

FY 03 TEST FISHERIES AND TEST FISH FUNDS IN THE SOUTHEAST ALASKA REGION



TEST FISH FUND PROJECT RED BOOK - 2003

Regional Information Report¹ 1J03-32

Alaska Department of Fish and Game
Division of Commercial Fisheries
P.O. Box 240020
Douglas, AK 99824

November 2003

¹The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

The Alaska Department of Fish and Game administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility, or if you desire further information please write to ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; U.S. Fish and Wildlife Service, 4040 N. Fairfield Drive, Suite 300, Arlington, VA 22203; or O.E.O., U.S. Department of the Interior, Washington DC 20240.

For information on alternative formats for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-4120, (TDD) 907-465-3646, or (FAX) 907-465-2440.

TABLE OF CONTENTS

LIST OF TABLES iv

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

 Purse Seine 3

 Point Kingsmill and Point Gardner Pink Salmon Abundance Fisheries..... 3

 Terminal Pink Salmon Fisheries 4

 Drift Gillnet 4

 Tahltan/Tuya Lake Sockeye Salmon Mesh Selectivity, Timing, Migration Route Study4

 Anita Bay Terminal Area Study 5

 PROJECT NAME: JUNEAU SALMON TEST FISH 6

 Hawk Inlet 6

HERRING TEST FISH PROJECTS 7

 PROJECT NAME: KETCHIKAN AREA HERRING TEST FISH..... 9

 PROJECT NAME: PETERSBURG AREA HERRING TEST FISH..... 9

 PROJECT NAME: SITKA AREA HERRING TEST FISH..... 10

 Sac Roe..... 10

 Spawn-on-Kelp..... 11

 PROJECT NAME: JUNEAU AREA HERRING TEST FISH 11

GROUND FISH TEST FISH PROJECT 12

 PROJECT NAME: SOUTHEAST GROUND FISH TEST FISH 12

SHELLFISH TEST FISH PROJECTS 13

 PROJECT NAME: SOUTHEAST SHELLFISH TEST FISH 13

 Salmon..... 15

 Herring..... 15

 Groundfish..... 15

 Shellfish..... 16

 Southeast Region Test Fish Total..... 16

LIST OF TABLES

<u>TABLES</u>	<u>PAGE</u>
Table 1. Test fishery revenues for Southeast Alaska, FY2001-2003 ^a	1
Table 2. Total Ketchikan Management Area salmon test fishery summary.....	3
Table 5. Southeast Alaska herring test fishery summary.....	8
Table 6. Southeast Alaska groundfish test fishery summary.....	13
Table 8. Southeast Alaska test fishery summary.....	15

FY 03 TEST FISHERIES AND TEST FISH FUNDS IN THE SOUTHEAST ALASKA REGION

EXECUTIVE SUMMARY

The Southeast Region Test Fish Fund program consists of 13 active 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. Three projects, Sitka, Haines and West Behm Canal salmon test fish, were deleted in FY2003 because they have shown no expenditures or revenue for the last six years or were not going to be implemented in the foreseeable future. Total revenues from test fisheries in Southeast Alaska have averaged \$496.3 (Table 1). Test Fish revenues have already added approximately \$300.8 to the region's budget during the first half of FY 2004.

Table 1. Test fishery revenues for Southeast Alaska, FY2001-2003^a.

Program	Revenue FY2003	Revenue FY2002	Revenue FY2001	FY2001-2003 Average
Salmon	\$58.6	\$104.2	\$177.6	\$113.5
Herring	\$56.9	\$112.1	\$86.0	\$85.0
Groundfish	\$314.8	\$290.0	\$259.6	\$288.1
Shellfish	\$8.0	\$11.0	\$10.2	\$9.7
Total	\$438.3	\$517.3	\$533.4	\$496.3

^a Does not include revenue from buoy or pot tags required by Board of Fisheries marking regulations.

The total Test Fish receipt authority for Southeast Alaska in FY2003 was \$650.1. A total of \$512.3 in revenue was generated from all test fisheries in Southeast Alaska in FY2003. Of the total, 14% of that revenue was generated from sales of crab and herring buoy stickers and shrimp pot tags. A total of \$438.3 was generated from actual harvest of groundfish, herring, salmon, and shellfish stocks in the region. Of the total revenue generated from test fishery harvests, 72% was generated from groundfish test fisheries, 13% from herring test fisheries, and 13% from salmon test fisheries. Less than 2% of the total Southeast Alaska test fish revenue was generated from shellfish test fisheries in FY2003.

INTRODUCTION

This document describes the use of Test Fish Funds in the Southeast Region for FY 2003. 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 every year, or may not generate revenue 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: Phil Doherty, 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.

Catch and Sales: This test fish program has been ongoing since 1991 with the exception of 1996. In the eleven years of test fishing 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 30% of the value. The state nets approximately \$8,000 to \$10,200 per year from this test fish program.

McDonald Lake is an enhanced sockeye salmon lake (lake fertilization) and can, in some years, support 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.

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.

In 2002 sockeye returns were well below average to McDonald Lake. In the test fishery 451 sockeye, 2,640 pink salmon, and 1,231 chum salmon were harvested for an exvessel value of \$5,891. The department’s share of the test fish revenue was \$2,062.

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

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
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
Average	\$27.8	\$16.5	\$4.6	\$11.9	\$11.9

Project Name: Petersburg-Wrangell Salmon Test Fish

Budget Code: 11100711-11117122

Location: Section 9-B for purse seine, ikura for purse seine, Sumner Straits and Frederick Sound for drift gillnet, Anita Bay for Hatchery Terminal Harvests

Timing: Late June and July

Contact: William Bergmann, Petersburg Area Management Biologist

Purse Seine

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, 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 and total revenue for the past seven fiscal years of test fishing from 1996 through 2002, when the fishery has been consistently operated, is 1,500 sockeye, 500 coho, 48,000 pink, and 21,000 chum salmon for an exvessel value of \$61,500 per fiscal year. 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 importance, 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.

Terminal Pink Salmon Fisheries

Primary Objectives: 1) To gather income for financing increased surveying and management costs associated with developing a new fishery on pink salmon surplus to escapement. These fisheries typically occurred either inside closed waters where numbers of salmon were much larger than needed to fully seed the affected streams or much later than usual in normal fishing areas. The test fishery was conducted in a few isolated areas immediately adjacent to the stream mouths.

Catch & Sales: The areas available for terminal pink salmon fisheries in 2002 were limited. In addition there was very little or no interest in terminal pink salmon fisheries. Therefore, this test fish program was not conducted in 2002.

Fund Use: The revenue generated from this test fishery paid for surveys in areas near stream mouths where large buildups of fish were occurring. It also paid for aerial flights to install and remove regulatory markers around these fishing areas that were often inside of normal closed waters. Note: none of the funds gathered were used to pay the fishermen. The fishermen were paid directly from the processor.

Drift Gillnet

Tahltan/Tuya Lake Sockeye Salmon Mesh Selectivity, Timing, Migration Route Study

Primary Objective: The objective is to determine if the enhanced Tuya Lake sockeye salmon can be harvested at a greater rate than Tahltan Lake sockeye salmon by using either time, area, or mesh selectivity or a combination of these tools. A significant proportion of Tuya fish are age 2.2, an age group that only occurs in very small numbers in the Tahltan stock. Since 2-ocean fish are generally smaller than the more prevalent 3-ocean sockeye salmon, a smaller mesh size may increase the harvest on the enhanced stock. If this works, mid-week openings could occur to target on enhanced Tuya sockeye salmon without excessively harvesting the Tahltan stock. Additionally there are two main entrances to the Stikine River where these sockeye salmon are returning. If one of these areas has an increased proportion of enhanced fish it may be advantageous to fish just in that area during years of poor wild stock returns. Initial indications from this test fishery are that a higher proportion of enhanced Tuya fish migrate through the Sumner Strait corridor than through Frederick Sound.

Catch and Sales: This test fish program was conducted from 1998 through 2000. Six gillnetters used different mesh sizes in two different areas and harvested an annual average of 4,332 sockeye, 166 coho, 181 pink, and 776 chum salmon. The drift gillnet operator is paid a percentage of the catch depending upon their bid. The average annual revenue was \$42,581.00 and the payment to the contractors totaled \$29,477.00 or 69% of the revenue. Because of expected poor returns and 6 years of not meeting escapement of sockeye to Tahltan Lake, this fishery was not operated in the 2001, 2002 and 2003 seasons. The test fishery is planned to resume in the 2004 season.

Fund Use: The revenue generated from this test fishery pays for, in order of importance, the vessel charters to catch the fish, hiring personnel to sample and analyze the catch to determine the percentage of enhanced fish, aerial escapement surveys in the Petersburg–Wrangell management area, personnel costs for seasonal employees monitoring the gillnet fishery and conducting escapement surveys of salmon streams, and tools, repairs, and project supplies associated with stream surveying and salmon management.

If a way to harvest a significantly higher percentage of wild fish is determined, this information will provide for more fishing time, especially during years when the Tahltan sockeye salmon return is low and the enhanced Tuya sockeye salmon return is high. About 1/3 of the fleet or about 150 gillnetters fish in District 6 or District 8 over the course of the sockeye salmon season.

Anita Bay Terminal Area Study

Primary Objective: This test fishery was conducted during the 2001 and 2002 seasons to evaluate the run strength, timing, and location of natural returns of salmon prior to the return of enhanced chum salmon to the remote release site in Anita Bay. Anita Bay had been the remote release site for pinks and chums from the Alaska Aquaculture Facility in Burnett Inlet. That hatchery declared bankruptcy and the last enhanced stocks returned to Anita Bay in 2000. Southern Southeastern Regional Aquaculture Association released 369,650 kings, 199,555 coho, and 8,334,691 chum salmon in the spring of 2001 in Anita Bay. Data collected from this test fishery will be used to facilitate fishery management in this area for future years.

Catch and Sales: In 2002 gillnetters harvested 58 sockeye, 98 coho, 47 pink, and 1,584 chum salmon. Revenues totaled \$3,817 and about 65% of this was paid to the test fishermen. The remainder was used for stream surveys.

Fund Use: The revenue generated from this test fishery pays for, in order of importance, the vessel charters to catch the fish, hiring personnel to sample and analyze the catch to determine the percentage of enhanced fish, aerial escapement surveys in the Petersburg–Wrangell management area, personnel costs for seasonal employees monitoring the gillnet fishery and conducting escapement surveys of salmon streams, and tools, repairs, and project supplies associated with stream surveying and salmon management.

If wild stocks of salmon are not present in areas adjacent to the terminal area, the terminal area could possibly be expanded.

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

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
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
Average	\$82.1	\$89.4	\$37.3	\$52.1	\$51.6

Project Name: Juneau Salmon Test Fish

Budget Code: 111000711-11117124

Location: Districts 11–14

Timing: Late June–Late 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 mandated 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: In 2002 the contractor harvested 884 sockeye, 50 coho, 11,392 pink, and 4,173 chum salmon. Revenues totaled \$13,100 and about 66% of this was paid to the test fishermen. The remainder was used for stream surveys.

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.

Table 4. Total Juneau Management Area salmon test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
03	\$25.0	\$13.1	\$8.6	\$4.5	\$1.0
02	\$25.0	\$11.8	\$6.3	\$5.5	\$5.1
01	\$25.0	\$21.5	\$5.6	\$15.9	\$15.9
00	\$25.0	\$26.4	\$9.5	\$16.9	\$16.9
99	\$25.0	\$12.4	\$5.9	\$6.5	\$6.5
98	\$25.0	\$10.9	\$5.7	\$5.2	\$5.2
97	\$43.7	\$23.4	\$8.6	\$14.8	\$14.8
Average	\$27.7	\$17.1	\$7.2	\$9.9	\$9.3

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) has adopted regulations for new 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 new 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. Total Region I receipt authority for herring test fisheries remains at FY 00 levels (\$96.8) but is distributed between the four new codes as necessary. Location specific authorizations, revenues, and expenditures are summarized below for FY2003. Pooled historical Region 1 information is also summarized:

Table 5. Southeast Alaska herring test fishery summary.

Fiscal Year	Location	Authorization	Gross Revenue^a	Contractor Cost	Net Revenue	Net Expenditures
2003	Ketchikan	\$20.0	\$22.1	0	\$22.1	\$21.4
	Petersburg	\$20.0	\$10.0	0	\$10.0	\$12.7
	Sitka	\$30.0	\$24.8	0	\$24.8	\$29.8
	Juneau	\$15.0	\$0.0	0	\$0.0	\$2.0
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
	Average	\$92.6	\$80.4	\$1.8	\$78.9	\$80.1

^a Herring test bids from 1996 to 1999 were based on percent value of the catch. Winning bidders in those years had bid 0% and recouped their costs and profit on tendering fees and subsequent retroactive payments. Since 2000, herring 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 minimum bidder won the contract.

For FY2002, test fish revenues for Ketchikan and Juneau totaled \$32.3 and \$25.9 respectively. Due to reduced herring stock size, i.e. stocks below established minimum spawning thresholds no test fisheries were conducted in the Petersburg area and revenue from the Ketchikan and Juneau fisheries were allocated to Petersburg to cover regular stock assessment costs for the Petersburg area stocks. A total of \$12.3 was allocated from Ketchikan revenue to Petersburg and a total of \$10.0 was allocated to Petersburg from Juneau revenues.

For FY2003, test fish revenues for Ketchikan and Juneau totaled \$30.0 and \$25.0 respectively. As in FY02, a portion, \$10.0, of the Ketchikan herring test fish revenue was allocated to the Petersburg test fish code. For the Juneau herring test fishery the department did receive the required \$25.0 from the contractor but because herring were unavailable for harvest in the test fishery after the common property fishery was completed the department refunded the contractor his bid. The objective, as in FY02, was to allocate \$10.0 of the Juneau herring test fishery revenue to the Petersburg office. Shortfalls in operational costs due to refunding the contractor this revenue were covered primarily by general fund underages due to personnel vacancy factors.

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.

Project Name: Ketchikan Area Herring Test Fish

Budget Code: 11100711-11117174

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

Timing: January – April

Contact: Phil Doherty, Ketchikan Area Management Biologist

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.

In the spring of 2003 the winning bid was 43.6 tons of herring. The amount of money received by the department was \$30,000. The price per ton was \$688.

With these large swings in the exvessel value of sac roe it is important for the department to have a reliable budget in order to plan for and properly manage and assess the herring stocks in the Ketchikan management districts. If revenue from test fisheries were not available, the Ketchikan herring management budget (code 11100011-1110171) would have to be increased by other funding sources by approximately \$30,000.

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.

Project Name: Petersburg Area Herring Test Fish

Budget Code: 11100711-11117175

Location: Petersburg Management Area, Southeast Alaska (District 10)

Timing: January – April

Contact: William Bergmann, Petersburg Area Management Biologist

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 occurs in less than 12 hours. Samples are collected by commercial herring gillnet vessels and by ADF&G personnel to obtain 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 since 1993. In the seven years of test fishing an average of 32 tons of herring have been harvested per year for an exvessel value of \$28,700/year. Beginning in 2000, Petersburg's General Fund herring management budgets were cut by \$8,000. There were no herring test fisheries conducted in the Petersburg-Wrangell management area in 2002 or 2003.

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.

Project Name: Sitka Area Herring Test Fish

Budget Code: 11100711-11117176

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

Timing: January – April

Contact: Bill Davidson, 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 Sitka area herring stocks in Sitka Sound and other local stocks, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the Sitka Sound stock.

Catch and Sales: Herring test fishing to support Sitka herring management began in 1992 and has continued annually since that time. Prior to 2001, the test fishery took place in the winter and the fish were sold as frozen bait. In 2000, Sitka's General Fund herring management budgets were cut by \$8,500. Beginning with 2001 the decision was made to harvest the test fish as sac roe to maximize their value and reduce the amount of fish harvested in the fishery. The test fishery harvest in 2003 was 18.4 tons. To better distribute available general funds around the Southeast Region, a further general fund reduction of \$8,000 is planned in FY 2004 for the Sitka Management area. Revenues needed for management and stock assessment expenses will be generated by additional test fish revenues.

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. During the first test fishery in 2003, the department contracted for the operation of two herring pounds with differing amounts of kelp. At present 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 exvessel value of the Hoonah Sound fishery increased to \$2,000,000 in 2003.

Catch and Sales: The first test fishery generated revenues of \$16,845 that were received in FY04 from the sale of 5,100 lbs of spawn-on-kelp product. The department contracted for the operation of two herring pounds on the basis of a percentage of the value of gross earnings. Since these revenues were received following the herring season, they will be used to seed management costs and reduce test fishing necessary to support management costs in the spring of 2004.

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 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, 12, 14, and 15)

Timing: April–May

Contact: Kevin Monagle, Juneau Area Management Biologist

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. The total harvest in the test fishery in 2002 was 102.5 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.

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. An increased allocation of general funds would reduce the department's reliance on test fish revenues.

GROUND FISH TEST FISH PROJECT

Project Name: Southeast Groundfish Test Fish

Budget Codes: 11100711-11117187 and 11100711-11117188

Location: Southeast Alaska (Districts 1–16)

Timing: January–December

Contact: Tory O'Connell, 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. These projects were partially funded under Nearshore III federal monies but some of the charter cost and equipment costs were covered under test fish funds. The mark and release survey will continue through at least FY05 and will rely on Nearshore VI federal funds, supplemented by test fishery revenues.

The sablefish fisheries are the most valuable state-managed groundfish fisheries in Southeast, with an estimated ex-vessel value of \$6.09 million in 2002. The fisheries are limited entry: current participation is approximately 108 permit holders in NSEI and 28 permit holders in SSEI. At present there is no state general fund support for these fisheries.

Catch and Sales: The Southeast groundfish project relies 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 FY2003, the cost of chartering five vessels for the two-area survey was \$102,700, and \$69,500 was needed to pay the costs of the pot survey. Additionally, \$15,000 was needed to pay for vessels to catch and deliver live sablefish for a tag retention study. Other expenses in FY2003 included survey gear, sampling supplies, PIT-tagging equipment, travel and personnel costs for the surveys, 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
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
Average	\$208.0	\$218.9	\$138.9	\$79.9	\$76.1

SHELLFISH TEST FISH PROJECTS

Project Name: Southeast Shellfish Test Fish

Budget Code: 11317193-11317193

Location: Southeast Alaska (Districts 1-16)

Timing: September and October

Contact: Gretchen Bishop, Shellfish Project Leader

Primary Objectives: Primary objectives are to develop survey methods to: 1) estimate stock strength of spot and coonstripe shrimp, and 2) estimate relative abundance of Tanner crab in major fishing areas of Southeast Alaska.

Catch and Sales: Pot shrimp stock assessment surveys in which commercial product is retained to partially defray survey costs 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 2002. In addition to the shrimp sampled by ADF&G biologists onboard the contract vessels, the marketable shrimp captured in each survey were processed and sold on the department's gear card. The cost recovery conducted defrays survey costs and prevents waste of shrimp due to handling mortality after sampling.

Annual October Tanner crab stock assessment surveys have been conducted on the department's *R/V Medeia* since 1997. The areas surveyed have expanded from Icy Straits and upper Stephens Passage in 1997 to include Holkam Bay, Thomas Bay, Port Camden, and Glacier Bay by 2002. While Tanner crabs have not been routinely retained to defray costs during this survey, they were retained in October 1999 to assess the degree to which cost recovery interfered with normal survey operations and the potential for revenue production. Cost recovery has not been conducted in subsequent surveys.

Table 7. Southeast Alaska shellfish test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
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 ^a	\$10.2	\$10.2
2000	\$38.5	\$11.5	\$4.9 ^b	\$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
1997	\$31.5	n/a	n/a	n/a	n/a
Average 1998-2003	\$59.3	\$12.0	\$6.1	\$6.0	\$5.6

^a Value of product; contractor cost of \$23.4 K charged to code 11311088.

^b Value of product; contractor cost of \$9.2.K charged to code 11110106.

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.

Salmon

Project	FY2003	FY2003	FY2002	FY2002	FY2001	FY2001	Average	Average
	Revenue	Expenditures	Revenue	Expenditures	Revenue	Expenditures	Revenue 2001-03	Expenditures 2001-03
Ketchikan	\$5.9	\$5.9	\$20.5	\$20.4	\$35.8	\$35.8	\$20.7	\$20.7
Petersburg	\$39.6	\$38.2	\$71.9	\$71.9	\$120.3	\$107.6	\$77.3	\$72.6
Juneau	\$13.1	\$9.6	\$11.8	\$11.4	\$21.5	\$21.5	\$15.5	\$14.2
Total	\$58.6	\$53.7	\$104.2	\$103.7	\$177.6	\$164.9	\$113.5	\$107.4

Herring

Project	FY2003	FY2003	FY2002	FY2002	FY2001	FY2001	Average	Average
	Revenue	Expenditures	Revenue	Expenditures	Revenue	Expenditures	Revenue 2001-03	Expenditures 2001-03
Ketchikan	\$32.1	\$21.4	\$32.3	\$17.8	\$15.0	\$15.2	\$26.5	\$18.1
Petersburg	\$0.0	\$12.7	\$0.0	\$22.4	\$20.0	\$19.8	\$6.7	\$18.3
Sitka	\$24.8	\$29.8	\$53.9	\$38.9	\$30.0	\$35.9	\$36.2	\$34.9
Juneau	\$0.0	\$2.0	\$25.9	\$21.8	\$21.0	\$21.8	\$15.6	\$15.2
Total	\$56.9	\$65.9	\$112.1	\$101.7	\$86.0	\$92.7	\$85.0	\$86.8

Groundfish

Project	FY2003	FY2003	FY2002	FY2002	FY2001	FY2001	Average	Average
	Revenue	Expenditures	Revenue	Expenditures	Revenue	Expenditures	Revenue 2001-03	Expenditures 2001-03
Regional Totals	\$314.8	\$259.6	\$290.0	\$289.5	\$259.6	\$259.6	\$288.1	\$269.6
Total	\$314.8	\$259.6	\$290.0	\$289.5	\$259.6	\$259.6	\$288.1	\$269.6

-continued-

Table 8. Page 2 of 2.

Shellfish

Project	FY2003 Revenue	FY2003 Expenditures	FY2002 Revenue	FY2002 Expenditures	FY2001 Revenue	FY2001 Expenditures	Average Revenue 2001-03	Average Expenditures 2001-03
Regional Totals	\$8.0	\$7.2	\$11.0	\$9.7	\$10.2	\$10.2	\$9.7	\$9.0
Total	\$8.0	\$7.2	\$11.0	\$9.7	\$10.2	\$10.2	\$9.7	\$9.0

Southeast Region Test Fish Total

Project	FY2003 Revenue	FY2003 Expenditures	FY2002 Revenue	FY2002 Expenditures	FY2001 Revenue	FY2001 Expenditures	Average Revenue 2001-03	Average Expenditures 2001-03
Regional Totals	\$438.3	\$386.4	\$517.3	\$504.6	\$533.4	\$527.4	\$496.3	\$472.8
Total	\$438.3	\$386.4	\$517.3	\$504.6	\$533.4	\$527.4	\$496.3	\$472.8

* 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 FY2003.