

Regional Information Report No. 1J08-21

**Fiscal Year 2008 Test Fisheries and Test Fish Funds in
the Southeast Alaska Region**

by

Scott Kelley

October 2008

Alaska Department of Fish and Game

Division of Commercial Fisheries



REGIONAL INFORMANTION REPORT NO. 1J08-21

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SOUTHEAST ALASKA REGION**

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	ii
ABSTRACT	1
EXECUTIVE SUMMARY	1
INTRODUCTION	1
SALMON TEST FISH PROJECTS	2
Project Name: Ketchikan Salmon Test Fish	2
McDonald Lake Sockeye Run Strength Analysis	2
Project Name: Petersburg-Wrangell Salmon Test Fish	3
Point Kingsmill and Point Gardner Pink Salmon Abundance Fisheries	3
Project Name: Juneau Salmon Test Fish	4
Hawk Inlet	4
Alsek River	5
HERRING TEST FISH PROJECTS	6
Project Name: Ketchikan Area Herring Test Fish	7
Sac Roe	7
Spawn-on-Kelp	8
Project Name: Petersburg Area Herring Test Fish	8
Sac Roe	8
Spawn-on-Kelp	9
Project Name: Sitka Area Herring Test Fish	9
Spawn-on-Kelp	10
Project Name: Juneau Area Herring Test Fish	10
Spawn-on-Kelp	11
GROUND FISH TEST FISH PROJECT.....	12
Project Name: Southeast Groundfish Test Fish	12
SHELLFISH TEST FISH PROJECTS	13

LIST OF TABLES

Table	Page
Table 1.–Test fishery revenues for Southeast Alaska, FY2004–2008 ^a	1
Table 2.–Total Ketchikan Management Area salmon test fishery summary.....	3
Table 3.–Total Petersburg-Wrangell Management Area salmon test fishery summary.....	4
Table 4.–Total Juneau/Yakutat Management Areas salmon test fishery summary.....	5
Table 5.–Southeast Alaska herring test fishery summary.....	6
Table 6.–Southeast Alaska groundfish test fishery summary.....	13
Table 7.–Southeast Alaska shellfish test fishery summary.....	14
Table 8.–Southeast Alaska test fishery summary, three most recent fiscal years.....	15

ABSTRACT

This document describes the use of Test Fish Funds in the Southeast Region for FY 2008. Each project that generates or expends Test Fish Funds is described, including the primary objectives and how the sale of fish and contracting of vessels is handled for that project.

Key words: Test fisheries, revenue, Southeast Alaska

EXECUTIVE SUMMARY

The Southeast Region Test Fish Fund program consists of 13 projects ranging from test fisheries to determine abundance of salmon and groundfish to herring and shellfish biological sampling and revenue generation to offset costs for new commercial fisheries. Total revenues from test fisheries in Southeast Alaska averaged \$614.1 thousand during Fiscal years 2004–2008 (Table 1). Test Fish revenues have added approximately \$508.1 thousand to the region's budget during the first half of FY 2009.

Table 1.—Test fishery revenues for Southeast Alaska, FY2004–2008^a.

Program	Revenue FY2008	Revenue FY2007	Revenue FY2006	Revenue FY2005	Revenue FY2004	FY2004– 2008 Average
Salmon	\$179.2	\$133.6	\$59.6	\$117.3	\$65.6	\$111.1
Herring	\$52.2	\$35.9	\$104.3	\$133.9	\$62.1	\$77.7
Groundfish	\$457.4	\$441.9	\$497.3	\$336.5	\$349.5	\$416.5
Shellfish	\$0.7	\$0.9	\$1.7	\$31.7	\$5.6	\$8.1
Total	\$689.5	\$615.6	\$663.0	\$619.4	\$482.8	\$614.1

^a Beginning in FY 2005 revenue from buoy or pot tags required by Board of Fisheries marking regulations is recorded as SDPR and not as test fish.

The total Test Fish receipt authority for Southeast Alaska in FY2008 was \$601,300. A total of \$689,514 in revenue was generated from all test fisheries in Southeast Alaska in FY2008. Of the total revenue generated from test fishery harvests, 66% was generated from groundfish (sablefish) test fisheries, 26% from salmon test fisheries, 7% from herring test fisheries, and less than 1% from shellfish test fisheries in FY2008.

INTRODUCTION

This document describes the use of Test Fish Funds in the Southeast Region for FY 2008. Each project that generates or expends Test Fish Funds is described, including the primary objectives and how the sale of fish and contracting of vessels is handled for that project.

Use of the Test Fish Fund is authorized by the Alaska State Legislature. The concept of the Test Fish Fund is that revenues are generated from the sale of fish to offset the expenses of certain projects designated as Test Fish Projects. As part of their data collection, these projects harvest fish that are sold to offset expenses and prevent waste. Also included are projects such as catch sampling, stock assessment surveys, and fishery monitoring. Some test fish projects have been added during the last ten years because of general fund cuts and development of new fisheries.

Because these projects are funded by the harvest of fishery resources that would otherwise be available to be harvested by the commercial fishery, it is incumbent upon the department to look for the most efficient means to harvest and sell fish as well as the most cost effective means to operate projects that rely on Test Fish Funds. It is also incumbent on the department not to harvest fishery resources when

stocks are depressed or when additional harvest is not prudent or necessary. For this reason some projects may not operate and generate revenues every year. It should also be noted that due to lower salmon prices the bids the Department has received for our salmon test fisheries have changed in recent years. The contractors have bid a higher proportion of the proceeds to go to them to better cover their costs. This, in conjunction with the lower prices, results in less net revenue to the Department for any given number of test fish harvested.

SALMON TEST FISH PROJECTS

Sitka (11117123) and Haines (11117125) projects were deleted in FY2003.

PROJECT NAME: KETCHIKAN SALMON TEST FISH

Budget Code: 11100711-1117121

Location: District 1

Timing: July

Contact: Scott Walker, Ketchikan Area Management Biologist

McDonald Lake Sockeye Run Strength Analysis

Primary Objective: To evaluate the relative abundance of sockeye salmon returning to McDonald Lake in the Yes Bay area of Behm Canal approximately 20 miles north of Ketchikan. The test fish program is used to determine if the run strength of sockeye salmon to McDonald Lake is sufficient to warrant a commercial purse seine opening to target that stock. The department typically charters one commercial purse seine boat to conduct the test fishery in mid-to-late July.

For the 2008 season the total return of sockeye salmon was projected to be below the lower end of the escapement goal. Therefore, no test fishery took place.

Catch and Sales: This test fish program has been ongoing since 1991 with the exception of 1996, and now 2005-2007. In the eleven years this test fishery took place an average of 1,170 sockeye, 3,800 pink, and 895 chum salmon have been harvested per year for an exvessel value of \$15,500 per year. The purse seine operator is paid approximately 15% to 60% of the value. The state nets approximately \$8,000 to \$10,200 per year from this test fish program.

McDonald Lake has, in some years, supported a directed commercial purse seine fishery. With the information obtained through the test fish program, common property commercial fisheries were conducted in the Yes Bay area in 1993 and from 1996 through 2001 with a total harvest of 532,000 sockeye, 7,000 coho, 1,455,000 pink, and 856,000 chum salmon and an approximate exvessel value of \$7,900,000. Approximately 35 purse seine vessels have participated on a yearly basis. No directed fishery took place in 2005–2008.

The funds generated from the sale of fish harvested in this test fishery are used by the department to conduct aerial, foot, and skiff surveys for salmon escapement counts at McDonald Lake and surrounding Behm Canal salmon systems in late July and August. These funds have also been used to pay for the cost of monitoring the commercial fisheries in this area. Without this test fishery there would be no other way for the department to accurately gauge the incoming run strength of McDonald Lake sockeye salmon and, in some years, the department would not have the information needed to open and monitor a commercial purse seine fishery.

Table 2.—Total Ketchikan Management Area salmon test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2008	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2007	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2006	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2005	\$30.0	\$1.5	\$0.0	\$1.5	\$1.5
2004	\$30.0	\$7.5	\$4.4	\$3.2	\$3.2
2003	\$30.0	\$5.9	\$3.8	\$2.1	\$2.1
2002	\$30.0	\$20.5	\$5.9	\$14.5	\$14.5
2001	\$30.0	\$35.8	\$10.8	\$25.0	\$25.0
2000	\$30.0	\$26.3	\$9.4	\$16.9	\$16.9
1999	\$15.0	\$9.4	\$1.3	\$8.1	\$8.0
1998	\$15.0	\$17.5	\$1.0	\$16.5	\$16.2
1997	\$46.8	\$0.0	\$0.0	\$0.0	\$0.0
97–08					
Average	\$25.7	\$12.4	\$3.7	\$8.8	\$8.7

PROJECT NAME: PETERSBURG-WRANGELL SALMON TEST FISH

Budget Code: 11100711-11117122

Location: Section 9-B

Timing: Late June and July

Contact: William Bergmann, Petersburg Area Management Biologist

Point Kingsmill and Point Gardner Pink Salmon Abundance Fisheries

Primary Objectives: The primary objectives of these test fisheries are to: 1) To assess the strength of the pink salmon return in Central Southeast Alaska, 2) determine the run timing through sex ratio sampling and 3) obtain revenue for managing the commercial purse seine fishery in the Petersburg-Wrangell Management Area. Test fishing, combined with other run indicators, is used to decide if purse seining is justified in District 10 and Section 9-B (Frederick Sound and lower Stephens Passage). The department charters two commercial purse seine boats to conduct the test fisheries at Kingsmill Pt. and Pt. Gardner over a four to five-week period from late June to late July.

Catch and Sales: This test fish program has been conducted since 1989. The average annual harvest past ten years of test fishing from 1998 through 2007, when the fishery has been consistently operated, is 1,354 sockeye, 480 coho, 47,500 pink and 15,800 chum salmon. The purse seine operator is paid a percentage of the catch depending upon their bid with a maximum dollar amount per day. Because of fluctuating values of salmon, the revenue the state obtains for management purposes varies significantly but averages approximately 60% of the total value.

Fund Use: The revenue generated from this test fishery pays for, in order of priority, the vessel charters to catch the fish, aerial escapement surveys in the Petersburg–Wrangell Management Area, vessel charters for conducting foot surveys of streams in the management area, personnel costs for seasonal employees conducting escapement surveys of salmon streams and tools, repairs, and project supplies associated with stream surveying and salmon management.

Table 3.—Total Petersburg-Wrangell Management Area salmon test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2008	\$78.3	\$96.2	\$37.3	\$59.0	\$77.9*
2007	\$61.8	\$78.6	\$29.3	\$49.3	\$37.8
2006	\$36.4	\$38.4	\$14.8	\$23.6	\$20.4
2005	\$60.0	\$58.2	\$28.7	\$29.5	\$26.1
2004	\$41.6	\$41.6	\$25.7	\$15.9	\$15.9
2003	\$102.8	\$39.6	\$20.4	\$19.3	\$19.3
2002	\$72.0	\$71.9	\$23.8	\$48.1	\$48.1
2001	\$120.0	\$120.3	\$38.8	\$81.5	\$68.8
2000	\$150.0	\$150.2	\$64.3	\$85.9	\$86.0
1999	\$43.3	\$99.4	\$55.5	\$43.9	\$60.9
1998	\$43.3	\$108.1	\$37.8	\$70.3	\$60.3
1997	\$43.3	\$36.1	\$20.5	\$15.6	\$18.0
97–08 Average	\$71.1	\$78.2	\$33.1	\$45.2	\$42.0

*Lapsed forward \$18.3 thousand to FY09.

PROJECT NAME: JUNEAU SALMON TEST FISH

Budget Code: 111000711-11117124

Location: District 12

Timing: Late June–Early July

Contact: Kevin Monagle, Juneau Area Management Biologist

Hawk Inlet

Primary Objectives: A purse seine test fishery is operated in late June and July to assess the run strength of northbound pink salmon returns in northern Chatham Strait. The Northern Southeast Seine Fishery Management Plan [5 ACC 33.366] specifies that fishing north of Point Marsden in Chatham Strait during July is only allowed when a harvestable abundance of pink salmon is observed. The plan also mandates that open areas and times must consider conservation concerns for all species in the area. Catches in the Hawk Inlet test fishery are one of the principle tools used to make this assessment. Since 1994 the test fishery has become standardized, with test sets conducted at specific locations for specific lengths of time. Information collected includes catch by species by location along this shoreline (Hawk Inlet Shoreline), pink salmon sex ratio (aids in determining run timing), and age, sex, and stock composition information for species of interest.

Catch and Sales: This test fishery has been occurring since 1978. The purse seine operator is paid a percentage of the catch depending upon their bid with a maximum dollar amount per day. The

average annual harvest past ten years of test fishing from 1998 through 2007, when the fishery has been consistently operated, is 980 sockeye, 70 coho, 11,800 pink and 5,700 chum salmon.

Fund Use: Funds generated from this test fishery are used to charter purse seine vessels, to conduct aerial and foot escapement surveys of salmon systems in northern Southeast Alaska during late July through September, and to cover costs of monitoring the commercial purse seine fishery in the area.

Alsek River

Primary Objectives: Following a prolonged period of stock rebuilding efforts and due to large forecast king salmon returns on the Taku and Stikine Rivers the Transboundary River Panel of the US-Canada Pacific Salmon Treaty negotiated an abundance based fishing regime and re-opened fisheries in 2005. To generate useful information toward developing an abundance based king salmon fishery on the Alsek River, a test fishery was initiated in FY2005. The test fishery has provided the opportunity to collect genetic samples of king salmon in late May and throughout June since its inception. Genetic identification of the proportion of the Klukshu River returns, where escapement is now enumerated by a weir in Canada, would help in determining the proportion of this stock harvested in potential future fisheries which target returns surplus to escapement goals.

Catch and Sales: A test fishing contract was issued providing for the harvest of up to 500 king salmon in 2007. 347 king salmon were harvested over a six week period from the second week of May through the end of June. Total revenues were \$20,600 of which \$8,258 was reimbursed to the contractor and \$12,400 was net revenue for the State.

Fund Use: Net revenues from this project were applied to aerial surveys of king salmon escapements to the Alsek River and fishery and program technician salaries during the spring of 2008.

Table 4.—Total Juneau/Yakutat Management Areas salmon test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2008	\$67.5	\$83.0	\$28.3	\$54.7	\$39.3*
2007	\$54.0	\$53.3	\$15.9	\$37.4	\$25.8
2006	\$41.3	\$21.3	\$18.8	\$2.5	\$3.5
2005	\$60.0	\$57.5	\$32.7	\$24.8	\$17.7
2004	\$25.0	\$16.4	\$14.7	\$1.8	\$1.8
2003	\$25.0	\$13.1	\$8.6	\$4.5	\$1.0
2002	\$25.0	\$11.8	\$6.3	\$5.5	\$5.1
2001	\$25.0	\$21.5	\$5.6	\$15.9	\$15.9
2000	\$25.0	\$26.4	\$9.5	\$16.9	\$16.9
1999	\$25.0	\$12.4	\$5.9	\$6.5	\$6.5
1998	\$25.0	\$10.9	\$5.7	\$5.2	\$5.2
1997	\$43.7	\$23.4	\$8.6	\$14.8	\$14.8
97–06 Average	\$34.0	\$24.4	\$12.0	\$12.3	\$8.8

*Lapsed forward \$15.4 thousand to FY09.

HERRING TEST FISH PROJECTS

Samples are collected by commercial herring vessels to obtain a more accurate forecast of the spawning biomass from which the commercial fishery quotas are determined. Size at age information from test fisheries may be applied directly to the age structured analysis (ASA) computer model that is used to set the quota for the following year's fisheries. As the Alaska Board of Fisheries (Board) adopted regulations for additional herring fisheries in Southeast Alaska the department has incurred additional costs associated with the Southeast herring management and assessment programs. Relatively recent fisheries include a sac roe fishery in Hobart Bay (1997) and spawn-on-kelp pound fisheries in Craig (1992), and Hoonah Sound (1990). Test fish revenues have covered these increased management and stock assessment costs over the past several years. The Board adopted three additional fisheries in January 2003. Those fisheries were a sac roe seine and gillnet fishery (alternating years) in West Behm Canal and spawn-on-kelp pound fisheries in Ernest Sound and Tenakee Inlet. Increased herring test fishery revenues will also offset increased costs associated with those new fisheries beginning in FY2004. Additionally, general fund budget cuts have reduced the scale of stock assessment and management support programs in all the management areas of Southeast Alaska.

Southeast Alaska herring test fishery receipts and expenditures were coded to one code, 11100711-11117177, prior to FY2000. This code received revenue and supported herring management and stock assessment costs for four area offices (Ketchikan, Petersburg, Sitka, and Juneau). Beginning in FY2000 this one code was split into four separate codes to facilitate expenditure tracking and revenue deposits. Location specific authorizations, revenues, and expenditures are summarized below for FY2008. Pooled historical Region 1 information is also summarized:

Table 5.—Southeast Alaska herring test fishery summary.

Fiscal Year	Location	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures^a
2008	Ketchikan	\$1.1	\$1.1	0	\$1.1	\$1.1
	Petersburg	\$0.0	\$0.0	0	\$0.0	\$0.0
	Sitka	\$25.0	\$51.2	0	\$51.2	\$22.8
	Juneau	\$0.0	\$0.0	0	\$0.0	\$0.0
2008	Region-Wide	\$26.1	\$52.3	0	\$52.3	\$23.9
2007	Region-Wide	\$35.0	\$35.9	0	\$35.9	\$31.5
2006	Region-Wide	\$92.8	\$104.3	\$0	\$104.3	\$84.7
2005	Region-Wide	\$145.0	\$134.0	\$0	\$134.0	\$109.5
2004	Region-Wide	\$123.0	\$62.1	\$0	\$62.1	\$97.4
2003	Region-wide	\$85.0	\$56.9	\$0	\$56.9	\$65.9
2002	Region-wide	\$85.0	\$112.1	\$0	\$112.1	\$101.7
2001	Region-wide	\$95.0	\$86.0	\$0	\$86.0	\$92.7
2000	Region-wide	\$96.8	\$92.0	\$0	\$92.0	\$93.6
1999	Region-wide	\$96.8	\$62.7	\$8.5	\$54.2	\$54.2
1998	Region-wide	\$96.8	\$72.8	\$0.4	\$72.4	\$72.4
FY98–08		\$88.8	\$79.2	\$0.8	\$78.4	\$75.2
Average						

^a A total of \$28.3 thousand will be lapsed forward from FY08 to FY09.

Herring test bids from 1996 to 1999 were based on percent value of the catch awarded to the contractor. Since 2000, herring sac roe test bids have been based on a fixed amount of revenue

the department felt was required to manage the fisheries and conduct stock assessment. Bids were expressed in tons of herring and the minimum bidder won the contract. Recent herring spawn-on-kelp test fisheries have been bid based on percent value of catch awarded to the contractor.

Region I Commercial Fisheries Division was required to cut General Fund budgets by \$125,000 for FY2000. Those cuts were distributed across several codes, several of which were herring management and stock assessment codes. The total GF cut to Southeast Alaska herring projects was \$40,000, \$10,500 of which was to Regional stock assessment programs and the balance spread across area offices. Because of these budget reductions, Commercial Fisheries Division increased test fish revenues in subsequent years.

The department discussed the issue of increased costs to manage new commercial herring fisheries at the January 2003 Board meeting. The department indicated there were no unallocated General Funds available to manage any new fisheries and that those costs would be borne by increased test fish revenue. Public testimony during Board committee work indicated consensus industry support for the department to generate additional revenue through herring test fisheries in the absence of new funding from other sources.

Common property commercial herring fishery ex-vessel values in 2007 were approximately \$5.7 million for sac roe purse seine, \$4.5 million for northern spawn-on-kelp, \$1.1 million for southern spawn-on-kelp, and \$570 thousand for sac roe set gillnet.

PROJECT NAME: KETCHIKAN AREA HERRING TEST FISH

Budget Code: 11100711-11117174

Location: Ketchikan Management Area, Southeast Alaska (District 1)

Timing: January–April

Contact: Scott Walker, Ketchikan Area Management Biologist

Revenue for this project in FY08 was \$1.1 thousand which was from FY07 lapse forward.

Sac Roe

Primary Objectives: The primary objectives of the Ketchikan herring test fish program are: 1) to generate revenues needed to assess Ketchikan area herring stocks in West Behm Canal, Kah Shakes/Cat Island, Craig/Klawock, and other local stocks, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the West Behm Canal stock.

Catch and Sales: Beginning in 2000, Ketchikan's General Fund herring management budgets were cut by \$9,000. To compensate for that reduction the West Behm Canal herring test fishery went from a yearly average value (1994–1999) of \$20,000 per year and an average harvest of 20 tons to \$30,000 and an average of 40 tons of herring in 2000 and 2001. The total harvest in the test fishery in 2002 was 106.95 tons. During these test fisheries the price of herring sac-roe has fluctuated from \$2,660/ton in 1996 to as little as \$320/ton in 1998. In 2001, the price received by the department's test fishery was \$700/ton and in 2002 was \$300/ton.

The biomass for the 2008 returns of herring to West Behm Canal was forecast to be under the minimum threshold level needed to conduct a commercial fishery, therefore, no herring test fishery took place in the area that year.

Fund Use: Revenues from test fisheries have historically been used to support management of the sac roe gillnet fisheries at Cat Island-Kah Shakes and to assess Ketchikan area herring stocks. Typical expenses funded by test fishing include aerial surveys, age, sex, size sampling, and vessel charters. Despite the fact that there have been no sac roe herring fisheries in the Ketchikan area in recent years the department must continue monitoring the spawning aggregations. Because of this certain costs are incurred whether there are commercial fisheries or not.

Spawn-on-Kelp

Primary Objectives: The primary objectives of the Section 3-B spawn-on-kelp test fishery are:

1) to generate revenues needed to manage and develop the Section 3-B spawn-on-kelp fishery and 2) to generate additional information about herring use, production data, or gear characteristics to continue improvement the fishery.

There is considerable uncertainty regarding production and sales of herring spawn-on-kelp fisheries and prices are generally not known until post-season sales have been concluded. The department solicits bids from prospective test fishermen through a Request for Proposals process where bids are based on a percentage of sales that would be paid to the department, with remaining sales available to compensate time spent and costs incurred by the fishermen.

Catch and Sales: The winning bid for the 2005 season was 64.9% of the gross earnings going to the winning bidder, with the State receiving 35.1% of the total. This was based on a maximum number of 2,000 blades of *Macrocystis* kelp being used. The State received \$4,628.08 for the 2005 test fishery in FY06. There was no Craig SOK test fishery in spring 2006–2007.

Fund Use: Revenues from this test fishery are mainly be used to support management of the Section 3-B Herring Spawn-On-Kelp fishery (229 limited entry permits) and to monitor spawning in the other major stocks in the management area. Expenses funded by test fishing include aerial surveys, vessel charters, fishery management expenses such as gas, food, and outboard repairs, and hiring technicians to collect and analyze biological samples.

PROJECT NAME: PETERSBURG AREA HERRING TEST FISH

Budget Code: 11100711-11117175

Location: Petersburg Management Area, Southeast Alaska (Districts 7 and 10)

Timing: January – April

Contact: William Bergmann, Petersburg Area Management Biologist

Revenue for this project in FY08 was zero as there were no herring test fisheries in the Petersburg-Wrangell area.

Sac Roe

Primary Objectives: The primary objectives of the Petersburg herring test fish program are: 1) to generate revenues needed to assess Petersburg-Wrangell area herring stocks in Hobart Bay/Port Houghton, Ernest Sound, and other local stocks, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the Hobart/Houghton stock.

The department charters one herring gillnetter to catch the fish and this usually requires less than 12 hours. Samples are collected by commercial herring gillnet vessels and by ADF&G personnel to gather data for a more accurate forecast of the spring spawning biomass from which the

commercial fishery quotas are determined. Size at age information from test fisheries and pre-fishery throw net samples are used in the age structured analysis (ASA) computer model that is used to set the quota for the following year's fisheries.

Catch and Sales: This test fish program has been conducted intermittently since 1993. In the seven years of test fishing an average of 32 tons of herring has been harvested per year for an ex-vessel value of \$28,700/year. Beginning in 2000, Petersburg's General Fund herring management budgets were cut by \$8,000. There were no sac roe herring test fisheries conducted in the Petersburg-Wrangell management area in 2002–2008. An attempt was made to conduct test fishing in Hobart Bay in FY 2005 but it was unsuccessful. Test fishing income was derived from the sac roe test fishery in District 11.

Fund Use: Revenues from test fisheries have mainly been used to support management of the Port Houghton-Hobart Bay sac roe fishery (117 limited entry permits) and to monitor spawning in the other major stocks in the management area. Expenses funded by test fishing include aerial surveys, vessel charters, fishery management expenses such as gas, food, and outboard repairs, and hiring technicians to collect and analyze biological samples.

Spawn-on-Kelp

Primary Objectives: The primary objectives of the Ernest Sound spawn-on-kelp test fishery are: 1) to generate revenues needed to manage and develop the Ernest Sound spawn-on-kelp fishery and 2) to generate additional information about herring use, production data, or gear characteristics to continue improvement the fishery. During the first test fishery in 2004, the department contracted for the operation of four herring pounds. Due to problems the contractor had, no spawn on kelp was harvested.

Catch and Sales: No catches were made and no sales occurred in FY06–FY08.

Fund Use: Department expenses associated with the Ernest Sound herring spawn-on-kelp fishery, which was created in 2004, are not supported by general funds so test fishing is expected to pay for the expense of managing this fishery.

PROJECT NAME: SITKA AREA HERRING TEST FISH

Budget Code: 11100711-11117176

Location: Sitka Management Area, Southeast Alaska (District 13)

Timing: January – April

Contact: Dave Gordon, Sitka Area Management Biologist

Sac Roe

Primary Objectives: The primary objectives of the Sitka sac roe herring test fish program are: 1) to generate revenues needed to assess and manage the herring stock in Sitka Sound and other areas, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the Sitka Sound stock which provide a basis for understanding of population trends, setting harvest quotas and stock forecasting.

Catch and Sales: Herring test fishing to support Sitka herring management began in 1992 and has continued annually since that time. From the outset of the program until 2001, the test fishery took place in the winter and the fish were sold as frozen bait. In response to General Fund budget cuts of \$8,500 in 2000, and an additional \$8,000 in 2004, the department has increasingly relied

on test fish program revenues. Beginning in 2001 test fishery herring was sold as sac roe to maximize their value and reduce the amount of fish harvested. In 2004, a small winter bait test fishery was reinstated as a means to reduce the cost of obtaining a winter herring sample necessary for stock assessment. The 2008 winter test fishery harvested 51 tons generating \$8,000. A sac roe test fishery was not conducted in 2006–2007 but was conducted in March 2008 with a harvest of 26 tons of herring with associated revenue of \$15,000.

Fund Use: Revenues from test fisheries have mainly been used to support management of the Sitka Sound sac roe fishery and to monitor spawning in the other major stocks in the management area. Expenses funded by test fishing include aerial surveys, vessel charters, fishery management expenses such as gas, food, and outboard repairs, and hiring technicians to collect and analyze biological samples.

Spawn-on-Kelp

Primary Objectives: The primary objectives of the Hoonah Sound spawn-on-kelp test fishery are: 1) to generate revenues needed to manage and develop the Hoonah Sound spawn-on-kelp fishery and 2) to generate additional information about herring use, production data, or gear characteristics to continue improvement the fishery. The initial spawn-on-kelp test fishery occurred in 2003 and was continued in 2004 and 2005. No spawn-on-kelp test fisheries were conducted in 2006 and 2007. As new spawn-on-kelp fisheries have begun elsewhere in the region, the department has worked to devise an appropriate test fish program that can generate revenues needed and continue fishery development

Catch and Sales: In Hoonah Sound during the spring of 2004 a total of seven test fishery herring pounds produced 28,732 pounds of spawn-on-kelp product and generated revenues of \$33,097 received in FY2005. In the spring of 2005, three test fish pounds were contracted producing 15,695 pounds of product and generating \$14,162 for the department and received in FY2006.

Fund Use: Department expenses associated with the Hoonah Sound herring spawn-on-kelp fishery, which began in 1990, have been supported by general funds, in part made available by the advent of herring test fishing used to supplement costs of the sac roe herring fishery in Sitka Sound. In 2003 the Board of Fisheries created new herring spawn-on-kelp opportunities in Tenakee Inlet and Earnest Sound. The department has found it necessary to provide for these new fisheries by further re-allocation of available funds and by new test fisheries. A spawn-on-kelp test fishery was first initiated in Hoonah Sound since this has now become an established fishery with predictable spawning and fishing areas and good prospects for a success. Expenses funded by test fishing include aerial surveys and fishery management expenses associated with providing for a fishery in a remote area.

PROJECT NAME: JUNEAU AREA HERRING TEST FISH

Budget Code: 11100711-11117177

Location: Southeast Alaska (Districts 11 and 12)

Timing: April–May

Contact: Kevin Monagle, Juneau Area Management Biologist

Sac Roe

Primary Objectives: The primary objectives of the Juneau herring test fish program are: 1) to generate revenues needed to assess and manage Juneau area herring stocks and fisheries in

Seymour Canal, Tenakee, and other local stocks, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the Seymour Canal stock.

Samples are collected by commercial gillnet vessels in the Juneau management area. Size at age, age composition, and fecundity information from test fisheries may be applied directly to the age structured analysis (ASA) computer model that is used to set the quota for the following year's fisheries.

Catch and Sales: Beginning in 2000, Juneau's General Fund herring management budgets were cut by \$4,000. To offset that reduction and to maintain existing test fishery revenue, test fishery harvests were increased. Unfortunately the herring test fishery is not successful every year. In the spring of 2003 for example, no test fish revenue was generated due to a lack of opportunity to the successful contractor. The herring test fishery is not opened until after the common property commercial fishery is over and in 2003 the herring spawning was complete immediately after the commercial fishery so the fish were not available for the test fish contractor. This meant that over \$15,000 for Juneau area herring management and assessment had to be made up from other sources. The department did not conduct herring test fisheries in Seymour Canal in 2006–2008.

Fund Use: Revenues from the test fisheries are to be used mainly to support management of the Seymour Canal gillnet sac roe fishery and assess other herring stocks in the Juneau management area. Typical expenses funded by test fishing include aerial surveys, vessel charters, and hiring technicians to collect and analyze biological samples.

Spawn-on-Kelp

Primary Objectives: The primary objectives of the Tenakee Inlet spawn-on-kelp test fishery are: 1) to generate revenues needed to manage and develop the Tenakee Inlet spawn-on-kelp fishery and 2) to generate additional information about herring use, production data, or gear characteristics to continue improvement of the fishery. There have been only three years of SOK fisheries in Tenakee Inlet and two test fisheries. Similar to Hoonah Sound, there has been considerable interest in evaluating optimum gear size and in optimizing kelp allocations as ways to maximize production and value of this fishery. The ex-vessel value of the Tenakee Inlet common property fishery was approximately \$890,000 in spring 2004, and \$513,000 in 2005. Although there was more spawn-on-kelp production in 2005 than 2004, the market was considerably down. No common property or test fisheries have occurred in 2006–2008 as the herring biomass was determined to be under the minimum threshold needed to conduct a fishery.

Catch and Sales: The first test fishery in the spring of 2004 generated revenues of approximately \$9,900 that were received in FY 05 from the sale of 9,100 lbs of spawn-on-kelp product. The spring of 2005 Tenakee SOK test fishery generated revenues of approximately \$15,800 that were received in FY06 from the sale of 15,353 lbs of spawn-on-kelp product. The department contracted for the operation of three herring pounds on the basis of a percentage of the value of gross earnings. Since these revenues were received following the herring season, they were used to seed management costs and reduce test fishing necessary to support management costs in the spring of 2006.

Fund Use: In 2003 the Board of Fisheries created new herring spawn-on-kelp opportunities in Tenakee Inlet and Earnest Sound. The department has found it necessary to provide for these new fisheries by further re-allocation of available funds and by new test fisheries. Therefore a spawn-on-kelp test fishery was initiated in Tenakee Inlet in 2004. Expenses funded by test fishing include aerial surveys and fishery management expenses associated with providing for on the grounds fishery management in a remote area.

GROUND FISH TEST FISH PROJECT

PROJECT NAME: SOUTHEAST GROUND FISH TEST FISH

Budget Codes: 11100711-11117187 and 11100711-11117188

Location: Southeast Alaska (Districts 1–16)

Timing: January–December

Contact: Cleo Brylinsky, Groundfish Project Leader

Primary Objectives: To estimate abundance of sablefish stocks in Southeast Alaska and to set appropriate harvest levels. Annual stock assessment surveys have been conducted since 1988 in southern (Clarence Strait) and northern Southeast (Chatham Strait) to collect abundance and biological information on stock structure and condition. Using longline gear, annual trends in catch per unit effort, size, and age structure of these sablefish populations are used to help determine the sablefish quota for the following year. The department contracts five commercial fishing vessels to conduct the survey each year, three in Chatham Strait and two in Clarence Strait. In addition to the longline surveys we implemented a pot-vessel survey in Chatham Strait in FY01 to mark and release sablefish for recapture in the longline fishery and a pilot project for PIT tagging of sablefish. We learned from our pilot PIT tagging project that PIT tags would not work for our circumstances. The mark and release survey has continued with external tagging only and was supported by the testfish account for part of the vessel contract and for staff travel and associated sea duty. Testfish will continue to support the Chatham mark and release project by supplying monies for part of the vessel contract only.

The sablefish fisheries are among the most valuable state-managed groundfish fisheries in Southeast, with an estimated ex-vessel value in excess of \$5.2 million in 2007. The fisheries are limited entry: current participation is approximately 96 permit holders in NSEI and 32 permit holders in SSEI. At present there is no state general fund support for these fisheries.

Catch and Sales: The Southeast groundfish project relies heavily on the revenues generated by the test fish project to fund the annual stock assessment surveys. The majority of the revenue is used to pay for charter vessels and associated staff sea duty and gear costs: in FY2008, the cost of chartering three vessels for the NSEI area survey was approximately \$84,000, the cost of chartering two vessels for the SSEI survey was approximately \$53,000, and for partially funding the NSEI pot-vessel tagging survey was \$95,000 (the total cost for the tagging survey charter was approximately \$115.0 thousand with the balance covered by a Fish and Game Fund project). Other expenses in FY2008 included survey gear, sampling supplies, tagging equipment, travel and personnel costs for the surveys, project support expenses, and continuing the port-sampling program to sample commercial catches for age and length data.

Table 6.—Southeast Alaska groundfish test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2008	\$387.4	\$457.4	\$231.0	\$226.4	\$150.2*
2007	\$399.8	\$393.9	\$219.4	\$174.5	\$174.5
2006	\$419.6	\$457.1	\$236.7	\$220.4	\$195.6
2005	\$336.5	\$336.5	\$137.2	\$199.3	\$116.3
2004	\$349.5	\$349.5	\$103.0	\$246.5	\$193.9
2003	\$278.3	\$314.8	\$172.2	\$142.6	\$116.3
2002	\$290.0	\$290.0	\$159.0	\$131.0	\$130.5
2001	\$260.0	\$259.6	\$176.7	\$82.9	\$82.9
2000	\$194.3	\$193.2	\$135.8	\$57.4	\$57.4
1999	\$196.2	\$174.4	\$111.2	\$63.2	\$63.2
1998	\$175.1	\$169.7	\$111.6	\$58.1	\$58.1
1997	\$61.8	\$130.3	\$105.9	\$24.4	\$24.4
97–08					
Average	\$279.0	\$293.9	\$158.3	\$135.6	\$113.6

* A total of \$76.2 thousand will be lapsed forward from FY08 to FY09.

SHELLFISH TEST FISH PROJECTS

Project Name: Southeast Shellfish Test Fish

Budget Code: 11100711-11117193

Location: Southeast Alaska (Districts 1–16)

Timing: September

Contact: Gretchen Bishop, Shellfish Research Project Leader

Primary Objectives: Primary objectives are to describe stock strength of spot and coonstripe shrimp in major commercial fishing areas of Southeast Alaska. Pot shrimp stock assessment surveys have been conducted annually in September since 1997. Over this time period, the areas surveyed have expanded from District 3 only in 1997 to Districts 3, 7, 12, and 13 in 2007. Currently 5-day fishery-independent stock assessment surveys are conducted using shrimp pots in each of Districts 3, 7, 12, and 13. The catch rate and size composition of shrimp captured is determined. Trends in this information are used along with fishery catch rate and sampling information to adjust preseason guideline harvest levels. In FY08, the survey was conducted aboard a commercial vessel in Districts 12 and 13 and aboard a department vessel in Districts 3 and 7.

The Pot shrimp fishery is limited entry, with 283 issued permits and an ex-vessel value of \$1.8 million in 2007.

Catch and Sales: In FY08, a small amount of product was retained for sale on both state and commercial vessels. The cost recovery conducted defrays survey costs and prevents waste of shrimp due to handling mortality after sampling. Survey expenses include charter vessels, equipment and supplies, sea duty, and staff travel to and from survey vessels.

The department collects additional revenue from the sale of buoy stickers and buoy tags that are required by regulations adopted by the Board of Fisheries. Fishermen are charged a fixed amount

per tag, which defrays the cost of the stickers or tags and the cost of administering sticker and tag sales.

Table 7.—Southeast Alaska shellfish test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2008	\$2.1	\$0.7	\$0.0	\$0.7	\$0.7
2007	\$2.1	\$1.0	\$0.0	\$1.0	\$1.6
2006	\$9.9	\$1.7	\$0.0	\$1.7	\$1.6
2005	\$5.2	\$3.1	\$0.0	\$3.1	\$5.1
2004	\$7.0	\$5.6	\$0.0	\$5.6	\$3.6
2003	\$36.0	\$8.0	\$0.0	\$8.0	\$7.2
2002	\$40.0	\$11.0	\$0.0	\$11.0	\$9.7
2001	\$40.0	\$10.2	\$0.0	\$10.2	\$10.2
2000	\$38.5	\$11.5	\$4.9	\$6.6	\$6.6
1999	\$100.6	\$11.6	\$11.6	\$0.0	\$0.0
1998	\$100.6	\$20.0	\$20.0	\$0.0	\$0.0
98–08 Average	\$38.0	\$8.4	\$6.3	\$4.7	\$4.6

The department collects additional revenue from the sale of buoy stickers and buoy tags that are required by regulations adopted by the Board of Fisheries. Fishermen are charged a fixed amount per tag, which defrays the cost of the stickers or tags and the cost of administering sticker and tag sales.

Table 8.—Southeast Alaska test fishery summary, three most recent fiscal years.

Project	FY2008 Revenue	FY2008 Expenditures	FY2007 Revenue	FY2007 Expenditures	FY2006 Revenue	FY2006 Expenditures
Salmon	\$179.2	\$145.5	\$136.8	\$119.4	\$59.6	\$57.5
Herring	\$52.2	\$23.9	\$35.9	\$31.5	\$104.3	\$84.7
Groundfish	\$457.4	\$381.2	\$393.9	\$330.0	\$497.3	\$431.0
Shellfish	\$0.7	\$0.7	\$1.0	\$1.6	\$1.7	\$1.5
Regional Totals	\$689.5	\$551.1	\$615.6	\$531.2	\$662.9	\$574.7

* Total Region I Commercial Fisheries test fish receipt authority in FY00 was \$1,138.7. In FY01, \$500.0 of Region I Test Fish authority was transferred to Westward Region, Region I total test fish receipt authority has been \$650.1 from FY01 through FY2004. For FY2005, Region I total test fish receipt authority was reduced to \$600.0 and crab, shrimp and herring buoy stickers and pot tag revenue was removed from test fish authority and placed in SDPR. Region I total test fish receipt authority in FY2006, FY2007, and FY2008 was \$601.3.