Afognak Lake Sockeye Salmon Smolt Project Operational Plan, 4K06-08

by

Robert T. Baer

May 2006

Alaska Department of Fish and Game **Division of 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)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
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

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail-fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	*E*
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

AFOGNAK LAKE SOCKEYE SALMON SMOLT PROJECT OPERATIONAL PLAN, 4K06-08

by

Robert T. Baer

Alaska Department of Fish and Game
211 Mission Road
Kodiak, Alaska 99615

May 2006

The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished division 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.

Robert T. Baer,
Alaska Department of Fish and Game, Division of Commercial Fisheries,
211 Mission Road, Kodiak, AK 99615, USA

This document should be cited as:
Baer, R.T. 2006. Afognak Lake sockeye salmon smolt project operational plan. In Salmon research operational plans for the Kodiak Area, 2006. Alaska Department of Fish and Game, Regional Information Report No. 4K06-8.

TABLE OF CONTENTS

Page

LIST OF FIGURES ii

LIST OF APPENDICES ii

INTRODUCTION 1

Goal 1
Objectives 2
Tasks 2
SUPERVISION 2

PROCEDURES 2

Smolt Trap Installation, Monitoring, and Maintenance 2
Smolt Trap Catch and Species Enumeration 3
Smolt Trap Efficiency and Mark-Recapture 3
Delayed Mortality Experiment 4
Smolt Age, Weight, and Length Sampling 5
Physical Data 6

OTHER REQUIREMENTS 6

Safety 6
Training 6
Radio Schedule 7
Air Charters 7
Reporting 7
Camp Inventory and Close Up 7
Photo Documentation 7
Timesheets 8
Purchasing 8

REFERENCE CITED 8

FIGURES 9

APPENDIX A. SMOLT AGE-WEIGHT-LENGTH SAMPLING 15

APPENDIX B. SATELLITE TELEPHONE AND DISPATCH INSTRUCTIONS 25

APPENDIX C. WEEKLY REPORT EXAMPLE 29

APPENDIX D. TIMESHEET INSTRUCTIONS 31

LIST OF FIGURES

Figure **Page**

1. Location of the ADF&G camp along the Afognak River and Afognak Lake on Afognak Island....10
2. Daily smolt trap catch reporting form. 11
3. Sockeye salmon smolt summary form. 12
4. Smolt dye release form.....13
5. Daily physical observation form. 14

LIST OF APPENDICES

Appendix **Page**

A1. Smolt age-weight-length (AWL) sampling materials and methods. 16
A2. Sampling weeks and associated calendar dates. 18
A3. Photo of a smolt with the preferred area highlighted. 19
A4. An example of 2 correctly labeled smolt slides representing fish 1 through 10 from a sample collected on 5/11/00. 20
A5. Procedure for recording salmon smolt age-weight-length data on AWL forms. 21
A6. Example of an AWL form filled out for smolt sampled (Note: Project code should be 8 not 4). 23

B1. Satellite telephone and dispatch instructions. 26

C1. An example of a weekly report. 30

D1. Instructions for filling out a timesheet. 32
D2. Example of a completed timesheet. 33

INTRODUCTION

The Afognak Lake drainage is located on the southeast side of Afognak Island approximately 50 kilometers (km) northwest of the city of Kodiak (Figure 1). Afognak Lake (58° 07' N lat., 152° 55' W long.) lies about 21 m above sea level, is 8.8 km long, up to 0.8 km wide, and has a surface area of 5.3 km^2 (Schrof et al. 2000). Runoff from Afognak Lake flows in an easterly direction via the 3.2 km Afognak River, emptying into Afognak Bay. The Afognak Lake system was the most productive sockeye salmon *Oncorhynchus nerka* system on Afognak Island in the 1990s. Total estimated sockeye salmon runs from the Afognak Lake system averaged 130,630 fish from 1990 through 1999 peaking at 219,126 in 1996 (Honnold and Schrof 2004).

Sockeye salmon escapements during the 1990s ranged from 66,869 (1998) to 132,050 (1997) and averaged 90,464 fish, well above the upper range of the Sustainable Escapement Goal (SEG; Honnold and Schrof 2004). In 2000, the sockeye salmon escapement of 54,064 was below the previous 10-year average but still fell within the SEG range of 40,000 to 60,000. Low escapement levels experienced during the 2001 season resulted in commercial salmon fishing closures in the Afognak area until July and season long sockeye salmon sport fishery restrictions. Despite these restrictions, the total sockeye salmon escapement was 24,271 in 2001, far below the lower end of the SEG (40,000; Nelson and Lloyd 2001) Sockeye salmon escapements into the Afognak River failed to reach the low end of the SEG from 2002-2004. During the same three year time period the commercial salmon fishery in Afognak Bay was closed and sport fishing for sockeye salmon was also restricted. The Alaska Department of Fish and Game (ADF&G) and Federal Subsistence Board jointly closed much of Afognak Bay to subsistence fishing for sockeye salmon in 2002, 2003, and 2004.

In January 2005, the Alaska Board of Fish changed the Afognak Lake SEG of 40,000-60,000 sockeye salmon to a Biological Escapement Goal (BEG) of 20,000-50,000 (Nelson et al. 2005). The escapement goal was changed from an SEG to a BEG based on more thorough spawner-recruit data and was reduced because recent escapement trends are more reflective of sustainable production because the system is no longer stocked or fertilized. Escapement into Afognak Lake in 2005 was 21,577 sockeye salmon. The commercial fishery was only open in the Afognak area for a single fishing period in 2005 and only 356 sockeye salmon were harvested. For the first time in three years the subsistence fishery did not close but only 656 subsistence fish were harvested.

Prior to 2003, sockeye salmon production had been assessed by adult escapement and harvest estimates; juvenile production (smolt) of the Afognak Lake sockeye salmon stock had not been reliably assessed. In 2003, a sockeye salmon smolt project was initiated at Afognak Lake to estimate the number, age, size, and condition of the smolt emigration. In 2004 and in 2005, the smolt project was continued and the rearing environment (limnology) was monitored. These data are essential in determining future Afognak Lake sockeye salmon stock production, as well as the future outlook for subsistence, commercial, and sport harvesters. Additionally, smolt abundance and limnology data will assist in the development of appropriate strategies to improve returns.

GOAL

The project goal is to assess the sockeye salmon production from Afognak Lake and to develop a strategy to restore and/or stabilize the sockeye salmon run.

OBJECTIVES

To achieve the project goal, ADF&G Research personnel will collect data to:

1. Estimate the number of sockeye salmon smolt emigrating from Afognak Lake,
2. Estimate the average age, weight, length, (AWL) and condition of sockeye salmon smolt emigrants from Afognak Lake,
3. Evaluate the water chemistry, nutrients, and zooplankton levels in Afognak Lake, and
4. Summarize project activities and data collection into a report that will be submitted to the Federal Office of Subsistence Management.

TASKS

1. Set up camp. Target completion date: 9-11 May.
2. Install and operate a Canadian fan trap to capture a portion of sockeye salmon smolt emigrants. Target date: 10 May until the end of the smolt emigration.
3. Enumerate the daily smolt trap catch of fish by species.
4. Mark approximately 650 sockeye salmon smolt weekly, using Bismark Brown Y (BBY) dye, to estimate trap efficiency, which is necessary to estimate the total smolt emigration. Of the 650 dyed sockeye salmon smolt, 100 smolt will be held for a delayed mortality experiment.
5. Collect AWL data from 40 sockeye salmon smolt per day, for five consecutive days each week (200 samples/week).
6. Collect physical data daily: air temperature, water temperature, water level, cloud coverage, wind direction and velocity, and precipitation.
7. Collect water and zooplankton samples at station 1 and 2 (zooplankton only) approximately every four weeks from May to September at Afognak Lake (Refer to the Lake Assessment operational plan for the sampling protocol).

SUPERVISION

Project Biologist: Rob Baer- Fishery Biologist II

Field Staff: Jason Fox- Crew leader (Fish and Wildlife Tech. III)

Scott Eggemeyer- Crew member (Fish and Wildlife Tech. II)

The project biologist will oversee the project, provide logistical and technical assistance, and write an annual report. The crew leader will implement the ADF&G safety guidelines, schedule daily tasks, and oversee operations at the field camp. The crewmember will assist the crew leader in all assigned tasks and field operations.

PROCEDURES

SMOLT TRAP INSTALLATION, MONITORING, AND MAINTENANCE

A Canadian fan trap will be located approximately 32 m upstream from the stream terminus of Afognak River in Afognak Bay. The trap will be installed so the water velocity is sufficient to force smolt into the catch box while ensuring that smolt are not injured (scale loss, pinned against the perforated sheeting, etc.). Perforated (1/8") aluminum sheeting (4' x 8' perf-plate),

supported by a rackmaster supported pipe frame, will be placed at the entrance of the trap in a "V" configuration to increase trap efficiency. If necessary, the perf-plate 'wings' may be lined with plastic sheeting to increase water velocity in the trap and avoid smolt scale loss.

The trap and wings will:

- Be kept free of debris to maintain trap efficiency and minimize smolt mortality.
- Require frequent monitoring and maintenance to ensure that the trap is working properly. The trap should be checked every 3-4 hours during the day and every 1-2 hours at night.
- Migration patterns change with significant weather changes (i.e., rain may trigger a large emigration). The trap will be fished continuously for the duration of the smolt emigration (~10 May until ~30 June).
- If unforeseen conditions occur and smolt trapping must temporarily cease, the trap will be modified or the wings pulled from the water to allow smolt to pass safely. If possible, any modifications to the trapping system will be discussed with the project biologist before implementation. If immediate modifications are necessary to avoid major mortality or loss of equipment, the project biologist will be notified as soon as possible.

SMOLT TRAP CATCH AND SPECIES ENUMERATION

Since smolt primarily migrate at night, a single trapping or sampling day will be the 24-hour period from noon of the first day to noon the following day and will correspond with the first day. All fish caught in the smolt trap will be counted. A dip net will be used to remove and release the fish as they are counted. Smolt needed for sampling will be held in a covered live-box. Smolt will be handled with care, as sockeye salmon smolt are very sensitive to any stress, and mortality can occur through the loss of just a few scales. A tally counter will be used to enumerate the smolt to assure an accurate count. All data, including smolt mortality will be entered on the *DAILY SMOLT TRAP CATCH REPORTING FORM* (Figure 2) each time the trap is checked. Daily trapping data will be summarized on the *SOCKEYE SALMON SMOLT SUMMARY FORM* (Figure 3).

Pollard et al. (1997) provides color pictures and explanations in the *Field Identification of Coastal Juvenile Salmonids* key for species identification. Contact the project biologist if any questions regarding identification occur.

SMOLT TRAP EFFICIENCY AND MARK-RECAPTURE

The trap efficiency estimates are necessary to estimate the total sockeye salmon smolt emigrating from Afognak Lake. Mark-recapture trials will be conducted to determine what percentage of the outmigration the trap is catching. Bismark Brown Y (BBY) dye will be used to mark and identify the smolt used for these trials. The dyeing process can be very stressful to smolt, so every effort should be made to minimize and avoid unnecessary handling of the smolt during the process. Excessive handling (netting), increased water temperatures, and exposure to the dye are the primary stresses. Individually, these can induce mortality. In combination, significant mortality may occur. The following methods will be used for marking and releasing smolt:

- All data will be recorded on the *Smolt Dye Release Form* (Figure 4).
- Once a week, 650 sockeye salmon smolt will be collected for marking. If the emigrating run strength is not sufficient to capture 650 smolt in one night, smolt will be collected

and held in a live-box for up to two days to obtain 650 smolt to be dyed. Approximately, 550 smolt will be dyed and released, while 100 dyed smolt will be retained to monitor delayed mortalities of dyed smolt. Smolt sampled for AWL will not be used in the dye test.

- Marking will take place at the release site, located approximately 1,240 m upstream from the trapping site. The smolt will be transported to the mark/release site by four-wheeler and a trailer. A garbage can will be used as a holding container and secured to the trailer. Sufficient water will be added to the can to minimize over-crowding. Water temperatures will be recorded. Supplemental oxygen will be added continuously throughout transport and a lid secured to prevent water from spilling over. Any mortality will be recorded upon arrival at the release site.
- Water temperatures will be taken from both the transport container and the recovery container in the stream. If the temperatures differ by more than 1-2 degrees Celsius, river water will be added to the appropriate container to stabilize the temperature. The smolt will be allowed to rest in a live box in the river for at least 30 minutes after the transport to the marking site. The live box holding the smolt will be covered to minimize stress.
- A solution of 1.9 g of BBY dye to 15 gallons of water will be dissolved in a 30-gallon plastic garbage can. The smolt will be placed in the dye for 30 minutes and the garbage can will be covered and oxygenated continuously (but gently - do not roll them) during the dyeing process.
- Following dyeing, all dyed smolt will be held in the live-box for a minimum of 60 minutes. Smolt displaying "abnormal" behavior will NOT be released. A fish with "abnormal" behavior may be swimming on its side, upside down, puffing or flaring gills continuously.
- Dyed smolt displaying "normal" behavior will be counted (up to 550) and released evenly across the creek with the use of water filled buckets. The process should be timed such that smolt will be released at ~2200 hours or under the cover of darkness. The remaining 100 smolt that were dyed will be held in a live box up to four days to determine smolt survival from the dye as part of Delayed Mortality Experiment.
- Monitor the smolt trap for marked smolt daily from the day of the release and continue until the next dye test. The number of dyed smolt observed will be recorded on the *Daily Smolt Catch Reporting Form* (Figure 2) and the *Sockeye Salmon Smolt Summary Form* (Figure 3). The number of smolt examined in a day equals the marked and unmarked smolt caught that day. The daily smolt catch will not include marked smolt, since they were previously counted at the trap site. The trap efficiency from this dye test will be a percentage of the dyed fish recovered divided by the dyed smolt released.

DELAYED MORTALITY EXPERIMENT

To test for potential bias in the mark-recapture estimates of the Afognak Lake sockeye salmon smolt emigration, delayed mortality of dyed smolt will be measured for each dye test. During each dye test, 100 additional smolt will be dyed simultaneously with the 550 smolt dyed that are released to test the trap efficiency. Smolt used for the mortality experiment will be handled the same way as the smolt being released, except they will not be released. Smolt dyed for the

mortality experiment will be held in a covered instream live box and checked daily for mortality over a 4-day period.

SMOLT AGE, WEIGHT, AND LENGTH SAMPLING

Refer to Appendix A1 for a description of smolt AWL sampling materials and methods. A sample of 40 sockeye salmon smolt per day for five (5) consecutive days per sample week will be collected to obtain AWL data. A sample week begins on Wednesday and runs through the following Tuesday (Appendix A2). All smolt sample data will reflect the sampling day when the fish were captured. Each sample will be comprised of a single day's catch and samples will not be mixed between days. If less than 40 fish are caught in a sampling day, the sample size for that day will be the number of fish caught on that day. Dyed smolt used to estimate trap efficiency will not be sampled.

The daily smolt sample will be taken randomly. Collect smolt hourly and place them in the live box. Use a small dip net to remove a sub-sample of 40 sockeye salmon smolt from the live box to be sampled. All remaining smolt will be counted and released, unless they are being held for a future dye test.

Smolt will be sampled on the day of capture. Smolt will be measured from the tip of the snout to the tail fork to the nearest mm. (Appendix A3). Excess water will be removed from the smolt before weighing by using a paper towel as a blotter. Individual smolt weights will be measured to the nearest 0.1 g. A scalpel will be used to remove 5-10 scales from the preferred area of the fish (Appendix A3). The scales will be mounted on a glass slide as shown in Appendix A4. Scales from five fish will be mounted on each slide. The left portion of each slide will be labeled with AWL number, sample location, species, date, and inclusive fish numbers that correspond with their place on the AWL form (Appendix A4). After sampling, the fish will be moved to the aerated recovery bucket and held until all smolt are swimming normally. Both the recovery and pre-sampling holding buckets will be covered to minimize stress on the fish.

AWL data will be collected and recorded in a notebook dedicated to smolt sampling. Data will then be transferred to AWL forms. Personnel collecting the data will record their names on the AWL form. Instructions for filling out AWL forms can be found in Appendices A5 and A6.

All data (slides, forms) will be forwarded to the Kodiak area office and reviewed throughout the field season. Keep data and samples updated daily in the event that data must be sent to town on short notice. The crew leader will be responsible for editing all AWL forms for errors prior to sending forms to the Kodiak office.

Common mistakes to avoid include:

1. Poorly mounted scales - Too many scales in a smear or slime and debris present when mounting. The rows of scales should not be too close together to avoid confusing scales from two different smolt.
2. Numbering AWL form improperly - For example, if 40 smolt are sampled in one day (day 1), the AWL numbers should be started at AWL 001 for the first 40 smolt sampled (fish 1-40; 8 slides). The next day will start with AWL 002 (fish 1-40) and so on. If there are not 40 smolt to be sampled for that day, smolt sampled the next day will be started on a new AWL form.
3. Damaged AWL forms - do not bend, fold, tape, staple, etc. these forms. Otherwise, the computer will not read them correctly.

4. Scales removed from one fish contaminating the scale smear of the next fish - wipe the scalpel blade off between each fish sampled.

PHYSICAL DATA

Physical data will be collected daily between 1100 and 1200 hours. Information will be recorded on the *DAILY PHYSICAL OBSERVATION FORM* (Figure 5) and will include water temperature, air temperature, water depth, percent cloud cover, wind direction and velocity, and precipitation. A depth gauge will be placed upstream of the weir to determine the water level on a daily basis.

OTHER REQUIREMENTS

SAFETY

Each employee will receive CPR and First Aid Certifications as required by the ADF&G Standard Operating Procedures (SOP), prior to assignment to the Afognak project. In addition, each employee will review the required sections of the ADF&G guidelines.

Specific guidelines to review include:

Safety Policy Standards

Building Safety

Field Camp Safety

Aircraft Passenger Safety

Emergency Survival Equipment Required in Aircraft

Boating Safety

Vehicle Safety

Laboratory Safety

Small Tool Handling

Firearm and Bear Safety

Project crew leaders will be responsible for providing the necessary equipment and information to field technicians. The ADF&Gs field safety policy will need to be reviewed by each field crewmember prior to field assignment. Each employee is responsible for reviewing the safety training materials.

This field camp is located in bear country and trash produced from this camp will be handled in a responsible manner. All organic matter will be disposed of in the river. All burnable materials will be burned in the barrel on-site. When burning, the barrel will be closely monitored to prevent grass fires. All inorganic or unburnable materials will be shipped to town via the next available chartered plane, and will be doubled-bagged using regular trash bags before the trash is put on the plane.

TRAINING

In addition to mandatory CPR and First Aid training, all field personnel will receive training on Salmon Sampling Protocols in the field. Also, personnel will be trained in proper use of firearms before departing from town or at the field camp.

RADIO SCHEDULE

The Commercial Fishery Division morning radio schedule is from 0800-0845 hours daily and camp personnel will need to be prepared with weir escapement counts for radio schedule on the Single Side Band (SSB) radio. During the smolt season, Kodiak Research office personnel will contact field camps by Satellite phone on the dispatch service at 1300-1315 (1:00-1:15 PM) hours Monday through Friday and at 1900 (7:00 PM) hours on Saturday and Sunday. If contact is necessary at other times, information can be relayed via the Commercial Fishery Management Section schedule at 0800 and 2000 hours. The emergency Coast Guard frequency is **4.125 kHz**.

Instructions on the operation and transmission of the satellite phone is provided in Appendix B. Crew leaders must train crew members in proper use of the satellite phone and SSB radio. In order for crewmembers to become more familiar with operating the radio, the crew leader should have the crew member talk with the Management biologist during 2000 hour radio schedule to pass along weir data. The Afognak camp is located in the southeastern corner of Afognak Island and the coordinates for the site will be provided by the Management Biologist.

AIR CHARTERS

All air charters will be set up through Kodiak office staff. Appropriate information in regard to charters will be relayed through daily radio contact. It is important to contact office personnel when any data, equipment or other freight will be "back hauled" to Kodiak.

REPORTING

Crew leaders will be responsible for recording all of the job activities and compiling biological data. Data forms and a field log will be completed daily. “Rite in the rain" logbooks will be used while collecting data and data will be transferred to data forms after returning to the cabin. Use a number 2 pencil when filling in the AWL forms. Data will be reported to Kodiak staff via satellite phone. Completed data forms will be sent to Kodiak as planes permit. Data that is sent to Kodiak will be properly packaged and labeled. **Data forms (not AWL forms) will be duplicated in case originals are misplaced in transit.**

A one-page report of project activities will be sent to town weekly, or on the next available plane (Appendix C).

CAMP INVENTORY AND CLOSE UP

The Afognak Lake smolt project equipment will be inventoried prior to camp close up. Inventory forms will be provided. Items of high value will be returned to Kodiak and a list will be made of the equipment needed for the next field season. The Salmon Management Biologists will provide direction on properly securing the cabin and out buildings prior to the field crew leaving the camp site for the season.

PHOTO DOCUMENTATION

Crew leaders will be responsible for photo documenting project activities. Specific aspects such as trap installations, weir construction, and other detailed tasks are important to photograph. When possible, ADF&G cameras and film will be used. If, however, State cameras are not available, film will be provided for use with personal cameras. The use of personal cameras is suggested in this case, but not required. The ADF&G will pay for developing film.

TIMESHEETS

Forward timesheets to the KODIAK OFFICE by the 15th and last day of each month! Plan ahead to ensure that timesheets arrive in town on time. To ensure that timesheets are properly filled out, instructions are contained in Appendix D1 and an example of a properly filled out timesheet is provided (Appendix D2). Plan work activities to be completed in a 7.5-hour day; work overtime only if pre-authorized by the project biologist.

Crew leaders should take the time to look over each crewmember's timesheet before sending them to town to ensure that they are properly filled out.

PURCHASING

During the field season, field crews will need additional items (e.g., groceries, fuel, or tools). Small lists can be read over the satellite phone; however, these lists should be limited to just a few items. Blank grocery lists will be sent to the field and the crew leader should remember to send orders in advance to ensure the correct grocery order for the next supply flight. It should also be remembered that the Afognak Lake budget allocates $20/day/person and this allocation will not be exceeded. Crew leaders should track grocery expenses and limit the number of requested specialty items. Plan ahead when requesting fuel for heating the camp. In the past, camps have left stoves on during the day while the crew was working outside. This practice is not acceptable and heating units will need to be turned off, when the cabin is unoccupied.

REFERENCE CITED

Honnold, S.G. and S. Schrof. 2004. Stock assessment and restoration of the Afognak Lake sockeye salmon run. Fisheries Resource Monitoring Program. U.S. Fish and Wildlife Service, Office of Subsistence Management, Fishery Information, Services Division, Final Project Report No. FIS 03-047, Anchorage, Alaska.

Nelson, P.A. and D.S. Lloyd. 2001. Escapement goals for pacific salmon in the Kodiak, Chignik, and Alaska Peninsula/ Aleutian Islands Areas of Alaska. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report No. 4K01-66, Kodiak.

Pollard, W.R., C.F. Hartman, C. Groot, and P. Edgell. 1997. Field identification of coastal juvenile salmonids. Harbour Publishing. Maderia Park, B.C. Canada. 31p.

Schrof, S.T., S.G. Honnold, C.J. Hicks and J.A. Wadle. 2000. A summary of salmon enhancement, rehabilitation, evaluation, and monitoring efforts conducted in the Kodiak management area through 1998. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K00-57, Kodiak.

Nelson P.A., M.J. Witteveen, S.G. Honnold, I. Vinning, and J.J. Hasbrouck. 2005. Review of salmon escapement based on goals in the Kodiak Management Area. Alaska Department of Fish and Game, Fishery Manuscript No. 05-05, Anchorage.

FIGURES

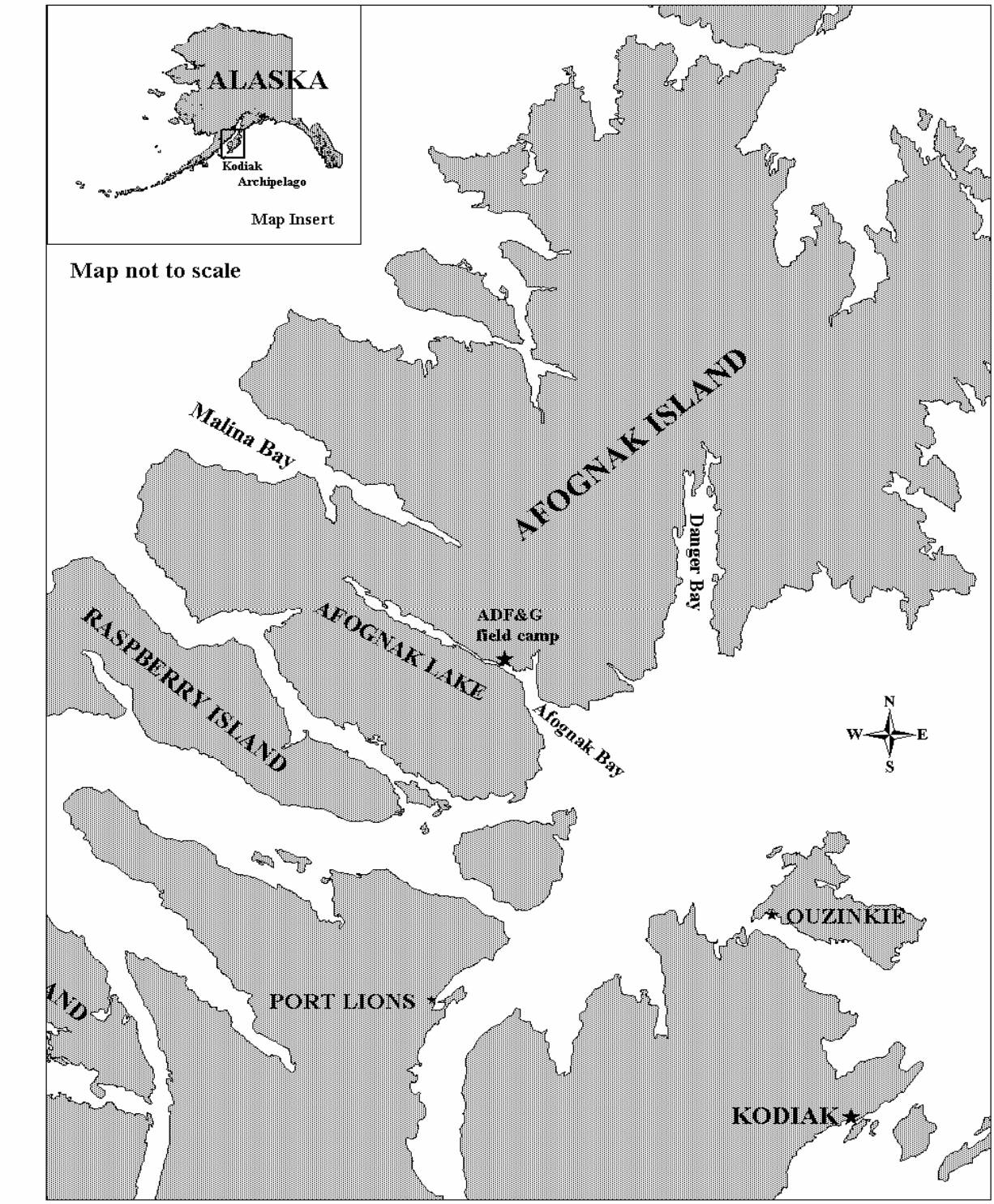


Figure 1.-Location of the ADF&G camp along the Afognak River and Afognak Lake on Afognak Island.

DAILY SMOLT TRAP CATCH REPORTING FORM

page_____of_____

PROJECT: **AFOGNAK LAKE** DATE _____ TRAP LOCATION: **Afognak River**

TIME (military)	SOCKEYE SMOLT (numbers)					OTHER (numbers)						COMMENTS[2]
	CATCH[1]	EXAMINED FOR MARKS	MARKED RECOVERIES	TRAP MORTALITY	LIVEBOX MORTALITY	COHO	PINK	DOLLY VARDEN	STICKLEBACK	RAINBOW	OTHER	
TOTAL												

[1] Catch number includes marked recoveries and mortality. Asterick weight based estimates and attach Catch Weight Worksheet.
[2] To be included in comments: significant water level changes, any difficulties determining marked fish, problems, observations.

Figure 2.-Daily smolt trap catch reporting form.

SOCKEYE SALMON SMOLT SUMMARY FORM

page_____of_____

PROJECT: **AFOGNAK** YEAR: _____ TRAP LOCATION: **Afognak River**

DATE[1]	NUMBER OF SMOLT								COMMENTS:
	CATCH[2]		MORTS[3]	SAMPLED		# MARKED	MARKED RECOVERIES[4]		
	DAILY	CUMULATIVE		DAILY	CUM	RELEASED	DAILY	CUM	

[1] Each date covers a 24-hour period extending from noon to noon and identifies the starting date.

[2] Numbers of fish caught includes marked recoveries. Should equal CATCH: TOTAL on Catch Reporting Form.

[3] Includes both trap and live box mortality.

[4] Reset after each release. Include Daily Marked Recoveries in the Daily Catch because they were not previously counted.

Figure 3.-Sockeye salmon smolt summary form.

SMOLT DYE RELEASE FORM

page_____of_____

DATE (actual): _____ CREW NAMES (Print) _____

PROJECT LOCATION: **AFOGNAK** _____

NUMBER OF FISH COLLECTED: _____ CREW LEADER _____
(from live box) (signature)

	COLLECTION LIVE BOX	DYE TUB	RECOVERY CONTAINER	TRANSPORT BUCKET	STREAM RELEASE
START TIME (military)					
START TEMP (degree celsius)					
END MORTALITY (number of fish)					
OXYGEN SUPPLEMENT O_2 or aerator(A)					

DYE SOLUTION (mixture): _____ DYE (grams); _____ WATER (gallons)

RELEASE SITE LOCATION (distance upstream of trap site, in meters): _____

TOTAL NUMBER OF DYED FISH RELEASED: _____

COMMENTS:

Figure 4.-Smolt dye release form.

DAILY PHYSICAL OBSERVATION FORM

PROJECT **AFOGNAK** YEAR _____ page_____of_____

DATE	TIME	SITE[1]	TEMPERATURE (C)		CLOUD COVER		VISIBILITY	WIND		GAUGE	COMMENTS (i.e., rain, drizzle, etc...)
			Air	Water	Percent (%)	Ceiling	(mi)	Direction	Vel. (kts)	HEIGHT (cm)	

[1] Weir Site = W; Smolt Site = S

Figure 5.-Daily physical observation form.

APPENDIX A. SMOLT AGE-WEIGHT-LENGTH SAMPLING

Appendix A1.-Smolt age-weight-length (AWL) sampling materials and methods.

Annually, outmigrating salmon smolt are sampled for age (scales), weight, and length, by field crews throughout the Westward Region. These data are essential for sound management of the State's salmon resources.

To be useful, data must be recorded on the age, weight, length (AWL) optical scanning (opscan) forms neatly and accurately. In addition, scale samples must be collected and mounted properly to ensure accurate age determination. The following procedures are to be strictly adhered to when sampling juvenile salmon for age, weight, and length.

Complete each section on the left side of the AWL form using a No.2 pencil and darken the corresponding circles as shown in the figures. Make every effort to darken the entire circle as the optical scanner, which reads and records the data from the AWL forms, may not recognize partially filled circles. Be sure to transfer the litho code, located in the left margin on the front side of the AWL form to the back side of the form by darkening the appropriate circles.

Label only one form at a time to avoid a "carbon paper effect" resulting in stray marks. Special care should be used to ensure that stray marks do not occur on either side of the AWL form. Stray marks and scuffed AWL forms can severely hamper scanning. The AWL forms should be treated carefully; the scanner in the Kodiak office cannot read damaged forms. The forms should not be stapled, bent, paper-clipped or folded. Specific instructions for completing AWL forms are listed in Appendix A.5 and an example of an AWL form filled out for smolt sampled can be found in Appendix A.6.

All juvenile salmon AWL data will be recorded in a field notebook dedicated to smolt sampling. These data will then be transferred from the field notebook to the AWL forms. Each species will have its own AWL sample number series that runs sequentially throughout the season. Up to 40 individual fish per smolt day may be included in one AWL sample. If more than 40 fish are sampled in a single smolt day, then multiple AWL numbers will be used on that day. For example, if 70 sockeye salmon smolt are sampled in a single day (day 1), the AWL numbers will be AWL #001 (fish 1-40; 8 slides) and AWL #002 (fish 1-30; 6 slides). The next day will start with AWL #003. Each day’s sample will start with a new AWL number.

Smolt will be sampled as soon as possible after they are captured. The smolt will be transported in clean, 5-gallon gallon buckets to the sampling area. An additional bucket of water will be used as a recovery bucket. Buckets containing smolt will be filled with fresh, clean water and aerated. The buckets will be covered when possible to avoid stress on the fish.

Tricane Methanesulfate (MS-222) will be used to anesthetize the smolt; latex gloves will be worn to prevent direct exposure to the anesthetic. The use of this chemical will be demonstrated by experienced personnel. A small amount (approximately 1 g) of MS-222 and a small amount of baking soda will be dissolved in approximately 2 L of cold water. The amount of anesthetic used will vary depending on the water temperature, freshness of the chemical, and size of the smolt. A few smolt will be placed in the anesthetic solution until subdued to a point where they can no longer flex their axial musculature but can still ventilate their gills. The concentration of the solution should be such that it immobilizes the fish in 2-3 minutes. After the fish are anesthetized, it is important to sample them quickly and place them in a recovery container to prevent mortality.

-Continued-

After the smolt have been immobilized, excess water will be gently removed from the fish using a paper towel or a wet sponge as a blotter. Place the fish on its right side to sample the left side. Measure smolt length, to the nearest mm, from tip-of-snout to tail fork (Appendix A.3). Record length by blackening the appropriate column circles on the front side of the AWL form. When collecting length data, take care to ensure that each length corresponds to the appropriate scale smear mounted on the slide, as length-at-age is evaluated for each sample. Weigh each smolt to the nearest 0.1 g, and record the weight by blackening the appropriate column circles on the back side of the AWL form.

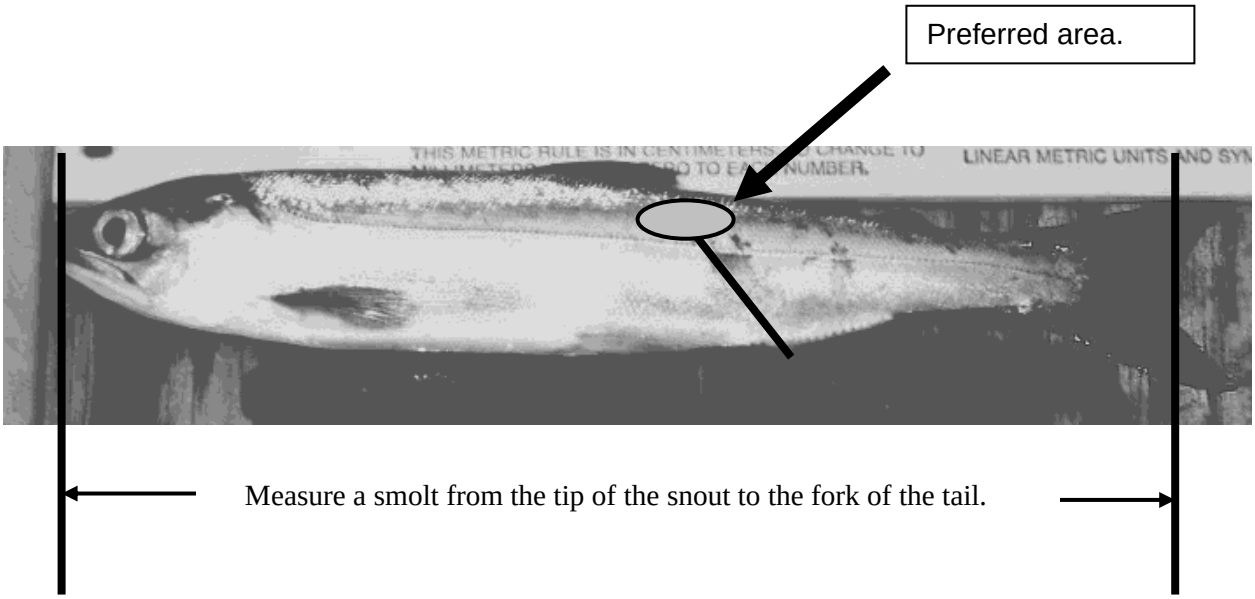
On salmon species, the preferred scale is located where a straight line between the posterior insertion of the dorsal fin and the anterior insertion of the anal fin crosses the second scale row dorsal to the lateral line. In smolt, the area directly around this scale is considered the preferred area (Appendix A.3). If scales are not present in this area then scales should be taken from the secondary location, which is the same area on the right side of the fish. A scalpel will be used to remove 5-10 scales from the preferred area. These scales will be mounted on a glass slide using a probe to position the scales. Scales from five fish will be mounted on each slide. The scalpel will be wiped clean of scales and slime between each fish. A diagram of a slide with scales mounted correctly is located in Appendix A.4.

The left portion of each slide will be labeled with AWL number, sample location, species, date, and inclusive fish numbers. A diagram of a properly labeled slide is located in Appendix A.4. After sampling, fish will be held in a recovery container until they are swimming normally and then released downstream of the trapping location. When the slides are completed, return them to the box in order by AWL # and fish #. Label the slide box on top with the information listed in Appendix A.4.

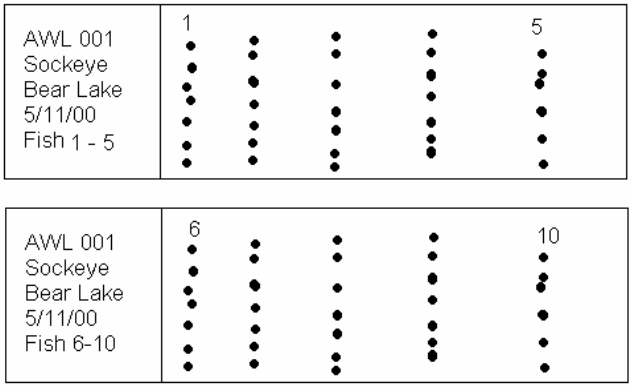
Appendix A2.-Sampling weeks and associated calendar dates.

Week	Calendar Dates	Week	Calendar Dates
1	01-Jan to 03-Jan	28	05-Jul to 11-Jul
2	04-Jan to 10-Jan	29	12-Jul to 18-Jul
3	11-Jan to 17-Jan	30	19-Jul to 25-Jul
4	18-Jan to 24-Jan	31	26-Jul to 01-Aug
5	25-Jan to 31-Jan	32	02-Aug to 08-Aug
6	01-Feb to 07-Feb	33	09-Aug to 15-Aug
7	08-Feb to 14-Feb	34	16-Aug to 22-Aug
8	15-Feb to 21-Feb	35	23-Aug to 29-Aug
9	22-Feb to 28-Feb	36	30-Aug to 05-Sep
10	01-Mar to 07-Mar	37	06-Sep to 12-Sep
11	08-Mar to 14-Mar	38	13-Sep to 19-Sep
12	15-Mar to 21-Mar	39	20-Sep to 26-Sep
13	22-Mar to 28-Mar	40	27-Sep to 03-Oct
14	29-Mar to 04-Apr	41	04-Oct to 10-Oct
15	05-Apr to 11-Apr	42	11-Oct to 17-Oct
16	12-Apr to 18-Apr	43	18-Oct to 24-Oct
17	19-Apr to 25-Apr	44	25-Oct to 31-Oct
18	26-Apr to 02-May	45	01-Nov to 07-Nov
19	03-May to 09-May	46	08-Nov to 14-Nov
20	10-May to 16-May	47	15-Nov to 21-Nov
21	17-May to 23-May	48	22-Nov to 28-Nov
22	24-May to 30-May	49	29-Nov to 05-Dec
23	31-May to 06-Jun	50	06-Dec to 12-Dec
24	07-Jun to 13-Jun	51	13-Dec to 19-Dec
25	14-Jun to 20-Jun	52	20-Dec to 26-Dec
26	21-Jun to 27-Jun	53	27-Dec to 31-Dec
27	28-Jun to 04-Jul		

Appendix A3.-Photo of a smolt with the preferred area highlighted.



Appendix A4.-An example of 2 correctly labeled smolt slides representing fish 1 through 10 from a sample collected on 5/11/00.



When the slides are completed, return them to the box in order by AWL # and fish #, and label the slide box on top with the following information:

Location: Bear Lake

AWL Number: AWL 001-003

Beginning and end dates: 6/12-7/13/00

Sockeye Salmon Smolt

Appendix A5.-Procedure for recording salmon smolt age-weight-length data on AWL forms.

Smolt length and weight will be recorded on AWL forms (Appendix A.5). Using a No.2 pencil, complete each section of the left side of the AWL and darken the corresponding ovals.

Fill out each of the following:

Description

Record the following: species, location, year and samplers names (e.g., sockeye smolt, Afognak, 2006, Sagalkin, Schrof).

Card

The AWL forms and corresponding slides are numbered sequentially date throughout the season starting with 001. A new, consecutively numbered AWL form is used each day even if the previous AWL form is not full. There may be a minimum of one fish and a maximum of 40 fish (8 slides) per AWL form.

Species

Refer to the reverse side of the AWL form for the correct one digit code (e.g., sockeye = 2).

Day, Month, Year

Use appropriate digits for the date the fish are sampled.

District

List the district in which the fish were sampled. Consult your area statistical map or project leader for the appropriate district **(Afognak district is 252).**

Subdistrict (Section)

List the subdistrict in which the fish were sampled **(Afognak subdistrict is 34).**

Stream

List the stream in which the fish were sampled. Consult your area statistical map or project leader for the appropriate stream number **(Afognak stream is 342).**

Location

List the location in which the fish were sampled. Consult your area statistical map or project leader for the appropriate stream number **(Afognak location is 034).**

-Continued-

Period

List the period (sample week) in which the fish were sampled (Appendix A.5).

Project and Gear

Refer to the reverse side of the AWL form for the correct code. For example, smolt samples collected in a trap would have a project code of **8** and a gear code of **00**.

Mesh

Leave blank unless specifically instructed by supervisor to do otherwise.

Type of length measurement

Refer to the reverse side of the AWL form for the correct code (e.g., tip of snout to tail fork = **2**). Refer to Appendix A.1.

Number of scales per fish

Fill in the number of scales (smears) collected per fish. For smolt, one scale smear per fish is collected.

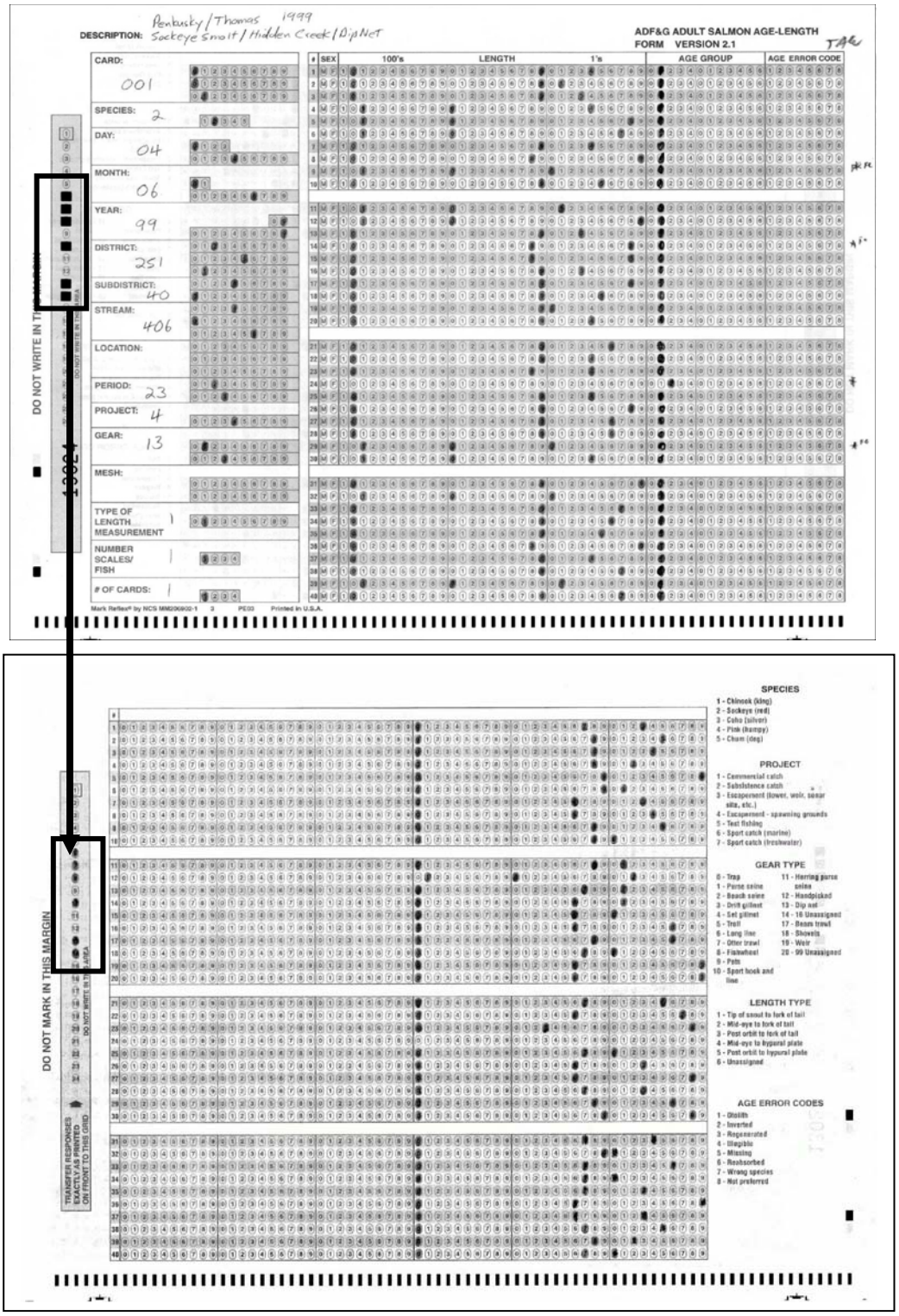
# of cards

# of cards always = 1 (each AWL form is individually numbered).

If possible, keep the AWL forms in numerical order throughout the season and keep all forms flat, dry, and clean. Remember, when sampling smolt, weight data is recorded on the back side of the AWL form and the litho code, located in the left margin on the front side of the AWL form must be transferred to the back side of the form (see Appendix A.4). The litho code is the number unique to each AWL form and copying the litho code from the front to the back of the form indicates weight data was transcribed on the back of the form for the Optical scanning machine to read. Fish slime and water curling may cause data to be misinterpreted by the optical scanning machine. It is the responsibility of the crew leader to make sure that all forms are carefully edited before returning them to their supervisor.

-Continued-

Appendix A6.-Example of an AWL form filled out for smolt sampled (Note: Project code should be 8 not 4).



APPENDIX B. SATELLITE TELEPHONE AND DISPATCH INSTRUCTIONS

Appendix B1.-Satellite telephone and dispatch instructions.

The following information serves as a Policy Statement regarding the allowable uses of ADF&G satellite phones and Instructions on the proper method to successfully set up and operate the satellite phone system assigned to your camp.

These systems are not like standard telephones or cell phones, nor are they like a single side band or VHF radio. Communication is sent through the transmitter to low level satellites, then is beamed down to ground stations, either directly to another satellite phone system or to a switching station linked to standard telephone lines. As such, there is a much higher cost involved in operation than with standard telephone long distance or cell phone charges.

Under NO CIRCUMSTANCES may you use this satellite phone system for personal calls, unless, for each event, you have obtained direct and explicit permission from your supervisor. This does not mean that field crew leaders may grant permission for personal use of this phone. Only the project biologist may give you such permission. ANY DELIBERATE MISUSE OF THIS SYSTEM, SUCH AS MAKING UNAPPROVED, NON-EMERGENCY, OR PERSONAL CALLS, WILL RESULT IN DISCIPLINARY ACTION, WHICH MAY INCLUDE SUSPENSION OR DISCHARGE.

The primary purpose for having this satellite phone is for secure, reliable communications between remote field stations and ADF&G offices (Kodiak, Chignik, Cold Bay, Sand Point, or Port Moller), ADF&G research vessels (Resolution or K-Hi-C), Fish and Wildlife Protection vessels and offices, or other field camps that are similarly equipped. The secondary purpose is for your SAFETY. With these phones you are capable of directly dialing emergency services at any time of the day or night. It is essential that these phone systems are maintained in good working order, are fully charged or hooked to sufficient power at all times, and remain free for official or emergency use.

INSTRUCTIONS

The portable sat phone unit must be charged with power. There is an internal battery pack, and a 12-volt adapter is available in order to hook the phone to a larger battery bank, that may in turn be recharged by generator or solar panels.

Turn the unit on using the power switch in the lower left corner. A green light, just above the switch, should come on indicating that the unit is sufficiently powered. If no light or a red light comes on, you will need to charge the unit, or attach it to your 12-volt battery bank via the appropriate connections.

The back, or top, of the briefcase-like unit is the antenna, and it must be oriented correctly in order to access the receiving satellite. The top of the case should be open and pointed in a general east-southeast direction. You must have a fairly clear line-of sight to the horizon in that direction; this unit will NOT work through walls or mountains. The angle of the antenna should be almost vertical; remember to lock the support arm that attaches the lid to the main body of the unit, along the right side.

This system has two means for calling; a telephone-like handset (for dial in or dial out phone calls), and a push-to-talk microphone (for 'dispatch', unit to unit, calls). All calls made with the handset are billed per minute of use, at an expensive rate. All calls on the 'AlaskaNet' dispatch system, using the microphone, are essentially FREE.

When first turned on, the handset and microphone should become active, with the display panels on the top of the phone handset and microphone lighting up (one LED panel, hopefully the one on the handset, should read SLEEP). The display will show, after a few moments, whether a connection has been established with the satellite, and how strong the signal is (ex. *B05 S* 21). Turn the unit slightly, and raise or lower the lid/antenna slightly until the highest possible signal strength is indicated (normally above 20 but will work down to 8). Lock the lid/antenna in place and do not turn the unit again, until your communications are finished. Once a strong signal is acquired push the "*" button for 2 seconds. Wait until there is a "beep" and the LCD screen displays '00:DN ??', then dial the number.

-continued-

Alaska Dispatch System

Because all calls made on the dispatch system are FREE, this is the method of choice for using the satellite phone units. There are several ADF&G offices, many field camps, and two research vessels on the AlaskaNet dispatch system, as well as Fish and Wildlife Protection/State Troopers offices and vessels, plus many canneries, fishing vessels, and tenders. You should have received a 10-12 page directory with your phone.

First, make sure the unit is turned on, and that there is sufficient power. Set the unit up so that the signal strength is at the maximum for your location. You should see the signal strength on the microphone display (ex. *B05 S* 21), and the handset display should read SLEEP. Once a strong signal is acquired push the "*" button for 2 seconds. Wait until there is a "beep".

On the microphone display, below the signal strength, there should be a query, '00:DN ??'. This is asking you to 'dial' in the 4-digit dispatch number that you wish to call. After you have entered the 4-digit dispatch number of the unit you wish to contact, hold in the microphone key and a connection will be made with the satellite, which will then try to connect with the dispatch number you punched in. IF a connection is made you will hear two beeps ("bird chirps") and the microphone display will read SELF. While continuing to hold in the microphone key, call the station you wish to talk to. USE ALL THE SAME FORMALITIES AS WHEN CALLING ON A SSB RADIO. For example, say "Calling the ADF&G Kodiak Office, Calling the ADF&G Kodiak Office; this is Karluk Weir". When you release the microphone key, the unit will beep again.

BE PATIENT. It will take some time for the signal to go up to the satellite, down to the number you called. It may take the other party some time to get to the microphone and respond (this is especially true for calls to the ADF&G office; supervisors have to walk down to the radio room to respond). When they respond, their 4-digit dispatch number (DN) will show on the microphone display. This is a private conversation, unlike the previous dispatch service.

Just remember to be patient; wait until the other party stops speaking and you hear the unit beep (indicating that they are finished with this portion of their communication), the display should read SELF, and you may key microphone to talk. Then you must again wait for the other party to respond. If the other party is not there, they simply will not answer. If the satellite connection cannot be made, the display will read 'Unable to Connect' or 'Not Available'.

-Continued-

Phone System

DO NOT USE THE HANDSET TO PLACE CALLS UNLESS ABSOLUTELY NECESSARY. All calls made with the handset are billed per minute of use, at an expensive rate. Calls should only be made to supervisors, either when radio or dispatch contact is not possible or when a confidential message needs to be relayed. Calls are made by dialing out, almost like a standard telephone. Punch in the area code and telephone number, then PRESS SEND (button located in the upper right corner of the handset). Because there is a satellite relay, there will be a slight delay between when you speak and when the other party hears you, so be patient.

Note EVERY call in a phone logbook. The system will show you the amount of time you've used on the call, on the LED panel. Note the number called, the date, approximate time, and the length of the call (minutes and seconds). When the call is completed, you MUST push the END button (top right corner of handset buttons), otherwise the system will remain active and YOU will be billed for the time (at almost a dollar a minute). Remember, PRESS END.

If someone calls in to this unit, it will ring, like a standard telephone. Press the SEND button to start the conversation, but remember to PRESS END to finish the call. ADF&G is billed for all calls made using the handset, both the calls you dial out and any calls dialed in.

IN CASE OF EMERGENCY:

If there is a medical emergency, or a real danger to life or health, IMMEDIATELY call the US Coast Guard Rescue Coordination Center at 800-478-5555. Be ready to tell them your name, exact location (latitude and longitude or nearby major landmark), and the exact nature of your emergency. They may question you extensively, so be prepared. There are emergency doctors on-call that can advise you. After the call is completed, immediately call your supervisor, at work or at home, and relay the details of your experience.

If there is an enforcement emergency, use the dispatch microphone to call the Kodiak office or the Alaska State Trooper, Fish and Wildlife Protection (DN 6370).

APPENDIX C. WEEKLY REPORT EXAMPLE

Appendix C1.-An example of a weekly report.

Date: 6-26-04

To: Steve Schrof and Greg Watchers

Fisheries Biologists

Alaska Dept. of Fish and Game

Kodiak

From: Amy Brodersen

Fish Technician III

Alaska Dept. of Fish and Game

Spiridon Lake

Subject: Activity Report for the Spiridon Lake Smolt Project

Smolt Outmigration

As of 6-28-04, total counts of 571,194 live and 1,042 dead smolts have passed through the bypass system averaging 790 smolt/night for the past nine nights.

Cumulative mortality is 0.2%

Smolt numbers have decreased significantly in the past week, but we still have little pulses of fish coming down on stormy or windy evenings. There are a few smolts hanging out in the wings and almost none in the de-watering tanks during the day. We have had several river otters searching the tanks for fish, but they don't seem to be getting very lucky. We are working on making the "Slap Shack" a little more otter proof so that hopefully we won't have too many mortalities while we are away at Telrod Cove.

The water temperature is currently at 13 degrees, and we have a stream height of 46.5 cm. Due to the low water levels, we have not been cleaning parts of the weir so as to keep a higher flow of water running through the cod ends of the traps. So far this method has been working fine.

A.W.L sampling

A total of 240 samples have been collected. On 6-27-04, a sample of 40 smolt had an average weight of 24.5 grams and a length of 10mm.

Safety

Attached old netting to the boards on the trail to reduce the potential for slipping on the boards when hiking to and from the lake with supplies.

Anticipated Activities

We are beginning our switch to monitoring the THA in Telrod Cove, so we will no longer be sampling the smolt, and we will only be hiking up to the smolt camp site every couple of weeks.

APPENDIX D. TIMESHEET INSTRUCTIONS

Appendix D1.-Instructions for filling out a timesheet.

All ADF&G employees must fill out a time sheet biweekly and these timesheets must be turned in to the Administrative staff in Kodiak in a timely manner. Please follow these instructions when filling out your time sheets to avoid payroll problems. When a flight comes out to drop off groceries, or for any other reason, near the end of a pay period, camp personnel need to send in their timesheets. Fill in the time sheet up to the day you send them in and attempt to project your remaining hours worked.

Fill out each of the following on the top of the timesheet:

Pay period: pay periods start on the 1st or 16th of each month and end on the 15th or end of the month (example: June 1-15 or June 16-30).

SSN: your social security number

Name: full name

Division: Commercial Fish

In the actual timesheet table fill in the following:

Day: Monday, Tuesday, etc.

Date: 6/16, 6/17, etc.

Hours worked box: start and stop time in military time

Code 1: fill in the number of hours worked for that day (see example in Appendix D.2.).

Work hours and Code 1 Totals should both equal the sum of daily hours worked. If your time sheet is sent in before the end of the pay period, project your time for the remaining days so you can total your columns.

Charge to Table located on the bottom left hand side of the time sheet should be left blank unless otherwise instructed by your project supervisor.

Comments Table located on the bottom right hand side of the time sheet should be left blank unless otherwise instructed by your project supervisor.

Employee's signature and date: Be sure to sign and date your timesheet.

Crew leaders are responsible for reviewing each crew member's timesheet before sending them to town to ensure that they are properly filled out.

Appendix D2.-Example of a completed timesheet.

ALASKA DEPARTMENT OF FISH AND GAME Time and Attendance Report

Pay period ending: 6/15/2003 SSN: 191-11-1111 Name: Joe Shmo Division Commercial Fisheries

Record times in military format. Example: 6:00 p.m. = 18:00. If you work past midnight, stop at 23:59 and resume at 00:01 the next day.

Day	Date	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Leave Taken	Sea Duty	Standby	Hazard	Code 1	Code 2	Code 3	Code 4	Holiday / Leave	Work Hrs Total
Sun	6/1	8:00	12:00	13:00	16:30											7.50				0.00	7.50
Mon	6/2	8:00	12:00	13:00	16:30											7.50				0.00	7.50
Tue	6/3	8:00	12:30	14:00	18:00											8.50				0.00	8.50
Wed	6/4	8:00	12:00	13:00	16:30	17:00	19:00									9.50				0.00	9.50
Thu	6/5	8:00	12:00	13:00	16:30											7.50				0.00	7.50
Fri	6/6	8:00	12:00	16:00	19:00											7.00				0.00	7.00
Sat	6/7	8:00	12:00	13:00	16:30											7.50				0.00	7.50
Sun	6/8																			0.00	0.00
Mon	6/9	8:00	12:00	13:00	16:30											7.50				0.00	7.50
Tue	6/10	8:00	12:00	13:00	16:30											7.50				0.00	7.50
Wed	6/11	8:00	12:00	13:00	16:30											7.50				0.00	7.50
Thu	6/12	8:00	12:00	13:00	16:30											7.50				0.00	7.50
Fri	6/13																			0.00	0.00
Sat	6/14																			0.00	0.00
Sun	6/15	8:00	12:00	13:00	16:30	17:00	18:30									9.00				0.00	9.00
																				0.00	0.00
TOTALS														0.00	0.00	94.00	0.00	0.00	0.00	0.00	94.00

EXAMPLE

	Charge to:		
	Notation	CC/LC	%
1			100%
2			
3			
4			
		Total	100%

	Comments		Comments
6/1		6/9	
6/2		6/10	
6/3		6/11	
6/4		6/12	
6/5		6/13	
6/6		6/14	
6/7		6/15	
6/8			

We certify that the information provided above is true and correct.

Joe Shmo Date: 6/15/03
Employee's Signature

Date:
Supervisor's Signature

Date:
Approving Officer Signature

Leave Use Codes

H=Holiday	X=Comp Ann
S=Sick	Y=Comp Pers
A=Annual	C=Court
P=Personal	L=LWOP

**** Premium Pay Codes (PPC)**

110 - Sea Duty	250 - Straight Time
206 - Hazard	251 - Overtime
211 - Standby	

Holiday, Leave, Overtime and Premium Pay Overrides

**Codes	Hours	CC/LC
Leave & Holiday	0.00	No code needed for Leave & Holiday

Ver. 1.9.4
Revised 2/20/99