

2013-14 Harvest Specifications and Management Measures

PFMC
March 2012

Harvest Specifications

Review of Harvest Specifications Actions

- November 2011
 - Adopted final preferred OFLs, ABCs in November 2011
 - Adopted preliminary preferred ACLs

Lingcod Harvest Specifications Realigned at 40°10' N. latitude

- **Lingcod N:**
 - OFLs: 3,334 mt (2013); 3,162 mt (2014)
 - ABCs & ACLs: 3,036 mt (2013); 2,878 mt (2014)

- **Lingcod S:**
 - OFLs: 1,334 mt (2013); 1,276 mt (2014)
 - ABCs & ACLs: 1,111 mt (2013); 1,063 mt (2014)

Other Fish Complex

Revised OFLs

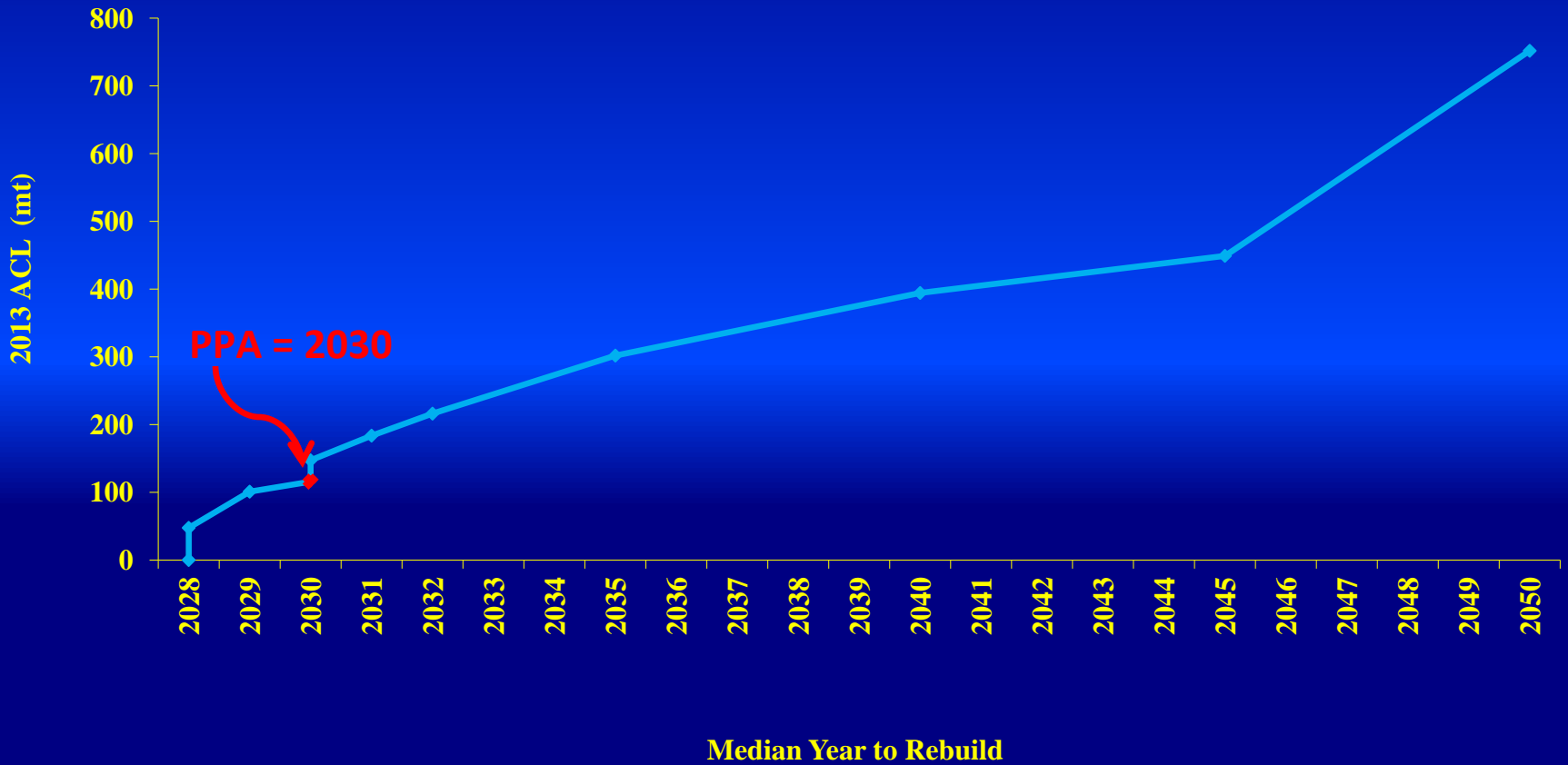
Stock	2013 OFL	2014 OFL
Other Fish	6,864	6,832
<i>Big skate</i>	<i>458.0</i>	<i>458.0</i>
<i>Cabazon (WA)</i>	<i>4.0</i>	<i>3.0</i>
<i>California skate</i>	<i>86.0</i>	<i>86.0</i>
<i>Finescale codling</i>		
<i>Kelp greenling (CA)</i>	<i>118.9</i>	<i>118.9</i>
<i>Kelp greenling (OR & WA)</i>	<i>28.0</i>	<i>27.0</i>
<i>Leopard shark</i>	<i>167.1</i>	<i>167.1</i>
<i>Pacific rattail</i>	<i>1,519.0</i>	<i>1,519.0</i>
<i>Ratfish</i>	<i>1,441.0</i>	<i>1,441.0</i>
<i>Soupfin shark</i>	<i>61.6</i>	<i>61.6</i>
<i>Spiny dogfish</i>	<i>2,980.0</i>	<i>2,950.0</i>

Other Fish Complex

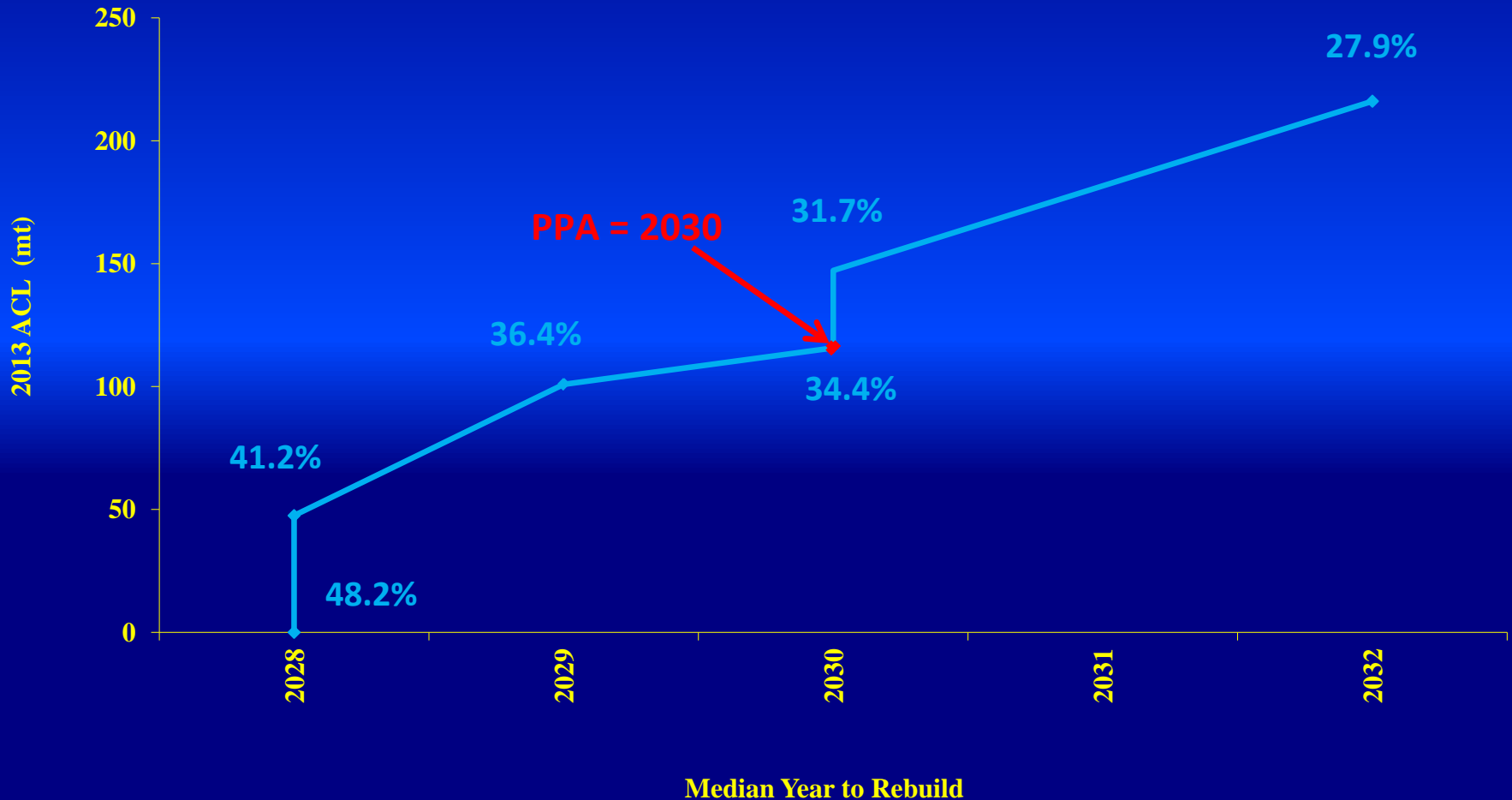
Revised Specifications

2013 OFL	6,864
2014 OFL	6,832
2013 ABC & ACL	4,739
2014 ABC & ACL	4,718
2012 ACL	5,575

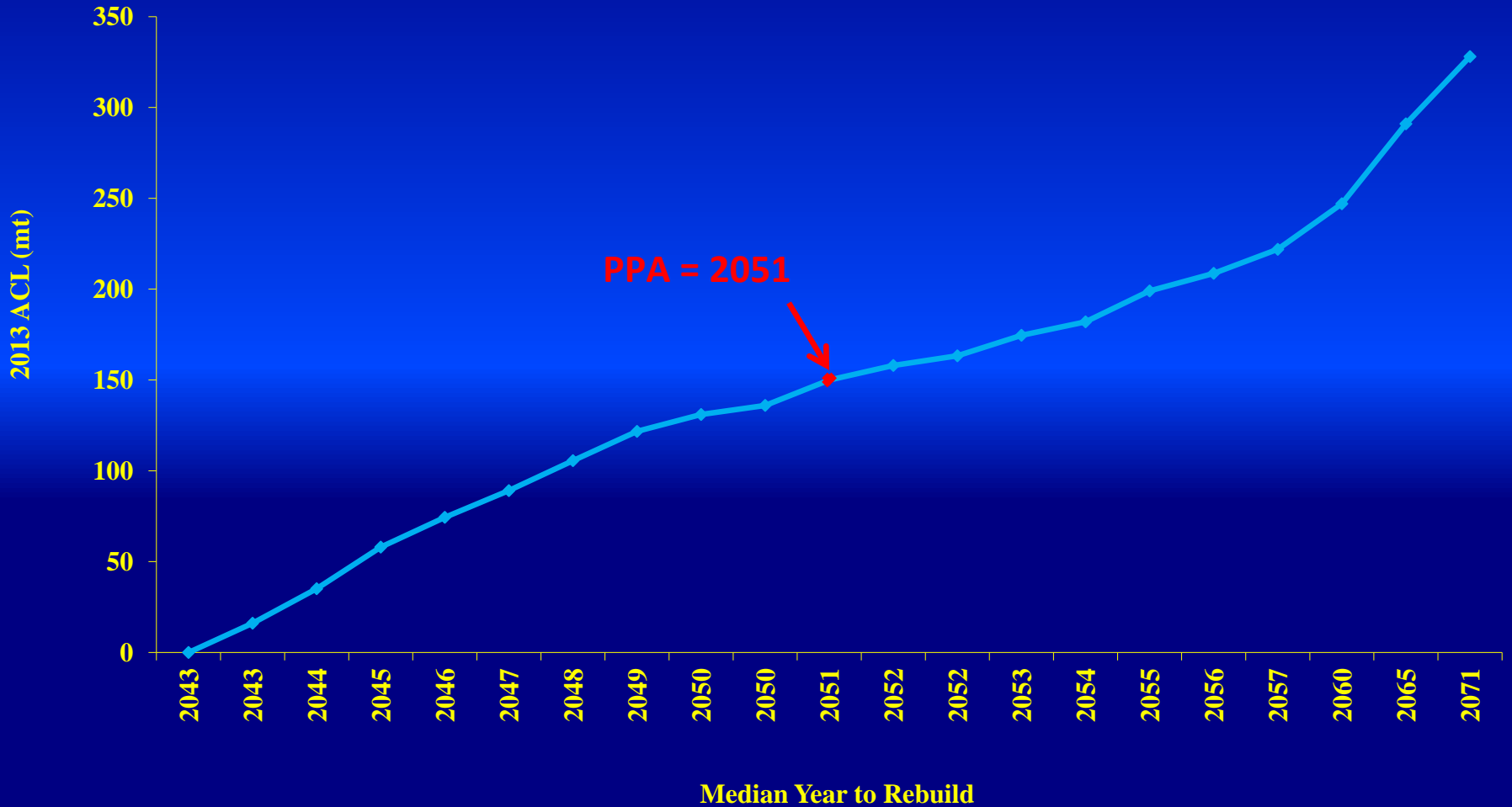
Canary Rebuilding



Canary Rebuilding Analyzed ACL Alts. (with P_{TARGET})

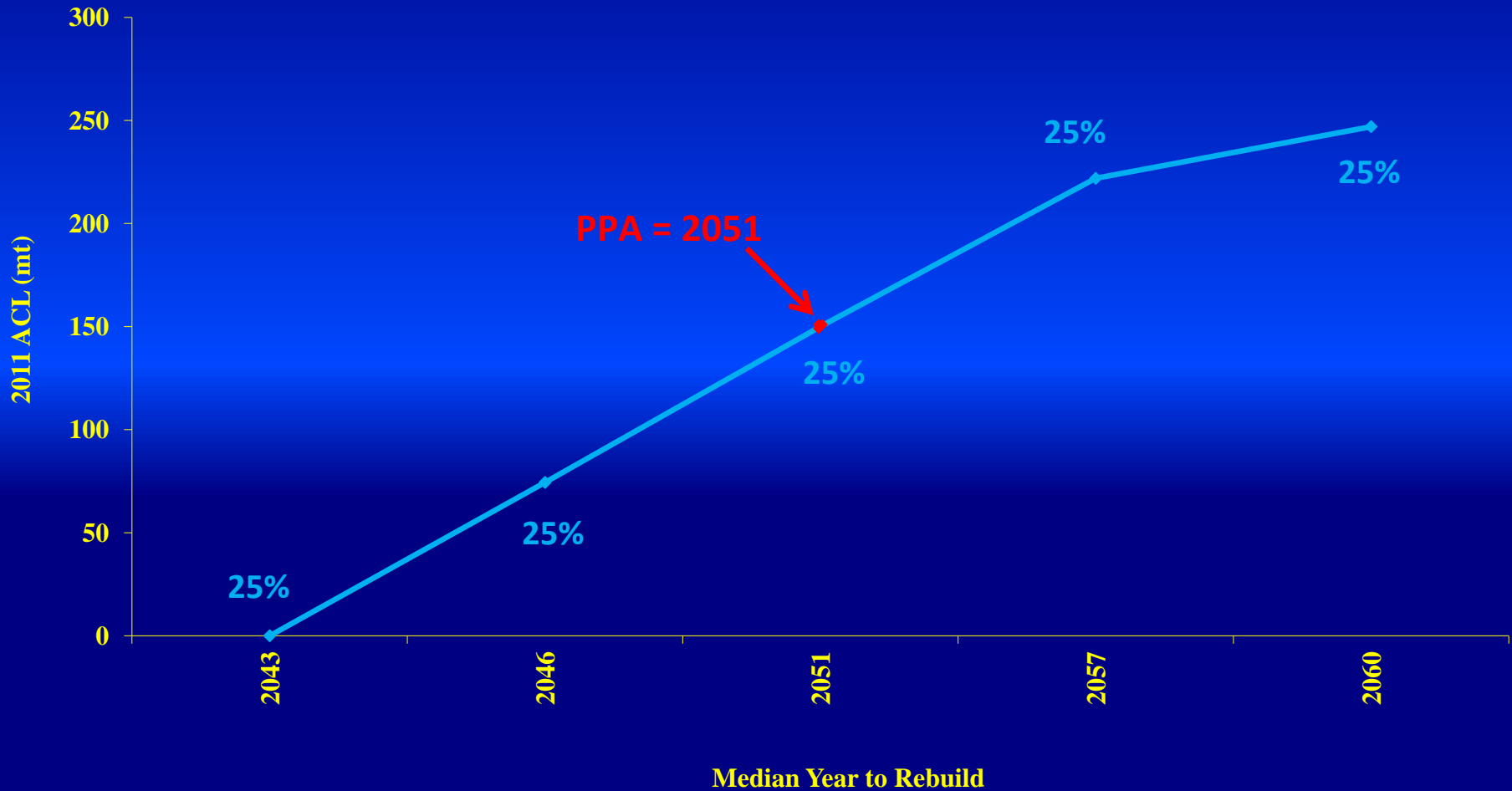


POP Rebuilding



POP Rebuilding

Analyzed ACL alts. (with P_{TARGET})

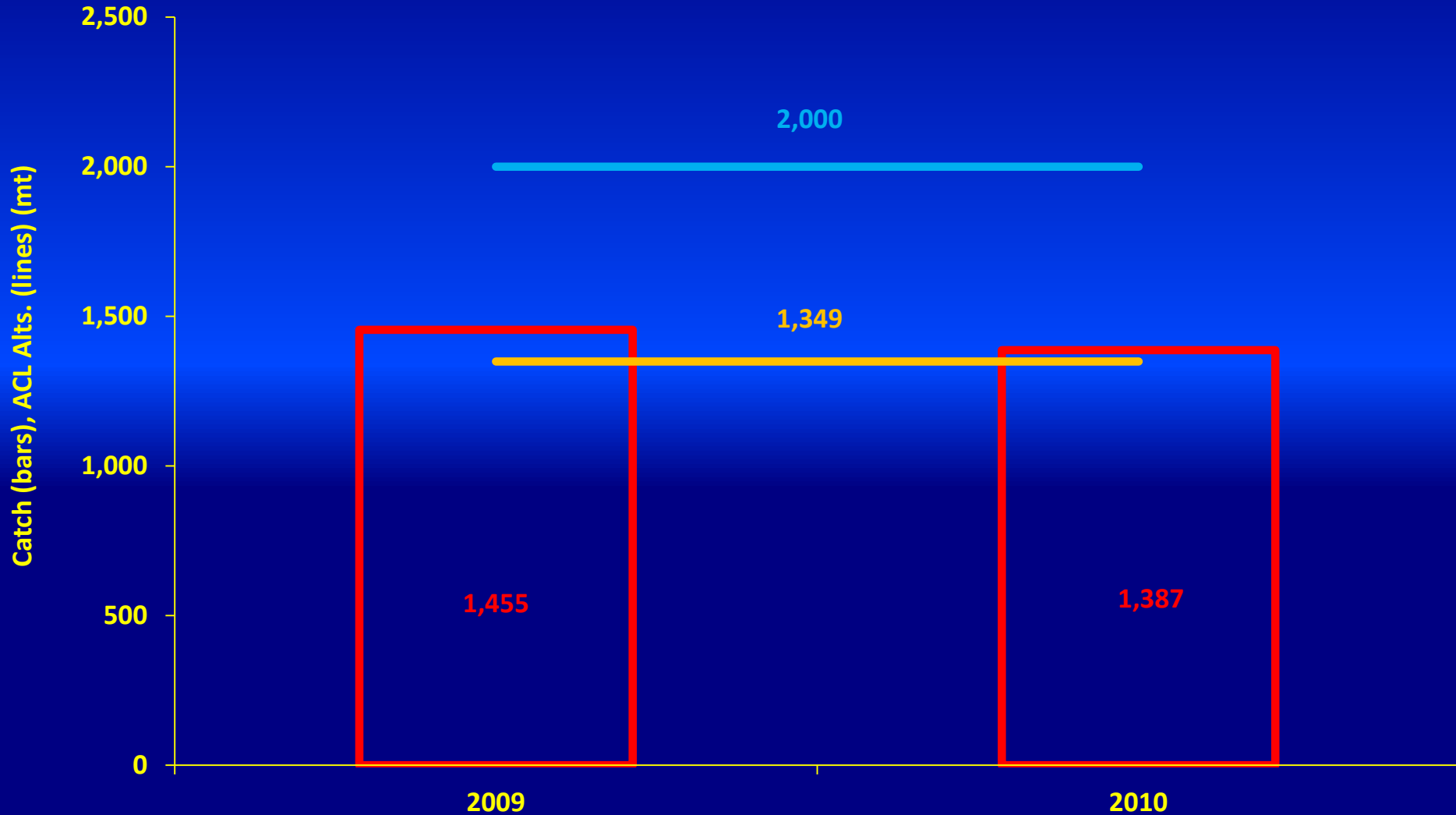


Widow ACLs

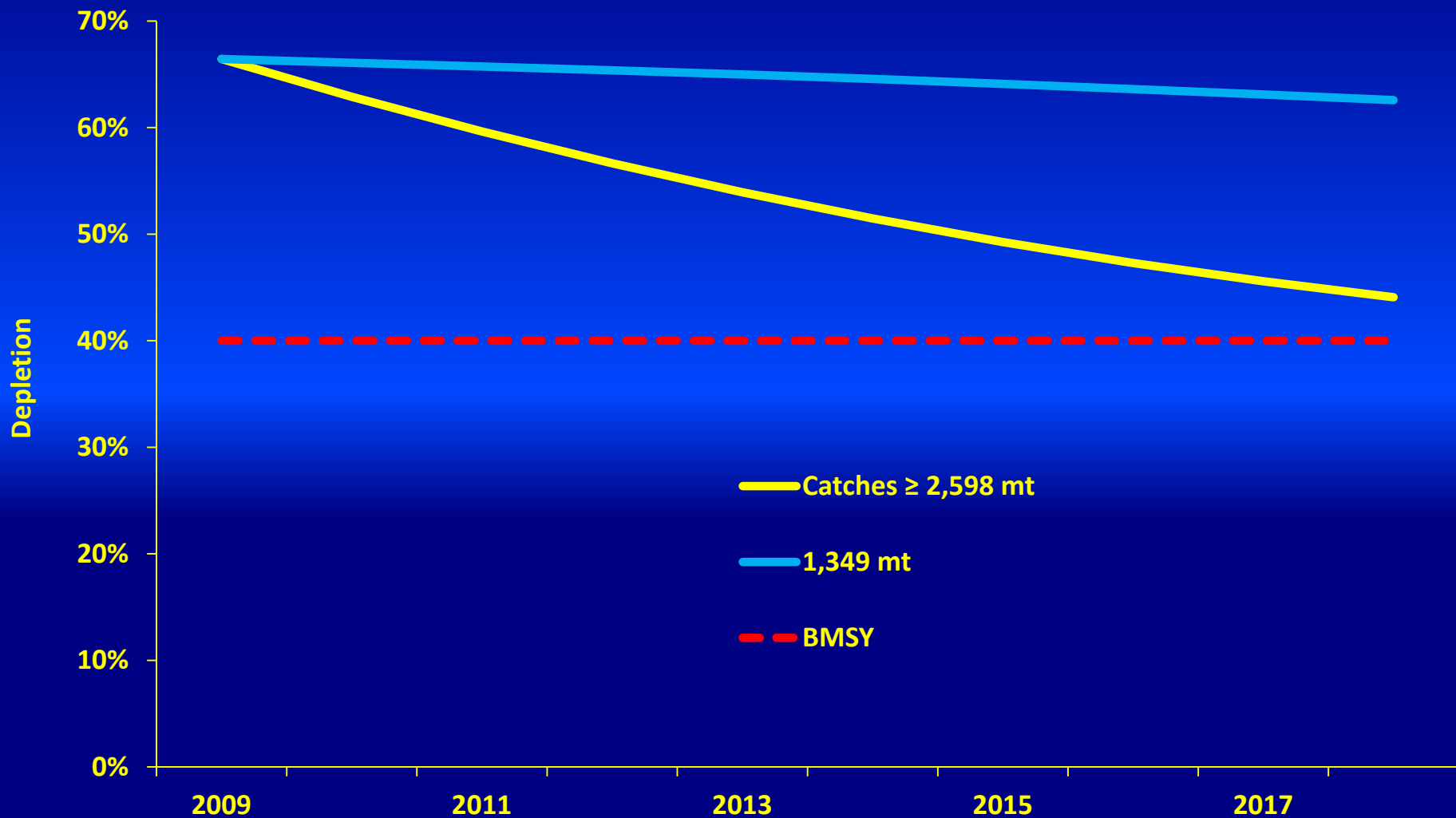
- **No Action = 600 mt**
- **ACL alts. = 1,500 mt (PPA) & 2,500 mt**
 - **Both alts. maintain healthy biomass in next 10 yrs. under base model ($h = 0.76$)**
 - **Highest constant catch ACL that maintains biomass above MSST in next 10 yrs. under low productivity model ($h = 0.41$) = 1,500 mt**

Longnose Skate

Recent Catches & ACL Alts.



Longnose Skate ACL Impact Projections



Integrated Alternatives

Previous Process



Step 1 : Adopt Harvest Specifications for all Species



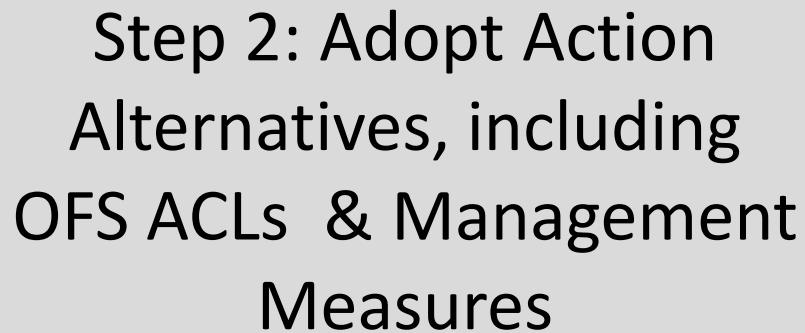
Step 2: Adopt Management Measures



Proposed Process



Step 1 : Adopt Harvest Specifications for non-OFS



Step 2: Adopt Action Alternatives, including OFS ACLs & Management Measures



2013-2014 FISHERIES

Integrated Alternatives

- An explanation for how each alternative is structured
- Overfished species (OFS) ACLs
- Estimates of non-OFS mortality, given OFS constraints – provides link to harvest specifications decisions
- Two-year allocations for overfished species
- Management measures necessary to stay within the ACLs or to achieve other management objectives (i.e., routine measures)
- Impact analysis of proposed new measures

Structure Behind the Integrated Alternatives

- Designed to clearly demonstrate trade offs in the time to rebuild for OFS
- Demonstrates how the choice of OFS ACLs constrains fishing opportunities by
 - sector
 - north and south of $40^{\circ}10$ N. lat.
 - shelf and slope

2013 Integrated Alternatives

	No Action	1 - PPA	2	3	4	5	6	7
Bocaccio	274	320						
Canary	107	116	101	116	48	216	101	147
Cowcod	3	3						
DRK	296	317						
POP	183	150	150	74	247	74	222	222
Petrale	1,160	2,592						
YE	17	18						

2014 Integrated Alternatives

	No Action	1 - PPA	2	3	4	5	6	7
Bocaccio	274				337			
Canary	107	119	104	119	49	220	104	151
Cowcod	3				3			
DRK	296				330			
POP	183	153	153	76	251	76	226	226
Petrале	1,160				2,652			
YE	17				18			

New Management Measures

- Changes to the waypoints that define RCA boundaries
- Sorting requirements north of 40°10 N. lat for aurora, shortraker, and roughey
- Catch accounting between limited entry and open access
- Widow rockfish within trawl allocation

New Management Measures – con't

- Shorebased IFQ accumulation limits
- Shorebased carry-over
- Remove or modify the lingcod length limit
- Recreational shelf rockfish retention in the CCA
- Remove the bocaccio size limit

Widow Allocations

- **A21 trawl alloc. = 91% of Fishery HG**
- **A21 within-trawl alloc.:**
 - **500 mt or 10% of trawl alloc., whichever is greater, to whiting sectors (apportioned according to whiting alloc. %s)**
 - **Shoreside whiting allocation (42%) is added to the shoreside non-whiting allocation to determine the shorebased IFQ allocation**
 - **at-sea in 2012 = 147.9 mt**
 - **at-sea in 2013-14 under PPA ACL = 290 mt**
- **At-sea alloc. alts. (no PPA yet) = 147.9 mt, 200 mt, 250 mt, 290 mt, & 300 mt**

Considerations for Deciding Widow Trawl Sector Allocations

- Shorebased IFQ sector benefits from max. widow alloc. since a healthy widow stock is targeted
- At-sea sectors need enough widow to attain whiting allocations (a low widow allocation can limit opportunities)
- Lower widow bycatch rates later in the season
- Lower widow bycatch rates when whiting are abundant

Trawl Sector Widow Allocation Alts. vs. Max. 2005-11 Widow Catch

ACL Alt.	Widow Alloc. Alt.	At-sea Trawl	SB IFQ Alloc.	MS Alloc.	CP Alloc.
Max. 2005-11 widow catch			124	73	73
600	SQ (A21)	290	181	120	170
	Alt. 1	147.9	323	61	86.7
	Alt. 2	200	271	83	117
	Alt. 3	250	221	103	147
	Alt. 4	300	171	124	176
1,500	SQ (A21)	290	1,000	120	170
	Alt. 1	147.9	1,142	61	87
	Alt. 2	200	1,090	83	117
	Alt. 3	250	1,040	103	147
	Alt. 4	300	990	124	176
2,500	SQ (A21)	290	1,910	120	170
	Alt. 1	147.9	2,052	61	87
	Alt. 2	200	2,000	83	117
	Alt. 3	250	1,950	103	147
	Alt. 4	300	1,900	124	176

Notable Modifications to Existing Management Measures

- Sablefish trip limit reductions
- Regulatory adjustment to the primary to DTL fishery
- Trip limit adjustments to blackgill rockfish south of 40°10
- RCA and trip limit adjusts for spiny dogfish and longnose skate
- Increase the California recreational bocaccio bag limit
- Increase the California recreational greenling bag limit

Socioeconomic Impacts

Ex-vessel Revenue, Personal Income Change from No Action

	No Action	1 - PPA	2	3	4	5	6	7
Canary	107	116	101	116	48	216	101	147
POP	183	150	150	74	247	74	222	222

Change in ex-vessel revenue from No Action (commercial "A" suboption only)

Sector	No Action	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Shoreside Whiting	23,650	-1.2%	-1.2%	-9.7%	-10.9%	-9.7%	-0.5%	-0.5%
Shoreside Nonwhiting Trawl	26,912	-11.8%	-11.8%	-23.2%	-19.2%	-23.2%	-11.7%	-11.7%
Shoreside LE Fixed Gear	19,068	-19.8%	-19.8%	-19.8%	-19.8%	-19.8%	-19.8%	-19.8%
Shoreside Nearshore OA	4,218	17.4%	17.4%	17.4%	-16.5%	17.4%	17.4%	17.4%
Shoreside Non-nearshore OA	7,687	-18.7%	-18.7%	-18.7%	-18.7%	-18.7%	-18.7%	-18.7%
Shoreside Incidental OA	151	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Shoreside Tribal (incl. whiting)	11,825	-8.8%	-8.8%	-8.8%	-8.8%	-8.8%	-8.8%	-8.8%
Total	93,512	-9.6%	-9.6%	-15.0%	-15.7%	-15.0%	-9.4%	-9.4%

Change in personal income from No Action (commercial "A" suboption only)

Community Groups	No Action	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Puget Sound	2,376	-21.40%	-21.40%	-25.70%	-21.60%	-25.70%	-21.40%	-21.40%
Washington Coast	16,905	-11.50%	-11.50%	-17.90%	-16.20%	-17.90%	-11.50%	-11.50%
Astoria-Tillamook	27,877	-6.80%	-6.80%	-19.90%	-20.90%	-19.90%	-6.10%	-6.10%
Newport	16,025	-9.70%	-9.70%	-12.10%	-13.60%	-12.10%	-9.50%	-9.50%
Coos Bay-Brookings	13,881	-13.00%	-13.00%	-14.60%	-17.70%	-14.60%	-13.00%	-13.00%
Crescent City-Eureka	7,937	-11.40%	-11.40%	-21.90%	-11.40%	-21.90%	-11.20%	-11.20%
Fort Bragg - Bodega Bay	5,786	-10.40%	-11.20%	-11.70%	-8.60%	-11.70%	-11.20%	-11.20%
San Francisco Area	7,616	-3.90%	-3.90%	-4.00%	-8.20%	-4.00%	-3.90%	-3.90%
Santa Cruz - Monterey - Morro Bay	13,948	3.30%	3.30%	3.10%	-8.00%	3.10%	3.30%	3.30%
Santa Barbara - Los Angeles - San Diego	52,167	0.10%	0.10%	0.10%	0.00%	0.10%	0.10%	0.10%
Coastwide Total	164,518	-5.50%	-5.50%	-9.30%	-10.20%	-9.30%	-5.40%	-5.40%

Socioeconomic Impacts

Projected Ex-vessel Revenue Change from Baseline (2005-10)

	No Action	1 - PPA	2	3	4	5	6	7
Canary	107	116	101	116	48	216	101	147
POP	183	150	150	74	247	74	222	222

By commercial fishery sector, commercial "A" suboptions

		No Action	1	2	3	4	5	6	7
Shoreside Whiting	11,141	+112%	+110%	+110%	+92%	+89%	+92%	+111%	+111%
Shoreside Nonwhiting Trawl	27,824	-3%	-15%	-15%	-26%	-22%	-26%	-15%	-15%
Shoreside LE Fixed Gear	13,796	+38%	+11%	+11%	+11%	+11%	+11%	+11%	+11%
Shoreside Non-nearshore OA	3,756	+105%	+66%	+66%	+66%	+66%	+66%	+66%	+66%
Shoreside Tribal (incl. whiting)	6,376	+85%	+69%	+69%	+69%	+69%	+69%	+69%	+69%
Shoreside Nearshore OA (suboption A)	3,185	+32%	+55%	+55%	+55%	+11%	+55%	+55%	+55%
Shoreside Nearshore OA (suboption B)		N/A	+49%	+49%	+49%	-16%	+49%	+49%	+49%
All other groundfish landings*	\$1,138								
Total % change (suboption A)		+41%	+28%	+28%	+20%	+19%	+20%	+28%	+28%
Total change \$000 (suboption A)	\$67,218	\$27,281	\$18,302	\$18,302	\$13,221	\$12,583	\$13,221	\$18,483	\$18,483

By community group, commercial "A" suboptions

Community Groups	Baseline (2005-10)	No Action	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Puget Sound		-54%	-64%	-64%	-66%	-64%	-66%	-64%	-64%
Washington Coast		+71%	+52%	+52%	+46%	+47%	+46%	+52%	+52%
Astoria-Tillamook		+77%	+64%	+64%	+40%	+40%	+40%	+65%	+65%
Newport		+37%	+20%	+20%	+16%	+14%	+16%	+20%	+20%
Coos Bay-Brookings		+16%	-1%	-1%	-3%	-8%	-3%	-1%	-1%
Crescent City-Eureka		-7%	-19%	-19%	-30%	-21%	-30%	-19%	-19%
Fort Bragg - Bodega Bay		+18%	-0%	-0%	-1%	-14%	-1%	-0%	-0%
San Francisco Area		-1%	-17%	-17%	-17%	-19%	-17%	-17%	-17%
Santa Cruz - Monterey - Morro Bay		+69%	+82%	+82%	+82%	+71%	+82%	+82%	+82%
Santa Barbara - Los Angeles - San Diego		+45%	+48%	+48%	+48%	+46%	+48%	+48%	+48%
Total (% change from baseline)		+39%	+26%	+26%	+18%	+17%	+18%	+26%	+26%
Total (\$000 change from baseline)	67,216	26,296	17,316	17,316	12,235	11,598	12,235	17,498	17,498

Comparison of Commercial “A” and “B” Suboptions

Average annual 2005-10 ex-vessel revenue by the nearshore open access fishery (dollars and percent of total groundfish ex-vessel revenue in the community group), and difference in ex-vessel revenue impacts (\$,000) between suboption B and suboption A under each alternative by community group.

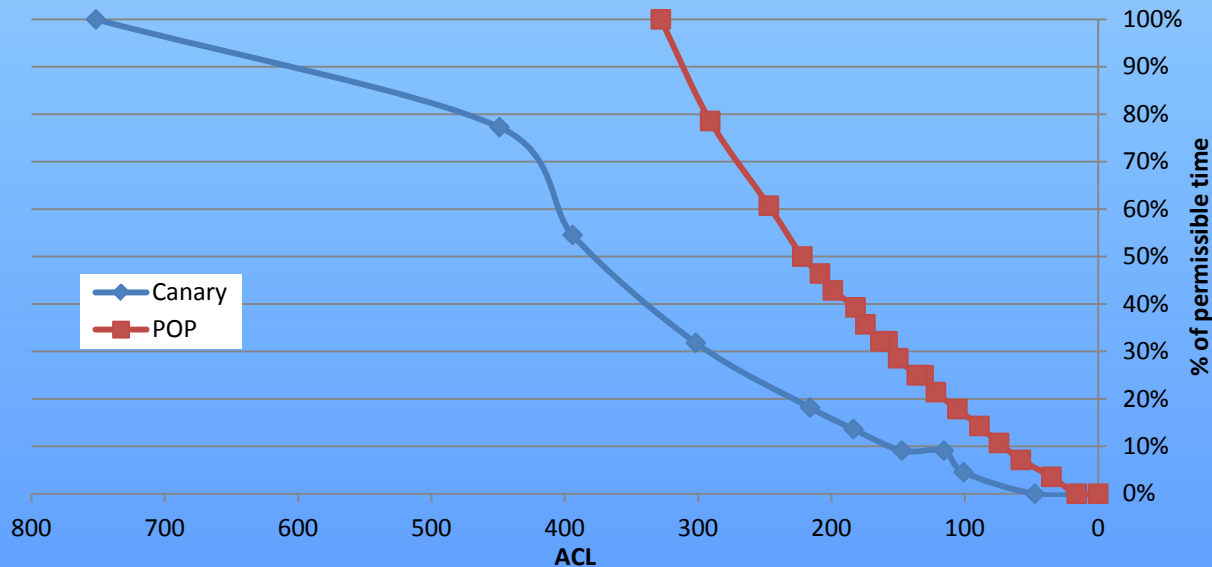
Community Group	Nearshore OA Baseline		Integrated Action Alternatives						
	\$,000	Pct.	1	2	3	4	5	6	7
Puget Sound		0%	(Difference in exvessel revenue)						
Washington Coast	<1	<1%							
Astoria-Tillamook	125	1%	-23	-23	-23	0	-23	-23	-23
Newport	23	0%	-8	-8	-8	0	-8	-8	-8
Coos Bay-Brookings	854	9%	-163	-163	-163	0	-163	-163	-163
Crescent City-Eureka	479	8%	0	0	0	-164	0	0	0
Fort Bragg - Bodega Bay	248	7%	0	0	0	-81	0	0	0
San Francisco Area	136	9%	0	0	0	-41	0	0	0
Santa Cruz - Monterey - Morro Bay	1,116	30%	0	0	0	-486	0	0	0
Santa Barbara - Los Angeles - San Diego	226	10%	0	0	0	-61	0	0	0
Coastwide Difference			-194	-194	-194	-833	-194	-194	-194

Integrated Alternatives: Rebuilding

Percent of “permissible” rebuilding time ($T_{TARGET} - T_{F=0} / T_{MAX} - T_{F=0}$)

	No Action	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Bocaccio	17%							
Canary	5%	9%	5%	9%	0%	18%	5%	9%
Cowcod	22%							
Darkblotched	5%							
POP	39%	29%	29%	11%	61%	11%	50%	50%
Petrale	0%							
Yelloweye	55%							
Overall Assessment		4	3	1	7	2	5	6

ACL – rebuilding tradeoff: Amount of ACL foregone for each year closer to $T_{F=0}$
 Canary: 34 mt /year POP: 12 mt/year (ACL/ “permissible” rebuilding period)



Integrated Alternatives: Summary of Impacts

	1 - PPA	2	3	4	5	6	7
Canary	116	101	116	48	216	101	147
POP	150	150	74	247	74	222	222

Ranking of impacts, 1 = least adverse / most beneficial

	Commercial "A" suboption							Rec
	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 4B
Socioeconomic Impacts (Revenue & Income)								
Commercial Fishery Impacts	3	3	5	7	5	1	1	
Recreational Fishery Impacts	1	2	2	7	2	2	2	8
Community Impacts	3	3	5	7	5	1	1	
Stock Rebuilding (Target Year)								
Canary	4	2	4	1	7	2	4	
POP	3	3	1	7	1	5	5	
Overall Ranking	4	2	5	7	6	1	2	

Next Steps

- March
 - Adopt preferred 2013-2014 OFLs, ABCs, ACLs for lingcod and Other Fish complex
- April
 - Adopt preferred harvest specifications and management measures
- June
 - Final action