



Summary of the Washington  
Purse Seine Fishery  
for  
Pacific Sardine  
(*Sardinops sagax*)

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## Washington Sardine Purse Seine Fishery

The Washington Department of Fish and Wildlife (WDFW) has managed a Pacific sardine fishery off our coast since 2000. In September 2011, the Pacific Fishery Management Council received a letter from the Quinault Indian Nation expressing their intent to have three treaty fishing vessels participating in the coastal sardine fishery beginning in 2012 and requested a tribal set aside of 9,000 mt to accommodate the needs of those fishing vessels. The Council had some discussion about the request and raised questions about the nature of the sardine fishery off the Washington coast. In response, WDFW has prepared this summary report, which will hopefully address some, if not all, of the questions raised.

### Fishery Background

From 2000 through 2009, participation in the sardine fishery was managed under Washington's Emerging Commercial Fishery Act (ECFA), which provides for the harvest of a newly classified species or harvest of a classified species in a new area or by new means. The ECFA prohibits the transfer or sale of an emerging commercial fishery license. In 2009, new legislation created a license limitation program specifically for the harvest and delivery of Pacific sardines into the state. In addition to establishing 16 permanent licenses, the rules provide criteria for the issuance of temporary annual permits at the discretion of the WDFW Director. In combination, the number of permanent and temporary annual licenses cannot exceed 25. In recent years, even though 16 or more permits have been issued, the number of active participants each year has been five to eight (Table 1). Permanent sardine licenses can be transferred.

The Washington sardine fishery opens annually on April 1. In past years, when the coastwide sardine harvest guideline was not attained and did not therefore constrain the fishery, fishing in Washington in April and May was usually limited by poor weather and ocean conditions. The annual coastwide harvest guideline is released in periodic increments (January 1: 35%; July 1: 40%; and September 15: 25%) and in more recent years, as a result of lower coastwide harvest guidelines, the first period of the fishery has closed prior to April 1. A complete description of the Washington state regulations for the sardine fishery is provided at the end of this report.

Washington annual and monthly landing information is presented in Tables 1 and 2, and Figure 1 below.

Table 1. Description of annual landings (metric tons), number of landings and number of active vessels in the Washington sardine purse seine fishery, 2004-2011.

	2011*	2010	2009	2008	2007	2006	2005	2004
No. of Vessels	7	8	8	5	6	7	11	14
Total Landings (mt)	7,918	12,379	8,009	6,432	4,663	4,362	6,714	8,911
No. of Landings	126	232	173	150	106	108	207	236
Average Landing (mt)	63	53	46	43	44	39	32	37

\*Preliminary

In reviewing landings data from the five vessels with the highest landings from 2000-2011, it appears that individual vessel landings averaged about 1,400 mt per year (Table 2). Season length, weather and ocean conditions, sardine abundance relative to proximity to port, processing capacity and skipper experience were likely all contributing factors.

Prior to 2008, the fishery did not attain the periodic allocation quotas or the annual coastwide harvest guideline. However, since then, as a result of a reduction in the coastwide harvest guideline, the fishery has since experienced closures between periods. In Washington, weather and ocean conditions are typically most favorable from May through October. Processor capacity does limit the number and size of deliveries; however, upgrades have increased facility capabilities compared to earlier years of the fishery.

Table 2. Annual landings (mt) for five vessels with the highest landings, ranked from highest to lowest for each year, 2000-2011.

Vessel	2011*	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
1	1,655	3,036	2,192	1,762	1,152	1,953	1,901	2,689	3,307	4,056	2,702	1,920
2	1,276	1,913	1,519	1,636	952	668	1,745	2,504	2,393	2,164	1,902	1,800
3	1,267	1,707	1,296	1,291	797	664	1,480	986	2,258	1,735	1,218	542
4	1,218	1,510	1,141	1,249	734	534	927	775	1,167	1,338	925	264
5	992	1,372	1,005	494	610	452	248	580	1,080	1,331	887	133

\*Preliminary

In reviewing the vessel-specific harvest data for recent years (2009-2011), the vessels that produced the higher landings exerted a fair amount of effort in a relatively short period of time, making multiple landings per day—most of them made two landings per day and some made up to three. During this same time period, the Washington vessel activity was also compressed to just a few weeks in July and about one week in September.

WDFW also examined the Washington coastal sardine fishery logbook data to compare fishery set locations from 2008 through 2011 with the northern and southern boundaries of the Quinault Indian Nation's usual and accustomed fishing grounds (Figure 2). Set location data are for Washington licensed fishers only.

Figure 1. Washington sardine landings by month and allocation release periods, 2005-2011.

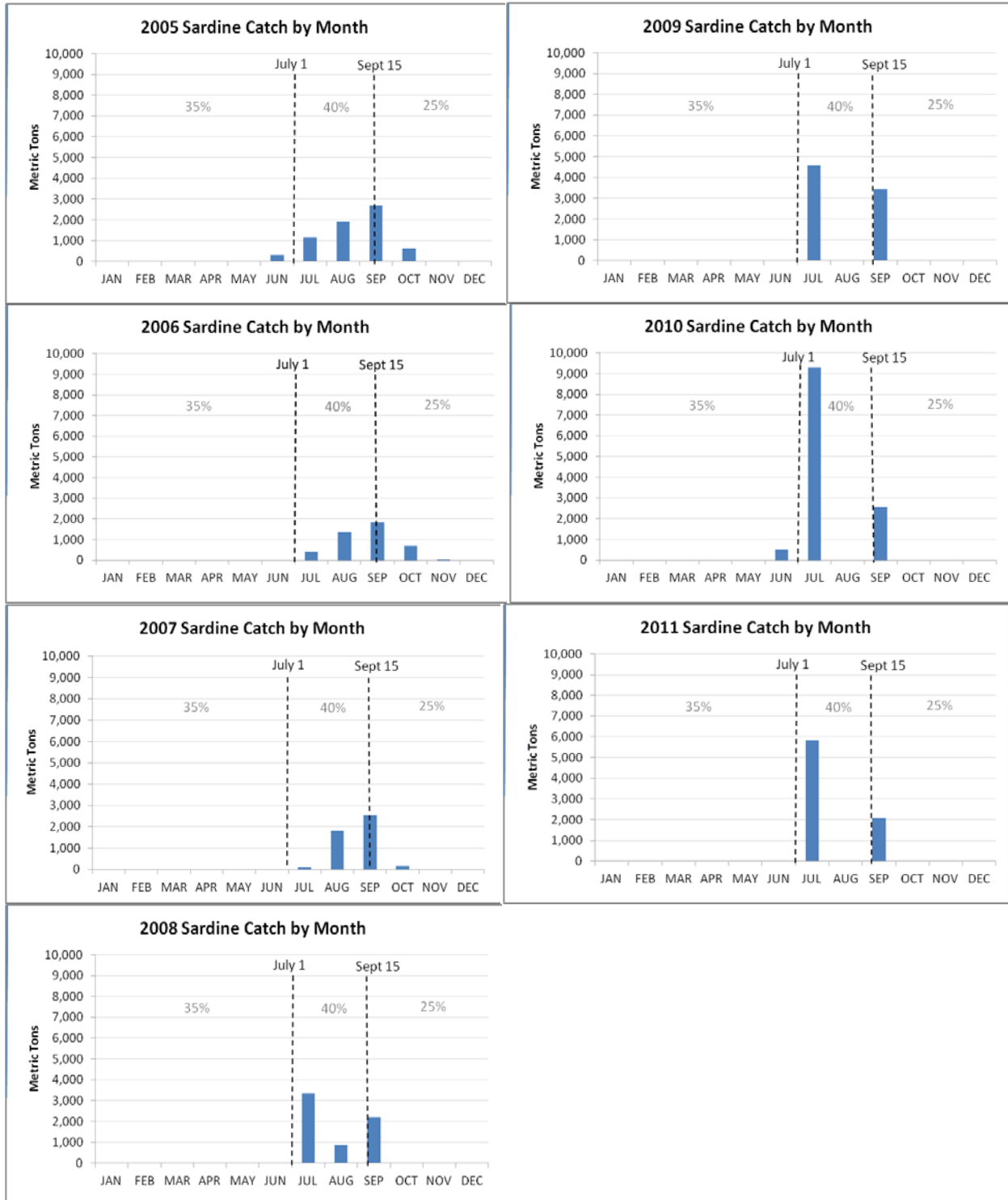
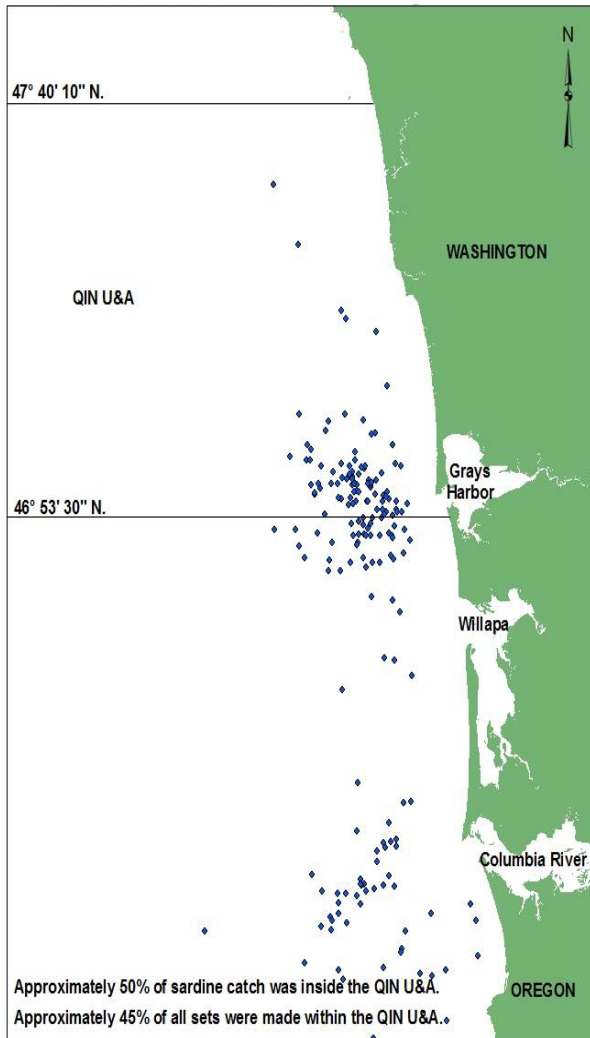


Figure 2. Washington licensed sardine set locations from logbook data, 2008-2011 with the northern and southern boundaries of the Quinault Indian Nation (QIN) Usual and Accustomed (U&A) fishing grounds.

2008



2009

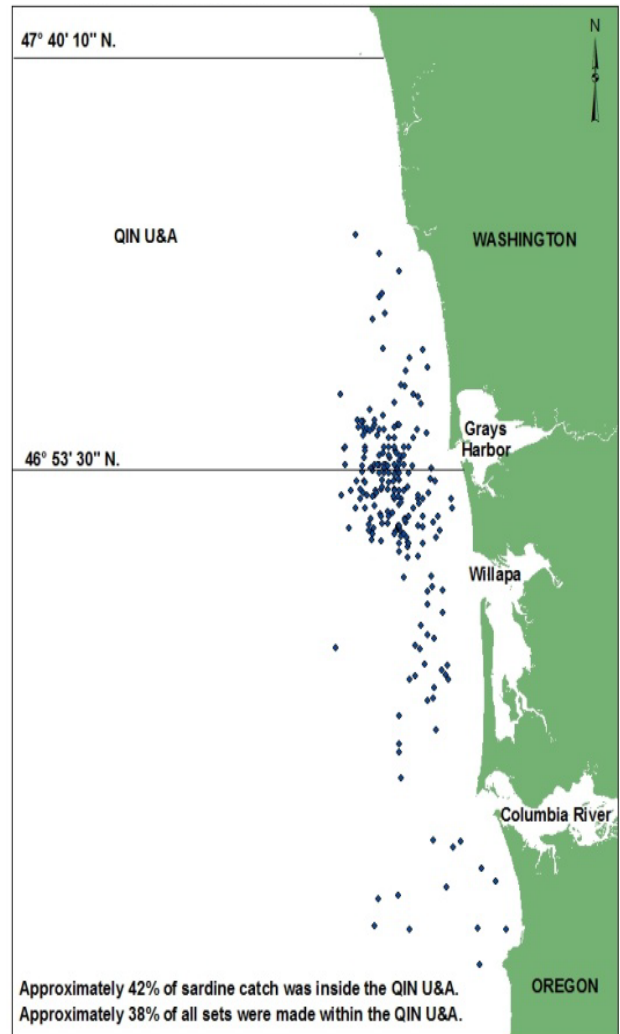
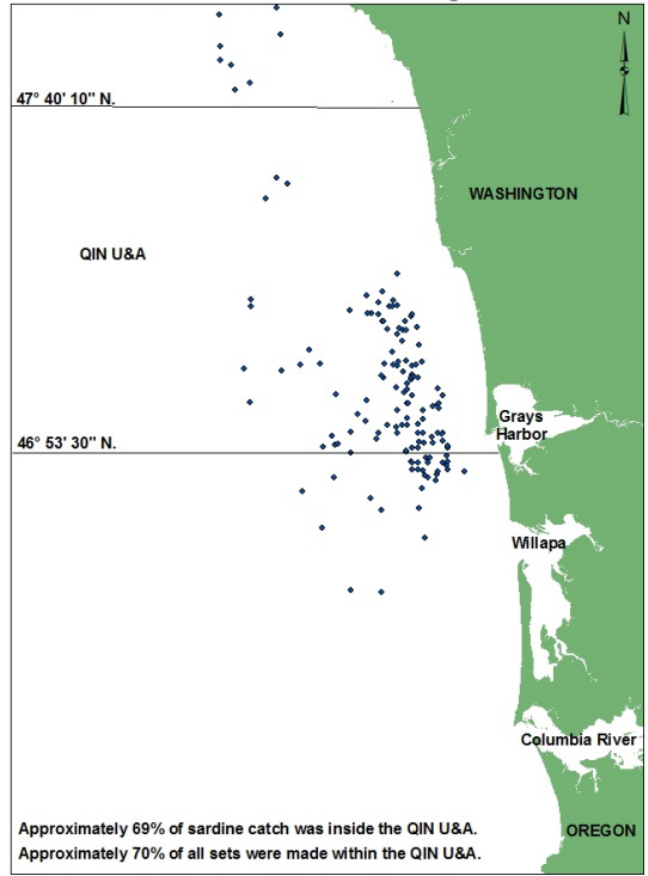
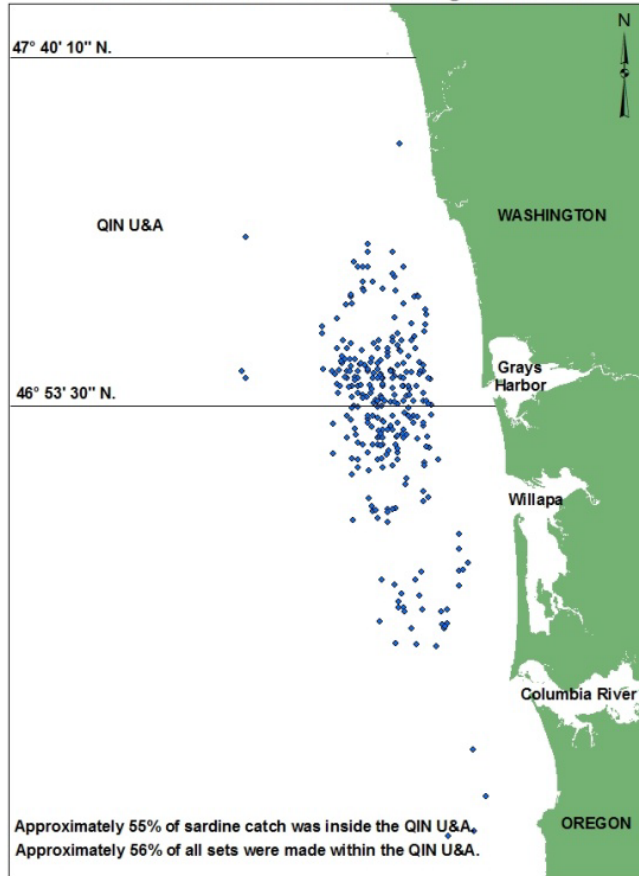


Figure 2. Washington licensed sardine set locations from logbook data, 2008-2011 with the northern and southern boundaries of the Quinault Indian Nation (QIN) Usual and Accustomed (U&A) fishing grounds.

2010

2011



## Bycatch Evaluation of the Washington Sardine Purse Seine Fishery

From 2000 through 2004, WDFW required fishers to carry at-sea observers, as well as provide financial support for this observer effort. Bycatch information was collected in terms of species, amount, and condition; observers noted whether the fish were released or landed, and whether alive, dead, or in poor condition. During the five-year period of the program, overall observer coverage averaged over 25 percent of both total landed catch and number of landings made.

Based on observer data, the bycatch of non-targeted species in the Washington sardine fishery was relatively low. A comparison of logbook and observer data from 2000 to 2004 indicated that logbook data, in general, tended to under report bycatch by 20 to 80 percent (Culver and Henry, 2006). For this reason, salmon bycatch in the Washington sardine fishery for years subsequent to the observer program is calculated by multiplying total sardine catch and the observed 5-year average bycatch rates. Bycatch and mortality estimates of incidentally captured salmon by year and species are shown in Table 3. Incidental species caught and reported on Washington fish tickets are shown in Table 4. Mackerel, both Pacific and jack, comprise the majority of non-target catch in the sardine fishery.

Table 3. Expanded salmonid bycatch in Pacific sardine fisheries in Washington, 2000-2010.

	Chinook		Coho		Pink	Unidentified		Total		Grand Total
	Live	Dead	Live	Dead	Live	Live	Dead	Live	Dead	
2010	87	288	53	328						756
2009	56	186	34	212						488
2008	45	149	27	170						391
2007	33	108	20	124				53	232	285
2006	31	101	19	116				50	217	267
2005	47	156	29	178				76	334	410
2004 <sup>1/</sup>	35	225	19	105	0	39	0	93	330	423
2003 <sup>1/</sup>	92	262	81	231	0	173	0	346	493	839
2002 <sup>1/</sup>	150	356	61	765	0	200	0	411	1211	1532
2001 <sup>1/</sup>	449	170	571	504	0	80	0	1100	674	1774
2000 <sup>1/</sup>	38	3	276	116	0	7	0	321	119	440

1/ Totals calculated from observed 2000-2004 observed bycatch rates.

Table 4. Incidental catch (mt) in Washington sardine fishery, 2000-2010 (from fish landing receipts).

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Mackerel	4.32	272.44	259.32	52.40	22.34	19.04	40.61	35.73	6.32	4.31	2.09
Pacific Herring			0.02						4.69		
Misc				0.34			1.37			2.34	
Northern Anchovy						1.81					
American Shad			0.18						<0.01		
Sharks	0.10	0.01							<0.01	<0.01	
Chinook		<0.01		<0.01							
Coho	<0.01										
Starry Flounder	<0.01										

Culver, M., and C. Henry, 2006. Summary Report of the 2005 Experimental Purse Seine Fishery for Pacific Sardine (*Sardinops sagax*). Washington Department of Fish and Wildlife, Montesano, Washington. 11 pp.

### Washington Sardine Fishery Regulations

RCW 77.70.480 Pacific sardines — Purse seine fishery license or temporary annual fishery permit required.

RCW 77.70.490 Pacific sardines — Purse seine fishery license — Adoption of rules regarding bycatch.

WAC 220-44-095 Coastal sardine purse seine fishery — Harvest, landing, and reporting requirements — Gear.

WAC 220-69-240 Duties of commercial purchasers and receivers.

***Revised Code of Washington 77.70.480 Pacific sardines — Purse seine fishery license or temporary annual fishery permit required.***

(1) A Washington sardine purse seine fishery license or temporary annual fishery permit is required to use purse seine gear to fish for or possess Pacific sardines in offshore waters. This requirement does not affect persons authorized to fish for or possess sardines in offshore waters under a valid Oregon or California license or permit.

(2) A Washington sardine purse seine fishery license or temporary annual fishery permit is required to deliver Pacific sardines into the state.

(3) Washington sardine purse seine fishery licenses and temporary annual fishery permits require vessel designation under RCW 77.65.100.

(4) Pacific sardines may not be taken or retained in state waters except for incidental harvest authorized by rule of the department.

***Revised Code of Washington 77.70.490 Pacific sardines — Purse seine fishery license — Adoption of rules regarding bycatch.***

(1) A Washington Pacific sardine purse seine fishery license:

(a) May only be issued to a person that held a coastal pilchard experimental fishery permit in 2008, except as otherwise provided in this section;

(b) Must be renewed annually to remain active; and

(c) Subject to the restrictions of subsections (6) and (7) of this section and RCW 77.65.040, is transferable.

(2) A Washington Pacific sardine purse seine fishery license may be issued to any person that held a coastal pilchard experimental fishery permit in 2005, 2006, or 2007 and is precluded from qualifying under subsection (1) of this section because the vessel designated on the permit sank prior to 2008.

(3) Beginning in 2010, after taking into consideration the status of the Pacific sardine population, the impact of removal of sardines and other forage fish to the marine ecosystem, including the effect on endangered marine species, and the market for Pacific sardines in the state, the director may issue:

(a) A Washington Pacific sardine purse seine fishery license to any person provided that the issuance would not raise the number of licenses beyond the number initially issued in 2009;

(b) A Washington Pacific sardine purse seine temporary annual fishery permit to any person if the combined number of active Washington Pacific sardine purse seine fishery licenses and annual temporary permits already issued during the year is less than twenty-five.

(4) The annual fee for a Washington Pacific sardine purse seine fishery license is one hundred eighty-five dollars for residents and two hundred ninety-five dollars for nonresidents.

(5) The fee for a Washington Pacific sardine purse seine temporary annual fishery permit is one hundred eighty-five dollars for residents and two hundred ninety-five dollars for nonresidents. A temporary annual fishery permit expires at the end of the calendar year in which the permit is issued.

(6) Only a person who owns or operates the vessel designated on the license or permit may hold a Washington Pacific sardine purse seine fishery license or temporary annual fishery permit.

(7) A person may not own or hold an ownership interest in more than two Washington Pacific sardine purse seine fishery licenses.

(8) The director shall adopt rules that require a person fishing under a Washington Pacific sardine purse seine fishery license or a temporary annual permit to minimize bycatch, and to the extent bycatch cannot be avoided, to minimize the mortality of such bycatch.

***Washington Administrative Code 220-44-095 Coastal sardine purse seine fishery — Harvest, landing, and reporting requirements — Gear.***

(1) (a) It is unlawful to possess, transport through the waters of the state, or deliver into any Washington port, Pacific sardine (*Sardinops sagax*) or other coastal pelagic species taken in violation of gear requirements and other rules published in Title 50, Part 660, Subpart I of the Code of Federal Regulations (CFR). These federal regulations govern commercial fishing for coastal pelagic species in the Exclusive Economic Zone off the coasts of Washington, Oregon, and California. Where the federal regulations refer to the fishery management area, that area is interpreted to include Washington state waters coterminous with the Exclusive Economic Zone. Updates to the federal regulations are published in the Federal Register. Discrepancies or errors between the CFR and Federal Register will be resolved in favor of the Federal Register. This chapter incorporates the CFR by reference and is based, in part, on the CFR. A copy of the federal rules may be obtained by contacting Lori Preuss at 360-902-2930, or going to the U.S. Government Printing Office's GPO Access web site ([www.gpoaccess.gov](http://www.gpoaccess.gov)). State regulations that are more restrictive than the federal regulations will prevail.

(b) The coastal sardine fishery season is open to purse seine fishing each year only from April 1st through December 31st. It is unlawful to take Pacific sardine in state waters except for the incidental take authorized by the coastal baitfish regulations.

(c) It is unlawful to retain any species that is taken incidental to sardine, except for anchovy, mackerel, and market squid (*Logligo opalescens*). Any salmon encircled in the purse seine must be released prior to completion of the set, and no salmon may be landed on the fishing vessel.

- (d) It is unlawful to transfer sardine catch from one fishing vessel to another.
- (e) It is unlawful to fail to have legal purse seine gear aboard the vessel making a sardine landing.
- (f) It is unlawful to fail to deliver sardine landings to a shore-side processing facility.
- (g) Once a delivery has commenced at a processing plant, all fish on board the vessel must be offloaded at that plant.
- (h) It is unlawful to deliver more than fifteen percent cumulative weight of sardines for the purposes of conversion into fish flour, fish meal, fish scrap, fertilizer, fish oil, other fishery products, or by-products, for purposes other than human consumption or fishing bait used during the sardine fishery season.

(2) License owners must designate a vessel upon issuance or renewal of the license and must be identified as either the vessel owner or primary license operator.

(3) Persons fishing under a Washington sardine purse seine fishery license or temporary annual fishery permit must:

- (a) Carry an observer on board for any sardine fishing trip if requested by the department;
- (b) Surrender up to five hundred sardines per vessel per trip if requested by department samplers for biological information; and
- (c) Complete a department-issued logbook each month in which fishing activity occurs, and submit it to the department by the 15th day of the following month.

(4) Violation of reporting requirements under this section is punishable pursuant to RCW 77.15.280.

(5) Violation of gear, harvest, or landing requirements under this section is punishable pursuant to RCW 77.15.520.

***Washington Administrative Code 220-69-240 Duties of commercial purchasers and receivers.***

(6) Forage fish: It is unlawful for any person receiving forage fish to fail to report the forage fish on fish receiving tickets initiated and completed on the day the forage fish are delivered. Herring are also required to be reported on herring harvest logs. The harvested amount of forage fish must be entered upon the fish ticket when the forage fish are off-loaded from the catcher vessel. An estimate of herring, candlefish, anchovy, or sardine caught but not sold due to mortality must be included on the fish ticket as "loss estimate." In the coastal sardine fishery, the amount of sardine, by weight, purchased for the purposes of conversion into fish flour, fishmeal, fish scrap, fertilizer, fish oil, other fishery products, or by-products for purposes other than human consumption or fishing bait, must be included on the fish ticket as "reduction." In any forage fish fishery, the amount of anchovy, by weight, purchased for the purposes of conversion into fish flour, fishmeal, fish scrap, fertilizer, fish oil, other fishery products, or by-products for purposes other than human consumption or fishing bait, must be included on the fish ticket as "reduction."

Violation of this subsection is a gross misdemeanor, punishable under RCW 77.15.640.