0       0       3       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       32      32      8       0       0       0
        0       0       0       0       1       4       1       1       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       33      33      4       0       0       0
        0       0       0       0       2       2       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       34      34      6       0       0       0
        0       0       0       0       3       2       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       36      36      1       0       0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       37      37      5       0       0       0
        0       0       0       0       0       0       1       0       2       0       2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       40      40      2       0       0       0
        0       0       0       0       0       0       0       0       1       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       1       0       1       42      42      2       0       0       0
        0       0       0       0       0       0       0       0       0       1       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2008    1       2       2       0       1       13      13      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

```
        0       0       1       1       0       0       0       0       0       0       0
        0       0       0
2008    1       2       2       0       1       14      14      23      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       14      5       2       0       0       0       0       0
        0       0       0
2008    1       2       2       0       1       15      15      52      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       3       29      13      7       0       0       0       0       0
        0       0       0
2008    1       2       2       0       1       16      16      46      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       2       18      16      8       2       0       0       0       0
        0       0       0
2008    1       2       2       0       1       17      17      45      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       14      14      10      5       1       0       0       0
        0       0       0
2008    1       2       2       0       1       18      18      38      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       3       11      16      6       1       0       0       0
        0       0       0
2008    1       2       2       0       1       19      19      57      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       5       18      20      10      4       0       0       0
        0       0       0
2008    1       2       2       0       1       20      20      38      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       2       3       5       18      9       1       0       0
        0       0       0
2008    1       2       2       0       1       21      21      21      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       4       6       7       3       1       0       0
        0       0       0
2008    1       2       2       0       1       22      22      17      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       4       6       5       0       1       0
        0       0       0
2008    1       2       2       0       1       23      23      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       8       4       0       1       0
        0       0       0
2008    1       2       2       0       1       24      24      14      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       3       4       5       2       0       0
        0       0       0
2008    1       2       2       0       1       25      25      13      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       1       0       3       7       0       1       0
        0       0       1
2008    1       2       2       0       1       26      26      7       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       2       2       1       1       0
        0       0       0
2008    1       2       2       0       1       27      27      6       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       2       2       0
        1       0       0
2008    1       2       2       0       1       28      28      2       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       1
        0       0       0
2008    1       2       2       0       1       29      29      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0

# Triennial 301 lines
```

```
1992    1       3       1       0       1       4       4       5.436362        0.666666667
        0.333333333     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1992    1       3       1       0       1       5       5       3.290908        0.5     0.25
        0.25    0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       6       6       6.72727 0.6     0.4     0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0
1992    1       3       1       0       1       7       7       4.654543        0.555555556
        0.444444444     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1992    1       3       1       0       1       8       8       1.072727        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       10      10      1.072727        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       11      11      4.436362        0       0.5
        0.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       12      12      2.145454        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       13      13      3.363635        0       0.8
        0.2     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       14      14      1.145454        0       0
        1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       15      15      3.363635        0       0.4
        0.4     0       0       0.2     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       16      16      3.218181        0
        0.666666667     0       0.333333333     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1992    1       3       1       0       1       17      17      2.363635        0       0.2
        0.6     0.2     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       18      18      5.799997        0
        0.272727273     0.363636364     0.363636364     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1992    1       3       1       0       1       19      19      4.436362        0       0
        0.666666667     0.166666667     0.166666667     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1992    1       3       1       0       1       20      20      3.218181        0
        0.333333333     0.666666667     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1992    1       3       1       0       1       21      21      3.363635        0       0
        0.8     0.2     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       22      22      3.363635        0       0
        0.4     0.2     0.4     0       0       0       0       0       0       0       0
```

```
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       23      23      3.363635        0       0
        0.6     0.4     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       24      24      2.145454        0       0
        0       0.5     0.5     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       25      25      2.145454        0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       26      26      2.290908        0       0
        0.25    0       0.5     0.25    0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       27      27      1.290908        0       0
        0.25    0.75    0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       28      28      2.436362        0       0
        0       0.333333333     0       0.333333333     0.333333333     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1992    1       3       1       0       1       29      29      2.509089        0       0
        0       0.285714286     0       0.285714286     0       0.428571429     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1992    1       3       1       0       1       30      30      2.218181        0
        0.333333333     0       0       0       0.333333333     0.333333333     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1992    1       3       1       0       1       31      31      3.290908        0       0
        0       0       0       0.25    0.25    0.25    0.25    0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       32      32      3.290908        0       0
        0       0       0.25    0       0.75    0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       33      33      1.290908        0       0
        0       0       0.5     0       0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       1       0       1       34      34      1.218181        0       0
        0       0       0       0.333333333     0       0.333333333     0       0
        0.333333333     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1992    1       3       1       0       1       35      35      1.218181        0       0
        0       0       0       0       0.333333333     0.333333333     0.333333333     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1992    1       3       1       0       1       36      36      1.072727        0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       3       3       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       4       4       1.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.5     0.5     0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       5       5       2.436362        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.666666667     0.333333333     0       0       0       0       0       0
        0       0       0       0       0       0
```

```
1992    1       3       2       0       1       6       6       2.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.333333333     0.666666667     0       0       0       0       0       0
        0       0       0       0       0       0
1992    1       3       2       0       1       7       7       1.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.5     0.5     0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       8       8       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       9       9       2.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.666666667     0       0.333333333     0       0       0       0
        0       0       0       0       0       0
1992    1       3       2       0       1       10      10      1.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.666666667     0.333333333     0       0       0       0       0
        0       0       0       0       0       0
1992    1       3       2       0       1       11      11      2.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.333333333     0.333333333     0       0       0.333333333     0       0       0
        0       0       0       0       0       0
1992    1       3       2       0       1       12      12      2.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.666666667     0.333333333     0       0       0       0       0
        0       0       0       0       0       0
1992    1       3       2       0       1       13      13      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       14      14      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       15      15      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       16      16      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       17      17      2.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.333333333     0.666666667     0       0       0       0
        0       0       0       0       0       0
1992    1       3       2       0       1       18      18      4.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.4     0.4     0       0       0.2     0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       19      19      3.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.75    0       0       0.25    0       0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       21      21      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.25    0.5     0.25    0       0       0       0
        0       0       0       0
1992    1       3       2       0       1       22      22      2.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.333333333     0.333333333     0       0.333333333
        0       0       0       0       0       0       0
1992    1       3       2       0       1       23      23      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.333333333     0       0.666666667     0       0
        0       0       0       0       0       0
1992    1       3       2       0       1       24      24      2.218181        0       0
        0       0       0       0       0       0       0       0       0       0
```

```
        0       0       0       0       0.333333333     0       0       0.666666667     0
        0       0       0       0       0       0
1992    1       3       2       0       1       25      25      3.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.2     0       0.2     0.2     0       0.4     0       0       0
        0       0       0       0
1992    1       3       2       0       1       27      27      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0
1992    1       3       2       0       1       29      29      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0       0
1995    1       3       1       0       1       2       2       3.218181        1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       3       3       10.72727        0.8     0.2
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       4       4       14.672721       0.782608696
        0.130434783     0.086956522     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1995    1       3       1       0       1       5       5       9.872724        0.416666667
        0.583333333     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1995    1       3       1       0       1       6       6       10.163632       0.5625  0.3125
        0.125   0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       7       7       5.509089        0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       8       8       1.072727        0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       9       9       4.363635        0       0.8
        0.2     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       10      10      1.218181        0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       11      11      4.509089        0.142857143
        0.571428571     0.285714286     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1995    1       3       1       0       1       12      12      7.509089        0
        0.428571429     0.571428571     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1995    1       3       1       0       1       13      13      10.72727        0       0.3
        0.7     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       14      14      12.236359       0
        0.117647059     0.705882353     0.176470588     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1995    1       3       1       0       1       15      15      16.036356       0
        0.142857143     0.5     0.321428571     0.035714286     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
```

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1995    1       3       1       0       1       16      16      14.45454        0       0.1
        0.35    0.3     0.2     0.05    0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       17      17      11.163632       0       0
        0.5     0.4375  0       0.0625  0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       18      18      17.45454        0.05    0
        0.25    0.45    0.2     0       0       0.05    0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       19      19      16.327264       0       0.03125
        0.15625 0.625   0.1875  0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       20      20      17.745448       0       0
        0.291666667     0.416666667     0.083333333     0.166666667     0.041666667     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
1995    1       3       1       0       1       21      21      12.309086       0       0
        0.055555556     0.277777778     0.444444444     0.111111111     0       0.055555556
        0.055555556     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
1995    1       3       1       0       1       22      22      13.945451       0       0
        0       0.230769231     0.461538462     0.153846154     0.153846154     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1995    1       3       1       0       1       23      23      7.799997        0       0
        0.090909091     0.090909091     0.636363636     0.181818182     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1995    1       3       1       0       1       24      24      6.581816        0       0
        0       0.125   0.75    0.125   0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       25      25      6.436362        0       0
        0       0       0.166666667     0.5     0.166666667     0.166666667     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1995    1       3       1       0       1       26      26      9.654543        0       0
        0       0.111111111     0.555555556     0.222222222     0       0.111111111     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1995    1       3       1       0       1       27      27      2.145454        0       0
        0       0       0       0.5     0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       28      28      6.436362        0       0
        0       0.333333333     0       0.5     0.166666667     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1995    1       3       1       0       1       29      29      2.145454        0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       30      30      2.145454        0       0
        0       0       0       0       0       0.5     0       0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       31      31      1.145454        0       0
        0       0       0       0       0       0.5     0.5     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       32      32      1.072727        0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       33      33      2.145454        0       0
        0       0       0       0       0.5     0.5     0       0       0       0       0
```

```
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       34      34      2.145454        0       0
        0       0       0       0       0       0       0.5     0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       1       0       1       35      35      2.218181        0       0
        0       0       0       0       0       0.333333333     0       0.333333333
        0.333333333     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1995    1       3       1       0       1       36      36      3.218181        0       0
        0       0       0       0       0.333333333     0       0.333333333     0       0
        0.333333333     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1995    1       3       1       0       1       38      38      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       1       1       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       2       2       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       3       3       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       4       4       3.436362        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.666666667     0.333333333     0       0       0       0       0       0
        0       0       0       0       0       0
1995    1       3       2       0       1       5       5       7.799997        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.454545455     0.545454545     0       0       0       0       0       0
        0       0       0       0       0       0
1995    1       3       2       0       1       6       6       5.581816        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.75    0.25    0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       7       7       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.5     0.5     0       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       9       9       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       10      10      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.6     0.4     0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       11      11      4.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.8     0.2     0       0       0       0       0       0       0
        0       0       0       0
1995    1       3       2       0       1       12      12      9.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.3     0.6     0.1     0       0       0       0       0       0       0
        0       0       0
1995    1       3       2       0       1       13      13      7.509089        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.714285714     0.285714286     0       0       0       0
        0       0       0       0       0       0
1995    1       3       2       0       1       14      14      11.163632       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.0625  0.625   0.25    0.0625  0       0       0       0       0
        0       0       0       0
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1995    1       3       2       0       1       15      15      7.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.6     0.4     0       0       0       0       0       0       0
        0       0       0
1995    1       3       2       0       1       16      16      11.872724       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.166666667     0.166666667     0.5     0.166666667     0       0
        0       0       0       0       0       0       0
1995    1       3       2       0       1       17      17      14.963629       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.185185185     0.62962963      0.037037037     0.148148148
        0       0       0       0       0       0       0       0
1995    1       3       2       0       1       18      18      14.18181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.033333333     0.033333333     0.033333333     0.666666667     0.033333333
        0.133333333     0.066666667     0       0       0       0       0       0       0
1995    1       3       2       0       1       19      19      11.236359       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.058823529     0.176470588     0.235294118     0.411764706
        0.058823529     0       0.058823529     0       0       0       0       0       0
1995    1       3       2       0       1       20      20      6.509089        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.714285714     0.285714286     0       0
        0       0       0       0       0       0
1995    1       3       2       0       1       21      21      7.654543        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.222222222     0.444444444     0.333333333     0
        0       0       0       0       0       0       0
1995    1       3       2       0       1       22      22      6.654543        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.222222222     0.444444444     0.111111111
        0.222222222     0       0       0       0       0       0       0
1995    1       3       2       0       1       23      23      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.333333333     0       0.666666667     0       0
        0       0       0       0       0       0
1995    1       3       2       0       1       24      24      2.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.4     0.2     0.2     0.2     0       0
        0       0       0       0
1995    1       3       2       0       1       25      25      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.666666667     0       0.333333333     0
        0       0       0       0       0       0
1995    1       3       2       0       1       26      26      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0
1995    1       3       2       0       1       27      27      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0.5     0       0
        0       0.5     0       0
1995    1       3       2       0       1       28      28      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0
1998    1       3       1       0       1       1       1       6.436362        1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       2       2       6.436362        1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       3       3       10.945451       0.923076923
        0.076923077     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1998    1       3       1       0       1       4       4       10.872724       1       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       5       5       6.581816        0.875   0.125
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       6       6       2.145454        1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       10      10      6.581816        0.125   0.875
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       11      11      7.509089        0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       12      12      7.581816        0.25    0.75
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       13      13      6.436362        0
        0.666666667     0.333333333     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1998    1       3       1       0       1       14      14      8.654543        0
        0.111111111     0.888888889     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1998    1       3       1       0       1       15      15      10.945451       0
        0.538461538     0.461538462     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1998    1       3       1       0       1       16      16      15.236359       0
        0.529411765     0.352941176     0.117647059     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       3       1       0       1       17      17      8.72727 0       0.3     0.5
        0.2     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       3       1       0       1       18      18      15.599994       0.045454545
        0.181818182     0.590909091     0.181818182     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       3       1       0       1       19      19      10.799997       0
        0.272727273     0.363636364     0.272727273     0.090909091     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
1998    1       3       1       0       1       20      20      12.381813       0
        0.105263158     0.526315789     0.263157895     0.105263158     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
1998    1       3       1       0       1       21      21      8.945451        0       0
        0.692307692     0.307692308     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1998    1       3       1       0       1       22      22      11.018178       0
        0.071428571     0.214285714     0.642857143     0.071428571     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
1998    1       3       1       0       1       23      23      6.581816        0       0
        0.125   0.5     0.375   0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       24      24      7.654543        0       0
        0.111111111     0.222222222     0.333333333     0.333333333     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
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1998    1       3       1       0       1       25      25      9.872724        0       0
        0.166666667     0.25    0.25    0.166666667     0.166666667     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1998    1       3       1       0       1       26      26      8.654543        0
        0.111111111     0.222222222     0.333333333     0.222222222     0.111111111     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
1998    1       3       1       0       1       27      27      8.654543        0       0
        0       0.222222222     0.222222222     0.444444444     0       0       0.111111111
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       3       1       0       1       28      28      7.509089        0       0
        0       0.142857143     0.285714286     0.285714286     0.285714286     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       3       1       0       1       29      29      5.72727 0       0       0
        0.3     0       0.4     0.3     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1998    1       3       1       0       1       30      30      2.145454        0       0
        0       0.5     0       0       0.5     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       31      31      5.509089        0       0
        0       0       0.428571429     0.285714286     0.142857143     0.142857143     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
1998    1       3       1       0       1       32      32      5.363635        0       0
        0       0       0.6     0       0.4     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       33      33      4.290908        0       0
        0       0.25    0.5     0       0.25    0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       34      34      1.072727        0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       1       0       1       35      35      2.145454        0       0
        0       0       0.5     0       0       0       0       0.5     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       1       1       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       2       2       4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       3       3       4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       4       4       6.654543        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       5       5       6.436362        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.833333333     0.166666667     0       0       0       0       0       0
        0       0       0       0       0       0
1998    1       3       2       0       1       8       8       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       9       9       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0.5     0.5     0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       10      10      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       11      11      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       12      12      5.436362        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.166666667     0.333333333     0.5     0       0       0       0       0
        0       0       0       0       0       0
1998    1       3       2       0       1       13      13      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.25    0.75    0       0       0       0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       14      14      6.654543        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.444444444     0.444444444     0.111111111     0       0       0
        0       0       0       0       0       0       0
1998    1       3       2       0       1       15      15      8.799997        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.272727273     0.636363636     0       0.090909091     0       0
        0       0       0       0       0       0       0
1998    1       3       2       0       1       16      16      8.799997        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.090909091     0.545454545     0.272727273     0.090909091     0
        0       0       0       0       0       0       0       0
1998    1       3       2       0       1       17      17      8.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.2     0.7     0.1     0       0       0       0       0       0       0
        0       0       0
1998    1       3       2       0       1       18      18      14.018178       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.214285714     0.285714286     0.357142857     0.071428571     0
        0       0.071428571     0       0       0       0       0       0
1998    1       3       2       0       1       19      19      12.090905       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.4     0.4     0.2     0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       20      20      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.2     0.2     0.2     0.4     0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       21      21      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.2     0.2     0.2     0.2     0.2     0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       22      22      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.333333333     0.333333333     0       0       0.333333333
        0       0       0       0       0       0       0
1998    1       3       2       0       1       23      23      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.5     0.5     0       0       0       0       0
        0       0       0       0
1998    1       3       2       0       1       24      24      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.5     0       0       0       0.5     0       0
        0       0       0       0
1998    1       3       2       0       1       26      26      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0
2001    1       3       1       0       1       1       1       7.654543        0.888888889
        0.111111111     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
```

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2001    1       3       1       0       1       2       2       15.672721       0.956521739
        0.043478261     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       1       0       1       3       3       17.109083       0.620689655
        0.344827586     0.034482759     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       4       4       24.545445       0.257142857
        0.714285714     0.028571429     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       5       5       20.745448       0.041666667
        0.916666667     0.041666667     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       6       6       10.872724       0.083333333
        0.666666667     0.25    0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       1       0       1       7       7       15.527267       0.238095238
        0.619047619     0.142857143     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       8       8       15.45454        0       0.6
        0.4     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       9       9       15.890902       0
        0.538461538     0.461538462     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       10      10      19.963629       0
        0.296296296     0.703703704     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       11      11      14.309086       0
        0.166666667     0.722222222     0.111111111     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2001    1       3       1       0       1       12      12      12.945451       0
        0.307692308     0.615384615     0.076923077     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2001    1       3       1       0       1       13      13      4.363635        0       0
        0.6     0.4     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       14      14      3.290908        0       0
        0.5     0.5     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       15      15      7.799997        0       0
        0.363636364     0.636363636     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       1       0       1       16      16      7.72727 0       0       0.4
        0.4     0.2     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2001    1       3       1       0       1       17      17      9.799997        0       0
        0.181818182     0.545454545     0.181818182     0.090909091     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2001    1       3       1       0       1       18      18      4.290908        0       0
        0.5     0.25    0.25    0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       19      19      5.363635        0       0
        0.4     0.2     0.2     0.2     0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       20      20      4.290908        0       0
        0       0.25    0.5     0.25    0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       21      21      5.363635        0       0
        0       0.6     0.4     0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       22      22      7.509089        0       0
        0.142857143     0.571428571     0.285714286     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       23      23      4.436362        0       0
        0       0       0.5     0.333333333     0.166666667     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       1       0       1       24      24      4.363635        0       0
        0       0.2     0       0.4     0.4     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       25      25      5.363635        0       0
        0       0       0.2     0.2     0.4     0.2     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       26      26      8.799997        0       0
        0       0       0       0.454545455     0.454545455     0.090909091     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       27      27      5.581816        0       0
        0       0       0       0.375   0.375   0.125   0.125   0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       28      28      4.436362        0       0
        0       0       0       0.166666667     0.5     0.166666667     0       0       0
        0       0       0.166666667     0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       1       0       1       29      29      3.290908        0       0
        0       0       0       0.25    0.25    0.25    0       0       0       0       0.25
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       30      30      5.654543        0       0
        0       0       0       0       0.333333333     0.222222222     0.222222222
        0.222222222     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2001    1       3       1       0       1       31      31      6.654543        0       0
        0       0       0       0.111111111     0.111111111     0.444444444     0.222222222
        0.111111111     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2001    1       3       1       0       1       32      32      4.436362        0       0
        0       0       0       0       0.166666667     0.166666667     0.333333333
        0.333333333     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2001    1       3       1       0       1       33      33      1.145454        0       0
        0       0       0       0       0.5     0.5     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       34      34      2.363635        0       0
        0       0       0       0       0       0.2     0.2     0.4     0.2     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       35      35      1.145454        0       0
        0       0       0       0       0       0.5     0       0       0.5     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       36      36      1.145454        0       0
        0       0       0       0       0       0.5     0.5     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
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2001    1       3       1       0       1       38      38      1.072727        0       0
        0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       39      39      1.072727        0       0
        0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       1       0       1       41      41      1.072727        0       0
        0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       1       1       4.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.833333333     0.166666667     0       0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       2       0       1       2       2       13.890902       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.769230769     0.230769231     0       0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       2       0       1       3       3       22.545445       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.428571429     0.542857143     0.028571429     0       0       0       0
        0       0       0       0       0       0
2001    1       3       2       0       1       4       4       16.963629       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.296296296     0.666666667     0.037037037     0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       2       0       1       5       5       10.799997       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.909090909     0.090909091     0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       2       0       1       6       6       4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       7       7       7.654543        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.777777778     0.222222222     0       0       0       0       0
        0       0       0       0       0       0
2001    1       3       2       0       1       8       8       17.236359       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.058823529     0.647058824     0.294117647     0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       2       0       1       9       9       18.745448       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.041666667     0.541666667     0.416666667     0       0       0       0
        0       0       0       0       0       0       0
2001    1       3       2       0       1       10      10      14.309086       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.055555556     0.444444444     0.388888889     0.111111111     0       0
        0       0       0       0       0       0       0       0
2001    1       3       2       0       1       11      11      10.945451       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.076923077     0.846153846     0       0.076923077     0       0
        0       0       0       0       0       0       0
2001    1       3       2       0       1       12      12      6.509089        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.142857143     0.714285714     0.142857143     0       0       0
        0       0       0       0       0       0       0
2001    1       3       2       0       1       13      13      8.581816        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.375   0.5     0.125   0       0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       14      14      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.4     0.6     0       0       0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       15      15      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0.5     0.5     0       0       0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       16      16      6.509089        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.571428571     0.428571429     0       0       0       0
        0       0       0       0       0       0
2001    1       3       2       0       1       17      17      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.2     0.4     0       0       0.2     0.2     0       0
        0       0       0       0
2001    1       3       2       0       1       18      18      6.436362        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.166666667     0.166666667     0.333333333
        0.333333333     0       0       0       0       0       0       0
2001    1       3       2       0       1       19      19      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       20      20      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       21      21      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.5     0       0       0.5     0
        0       0       0       0
2001    1       3       2       0       1       22      22      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.5     0.5     0       0       0       0
        0       0       0       0
2001    1       3       2       0       1       23      23      3.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.25    0.25    0.5     0       0
        0       0       0       0
2001    1       3       2       0       1       24      24      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0.5     0       0.5     0
        0       0       0       0
2001    1       3       2       0       1       25      25      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0
2001    1       3       2       0       1       26      26      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0
2001    1       3       2       0       1       27      27      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0
2004    1       3       1       0       1       3       3       2.218181        0.333333333
        0.666666667     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       1       0       1       4       4       3.218181        0.333333333
        0.666666667     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       1       0       1       5       5       3.218181        0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       6       6       2.218181        0
        0.666666667     0.333333333     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       7       7       4.290908        0       0.75
        0.25    0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
```

```
2004    1       3       1       0       1       8       8       3.218181        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       9       9       6.7227255       0
        0.769230769     0.230769231     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       10      10      5.363635        0       0.8
        0.2     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       11      11      6.509089        0
        0.142857143     0.571428571     0.142857143     0       0.142857143     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2004    1       3       1       0       1       12      12      16.236359       0
        0.117647059     0.764705882     0.117647059     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       3       1       0       1       13      13      7.72727 0       0.2     0.4
        0.4     0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       3       1       0       1       14      14      14.309086       0       0
        0.555555556     0.444444444     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       1       0       1       15      15      14.163632       0       0
        0.5     0.375   0.125   0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       16      16      9.018178        0       0
        0.357142857     0.642857143     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       1       0       1       17      17      21.0318115      0       0
        0.204081633     0.632653061     0.163265306     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       18      18      17.45454        0       0
        0       0.65    0.3     0.05    0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       19      19      12.090905       0       0
        0       0.533333333     0.4     0.066666667     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       1       0       1       20      20      18.309086       0       0
        0.111111111     0.444444444     0.333333333     0.055555556     0       0       0
        0.055555556     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       3       1       0       1       21      21      12.018178       0       0
        0       0.285714286     0.5     0.142857143     0.071428571     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       22      22      12.018178       0       0
        0       0.142857143     0.5     0.285714286     0.071428571     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       23      23      12.018178       0       0
        0       0.285714286     0.428571429     0.285714286     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       24      24      9.945451        0       0
        0.076923077     0.076923077     0.384615385     0.307692308     0.076923077     0
        0       0       0       0.076923077     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2004    1       3       1       0       1       25      25      14.090905       0       0
        0       0       0.8     0.066666667     0.133333333     0       0       0       0
```

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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       1       0       1       26      26      7.654543        0       0
        0       0       0.555555556     0.222222222     0.111111111     0.111111111     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       3       1       0       1       27      27      5.436362        0       0
        0       0       0.666666667     0.333333333     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       1       0       1       28      28      1.072727        0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       29      29      5.363635        0       0
        0       0       0.2     0.6     0.2     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       30      30      4.290908        0       0
        0       0       0.25    0       0.5     0.25    0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       31      31      1.072727        0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       32      32      3.218181        0       0
        0       0       0       0       0       0.333333333     0       0.333333333     0
        0.333333333     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       33      33      2.218181        0       0
        0       0       0       0       0.333333333     0.333333333     0.333333333     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       34      34      3.290908        0       0
        0       0       0       0       0.25    0.5     0       0.25    0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       35      35      2.145454        0       0
        0       0       0       0       0       0.5     0.5     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       36      36      5.363635        0       0
        0       0       0       0       0       0.2     0.2     0       0.4     0       0
        0.2     0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       38      38      1.072727        0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       39      39      3.218181        0       0
        0       0       0       0       0       0       0.333333333     0       0.333333333
        0.333333333     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       3       1       0       1       40      40      1.072727        0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       1       0       1       42      42      1.072727        0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       3       3       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.5     0.5     0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       4       4       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
```

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2004    1       3       2       0       1       5       5       1.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       6       6       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       8       8       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.333333333     0       0.666666667     0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       2       0       1       9       9       3.5045445       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.857142857     0.142857143     0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       2       0       1       10      10      6.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.166666667     0.833333333     0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       2       0       1       11      11      5.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.166666667     0.833333333     0       0       0       0       0
        0       0       0       0       0       0
2004    1       3       2       0       1       12      12      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.8     0.2     0       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       13      13      12.945451       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.076923077     0.692307692     0.076923077     0.076923077     0
        0       0       0       0.076923077     0       0       0       0
2004    1       3       2       0       1       14      14      5.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.666666667     0.333333333     0       0       0       0
        0       0       0       0       0       0
2004    1       3       2       0       1       15      15      10.72727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.1     0.8     0.1     0       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       16      16      6.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.166666667     0.833333333     0       0       0       0
        0       0       0       0       0       0
2004    1       3       2       0       1       17      17      11.3045415      0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.068965517     0.586206897     0.275862069     0.068965517
        0       0       0       0       0       0       0       0
2004    1       3       2       0       1       18      18      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.4     0.6     0       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       19      19      8.654543        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.444444444     0.555555556     0       0       0
        0       0       0       0       0       0
2004    1       3       2       0       1       20      20      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       21      21      3.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.5     0.5     0       0       0       0       0
        0       0       0       0
2004    1       3       2       0       1       22      22      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.25    0       0.25    0.5     0       0       0
        0       0       0       0
2004    1       3       2       0       1       23      23      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0.333333333     0.333333333     0       0.333333333
        0       0       0       0       0       0       0
2004    1       3       2       0       1       24      24      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.2     0.2     0       0.2     0       0.2     0.2     0
        0       0       0       0
2004    1       3       2       0       1       25      25      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0
2004    1       3       2       0       1       26      26      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0


# NWFSC 357 lines
2003    1       4       1       0       1       2       2       1.072727        1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       3       3       2.145454        1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       4       4       1.072727        1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       5       5       7.581816        0.876681913
        0.123318087     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       1       0       1       6       6       5.363635        0.23318323
        0.76681677      0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       1       0       1       7       7       3.5045445       0.747177399
        0.252822601     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       1       0       1       8       8       5.6499985       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       9       9       12.2318145      0.154383948
        0.689788389     0.155827663     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       1       0       1       10      10      10.945451       0.240504285
        0.552681688     0.206814027     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       1       0       1       11      11      14.090905       0.095440308
        0.832999929     0.035146295     0.036413469     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       4       1       0       1       12      12      19.599994       0
        0.23204057      0.76795943      0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       1       0       1       13      13      8.654543        0
        0.292856911     0.643597136     0.063545952     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2003    1       4       1       0       1       14      14      22.599994       0
        0.072544327     0.927455673     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
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2003   1      4      1      0      1      15     15     17.381813      0
       0.026050507    0.959695144    0      0.014254349    0      0      0      0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0
2003   1      4      1      0      1      16     16     16.090905      0
       0.079085079    0.867533303    0.039037327    0.01434429     0      0      0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0
2003   1      4      1      0      1      17     17     14.4499955     0      0
       0.591434668    0.388953176    0.007124618    0.012487537    0      0      0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0
2003   1      4      1      0      1      18     18     20.027267      0
       0.036506468    0.443214792    0.367543281    0.085418568    0.067316891    0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0
2003   1      4      1      0      1      19     19     14.163632      0
       0.005991351    0.715943148    0.254806927    0.008930322    0.014328252    0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0
2003   1      4      1      0      1      20     20     13.018178      0      0
       0.830456486    0.140362577    0.029180937    0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0
2003   1      4      1      0      1      21     21     7.654543       0      0
       0      1      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0
2003   1      4      1      0      1      22     22     7.509089       0      0
       0.151738103    0.848261897    0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0
2003   1      4      1      0      1      23     23     3.5772715      0      0
       0      0.762684765    0.237315235    0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0
2003   1      4      1      0      1      24     24     7.581816       0      0
       0      0.375444661    0.258850192    0.365705147    0      0      0      0
       0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0
2003   1      4      1      0      1      25     25     1.072727       0      0
       0      1      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0
2003   1      4      1      0      1      26     26     5.363635       0      0
       0      0.035506118    0.068523803    0.895970079    0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0
2003   1      4      1      0      1      27     27     3.218181       0      0
       0      0      0.273506376    0.726493624    0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0
2003   1      4      1      0      1      28     28     2.145454       0      0
       0      0.291028203    0      0.708971797    0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0
2003   1      4      1      0      1      29     29     1.072727       0      0
       0      0      0      0      0      1      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0
2003   1      4      1      0      1      30     30     6.436362       0      0
       0      0      0      0.091854207    0.772273864    0.135871929    0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0
2003   1      4      1      0      1      31     31     1.072727       0      0
       0      0      1      0      0      0      0      0      0      0      0
       0      0      0      0      0      0      0      0      0      0      0
       0      0      0      0
2003   1      4      1      0      1      32     32     1.072727       0      0
       0      0      0      1      0      0      0      0      0      0      0
```

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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       34      34      2.145454        0       0
        0       0       0       0       0       0.502513068     0       0.497486932     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       1       0       1       36      36      1.072727        0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       37      37      1.072727        0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       1       0       1       42      42      1.072727        0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       2       2       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       4       4       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       5       5       5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.623225816     0.376774184     0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       2       0       1       7       7       8.8681795       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.193704799     0.806295201     0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       2       0       1       8       8       5.6499985       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.891960464     0.108039536     0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       2       0       1       9       9       4.5772715       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.417479425     0.420587151     0.161933423     0       0       0       0
        0       0       0       0       0       0       0
2003    1       4       2       0       1       10      10      8.581816        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.119112209     0.880887791     0       0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       2       0       1       11      11      6.509089        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.695856428     0.304143572     0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       2       0       1       12      12      8.581816        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.190381555     0.809618445     0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       2       0       1       13      13      9.799997        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.090197812     0.909802188     0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       2       0       1       14      14      9.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.046524273     0.953475727     0       0       0       0       0       0
        0       0       0       0       0
2003    1       4       2       0       1       15      15      8.581816        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.12263062      0.87736938      0       0       0       0       0
        0       0       0       0       0       0
2003    1       4       2       0       1       16      16      10.799997       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.151921335     0.80963781      0.038440855     0       0       0
        0       0       0       0       0       0       0
```

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2003    1       4       2       0       1       17      17      12.3045415      0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.722290014     0.248511657     0.029198329     0       0
        0       0       0       0       0       0       0
2003    1       4       2       0       1       18      18      12.590905       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.495844987     0.456241829     0.047913184     0       0
        0       0       0       0       0       0       0
2003    1       4       2       0       1       19      19      9.654543        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.754254585     0.11275004      0.030828597     0.072864669
        0.02930211      0       0       0       0       0       0       0
2003    1       4       2       0       1       20      20      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.016228826     0       0.964053244     0.01971793      0       0
        0       0       0       0       0       0       0
2003    1       4       2       0       1       21      21      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       22      22      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.342332741     0       0       0       0
        0.657667259     0       0       0       0
2003    1       4       2       0       1       23      23      0.2863635       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0
        0       0       0       0
2003    1       4       2       0       1       24      24      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0
        0       0       0       0
2004    1       4       1       0       1       1       1       2.4318175       1       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       1       0       1       2       2       4.363635        0.817103382
        0.182896618     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       3       3       3.218181        0.273122176
        0.726877824     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       4       4       6.436362        0.425785683
        0.574214317     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       5       5       5.8681795       0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       1       0       1       6       6       2.145454        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       1       0       1       7       7       4.363635        0
        0.692542939     0.307457061     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       8       8       9.799997        0
        0.369404783     0.630595217     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       9       9       6.7227255       0
        0.486443175     0.513556825     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       10      10      11.872724       0
        0.377214684     0.622785316     0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       11      11      4.290908        0       0
        0.792825159     0.207174841     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       12      12      16.4499955      0
        0.127315347     0.599996435     0.272688218     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       4       1       0       1       13      13      13.090905       0
        0.152700071     0.682837659     0.164462271     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       4       1       0       1       14      14      12.872724       0       0
        0.60196928      0.341998632     0.056032089     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       15      15      16.163632       0       0
        0.183588636     0.816411364     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       16      16      12.945451       0       0
        0.365620864     0.634379136     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       17      17      9.72727 0       0
        0.466435351     0.370047964     0.163516685     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       18      18      10.945451       0       0
        0.095164127     0.708046075     0.128819474     0.067970324     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       4       1       0       1       19      19      9.945451        0       0
        0       0.680282905     0.319717095     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       20      20      7.509089        0       0
        0       0.466259102     0.359925626     0.173815272     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       21      21      6.581816        0       0
        0       0.201292612     0.439105052     0.262979058     0.096623277     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       4       1       0       1       22      22      4.290908        0       0
        0       0.399056516     0.170758201     0.430185283     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       23      23      5.363635        0       0
        0       0       0.624698426     0.375301574     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       24      24      5.363635        0       0
        0       0.384160945     0.278506421     0.167537237     0.169795397     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2004    1       4       1       0       1       25      25      6.436362        0       0
        0       0       0.296541175     0.345208138     0.358250687     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       1       0       1       26      26      5.363635        0       0
        0       0       0.770723233     0.229276767     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       27      27      4.290908        0       0
        0       0       0       0.732044593     0.267955407     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
```

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2004    1       4       1       0       1       28      28      1.072727        0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       1       0       1       29      29      2.145454        0       0
        0       0       0       0       0.473612515     0       0.526387485     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       1       0       1       30      30      1.072727        0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       1       0       1       31      31      1.072727        0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       1       0       1       32      32      1.072727        0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       2       0       1       1       1       0.2863635       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
2004    1       4       2       0       1       2       2       5.436362        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.768118859     0.231881141     0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       3       3       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.247546994     0.752453006     0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       4       4       6.581816        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.230490457     0.769509543     0       0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       5       5       7.8681795       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.541321616     0.400369077     0.058309306     0       0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       6       6       7.581816        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.725092994     0.274907006     0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       7       7       8.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0
2004    1       4       2       0       1       8       8       4.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.873468231     0.126531769     0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       9       9       12.2318145      0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.120099655     0.833305133     0.046595212     0       0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       10      10      7.509089        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.749045886     0.250954114     0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       11      11      5.509089        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.11836598      0.88163402      0       0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       12      12      16.4499955      0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.660959033     0.181758221     0.157282745     0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       13      13      15.090905       0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0.697460474     0.188322495     0.114217031     0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       14      14      13.945451       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.296556696     0.656694168     0       0.046749135     0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       15      15      11.799997       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.080087837     0.919912163     0       0       0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       16      16      6.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.146506822     0.671243404     0.182249774     0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       17      17      6.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.257081461     0.418290832     0.324627707     0       0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       18      18      13.018178       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.106381809     0.129115079     0.445995426     0.318507686
        0       0       0       0       0       0       0       0
2004    1       4       2       0       1       19      19      6.581816        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.253283942     0.388592932     0.358123126     0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       20      20      9.654543        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.164692611     0.369110227     0.397265286
        0.068931876     0       0       0       0       0       0       0
2004    1       4       2       0       1       21      21      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.119418559     0.73414169      0.146439751     0
        0       0       0       0       0       0       0
2004    1       4       2       0       1       22      22      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.608460155     0.391539845     0       0
        0       0       0       0       0       0
2004    1       4       2       0       1       23      23      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.235238935     0       0       0
        0.764761065     0       0       0       0
2004    1       4       2       0       1       24      24      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.303754954     0       0.303754954     0
        0       0.392490092     0       0       0       0
2004    1       4       2       0       1       27      27      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       1       1       1.145454        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       2       2       1.072727        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       3       3       8.581816        0.387673287
        0.612326713     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       1       0       1       4       4       12.122724       0.379508102
        0.538136353     0.082355546     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       5       5       9.872724        0.138891714
        0.617694326     0.243413959     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
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2005    1       4       1       0       1       6       6       8.72727 0.372777168
        0.505659227     0.121563605     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       7       7       6.581816        0
        0.606237307     0.393762693     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       8       8       2.4318175       0
        0.55775929      0.44224071      0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       9       9       6.436362        0
        0.28569144      0.71430856      0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       10      10      4.363635        0
        0.400962167     0.599037833     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       11      11      4.363635        0
        0.20214427      0.79785573      0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       12      12      15.163632       0       0
        0.62845804      0.37154196      0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       1       0       1       13      13      5.6499985       0
        0.281876325     0.341761797     0.115308816     0.261053062     0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2005    1       4       1       0       1       14      14      14.090905       0       0
        0.260213003     0.739786997     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       1       0       1       15      15      15.018178       0       0
        0.133875053     0.791471255     0.074653692     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       16      16      18.236359       0       0
        0.287707657     0.595039767     0.117252577     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       17      17      14.018178       0       0
        0.422377611     0.577622389     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       1       0       1       18      18      12.872724       0       0
        0.145438651     0.854561349     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       1       0       1       19      19      13.945451       0       0
        0       0.618265673     0.381734327     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       1       0       1       20      20      13.945451       0       0
        0       0.491502858     0.370878624     0.056669805     0.080948713     0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       4       1       0       1       21      21      13.018178       0       0
        0       0.139141218     0.542221957     0.318636825     0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       22      22      10.799997       0       0
        0       0.241569232     0.582412777     0.176017991     0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       23      23      7.581816        0       0
        0       0       1       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       24      24      7.581816        0       0
        0       0.315391074     0.361648254     0.105481296     0.217479377     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       4       1       0       1       25      25      6.509089        0       0
        0       0.125982906     0.754514375     0.11950272      0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       26      26      11.872724       0       0
        0       0.07767673      0.210753797     0.556366023     0.073776486     0.081426964
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2005    1       4       1       0       1       27      27      2.145454        0       0
        0       0       0.292631123     0.707368877     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       1       0       1       28      28      4.436362        0       0
        0       0       0.258214989     0.601824401     0.13996061      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       29      29      4.290908        0       0
        0       0       0       0.343086172     0.485651303     0.171262525     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2005    1       4       1       0       1       30      30      5.436362        0       0
        0       0       0       0.364561723     0.262249817     0.129624931     0.243563529
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2005    1       4       1       0       1       32      32      2.145454        0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       33      33      2.145454        0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       34      34      1.072727        0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       35      35      1.072727        0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       1       0       1       37      37      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       2       0       1       1       1       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.501614757     0.498385243     0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       2       2       5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.355490702     0.644509298     0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       3       3       12.872724       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.430521317     0.569478683     0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       4       4       12.268178       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.322678761     0.677321239     0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       5       5       8.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0.086493305     0.715927258     0.197579436     0       0       0       0       0
        0       0       0       0       0       0
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2005    1       4       2       0       1       6       6       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.270492606     0.729507394     0       0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       7       7       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.564194339     0.435805661     0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       8       8       1.3590905       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.384447773     0.615552227     0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       9       9       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
2005    1       4       2       0       1       10      10      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.35451284      0.64548716      0       0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       11      11      7.654543        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.324556589     0.589375469     0.086067942     0       0       0
        0       0       0       0       0       0       0
2005    1       4       2       0       1       12      12      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.644311985     0.355688015     0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       13      13      12.0863605      0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.32477991      0.67522009      0       0       0       0
        0       0       0       0       0       0
2005    1       4       2       0       1       14      14      9.654543        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.226871005     0.572812865     0.200316129     0       0
        0       0       0       0       0       0       0
2005    1       4       2       0       1       15      15      11.799997       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.423859135     0.358343688     0.217797177     0       0
        0       0       0       0       0       0       0
2005    1       4       2       0       1       16      16      10.72727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.247383703     0.465345811     0.22158628      0.065684206
        0       0       0       0       0       0       0       0
2005    1       4       2       0       1       17      17      12.872724       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.187603079     0.65216518      0.160231742     0       0
        0       0       0       0       0       0       0
2005    1       4       2       0       1       18      18      11.799997       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.470042685     0.469877846     0.06007947      0
        0       0       0       0       0       0       0
2005    1       4       2       0       1       19      19      8.581816        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.114091321     0.598745086     0.287163592     0
        0       0       0       0       0       0       0
2005    1       4       2       0       1       20      20      6.509089        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.083148966     0.555225137     0.361625897     0
        0       0       0       0       0       0       0
2005    1       4       2       0       1       21      21      6.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.817242071     0       0       0.182757929
        0       0       0       0       0       0
2005    1       4       2       0       1       22      22      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.14491955      0.723738153     0.131342297
        0       0       0       0       0       0       0
2005    1       4       2       0       1       23      23      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0.421187295     0.208748493     0.210249219
        0.159814992     0       0       0       0       0       0
2005    1       4       2       0       1       24      24      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0
        0       0       0       0
2005    1       4       2       0       1       25      25      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       1       0       0       0       0
        0       0       0       0
2005    1       4       2       0       1       26      26      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0
        0       0       0       0
2006    1       4       1       0       1       1       1       1.072727        1       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       3       3       2.145454        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       4       4       2.363635        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       5       5       1.145454        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       6       6       7.509089        0.247232218
        0.752767782     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       1       0       1       7       7       5.363635        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       8       8       5.436362        0
        0.655120186     0.344879814     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       9       9       5.363635        0
        0.625217269     0.374782731     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       10      10      6.436362        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       11      11      11.872724       0
        0.289247731     0.632913402     0.077838867     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       12      12      7.509089        0
        0.728977986     0.271022014     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       13      13      3.218181        0
        0.651480732     0.348519268     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       14      14      1.072727        0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       15      15      8.9409065       0
        0.064250481     0.301950245     0.558994089     0.074805185     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
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2006    1       4       1       0       1       16      16      14.018178       0       0
        0.5636403       0.4363597       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       1       0       1       17      17      11.799997       0       0
        0.699972904     0.199618079     0.100409016     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       18      18      16.090905       0       0
        0.040717361     0.704413934     0.254868705     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       19      19      19.45454        0       0
        0.124302904     0.358660997     0.488182394     0.028853705     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       20      20      25.745448       0       0
        0.026387874     0.633133718     0.32595917      0.014519239     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       21      21      11.872724       0       0
        0.114387359     0.154539919     0.731072722     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       22      22      20.381813       0       0
        0       0.338162193     0.629822665     0.032015142     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       23      23      15.090905       0       0
        0       0.015565523     0.892650929     0.076032654     0.015750893     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       24      24      21.599994       0       0
        0       0.084774329     0.709470901     0.143589035     0.033676067     0.028489669
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2006    1       4       1       0       1       25      25      15.090905       0       0
        0       0.082135966     0.233561004     0.63406749      0.050235539     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       26      26      13.018178       0       0
        0       0.026473763     0.083388848     0.422157429     0.455497836     0.012482123
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2006    1       4       1       0       1       27      27      18.381813       0       0
        0       0.023666816     0.700268612     0.157775261     0.118289311     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       28      28      9.654543        0       0
        0       0.205800118     0.236503532     0.384691389     0.173004961     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       29      29      12.872724       0       0
        0       0       0.048701972     0.70400821      0.247289817     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2006    1       4       1       0       1       30      30      9.654543        0       0
        0       0       0.087920769     0.465354006     0.215881625     0.230843601     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       31      31      3.218181        0       0
        0       0       0       0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       32      32      7.509089        0       0
        0       0       0       0.140337612     0.25330334      0.132171415     0.474187634
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       33      33      5.363635        0       0
        0       0       0       0       0       0.896035863     0       0.062228922
```

```
        0.041735215    0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       35      35      3.218181        0       0
        0       0       0       0       0       0.154943084     0       0.121272931
        0.723783985    0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2006    1       4       1       0       1       36      36      1.072727        0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       38      38      1.072727        0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       1       0       1       39      39      1.072727        0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       2       0       1       1       1       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       2       0       1       3       3       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       2       0       1       4       4       1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       2       0       1       5       5       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.329259704    0.670740296     0       0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       6       6       4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.246086119    0.753913881     0       0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       7       7       5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.797010736    0.202989264     0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       8       8       4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.219962749    0.780037251     0       0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       9       9       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
2006    1       4       2       0       1       10      10      9.654543        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.651492404    0.348507596     0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       11      11      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.832008022    0.167991978     0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       12      12      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.378882141    0.621117859     0       0       0       0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       13      13      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.939503844    0.060496156     0       0       0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       14      14      8.581816        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.084593662    0.312289509     0.176832967     0.426283862     0
        0       0       0       0       0       0       0       0
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2006    1       4       2       0       1       15      15      12.0863605      0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.249861065     0.689214412     0.060924523     0       0
        0       0       0       0       0       0       0
2006    1       4       2       0       1       16      16      12.945451       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.27842714      0.179925265     0.290115656     0.197721047
        0.053810893     0       0       0       0       0       0       0       0
2006    1       4       2       0       1       17      17      10.72727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.077675756     0.588341681     0.333982564     0       0
        0       0       0       0       0       0       0
2006    1       4       2       0       1       18      18      18.309086       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.101709058     0.161931143     0.640709819     0.09564998
        0       0       0       0       0       0       0       0
2006    1       4       2       0       1       19      19      13.018178       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.296750085     0.213212892     0.368897569     0.121139454
        0       0       0       0       0       0       0       0
2006    1       4       2       0       1       20      20      8.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.225754944     0.668618223     0.105626833     0       0
        0       0       0       0       0       0
2006    1       4       2       0       1       21      21      8.654543        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.062678018     0.6894582       0.12448204
        0.123381741     0       0       0       0       0       0       0
2006    1       4       2       0       1       22      22      10.72727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.022758755     0.168721128     0.727142081
        0.081378035     0       0       0       0       0       0       0
2006    1       4       2       0       1       23      23      5.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.447626838     0.084700802     0.46767236
        0       0       0       0       0       0       0
2006    1       4       2       0       1       24      24      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.082393622     0.162232323     0       0
        0.755374055     0       0       0       0       0       0
2006    1       4       2       0       1       25      25      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0
2007    1       4       1       0       1       1       1       1.072727        1       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       2       2       6.509089        0.445491126
        0.554508874     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       3       3       3.218181        0.274853801
        0.725146199     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       4       4       6.581816        0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       5       5       3.290908        0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       6       6       1.072727        1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       7       7       1.072727        0       0
        1       0       0       0       0       0       0       0       0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       8       8       1.072727        0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       9       9       3.218181        0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       10      10      3.218181        0
        0.480639264     0.519360736     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       11      11      7.509089        0
        0.238440716     0.761559284     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       12      12      4.363635        0
        0.402081165     0.597918835     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       13      13      4.290908        0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       14      14      3.218181        0       0
        0.658153242     0.341846758     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       15      15      7.509089        0       0
        0.692897364     0.151106484     0       0.155996151     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       16      16      8.654543        0
        0.223989096     0.25757151      0.518439394     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       17      17      4.290908        0       0
        0.238030096     0.166096671     0.200227998     0.395645235     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       18      18      6.509089        0       0
        0.271251207     0.605801466     0.122947327     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       19      19      8.581816        0       0
        0       0.494646624     0.392825675     0.112527701     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       20      20      9.799997        0       0
        0.067042801     0.388677712     0.282674699     0.261604788     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       21      21      8.581816        0       0
        0       0.210619887     0.415003403     0.23324583      0       0       0.14113088
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       22      22      12.945451       0       0
        0       0.100966028     0.642722683     0.069686843     0.186624445     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       23      23      6.509089        0       0
        0       0.425126048     0.298034619     0.276839333     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       24      24      8.581816        0       0
        0       0.428336578     0.189941596     0.265347177     0.116374648     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
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2007    1       4       1       0       1       25      25      9.654543        0       0
        0       0.325347983     0.108805895     0.431988062     0.13385806      0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       26      26      15.018178       0       0
        0       0.052150937     0       0.511205846     0.436643218     0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       27      27      6.436362        0       0
        0       0       0       0       0.482855038     0.351703161     0.165441802     0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       28      28      16.163632       0       0
        0       0       0.183004058     0.14991861      0.413883066     0.253194265     0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       29      29      12.090905       0       0
        0       0       0       0.446019512     0.287272753     0.266707735     0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       30      30      11.872724       0       0
        0       0       0       0.073453458     0.588268417     0.174449536     0
        0.078569764     0.085258825     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2007    1       4       1       0       1       31      31      5.436362        0       0
        0       0       0.168857115     0       0.31938106      0.342904711     0.168857115
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2007    1       4       1       0       1       32      32      4.290908        0       0
        0       0       0       0.226650706     0       0.268710722     0.504638572     0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2007    1       4       1       0       1       33      33      2.145454        0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       34      34      3.218181        0       0
        0       0       0       0       0.246237402     0.753762598     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       35      35      1.072727        0       0
        0       0       0       0       0       0       0       0       0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       36      36      2.145454        0       0
        0       0       0       0       0       0       0.460573477     0       0.539426523
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       1       0       1       37      37      1.072727        0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       1       0       1       39      39      1.072727        0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       2       0       1       1       1       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       2       0       1       2       2       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.307807692     0.692192308     0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       3       3       4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.468279166     0.531720834     0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       4       4       7.509089        0       0
        0       0       0       0       0       0       0       0       0       0       0
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        0       0.37547677      0.62452323      0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       5       5       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0.345735248     0.654264752     0       0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       8       8       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       2       0       1       9       9       4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.469904328     0.530095672     0       0       0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       10      10      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       2       0       1       11      11      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0
        0       0       0       0
2007    1       4       2       0       1       12      12      7.581816        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.175762286     0.747830857     0.076406857     0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       13      13      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.149359208     0.299480697     0.551160095     0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       14      14      6.509089        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0.200371058     0.513383086     0.286245857     0       0       0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       15      15      7.509089        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0
        0       0       0       0
2007    1       4       2       0       1       16      16      7.509089        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.125265833     0.610405104     0.136404897     0.127924166
        0       0       0       0       0       0       0       0
2007    1       4       2       0       1       17      17      5.363635        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.685733436     0       0.314266564     0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       18      18      10.72727        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.16533983      0.467513284     0.367146886     0
        0       0       0       0       0       0       0
2007    1       4       2       0       1       19      19      7.509089        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.464356864     0.535643136     0       0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       20      20      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.739213884     0.260786116     0       0
        0       0       0       0       0       0
2007    1       4       2       0       1       21      21      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.494237998     0       0.505762002
        0       0       0       0       0       0
2007    1       4       2       0       1       22      22      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0
2007    1       4       2       0       1       23      23      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0
```

```
2007    1       4       2       0       1       24      24      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.244909876     0.267047474     0       0
        0.48804265      0       0       0       0       0
2007    1       4       2       0       1       25      25      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.30418046      0.317152976     0.378666564
        0       0       0       0       0       0       0
2008    1       4       1       0       1       1       1       2.218181        1       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       1       0       1       2       2       5.7954525       0.940893158
        0.059106842     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       4       4       3.218181        1       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       1       0       1       5       5       1.072727        1       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       1       0       1       6       6       2.145454        0.551172401
        0.448827599     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       7       7       15.236359       0.18703204
        0.69788628      0.11508168      0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       8       8       9.654543        0.120416116
        0.804328161     0.075255723     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       9       9       8.581816        0
        0.771332126     0.228667874     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       10      10      5.363635        0
        0.596783882     0.403216118     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       11      11      2.145454        0
        0.495396756     0.504603244     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       12      12      1.072727        0       1
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       1       0       1       13      13      2.145454        0       0
        1       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       1       0       1       14      14      2.145454        0       0
        0.543876351     0       0.456123649     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       15      15      7.509089        0       0
        0.269931553     0.730068447     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       16      16      12.3045415      0       0
        0.290204762     0.574771688     0.13502355      0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       17      17      14.3772685      0       0
        0.242453194     0.523473968     0.192539641     0.041533198     0       0       0
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        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2008    1       4       1       0       1       18      18      10.72727        0       0
        0       0.600540871     0.399459129     0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       1       0       1       19      19      11.3363605      0       0
        0.281194182     0.333738199     0.255937739     0.12912988      0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2008    1       4       1       0       1       20      20      8.9409065       0       0
        0       0.095836331     0.488602008     0.415561661     0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       21      21      7.509089        0       0
        0       0.269111325     0.583413649     0       0.147475026     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       22      22      13.3772685      0       0
        0       0.049094104     0.37135212      0.392485528     0.187068248     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2008    1       4       1       0       1       23      23      15.163632       0       0
        0       0.083058484     0.360027932     0.346160523     0.210753061     0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2008    1       4       1       0       1       24      24      16.309086       0       0
        0.048489654     0.042105848     0.461780496     0.359493134     0.088130868     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       25      25      14.090905       0       0
        0       0.050678317     0.084668889     0.421510692     0.283335249     0
        0.123430674     0.036376178     0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       26      26      16.5227225      0       0
        0       0       0.270496182     0.22036473      0.383216386     0.125922703     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       27      27      11.945451       0       0
        0       0       0.280280318     0.182020399     0.246788028     0.290911255     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2008    1       4       1       0       1       28      28      7.509089        0       0
        0       0       0.12152258      0.492858034     0.385619386     0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       29      29      7.509089        0       0
        0       0       0.101022499     0.116458804     0.236599852     0.322570914
        0.223347931     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       30      30      9.0136335       0       0
        0       0       0       0.024548427     0.411054196     0.148452481     0.415944896
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2008    1       4       1       0       1       31      31      9.654543        0       0
        0       0       0.123231641     0.119586933     0.196571274     0.560610151     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
2008    1       4       1       0       1       32      32      6.509089        0       0
        0       0       0       0       0.545645823     0.21850841      0.235845767     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       1       0       1       33      33      6.436362        0       0
        0       0       0       0.344702035     0.102194703     0.212738939     0.241293672
        0.099070651     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0
2008    1       4       1       0       1       34      34      1.072727        0       0
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
```

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2008    1       4       1       0       1       36      36      1.072727        0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       1       0       1       37      37      1.072727        0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       1       0       1       39      39      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       1       1       8.654543        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.889746956     0.110253044     0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       2       2       6.7227255       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.942746        0.057254        0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       3       3       2.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       1       0       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       4       4       2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       5       5       4.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.525550855     0.474449145     0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       6       6       4.363635        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.127982157     0.872017843     0       0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       7       7       3.290908        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.866303788     0.133696212     0       0       0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       8       8       7.654543        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.120497168     0.779558537     0.099944295     0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       2       0       1       9       9       3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0.401852374     0.303282152     0.294865474     0       0       0       0
        0       0       0       0       0       0       0
2008    1       4       2       0       1       10      10      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       12      12      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       1       0       0       0       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       13      13      2.145454        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.511041357     0.488958643     0       0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       14      14      3.218181        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0.605523285     0       0.394476715     0       0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       15      15      9.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0.337008951     0.559331664     0       0.103659385     0       0
        0       0       0       0       0       0
2008    1       4       2       0       1       16      16      8.8681795       0       0
        0       0       0       0       0       0       0       0       0       0       0
```

```
        0       0       0       0.11097036      0.627393181     0.261636459     0       0
        0       0       0       0       0       0       0
2008    1       4       2       0       1       17      17      6.7227255       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.354597358     0.339952136     0.152169829
        0.153280677     0       0       0       0       0       0       0
2008    1       4       2       0       1       18      18      9.72727 0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0.576076365     0.10063183      0.220522439     0.102769366
        0       0       0       0       0       0       0
2008    1       4       2       0       1       19      19      3.8272715       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.221221069     0.717201638     0.061577293     0
        0       0       0       0       0       0       0
2008    1       4       2       0       1       20      20      4.5772715       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0.305189094     0.279827954     0.187684486
        0       0       0.227298466     0       0       0       0
2008    1       4       2       0       1       21      21      6.436362        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.489598252     0       0.510401748
        0       0       0       0       0       0
2008    1       4       2       0       1       22      22      9.0136335       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0.061245658     0.105198317     0.349845776
        0.277661776     0.206048473     0       0       0       0       0       0
2008    1       4       2       0       1       23      23      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.202763178     0.334443462
        0.46279336      0       0       0       0       0       0       0
2008    1       4       2       0       1       24      24      4.290908        0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0.274302829     0.431562418
        0.294134752     0       0       0       0       0       0
2008    1       4       2       0       1       26      26      0.2863635       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1       0       0       0
        0       0       0       0
2008    1       4       2       0       1       30      30      0.2863635       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0       0
2008    1       4       2       0       1       32      32      1.072727        0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       1       0       0
        0       0       0       0


0   # Mean Size at Age Observations
0       # Total number of environmental variables
0       # Total number of environmental observations
0       # No Weight frequency data
0       # No tagging data
0       # No morph composition data

999 # End data file
```

Control File

```
# Lingcod control file North
# for SS v3.x
#July15, 2009
#catch data from washington updated

# Morph setup
1       # Number of growth patterns
1       # N sub morphs within growth patterns

1 # Blocks
1  # blocks in each design
```

```
#1973  1982  1983 1992  1993 1997  1998 2002 2003 2008
1998  2008

# Mortality and growth specifications
0.5     # Fraction female at birth
1       # M setup: 0=single
Par,1=N_breakpoints,2=Lorenzen,3=agespecific;_4=agespec_withseasinterpolate
2       # Number of M breakpoints
11 13   # Ages at M breakpoints
1       # Growth model: 1=VB with L1 and L2, 2=VB with A0 and Linf, 3=Richards, 4=Read
vector of L@A
1       # Age for growth Lmin
20      # Age for growth Lmax or 999 = Linf
0.0     # SD constant added to LAA (0.1 mimics v1.xx for compatibility only)
0       # Variability about growth: 0=CV~f(LAA) [mimic v1.xx], 1=CV~f(A), 2=SD~f(LAA),
3=SD~f(A)
1       # Maturity option: 1=length logistic, 2=age logistic, 3=read age-maturity matrix
by growth_pattern
1       # First age allowed to mature
1       # fecundity option - ?
0       # hermaphro
1       # mg parm offset option:
#old key: 1=direct assignment, 2=each pat. x gender offset from pat. 1 gender 1,
3=offsets as SS2 V1.xx with M old and CV old offset from young values
#new key: 1=none, 2= M, G, CV_G as offset from female-GP1, 3=like SS2 V1.x)

1       # mg parm adjust method 1=do V1.23 approach, 2=use logistic transform between
bounds approach

# Maturity & Growth Parameters
# min   max   init     prior pr_type  sd      phase   env     UseDev  Minyr   Maxyr   DevSD
       use_bl bl_type
0.05    0.25    0.18    0.19    0       99      -3      0       0       0       0       0.5
       0       0       #M1_natM_young
0.05    0.25    0.18    0.19    0       99      -4      0       0       0       0       0.5
       0       0       #M1_natM_old
10      60      30      42.5    0       99      2       0       0       0       0       0.5
       0       0       #M1_Lmin
40      140     118     120     0       99      -2      0       0       0       0       0.5
       0       0       #M1_Lmax
0.01    0.5     0.1041  0.105   0       99      3       0       0       0       0       0.5
       0       0       #M1_VBK
0.01    0.5     0.0633  0.0633  0       99      2       0       0       0       0       0.5
       0       0       #M1_CV-young
0.01    0.5     0.085   0.07    0       0.8     3       0       0       0       0       0
       0       0       # CV old
0.15    0.40    0.32    0.32    0       99      -3      0       0       0       0       0.5
       0       0       #M2_natM_young
0.15    0.40    0.32    0.32    0       99      -4      0       0       0       0       0.5
       0       0       #M2_natM_old
10      60      30      42.5    0       99      3       0       0       0       0       0.5
       0       0       #M2_Lmin
40      140     86      90      0       99      -3      0       0       0       0       0.5
       0       0       #M2_Lmax
0.01    1       0.149   0.15    0       99      3       0       0       0       0       0.5
       0       0       #M2_VBK
0.01    0.5     0.05    0.05    0       99      2       0       0       0       0       0.5
       0       0       #M2_CV-young
0.01    0.5     0.085   0.07    0       0.8     3       0       0       0       0       0
       0       0       # Male cv old

# Add 2+2*gender lines to read the wt-Len and mat-Len parameters
# Female length-weight
#       LO      HI      INIT            PRIOR   PR_type SD      PHASE
       -3      3       0.00000176  0.00000176 0       99      -3      0       0       0
       0       0.5     0       0       #Female wt-len-1 a
       -3      5       3.39780     3.39780    0       99      -3      0       0       0
       0       0.5     0       0       #Female wt-len-2 b
# Female maturity
       -3      100     68.059  0.1577  0       99      -3      0       0       0       0
       0.5     0       0       #Female mat-len-infl
```

```
       -5      5       -0.1577 68.059  0       99      -3      0       0       0       0
       0.5     0       0       #Female mat-len-slope
# Female fecundity - Same as biomass if intercept = 1 and slope = 0
       -3      3       1.      1.      0       99      -3      0       0       0       0
       0.5     0       0       #Female eggs/gm intercept
       -3      3       0.      0.      0       99      -3      0       0       0       0
       0.5     0       0       #Female eggs/gm slope
# Male length-weight
       -3      3       0.000003953     0.000003953     0       99      -3      0       0
       0       0       0.5     0       0       #Male wt-len-1
       -5      5       3.2149          3.2149          0       99      -3      0       0
       0       0       0.5     0       0       #Male wt-len-2
# Distribute recruitment among growth pattern x area x season
0      999     1       1       0       0.8     -3      0       0       0       0       0.5
       0       0       # GP 1
0      999     1       1       0       0.8     -3      0       0       0       0       0.5
       0       0       # Area 1
0      999     1       1       0       0.8     -3      0       0       0       0       0.5
       0       0       # Season 1
# Cohort growth (K) deviation parameter
-1     1       1       1       0       99      -3      0       0       1980    1983    0.5
       0       0
# Seasonal effects on biology parameters (0=none)
 0 0 0 0 0 0 0 0 0 0
# Spawner-recruit parameters

1      # SR_fxn:  1=Beverton-Holt

#LO     HI      INIT    PRIOR   Pr_type SD      PHASE
5       20      8.22947 7.6187  0       99      2       #Ln(R0)
0.2     5       0.8     0.9     0       99      -4      #steepness
0       20      0.5     0.5     0       99      -3      #SD_recruitments
-5      5       0       0       0       99      -3      #Env_link
-5      5       0       0       0       99      -5      #_ln(init_eq_R_multiplier)
 0      2       0       1       0       50      -50             # Autocorrelation placeholder
(Future implementation)
0 # index of environmental variable to be used
0 # env target parameter: 1=rec devs, 2=R0, 3=steepness
1 # rec dev type: 0=none, 1=devvector (zero-sum), 2=simple deviations (no sum constraint)

# Recruitment residuals
1928    # Start year recruitment residuals
2007    # End year recruitment residuals
3       # Phase

1 # Read 11 advanced recruitment options: 0=no, 1=yes
0       # first year for early rec devs
-4      # phase for early rec devs
5       # Phase for forecast recruit deviations
1       # Lambda for forecast recr devs before endyr+1
1950    #_last_yr_nobias_adj_in_MPD
1964    # first year of full bias correction (linear ramp up from this year minus the
plus-age to this year)
2007    # last year for full bias correction in_MPD
2008    #_first_recent_yr_nobias_adj_in_MPD
1.0     # Max bias correction
0       # placeholder
-15     # Lower bound rec devs
15      # Upper bound rec devs
0       # read intitial values for rec devs

# Fishing mortality setup
0.1     # F ballpark for tuning early phases
1999    # F ballpark year
1       # F method:  1=Pope's; 2=Instan. F; 3=Hybrid (recommended)
0.9     # max F or harvest rate, depends on F_Method

#init_F_setupforeachfleet

#LO     HI      INIT    PRIOR   PR_type SD      PHASE
0       1       0.0009  0.009   0       99      1
```

```
0       1       0.0000  0.009   0       99      -1

# Catchability (Q) setup
# A=do power: 0=skip, survey is prop. to abundance, 1= add par for non-linearity
# B=env. link: 0=skip, 1= add par for env. effect on Q
# C=extra SD: 0=skip, 1= add par. for additive constant to input SE (in ln space)
# D=type: <0=mirror lower abs(#) fleet, 0=no par Q is median unbiased, 1=no par Q is mean
unbiased, 2=estimate par for ln(Q)
#          3=ln(Q) + set of devs about ln(Q) for all years. 4=ln(Q) + set of devs about Q
for indexyr-1
# E=Units: 0=numbers, 1=biomass
# F=err_type 0=lognormal, >0=T-dist. DF=input value
# A B C D E F
  0 0 0 0 1 0 #Com_1
  0 0 0 0 1 0 #Rec_2
  0 0 0 0 1 0 #Tri_3
  0 0 0 0 1 0 #NWFSC_4
  0 0 0 0 1 0 #Logbk_5

# Selectivity Specification
#Type   Retent  Moffset Special
#_SELEX_&_RETENTION_PARAMETERS

#Selex_type Do_retention(0/1) Do_male Mirrored_selex_number

#Length Selectivity
24      1       0       0       #Com_1
24      0       2       0       #Rec_2
24      0       0       0       #Tri_3
24      0       0       0       #NWFSC_4
5       0       0       1       #Logbk_5
#_Age   selectivity

10      0       0       0       #Com_1
10      0       0       0       #Rec_2
10      0       0       0       #Tri_3
10      0       0       0       #NWFSC_4
10      0       0       0       #Logbk_5

# Selectivity Parameter

#Low    High    Init    Prior   PrType  SD      Phase   env     usedev  minyr   maxyear sd
        block   blswitch # 1 means that parm' = baseparm + blockparm # 2 means that parm'
= blockparm
#Comm
35      100     45      75      0       50      2       0       0       0       0       0.5
        1       2       # Peak
-6      4       0       0       0       50      2       0       0       0       0       0.5
        1       2       # Top width
-1      9       4       4       0       50      3       0       0       0       0       0
        0       0       # Ascending width
-1      9       5       5.5     0       50      3       0       0       0       0       0
        0       0       # Descending width
-5      9       -2      -2      0       50      2       0       0       0       0       0
        0       0       # inital value
-5      9       9       5       0       50      3       0       0       0       0       0
        0       0       # Final

#retention
31      100     40      55      0       50      -2      0       0       0       0       0.5
        1       2       # Inflection
0.1     10      2       1       0       99      -2      0       0       0       0       0.5
        0       0       # Slope
0.001   1       1       1       0       99      -3      0       0       0       0       0.5
        1       2       # Asymptotic retention
0       0       0       0       0       99      -3      0       0       0       0       0.5
        0       0       # male arithmetic offset to inflection

##Recreational
```

```
35      100     50      75      0       50      2       0       0       0       0       0.5
        1       2       # Peak
-6      4       -5.9    0       0       50      -2      0       0       0       0       0
        0       0       # Top width
-1      9       4       4       0       50      3       0       0       0       0       0
        0       0       # Ascending width
-1      9       5       5.5     0       50      3       0       0       0       0       0
        0       0       # Descending width
-5      9       -4.9    -2      0       50      -2      0       0       0       0       0
        0       0       # inital value
-5      9       -4.9    5       0       50      -3      0       0       0       0       0
        0       0       # Final

30      100     58      60      0       99      2       0       0       0       0       0
        0       0       #dogleg female vs. male rec
-1      1       -.99    0       0       99      -3      0       0       0       0       0
        0       0       #log min length select relative to male
-2      1       -1.99   -.5     0       99      -3      0       0       0       0       0
        0       0       #log relative select at dogleg
-2      2       1.2     -.2     0       99      3       0       0       0       0       0
        0       0       #log relative select at maxlength # fixed since hitting bound
#Triennial
35      100     70      75      0       50      -2      0       0       0       0       0.5
        0       0       # Peak
-6      4       -0.55   0       0       50      -2      0       0       0       0       0
        0       0       # Top width
-1      9       5.34    4       0       50      -2      0       0       0       0       0
        0       0       # Ascending width
-1      9       5.2     5.5     0       50      -2      0       0       0       0       0
        0       0       # Descending width
-5      9       -1.14   -2      0       50      -2      0       0       0       0       0
        0       0       # inital value
-5      9       -4.9    5       0       50      -3      0       0       0       0       0
        0       0       # Final
#NWFSC
35      100     40      75      0       50      2       0       0       0       0       0.5
        0       0       # Peak
-6      4       -5.9    0       0       50      2       0       0       0       0       0
        0       0       # Top width
-1      9       4       4       0       50      3       0       0       0       0       0
        0       0       # Ascending width
-1      9       5       5.5     0       50      3       0       0       0       0       0
        0       0       # Descending width
-5      9       -2      -2      0       50      2       0       0       0       0       0
        0       0       # inital value
-5      9       -4.9    5       0       50      -3      0       0       0       0       0
        0       0       # Final
#logbook mirror
-2      0       -1      0       0       50      -2      0       0       0       0       0
        0       0
-2      0       -1      0       0       50      -3      0       0       0       0       0
        0       0

#Ages pattern 11
# 0     1       0.1     0.1     0       50      -2      0       0       0       0       0
        0       0
# 1     14      14      14      0       50      -3      0       0       0       0       0
        0       0

# 0     1       0.1     0.1     0       50      -2      0       0       0       0       0
        0       0
# 1     14      14      14      0       50      -3      0       0       0       0       0
        0       0

# 0     1       0.1     0.1     0       50      -2      0       0       0       0       0
        0       0
# 1     14      14      14      0       50      -3      0       0       0       0       0
        0       0

# 0     1       0.1     0.1     0       50      -2      0       0       0       0       0
        0       0
```

```
# 1    14     14     14     0      50     -3     0      0      0      0      0
       0      0

# 0    1      0.1    0.1    0      50     -2     0      0      0      0      0
       0      0
# 1    14     14     14     0      50     -3     0      0      0      0      0
       0      0

1      # Selex block setup: 0=Read one line apply all, 1=read one line each parameter
# Lo   Hi     Init   Prior  P_type SD     Phase
35     100    45     75     0      50     2
-6     4      0      0      0      50     3
31     100    40     55     0      99     3
0.1    1      0.9    0.9    0      99     3
35     100    45     75     0      50     3

1 #_env/block/dev_adjust_method (1=standard; 2=logistic trans to keep in base parm
bounds)
0 # Tagging flag: 0=none,1=read parameters for tagging

### Likelihood related quantities ###
# variance/sample size adjustment by fleet
1 # Do variance adjustments
0  0  0  0  0   # const added to survey cv
0  0  0  0  0   # const added to discard sd
0  0  0  0  0   # const added to body weight sd
1  1  1  1  1   # mult scalar for length comps
.5  .5  1  1  1   # mult scalar for age comps
1  1  1  1  1   # mult scalar for length at age obs

30     # DF discard fraction data t-distribution
30     # DF mean body weight data t-distribution

1      # Max N lambda phases: read this N values for each item below
1      # SD offset (CPUE, discard, mean body weight, recruitment devs): 0=omit log(s)
term, 1=include

5 # N changes to default Lambdas = 1.0
# Component codes:
#  1=survey
#  2=discard
#  3=mean body weight
#  4=length frequency
#  5=age frequency
#  6=Weight frequency
#  7=size at age
#  8=catch
#  9=initial equilibrium catch
#  10=rec devs
#  11=parameter priors
#  12=parameter deviations
#  13=Crash penalty
#  14=Morph composition
#  15=Tag composition
#  16=Tag return
# Component fleet/survey  phase  value  wtfreq_method
5      1      1      0      1
5      2      1      0      1
5      3      1      0      1
5      4      1      0      1
5      5      1      0      1

0 # extra SD pointer

999 # end of control file
```

B. South Model

Starter File

```
# lingcod starter file for SS v3.x
# South Model
LingS_data.SS          # Data file
LingS_ctl.SS   # Control file

0       # Read initial values from .par file: 0=no,1=yes
1       # DOS display detail: 0,1,2
2       # Report file detail: 0,1,2
0       # Detailed checkup.sso file (0,1)
0       # Write parameter iteration trace file during minimization
2       # Write cumulative report: 0=skip,1=short,2=full
0       # Include prior likelihood for non-estimated parameters
0       # Use Soft Boundaries to aid convergence (0,1) (recommended)
0       # N bootstrap datafiles to create
25      # Last phase for estimation
1       # MCMC burn-in
1       # MCMC thinning interval
0       # Jitter initial parameter values by this fraction
-1      # Min year for spbio sd_report (neg val = styr-2, virgin state)
-2      # Max year for spbio sd_report (-1=endyr+1, -2=entire forecast)
0       # N individual SD years
0.0001          # Ending convergence criteria
0       # Retrospective year relative to end year
2       # Min age for summary biomass
1       # Depletion basis: denom is: 0=skip; 1=rel X*B0; 2=rel X*Bmsy; 3=rel X*B_styr
1.0     # Fraction (X) for Depletion denominator (e.g. 0.4)
1       # (1-SPR)_reporting:  0=skip; 1=rel(1-SPR); 2=rel(1-SPR_MSY); 3=rel(1-
SPR_Btarget); 4=notrel
1       # F_std reporting: 0=skip; 1=exploit(Bio); 2=exploit(Num); 3=sum(frates)
1       # F_report_basis: 0=raw; 1=rel Fspr; 2=rel Fmsy ; 3=rel Fbtgt

999 # end of file marker
```

Forecast File

```
# Forecast specifications
# lingcod in SS v3.x
#South Model
1       # Forecast: 0=none; 1=F(SPR); 2=F(MSY) 3=F(Btgt); 4=F(endyr); 5=Ave F
(enter yrs); 6=read Fmult
2000    # First year for averaging selex to use in forecast (e.g. 2004; or use -x to be rel
endyr)
2008    # Last year for averaging selex to use in forecast
1       # Benchmarks:0=skip, 1=calc Fspr, Fbtgt, Fmsy
1       # MSY: 0=none,1=F(SPR),2=calc F(MSY),3=F(Btgt),4=set to F(endyr)
```

0.45 # SPR target (e.g. 0.40)
0.40 # Biomass target (e.g. 0.40)
10 # Number of forecast years
1 # Read advanced options add indents below if 1
0 # Puntalyzer output: 0=no,1=yes
1999 # Rebuilder: first year catch could have been set to zero (Ydecl)
2009 # Rebuilder: year for current age structure (Yinit)
1 # Control rule method (1=west coast adjust catch; 2=adjust F)
0.4 # Control rule Biomass level for constant F (as frac of Bzero, e.g. 0.40)
0.1 # Control rule Biomass level for no F (as frac of Bzero, e.g. 0.10)
1 # Control rule fraction of Flimit (e.g. 0.75)
-1 # maximum annual catch during forecast (not coded yet)
0 # 0= no implementation error; 1=use implementation error in forecast (not coded yet)
0.1 # stddev of log(realized F/target F) in forecast (not coded yet)
2 # fleet allocation (in terms of F) (1=use endyr pattern, no read; 2=read below)
1.0 1.0 # relative F for forecast when using F; seasons; fleets within season
0 # Number of manual forecast catches to input
basis for forecatch: 1=retained catch; 2=total dead catch (if line above > 0)
Year Seas Fleet Catch

999 # end of forecast file

Data File

```
# data file for Lingcod in SS v3.x 2008
# Southern area = California
#June 28, 2009

### Global model specifications ###
1928        # Start year
2008        # End year
1           # N seasons per year
12          # Months per season
1           # Spawning Season
2           # N fishing fleets
4           # N surveys
1           # Number of areas
COMMERCIAL%RECREATIONAL%TRIENNIAL%NWFSC%CPUE%Dock #Names divided by "%"
0.5  0.5  0.7  0.6  0.5 0.5 #Timing of each fishery/survey (REDO for Tom Ws later)
1 1 1 1 1 1             # Area of each fleet
1 1         # Units for catch by fishing fleet: 1=Biomass(mt),2=Numbers(1000s)
0.01  0.01# SE of log(catch) by fleet for equilibrium and continuous options
2           # Number of Genders
20          # Accumulator age

### Catch section ###
# Initial equilibrium catch (landings + discard) by fishing fleet
341   0     # Fleet 1,2

81 # Number of lines catch data
# Landed catch (only) time series by fleet
# Catch(by fleet) Year          Season
387         0           1928        1
529         3           1929        1
584         6           1930        1
558         9           1931        1
400         12          1932        1
636         14          1933        1
```

389	17	1934	1
461	20	1935	1
343	23	1936	1
440	36	1937	1
351	43	1938	1
262	60	1939	1
313	63	1940	1
241	58	1941	1
143	31	1942	1
327	29	1943	1
339	24	1944	1
317	32	1945	1
525	56	1946	1
880	201	1947	1
903	220	1948	1
708	239	1949	1
833	215	1950	1
788	222	1951	1
613	158	1952	1
415	117	1953	1
406	188	1954	1
424	201	1955	1
414	274	1956	1
744	317	1957	1
693	349	1958	1
616	275	1959	1
558	230	1960	1
618	227	1961	1
476	221	1962	1
476	221	1963	1
368	215	1964	1
357	313	1965	1
359	438	1966	1
418	463	1967	1
483	447	1968	1
545	347	1969	1
749	532	1970	1
973	619	1971	1
1539	756	1972	1
1721	753	1973	1
1834	769	1974	1
1569	841	1975	1
1527	881	1976	1
875	647	1977	1
961	862	1978	1
1529	936	1979	1
1414	1335	1980	1
1304	1133	1981	1
1425	829	1982	1
1020	484	1983	1
952	477	1984	1
696	963	1985	1
541	908	1986	1
863	931	1987	1
1030	1019	1988	1
1280	940	1989	1
1072	765	1990	1
791	795	1991	1
619	772	1992	1
703	451	1993	1
572	254	1994	1
542	281	1995	1
482	361	1996	1
510	263	1997	1
151	247	1998	1
142	342	1999	1
56	199	2000	1
63	170	2001	1
81	534	2002	1
51	1021	2003	1

```
63      130     2004    1
61      299     2005    1
62      348     2006    1
79      174     2007    1
69      102     2008    1


50   # number of Survey data points
# Triennial 9 points
1980    1       3       1877    0.35
1983    1       3       2109    0.31
1986    1       3       1093    0.45
1989    1       3       2620    0.28
1992    1       3       977     0.39
1995    1       3       790     0.31
1998    1       3       716     0.29
2001    1       3       1240    0.31
2004    1       3       3624    0.25

 #NWFSC combo 6 points
2003    1       4       7630    0.23
2004    1       4       16054   0.30
2005    1       4       13060   0.28
2006    1       4       13338   0.34
2007    1       4       8090    0.33
2008    1       4       2571    0.28

#Logbook GLM 20 points
1978    1       5       5.8     0.2
1979    1       5       11.8    0.2
1980    1       5       9.6     0.2
1981    1       5       7.3     0.2
1982    1       5       7.4     0.2
1983    1       5       8.9     0.2
1984    1       5       7.6     0.2
1985    1       5       3.6     0.2
1986    1       5       3.1     0.2
1987    1       5       5.4     0.2
1988    1       5       5.6     0.2
1989    1       5       7.3     0.2
1990    1       5       6.2     0.2
1991    1       5       3.8     0.2
1992    1       5       3.1     0.2
1993    1       5       3.8     0.2
1994    1       5       3.6     0.2
1995    1       5       3.9     0.2
1996    1       5       3.1     0.2
1997    1       5       3.3     0.2

#PSMFC Dockside 15 points (last 10 after changes in regulations)
1980    1       6       0.0932  0.1408
1981    1       6       0.0925  0.2680
1982    1       6       0.0362  0.1570
1983    1       6       0.0243  0.1640
1984    1       6       0.0361  0.1713
1985    1       6       0.0338  0.1243
1986    1       6       0.0315  0.1196
1987    1       6       0.0460  0.1793
1988    1       6       0.0334  0.1543
1989    1       6       0.0341  0.1523
1993    1       6       0.0461  0.0829
1994    1       6       0.0387  0.1000
1995    1       6       0.0482  0.0884
1996    1       6       0.0457  0.0732
1997    1       6       0.0522  0.0823
#1998   1       6       0.0448  0.0880
#1999   1       6       0.0371  0.0680
#2000   1       6       0.0311  0.0895
#2001   1       6       0.0169  0.1105
#2002   1       6       0.0650  0.0678
```

```
#2003   1       6       0.0706  0.0549
#2004   1       6       0.0203  0.0748
#2005   1       6       0.0653  0.0613
#2006   1       6       0.0439  0.0578
#2007   1       6       0.0366  0.0636

2   # Discards Type 1 = biomass(mt), 2 = fraction of total
6   # Discards N observations
2002  1  1  0.56  0.1
2003  1  1  0.45  0.1
2004  1  1  0.40  0.1
2005  1  1  0.61  0.1
2006  1  1  0.52  0.1
2007  1  1  0.32  0.1
0   # Mean Body Weight

## Population size structure
3  # Length bin method: 1=Use data bins,
  # 2=generate from min/max/width read below
  # 3=Read count and vector below
60 # Count of population bins
# Lower edge of bins
10      12      14      16      18      20      22      24      26      28      30      32
        34      36      38      40      42      44      46      48      50      52      54
        56      58      60      62      64      66      68      70      72      74      76
        78      80      82      84      86      88      90      92      94      96      98
        100     102     104     106     108     110     112     114     116     118     120
        122     124     126     128

-1      # Minimum proportion for compressing tails of observed compositional data
0.0001  # Constant added to expected frequencies

0       # Combine males and females at and below this bin number

42 # Number of Length Bins

28      30      32      34      36      38      40      42      44      46      48      50
        52      54      56      58      60      62      64      66      68      70      72
        74      76      78      80      82      84      86      88      90      92      94
        96      98      100     102     104     106     108     110

68   # Length Composition Observations
#Year   Seas    Fleet   Gender  Part    effn
#Commercial 30 years, 78-08 missing 1991
1978    1       1       3       2       44.182  0.5     0       1       0.5     2.5     5
        20.5    6.5     2       0       1       1       4       0.5     1       1       1.5
        1.5     5       1.5     0       0       1.5     1.5     1       1       2       1.5
        0.5     1       0       1       0       1       0       0       0       0       0
        0       0       0       0.5     0       0       3.5     4.5     4       9.5     7.5
        5       2       0       1       2       3.5     1       0       1.5     7.5     2
        2.5     3       2       1.5     1.5     0       0       1       0.5     0.5     1
        0       0       0       2       0       0       0       0       0       0       0
        0
1979    1       1       3       2       67.914  3       3       3       4.5     3       10
        20.5    31.5    36.5    27      20.5    14.5    8.5     9       5.5     11      5
        6.5     4       4       6       4       4.5     6.5     5.5     4       5       4
        3       3       3       3       3       3       3       3       3       3       3
        3       3       3       3       3       3       3.5     4       4       13.5    11.5
        10.5    9       7.5     5.5     5.5     6       5.5     5       4       5.5     3
        3       5       4       3.5     3.5     4.5     3       3       3       3       3
        3       3       3       3       3       3       3       3       3       3       3
        3
1980    1       1       3       2       285.388 8       8       8       9       12      13
        13      16      17      22.5    20.5    24.5    32      48      64      66      96
        63      51      35      28      36      45      59      79      54      59      40
        37      38      35      36      29      21      23      23      12      8       8
        8       8       8       2       2       2       3       2       4       6       5
        9       11.5    24.5    30.5    25      41      54      74      71      40      36
        38      45      23      32      20      23      14      16      10      8       5
```

	7	2	7	4	3	3	2	2	2	2	2
	2										
1981	1	1	3	2	2.414	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1982	1	1	3	2	69.918	0	0	0	0	0	1
	2	2	2	3	6	9	16	23	16	13	20
	12	13	10	12	10	15	2	2	5	3	3
	3	1	1	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	1	0	0	2
	1	0	4	7	9	9	8	10	6	6	6
	12	4	5	3	6	0	1	1	2	1	0
	1	0	0	0	0	0	0	0	0	0	0
	0										
1983	1	1	3	2	90.854	0	0	0	1	0	0
	3	1	2	6	8.5	12.5	13.5	22.5	10.5	12	17.5
	22.5	25	13	10	17	17.5	20	11	5	4	1.5
	2.5	2	1	2	1	0	2	1	1	0	0
	0	0	0	0	0	0	0	0	1	2	2
	1	1	4.5	2.5	4.5	12.5	15.5	12	15.5	8.5	11
	4	3	4	2.5	3	2	0	1	0.5	0.5	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1984	1	1	3	2	49.844	0	0	0	0	0	0
	1	0	1	2	3	5	13	22	18	17	16
	12	13	5	9	15	12	11	9	8	3	3
	1	0	0	0	1	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	2	1	4	3	2	5	4	4	2	3
	3	1	1	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1985	1	1	3	2	20.66	0	0	0	0	1	0
	0	2	0	0	0	0	0	2	3	1	4
	2	3	5	4	3	3	5	0	9	3	5
	3	1	2	0	0	1	2	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	3	1	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1986	1	1	3	2	20.73	0	0	0	0	1	1.5
	1	1	5	4	15	10	6	5	2	0	1
	0	0	0	2	1	1	0	0	1	0	0
	0	0	1	1	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	2.5	0	0
	5	5	1	5	3	2	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1987	1	1	3	2	34.148	0	0	0	0	0	1
	1	2	2	6	9	7	7	16	23	8	11
	8	3	2	0	0	0	0	1	0	0	0
	1	0	0	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	2	1
	2	4	4	4	4	10	3	0	3	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1988	1	1	3	2	66.018	0	0	0	1	2	1
	1	3	3	11	5	10	14	20	17	12	15
	18	11	8	9	5	4	4	0	0	1	0
	2	1	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	0

	3	4	7	12	11	14	6	9	8	4	2
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1989	1	1	3	2	33.284	0	0	0	0	0	5
	3.5	10	6	4	3	1	4.5	5	5.5	6	5
	2	0	5.5	3	4	2	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	8	5.5	2
	0	0	2	4	2.5	5	6.5	3	1	0	1
	1.5	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1990	1	1	3	2	2.414	0	0	0	0	0	0
	0	0	0	0	0	0	0	0.5	0.5	0	0
	0.5	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0.5	0.5	0	0	0.5	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1992	1	1	3	2	2.276	0	0	0	0	0	0
	0	0	0	0	0.5	0	0	0	0	0	0
	0	0	0	0	0.5	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.5	0	0	0	0	0	0	0	0
	0	0	0.5	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1993	1	1	3	2	268.988	0	0	0	0	3	13.5
	21	38	40	58.5	67.5	71.5	84.5	58.5	68	56	48.5
	48	31.5	29.5	21.5	18	26	14	16	12	8.5	6
	6.5	7	9	4.5	3	1.5	3.5	1	0	0	0
	0	0	0	0	0	0	0	4	9.5	15	25
	31	35.5	29.5	36.5	29.5	28.5	31	31	19.5	26	13.5
	12.5	10.5	9	7	3	7	1	2.5	3	1.5	2
	1	1.5	1	0.5	0.5	1	0	0	0	0	0
	0										
1994	1	1	3	2	140.742	0	0	0	0	3	4
	2	1.5	6	7	21	28.5	32	31.5	31	41	42
	23	23.5	24.5	12.5	16	14.5	13	14.5	10	12	7
	8	12	7	3	3.5	4	3	1	2.5	0	0
	0	0	1	0	0	0	0	0	0	0	1.5
	2	9	13	26.5	50	28.5	28	29	22	21	17.5
	10.5	8.5	14	7.5	1	0.5	1	1	0	0	0
	0	0	0.5	0	0	0	0.5	0	0	0	0
	0										
1995	1	1	3	2	125.83	0	0	0	0.5	0	0
	0	3	3	8	4	6.5	3	10.5	25	35	43
	30.5	25	21	17.5	20	16	12	12.5	8.5	12	11
	4.5	4.5	5	0	0	6	1	0	0	1	1
	0	0	0	0	0	0	0.5	0	0	0	1
	2	1	1	1.5	5	22.5	28	31	24	19.5	14
	13	6.5	3	5	1	1.5	1.5	0	1	0.5	0.5
	0	0	0	0	0	0	0	0	0	0	0
	0										
1996	1	1	3	2	187.494	0	0	1	0.5	0	0
	0	0	1.5	2	5	6.5	13.5	25.5	36	39	38
	27.5	21	25.5	23.5	22	33.5	17.5	13.5	11.5	10	6
	2.5	2	2	1	0	2	1.5	3	0	0	1
	0	0	0	0	0	0	0.5	0	0	0	0
	2.5	5	3	9.5	12.5	29.5	28	28	23	19.5	22
	21.5	16.5	14	8.5	6.5	3.5	5.5	3	2	0.5	0
	1	0	0	1	0.5	0	0	0	0	0	0
	0										
1997	1	1	3	2	258.632	0	0	0	0	0	0
	2	6	12.5	3.5	10.5	22.5	29	50	43.5	42.5	47
	50	40	32	20	26	42.5	48	43.5	47	25.5	35

	24.5	18.5	14	12.5	13.5	9.5	6	3	5	0	0
	0	1	2	0	0	0	1	0	1	3	1
	5.5	3.5	6.5	25.5	27	45	52.5	43.5	26	31	15
	19	13	13	5.5	10	7.5	6	4.5	2	0.5	2.5
	1	1.5	0.5	0.5	0	0	0	0	0	0	0
	0										
1998	1	1	3	2	92.232	0	0	0	0	0	0
	0	0	0.5	2.5	1	3	8.5	12	25	12.5	32
	19.5	18	14	14	15.5	9	13.5	6.5	7.5	17.5	12
	11.5	6	4	3.5	2	2	2	1	1	0	0
	0	0	3	0	0	0	0	0	0	0	0
	0.5	2.5	1	1	4.5	7	9	7.5	8	7.5	7
	3	3	8.5	4	1.5	5.5	0.5	0.5	1	0.5	0
	0	0.5	0	0	0	0	0	0	0	0	0
	0										
1999	1	1	3	2	198.146	0	0	0	0	0.5	0
	0	0	1	0	0	1.5	7	6.5	12	17	22
	32	26.5	30.5	35	39	18.5	26	19	20.5	10	15.5
	10.5	7.5	8.5	5	7	6	1.5	1.5	3.5	1	0
	0	0	1	0	0	0	0	0.5	0	0	0
	1	0	1	4.5	3	2.5	9	10	18	20	22.5
	15.5	20	20	13.5	13	8	8.5	6	5.5	4.5	3.5
	2.5	3	3	2	0.5	0.5	2.5	0	0	0	0
	0										
2000	1	1	3	2	76.018	0	0	0	0	0	0
	0	0	0	0	0	0	2	2	4	4	7
	5.5	8	8	9.5	4.5	9	14.5	7	7.5	9.5	8
	5	8	7	2.5	2.5	3.5	0.5	0	2	0	0.5
	1	0	0.5	0	0	0	0	0	0	0	0
	0	0	0	2	1	4	4	4	7	16.5	13
	9	4.5	8.5	8	6.5	7	2.5	4.5	5	1	2
	3	0.5	1.5	1.5	0.5	0	0	0	0.5	0	0
	0.5										
2001	1	1	3	2	128.406	0	0	0	0	0	0
	0	0.5	0	0	0	0.5	1	1	3.5	4.5	7.5
	11	14	24.5	21	14	18	21	12	12.5	10.5	11
	8	3	3	4	3.5	2.5	1	1.5	2.5	0	0
	0	0	0.5	0	0	0	0	0	0	1	0.5
	0	0	0	0.5	0	4	3.5	5.5	13.5	16	15
	19.5	17	19	9	14	5	9.5	3.5	2	1	3
	1	1	1.5	1.5	0	1.5	0.5	0	0	0	0
	0.5										
2002	1	1	3	2	88.748	0	0	0	0	0	0
	0	0	0	0	0	0	2	5	4	7	12.5
	28	14.5	27.5	15	14	18.5	12.5	8.5	14.5	11	6
	3.5	3	5.5	1.5	1	0	0	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	2	3	4	4	13.5	16	10.5
	17.5	9	14	11.5	7.5	3.5	4.5	3	2	0.5	1
	0.5	0.5	0	0	0	0	0	0	0	0	0
	0										
2003	1	1	3	2	48.736	0.5	0	0.5	0	0	0
	1	0	1	0	1	0	0	0	2	5	9.5
	16	9.5	12	7.5	7.5	12	4	1	3	4.5	1
	2.5	0	0	0.5	1	0	0	0	0	0	0
	0	0	1	0.5	0	0.5	1	1	0	0	0
	1	0	0	0	0	0	1	2	7.5	13	8.5
	4	4.5	8.5	11	1	2	0	0.5	0	0.5	0
	0	0.5	0	0	0	0	0	0	0	0	0
	0										
2004	1	1	3	2	88.23	0	0.5	6.5	2	5	1
	1	0	2	2	5	4	8	11	9	13	13
	22.5	15	29	17	15	8	10	4	15	6	5
	3	3	1	3	1	0	0	1	0	0	0
	0	0	0	0	0.5	2.5	2	4	2	1	1
	0	0	2	2	9	4	7	4	8	5.5	11
	11	6	2	1	1	4	1	1	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0										

2005	1	1	3	2	48.15	0	0	0	0	0	0
	0	0	0	0	0	1	2	0	3.5	5	6
	12	7	13	6	9.5	10.5	2	5.5	3	1	2
	1	1	1	0	1	1	0	0.5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	2	2	3.5	10	5	10	11
	7	7	8.5	6.5	3	1.5	1	1	1	0	0
	0	0	0	0	0	0.5	0	0	0	0	0
	0										
2006	1	1	3	2	93.024	0	0	0	0	0	0
	0	0	0	0	0	0	3	1.5	3	1.5	5
	8.5	6.5	14	19.5	17.5	25	23	19.5	14.5	20	19.5
	14	8.5	4	3.5	1	3.5	1.5	6	2	4	2
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	1.5	2	3.5	5	3.5	8.5
	13	16.5	13.5	5	7	6.5	1.5	1	2.5	1	0.5
	0	0.5	0	0.5	0.5	0	0	0	0	0	0
	0										
2007	1	1	3	2	177.384	0	0	0	0	0	0
	0	0	0	0	0	1	0	2	2	6	15.5
	14.5	16.5	18.5	29.5	35	32	43.5	44	41	37.5	31.5
	21	22.5	11	8	10	3	4	3	3	0	3
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	2	1	0	4	9.5	13.5	15.5
	13.5	6.5	19	6	8.5	4	3	1.5	0.5	0	0.5
	0	0	0	0	0	0	0	0	0	0	0
	0										
2008	1	1	3	2	151.172	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	2
	5	10.5	9	14.5	30	27	34	37	38	44	35
	31	22.5	24	10	13	2.5	3	2	1	1	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	3	8	12.5
	18	11.5	8	16	2	7	1	2	2	1	0.5
	0	0	1	0.5	0	0	0	0	0	0	0
	0										

#Recreational 22 years Note these are from Field (1987-1992) combined (1993-1998 - with 3/4th of combined sample size) and from RECFIN 1999-2008 and no sex info

1987	1	2	0	2	28.4	0	0	1	0	0	0
	0	0	0	0	0	5	13	18	21	31	26
	31	24	20	17	9	8	10	9	8	1	4
	7	3	4	6	3	1	3	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1988	1	2	0	2	107.2	0	0	0	0	0	0
	0	0	3	5	11	28	43	62	111	94	100
	90	99	54	62	62	56	41	27	27	30	20
	5	11	7	6	3	3	4	1	1	1	1
	1	1	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1989	1	2	0	2	107	0	0	0	0	0	0
	1	1	4	6	8	27	33	57	115	153	104
	88	75	60	62	65	49	37	25	40	28	7
	6	6	3	6	1	1	1	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1990	1	2	0	2	22.3	0	0	0	0	0	0
	0	1	1	1	5	14	12	20	19	20	16
	19	14	10	11	10	9	12	6	6	9	2

	3	1	0	0	0	0	1	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1991	1	2	0	2	35.9	0	0	0	0	0	0
	0	0	0	3	0	5	8	19	35	38	39
	32	30	28	16	19	19	9	12	14	6	8
	7	1	4	1	0	1	1	1	1	0	1
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1992	1	2	0	2	71.8	0	0	0	0	0	0
	0	2	4	5	10	5	9	41	114	76	85
	70	51	47	35	40	24	20	20	13	9	12
	2	10	6	2	0	1	1	1	0	1	0
	1	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1993	1	2	0	2	82.8	1	0	2	1	0	0
	1	2	5	8	15	19	39	69	137	106	99
	93	82	73	68	51	45	37	30	22	19	19
	11	10	10	7	8	6	3	2	1	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1994	1	2	0	2	72.5	1	1	1	2	3	1
	0	1	3	4	10	15	32	83	128	117	91
	68	81	58	54	54	28	25	15	18	12	10
	21	6	9	6	4	1	1	1	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1995	1	2	0	2	98.6	0	0	1	1	0	2
	0	0	2	3	2	6	26	98	163	175	181
	147	100	95	64	55	39	36	34	22	12	11
	9	9	2	1	6	9	3	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1996	1	2	0	2	139.3	0	0	0	0	1	1
	5	3	3	0	8	10	48	97	195	186	206
	179	140	135	124	116	91	81	56	39	43	25
	13	14	15	11	3	2	0	3	0	0	0
	0	1	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1997	1	2	0	2	182.8	1	1	0	0	0	0
	0	1	2	1	4	14	59	166	271	234	252
	224	226	173	126	121	110	87	79	59	43	28
	20	19	21	80	6	3	2	3	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										

1998	1	2	0	2	85.1	0	1	0	1	1	0
	0	2	2	1	1	4	3	8	22	92	148
	164	136	142	73	84	61	39	35	33	30	15
	8	7	7	3	4	3	0	0	2	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
1999	1	2	0	2	69.9	0	0	0	0	0	0
	0	0	1	0	0	1	3	9	19	29	81
	76	64	64	76	56	35	39	23	36	24	16
	15	7	10	7	2	0	4	1	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
2000	1	2	0	2	23.5	1	0	0	3	0	0
	0	1	1	1	0	1	0	2	2	4	5
	13	21	26	25	23	22	12	14	9	14	8
	5	2	3	5	3	3	2	1	1	0	1
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
2001	1	2	0	2	14.7	0	0	0	0	1	0
	1	1	0	1	1	1	0	1	2	2	3
	6	18	18	20	16	12	9	4	5	9	9
	0	2	1	1	0	0	0	0	0	0	1
	0	0	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
2002	1	2	0	2	84	0	1	0	0	0	0
	0	5	3	5	8	5	8	4	13	52	126
	144	112	75	56	39	30	32	23	17	23	22
	12	7	1	2	3	4	2	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
2003	1	2	0	2	140.7	0	2	2	1	2	2
	0	0	4	13	18	17	22	19	21	78	226
	196	162	154	108	86	50	49	30	29	25	17
	11	22	13	10	5	3	0	3	0	0	1
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
2004	1	2	0	2	113.1	0	1	0	1	0	0
	1	3	1	4	7	10	11	18	23	40	57
	76	55	50	52	45	52	79	121	118	75	45
	44	33	29	15	15	13	13	7	5	3	0
	0	2	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0										
2005	1	2	0	2	447.2	0	3	2	2	0	2
	3	2	3	7	14	21	17	26	52	174	495
	574	503	461	431	343	278	205	201	159	105	82
	59	41	51	33	25	15	27	20	20	2	3
	1	3	3	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

0 0 0 0 0 0 0 0 0 0 0
0
2006 1 2 0 2 426.4 0 0 3 1 4 2
0 2 0 7 12 14 18 26 50 167 505
520 429 399 385 317 295 207 161 152 131 93
95 56 44 45 38 27 21 16 5 4 3
2 1 4 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0
2007 1 2 0 2 322.1 0 2 0 1 0 0
2 3 5 2 9 12 11 18 49 130 400
389 370 333 258 234 190 174 123 99 88 73
56 48 43 26 15 11 11 15 4 3 5
3 0 4 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0
2008 1 2 0 2 254.7 0 0 0 1 0 0
0 3 4 1 4 6 7 18 39 118 395
371 285 267 212 191 106 111 90 89 66 35
34 26 21 14 8 11 2 8 2 0 0
1 0 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0

Discard 4 years
2004 1 1 0 1 152 0.051076333 0.078050103 0.091679001
0.075888051 0.036106281 0.046484134 0.031695693 0.063855026
0.035457665 0.026809454 0.024214991 0.028128306 0.038291395
0.05030376 0.029794604 0.019862058 0.027423684 0.040070044
0.025261631 0.013779483 0.025625271 0.017334105 0.012885834
0.023396708 0.00985896 0 0.00766808 0.0082158 0.014941433
0.006053748 0.015373844 0.006120258 0.009147132 0.009147132 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0
2005 1 1 0 1 200 0.02456214 0.014632765 0.024446008
0.02360305 0.020131665 0.030376114 0.018811545 0.028052314
0.0193768 0.012040094 0.044634243 0.024836352 0.039605793
0.081803699 0.130995341 0.092815288 0.111113343 0.035632483
0.057117859 0.057622101 0.04794124 0.023768412 0.013875455
0.014889512 0.003658191 0.001219397 0 0.001219397 0 0
0 0.001219397 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
2006 1 1 0 1 31 0.105166241 0 0.09140665
0.061381074 0.036828645 0 0 0.049104859 0 0.073657289
0.036828645 0.09140665 0.110485934 0.036828645 0.073657289
0.122762148 0.012276215 0 0.012276215 0 0 0.012276215
0.049104859 0 0 0 0.02455243 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0
2007 1 1 0 1 34 0 0 0 0 0.003331029
0.00624568 0.00624568 0 0.002081893 0.00624568 0.00624568
0.010409467 0.044552518 0.126853926 0.055378363 0.014573253
0.088688657 0.1190843 0.1190843 0.089105036 0.093268822
0.036224944 0.017487904 0.037057702 0.031644779 0.015406011
0.068702481 0 0 0 0 0.002081893 0 0 0

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
#Triennial 6 years											
1989.0	1	3	3	0	100.7	6.0	10.0	7.0	16.0	8.0	2.0
	1.0	5.0	4.5	9.0	13.8	13.0	12.4	6.0	4.0	7.0	8.0
	11.0	15.0	15.0	8.0	9.0	12.0	3.0	5.0	1.0	2.0	0.0
	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0
	0.0	0.0	1.0	1.0	8.0	16.8	11.0	25.2	6.0	4.0	21.2
	2.5	12.0	3.0	4.0	3.5	1.0	7.0	7.0	11.9	7.0	8.0
	2.0	8.9	1.0	0.0	2.0	0.0	5.8	0.0	1.0	1.0	0.0
	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
1992.0	1	3	3	0	45.4	10.0	23.5	15.5	12.0	8.0	1.0
	4.0	2.0	4.7	5.7	5.4	5.0	0.0	2.0	0.0	2.0	0.0
	1.0	1.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	6.0	13.5	13.5	11.0	6.0	2.0	1.0	3.0
	0.0	2.0	8.4	1.0	5.4	0.0	2.0	0.0	2.0	1.0	1.0
	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
1995.0	1	3	3	0	72.8	21.0	26.7	18.0	4.0	4.0	2.0
	2.0	1.0	8.0	10.8	1.0	1.0	1.0	2.0	2.0	2.0	2.0
	3.0	10.1	0.0	4.0	5.0	0.0	3.0	0.0	0.0	0.0	2.0
	2.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	22.0	20.0	14.0	3.0	1.0	3.0	3.0	4.0
	3.0	3.0	0.0	0.0	1.0	1.0	0.0	5.7	3.0	0.0	3.0
	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	2.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
1998.0	1	3	3	0	81.4	5.0	7.0	9.0	9.0	7.0	5.0
	7.0	13.0	26.0	8.0	4.0	4.0	5.0	3.0	2.0	1.0	4.0
	2.0	4.0	2.0	2.0	1.0	1.0	1.0	1.0	0.0	1.0	0.0
	2.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
	0.0	0.0	0.0	5.0	4.0	10.0	5.0	1.0	4.0	6.0	10.0
	6.0	8.0	3.0	2.0	0.0	6.0	4.0	4.0	5.0	4.0	3.0
	1.0	3.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
2001.0	1	3	3	0	138.4	26.0	30.0	10.0	14.0	15.0	31.5
	37.0	34.0	19.0	10.0	2.0	2.0	2.0	2.0	0.0	3.0	2.0
	3.0	4.0	3.0	7.0	6.0	3.0	1.0	2.0	2.0	1.0	2.0
	1.0	0.0	1.0	0.0	2.0	2.0	0.0	1.0	0.0	0.0	0.0
	0.0	0.0	0.0	22.0	10.0	7.0	6.0	10.0	21.5	18.0	24.0
	14.0	4.0	2.0	4.0	0.0	2.0	2.0	2.0	3.0	3.0	5.0
	4.0	5.0	0.0	1.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	0.0										
2004.0	1	3	3	0	123.5	20.5	22.5	10.0	10.0	4.0	1.0
	2.0	3.5	7.7	8.0	6.0	6.0	17.0	22.7	31.5	15.5	24.4
	11.2	7.0	32.2	11.0	11.0	8.0	7.2	8.0	11.0	6.0	2.0
	1.0	3.0	2.0	4.0	1.0	0.0	2.0	0.0	1.0	1.0	0.0
	0.0	0.0	0.0	15.5	27.7	18.7	7.0	2.0	0.0	1.0	3.0
	0.0	5.0	0.0	11.0	17.2	10.5	4.0	8.7	11.2	6.0	14.0
	8.0	7.0	3.0	1.0	4.0	2.0	1.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
#NWFSC 6 years											
2003	1	4	3	0	129	92.3	110.8	96.1	117.8	128.0	75.9
	151.7	106.0	231.6	449.0	354.4	193.4	140.4	285.8	245.3	406.3	326.6
	328.5	318.5	124.3	185.7	125.9	65.7	24.1	70.0	76.4	84.4	31.6
	70.5	26.3	0.0	12.9	0.0	0.0	0.0	12.7	0.0	0.0	0.0
	0.0	0.0	11.4	51.7	144.2	106.6	114.4	84.5	97.8	80.6	115.4
	120.5	146.2	143.7	233.0	110.3	238.7	163.3	149.4	205.6	81.1	87.1

	27.2	0.0	23.6	11.4	0.0	0.0	13.2	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
2004	1	4	3	0	145	249.6	369.5	384.6	294.3	453.7	330.4
	229.5	117.0	128.2	237.3	97.5	405.9	685.2	735.2	741.0	851.9	501.6
	464.0	638.2	859.4	330.4	262.7	111.0	124.9	92.7	59.7	113.9	16.7
	0.0	0.0	0.0	0.0	22.1	16.7	16.7	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	137.9	182.1	193.9	276.8	307.9	229.3	53.6	44.6
	64.5	169.0	146.2	456.3	473.2	532.1	914.7	352.6	509.4	371.3	334.3
	133.8	116.6	38.6	24.3	12.0	0.0	25.5	0.0	0.0	0.0	0.0
	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
2005	1	4	3	0	114	33.2	69.3	95.3	179.8	196.9	166.4
	86.9	35.0	98.4	201.5	149.0	186.5	87.4	168.9	185.5	170.2	535.2
	279.7	503.9	733.5	680.2	513.1	531.3	565.3	722.8	485.6	478.6	644.1
	21.2	213.0	24.9	12.4	0.0	176.4	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	59.7	158.8	58.9	27.7	99.8	68.2	87.9	63.1
	15.0	230.2	120.8	48.4	42.4	159.1	262.9	271.8	394.5	289.5	375.8
	287.7	289.0	233.6	38.9	85.2	36.7	22.8	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
2006	1	4	3	0	67	0.0	198.6	96.4	78.9	24.3	18.5
	0.0	26.4	98.1	25.0	222.5	134.7	137.7	229.4	263.5	170.9	92.9
	265.0	308.5	216.8	623.6	450.4	569.2	738.9	395.2	520.9	291.8	173.2
	392.3	234.8	22.2	87.9	38.6	79.5	0.0	26.9	0.0	21.2	0.0
	0.0	0.0	0.0	0.0	47.5	87.1	42.5	49.4	22.4	0.0	27.0
	22.2	22.2	131.2	51.9	74.0	153.9	432.7	121.3	733.6	457.2	470.8
	104.7	403.2	841.9	585.8	363.6	339.6	23.6	144.2	165.4	0.0	0.0
	144.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
2007	1	4	3	0	59	46.9	23.5	49.6	45.7	45.7	0.0
	0.0	41.8	152.2	18.0	22.2	85.8	373.0	495.9	193.8	431.3	36.0
	386.3	226.9	221.3	136.0	433.5	231.2	600.8	384.4	364.9	201.5	243.4
	114.3	303.1	19.4	188.2	0.0	188.2	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	20.5	24.5	26.1	0.0	0.0	0.0	0.0	0.0
	0.0	22.6	117.4	72.7	59.3	140.5	96.3	140.2	141.8	83.5	24.5
	368.6	76.1	116.7	0.0	179.8	0.0	50.0	23.7	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										
2008	1	4	3	0	93	100.0	273.6	71.5	172.0	33.2	20.8
	0.0	0.0	0.0	0.0	0.0	0.0	58.9	24.0	0.0	10.4	16.1
	66.5	11.7	43.9	93.5	66.0	66.4	125.5	66.6	149.6	34.0	58.9
	0.0	222.4	45.7	0.0	10.9	0.0	0.0	46.5	0.0	0.0	0.0
	0.0	0.0	0.0	28.7	123.3	100.9	77.0	10.9	12.3	0.0	0.0
	0.0	12.9	0.0	18.6	29.6	0.0	30.4	39.7	42.5	0.0	0.0
	33.1	101.5	0.0	10.9	9.8	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0										

14 # Number of Age Bins
1 2 3 4 5 6 7 8 9 10 11 12 13 14

1 # Number of Aging Error Matrices

0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5
	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.5	20.5		
0.4	0.4	0.41	0.43	0.45	0.51	0.59	0.67	0.76	0.86	0.95	1.05
	1.14	1.24	1.33	1.43	1.53	1.63	1.73	1.83	1.93		

923 # Number of age comp observations using restricted length ranges ***
2 # Length bin refers to: 1=population length bin indices; 2=data length bin indices; 3= actual pop? data? lengths match bins?
0 #_combine males into females at or below this bin number

#Year	Seas	Fleet	Gender	Part						

#Commerical 422 lines 1993 - 1998,2001-2004

1993	1	1	1	0	1	5	5	2	0	2	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	6	6	8	0	8	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	7	7	12	0	11	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	8	8	24	0	18	6
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	9	9	27.5	0	12	13.5
	2	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	10	10	48	0	9	33
	4	1	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	11	11	50	0	3	34
	11	1	0	0	0	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	12	12	49	0	1	30
	15	3	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	13	13	59	0	0	17
	33	9	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	14	14	44	0	0	10
	28	6	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	15	15	48	0	0	1
	23	17	4	2	0	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	16	16	39	0	0	1
	12	20	6	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	17	17	33	0	0	1
	10	18	3	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	18	18	33	0	0	0
	4	11	16	1	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	19	19	19	0	0	0
	0	6	11	1	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	20	20	10	0	0	0
	0	3	3	4	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	21	21	13	0	0	0
	0	4	6	3	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	22	22	9	0	0	0
	0	0	1	5	3	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

1993	1	1	1	0	1	23	23	18	0	0	1
	0	0	5	5	4	3	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	24	24	11	0	0	0
	0	0	2	3	5	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	25	25	7	0	0	0
	0	0	1	3	3	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	26	26	7	0	0	0
	0	0	0	4	2	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	27	27	6	0	0	0
	0	0	0	1	2	0	3	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	28	28	4	0	0	0
	1	0	0	1	1	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	29	29	2	0	0	0
	0	0	0	0	0	1	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	30	30	4	0	0	0
	0	0	0	2	0	1	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	31	31	5	0	0	0
	0	0	0	0	1	2	2	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	32	32	3	0	0	0
	0	0	0	0	0	0	2	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	33	33	2	0	0	0
	0	0	0	0	0	0	2	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	34	34	1	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	1	0	1	35	35	3	0	0	0
	0	0	0	0	0	0	1	0	1	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	5	5	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	3	0	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	6	6	5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	3	1	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	7	7	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	2	4	0	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	8	8	14	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	6	7	0	0	0	1	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	9	9	13.5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	4	4.5	5	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	10	10	22	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	2	12	8	0	0	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	11	11	17	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	7	9	1	0	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	12	12	19	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	6	7	4	2	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	13	13	11	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	7	2	1	0	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	14	14	15	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	4	6	3	1	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	15	15	17	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	1	7	7	1	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	16	16	17	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	2	8	5	2	0	0	0	0
	0	0	0								
1993	1	1	2	0	1	17	17	13	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	1	3	5	3	0	0	0
	0	0	0								
1993	1	1	2	0	1	18	18	16	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	3	1	7	3	2	0	0
	0	0	0								
1993	1	1	2	0	1	19	19	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	4	1	1	0	0
	0	0	0								
1993	1	1	2	0	1	20	20	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	2	0	0	1	1	0
	0	0	0								
1993	1	1	2	0	1	21	21	8	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	3	4	0	0
	0	0	0								
1993	1	1	2	0	1	22	22	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	2	0	0
	0	0	0								
1993	1	1	2	0	1	23	23	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	2	0	1
	0	0	0								
1993	1	1	2	0	1	25	25	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0								
1994	1	1	1	0	1	5	5	3	2	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	6	6	4	2	2	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

1994	1	1	1	0	1	7	7	2	0	0	1
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	8	8	1	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	9	9	3	0	2	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	10	10	4.5	0	0	4.5
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	11	11	15	0	1	7
	6	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	12	12	19	0	0	10
	7	0	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	13	13	27	0	0	13
	8	5	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	14	14	29	0	0	9
	14	4	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	15	15	29	0	0	2
	16	6	4	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	16	16	36	0	0	0
	16	15	4	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	17	17	33	0	0	0
	5	16	11	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	18	18	20	0	0	0
	5	4	6	4	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	19	19	21	0	0	0
	0	8	6	6	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	20	20	22	0	0	0
	1	3	11	6	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	21	21	12	0	0	0
	1	2	6	2	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	22	22	15	0	0	0
	0	0	6	6	3	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	23	23	11	0	0	0
	0	0	3	5	2	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	24	24	9	0	0	0
	0	0	2	2	1	4	0	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	25	25	7	0	0	0
	0	0	0	1	2	4	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	26	26	9	0	0	0
	0	0	0	4	2	2	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	27	27	10	0	0	0
	0	0	0	1	6	3	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	28	28	3	0	0	0
	0	0	0	0	0	1	2	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	29	29	6	0	0	0
	0	0	0	0	3	3	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	30	30	5	0	0	0
	0	0	0	0	0	2	3	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	31	31	5	0	0	0
	0	0	0	0	1	1	3	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	32	32	2	0	0	0
	0	0	0	0	0	0	1	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	34	34	2	0	0	0
	0	0	0	0	0	0	1	0	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	35	35	3	0	0	0
	0	0	0	0	0	0	0	2	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	36	36	1	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	37	37	2	0	0	0
	0	0	0	0	0	0	0	1	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	1	0	1	42	42	1	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	8	8	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	9	9	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	10	10	7.5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	2.5	4	0	0	0	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	11	11	10	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	6	2	0	0	0	0	0	0
	0	0	0								

1994	1	1	2	0	1	12	12	16	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	6	4	4	0	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	13	13	44	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	7	15	14	8	0	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	14	14	27	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	9	15	1	0	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	15	15	26	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	5	9	8	4	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	16	16	26	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	3	10	10	3	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	17	17	17	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	3	10	4	0	0	0	0
	0	0	0								
1994	1	1	2	0	1	18	18	18	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	9	5	2	1	1	0
	0	0	0								
1994	1	1	2	0	1	19	19	13	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	4	7	0	2	0	0
	0	0	0								
1994	1	1	2	0	1	20	20	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	3	4	0	0	0
	0	0	0								
1994	1	1	2	0	1	21	21	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	3	3	0	0
	0	0	0								
1994	1	1	2	0	1	22	22	10	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	3	4	1
	1	0	0								
1994	1	1	2	0	1	23	23	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	2	1	1
	0	0	0								
1994	1	1	2	0	1	24	24	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0								
1995	1	1	1	0	1	8	8	3	0	0	2
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	9	9	3	0	0	3
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	10	10	7	0	0	5
	2	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	11	11	1	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	12	12	3	0	0	0
	3	0	0	0	0	0	0	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	13	13	2	0	0	0
	1	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	14	14	2	0	0	0
	1	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	15	15	5	0	0	0
	4	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	16	16	14	0	0	0
	6	6	1	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	17	17	23	0	0	0
	3	13	5	2	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	18	18	17	0	0	0
	0	9	8	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	19	19	17	0	0	0
	0	6	10	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	20	20	17	0	0	0
	0	4	6	5	2	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	21	21	10	0	0	0
	0	1	5	3	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	22	22	15	0	0	0
	0	0	6	6	3	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	23	23	12	0	0	0
	0	0	4	3	2	3	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	24	24	10	0	0	0
	0	0	1	6	3	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	25	25	8	0	0	0
	0	0	2	2	3	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	26	26	5	0	0	0
	0	0	0	0	3	2	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	27	27	10	0	0	0
	0	0	0	1	7	1	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	28	28	8	0	0	0
	0	0	0	0	6	1	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	29	29	3	0	0	0
	0	0	0	0	1	2	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

1995	1	1	1	0	1	30	30	1	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	31	31	4	0	0	0
	0	0	0	0	1	0	3	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	34	34	3	0	0	0
	0	0	0	0	0	0	1	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	35	35	1	0	0	0
	0	0	0	0	0	0	0	0	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	38	38	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	1	0	1	39	39	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	2	0	1	8	8	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	2	0	1	9	9	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	2	0	1	10	10	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	1	2	0	1	13	13	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
1995	1	1	2	0	1	14	14	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	3	3	0	0	0	0	0
	0	0	0								
1995	1	1	2	0	1	15	15	9	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	5	3	0	0	0	0
	0	0	0								
1995	1	1	2	0	1	16	16	8	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	2	4	1	1	0	0	0
	0	0	0								
1995	1	1	2	0	1	17	17	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	2	4	1	0	0	0
	0	0	0								
1995	1	1	2	0	1	18	18	8	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	5	1	1	0	0
	0	0	0								
1995	1	1	2	0	1	19	19	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	2	3	1	0
	0	0	0								
1995	1	1	2	0	1	20	20	9	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	3	1	3	2	0
	0	0	0								
1995	1	1	2	0	1	21	21	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0	0	0	0	0	0	0	2	0	1
	0	0	0								
1995	1	1	2	0	1	22	22	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0								
1995	1	1	2	0	1	23	23	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	1	0	0								
1995	1	1	2	0	1	24	24	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0								
1996	1	1	1	0	1	3	3	1	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	9	9	1	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	10	10	1	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	11	11	3	0	0	2
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	12	12	3	0	0	2
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	13	13	6	0	0	0
	4	0	1	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	14	14	11	0	0	2
	6	2	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	15	15	24	0	0	3
	16	4	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	16	16	22	0	0	0
	15	5	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	17	17	22	0	0	0
	6	12	2	2	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	18	18	14	0	0	0
	2	9	3	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	19	19	7	0	0	0
	0	6	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	20	20	15	0	0	0
	1	5	7	0	1	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	21	21	9.5	0	0	0
	0	1	3	3	2	0.5	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

1996	1	1	1	0	1	22	22	10	0	0	0
	0	1	5	3	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	23	23	22	0	0	0
	0	2	12	8	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	24	24	15	0	0	0
	0	3	4	6	2	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	25	25	10	0	0	0
	0	1	4	4	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	26	26	7	0	0	0
	0	0	2	4	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	27	27	7	0	0	0
	0	0	1	2	2	2	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	28	28	4	0	0	0
	0	0	0	1	1	2	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	29	29	2	0	0	0
	0	0	1	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	30	30	2	0	0	0
	0	0	0	1	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	31	31	1	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	32	32	1	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	34	34	1	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	35	35	1	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	1	0	1	36	36	3	0	0	0
	0	0	0	0	0	0	0	2	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	9	9	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	10	10	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	0	2	0	0	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	11	11	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	12	12	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0	1	3	2	0	0	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	13	13	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	2	3	0	0	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	14	14	17	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	10	3	2	0	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	15	15	13	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	3	9	0	1	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	16	16	12	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	3	5	3	0	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	17	17	10	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	3	3	3	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	18	18	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	2	2	1	0	0	0
	0	0	0								
1996	1	1	2	0	1	19	19	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	2	1	2	0	0
	0	0	0								
1996	1	1	2	0	1	20	20	11	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	1	3	5	1	0	0
	0	0	0								
1996	1	1	2	0	1	21	21	7.5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	3	1	1.5	1	0
	0	0	0								
1996	1	1	2	0	1	22	22	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	1	0	0	0	0
	0	0	0								
1996	1	1	2	0	1	23	23	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0								
1996	1	1	2	0	1	24	24	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	1	0	0
	1	0	0								
1996	1	1	2	0	1	26	26	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	1	0
	0	0	0								
1997	1	1	1	0	1	7	7	2	0	2	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	8	8	6	0	6	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	9	9	11	0	7	4
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	10	10	2	0	2	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

1997	1	1	1	0	1	11	11	6	0	2	4
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	12	12	16	0	0	16
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	13	13	25	0	0	21
	4	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	14	14	38	0	0	24
	13	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	15	15	31	0	0	12
	19	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	16	16	34	0	0	5
	25	3	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	17	17	38	0	0	1
	20	16	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	18	18	38	0	0	0
	15	19	3	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	19	19	30	0	0	0
	5	20	5	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	20	20	24	0	0	0
	2	15	4	3	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	21	21	15	0	0	0
	2	10	3	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	22	22	21	0	0	0
	1	7	8	5	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	23	23	36	0	0	0
	0	6	24	5	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	24	24	41	0	0	0
	0	2	24	10	5	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	25	25	34	0	0	0
	0	0	14	13	6	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	26	26	38	0	0	0
	0	0	18	15	4	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	27	27	22	0	0	0
	0	0	2	10	5	3	2	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	28	28	27	0	0	0
	0	0	1	11	9	4	2	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	29	29	20	0	0	0
	0	0	0	8	3	6	1	1	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	30	30	15	0	0	0
	0	0	1	6	2	3	1	1	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	31	31	10	0	0	0
	0	0	0	1	0	4	3	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	32	32	9	0	0	0
	0	0	0	0	1	3	1	2	2	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	33	33	12	0	0	0
	0	0	0	0	0	4	2	4	1	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	34	34	7	0	0	0
	0	0	0	0	1	1	1	3	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	35	35	6	0	0	0
	0	0	0	0	0	1	3	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	36	36	3	0	0	0
	0	0	0	0	0	0	0	2	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	37	37	5	0	0	0
	0	0	0	0	0	0	2	0	2	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	41	41	1	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	1	0	1	42	42	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	2
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	6	6	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	7	7	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	3	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	8	8	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	9	9	5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	4	1	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	10	10	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	3	0	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	11	11	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	3	0	0	0	0	0	0	0	0
	0	0	0								

1997	1	1	2	0	1	12	12	18	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	12	5	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	13	13	23	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	17	6	0	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	14	14	36	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	19	14	1	1	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	15	15	41	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	11	28	2	0	0	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	16	16	35	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	6	20	7	1	1	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	17	17	19	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	7	10	1	0	1	0	0	0
	0	0	0								
1997	1	1	2	0	1	18	18	19	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	5	8	4	2	0	0	0	0
	0	0	0								
1997	1	1	2	0	1	19	19	9	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	1	3	3	1	0	0	0
	0	0	0								
1997	1	1	2	0	1	20	20	9	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	2	6	1	0	0	0
	0	0	0								
1997	1	1	2	0	1	21	21	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	2	1	2	1	0	0
	0	0	0								
1997	1	1	2	0	1	22	22	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	1	0	0	0
	1	0	0								
1997	1	1	2	0	1	23	23	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	1	0	0	0
	0	0	0								
1997	1	1	2	0	1	24	24	5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	1	2	0	1
	0	0	0								
1997	1	1	2	0	1	25	25	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	0
	1	0	1								
1997	1	1	2	0	1	26	26	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1
	0	0	0								
1997	1	1	2	0	1	27	27	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0								
1997	1	1	2	0	1	30	30	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0								
1998	1	1	1	0	1	12	12	2	0	0	0
	1	0	0	0	1	0	0	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	13	13	7	0	0	0
	7	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	14	14	11	0	0	1
	7	2	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	15	15	22	0	0	1
	17	4	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	16	16	9	0	0	0
	5	4	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	17	17	24	0	0	0
	8	13	3	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	18	18	14	0	0	0
	2	6	3	2	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	19	19	13	0	0	0
	1	10	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	20	20	11	0	0	0
	1	5	5	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	21	21	13	0	0	0
	0	1	7	3	2	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	22	22	13	0	0	0
	0	2	6	2	2	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	23	23	8	0	0	0
	0	0	4	3	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	24	24	11	0	0	0
	0	0	4	3	2	2	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	25	25	4	0	0	0
	0	0	0	3	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	26	26	7	0	0	0
	0	0	2	3	2	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	27	27	14	0	0	0
	0	0	1	7	5	0	0	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	28	28	7	0	0	0
	0	0	1	3	2	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	29	29	10	0	0	0
	0	0	0	5	1	4	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

1998	1	1	1	0	1	30	30	3	0	0	0
	0	0	0	0	3	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	31	31	2	0	0	0
	0	1	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	32	32	2	0	0	0
	0	0	0	0	1	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	33	33	2	0	0	0
	0	0	0	0	0	1	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	34	34	1	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	35	35	1	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	36	36	1	0	0	0
	0	0	0	0	0	0	0	0	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	1	0	1	42	42	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	3
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	13	13	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	3	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	14	14	5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	4	1	0	0	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	15	15	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	5	0	1	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	16	16	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	2	1	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	17	17	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	18	18	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	3	0	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	19	19	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	2	1	0	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	20	20	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	1	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	21	21	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	1	0	0	0	0
	0	0	0								
1998	1	1	2	0	1	22	22	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0	0	0	0	1	2	3	0	0	0
	0	0	0								
1998	1	1	2	0	1	23	23	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	1	0	0	0
	1	0	0								
1998	1	1	2	0	1	25	25	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	1
	0	1	0								
2001	1	1	1	0	1	13	13	1	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	14	14	1	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	15	15	2	0	0	2
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	16	16	4	0	0	3
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	17	17	3	0	0	3
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	18	18	5	0	0	2
	3	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	19	19	8	0	0	4
	3	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	20	20	15	0	0	0
	8	5	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	21	21	11	0	0	0
	5	4	1	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	22	22	4	0	0	1
	1	1	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	23	23	7	0	0	0
	1	0	5	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	24	24	8	0	0	0
	0	6	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	25	25	7	0	0	0
	1	3	0	2	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	26	26	9	0	0	0
	0	2	4	1	1	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	27	27	8	0	0	0
	0	2	2	3	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

2001	1	1	1	0	1	28	28	9	0	0	0
	0	0	5	3	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	29	29	5	0	0	0
	0	0	2	1	2	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	31	31	1	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	32	32	2	0	0	0
	0	0	0	0	1	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	33	33	2	0	0	0
	0	0	0	0	1	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	34	34	1	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	35	35	1	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	1	0	1	37	37	2	0	0	0
	0	0	0	0	0	0	1	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	7	7	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	14	14	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	1	1	1	0	0	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	15	15	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	0	1	0	0	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	16	16	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	3	1	0	0	0	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	17	17	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	2	3	1	0	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	18	18	10	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	3	6	0	0	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	19	19	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	2	3	1	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	20	20	8	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	2	4	1	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	21	21	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	3	1	1	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	22	22	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0	0	1	1	2	3	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	23	23	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	24	24	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	2	0	0	0	0
	0	0	0								
2001	1	1	2	0	1	25	25	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	0
	0	0	0								
2001	1	1	2	0	1	26	26	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	0	0	0	1	2	0	0	1
	0	0	0								
2001	1	1	2	0	1	27	27	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0								
2002	1	1	1	0	1	13	13	2	0	1	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	14	14	5	0	0	4
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	15	15	4	0	0	2
	1	0	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	16	16	6	0	0	4
	1	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	17	17	11	0	0	3
	8	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	18	18	23	0	1	4
	14	1	2	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	19	19	10	0	0	0
	4	4	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	20	20	22	0	0	2
	10	4	6	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	21	21	9	0	0	0
	3	4	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	22	22	11	0	0	0
	1	3	3	4	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	23	23	15	0	0	0
	3	4	7	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	24	24	10	0	0	0
	0	4	1	1	2	2	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

2002	1	1	1	0	1	25	25	8	0	0	0
	0	4	2	2	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	26	26	10	0	0	0
	2	1	4	1	1	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	27	27	5	0	0	0
	1	0	2	0	2	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	28	28	2	0	0	0
	0	1	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	29	29	2	0	0	0
	0	0	0	0	1	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	30	30	2	0	0	0
	0	0	0	0	2	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	31	31	4	0	0	0
	0	0	0	0	1	2	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	32	32	1	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	1	0	1	36	36	1	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	11	11	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	13	13	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	1	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	14	14	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	1	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	15	15	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	3	1	0	0	0	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	16	16	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	2	0	1	0	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	17	17	10	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	1	4	1	2	1	0	0	0
	0	0	0								
2002	1	1	2	0	1	18	18	11	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	3	3	1	1	2	0	0	0
	0	0	0								
2002	1	1	2	0	1	19	19	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	2	0	1	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	20	20	11	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0	1	2	5	1	2	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	21	21	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	4	2	1	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	22	22	12	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	3	5	2	1	1	0	0
	0	0	0								
2002	1	1	2	0	1	23	23	8	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	4	2	2	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	24	24	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	2	1	0	0	0
	0	0	0								
2002	1	1	2	0	1	25	25	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0	0	1
	0	0	0								
2002	1	1	2	0	1	26	26	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0								
2002	1	1	2	0	1	27	27	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0								
2003	1	1	1	0	1	15	15	2	0	0	1
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	16	16	1	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	17	17	6	0	0	1
	3	2	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	18	18	11	0	0	1
	5	3	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	19	19	8	0	0	1
	3	2	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	20	20	8	0	0	0
	4	2	1	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	21	21	5	0	0	0
	1	1	2	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	22	22	1	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	23	23	7	0	0	0
	0	1	1	4	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	24	24	3	0	0	0
	0	1	0	0	0	2	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

2003	1	1	1	0	1	25	25	1	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	26	26	1	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	27	27	2	0	0	0
	0	0	0	2	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	29	29	1	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	33	33	1	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	1	0	1	42	42	1	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	2	0	1	15	15	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	2	0	1	16	16	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	1	0	0	0	0	0	0	0
	0	0	0								
2003	1	1	2	0	1	17	17	5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	3	1	0	0	0	0	0	0
	0	0	0								
2003	1	1	2	0	1	18	18	10	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	7	3	0	0	0	0	0	0
	0	0	0								
2003	1	1	2	0	1	19	19	7	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	5	2	0	0	0	0	0	0
	0	0	0								
2003	1	1	2	0	1	20	20	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	1	1	0	0	0	0	0
	0	0	0								
2003	1	1	2	0	1	21	21	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0								
2003	1	1	2	0	1	22	22	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	1	1	0	0	0
	0	0	0								
2003	1	1	2	0	1	23	23	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	1	3	1	0	0	0
	0	0	0								
2003	1	1	2	0	1	25	25	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	3	3	1	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	5	5	1	1	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	7	7	1	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	9	9	1	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	11	11	3	0	0	3
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	12	12	1	0	0	1
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	13	13	4	0	0	4
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	14	14	6	0	0	4
	2	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	15	15	6	0	0	4
	1	0	0	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	16	16	5	0	0	3
	2	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	17	17	6	0	0	3
	2	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	18	18	8	0	0	0
	6	1	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	19	19	9	0	0	1
	4	2	1	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	20	20	12	0	0	2
	4	6	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	21	21	8	0	0	0
	6	2	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	22	22	11	0	0	0
	5	4	2	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	23	23	4	0	0	0
	0	1	1	2	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	24	24	8	0	0	0
	2	3	1	1	0	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	25	25	2	0	0	0
	0	0	1	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

2004	1	1	1	0	1	26	26	9	0	0	0
	0	2	1	5	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	27	27	3	0	0	0
	1	1	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	1	0	1	28	28	1	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	3	3	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	5	5	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	7	7	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	11	11	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	2	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	12	12	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	1	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	13	13	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	1	1	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	14	14	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	1	1	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	15	15	2	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	2	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	16	16	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	3	0	1	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	17	17	6	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	2	2	2	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	18	18	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	1	1	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	19	19	4	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	1	2	0	0	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	20	20	5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	2	1	1	0	0	0	0
	0	0	0								
2004	1	1	2	0	1	21	21	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	1	0	0	1	0	0	0
	0	0	0								
2004	1	1	2	0	1	22	22	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

```
        0       0       0       0       1       0       0       0       0       0       0
        0       0       0
2004    1       1       2       0       1       25      25      1       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       1       0       0       0       0
        0       0       0

# Recreational 0 lines

# Triennial 192 lines
1995    1       3       1       0       1       1       1       9.95454 0.7     0.3     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       2       2       11.527267       0.619047619
        0.380952381     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1995    1       3       1       0       1       3       3       7.799997 0.454545455
        0.545454545     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0
1995    1       3       1       0       1       4       4       2.145454 0.5     0.5     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       5       5       1.072727 0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       7       7       2.145454 0.5     0.5     0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       8       8       1.072727 0       1       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       9       9       4.509089 0       0.571428571
        0.428571429     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0
1995    1       3       1       0       1       10      10      4.509089 0       0.857142857
        0.142857143     0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0
1995    1       3       1       0       1       11      11      1.072727 0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       12      12      1.072727 0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       14      14      1.072727 0       0       1
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       15      15      3.218181 0       0
        0.333333333     0.333333333     0.333333333     0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0
1995    1       3       1       0       1       16      16      1.072727 0       0       0
        1       0       0       0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0       0       0       0
        0       0       0
1995    1       3       1       0       1       17      17      1.072727 0       0       1
        0       0       0       0       0       0       0       0       0       0       0
```

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	1	0	1	18	18	2.290908	0	0	0.25
	0.5	0.25	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	1	0	1	19	19	3.218181	0	0	0
	0.333333333		0.666666667	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
1995	1	3	1	0	1	21	21	2.218181	0	0	0
	0	0.333333333		0.666666667		0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
1995	1	3	1	0	1	22	22	1.072727	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	1	0	1	23	23	1.072727	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	1	0	1	24	24	1.072727	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	1	0	1	27	27	1.072727	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	1	0	1	28	28	1.072727	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	1	0	1	33	33	1.072727	0	0	0
	0	0	0	0	0	0	0	0	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	1	0	1	34	34	1.072727	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	1	1	9.299997	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.545454545		0.454545455		0	0	0	0	0	0	0
	0	0	0	0	0						
1995	1	3	2	0	1	2	2	10.163632		0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.4375	0.5625	0	0	0	0	0	0	0	0
	0	0	0	0							
1995	1	3	2	0	1	3	3	10.945451		0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.461538462		0.538461538		0	0	0	0	0	0
	0	0	0	0	0	0					
1995	1	3	2	0	1	4	4	2.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.25	0.75	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	6	6	4.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.5	0.25	0.25	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	7	7	3.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	8	8	6.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.833333333		0.166666667		0	0	0	0	0	0
	0	0	0	0	0						

1995	1	3	2	0	1	9	9	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.5	0.5	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	10	10	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	11	11	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.5	0	0	0.5	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	14	14	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	15	15	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	16	16	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.5	0	0.5	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	17	17	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	18	18	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	19	19	3.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0.333333333		0.666666667		0	0	0
	0	0	0	0	0						
1995	1	3	2	0	1	20	20	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0								
1995	1	3	2	0	1	22	22	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0.5	0	0.5	0	0	0
	0	0	0								
1995	1	3	2	0	1	28	28	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	0
	0	0	0								
1995	1	3	2	0	1	29	29	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0								
1998	1	3	1	0	1	1	1	3.290908	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	2	2	3.290908	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	3	3	6.509089	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	4	4	2.436362	0.666666667		
	0.333333333		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
1998	1	3	1	0	1	5	5	5.654543	1	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	6	6	2.290908	0.5	0.5	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	7	7	4.72727	0.3	0.7	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	8	8	4.090905	0.4	0.6	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	9	9	3.018178	0	0.857142857	
	0.142857143	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0						
1998	1	3	1	0	1	10	10	3.436362	0	0.833333333	
	0.166666667	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0						
1998	1	3	1	0	1	11	11	2.290908	0	0.75	0.25
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	12	12	3.290908	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	13	13	2.218181	0	0.333333333	
	0.666666667	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0						
1998	1	3	1	0	1	14	14	1.145454	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	15	15	1.072727	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	17	17	2.145454	0	0	0.5
	0.5	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	18	18	3.218181	0	0	
	0.666666667	0	0.333333333		0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0					
1998	1	3	1	0	1	19	19	4.290908	0	0	0.75
	0.25	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	20	20	1.072727	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	21	21	2.145454	0	0	0.5
	0	0.5	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	24	24	1.072727	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	25	25	1.072727	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

1998	1	3	1	0	1	28	28	2.145454	0	0.5	0
	0	0	0.5	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	29	29	1.072727	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	1	0	1	32	32	1.072727	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	1	1	4.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	2	2	4.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	3	3	4.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.75	0.25	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	4	4	4.581816	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	5	5	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	6	6	2.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.2	0.8	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	7	7	5.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	8	8	5.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	9	9	6.654543	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.111111111		0.888888889	0	0	0	0	0	0	0	0
	0	0	0	0	0						
1998	1	3	2	0	1	10	10	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	11	11	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	12	12	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.5	0.5	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	13	13	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	14	14	2.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.5	0.5	0	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	15	15	3.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

	0	0.333333333		0.666666667		0	0	0	0	0	0
	0	0	0	0	0						
1998	1	3	2	0	1	16	16	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.5	0	0.5	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	17	17	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	18	18	3.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.333333333		0.333333333		0.333333333		0	0	0
	0	0	0	0	0	0					
1998	1	3	2	0	1	19	19	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	20	20	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.5	0	0	0.5	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	21	21	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	22	22	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	23	23	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
1998	1	3	2	0	1	24	24	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	1	0	1	1	1	9.945451	0.615384615		
	0.307692308	0	0	0.076923077	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2001	1	3	1	0	1	2	2	8.872724	0.5	0.5	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	1	0	1	3	3	4.290908	0.75	0.25	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	1	0	1	4	4	4.654543	0.111111111		
	0.888888889	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2001	1	3	1	0	1	5	5	7.509089	0	0.714285714	
	0.285714286	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2001	1	3	1	0	1	6	6	7.945451	0.153846154		
	0.769230769	0.076923077		0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2001	1	3	1	0	1	7	7	8.872724	0	0.916666667	
	0	0	0	0.083333333	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2001	1	3	1	0	1	8	8	6.72727	0	0.7	0.3
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								

```
2001 1 3 1 0 1 9 9 5.436362 0 0.666666667
     0.333333333 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0
     0 0 0 0 0
2001 1 3 1 0 1 10 10 2.145454 0 0 1
     0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 1 0 1 12 12 1.072727 0 1 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 1 0 1 13 13 1.072727 0 0 1
     0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 1 0 1 16 16 1.072727 0 0 0
     0 0 1 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 1 0 1 18 18 2.145454 0 0 0.5
     0 0.5 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 1 0 1 19 19 1.072727 0 0 0
     1 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 1 0 1 21 21 2.218181 0 0 0
     0 0.333333333 0 0.333333333 0 0.333333333 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0
2001 1 3 1 0 1 22 22 3.218181 0 0 0
     0 0.666666667 0 0.333333333 0 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0
2001 1 3 1 0 1 25 25 2.145454 0 0 0
     0 0.5 0 0 0 0.5 0 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 2 0 1 1 1 8.799997 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0.818181818 0.181818182 0 0 0 0 0 0 0
     0 0 0 0 0
2001 1 3 2 0 1 2 2 7.799997 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0.636363636 0.363636364 0 0 0 0 0 0 0
     0 0 0 0 0
2001 1 3 2 0 1 3 3 5.436362 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0.5 0.5 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 2 0 1 4 4 3.290908 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0.25 0.75 0 0 0 0 0 0 0 0
     0 0 0
2001 1 3 2 0 1 5 5 2.363635 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0.8 0.2 0 0 0 0 0 0 0
     0 0 0
2001 1 3 2 0 1 6 6 7.654543 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0 0.666666667 0.333333333 0 0 0 0 0 0
     0 0 0 0 0
2001 1 3 2 0 1 7 7 7.509089 0 0 0
     0 0 0 0 0 0 0 0 0 0
     0.285714286 0.285714286 0.428571429 0 0 0 0 0 0
     0 0 0 0 0 0
2001 1 3 2 0 1 8 8 3.363635 0 0 0
     0 0 0 0 0 0 0 0 0 0
```

	0	0.6	0.4	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	9	9	5.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.2	0.8	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	10	10	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	11	11	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.5	0	0.5	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	12	12	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	13	13	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	14	14	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	15	15	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	16	16	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	18	18	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	19	19	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.5	0.5	0	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	20	20	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	21	21	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
2001	1	3	2	0	1	38	38	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1								
2004	1	3	1	0	1	1	1	11.945451		0.923076923	
	0.076923077		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	3	1	0	1	2	2	12.381813		0.421052632	
	0.578947368		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	3	1	0	1	3	3	9.654543	0.222222222		
	0.777777778		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	3	1	0	1	4	4	8.654543	0.222222222		
	0.777777778		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					

```
2004 1 3 1 0 1 5 5 2.145454 0.5 0.5 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 3 1 0 1 6 6 1.072727 0 1 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 3 1 0 1 7 7 2.145454 0 1 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 3 1 0 1 8 8 3.218181 0 0.333333333
     0.666666667 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0
2004 1 3 1 0 1 9 9 2.145454 0 1 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 3 1 0 1 10 10 6.509089 0 0.571428571
     0.285714286 0 0 0.142857143 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0
2004 1 3 1 0 1 11 11 4.363635 0 0.2 0.8
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 3 1 0 1 12 12 4.5772715 0
     0.222222222 0.777777778 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0
2004 1 3 1 0 1 13 13 10.945451 0 0
     0.615384615 0.153846154 0.076923077 0 0.076923077 0 0
     0 0.076923077 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0
2004 1 3 1 0 1 14 14 9.945451 0 0
     0.692307692 0.307692308 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0
2004 1 3 1 0 1 15 15 14.527267 0
     0.047619048 0.380952381 0.380952381 0.095238095 0.047619048 0
     0 0.047619048 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
2004 1 3 1 0 1 16 16 7.72727 0 0.1 0.4
     0.2 0.3 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 3 1 0 1 17 17 7.509089 0 0
     0.142857143 0.571428571 0.285714286 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0
2004 1 3 1 0 1 18 18 6.436362 0 0
     0.166666667 0.666666667 0.166666667 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0
2004 1 3 1 0 1 19 19 4.290908 0 0 0
     0.5 0.25 0.25 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 3 1 0 1 20 20 12.018178 0 0
     0.071428571 0.5 0.142857143 0.214285714 0 0.071428571 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0
2004 1 3 1 0 1 21 21 4.290908 0 0 0
     0 0.5 0.5 0 0 0 0 0 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 3 1 0 1 22 22 4.290908 0 0 0
     0 0.25 0.5 0 0.25 0 0 0 0 0 0
```

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	23	23	6.509089	0	0	0
	0.142857143		0.714285714		0.142857143		0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	3	1	0	1	24	24	4.290908	0	0	0
	0.25	0.25	0.25	0.25	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	25	25	6.581816	0	0	0
	0	0.5	0.25	0.125	0.125	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	26	26	3.218181	0	0	0
	0	0	0.333333333		0.666666667		0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2004	1	3	1	0	1	27	27	2.145454	0	0	0
	0	0	0.5	0	0	0.5	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	28	28	1.072727	0	0	0
	0	0	0	0	0	1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	29	29	1.072727	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	30	30	2.145454	0	0	0
	0	0	0.5	0	0	0	0.5	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	31	31	2.145454	0	0	0
	0	0	0	0.5	0	0.5	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	32	32	3.218181	0	0	
	0.333333333		0	0	0	0	0.333333333		0.333333333		0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2004	1	3	1	0	1	33	33	1.072727	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	35	35	2.145454	0	0	0
	0	0	0.5	0	0	0	0.5	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	37	37	1.072727	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	1	0	1	38	38	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	1	1	8.72727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.5	0.4	0.1	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	2	2	16.381813		0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.421052632		0.578947368		0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	3	2	0	1	3	3	9.799997	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.454545455		0.545454545		0	0	0	0	0	0	0
	0	0	0	0	0						

2004	1	3	2	0	1	4	4	6.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.166666667		0.833333333		0	0	0	0	0	0	0
	0	0	0	0	0						
2004	1	3	2	0	1	5	5	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.5	0.5	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	7	7	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	8	8	3.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.666666667		0.333333333		0	0	0	0	0	0
	0	0	0	0	0						
2004	1	3	2	0	1	10	10	5.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.2	0.8	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	12	12	10.0136335		0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.80952381		0.19047619		0	0	0	0
	0	0	0	0	0	0					
2004	1	3	2	0	1	13	13	8.72727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.1	0.2	0.5	0.1	0	0	0	0.1	0	0
	0	0	0								
2004	1	3	2	0	1	14	14	6.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.666666667		0.166666667		0.166666667		0	0	0
	0	0	0	0	0	0					
2004	1	3	2	0	1	15	15	3.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	16	16	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.5	0.5	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	17	17	3.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	18	18	4.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.4	0.2	0	0.2	0	0	0.2	0
	0	0	0								
2004	1	3	2	0	1	19	19	4.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.166666667		0.166666667		0.5	0.166666667		0	0
	0	0	0	0	0	0					
2004	1	3	2	0	1	20	20	4.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0.4	0.2	0.2	0	0	0	0
	0	0.2	0								
2004	1	3	2	0	1	21	21	4.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.333333333		0.5	0	0.166666667		0	0
	0	0	0	0	0						
2004	1	3	2	0	1	22	22	2.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.333333333		0	0.333333333		0.333333333		0	0
	0	0	0	0	0	0					
2004	1	3	2	0	1	23	23	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	0	0	0
	0	0	0								
2004	1	3	2	0	1	24	24	4.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0

```
          0         0         0         0.25      0.25      0         0         0         0         0         0.25
          0.25      0         0
2004      1         3         2         0         1         25        25        1.072727  0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         1         0         0         0         0
          0         0         0
2004      1         3         2         0         1         26        26        1.072727  0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         1
          0         0         0


#NWFSC 309 lines
2003      1         4         1         0         1         1         1         5.436362  1         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0
2003      1         4         1         0         1         2         2         5.509089  1         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0
2003      1         4         1         0         1         3         3         5.363635  1         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0
2003      1         4         1         0         1         4         4         6.581816  0.506499674
          0.493500326         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0
2003      1         4         1         0         1         5         5         6.436362  0.745690638
          0.254309362         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0
2003      1         4         1         0         1         6         6         2.145454  1         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0
2003      1         4         1         0         1         7         7         6.436362  0.304296724
          0.695703276         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0
2003      1         4         1         0         1         8         8         3.218181  0         0.656568006
          0.343431994         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0
2003      1         4         1         0         1         9         9         9.654543  0         0.906638112
          0.093361888         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0
2003      1         4         1         0         1         10        10        11.872724           0.089977368
          0.847991432         0.062031199         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0
2003      1         4         1         0         1         11        11        11.1590875          0.130353656
          0.705602612         0.164043732         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0
2003      1         4         1         0         1         12        12        8.581816  0         0.631090855
          0.177482257         0.191426887         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0
2003      1         4         1         0         1         13        13        7.581816  0         0.703664192
          0.296335808         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0
2003      1         4         1         0         1         14        14        7.8681795           0
          0.423413122         0.45281788          0.123768999         0         0         0         0         0
          0         0         0         0         0         0         0         0         0         0         0
          0         0         0         0         0         0         0         0
```

```
2003 1 4 1 0 1 15 15 10.72727 0 0
0.791737459 0.208262541 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0
2003 1 4 1 0 1 16 16 19.381813 0 0
0.934651647 0.065348353 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0
2003 1 4 1 0 1 17 17 16.236359 0 0
0.556186453 0.443813547 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0
2003 1 4 1 0 1 18 18 14.090905 0
0.069119944 0.643227041 0.287653015 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0
2003 1 4 1 0 1 19 19 9.654543 0 0
0.487065685 0.366350155 0.14658416 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2003 1 4 1 0 1 20 20 6.509089 0 0
0.409440874 0.510622711 0.079936416 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2003 1 4 1 0 1 21 21 6.436362 0 0
0.17536941 0.661024175 0.163606414 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2003 1 4 1 0 1 22 22 6.509089 0 0
0.293721004 0.465227872 0.135984263 0 0 0 0
0.105066861 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0
2003 1 4 1 0 1 23 23 4.290908 0 0 0
0.281075715 0 0.566210179 0 0 0 0.152714106 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0
2003 1 4 1 0 1 24 24 2.145454 0 0 0
0 0 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0
2003 1 4 1 0 1 25 25 4.290908 0 0 0
0.102968758 0 0.897031242 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0
2003 1 4 1 0 1 26 26 3.363635 0 0 0
0.176044825 0.176044825 0.235932762 0.411977587 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2003 1 4 1 0 1 27 27 4.290908 0 0 0
0 0.229870691 0.386405472 0.383723837 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0
2003 1 4 1 0 1 28 28 2.145454 0 0 0
0 0 0 0.864990304 0.135009696 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0
2003 1 4 1 0 1 29 29 4.290908 0 0 0
0 0 0.180572035 0.393399113 0.13751327 0.288515581 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2003 1 4 1 0 1 30 30 2.145454 0 0 0
0 0 0 1 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0
2003 1 4 1 0 1 32 32 1.072727 0 0 0
0 0 0 0 1 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0
2003 1 4 1 0 1 36 36 1.072727 0 0 0
0 0 0 0 0 0 0 1 0 0 0
```

	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	1	1	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	2	2	7.581816	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	3	3	5.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	4	4	7.581816	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.865281821		0.134718179		0	0	0	0	0	0	0
	0	0	0	0	0						
2003	1	4	2	0	1	5	5	5.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	6	6	5.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.594668781		0.405331219		0	0	0	0	0	0	0
	0	0	0	0	0						
2003	1	4	2	0	1	7	7	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	8	8	4.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.158651212		0.841348788		0	0	0	0	0	0	0
	0	0	0	0	0						
2003	1	4	2	0	1	9	9	5.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0.142651406		0.857348594		0	0	0	0	0	0	0
	0	0	0	0	0						
2003	1	4	2	0	1	10	10	8.581816	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	11	11	7.7954525		0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.702027889		0.117583457		0.180388654		0	0	0
	0	0	0	0	0	0	0				
2003	1	4	2	0	1	12	12	7.654543	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0.651411527		0.24216404		0	0	0.106424432		0	0
	0	0	0	0	0	0					
2003	1	4	2	0	1	13	13	5.363635	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.274348422		0.725651578		0	0	0	0	0
	0	0	0	0	0						
2003	1	4	2	0	1	14	14	11.1590875		0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.20654027		0.539690531		0.253769199		0	0	0
	0	0	0	0	0	0	0				
2003	1	4	2	0	1	15	15	7.581816	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.594153346		0.405846654		0	0	0	0	0
	0	0	0	0	0						
2003	1	4	2	0	1	16	16	8.654543	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.797253452		0.061185308		0	0.14156124		0	0
	0	0	0	0	0	0					
2003	1	4	2	0	1	17	17	7.509089	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.389250205		0.610749795		0	0	0	0	0
	0	0	0	0	0						

2003	1	4	2	0	1	18	18	6.436362	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.502422123		0.293371806		0.20420607		0	0	0
	0	0	0	0	0	0					
2003	1	4	2	0	1	19	19	2.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.507132103		0.492867897		0	0	0	0	0
	0	0	0	0	0						
2003	1	4	2	0	1	20	20	1.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	22	22	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.414381493		0	0	0.585618507		0	0	
	0	0	0	0	0						
2003	1	4	2	0	1	23	23	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
2003	1	4	2	0	1	26	26	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0	0	0
	0	0	0								
2004	1	4	1	0	1	1	1	9.0863605		0.93940443	
	0.06059557		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	4	1	0	1	2	2	16.309086		0.575092407	
	0.424907593		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	4	1	0	1	3	3	20.527267		0.528276205	
	0.471723795		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	4	1	0	1	4	4	12.018178		0.382577482	
	0.617422518		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	4	1	0	1	5	5	14.309086		0.508528791	
	0.460490222		0.030980987		0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2004	1	4	1	0	1	6	6	4.290908	0.160636589		
	0.839363411		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2004	1	4	1	0	1	7	7	4.290908	0.257304455		
	0.469843993		0.272851552		0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2004	1	4	1	0	1	8	8	4.290908	0	0.590852157	
	0.409147843		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2004	1	4	1	0	1	9	9	6.436362	0	0.634430348	
	0.365569652		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2004	1	4	1	0	1	10	10	3.218181	0	0.258129176	
	0.741870824		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2004	1	4	1	0	1	11	11	4.290908	0	0.873698013	
	0.126301987		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2004	1	4	1	0	1	12	12	4.290908	0	0.357108008	
	0.399391306		0.243500685		0	0	0	0	0	0	0

```
      0         0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0
2004  1         4         1         0         1        13        13   9.72727         0 0.590901707
      0.086830976 0.322267317         0         0         0         0         0         0         0
      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0
2004  1         4         1         0         1        14        14  6.436362         0         0
      0.844626241 0.155373759         0         0         0         0         0         0         0
      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0
2004  1         4         1         0         1        15        15  12.090905         0         0
      0.684234657 0.236611988 0.057677145 0.021476209         0         0         0
      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0         0         0
2004  1         4         1         0         1        16        16  19.381813         0         0
      0.499866749 0.332401303 0.167731948         0         0         0         0         0
      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0         0
2004  1         4         1         0         1        17        17  14.018178         0         0
      0.572622346 0.190880813 0.177256645         0 0.029602746         0         0
      0.02963745         0         0         0         0         0         0         0         0
      0         0         0         0         0         0         0         0         0
2004  1         4         1         0         1        18        18  11.799997         0         0
      0 0.540932754 0.324397305 0.134669941         0         0         0         0
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2004  1         4         1         0         1        19        19  12.945451         0         0
      0 0.100292914 0.740598532 0.123327216 0.035781338         0         0
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2004  1         4         1         0         1        20        20  11.018178         0
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      0         0         0         0         0         0         0         0         0
2004  1         4         1         0         1        21        21   8.72727         0         0         0
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      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0         0
2004  1         4         1         0         1        22        22  4.363635         0         0         0
      0 0.080852017 0.809586252         0         0 0.109561732         0         0
      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0
2004  1         4         1         0         1        23        23  1.072727         0         0         0
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      0         0         0         0         0         0         0         0         0         0         0
      0         0         0
2004  1         4         1         0         1        24        24  5.363635         0         0         0
      0 0.682587698 0.095145854 0.142917794         0         0 0.079348653
      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0         0
2004  1         4         1         0         1        25        25  2.145454         0         0         0
      0         1         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0         0         0         0         0         0
      0         0         0
2004  1         4         1         0         1        26        26  3.218181         0         0         0
      0.12622959         0 0.87377041         0         0         0         0         0         0
      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0
2004  1         4         1         0         1        27        27  4.290908         0         0         0
      0         0 0.219193953         0 0.283495628 0.258199774 0.239110645
      0         0         0         0         0         0         0         0         0         0
      0         0         0         0         0         0         0
2004  1         4         2         0         1         1         1  6.7227255         0         0
      0         0         0         0         0         0         0         0         0         0
      0 0.607311882 0.392688118         0         0         0         0         0         0
      0         0         0         0         0         0
2004  1         4         2         0         1         2         2  13.945451         0         0
      0         0         0         0         0         0         0         0         0         0
      0 0.520112678 0.479887322         0         0         0         0         0         0
      0         0         0         0         0         0
```

```
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     0 0 0 0 0 0 0 0 0 0 0
     0.83340628 0.16659372 0 0 0 0 0 0 0 0
     0 0 0 0 0
2004 1 4 2 0 1 4 4 3.218181 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 1 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 4 2 0 1 5 5 8.654543 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0.361517439 0.638482561 0 0 0 0 0 0 0 0
     0 0 0 0 0
2004 1 4 2 0 1 6 6 4.290908 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 1 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 4 2 0 1 8 8 3.218181 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 1 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 4 2 0 1 9 9 1.072727 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 1 0 0 0 0 0 0 0 0 0
     0 0 0
2004 1 4 2 0 1 10 10 5.509089 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0.085931695 0.544362383 0.369705922 0 0 0 0 0 0
     0 0 0 0 0 0
2004 1 4 2 0 1 11 11 6.509089 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0.64229028 0.35770972 0 0 0 0 0 0
     0 0 0 0 0
2004 1 4 2 0 1 12 12 8.72727 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0.750452582 0.20394348 0.045603937 0 0 0 0 0
     0 0 0 0 0 0
2004 1 4 2 0 1 13 13 16.236359 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0.270077915 0.607090586 0.122831499 0 0 0 0
     0 0 0 0 0 0 0
2004 1 4 2 0 1 14 14 9.654543 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0.037280463 0.483786538 0.379303237 0.099629762 0 0 0 0
     0 0 0 0 0 0 0
2004 1 4 2 0 1 15 15 16.527267 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0.00887167 0.53472858 0.17236563 0.168438917 0 0 0 0
     0.115595204 0 0 0 0 0 0 0 0 0
2004 1 4 2 0 1 16 16 9.799997 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0.043953561 0.259015797 0.567517233 0.129513409 0 0 0 0
     0 0 0 0 0 0 0
2004 1 4 2 0 1 17 17 11.799997 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0.022107371 0.19803354 0.047610719 0.684949556 0 0 0
     0 0.047298814 0 0 0 0 0 0 0 0
2004 1 4 2 0 1 18 18 4.290908 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0.061489427 0 0.111216971 0.827293602 0 0 0 0
     0 0 0 0 0 0 0
2004 1 4 2 0 1 19 19 4.290908 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0.12334209 0.302668674 0.573989236 0 0 0 0
     0 0 0 0 0 0 0
2004 1 4 2 0 1 20 20 3.218181 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
     0 0 0 0.283490095 0.716509905 0 0 0 0 0
     0 0 0 0 0 0 0
2004 1 4 2 0 1 21 21 2.145454 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
```

	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
2004	1	4	2	0	1	22	22	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0.5	0	0.5	0	0	0
	0	0	0								
2004	1	4	2	0	1	23	23	2.145454	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0.503479627		0.496520373		0	0
	0	0	0	0	0						
2004	1	4	2	0	1	26	26	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	0
	0	0	0								
2004	1	4	2	0	1	31	31	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0								
2005	1	4	1	0	1	1	1	1.072727	1	0	0
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	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2005	1	4	1	0	1	2	2	3.218181	0.287141693		
	0.712858307		0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0					
2005	1	4	1	0	1	3	3	5.436362	0.402738298		
	0.597261702		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2005	1	4	1	0	1	4	4	7.581816	0.269579664		
	0.616431301		0.113989035		0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2005	1	4	1	0	1	5	5	5.7954525		0.267211075	
	0.626069373		0.106719552		0	0	0	0	0	0	0
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	0	0	0	0	0	0	0				
2005	1	4	1	0	1	6	6	7.581816	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2005	1	4	1	0	1	7	7	6.436362	0	0.572828378	
	0.312794296		0.114377326		0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2005	1	4	1	0	1	8	8	3.218181	0	1	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2005	1	4	1	0	1	9	9	6.436362	0	0.307572523	
	0.692427477		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2005	1	4	1	0	1	10	10	9.654543	0.067768578		
	0.277953651		0.654277771		0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0				
2005	1	4	1	0	1	11	11	8.581816	0	0.685542829	
	0.314457171		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2005	1	4	1	0	1	12	12	6.509089	0	0.196535348	
	0.44102813		0.362436522		0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2005	1	4	1	0	1	13	13	4.290908	0	0	
	0.74428596		0.25571404		0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					

```
2005 1 4 1 0 1 14 14 10.72727 0 0
0.293687777 0.591447956 0.114864267 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2005 1 4 1 0 1 15 15 8.581816 0 0
0.621570958 0.378429042 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0
2005 1 4 1 0 1 16 16 7.509089 0 0
0.284388547 0.575304531 0.140306921 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2005 1 4 1 0 1 17 17 9.72727 0 0.06788456
0.233192925 0.434259726 0.26466279 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2005 1 4 1 0 1 18 18 10.945451 0 0
0.166238884 0.659189565 0.116228341 0.05834321 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0
2005 1 4 1 0 1 19 19 11.018178 0 0
0.053335569 0.63425327 0.312411161 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2005 1 4 1 0 1 20 20 20.599994 0 0
0 0.554076633 0.103700836 0.342222531 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2005 1 4 1 0 1 21 21 15.163632 0 0
0 0.184320064 0.750428863 0.065251073 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2005 1 4 1 0 1 22 22 10.872724 0 0
0 0.146114861 0.768253841 0.085631297 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0
2005 1 4 1 0 1 23 23 4.363635 0 0 0
0 0.884508878 0.115491122 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0
2005 1 4 1 0 1 24 24 12.945451 0 0
0 0.276760463 0.677188563 0.029927166 0.016123808 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0
2005 1 4 1 0 1 25 25 9.72727 0 0 0
0.015086032 0.479928593 0.504985375 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0
2005 1 4 1 0 1 26 26 7.509089 0 0 0
0 0.072648017 0.791633797 0.135718187 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0
2005 1 4 1 0 1 27 27 2.145454 0 0 0
0 0 0 1 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0
2005 1 4 1 0 1 28 28 3.218181 0 0 0
0 0.091894512 0.908105488 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0
2005 1 4 1 0 1 29 29 1.072727 0 0 0
0 0 0 1 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0
2005 1 4 1 0 1 30 30 2.145454 0 0 0
0 1 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0
2005 1 4 1 0 1 31 31 2.145454 0 0 0
0 0 1 0 0 0 0 0 0 0 0
```

```
      0          0          0          0          0          0          0          0          0          0          0
      0          0          0
2005  1          4          1          0          1         32         32    1.072727          0          0          0
      0          0          0          1          0          0          0          0          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0          0          0
2005  1          4          2          0          1          1          1    4.290908          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0  0.263223341          0.736776659          0          0          0          0          0          0          0
      0          0          0          0          0
2005  1          4          2          0          1          2          2    6.581816          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0  0.270953198          0.729046802          0          0          0          0          0          0          0
      0          0          0          0          0
2005  1          4          2          0          1          3          3    1.072727          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0          1          0          0          0          0          0          0          0          0          0
      0          0          0
2005  1          4          2          0          1          4          4    1.072727          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      1          0          0          0          0          0          0          0          0          0          0
      0          0          0
2005  1          4          2          0          1          5          5    7.7954525          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0  0.445541076          0.554458924          0          0          0          0          0          0          0
      0          0          0          0          0          0
2005  1          4          2          0          1          6          6    5.363635          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0.403472344          0.596527656          0          0          0          0          0          0          0
      0          0          0          0          0
2005  1          4          2          0          1          7          7    7.509089          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0  0.655399253          0.344600747          0          0          0          0          0          0          0
      0          0          0          0          0
2005  1          4          2          0          1          8          8    4.290908          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0.25535335          0.275044492          0.469602159          0          0          0          0          0          0
      0          0          0          0          0          0
2005  1          4          2          0          1          9          9    1.072727          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0          0          1          0          0          0          0          0          0          0          0
      0          0          0
2005  1          4          2          0          1         10         10    6.436362          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0  0.503787455          0.496212545          0          0          0          0          0          0          0
      0          0          0          0          0
2005  1          4          2          0          1         11         11    3.290908          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0.167561408          0          0.832438592          0          0          0          0          0          0
      0          0          0          0          0
2005  1          4          2          0          1         12         12    2.145454          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0          0          0.765623597          0.234376403          0          0          0          0          0
      0          0          0          0          0
2005  1          4          2          0          1         13         13    2.145454          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0          0          1          0          0          0          0          0          0          0          0
      0          0          0
2005  1          4          2          0          1         14         14    6.509089          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0          0          0.82326775          0.17673225          0          0          0          0          0
      0          0          0          0          0
2005  1          4          2          0          1         15         15    17.163632          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0          0          0          0.222489534          0.613149132          0.115461977          0.048899356
      0          0          0          0          0          0          0          0
2005  1          4          2          0          1         16         16    10.72727          0          0          0
      0          0          0          0          0          0          0          0          0          0          0
      0          0          0.298137224          0.607546156          0          0.09431662          0          0
      0          0          0          0          0          0
```

2005	1	4	2	0	1	17	17	16.45454	0	0	0
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	0	0	0.122735505		0.737875186		0.102226583		0.037162726		0
	0	0	0	0	0	0	0				
2005	1	4	2	0	1	18	18	8.72727	0	0	0
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	0	0	0.09979777		0.576337368		0.125091062		0.1987738		0
	0	0	0	0	0	0	0				
2005	1	4	2	0	1	19	19	11.945451		0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.034046702		0.720657912		0.245295386		0	0
	0	0	0	0	0	0	0				
2005	1	4	2	0	1	20	20	6.509089	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0.903358676		0.096641324		0	0	0
	0	0	0	0	0						
2005	1	4	2	0	1	21	21	7.654543	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.709542047		0.0438456		0.163837244		0.046041362	
	0	0.036733746	0	0	0	0	0				
2005	1	4	2	0	1	22	22	4.290908	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0.359422092		0.09953211		0.470662002		0.070383797	
	0	0	0	0	0	0	0				
2005	1	4	2	0	1	23	23	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0								
2005	1	4	2	0	1	24	24	3.218181	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0.393546039		0.606453961		0	0	0
	0	0	0	0	0						
2005	1	4	2	0	1	25	25	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
2005	1	4	2	0	1	26	26	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	1	0	0	0	0	0	0
	0	0	0								
2006	1	4	1	0	1	2	2	5.436362	0.851384091		
	0.148615909		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2006	1	4	1	0	1	3	3	2.290908	0.449793701		
	0.550206299		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2006	1	4	1	0	1	4	4	3.218181	0.417122162		
	0.582877838		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2006	1	4	1	0	1	5	5	1.072727	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2006	1	4	1	0	1	6	6	1.072727	1	0	0
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	0.127345118		0	0	0	0	0	0	0	0	0

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2006  1         4         1         0         1        12        12  4.290908         0  0.657749721
      0.342250279         0         0         0         0         0         0         0         0         0
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2006  1         4         1         0         1        13        13  2.145454         0  0.612864526
      0.387135474         0         0         0         0         0         0         0         0         0
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2006  1         4         1         0         1        14        14  4.363635         0         0
      0.637739568 0.362260432         0         0         0         0         0         0         0         0
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2006  1         4         1         0         1        15        15  4.290908         0  0.179901067
      0.458009447 0.362089486         0         0         0         0         0         0         0         0
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2006  1         4         1         0         1        16        16  4.363635         0         0
      0.712763317 0.287236683         0         0         0         0         0         0         0         0
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2006  1         4         1         0         1        17        17  2.145454         0         0
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2006  1         4         1         0         1        22        22   8.72727         0         0
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2006  1         4         1         0         1        24        24   7.72727         0         0         0
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2006 1 4 2 0 1 2 2 2.145454 0 0 0
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2006 1 4 2 0 1 3 3 4.290908 0 0 0
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2006 1 4 2 0 1 6 6 1.072727 0 0 0
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2006 1 4 2 0 1 9 9 1.072727 0 0 0
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2006 1 4 2 0 1 10 10 1.072727 0 0 0
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2006 1 4 2 0 1 11 11 1.072727 0 0 0
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2006 1 4 2 0 1 12 12 1.072727 0 0 0
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2006 1 4 2 0 1 13 13 3.218181 0 0 0
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2006 1 4 2 0 1 14 14 4.290908 0 0 0
     0 0 0 0 0 0 0 0 0 0 0
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2006 1 4 2 0 1 15 15 5.436362 0 0 0
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	0	0	0								
2006	1	4	2	0	1	23	23	3.218181	0	0	0
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2006	1	4	2	0	1	24	24	2.290908	0	0	0
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2006	1	4	2	0	1	25	25	1.072727	0	0	0
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2006	1	4	2	0	1	26	26	1.072727	0	0	0
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	0	0	0								
2007	1	4	1	0	1	1	1	1.145454	0.5	0.5	0
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2007	1	4	1	0	1	2	2	1.072727	0	1	0
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2007	1	4	1	0	1	3	3	2.145454	0.526624239		
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2007	1	4	1	0	1	4	4	2.145454	0.429096143		
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2007	1	4	1	0	1	5	5	2.145454	0.570903857		
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2007	1	4	1	0	1	28	28	2.145454	0	0	0
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2007	1	4	1	0	1	29	29	4.363635	0	0	0
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2007	1	4	1	0	1	30	30	2.145454	0	0	0
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2007	1	4	1	0	1	31	31	1.072727	0	0	0
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	0	0	0								
2007	1	4	1	0	1	32	32	1.145454	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0
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2007	1	4	1	0	1	34	34	1.072727	0	0	0
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	0	0	0								
2007	1	4	2	0	1	1	1	1.072727	0	0	0
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2007	1	4	2	0	1	2	2	1.072727	0	0	0
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	0	0	0								
2007	1	4	2	0	1	3	3	1.072727	0	0	0
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2007	1	4	2	0	1	10	10	1.072727	0	0	0
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2007	1	4	2	0	1	11	11	1.072727	0	0	0
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2007	1	4	2	0	1	12	12	3.218181	0	0	0
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2007	1	4	2	0	1	13	13	3.218181	0	0	0
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2007	1	4	2	0	1	18	18	4.290908	0	0	0
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2007	1	4	2	0	1	19	19	1.072727	0	0	0
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2007	1	4	2	0	1	20	20	5.363635	0	0	0
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	0	0	0	0	0	0					
2007	1	4	2	0	1	21	21	2.145454	0	0	0
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2007	1	4	2	0	1	22	22	1.072727	0	0	0
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	0	0	0	0	0	1	0	0	0	0	0
	0	0	0								
2007	1	4	2	0	1	24	24	3.218181	0	0	0
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	0	0	0	0	0.346823194		0	0.392018603		0.261158203	
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2007	1	4	2	0	1	26	26	1.072727	0	0	0
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	0	0	0	0	0	0	0	0	1	0	0
	0	0	0								
2007	1	4	2	0	1	27	27	1.072727	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0
	0	0	0								
2008	1	4	1	0	1	1	1	5.509089	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2008	1	4	1	0	1	2	2	9.872724	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2008	1	4	1	0	1	3	3	3.218181	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2008	1	4	1	0	1	4	4	7.509089	0.78791378		
	0.21208622		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2008	1	4	1	0	1	5	5	1.072727	1	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2008	1	4	1	0	1	6	6	2.145454	0.417813085		
	0.582186915		0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0					
2008	1	4	1	0	1	13	13	3.218181	0	0.405547245	
	0	0.594452755		0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0						
2008	1	4	1	0	1	14	14	1.072727	0	0	0
	1	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0								
2008	1	4	1	0	1	16	16	1.072727	0	0	0
	1	0	0	0	0	0	0	0	0	0	0

```
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0
2008    1         4         1         0         1        17        17  1.072727         0         0         0
        0         1         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0
2008    1         4         1         0         1        18        18  3.218181         0         0
        0.20974612  0.511129828         0  0.279124052         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0
2008    1         4         1         0         1        19        19  1.072727         0         0         0
        1         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0
2008    1         4         1         0         1        20        20  1.072727         0         0         0
        0         0         1         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0
2008    1         4         1         0         1        21        21  3.218181         0         0         0
        0  0.300184973  0.699815027         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0
2008    1         4         1         0         1        22        22  3.218181         0         0         0
        0  0.681695707         0  0.318304293         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0
2008    1         4         1         0         1        23        23  3.218181         0         0         0
        0         0         0         1         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0
2008    1         4         1         0         1        24        24  6.436362         0         0         0
        0  0.454158058   0.17430699  0.371534952         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0
2008    1         4         1         0         1        25        25  3.218181         0         0         0
        0  0.287522146         0  0.383826879  0.328650974         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0
2008    1         4         1         0         1        26        26  5.363635         0         0         0
        0  0.350657661  0.313852352  0.335489987         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0
2008    1         4         1         0         1        27        27  3.218181         0         0         0
        0         0  0.343271238  0.320113426  0.336615336         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0
2008    1         4         1         0         1        28        28  3.218181         0         0         0
        0         0  0.367474852         0  0.632525148         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0
2008    1         4         1         0         1        30        30  5.436362         0         0         0
        0         0  0.293863854  0.385926883         0  0.142065113  0.178144149
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0
2008    1         4         1         0         1        31        31  1.072727         0         0         0
        0         0         0         0         1         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0
2008    1         4         1         0         1        33        33  1.072727         0         0         0
        0         0         0         0         0         1         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0
2008    1         4         1         0         1        36        36  1.072727         0         0         0
        0         0         0         0         0         0         0         0         1         0         0
        0         0         0         0         0         0         0         0         0         0         0
        0         0         0
2008    1         4         2         0         1         1         1  2.145454         0         0         0
        0         0         0         0         0         0         0         0         0         0         0
        1         0         0         0         0         0         0         0         0         0         0
        0         0         0
```

```
2008  1  4  2  0  1  2  2  5.363635  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      1  0  0  0  0  0  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  3  3  7.509089  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      1  0  0  0  0  0  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  4  4  7.509089  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0.497168455  0.502831545  0  0  0  0  0  0  0
      0  0  0  0  0
2008  1  4  2  0  1  5  5  1.072727  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      1  0  0  0  0  0  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  6  6  1.072727  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  1  0  0  0  0  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  10  10  1.072727  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  0  1  0  0  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  12  12  1.072727  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  1  0  0  0  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  13  13  1.072727  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  1  0  0  0  0  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  15  15  1.072727  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  0  0  0  1  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  16  16  2.145454  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  0  1  0  0  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  17  17  2.145454  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  0  0  0.571266745  0.428733255  0  0  0
      0  0  0  0  0
2008  1  4  2  0  1  20  20  3.218181  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  0  0  0.375233001  0.624766999  0  0  0
      0  0  0  0  0
2008  1  4  2  0  1  21  21  3.218181  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  0  0  0.303707554  0.295218295  0.401074151  0
      0  0  0  0  0  0
2008  1  4  2  0  1  23  23  1.072727  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  0  0  0  1  0  0  0  0  0
      0  0  0
2008  1  4  2  0  1  24  24  1.072727  0  0  0
      0  0  0  0  0  0  0  0  0  0  0
      0  0  0  0  0  0  0  0  1  0  0
      0  0  0
```

0 # Mean Size at Age Observations
0 # Total number of environmental variables
0 # Total number of environmental observations
0 # No Weight frequency data
0 # No tagging data
0 # No morph composition data

999 # End data file

Control File

```
# Lingcod control file South
# for SS v3.x
# July 2, 2009

# Morph setup
1       # Number of growth patterns
1       # N sub morphs within growth patterns

1 # Blocks
1  # blocks in each design

#1973  1982  1983 1992  1993 1997  1998 2002 2003 2008
1998  2008

# Mortality and growth specifications
0.5     # Fraction female at birth
1       # M setup: 0=single
Par,1=N_breakpoints,2=Lorenzen,3=agespecific;_4=agespec_withseasinterpolate
2       # Number of M breakpoints
11 13   # Ages at M breakpoints
1        # Growth model: 1=VB with L1 and L2, 2=VB with A0 and Linf, 3=Richards, 4=Read
vector of L@A
1       # Age for growth Lmin
20      # Age for growth Lmax or 999 = Linf
0.0     # SD constant added to LAA (0.1 mimics v1.xx for compatibility only)
0       # Variability about growth: 0=CV~f(LAA) [mimic v1.xx], 1=CV~f(A), 2=SD~f(LAA),
3=SD~f(A)
1       # Maturity option: 1=length logistic, 2=age logistic, 3=read age-maturity matrix
by growth_pattern
1       # First age allowed to mature
1        # fecundity option - ?
0        # hermaphro
1       # mg parm offset option:
#old key: 1=direct assignment, 2=each pat. x gender offset from pat. 1 gender 1,
3=offsets as SS2 V1.xx with M old and CV old offset from young values
#new key: 1=none, 2= M, G, CV_G as offset from female-GP1, 3=like SS2 V1.x)

1       # mg parm adjust method 1=do V1.23 approach, 2=use logistic transform between
bounds approach

# Maturity & Growth Parameters
# min   max   init     prior pr_type  sd      phase   env     UseDev  Minyr   Maxyr   DevSD
        use_bl bl_type
0.05    0.25    0.18    0.19    0       99      -3      0       0       0       0       0.5
        0       0       #M1_natM_young
0.05    0.25    0.18    0.19    0       99      -4      0       0       0       0       0.5
        0       0       #M1_natM_old
10      60      30      32.5    0       99      2       0       0       0       0       0.5
        0       0       #M1_Lmin
40      140     108     120     0       99      -2      0       0       0       0       0.5
        0       0       #M1_Lmax
0.01    0.5     0.1041  0.105   0       99      2       0       0       0       0       0.5
        0       0       #M1_VBK
0.01    0.5     0.0633  0.0633  0       99      1       0       0       0       0       0.5
        0       0       #M1_CV-young
0.01    0.5     0.085   0.07    0       0.8     3       0       0       0       0       0
        0       0       # CV old
0.15    0.40    0.32    0.32    0       99      -3      0       0       0       0       0.5
        0       0       #M2_natM_young
0.15    0.40    0.32    0.32    0       99      -4      0       0       0       0       0.5
        0       0       #M2_natM_old
10      60      30      32.5    0       99      3       0       0       0       0       0.5
        0       0       #M2_Lmin
40      140     81      90      0       99      -3      0       0       0       0       0.5
        0       0       #M2_Lmax
0.01    1       0.149   0.15    0       99      2       0       0       0       0       0.5
        0       0       #M2_VBK
```

```
0.01    0.5     0.05    0.05    0       99      1       0       0       0       0       0.5
        0       0       #M2_CV-young
0.01    0.5     0.085   0.07    0       0.8     3       0       0       0       0       0
        0       0       # Male cv old

# Add 2+2*gender lines to read the wt-Len and mat-Len parameters
# Female length-weight
#       LO      HI      INIT            PRIOR   PR_type SD      PHASE
        -3      3       0.00000176  0.00000176 0       99      -3      0       0       0
        0       0.5     0       0       #Female wt-len-1 a
        -3      5       3.39780     3.39780    0       99      -3      0       0       0
        0       0.5     0       0       #Female wt-len-2 b
# Female maturity
        -3      100     60.601  60      0       99      -3      0       0       0       0
        0.5     0       0       #Female mat-len-infl
        -5      5       -0.155  0.1     0       99      -3      0       0       0       0
        0.5     0       0       #Female mat-len-slope
# Female fecundity - Same as biomass if intercept = 1 and slope = 0
        -3      3       1.      1.      0       99      -3      0       0       0       0
        0.5     0       0       #Female eggs/gm intercept
        -3      3       0.      0.      0       99      -3      0       0       0       0
        0.5     0       0       #Female eggs/gm slope
# Male length-weight
        -3      3       0.000003953     0.000003953     0       99      -3      0       0
        0       0       0.5     0       0       #Male wt-len-1
        -5      5       3.2149          3.2149          0       99      -3      0       0
        0       0       0.5     0       0       #Male wt-len-2
# Distribute recruitment among growth pattern x area x season
0       999     1       1       0       0.8     -3      0       0       0       0       0.5
        0       0       # GP 1
0       999     1       1       0       0.8     -3      0       0       0       0       0.5
        0       0       # Area 1
0       999     1       1       0       0.8     -3      0       0       0       0       0.5
        0       0       # Season 1
# Cohort growth (K) deviation parameter
-1      1       1       1       0       99      -3      0       0       1980    1983    0.5
        0       0
# Seasonal effects on biology parameters (0=none)
 0 0 0 0 0 0 0 0 0 0
# Spawner-recruit parameters

1       # SR_fxn:  1=Beverton-Holt

#LO     HI      INIT    PRIOR   Pr_type SD      PHASE
1       100     8.22947 7.6187  0       99      3       #Ln(R0)
0.2     5       0.8     0.9     0       99      -4      #steepness
0       20      0.5     0.5     0       99      -3      #SD_recruitments
-5      5       0       0       0       99      -3      #Env_link
-5      5       0       0       0       99      -5      #_ln(init_eq_R_multiplier)
 0      2       0       1       0       50      -50             # Autocorrelation placeholder
(Future implementation)
0 # index of environmental variable to be used
0 # env target parameter: 1=rec devs, 2=R0, 3=steepness
1 # rec dev type: 0=none, 1=devvector (zero-sum), 2=simple deviations (no sum constraint)

# Recruitment residuals
1928    # Start year recruitment residuals
2007    # End year recruitment residuals
3       # Phase

1 # Read 11 advanced recruitment options: 0=no, 1=yes
0       # first year for early rec devs
-4      # phase for early rec devs
5       # Phase for forecast recruit deviations
1       # Lambda for forecast recr devs before endyr+1
1960    #_last_yr_nobias_adj_in_MPD
1974    # first year of full bias correction (linear ramp up from this year minus the
plus-age to this year)
2007    # last year for full bias correction in_MPD
2008    #_first_recent_yr_nobias_adj_in_MPD
1.0     # Max bias correction
```

```
0       # placeholder
-15     # Lower bound rec devs
15      # Upper bound rec devs
0       # read intitial values for rec devs

# Fishing mortality setup
0.1     # F ballpark for tuning early phases
1999    # F ballpark year
1       # F method:  1=Pope's; 2=Instan. F; 3=Hybrid (recommended)
0.9     # max F or harvest rate, depends on F_Method

#init_F_setupforeachfleet

#LO     HI      INIT    PRIOR   PR_type SD      PHASE
0       1       0.0039  0.09    0       99      1
0       1       0.0000  0.09    0       99      -1

# Catchability (Q) setup
# A=do power: 0=skip, survey is prop. to abundance, 1= add par for non-linearity
# B=env. link: 0=skip, 1= add par for env. effect on Q
# C=extra SD: 0=skip, 1= add par. for additive constant to input SE (in ln space)
# D=type: <0=mirror lower abs(#) fleet, 0=no par Q is median unbiased, 1=no par Q is mean
unbiased, 2=estimate par for ln(Q)
#         3=ln(Q) + set of devs about ln(Q) for all years. 4=ln(Q) + set of devs about Q
for indexyr-1
# E=Units: 0=numbers, 1=biomass
# F=err_type 0=lognormal, >0=T-dist. DF=input value
# A B C D E F
  0 0 0 0 1 0 #Com_1
  0 0 0 0 1 0 #Rec_2
  0 0 0 0 1 0 #Tri_3
  0 0 0 0 1 0 #NWFSC_4
  0 0 0 0 1 0 #Logbk_5
  0 0 0 0 0 0 #Dock

# Selectivity Specification
#Type   Retent  Moffset Special
#_SELEX_&_RETENTION_PARAMETERS

#Selex_type Do_retention(0/1) Do_male Mirrored_selex_number

#Length Selectivity
24      1       0       0       #Com_1
24      0       0       0       #Rec_2
24      0       0       0       #Tri_3
24      0       0       0       #NWFSC_4
5       0       0       1       #Logbk_5
5       0       0       2       #Dock
#_Age   selectivity

10      0       0       0       #Com_1
10      0       0       0       #Rec_2
10      0       0       0       #Tri_3
10      0       0       0       #NWFSC_4
10      0       0       0       #Logbk_5
10      0       0       0       #Dock
# Selectivity Parameter

#Low    High    Init    Prior   PrType  SD      Phase   env     usedev  minyr   maxyear sd
        block   blswitch # 1 means that parm' = baseparm + blockparm # 2 means that parm'
= blockparm
#Comm
35      100     45      75      0       50      2       0       0       0       0       0.5
        1       2       # Peak
-6      4       -5      0       0       50      -2      0       0       0       0       0.5
        0       0       # Top width
-1      9       4       4       0       50      3       0       0       0       0       0
        0       0       # Ascending width
-1      9       0       5.5     0       50      -3      0       0       0       0       0
        0       0       # Descending width
```

```
-5      9       -2      -2      0       50      2       0       0       0       0       0
        0       0       # inital value
-5      9       9       5       0       50      -3      0       0       0       0       0
        0       0       # Final

#retention
31      100     40      55      0       50      -2      0       0       0       0       0.5
        1       2       # Inflection
0.1     10      2       1       0       99      -2      0       0       0       0       0.5
        0       0       # Slope
0.001   1       1       1       0       99      -3      0       0       0       0       0.5
        1       2       # Asymptotic retention
0       0       0       0       0       99      -3      0       0       0       0       0.5
        0       0       # male arithmetic offset to inflection

#Recreational

35      100     50      75      0       50      2       0       0       0       0       0.5
        1       2       # Peak
-6      4       -5.9    0       0       50      -2      0       0       0       0       0
        0       0       # Top width ##bound
-1      9       4       4       0       50      3       0       0       0       0       0
        0       0       # Ascending width
-1      9       5       5.5     0       50      3       0       0       0       0       0
        0       0       # Descending width
-5      9       -4.9    -2      0       50      -2      0       0       0       0       0
        0       0       # inital value
-5      9       -4.9    5       0       50      3       0       0       0       0       0
        0       0       # Final
#Triennial
35      100     70      75      0       50      -2      0       0       0       0       0.5
        0       0       # Peak
-6      4       -0.55   0       0       50      -2      0       0       0       0       0
        0       0       # Top width
-1      9       5.34    4       0       50      -2      0       0       0       0       0
        0       0       # Ascending width
-1      9       5.2     5.5     0       50      -2      0       0       0       0       0
        0       0       # Descending width
-5      9       -1.14   -2      0       50      -2      0       0       0       0       0
        0       0       # inital value
-5      9       -4.9    5       0       50      -3      0       0       0       0       0
        0       0       # Final
#NWFSC
35      100     40      75      0       50      2       0       0       0       0       0.5
        0       0       # Peak
-6      4       0       0       0       50      2       0       0       0       0       0
        0       0       # Top width
-1      9       4       4       0       50      3       0       0       0       0       0
        0       0       # Ascending width
-1      9       -.99    5.5     0       50      3       0       0       0       0       0
        0       0       # Descending width ##bound
-5      9       -2      -2      0       50      2       0       0       0       0       0
        0       0       # inital value
-5      9       -4      5       0       50      -3      0       0       0       0       0
        0       0       # Final

#logbook mirror
-2      0       -1      0       0       50      -2      0       0       0       0       0
        0       0
-2      0       -1      0       0       50      -3      0       0       0       0       0
        0       0

#dockside mirror
-2      0       -1      0       0       50      -2      0       0       0       0       0
        0       0
-2      0       -1      0       0       50      -3      0       0       0       0       0
        0       0

1       # Selex block setup: 0=Read one line apply all, 1=read one line each parameter
# Lo    Hi      Init    Prior   P_type  SD      Phase
35      100     45      60      0       50      2
```

```
#-6     4       0       0       0       50      3
31      100     40      55      0       99      3
0.1     1       0.9     0.9     0       99      3
35      100     45      75      0       50      3

1 #_env/block/dev_adjust_method (1=standard; 2=logistic trans to keep in base parm
bounds)
0 # Tagging flag: 0=none,1=read parameters for tagging

### Likelihood related quantities ###
# variance/sample size adjustment by fleet
1 # Do variance adjustments
0 0 0 0 0 0  # const added to survey cv
0 0 0 0 0 0  # const added to discard sd
0 0 0 0 0 0   # const added to body weight sd
1 1 1 1 1 1   # mult scalar for length comps
.5 .5 1 1 1 1   # mult scalar for age comps
1 1 1 1 1 1 # mult scalar for length at age obs

30      # DF discard fraction data t-distribution
30      # DF mean body weight data t-distribution

1       # Max N lambda phases: read this N values for each item below
1       # SD offset (CPUE, discard, mean body weight, recruitment devs): 0=omit log(s)
term, 1=include

5 # N changes to default Lambdas = 1.0
# Component codes:
#  1=survey
#  2=discard
#  3=mean body weight
#  4=length frequency
#  5=age frequency
#  6=Weight frequency
#  7=size at age
#  8=catch
#  9=initial equilibrium catch
#  10=rec devs
#  11=parameter priors
#  12=parameter deviations
#  13=Crash penalty
#  14=Morph composition
#  15=Tag composition
#  16=Tag return
# Component fleet/survey  phase  value  wtfreq_method
5       1       1       0       1
5       2       1       0       1
5       3       1       0       1
5       4       1       0       1
5       5       1       0       1

0 # extra SD pointer

999 # end of control file
```