

# **Summary Report of the 2001 Trial Purse Seine Fishery for Pacific Sardine (*Sardinops sagax*)**

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## TABLE OF CONTENTS

Background.....	1
Goals and Objectives .....	1
Fishery Regulations .....	2
Fishery Description.....	2
Observer Coverage/Logbooks .....	3
Bycatch .....	3
Biological samples .....	3
Summary of WDFW Activities .....	4

### Appendices

A. 2001 Permit Conditions .....	5
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### List of Tables and Figures

Table 1. Catch comparisons between 2000 and 2001 sardine fisheries.....	2
Table 2. Preliminary expanded observed bycatch data for the 2001 trial fishery and comparison to the 2000 trial fishery .....	3
Figure 1. Number and amount of sardine landings by month.....	2

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE  
SUMMARY REPORT OF THE 2001 TRIAL PURSE SEINE FISHERY  
FOR PACIFIC SARDINE (*Sardinops sagax*)**

**Background**

In Washington, sardines are managed under the Emerging Commercial Fishery provisions as a trial commercial fishery. A trial commercial fishery allows the harvest of a newly classified species, or harvest of a previously classified species in a new area or by new means (WAC 220-88-010). In February 2001, in response to a request from Washington-based fishers and processors, the Washington Fish and Wildlife Commission approved a trial ocean purse seine sardine fishery for 2001.

The target of the trial fishery was sardines; however, anchovy, mackerel, and squid could also be landed. These coastal pelagic species (CPS) are managed by the Secretary of Commerce through the Pacific Fishery Management Council (PFMC) under a federal fishery management plan (FMP). By definition, a Washington trial commercial fishery cannot limit participation, and under current law, an experimental fishery (which allows participation to be limited) cannot be established for any fishery under the jurisdiction of the Secretary of Commerce (i.e., a federally managed fishery) (WAC 220-88-020).

Current limited entry provisions and direct harvest controls have been developed in the FMP for waters south of 39° N latitude which encompasses most of the distribution of the CPS stocks and fisheries. This leaves specific management measures north of 39° N latitude (Oregon and Washington) up to the state management agencies, as long as those management measures conform to the overall guidelines of the FMP. PFMC develops and adopts separate annual harvest guidelines for the two areas which take into account the biological and ecological impacts of harvesting forage fish. State fishery management measures must be developed to ensure that the harvest guidelines are not exceeded.

**Goals and Objectives**

The goals for this trial fishery were to provide fishing opportunity consistent with the Pacific Fishery Management Council's CPS FMP and Washington Department of Fish and Wildlife (WDFW) policy, collect information on sardines off Washington to improve the coastwide stock assessment, and document the extent of bycatch occurring in the fishery.

Objectives include:

- Collect length, weight, age, sex, and maturity data from the catch landed into Washington.
- Document bycatch, in terms of species, amount, and condition. Recommend management measures to reduce bycatch, as necessary.
- Document harvest methods, distribution of harvest, and catch per unit of effort.

## Fishery Regulations

The trial fishery began on May 15 and continued through October 31, 2001. The fishery was managed to a harvest guideline of 15,000 mt. Purse seine fishers were regulated by a set of permit conditions (see Appendix A).

## Fishery Description

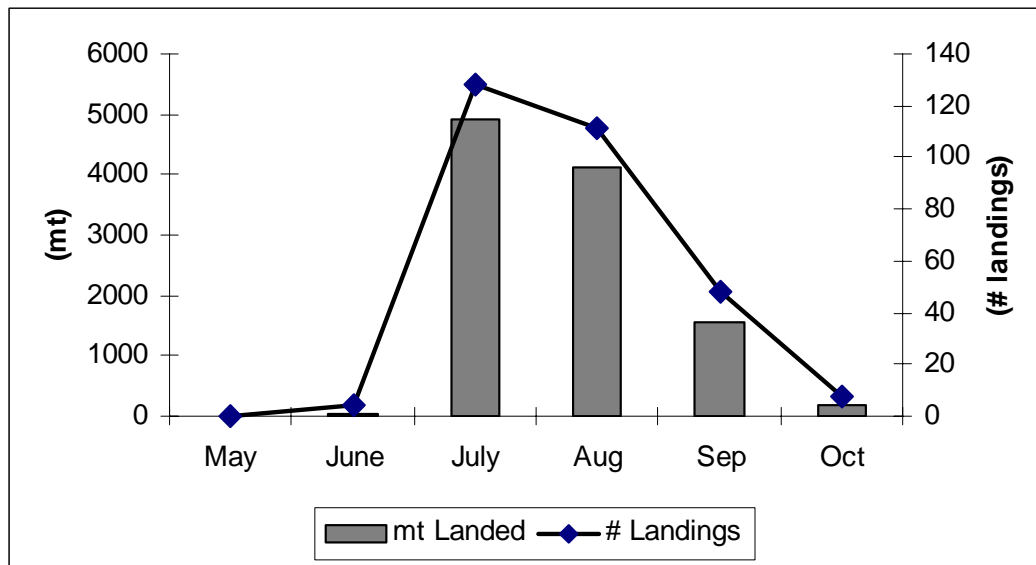
The fishery opened on May 15, 2001; however, the first landing into Washington occurred on June 19. The Department issued a total of 40 permits and 13 permit holders participated in the fishery.

A total of 10,837 mt of sardines were landed into Washington which left 4,163 mt remaining in the Washington harvest guideline. A total of 299 landings were made and 128 occurred within the month of July. The majority of the landings (79%) were made into Ilwaco, and 43% of the catch occurred in waters adjacent to Washington. A comparison between the 2000 and 2001 seasons is contained in Table 1.

Table 1. Catch comparisons between 2000 and 2001 trial sardine fisheries.

	2000	2001
Sardine Harvest	4,791.4 mt	10,837 mt
# of Landings	153	299
# Vessels Participating	3 (88%)	13

Figure 1. Number and amount of sardine landings by month.



## Observer Coverage/Logbooks

The purpose of requiring observer coverage is to document total catch and bycatch in the purse seine fishery. Bycatch has been recorded in terms of species, amount, and condition; observers noted whether the fish were released or landed, and whether the fish were alive, dead, or in poor condition. The Department was aiming for 30% coverage and averaged about 24% overall.

All of the vessels participating in the fishery chose to utilize Department observers, rather than contract with private observer companies. A “sardine hotline” was established for fishers to notify the Department of their planned fishing activities so observer coverage could be scheduled accordingly. Observers were in daily contact with the vessels to schedule onboard trips directly.

Fishers were cooperative in allowing observers on board and in scheduling departure times and locations. In general, logbooks were completed and submitted as requested.

## Bycatch

Based on observer data, the bycatch of non-targeted species was fairly low. Bycatch included chinook and coho salmon, spiny dogfish, blue shark, and other species. Salmon and shark were the primary bycatch species of concern. Salmon and shark species accounted for 1.8% of the overall bycatch, and there were 23 observed chinook mortalities.

The preliminary expanded total bycatch of these species (in numbers of individuals) for the fishery, based on observer data, is contained in Table 2.

Table 2. Preliminary expanded observed bycatch data (in numbers of individuals) for the 2001 trial fishery and comparison to the 2000 trial fishery.

	<b>Chinook (live)</b>	<b>Chinook (dead)</b>	<b>Coho (live)</b>	<b>Coho (dead)</b>	<b>Unident. salmon (live)</b>	<b>Shark (live)</b>	<b>Shark (dead)</b>
<b>2001</b>	<b>449</b>	<b>170</b>	<b>571</b>	<b>504</b>	<b>80</b>	<b>150</b>	<b>50</b>
<b>2000</b>	<b>38</b>	<b>3</b>	<b>276</b>	<b>116</b>	<b>7</b>	<b>169</b>	<b>31</b>

## Biological Samples

Department staff have collected and processed 58 biological samples of 25 sardines each (1,450 sardines total). Otoliths were extracted which measured about 1.5-3 mm in length; these otoliths were sent to the California Department of Fish and Game (CDFG) laboratory in LaJolla for age-reading.

Data sheets accompanied the otoliths which included the catch date, vessel name, standard lengths of the sardines, individual weights, sex, and maturity.

Sex and maturity were determined by using the CDFG Standard Maturity Guide for Wetfish which was based on Hjort, J. (1914) State of Sexual Organs. Sexual maturity codes 1-4 were used for the sardine samples:

<u>Code</u>	<u>Description</u>
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- (1) Virgin individuals.
- (2) Maturing virgins or recovering spent.
- (3) Sexual organs becoming swollen.
- (4) Ovaries and testis nearly filling 2/3 of ventral cavity.

Fifty percent of the samples analyzed were males, with most of them having a sexual maturity of 1 or 2. The highest subcategory overall were females with a sexual maturity of 2. There were two males and two females with a sexual maturity of 4.

Standard lengths of sardine samples were taken and ranged between 116 mm and 250 mm. In general, the average lengths of the samples decreased slightly over time. Average length overall was 211 mm. Individual weights of sardine samples (n=50) were also taken and the average weight was 152 g.

### **Summary of WDFW Activities**

Coastal Marine Fish staff developed the processes to implement the trial fishery and administered the observer program, notification process, port sampling, data recording, and biological analyses. Two additional full-time observers were hired and existing staff were utilized to augment our observer program and conduct dockside sampling. The observers worked onboard commercial fishing trips to document bycatch, determine catch composition, and collect market samples.

Samplers monitored unloading at processing plants for incidental catch data, weighed sub-samples of the sardine catch, and collected logbooks to determine harvest distribution, CPUE, and unobserved bycatch information. Additional staff time was spent extracting otoliths, measuring, weighing, and determining sex and maturity of samples, and summarizing observer and logbook information.

## Appendix A.

### **2001 TRIAL PURSE SEINE FISHERY FOR PACIFIC SARDINES DEPARTMENT STAFF RECOMMENDED PERMIT CONDITIONS**

*As adopted by the Fish and Wildlife Commission on February 9, 2001*

#### Permits

- Participants are required to have an Emerging Commercial Fisheries License (\$185 for residents; \$295 for non-residents) and a trial commercial fishery permit issued by the Director.
- Permits are non-transferable and must be carried on the fishing vessel during harvest and sale of catch.
- The permit is subject to revocation by the Director for failure to abide by the conditions of the permit, violation of other fishing regulations, or other valid reason.
- Permits will not be issued to (and may be revoked from) those who: 1) have an outstanding balance of fees owed to the Department for greater than 30 days; or 2) did not comply with the permit conditions of the previous years' fisheries. This decision will be at the discretion of the Director and may be waived if special circumstances warrant.

#### Season

- Permits would be valid during the time period of May 15, 2001 to October 31, 2001.

#### Harvest Guideline

- The fishery would be managed to a harvest guideline of 15,000 mt landed into Washington. If the fishery is projected to exceed the guideline, the Director may adjust the harvest guideline or close the fishery.

#### Observer Coverage

- WDFW retains the right to require certified observers to be on-board for the duration of any trip harvesting sardines and the Director has the discretion to recover costs for observer coverage.
- Options for observer coverage are:
  1. Use a Department-provided observer - The Department will have observers available; fishers electing this option would need to reimburse the Department at a rate of \$100 per landing (even if the trip was not observed) and payment must be received by the 10<sup>th</sup> day of each month for the previous month's landings; OR

2. Hire a NMFS-certified observer - Fishers may contract with an independent observer company to hire NMFS-certified observers; these observers would need to complete a training session with the Department prior to observing a trip. Fishers electing this option are required to have a minimum of 50% of their trips observed and their first fishing trip observed.
- Fishers must notify the Department which option they are electing for observer coverage at least 48 hours prior to their first fishing trip of the season; this option cannot be changed during the season without approval by the Director.

#### Notification

- Each fisher participating in the trial fishery must contact the Department's fishing hotline during official business hours (Monday-Friday; 8:00 a.m.-5:00 p.m.) at least 48 hours prior to departing for their first fishing trip, and at least 24 hours prior to departing for their subsequent fishing trips. On the message hotline, fishers are required to provide the following information:
  - Name
  - Phone number to contact fisher
  - Time and location of departure
  - Estimated time of return

NOTE: This notification requirement may be waived if other arrangements are made with individual fishers and/or processors.

#### Data Collection

- Participants must identify the vessel to be used in the fishery and agree to carry WDFW employees on board the fishing vessel whenever fishing under the permit. Agency employees will be granted full access to the catch and be allowed to gather biological data as needed. Up to 500 sardine per day may be retained by WDFW for biological information.
- Logbooks are required and will be provided by WDFW. Logbooks must be returned to WDFW by November 15, 2001.

#### Gear

- The trial fishery is open to purse seine gear only, and gear specifications will be detailed to ensure that the net meets a purse seine definition.
- Legal purse seine gear must be onboard the vessel making the landing.

#### Species



- Participants may retain and sell sardine and incidental catches of mackerel, squid, and anchovy. All other species must be released immediately and care taken to minimize damage to prohibited species.
- No salmon may be landed on the boat's deck but must be released or dip netted directly from the net before the completion of each set.
- Consistent with standards in the offshore whiting fishery, a mortality greater than 1 chinook per 20 mt of Pacific sardine would be sufficient to rescind a permit or close the trial commercial fishery.

#### Fishing Area

- The fishery would be restricted from the area inside 3 miles to minimize bycatch, conserve forage fish, and reduce conflicts with the existing baitfish fishery.

#### Landings

- All landings made under the authority of this permit into Washington must comply with existing state and federal regulations and requirements including observers.
- The transfer of catch from one vessel to another vessel is prohibited.