

Regional Operational Plan CF.4K.2015.11

**The Shumagin Islands Immature Salmon Test Fishery
Operational Plan, 2015**

by

Matthew D. Keyse

and

Charles W. Russell

April 2015

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the *Système International d'Unités* (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

| | | | | | |
|---|--------------------|--|---|---|-------------------------|
| Weights and measures (metric) | | General | | Mathematics, statistics | |
| centimeter | cm | Alaska Administrative Code | AAC | <i>all standard mathematical signs, symbols and abbreviations</i> | |
| deciliter | dL | all commonly accepted abbreviations | e.g., Mr., Mrs., AM, PM, etc. | alternate hypothesis | H _A |
| gram | g | all commonly accepted professional titles | e.g., Dr., Ph.D., R.N., etc. | base of natural logarithm | <i>e</i> |
| hectare | ha | at | @ | catch per unit effort | CPUE |
| kilogram | kg | compass directions: | | coefficient of variation | CV |
| kilometer | km | east | E | common test statistics | (F, t, χ^2 , etc.) |
| liter | L | north | N | confidence interval | CI |
| meter | m | south | S | correlation coefficient | |
| milliliter | mL | west | W | (multiple) | R |
| millimeter | mm | copyright | © | correlation coefficient (simple) | r |
| | | corporate suffixes: | | covariance | cov |
| Weights and measures (English) | | Company | Co. | degree (angular) | ° |
| cubic feet per second | ft ³ /s | Corporation | Corp. | degrees of freedom | df |
| foot | ft | Incorporated | Inc. | expected value | <i>E</i> |
| gallon | gal | Limited | Ltd. | greater than | > |
| inch | in | District of Columbia | D.C. | greater than or equal to | ≥ |
| mile | mi | et alii (and others) | et al. | harvest per unit effort | HPUE |
| nautical mile | nmi | et cetera (and so forth) | etc. | less than | < |
| ounce | oz | exempli gratia | | less than or equal to | ≤ |
| pound | lb | (for example) | e.g. | logarithm (natural) | ln |
| quart | qt | Federal Information Code | FIC | logarithm (base 10) | log |
| yard | yd | id est (that is) | i.e. | logarithm (specify base) | log ₂ , etc. |
| | | latitude or longitude | lat. or long. | minute (angular) | ' |
| Time and temperature | | monetary symbols (U.S.) | \$, ¢ | not significant | NS |
| day | d | months (tables and figures): first three letters | Jan, ..., Dec | null hypothesis | H ₀ |
| degrees Celsius | °C | registered trademark | ® | percent | % |
| degrees Fahrenheit | °F | trademark | ™ | probability | P |
| degrees kelvin | K | United States (adjective) | U.S. | probability of a type I error (rejection of the null hypothesis when true) | α |
| hour | h | United States of America (noun) | USA | probability of a type II error (acceptance of the null hypothesis when false) | β |
| minute | min | U.S.C. | United States Code | second (angular) | " |
| second | s | U.S. state | use two-letter abbreviations (e.g., AK, WA) | standard deviation | SD |
| | | | | standard error | SE |
| Physics and chemistry | | | | variance | |
| all atomic symbols | | | | population sample | Var |
| alternating current | AC | | | sample | var |
| ampere | A | | | | |
| calorie | cal | | | | |
| direct current | DC | | | | |
| hertz | Hz | | | | |
| horsepower | hp | | | | |
| hydrogen ion activity (negative log of) | pH | | | | |
| parts per million | ppm | | | | |
| parts per thousand | ppt, ‰ | | | | |
| volts | V | | | | |
| watts | W | | | | |

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Division of Commercial Fisheries

April 2015

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SIGNATURE PAGE

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PURPOSE

This document provides commercial salmon fishers and buyers on the South Alaska Peninsula with information and guidelines that will be used to conduct the Shumagin Islands immature salmon test fishery during 2015. The presence of immature salmon in South Peninsula waters has warranted restrictions to commercial fishing in some years. In 1990, a test-fishing program was instituted by the Alaska Department of Fish and Game in the Shumagin Islands to determine the presence and abundance of immature salmon in South Peninsula waters prior to commercial salmon fishing periods in July. In 1998, the Alaska Board of Fisheries adopted regulations in the Post-June Management Plan (5 AAC 09.366(i)), mandating that the test fishery be conducted to assist management staff with making commercial fishery management decisions.

The 2015 Shumagin Islands test fishery will be operated beginning July 2 with one purse seine vessel making a minimum of six sets per day. The objective of the test fishery is to assess the marine abundance of immature salmon in the vicinity of the Shumagin Islands. Test fishing will be conducted prior to the first July commercial purse seine fishing period in the Shumagin Islands. Additional test fishing may be required if the abundance of immature salmon harvested during the commercial fishery is above the regulatory threshold.

Key words: Shumagin Islands, Alaska Peninsula, immature salmon, test fishery, commercial fishery management, Post June management plan, Area M, *Oncorhynchus*, purse seine, operational plan

BACKGROUND

This paper documents the purpose, goals, and methods of a program designed to assess immature Chinook *Oncorhynchus tshawytscha*, sockeye *O. nerka*, coho *O. kisutch*, and chum *O. keta* salmon abundance in the marine waters near the Shumagin Islands. For the purposes of the test fishery, immature salmon are defined as those Chinook, sockeye, coho, and chum salmon that are gilled in the seine web (5 AAC 09.366(i)).

The Alaska Department of Fish and Game (ADF&G) first became aware of immature salmon catches in 1963 (Keyse and Fox *In prep*). The presence of excess numbers of immature salmon in South Alaska Peninsula commercial salmon catches has warranted restrictions to commercial fishing in some years. These restrictions were applied to all gear types in affected areas from late June into July in 1963, 1968, 1969, 1974, 1979, and for purse seine fishing only during the 1989–1992, 1999, 2001, 2003, 2008, and 2013 seasons (Keyse and Fox *In prep*).

High abundance of immature salmon has been most prevalent in the Shumagin Islands Section where the concern for harvesting immature salmon is limited to purse seine gear (Figure 1). Under current regulations, seine mesh size may not exceed 3½ inches except for the first 25 meshes above the lead line, which may not exceed 7 inches (5 AAC 09.332(a)). Set gillnet gear has larger mesh size (minimum of 5 ¼ inches; 5 AAC 09.331(b)(3)) which allows immature salmon to pass through. Immature salmon usually migrate out of the area by the third week of July, although in 1992, closures were necessary until July 29 and in 2013 from August 20–August 23.

In 1990, the department instituted a test fishing program in the Shumagin Islands to determine the presence and abundance of immature salmon in South Peninsula waters prior to commercial salmon fishing in July (Table 1). In the Shumagin Islands Section, most purse seine fishing effort occurs in the nearshore waters from Popof Head to Red Bluff, so test fishing sites were established in those areas (Figure 2). In 1991, the Alaska Board of Fisheries (BOF) restricted commercial salmon fishing to terminal areas within South Peninsula waters from July 6–July 19, due in part to concerns for immature Chinook, sockeye, and chum salmon that were inadvertently gilled during purse seine gear fishing operations (McCullough and Shaul 1992). In 1998, the BOF amended the Post-June Management Plan (5 AAC 09.366), which regulates the

commercial salmon fishery after June 30 in South Alaska Peninsula waters. The regulation established the test fishery and clarified the definition of immature salmon.

OBJECTIVES

BIOLOGICAL

- Provide a timely index of the immature salmon abundance within the marine waters in the vicinity of the Shumagin Islands;
- reduce the potential for large catches of immature salmon, thus maximizing future escapement and harvest; and
- collect biological data from test fishery-caught salmon.

FISCAL

- Secure revenue through the sale of fish caught during the test fishery to cover the costs of the daily charter.

METHODS

In April of 2015, ADF&G will distribute a pre-season letter and request for quotation (RFQ) seeking individuals interested in working with the department in conducting test fishery operations. Interested parties are asked to submit a bid based on a percentage, not to exceed 70% of the adult salmon harvested, that they would accept as payment for the charter. Selection of the test fish charter will go to the lowest bidder. In the case of multiple "low" bids, charter selection will be awarded to the low bid that was received first. The standard department short-term vessel charter agreement between the State of Alaska and the vessel owner will be used (Appendix A1). Skippers will provide necessary crew to operate the boat and gear, fuel and lubricants, and other supplies needed for daily operation of the vessel. Vessel operators must have a current Area M salmon purse seine permit. Protection (hull) and Indemnity insurance including crew exposure in the amount of at least \$300,000 is required. All vessels must contain a refrigerated sea water (RSW) system to chill the catch.

Immature salmon are defined as Chinook, sockeye, coho, and chum salmon observed to be gilled in seine webbing (5 AAC 09.366(i)). All salmon harvested are the property of the State of Alaska and will be sold to cover charter costs. During off-loading, the mature salmon will be separated by species, and weighed. The number of mature salmon, by species, will be determined from the average weight of a sample of fish.

SCHEDULE AND DELIVERABLES

Department staff will determine when test fishing occurs based on management requirements. Since 1998, the test fish program has been conducted in early July. However, prior to early July department staff will monitor the seine fishing fleet (via department vessel) for immature salmon harvests.

RESPONSIBILITIES

Department staff will meet with the skipper of the scheduled chartered vessel prior to departure from Sand Point. The vessel will depart at an agreed upon time with at least one department

observer, and will return to Sand Point after the required sets are completed. The purse seine vessel must make a minimum of six sets; two each at Popof Head, Middle Set, and Red Bluff, all near Popof Island (Figure 2). Sets will be perpendicular to the beach and department staff will record the number of immature salmon and bycatch caught by species, by set, set location, start net out, net fully out, start net close, and end net close on the Sand Point Test Fishery Data Form (Appendix B1). All gilled salmon will be removed from the net as they are brought aboard. Standard sets are 20 minutes in duration (time the entire net is in the water until vessel begins to close the net). Actual set time may vary depending on fishing conditions and the number of fish being caught. If large numbers of immature salmon (greater than 1,000) are observed being gilled during any set, additional sets may be shorter than 20 minutes in length.

Sets will be made as close to shore as possible. The skipper should use his/her sound judgment when fishing in a specific site based on weather conditions or other hindrances, such as known snags. Attempts should be made to reduce damage to fishing gear and equipment. If a high rate of catch of immature salmon is encountered before all six sets are made, fishing may cease to prevent excessive numbers of immature salmon from being harvested. Determination of the need for additional sets or locations will be made onsite by the department observers in consultation with the Area Management Biologist.

Upon completion of the final set, the skipper will transport the catch to a processor and will return department staff to the Sand Point dock. All fish will be sold and revenue will be deposited into the department Test Fish Account.

REFERENCES CITED

- Keyse, M.D. and E. K. C. Fox. *In prep.* South Alaska Peninsula salmon annual management report, 2014. Alaska Department of Fish and Game, Fishery Management Report No. 15-XX, Anchorage.
- McCullough, J. N. and A. R. Shaul. 1992. The incidence of immature salmon in south peninsula purse seine fisheries, 1963-91. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K92-17, Kodiak.

TABLES AND FIGURES

Table 1.—Shumagin Islands, immature salmon test fish results, 1990–2014.

| Year | Duration | Number ^a of sets | Number of Adult Salmon | | | | | | Number of Immature Salmon | | | |
|------|-------------------|--------------------------------|------------------------|---------|--------|--------|-------|--------|---------------------------|---------|------|--------|
| | | | Chinook | Sockeye | Coho | Pink | Chum | Total | Chinook | Sockeye | Coho | Total |
| 1990 | July 03–August 13 | 29 | 23 | 1,194 | 1,708 | 4,516 | 3,104 | 10,545 | 39 | 796 | 0 | 1,973 |
| | | Avg/Set | 0.8 | 41.2 | 58.9 | 155.7 | 107.0 | 363.6 | 1.3 | 27.4 | 0.0 | 68.0 |
| 1991 | July 01–July 19 | 51 | 148 | 3,791 | 1,422 | 7,077 | 4,092 | 16,530 | 331 | 13,167 | 0 | 20,908 |
| | | Avg/Set | 2.9 | 74.3 | 27.9 | 138.8 | 80.2 | 324.1 | 6.5 | 258.2 | 0.0 | 410.0 |
| 1992 | July 10–July 29 | 44 | 134 | 2,413 | 3,695 | 10,167 | 4,388 | 20,797 | 892 | 13,449 | 5 | 14,346 |
| | | Avg/Set | 3.0 | 54.8 | 84.0 | 231.1 | 99.7 | 472.7 | 20.3 | 305.7 | 0.1 | 326.0 |
| 1993 | July 12–July 18 | 24 | 259 | 1,804 | 4,892 | 2,944 | 827 | 10,726 | 393 | 2,188 | 0 | 2,581 |
| | | Avg/Set | 10.8 | 75.2 | 203.8 | 122.7 | 34.5 | 446.9 | 16.4 | 91.2 | 0.0 | 107.5 |
| 1994 | July 14–July 27 | 31 | 99 | 1,171 | 4,221 | 8,530 | 2,657 | 16,678 | 135 | 3,685 | 2 | 3,822 |
| | | Avg/Set | 3.2 | 37.8 | 136.2 | 275.2 | 85.7 | 538.0 | 4.4 | 118.9 | 0.1 | 123.3 |
| 1995 | July 12–July 17 | 30 | 122 | 4,000 | 3,671 | 8,456 | 2,592 | 18,841 | 215 | 221 | 0 | 436 |
| | | Avg/Set | 4.1 | 133.3 | 122.4 | 281.9 | 86.4 | 628.0 | 7.2 | 7.4 | 0.0 | 14.5 |
| 1996 | July 12–July 18 | 35 | 188 | 2,093 | 15,187 | 7,010 | 7,391 | 31,869 | 211 | 520 | 4 | 735 |
| | | Avg/Set | 5.4 | 59.8 | 433.9 | 200.3 | 211.2 | 910.5 | 6.0 | 14.9 | 0.1 | 21.0 |
| 1997 | July 12–July 19 | 39 | 373 | 2,716 | 3,536 | 4,925 | 4,075 | 15,625 | 3,361 | 674 | 32 | 4,067 |
| | | Avg/Set | 9.6 | 69.6 | 90.7 | 126.3 | 104.5 | 400.6 | 86.2 | 17.3 | 0.8 | 104.3 |
| 1998 | July 02–July 03 | 10 | 6 | 711 | 33 | 1,200 | 499 | 2,449 | 5 | 24 | 0 | 29 |
| | | Avg/Set | 0.6 | 71.1 | 3.3 | 120.0 | 49.9 | 244.9 | 0.5 | 2.4 | 0.0 | 2.9 |
| 1999 | July 01–July 07 | 26 | 26 | 12,284 | 18 | 12,340 | 4,680 | 29,348 | 13 | 2,132 | 0 | 2,145 |
| | | Avg/Set | 1.0 | 472.5 | 0.7 | 474.6 | 180.0 | 1128.8 | 0.5 | 82.0 | 0.0 | 82.5 |
| 2000 | July 03–July 05 | 13 | 9 | 1,597 | 101 | 2,946 | 1,919 | 6,572 | 13 | 77 | 0 | 90 |
| | | Avg/Set | 0.7 | 122.8 | 7.8 | 226.6 | 147.6 | 505.5 | 1.0 | 5.9 | 0.0 | 6.9 |

-continued-

Table 1.—Page 2 of 3.

| Year | Duration | Number ^a of sets | Number of Adult Salmon | | | | | | Number of Immature Salmon | | | |
|------|-----------------|--------------------------------|------------------------|---------|-------|--------|--------|--------|---------------------------|---------|------|--------|
| | | | Chinook | Sockeye | Coho | Pink | Chum | Total | Chinook | Sockeye | Coho | Total |
| 2001 | July 02–July 16 | 50 | 318 | 6,258 | 3,353 | 9,382 | 10,772 | 30,083 | 1,265 | 3,241 | 17 | 4,523 |
| | | Avg/Set | 6.4 | 125.2 | 67.1 | 187.6 | 215.4 | 601.7 | 25.3 | 64.8 | 0.3 | 90.5 |
| 2002 | July 02–July 04 | 15 | 29 | 1,020 | 11 | 443 | 1,227 | 2,730 | 325 | 911 | 1 | 1,237 |
| | | Avg/Set | 1.9 | 68.0 | 0.7 | 29.5 | 81.8 | 182.0 | 21.7 | 60.7 | 0.1 | 82.5 |
| 2003 | July 02–July 20 | 28 | 26 | 819 | 1,279 | 4,646 | 2,275 | 9,045 | 1,419 | 8,640 | 43 | 10,102 |
| | | Avg/Set | 0.9 | 29.3 | 45.7 | 165.9 | 81.3 | 323.0 | 50.7 | 308.6 | 1.5 | 360.8 |
| 2004 | July 07–July 08 | 10 | 81 | 507 | 542 | 1,131 | 1,827 | 4,088 | 42 | 111 | 0 | 153 |
| | | Avg/Set | 8.1 | 50.7 | 54.2 | 113.1 | 182.7 | 408.8 | 4.2 | 11.1 | 0.0 | 15.3 |
| 2005 | July 02–July 05 | 22 | 68 | 1,197 | 2,137 | 7,117 | 2,140 | 12,659 | 1,110 | 263 | 2 | 1,375 |
| | | Avg/Set | 3.1 | 54.4 | 97.1 | 323.5 | 97.3 | 575.4 | 50.5 | 12.0 | 0.1 | 62.5 |
| 2006 | July 02–July 05 | 15 | 21 | 1,211 | 440 | 2,254 | 7,855 | 11,781 | 69 | 356 | 0 | 425 |
| | | Avg/Set | 1.4 | 80.7 | 29.3 | 150.3 | 523.7 | 785.4 | 4.6 | 23.7 | 0.0 | 28.3 |
| 2007 | July 02–July 05 | 17 | 12 | 11,389 | 781 | 7,036 | 1,300 | 20,518 | 2 | 951 | 0 | 953 |
| | | Avg/Set | 0.7 | 669.9 | 45.9 | 413.9 | 76.5 | 1206.9 | 0.1 | 55.9 | 0.0 | 56.1 |
| 2008 | July 03–July 08 | 23 | 12 | 9,310 | 1,901 | 14,838 | 11,436 | 37,497 | 22 | 2,167 | 0 | 2,189 |
| | | Avg/Set | 0.5 | 404.8 | 82.7 | 645.1 | 497.2 | 1630.3 | 1.0 | 94.2 | 0.0 | 95.2 |
| 2009 | July 03–July 05 | 18 | 28 | 1,587 | 389 | 21,101 | 3,825 | 26,930 | 76 | 644 | 3 | 723 |
| | | Avg/Set | 1.6 | 88.2 | 21.6 | 1172.3 | 212.5 | 1496.1 | 4.2 | 35.8 | 0.2 | 40.2 |
| 2010 | July 02–July 05 | 18 | 13 | 6,418 | 179 | 4,180 | 1,608 | 12,398 | 2 | 416 | 0 | 418 |
| | | Avg/Set | 0.7 | 356.6 | 9.9 | 232.2 | 89.3 | 688.8 | 0.1 | 23.1 | 0.0 | 23.2 |
| 2011 | July 02–July 05 | 18 | 7 | 1,151 | 49 | 11,980 | 1,315 | 14,502 | 4 | 267 | 0 | 271 |
| | | Avg/Set | 0.4 | 63.9 | 2.7 | 665.6 | 73.1 | 805.7 | 0.2 | 14.8 | 0.0 | 15.1 |

-continued-

Table 1.–Page 3 of 3

| Year | Duration | Number ^a of sets | Number of Adult Salmon | | | | | | Number of Immature Salmon | | | |
|-----------|-----------------|--------------------------------|------------------------|---------|-------|-------|-------|--------|---------------------------|---------|------|-------|
| | | | Chinook | Sockeye | Coho | Pink | Chum | Total | Chinook | Sockeye | Coho | Total |
| 2012 | July 02–July 05 | 18 | 4 | 2,668 | 16 | 947 | 1,192 | 4,827 | 7 | 108 | 0 | 118 |
| | | Avg/Set | 0.2 | 148.2 | 0.9 | 52.6 | 66.2 | 268.2 | 0.4 | 6.0 | 0.0 | 6.6 |
| 2013 | July 02–July 05 | 20 | 4 | 2,366 | 1,002 | 7,043 | 1,632 | 12,047 | 5 | 662 | 0 | 667 |
| | | Avg/Set | 0.2 | 118.3 | 50.1 | 352.2 | 81.6 | 602.4 | 0.3 | 33.1 | 0.0 | 33.4 |
| 2014 | July 02–July 05 | 23 | 356 | 2,959 | 957 | 977 | 3,270 | 8,519 | 161 | 143 | 26 | 330 |
| | | Avg/Set | 15.5 | 128.7 | 41.6 | 42.5 | 142.2 | 370.4 | 7.0 | 6.2 | 1.1 | 14.3 |
| 2004–2013 | | Number | 25 | 3,780 | 744 | 7,763 | 3,413 | 15,725 | 134 | 595 | 1 | 729 |
| Average | | Avg/Set | 1.7 | 203.6 | 39.5 | 412.1 | 190.0 | 846.8 | 6.6 | 31.0 | 0.0 | 37.6 |

^a Test fishing is standardized to purse seine gear, conducting 20 minute sets at Popof Head, Middle Set, and Red Bluff located on Popof Island. Additional sets are made if time allows.

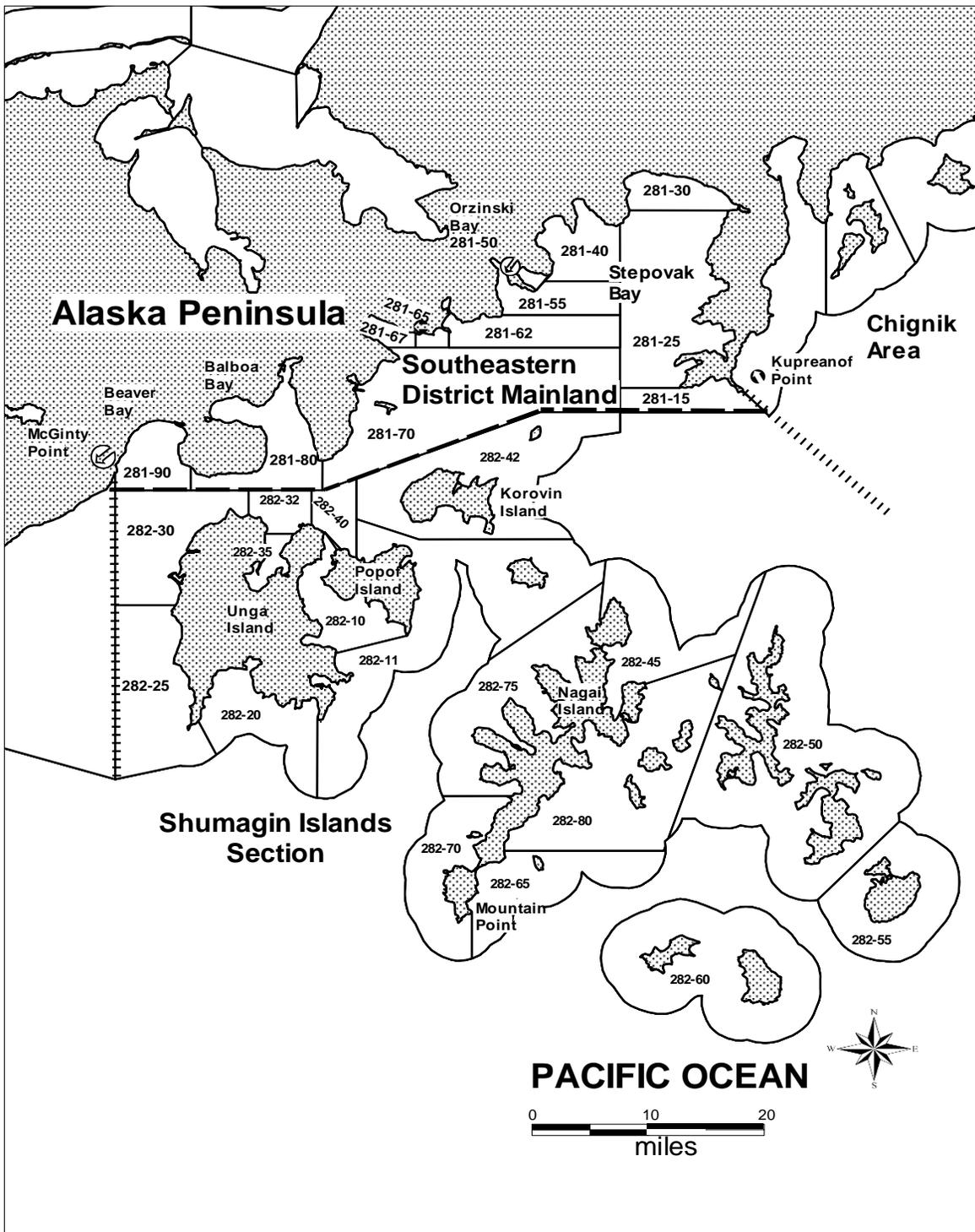


Figure 1.—Map of the Alaska Peninsula Area from Kupreanof Point to McGinty Point (Southeastern District) with the statistical salmon fishing areas shown.

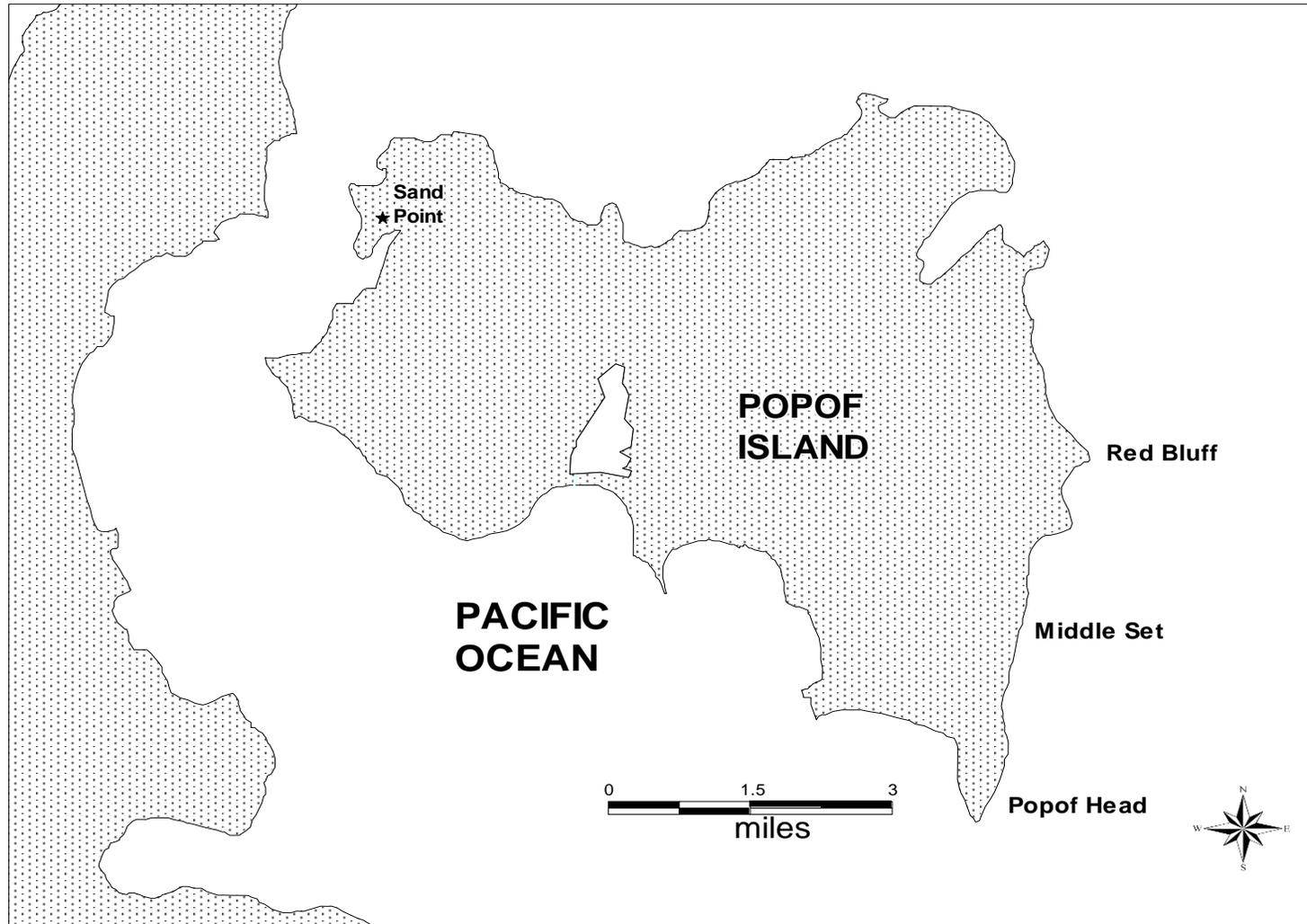


Figure 2.—Map of Popof Island with test fishing sites defined.

**APPENDIX A. SHORT-TERM VESSEL CHARTER
AGREEMENT**

Appendix A1.–Short-term vessel charter agreement.



State of Alaska
Department of Fish and Game
SHORT-TERM VESSEL CHARTER AGREEMENT

This agreement shall cover chartering of the vessel described and under the conditions set forth below between the State of Alaska, Department of Fish and Game and:

Name _____ Mailing address _____

Telephone _____ City/State/Zip _____

VESSEL _____ S.S.# or Tax ID _____

Name and/or Number _____ Type & Keel length _____

Equipment & supplies needed provided by the contractor (food, bait, skiff, etc.) _____

Fishing gear provided by contractor _____

Fuel _____ will be _____ will not be provided by the State of Alaska.

PURPOSE OF CHARTER _____

Charter will begin at _____ on _____ and end at _____ on _____.
(Location) (Date) (Location) (Date)

(Agreement cannot exceed fourteen (14) working days. No extension or sequential contract allowed.)

Cost of Charter: \$ _____ (cannot exceed \$30,000)

TERMS AND CONDITIONS

- 1. The state will have general direction of activities of the vessel, but contractor (if aboard) will be responsible for safe operation of vessel.
2. The contractor will hold the State harmless from any liability caused by loss of vessel or damage caused to or by the vessel, and against any loss, damage, and/or liability occasioned by or arising from, any negligent act on the part of the contractor.
3. The State will provide insurance coverage for the state employees only.
4. The length of the charter shown above is estimated and can be terminated at anytime by the State but cannot exceed fourteen (14) days.
5. Vessel may be required to submit to an inspection by the U.S. Coast Guard (State's option).
6. Upon completion of the contract, Department of Fish and Game representatives will initiate payment processing. A warrant will be mailed to the above address after processing.
7. Special conditions _____

The terms and conditions are understood and agreed to.

/s/ _____ /s/ _____
Department of Fish and Game Representative Owner or Master of Vessel

INSURANCE INFORMATION

- 1. Value of hull insurance \$ _____
2. Amount of protection and indemnity insurance \$ _____
3. Name of Insurance Carrier _____
4. Expiration date of policy _____
5. Number of Contractors _____
6. Name(s) of Department of Fish and Game personnel aboard: _____

APPENDIX B. SAND POINT TEST FISH DATA FORM

| | | | |
|--|------------------|-----------------|-------------------|
| Sand Point Test Fishery Data Form | | | Page ____ of ____ |
| Date _____ | | Vessel _____ | |
| | | Observer _____ | |
| | | Processor _____ | |
| SET NUMBER | Lat. | Long. | |
| SET LOCATION | Start net out | Net fully out | |
| | Start net closed | End net closed | |
| | Time Out | Time Closed | |
| Immature Salmon Caught | | Bycatch | |
| | Caught | Species | Caught |
| Sockeye | | | |
| Chinook | | | |
| Pink | | | |
| Chum | | | |
| Coho | | | |
| Total | | Total | |
| Comments: | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Date _____ | | Vessel _____ | |
| | | Observer _____ | |
| | | Processor _____ | |
| SET NUMBER | Lat. | Long. | |
| SET LOCATION | Start net out | Net fully out | |
| | Start net closed | End net closed | |
| | Time Out | Time Closed | |
| Immature Salmon Caught | | Bycatch | |
| | Caught | Species | Caught |
| Sockeye | | | |
| Chinook | | | |
| Pink | | | |
| Chum | | | |
| Coho | | | |
| Total | | Total | |
| Comments: | | | |
| | | | |
| | | | |
| | | | |