



PRINCE WILLIAM SOUND GENERAL DISTRICTS 1976 PINK
(Oncorhynchus gorbuscha) AND CHUM SALMON (O. keta)
AERIAL AND GROUND ESCAPEMENT SURVEYS AND
CONSEQUENT BROOD YEAR EGG DEPOSITION AND PRE-
EMERGENT FRY INDEX PROGRAMS

By:
Ralph B. Pirtle
and
Michael L. McCurdy

1980

ADF&G TECHNICAL DATA REPORTS

This series of reports is designed to facilitate prompt reporting of data from studies conducted by the Alaska Department of Fish and Game, especially studies which may be of direct and immediate interest to scientists of other agencies.

The primary purpose of these reports is presentation of data. Description of programs and data collection methods is included only to the extent required for interpretation of the data. Analysis is generally limited to that necessary for clarification of data collection methods and interpretation of the basic data. No attempt is made in these reports to present analysis of the data relative to its ultimate or intended use.

Data presented in these reports is intended to be final, however, some revisions may occasionally be necessary. Minor revision will be made via errata sheets. Major revisions will be made in the form of revised reports.

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PREFACE

The intent of this data report is to consolidate, under one cover, Prince William Sound, Alaska General District annual aerial and ground escapement estimates of pink salmon (*Oncorhynchus gorbuscha*) and chum salmon (*O. keta*) and the consequent egg deposition and pre-emergent fry index programs.

This is the initiation of an annual data report series on Prince William Sound pink and chum salmon spawning escapement, egg deposition, and pre-emergent fry index programs.

Historical pink and chum salmon spawning escapement data can be found in, "Historical Pink and Chum Salmon Estimated Spawning Escapements from Prince William Sound, Alaska Streams, 1960 - 1975". Copies can be obtained by contacting the Alaska Department of Fish and Game Cordova or Anchorage offices.

INTRODUCTION

This report will present, for the Prince William Sound District (Figure 1), pink and chum salmon data gathered on the 1976 adult return. The data, in tabular form, will consist of the following: (1) Aerial and ground escapement estimates, (2) Egg deposition studies, and (3) Pre-emergent fry studies.

It was felt, by the Cordova Department of Fish and Game Commercial Fisheries staff, that the incorporation of these three activities would provide a quick and easy reference for them and other interested persons.

The aerial and ground escapement surveys are by date, district, and stream. The egg deposition and pre-emergent fry studies are by date, stream, and stream sample zone.

Aerial and ground salmon escapement surveys have been conducted in the Sound since the mid-1920's. Egg deposition studies have been conducted since the early 1960's, while pre-emergent fry studies have been in existence since the late 1950's. It was not until Alaska statehood, however, that these programs became fixed and consistent factors in salmon resource management for Prince William Sound.

Past years' data is available at the Cordova area and Anchorage regional offices.

METHODS AND MATERIALS

Aerial Surveys

Prince William Sound General Districts have approximately 680 streams, most of which are used to some extent by spawning salmon. Annual aerial surveys are conducted on about 200 of these streams.

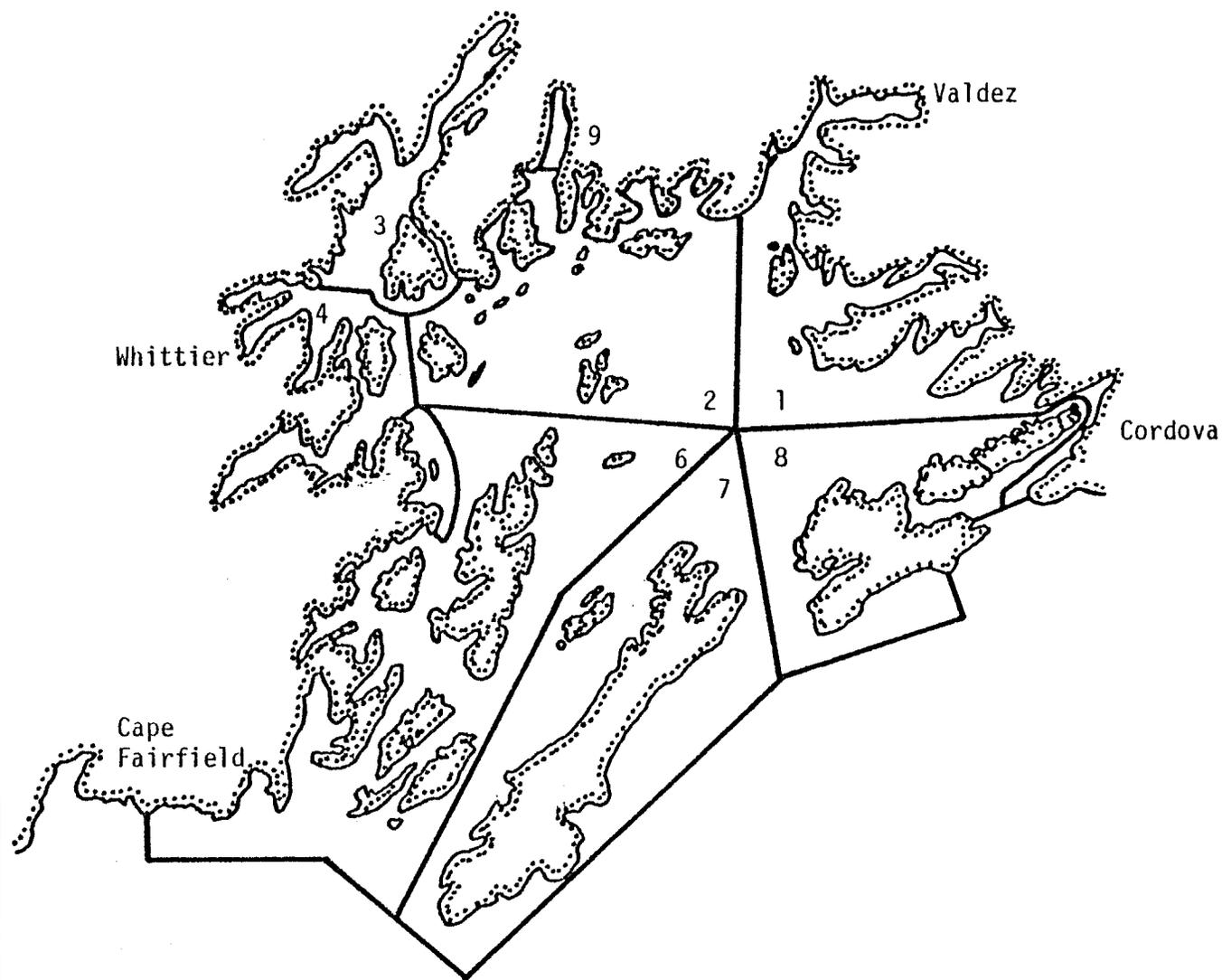
Aerial estimates of live salmon are made in bays, at the mouth of streams, and in the streams¹. Weekly counts are made throughout the season beginning about the first week in July and terminating about the third week in September. Estimates of salmon within closed areas at the head of bays and schooled salmon at the mouth of streams provide management with information on the progress of runs. Counts made in streams provide weekly and cumulative estimates of spawners from which an index of total escapement is calculated at the end of the season.

Various methods of recording aerial counts of live salmon have been used in Prince William Sound, but the method commonly employed is to use a clipboard with pre-printed forms upon which the aerial counts are recorded at the time of observation. Portable recording devices have been used, but were found inconvenient, or the noise of the airplane made the tapes difficult to transcribe in some cases.

¹ During the first survey of the year the dead salmon should also be counted.

Fishing Districts

1. Eastern
2. Northern
3. Coghill
4. Northwestern
5. Eshamy
6. Southwestern
7. Montague
8. Southeastern
9. Unakwik



-2-

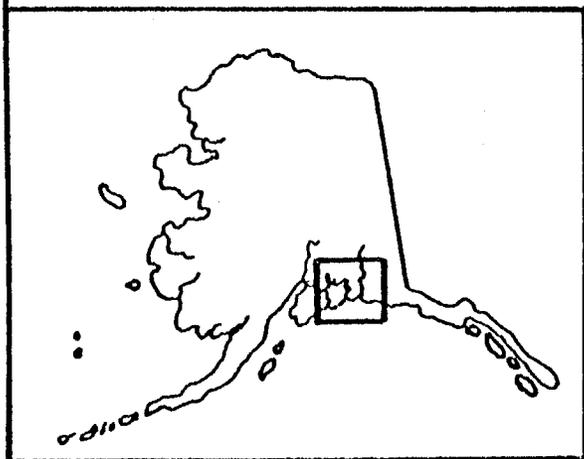


Figure 1. Prince William Sound General Districts commercial fisheries management areas.

The following lists the survey equipment and materials normally used on an aerial survey in Prince William Sound:

- 1) Super Cub (PA-18) on floats, with pilot,
- 2) Pair of polaroid glasses,
- 3) Clipboard for standard size paper,
- 4) Survey forms for the area to be surveyed,
- 5) Pencils,
- 6) Tally counters, (2),
- 7) Float coat or equivalent,
- 8) Emergency location beacon, and
- 9) Prince William Sound stream numbered chart.

A super cub (PA-18) with floats is used almost exclusively for aerial surveys of Prince William Sound streams. Survey flight elevations vary from about 250-500 feet depending upon conditions. Time of surveys is selected during low tide periods, and flights are done during mid-day when possible. Due to the variable coastal climate it is usually necessary to make aerial counts as weather permits, especially during the peak of the season.

Aerial counting is not attempted until at least 2 days following heavy rainstorms because the water becomes discolored, and reliable counting is not possible.

Most of the streams in Prince William Sound are small with spawning confined to a few hundred yards above high tide, but in a few streams spawning may extend upstream as much as 3 to 4 mi. With the smallest streams, a count is made by simply flying across the mouth, but in most cases the stream is approached from the mouth and counting is done first upstream and then downstream with the highest count being recorded.

Depending upon the density of the spawning population, the numbers of salmon are estimated in groups of tens, hundreds, or thousands. Previous ground counting experience and knowledge of the stream helps to improve accuracy. To gain confidence and to check the accuracy of aerial counts, the observer should make both aerial and ground counts of several streams. Aerial counts are compared with counts made by foot survey crews to check species composition. Aerial counts in large streams are probably more accurate than ground counts with ground counts being more accurate on smaller streams.

For species composition an estimate is made in a section of stream and applied throughout the stream where both pink and chum salmon occur. Sometimes it is necessary to obtain a total count while flying upstream, and then estimate the species composition while flying downstream. During cer-

tain times of the year Dolly Varden char (*Salvelinus malma*) are present in large numbers in some streams, and most of the time they are readily discernable; however, when large numbers of both salmon and char are present in pools they may be incorrectly counted as salmon. A check with ground counts may reveal this, or previous experience may offer clues to the presence of other species. When surveying is continued into September some streams contain coho salmon (*O. kisutch*), but they are easily distinguished from other species except in crowded pool areas. Here again, a check with ground counts or previous knowledge is used to separate species.

The greatest problem with species separation is encountered during years when individuals of both species, pink and chum salmon, are of similar size; for example, years when pink salmon are large and chum salmon are small. In this situation it is necessary to obtain species composition by ground counts. It is found from aerial survey counts that the most numerous species usually overshadow the less abundant species resulting in overcounts of the abundant species and undercounts of others.

Survey notes are recorded on prepared forms which have the format as shown on Figure 2. The format includes a listing of the streams by number and name, and blank columns for stream, mouth, and bay counts for pink salmon, chum salmon, and other species, and a remarks column. Under the remarks column such information that may be pertinent to management or which may help other divisions is recorded; such as number and distribution of seine boats, number and distribution of sport boats, counts of bears by species, counts of eagles, and counts and location of eagle nests.

After the aerial survey is done, or as soon as convenient, the original salmon counts for pink and chum salmon are transferred to a master copy for that year. Corrections, if necessary, are made by comparison with ground counts. Corrections are made as soon as possible and totals by week for each regulatory district are kept current. Totals are compared with previous years to determine if regulatory action is necessary. Weak or strong areas in the runs are usually easily identified by comparison with previous years.

At the end of the season the weekly counts are used to produce an index of total escapement for pinks and chums. In calculating escapements the method used is as follows:

- 1) Ground survey counts are used in preference to aerial counts.
- 2) Ground and aerial counts are used in preference to interpolations.
- 3) If no surveys have been made during the previous week an interpolative count of one-half the next following week will be given.
- 4) If an interpolative count is added between 2 weeks when surveys are made, the count will be one-half of the total of adjacent weeks.
- 5) If no surveys have been made for 2 weeks or more, an estimate of escapement based upon the relationship between this and adjacent streams in past years is used.

AERIAL SURVEY

EASTERN DISTRICT

Date: _____ Depart: _____ Return: _____ Gen. Vis.: _____

Airplane: _____ Pilot: _____ Observer: _____ Remarks: _____

Stream No.		PINKS			CHUMS			OTHER			REMARKS
		Stream	Mouth	Bay	Stream	Mouth	Bay	Stream	Mouth	Bay	
5	Eccles Creek										
11	Humpy Creek										
21	Rogue Creek										
23	Chase River										
36	Sheep Creek										

Instructions

1. Date: Record on each page the date the aerial survey was conducted.
2. Depart, Return: Record the time of departure and the time of return. This information need only be recorded on one page.
3. Gen. Vis.: This space is to record general visability and should be entered on each page, eg. excellent, good, fair, or poor.
4. Airplane: Enter type of airplane used on the survey, eg. PA-18.
5. Pilot: Enter pilot's name.
6. Observer: Enter observer's name.
7. Remarks (title space): Record anything pertinent that may effect survey results.
8. Pinks, chums and other: Enter only counts of live salmon observed to the nearest ten fish in the appropriate column. If dead salmon are recorded be sure they are identified as such. The "other" columns are to be used to record observations of sockeye, coho, Dolly varden or other fish species. Be sure to identify other fish species by name.
9. Remarks (column): To be used for anything pertinent to the particular stream counts or to record observations of mammals, birds, etc.

Figure 2. Aerial survey form used on Prince William Sound pink and chum salmon escapement surveys.

- 6) All counts are rounded off to the nearest 10 fish.
- 7) Counts are based on live fish in streams and not from schooled fish at the mouth or in the bay.
- 8) If a deviation from the above is necessary, a written explanation is given in the escapement calculation master copy book.

Calculations of escapement are from the standardized list of streams, 196 streams for pink salmon and 94 for chum salmon (Table 1). At the end of the season the weekly counts from each stream are totaled and divided by a stream life factor of 2.5 weeks or 4.0 weeks, whichever applies, to determine the total estimated season escapement. A summation of these provides the index of total escapement for Prince William Sound. Stream counts of pink salmon that are divided by the stream life factor of 4.0 weeks are as follows: Millard Creek, No. 115; Cannery Creek, No. 241; Jonah Creek, No. 259; Coghill River, No. 322; and Jackpot River, No. 608.

The final step in annual aerial and ground escapement surveys is the entering of the data onto a standard form (Figure 3) for keypunching. After the data is keypunched onto IBM cards it is put on tapes and entered into a computer to become part of the Prince William Sound salmon data bank.

Ground Surveys

Following is a general breakdown of the survey method used. Upon arriving at the stream the time is noted using military time notation in the salmon stream survey notebook (Figure 4). The stream side offering the least sunlight reflection is used whenever possible. All surveys are conducted using polaroid sunglasses. Spawning estimate counts, by species, are entered in the notebook after each major spawning zone has been surveyed. The major spawning zones now in existence in Prince William Sound are as follows: (1) New Intertidal; (2) New Upstream; (3) Old Intertidal; and (4) Old Upstream. A general breakdown of the zones for surveying purposes is as follows:

- 1) New Intertidal - that area now within the tidal zone. This zone terminates with the commencement of grass and sedge growths or the 12-ft tide level.
- 2) New Upstream - the area of predominantly grass and sedge type vegetation extending up to the appearance of deciduous trees.
- 3) Old Intertidal - that area consisting of grasses and sedge mixed with stands of willow and alder. This area extends upstream to the established climax forest of coniferous trees.
- 4) Old Upstream - that area of the stream which courses through the climax forest of the area (spruce and hemlock).

Air and water temperatures are recorded in degrees Centigrade to the nearest one-half degree with the air temperature taken in the shade, and the water temperature taken in an area of the stream that is out of the influence of salt water.

Table 1. Listing, by stream number, of Prince William Sound pink and chum salmon survey index streams¹.

Eastern District

2, 5, 8, 11, 19, 20, 21, 23, 35, 36, 37, 41, 45, 46, 48, 51,
52, 54, 56, 71, 72, 73, 76, 80, 83, 87, 88, 89, 92, 93, 94,
99, 106, 107, 114, 115, 116, 117, 120, 121, 123, 127, 129,
131, 133, 137, 143, 145, 148, 152, 153

Northern District

213, 214, 216, 217, 221, 224, 227, 229, 234, 241, 258, 264,
265, 276, 277, 278, 279, 282, 283

Coghill District

303, 307, 310, 314, 322

Northwestern District

414, 417, 421, 424, 425, 428, 430, 432, 435, 450, 451, 454,
455, 458, 469, 471, 476, 479, 480, 484, 485, 493, 495, 498

Eshamy District

506, 508, 510, 511, 515

Southwestern District

601, 602, 603, 604, 608, 610, 611, 612, 613, 621, 628, 630,
632, 633, 634, 636, 653, 655, 656, 661, 665, 666, 670, 672,
673, 676, 677

Montague District

702, 703, 707, 710, 711, 717, 718, 719, 722, 724, 725, 726,
738, 739, 740, 741, 744, 745, 746, 747, 748, 749, 752, 753,
754, 758, 759, 766, 770, 771, 774, 775, 788

Southeastern District

805, 806, 807, 810, 811, 812, 815, 817, 818, 821, 827, 828,
829, 831, 833, 834, 835, 836, 837, 839, 844, 847, 849, 850,
851, 856, 857, 858, 861, 862, 863

¹ Underlined streams are chum salmon index streams.

SALMON STREAM SURVEY FORM

SALMON STREAM SURVEY
NOTEBOOK S-359

Stream No. _____ Stream Name _____

Date _____ 19 ____ Observer(s) _____

Air Temp. _____ °C Stream Temp. _____ °C

Time _____ Hr.

Section	Category	Pink	Chum
New Intertidal	Live		
	Dead		
	Total		
New Upstream	Live		
	Dead		
	Total		
Old Intertidal	Live		
	Dead		
	Total		
Old Upstream	Live		
	Dead		
	Total		

Remarks: _____

Figure 4. Cover title and page example of salmon escapement field survey booklet used on Prince William Sound stream foot surveys. (Booklet printed by the J. L. Darling Corporation.)

Salmon counts are taken with the use of two "tally whackers" (Veeder-Root blood cell counters) that are mounted in tandem with common reset shaft. Fish species other than pink and chum salmon are noted in the survey book by number or spawning zone. When possible, estimates of schooled fish at the stream mouth are noted in the remarks column.

The first survey made on the streams at the beginning of the survey schedule include both live and dead fish. Thereafter, only live fish are counted. Fish schooled within the stream are noted as to location and numbers by species.

After the ground survey is done, or as soon as convenient, the original salmon counts for pink and chum salmon are transferred to the master copy book, and calculations of season totals determined in the manner described under aerial counts.

Chum salmon scale samples are collected from spawned out fish with the sample being one-half male and one-half female. The sample schedule is based on brood year escapements by stream and individual stream run timing.

Following is a listing of the survey equipment and materials used to conduct stream foot surveys.

<u>Item</u>	<u>Quantity</u>
Boston Whaler, 13 ft	1
25 hp short shaft outboard motor	2 (1 spare)
Oars and oar locks	1 set each
18 gallon fuel tank	1
6 gallon fuel tank	2
5 gallon plastic fuel containers	3
Outboard engine fuel hoses	2 (1 spare)
Outboard motor safety chain	1
Flotation coats	2
Flotation cushions	2
Anchor	1
Polypropylene rope, 3/8 in diameter	50 ft
Box for rifles on board Whaler	1

Outboard repair kit:

- | | |
|-------------------------------|--------|
| 1) Pliers | 1 |
| 2) Screw driver, medium size | 1 |
| 3) Cotter keys and shear pins | 3 each |
| 4) Spark plugs | 2 sets |
| 5) Spark plug wrench | 1 |

Rifle and/or shotgun with ammunition

One set of survey maps in binder

The above should be present on the boat (with the exception of the spare outboard and extra 5 and 6 gallon fuel containers and/or its occupants while conducting surveys.

The following equipment and material are required for the collection of biological and climatological data.

<u>Item</u>	<u>Quantity</u>
Salmon Stream Survey Notebook S-359	6
Lead pencils, #2 lead	12
Thermometer, centigrade (calibrated)	3 (2 spares)
Veeder-Root counters, tandem mounted	2 (1 spare set)
Polaroid sunglasses	4
Paper clips	1 box
Gummed scale cards, properly mounted	50
Plastic scale cards	100
Rubber bands, heavy duty	20-30
Clipboard, small	1
Umbrella	1
Forceps or needle nose pliers	2

Salmon Egg Deposition and Pre-emergent Fry Studies

The spawning areas sampled in Prince William Sound streams fall into four

main categories: (1) New intertidal zones (NIT), (2) New upstream zones (NUPST), (3) Old intertidal zones (OIT), and (4) Old upstream zones (OUPST). The first two zones, NIT and NUPST, are the result of the 1964 Alaska earthquake which produced large uplift and subsidence areas in Prince William Sound. The last two zones represent the spawning areas used previous to, and in many cases, after the earthquake.

The NIT and OIT zones are sampled on the basis of pre- and post-earthquake flood tide levels. The tide levels sampled are as follows: (1) 6 ft to 8 ft, (2) 8 ft to 10 ft, and (3) 10 ft to 12 ft. All zones are sampled according to stream gradient and spawner distribution, i.e., if the gradient is steep and spawner distribution is confined to a short stream section then only one section is sampled. In some cases zones were eliminated as a result of land subsidence from the 1964 earthquake.

The basic zone sampling section size is up to 100 ft in length. A section for the egg deposition study is sampled starting from the lower left hand corner (looking upstream) and worked to the upper right hand corner. For pre-emergent fry, the sample is started in the lower right hand section and worked to the upper left hand corner. The individual samples are spaced evenly along the sample line. This procedure insures a sample which represents both the length and width of the zone. In some cases zone lengths are less than 100 ft due to a steep stream gradient.

The sampling equipment used is as follows:

- 1) Homelite water pump, Model XLS 1 1/2 - 1A. This pump is mounted on a pipe stand of 1 in outside diameter galvanized pipe. The stand and pump are then attached to a U.S. Army backpack for ease of carrying along a stream bed. A standby pump is brought on the trip in case of breakdowns. Both the intake and outlet of the pump are fitted with a 4 in long by 2 in O.D. piece of pipe stock threaded for a 1 1/2 in brass firehose fitting.
- 2) Intake Hose: 2 in O.D. flexible rubber hose (spiral wire base) 15 ft in length. One end is fitted with a 1 1/2 in I.D. female brass firehose fitting and the other end is fitted with a standard water intake fixture. The intake fixture is wrapped with window screen wire mesh which, in turn, is covered with 1/4 in hardware cloth. Both wrappings are held in place with a screw clamp.
- 3) Output Hose: 1 1/2 x 2 in Conti "Superflex" two braid water hose, 50 ft long. One end of the hose is fitted with a brass firehose fitting (same size as intake hose). The other end of the hose is fitted with a stainless steel Venturi cone (1971 supplier: William Damast; 4329 Dayton North; Seattle, Washington 98103). The Venturi is attached to the hose using a screw clamp.
- 4) Sample Frame: Materials used for construction are (1) 1/4 inch diameter round stainless steel rod; (2) 3/16 in stainless steel hardware cloth; (3) 1/2 x 1/4 in stainless steel strap; (4) 1/8 in mesh, woven nylon net; (5) stainless steel wire; (6) 1 in I.D. garden hose; and (7) white mending twine.

- 5) Accessory Equipment: (1) Two Veeder-Root "Tally-whackers"; (2) one 8½ in diameter kitchen seive; (3) one tablespoon; (4) six 12 x 14 x 5 in plastic tubs; (5) one 2 gallon plastic fuel jug and; (6) one tool bag with: (a) one screw driver, (b) one plug wrench, (c) one pair of pliers, (d) one 8 in adjustable wrench, and (3) C-J-8 spark plugs.

As with salmon escapement estimates the final in-season step in handling egg deposition and pre-emergent fry study is to record the data in the Prince William Sound salmon data bank. Figure 5 depicts the keypunch form and Figures 6 and 7 show field codes.

RESULTS AND DISCUSSION

Aerial and Ground Salmon Escapement Surveys

Weekly estimates from both aerial and ground counts, cumulative weekly total counts, and calculated season totals by stream and district are shown in Appendix A for pink salmon and in Appendix B for chum salmon.

A recapitulation summary by week, by district and total for Prince William Sound is given at the end of the district summaries for both pink and chum salmon.

Pink Salmon:

The estimated total of 865,600 pink salmon in 1976 is 43% below the desired upper escapement range of 1.5 million and 31% below the desired minimum range of 1.25 million pink salmon for Prince William Sound spawning streams. Pink salmon returns in 1976 were skewed to the northern and eastern portions of Prince William Sound resulting in poor spawning escapement distribution to other districts. The Eastern District was the only district to receive a desired spawning escapement level. Other escapement levels ranged from fair in the Northern District to disastrous in the Montague District which received an estimated 12,260 pink salmon or 11% of the desired minimum escapement.

Pink salmon escapement distribution in 1976 reflects the relative production of the districts to the total run with the Eastern District producing over 50% of the returning pink salmon. One stream, Duck River, in a late August special fishery produced a catch of approximately 300,000 pink salmon and an escapement of 124,000. The Montague District, on the other hand, was closed to fishing all season and escapement returns indicate that natural mortality rates were exceedingly high with returns approximately one for every nine spawners. Fishing mortality can be dismissed as the cause for low returns as previous tagging experiments show that salmon enroute to the Montague District are not available in other district fisheries.

Table 2 gives the 1976 Prince William Sound estimated pink salmon spawning escapement by district and comparisons with desired escapement ranges.

INSTRUCTIONS

PINK AND CHUM SALMON DATA FORM

General Instructions

- 1) When the same number is to be used throughout a column or portion of a column, draw a vertical arrow.
- 2) Leading zeros and zero entries need not be entered, but numbers should be right centered.

Specific Instructions

- Field 5 Study Area (Numerical order for area sampled within a stream).
- Field 6 Stream Area (Type of area sampled - 1 for UPSTREAM with no intertidal, 2 for DOWNSTREAM with intertidal, 3 for INTERTIDAL, 4 for OLD UPSTREAM, 5 for NEW UPSTREAM, 6 for OLD INTERTIDAL, and 7 for NEW INTERTIDAL).
- Field 7 Temperature (With decimal for Centigrade and without decimal for Fahrenheit).
- Field 8 Crew Leader (0 for UNKNOWN, 1-199 for Southeastern, 200-299 for Prince William Sound, 300-399 for Cook Inlet, 400-499 for Kodiak, 500-599 for Chignik and Alaska Peninsula, 600-699 for A-Y-K Region).
- Field 9 Dig type (0 or 1 for spring pre-emergent and 2 for fall egg deposition).
- Field 10 Location (Sample subgroup of same riffle or group of similar riffles).
- Field 11 Sample Point (Non-identical numbered samples within a location).
- Field 14 Percent Absorbed (Average percent fry sac absorbed for pink salmon).
- Field 19 Percent Absorbed (Average percent fry sac absorbed for chum salmon).
- Field 22 Remarks (1 for Sculpin, 2 for Flatworms, 3 for Roundworms, 4 for Dolly Varden, 5 for Copepods, and 6 for Flounders).
- Field 23 Condition (1 for NOT SAMPLED DUE TO SNOW, 2 for NOT SAMPLED BECAUSE DRY, and 3 for NOT SAMPLED DUE TO WEATHER).

Figure 6. Codes and explanations for fields 5-11, 14, 19, 22, and 23 on the pink and chum salmon egg and pre-emergent fry data form.

Pre-emergent Fry and Egg Deposition Pink and Chum Salmon

Data Form Codes

Field No. 10 - Location Code 1/

NIT 4' - 6'	=	010
NIT 6' - 8'	=	020
NIT 8' - 10'	=	030
NIT 10' - 12'	=	040
NIT 12' - 15'	=	050
NUPST	=	060
OIT 4' - 6'	=	070
OIT 6' - 8'	=	080
OIT 8' - 10'	=	090
OIT 10' - 12'	=	100
OIT 12' - 15'	=	110
OUPST	=	120

Field No. 10 - Sublocation code for far right digit in the above location Codes.

- 0 = Where only one channel exists in sample location.
- 1 = Right hand channel facing upstream.
- 2 = Left hand channel facing upstream.
- 3 = Second (2nd) sample zone in same location.
- 4 = Third (3rd) sample zone in same location.
- 5 = Fourth (4th) sample zone in same location.

1/ If a sample location is known as OIT 9' the code would be the same as OIT 8' - 10'. This applies to all such sample location labels.

Figure 7. Codes for Field 10 on the pink and chum salmon egg and pre-emergent fry data form.

Table 2. Prince William Sound estimated pink salmon spawning escapement and escapement goals by district, 1976.

District	Escapement	% of Minimum	Desired Range
Eastern	446,470	110	403,800 - 484,500
Northern	123,380	88	140,000 - 168,000
Coghill	20,450	45	262,500 - 315,000
Northwestern	96,280		
Eshamy	5,500	45	112,500 - 135,000
Southwestern	45,700		
Montague	12,260	11	106,250 - 127,500
Southeastern	115,560	51	225,000 - 270,000
TOTAL	856,600	69	1,250,000 - 1,500,000

Chum Salmon:

Chum salmon returns of about 462,000 in 1976 were approximately 25% of the forecast point estimate of 1.8 million. Resulting spawning escapements were very poor which was aggravated by the fact that the purse seine fishery is managed primarily to accommodate the largely predominant pink salmon runs.

The total estimated chum salmon spawning escapement of 83,890 in 1976 is 67% below the desired upper escapement range of 250,000 and 59% below the minimum range of 200,000 for Prince William Sound spawning streams. Some streams in the Northern District received adequate escapement levels with the overall Northern District receiving 72% of the desired maximum range and 90% of the desired minimum range. Also, the Northwestern and Coghill Districts received fair spawning escapements of chum salmon with the Coghill River receiving the bulk for these districts. Chum salmon spawning escapements to other districts was a complete disaster in 1976 with no observed escapement in the Eshamy and Montague Districts and a bare minimal escapement recorded for the Southwestern and Southeastern Districts.

Similar to pink salmon, the escapement distribution of chum salmon reflected the relative production of the districts to the total run with the eastern, northern, and northwestern areas of Prince William Sound producing over 90% of the returning chum run.

Table 3 shows the 1976 Prince William Sound estimated chum salmon spawning escapement by district and comparisons with desired escapement ranges.

Salmon Egg Deposition Index

The pink and chum egg deposition project was initiated on 22 October and terminated on 28 October 1976. Due to very low, or nonexistent, escapements in many streams only 11 streams were indexed. Results of the program are shown in Appendix C.

Comparisons with past data (Table 4) shows that about one-half of the streams were above average in total number of live pink salmon eggs and fry while the remaining one-half were below average. As might be expected, nearly all the above average streams were located in the Eastern and Northern Districts where escapement was good in 1976.

With the exception of Blackbear Creek, No. 276, chum salmon made a poor showing throughout the Sound. Again, this was expected due to the poor escapement levels throughout the Sound.

Salmon Pre-emergent Fry Index

The pink and chum salmon pre-emergent fry index program was initiated on 7 March and terminated on 18 March 1977. A total of 32 streams were indexed. Results of the program are shown in Appendix D, while Table 5 shows a comparison of even-year data (1966-1974) with 1976 brood year.

Overall, egg to fry survival of the 1976 brood was exceptionally good considering the overall low level of escapement. In addition, the condition

Table 3. Prince William Sound estimated chum salmon spawning escapement and escapement goals by district, 1976.

District	Escapement	% of Minimum	Desired Range
Eastern	17,870	20	87,200 - 109,000
Northern	26,520	90	29,400 - 36,750
Coghil-Northwestern	38,460	79	48,600 - 60,750
Eshamy-Southwestern	90	2	3,400 - 4,250
Montague	0	0	11,400 - 14,250
Southeastern	950	4	20,000 - 25,000
TOTAL	83,890	41	200,000 - 250,000

Table 4. Comparison of even-year pink salmon and all years chum salmon average egg deposition indices for brood years 1966-1974 with brood year, 1976¹.

Stream Name and Number	Pink Salmon		Chum Salmon	
	Average ²	1976 ²	Average ²	1976 ²
Koppen Creek, #35	11,567	10,572	1,814	114
Control Creek, #52	7,465	10,219	319	0
Indian Creek, #117	9,003	10,370	1,101	97
Sawmill Creek, #133	2,451	5,432	728	0
Cannery Creek, #241	4,084	5,136	- ³	-
Blackbear Creek, #276	2,604	4,824	543	599
Meacham Creek, #430	3,287	2,432	162	120
Mink Creek, #480	9,146	6,947	223	0
Erb Creek, #604	2,636	654	93	0
Constantine Creek, #815	5,074	4,354	1,503	0
Bernard Creek, #861	5,232	5,976	- ³	-

¹ Egg deposition index was not conducted in 1975.

² Live eggs and fry combined. Does not include dead eggs and fry.

³ Chums not present in this stream.

Table 5. Comparison of even-year pink salmon and all years chum salmon live pre-emergent fry indices for brood years 1966-1975 with brood year 1976.

Stream Name and Number	Pink Salmon		Chum Salmon	
	Average	1976	Average	1976
Humpback Creek, #11	66	0	- ¹	-
Koppen Creek, #35	2,397	1,531	827	7
Control Creek, #52	2,843	4,809	331	0
Whalen Creek, #80	139	551	111	0
Sunny River, #87	244	367	1,087	40
Gladhough Creek, #106	1,237	1,440	- ¹	-
Duck River, #116	3,177	5,321	2,101	133
Indian Creek, #117	2,110	8,651	1,204	1,091
Gregoroff Creek, #123	1,402	2,075	859	0
Gorge Creek, #131	1,824	3,269	557	648
Sawmill Creek, #133	1,742	3,281	711	0
Stellar Creek, #153	3,685	6,160	1,768	1
Eickelberg Creek, #221	918	932	45	0
Cannery Creek, #241	1,159	1,176	- ¹	-
Unakwik Creek, #265	2,070	2,337	4	0
Blackbear Creek, #276	1,109	1,829	304	717
Mill Creek, #421	244	2,982	584	37
Meacham Creek, #430	2,169	2,023	232	0
Paulson Creek, #455	826	405	401	0
Mink Creek, #480	3,137	5,295	171	182
Erb Creek, #604	855	776	21	0
Totemoff Creek, #621	2,836	2,148	9	0
Bainbridge Creek, #630	520	1,111	1	0
Claw Creek, #632	373	0	- ¹	-
Falls Creek, #673	1,390	653	- ¹	-
Hayden Creek, #677	184	0	- ¹	-
Cabin Creek, #747	871	2,176	- ¹	-
Constantine Creek, #815	2,209	190	472	0
Cook Creek, #828	1,038	1,110	232	0
Canoe Creek, #850	1,287	558	84	0
Bernard Creek, #861	1,494	532	- ¹	-

¹ Chum salmon not present in this stream.

of the fry looked to be good at the time the index was taken. Estimated yolk sac absorption rates ranged from 40 to 95%. Considering the warm winter conditions, the lower rates of yolk sac absorption suggests that spawning in some streams was later than normal. That this occurred is substantiated, on a small scale, by the finding of live pink salmon eggs in Gorge Creek, No. 131, located in Valdez Arm. This stream is virtually intertidal. Available spawning gravel in this stream is totally restricted to the intertidal area.

The effects of the large amount of rain in the winter of 1976-77 seemed to have little physical effect on streams. The only streams that were visited to have been visibly changed were Constantine Creek on Hinchinbrook Island and Stellar Creek in Valdez Arm. The change in Constantine Creek consisted of a shift to the right (looking upstream) and a straightening of the channel beginning at the current 9-ft tide level and extending downstream to approximately the current 5-ft tide level. The channel shift in Constantine Creek resulted in a drying-up of most of the 9-ft tidal area which had received most of the egg deposition. Additionally, it appeared that scouring did occur in this stream as very few eggs were recovered from an estimated pink escapement of 21,960 fish. The change that occurred in Stellar Creek resulted in the enlargement of the right channel (looking upstream) in the current 8 to 12-ft tide level. Scouring in this stream, however, did not appear to have any effect on salmon production. The probable reasons for this is the nature of the stream bottom which consists of large cobble and the enlargement of the right channel which apparently reduced the effect of the high stream flow.

Two streams that definitely suffered scouring was Claw Creek, No. 632, in Whale Bay and Hayden Creek, No. 677, on the west shore of Latouche Island. The channel in Claw Creek shifted to the right. Hayden Creek suffered no channel shifts but apparently experienced a complete washout.

With the exception of a few bright spots chum salmon made a poor showing.

The results of this pre-emergent fry index will be experienced in 1978 (pink salmon) and 1980 (chum salmon).

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APPENDIX A

Pink salmon escapement estimates by stream and district, cumulative weekly totals by stream, and calculated season total by streams and district.

A recapitulation by district, by week and season total estimated spawning escapement is given at the end of district totals.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976.

I EASTERN DISTRICT		WEEK ENDING DATE													Cal. Weekly Totals	Cal. Season Totals
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25	Cal. Weekly Totals	Cal. Season Totals
2	Hartney Creek					90*	180*	350	480*	610*	860	430*	220*	110*	3330	1330
5	Eccles Creek							0	30*	60*	110	60*	30*	20*	310	120
11	Humpy Creek				250	350	550	310	250*	190	100*	50*	30*	20*	2100	840
19	Twin Lakes Ck.					0	0	0	0	90	500	1100	1000*	500*	3190	1280
20	Spring Creek					0	0	0	0	0	10	0			10	10 <u>1/</u>
21	Rogue Creek					10	10*	0	0	100	50	0			180	70
23	Chase River				180*	370	100	0	50	50	200	0			950	380
35	Koppen Creek@	0	100	5500	10000	7680	8000	4400	6000	3110	6000	2000	1000*	500*	53990	21600
36	Sheep River		0	750*	1500	1600	1500	1300	1200	1400	2000	1100	550*	280*	13180	5270
37	Allen Creek			0	0	100	200	300	250	440	900	200	100*	50*	2540	1020
41	Pass Creek					0	0	0	0	510	800	800	600*	300*	3010	1200
45	Plateau Creek					0	0	0	0	50	500	200	100*	50*	900	360
46	Comfort Creek			50*	100*	200	200	0	500	1500	2000	100	50*	30*	4730	1890
47	S. Shore Pt. Gravina**								200		2000	500				
48	Beartrap Creek@	0	0	200	2500	1390	1000	1610	2800	9930	14000	8000	7000*	3500*	51930	20770
49	Cataract Creek					0	0	0	0	300	300	550	500*	250*	1900	760
50	Gravina River**							500								
51	Olsen Creek@	0	0	2000	4000	11050	8000	6490	6500	7560	7000	9500	10000*	8000*	80100	32040
52	Control Creek@	0	0	300	5000	5050	4500	4910	3500	5480	6500	8000	8000*	6000*	57240	22900
54	Carlson Creek		0	0	250	550	400	560	450	600	500	150	80*	40*	3640	1460
56	St. Matthews Ck.			0	500	570	900	950	1000	3170	3200	4000	3000*	2000*	19290	7720

* Interpolations. _____ Ground counts. @ Also surveyed 6/26. Total count 0. ** Not included in totals.

1/ Aerial count of 9/4 used as total escapement.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

I EASTERN DISTRICT		WEEK ENDING DATE													Cum. Weekly Totals	Cal. Season Totals EW±2.5
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25		
120	Donaldson Creek		0	0	220*	<u>450</u> 200	400	<u>150</u>	150	<u>710</u> 450	600	900	800*	700*	5080	2030
121	Levshakoff Creek	0	0	0	1500	<u>1890</u> 1200	1500	<u>1200</u>	1500	<u>1860</u> 1100	2000	900	450*	230*	13030	5210
123	Gregorieff Creek	0	0	0	2000	<u>1150</u> 1500	2000	<u>960</u>	1200	<u>1930</u> 900	2200	700	350*	180*	12670	5070
127	Naomoff River				1500*	3000	2500	4700*	8000	5500	4500	2500	1250*	630*	34080	13630
129	Vlasoff Creek			0	600	1200	1000	1800*	2500	1500	3500	1800	900*	450*	15250	6100
131	Gorge Creek	0	0	0	500	<u>800</u>	2000	<u>250</u>	1100	<u>250</u>	120*	60*	30*	20*	5130	2050
133	Sawmill Creek\$\$			50	500*	<u>1000</u>	2000	<u>45</u> " 2100*	2200	<u>440</u>	220*	110*	60*	30*	8710	3480
-26- 137	Low River			100	100*	200*	200	400*	800*	400*	200*	100*	50*	30*	2580	1030
141	**											20				
142	**											<u>10</u>				
143	Siwash Ck.**											<u>5</u>				
144	**											<u>0</u>				
148	Mineral Flats				300*	600*	1100	1250*	1400	2800*	1400*	700*	350*	180*	10080	4030
152	Twin Falls Creek			0			130*	250*	500	900	3300	800	400*	200*	6480	2590
153	Stellar Creek\$\$@	0	0	600	6000	<u>6060</u> 6500	7800	<u>2160</u> 7200*	6500	<u>2660</u> 7000	7500	3000	1500*	750*	53910	21560
Eastern Totals		0	100	10550	55700	65710	69170	59260	91520	108090	178430	195560	179200	143900	1157190	446470

* Interpolations. Ground counts. \$\$ Aerial survey and interpolations used. ** Not included in totals.
" Survey poor - murky water. @ Also surveyed 6/26. Total count 0.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

II NORTHERN DISTRICT		WEEK ENDING DATE													Cum. Weekly Totals	Cal. Season Totals EW÷2.5
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25		
213	Bench Mark Ck.				50*	<u>100</u>	100	100*	100	<u>80</u>	200	100*	50*	30*	910	360
214	Long Creek		0	0	0	400	200	<u>370</u>	1700	<u>730</u>	4000	600	300*	150*	12220	4890
216	Vanishing Creek		0	0	0	<u>10</u>	50	<u>590</u>	1900	<u>5180</u>	8500	1400	700*	350*	18770	7510
217	Spring Stream			0		0	0	350*	700	3000	5000	1800	900*	450*	12200	4880
218	Billy's Creek			0		0	0		0	0					0	0
220	**										1000	(Total)				
221	Eickelberg Creek					<u>0</u>	0	<u>0</u>	0	<u>30</u>	100	500	400*	200*	1230	490
224	Backyard Creek					<u>0</u>	0	<u>1000</u>	1000	<u>2050</u>	2500	800	600*	300*	8250	3300
227	Granite Creek					0	0	30*	50	1500	2500	2000	2000*	1000*	9080	3630
229	Cedar Creek			0	0	<u>40</u>	0	<u>2020</u>	2000	<u>8880</u>	5500	800	400*	200*	19840	7940
234	Wells River	0	0	0	500*	<u>190</u>	500	<u>1840</u>	11000	<u>13500</u>	12500	2500	1250*	630*	45220	18090
241	Cannery Creek				20*	<u>50</u>	200	<u>300</u>	2000	<u>2500</u>	5000	3000	1500*	750*	17820	4460 <u>1/</u>
259	Jonah Creek			0	5000	<u>4110</u>	10000	<u>4140</u>	8000	<u>1230</u>	3500	1200	600*	300*	45240	11310 <u>1/</u>
264	Siwash River			0	15000	<u>8000</u>	10000	<u>4700</u>	14000	<u>1680</u>	13000	3500	1750*	900*	89650	35860
265	Unakwik Creek				750*	<u>1550</u>	1400	<u>700*</u>	350*	<u>330</u>	1200	600*	300*	150*	7330	2930
276	Black Bear Creek			0	0	<u>700</u>	0	<u>20</u>	1000	<u>1500</u>	1500	350	180*	90*	5190	2080
277	Eaglek Bay E.					<u>0*</u>	0	<u>100*</u>	200	<u>700</u>	150	50	30*	20*	600	240

* Interpolations. _____ Ground counts. ¢ Aerial count used. 1/ Stream life factor 4.0.

** Not used in totals. \$ Interpolation used.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

Stream No.	Stream Name or Location	WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW=2.5	
		7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25
278	Eaglek Bay E.				400*	<u>770</u>	800	<u>630</u>	800	<u>1170</u> 100	450	100	50*	30*	5200	2080
279	Canyon Creek		0				0	1500*	3000	2500	3500	1200	600*	300*	12600	5040
282	Eaglek River Delta						0	250*	500	3000	4000	300	150*	80*	8280	3310
283	Eaglek River Delta							150*	1300	<u>7110</u> 2500	2500	800	400*	200*	12460	4980
Northern Totals		0	0	0	21720	21010	23250	26090	49600	74930	75600	21600	12160	6130	332090	123380

III COGHILL DISTRICT																
303	Triple Creek			300*	650*	<u>1270</u> 500	1000	<u>2320</u>	2000	<u>3670</u> 3700	3500	1200	600*	300*	16810	6720
307	Village Creek			20*	50*	<u>110</u> 0	200	<u>120</u>	250	<u>730</u> 250	550	150	80*	40*	2300	920
310	Golden Lagoon							50	2000*	2000d	0				2550	2550&&
314	Avery River							0	0	0	0	0			0	0
322	Coghill River	0		600*	1250*	2500	3800*	5000*	10000	10000	7000	500	250*	130*	41030	10260 <u>1/</u>
Coghill Totals		0		920	1950	3880	5000	7440	12300	16400	11550	1850	930	470	62690	20450

* Interpolations. _____ Ground counts. d Dead. && Cum. weekly total used as escapement.

1/ Stream life factor 4.0.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

Stream No.	Stream Name or Location	WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW÷2.5	
		7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25
414	Harrison Lagoon			0	330*	<u>670</u> 100	630*	<u>600</u>	600	<u>520</u> 600	350	30	20*	3750	1500	
417	Hobo Creek							0						0	0	
421	Mill Creek			0	10*	<u>10</u> 0	1230*	<u>2440</u>	4000	<u>2060</u> 2500	1800	700	350*	180*	12780	5110
424	Port Wells			0		0	0	50*	100	350	300	50	30*	20*	900	360
425	Hummer Creek			0	100*	200	300	550*	800	1700	2000	100	50*	30*	5830	2330
428	Pirate Creek			0	20*	<u>20</u> 0	20	<u>280</u>	200	<u>680</u> 200	500	30	20*	1770	710	
430	Meacham Creek			0	500*	<u>220</u> 1000	1100	<u>2810</u>	2000	<u>2230</u> 2300	2000	700	350*	180*	12870	5150
432	Swanson Creek			0	1250*	<u>860</u> 2500	3000	<u>6500</u>	7000	<u>2320</u> 8000	7000	1700	900*	450*	38300	15320
435	Logging Camp Ck.			0		0	0	100*	200	1200	1000	300	150*	80*	3030	1210
450	Tebenkof Creek			0	500*	1100	1000	1250*	1500	450	230*	120*	60*	30*	6240	2500
451	Blackstone Creek			0	30*	<u>70</u> 0	20	<u>310</u>	600	<u>300*</u>	150*	80*	40*	20*	1620	650
454	Halferty Creek			0		0	500	500	2000	1500	1600	500	250*	130*	6980	2790
455	Paulson Creek		250*	500	2800*	<u>6140</u> 1500	5500	<u>3350</u> 2500	1800	<u>180</u> 1500	900	200	100*	50*	23090	9340
458	Parks Creek			80*	150*	300	600	500	1500	1500	750*	200	100*	50*	5730	2290
469	Wickett Creek		250*	500	640*	<u>780</u> 600	830*	<u>570</u> 1100	920*	<u>1250</u> 700	630*	320*	160*	80*	6930	2770
471	Narrows Creek					0	100*	200	400*	800*	400*	200*	100*	50*	2250	900
476	Shrode Creek			0		0	500	500	2000	8000	7000	5000	4000*	3000*	30000	12000
479	Culross Creek			0	10*	<u>20</u> 0	50	<u>50</u> 500	400	<u>860</u> 1000	430*	50	30*	20*	2370	950
480	Mink Creek		150*	300	2200*	<u>3870</u> 1500	3000	<u>3440</u> 3000	2500*	<u>1460</u> 1500	730*	370*	180*	90*	18290	7320

* Interpolations.

Ground counts.

¢ Aerial count used.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

IV NORTHWESTERN DISTRICT		WEEK ENDING DATE													Cum. Weekly Totals	Cal. Season Totals EW÷2.5	
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25			
484	Finger Creek E.		180*	350*	700*	<u>1370</u>	1300	<u>1300</u>	1500*	<u>1750</u>	900*	450*	230*	120*	10150	4020	
						<u>500</u>		<u>1500</u>		<u>800</u>							
485	Finger Creek W.		500*	1000*	2000*	<u>3840</u>	3000	<u>5200</u>	4500*	<u>3570</u>	1800*	900*	450*	230*	26990	10800	
						<u>2500</u>		<u>1800</u>		<u>2000</u>							
493	Most Creek			10*	20*	<u>40</u>	100	<u>140</u>	270*	<u>390</u>	200*	100*	50*	30*	1350	540	
						<u>0</u>				<u>50</u>							
495	Chimevisky Lagoon					0	0	500	3100*	<u>5750</u>	4000*	2000*	1000*	500*	16850	6740	
										<u>1200</u>							
498	McClure Creek					0	0	<u>350</u>	550*	800	400*	200*	100*	50*	2450	980	
						<u>0</u>		<u>300</u>									
Northwestern Totals		1330	2740	11260	21930	22780	31940	38440	46620	35070	14300	8720	5390	240520	96280		
V ESHAMY DISTRICT																	
506	Loomis Creek					0	0	270*	530	550*	580	500*	250*	130*	2810	1120	
507	Gumboot Creek					0	0	70*	<u>130</u>	90*	<u>50</u>	30*	20*		390	160	
508	N. Shore, Eshamy Lag.					0	30*	50	<u>1000</u>	1700	1180*	650	330*	170*	5110	2040	
510	Elishansky Creek		0			<u>0</u>	<u>170</u>	<u>250</u>	<u>280</u>	<u>300</u>	<u>800</u>	<u>730</u>	<u>600*</u>	500*	400*	4030	1610
511	Eshamy River				10*	<u>20</u>	<u>90</u>	<u>70</u>	<u>540</u>	<u>420</u>	<u>220</u>	<u>30</u>	20*	10*	1430	570	
Eshamy Totals			0	10	190	370	740	2500	3560	2760	1810	1120	710	13770	5500		

* Interpolations. _____ Ground counts.

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Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

VI SOUTHWESTERN DISTRICT		WEEK ENDING DATE													Cum.	Cal.
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25	Weekly Totals	Season Totals EW=2.5
601	Paddy Creek					0	0	0	260*	310	300*	200*	100*	50*	1420	570
						0		200 [¢]		250						
602	Nacktan Creek					0	0	0	50*	100	80*	40*	20*	10*	300	120
603	Ewan Creek					0	100	500	750*	1000	2000*	2000*	1000*	500*	7850	3140
604	Erb Creek				220*	440	800	100	450*	380	190*	100*	50*	30*	3160	1260
						1100		500 [¢]		400						
608	Jackpot River			0		0	2000	3500	3250*	3000	2500*	1500*	1000*	500*	17250	4310 <u>1/</u>
610	Kompkoff River				80*	150	250	90	70*	50	30*				720	290
						0		200		100						
611	W. Arm, Jackpot Bay					0	0	50	50*	50	50*				200	80
612	W. Arm, Jackpot Bay					0	0	0	30*	50	50*	30*			160	60
613	Jackson Creek			0	200*	400	350	600	600*	600	600*	500*	400*	200*	4450	1780
621	Totemoff Creek				140*	280	200	480	800*	1050	1500*	1000*	500*	250*	6200	2480
						20		500		1100						
630	Bainbridge Creek			0	1200*	2300	2210 [¢]	5000	4200	7000	2460	2000*	1000*	500*	30160	12060
							4500 [¢]									
632	Claw Creek				550*	1100	2220 [¢]	900	410	350	280	140*	70*	30*	6050	2420
							1100									
633	Pablo Creek					0	210	300	50	500	300	150*	80*	40*	1630	650
							150									
634	Whale Bay					0	0	0	30*	50	50*	30*			160	60
636	Whale Creek					0	0	200	180*	150	100*	50*	30*		710	280
653	Hogg Creek					0	0	0	30*	50	50*	30*			160	60
655	Johnson Creek				400*	800	500	2000	2500*	3000	4700	4000*	2000*	1000*	20900	8360
656	Halverson Creek				550*	1100	500	800	650*	500	2240	2000*	1000*	500*	9840	3940
665	Bjorn Creek					0	0	200	150*	100	50*	30*	10*		540	220
666	O'Brien Creek					0	0	100	60	600	1470	1000*	500*	250*	3990	1600
							10									

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* Interpolations. _____ Ground counts. ¢ Aerial count used. 1/ Stream life factor 4.0.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

VI SOUTHWESTERN DISTRICT		WEEK ENDING DATE												Cum.	Cal.	
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25	Totals	Season Totals EW÷2.5
670	Montgomery Creek							0	10*	20	20*	10*			60	20
672	Big Bay, Latouche Is.							0		0					0	0
673	Falls Creek				10*	20*	<u>30</u> 250¢	800	<u>480</u> *	500	<u>80</u>	40*	20*	10*	2210	880
676	Horseshoe Creek					0	0	0	50*	100	100	50*	30*	20*	350	140
677	Hayden Creek					0	500	450*	400*	800	<u>80</u>	40*	20*	10*	2300	920
623	**					0	<u>120</u> 200	100	<u>290</u>	450	600*	300*	150*	80*		
-33-	Southwestern Totals				3350	6590	12390	16670	15510	20310	19280	14940	7830	3900	120770	45700

VII MONTAGUE DISTRICT

702	Point Creek							0							0	0
703	Clam Beach Creek							0		0					0	0
707	MacLeod Creek							0	300*	600	600*	500*	400*	200*	2600	1040
710	Hanning Creek							0	30*	50	150*	100*	50*	30*	410	160
711	Quadra Creek							0	100*	200	200*	100*	50*	30*	680	230
717	W. Shore, Montague Is.							0		0					0	0
718	W. Shore, Montague Is.							0		0					0	0
722	W. Shore, Montague Is.							0		0					0	0
724	W. Shore, Montague Is.							0		0					0	0
725	W. Shore, Montague Is.							0		0					0	0
726	Montague Island					0		0		0					0	0
738	Russell Creek					0	0	0		0					0	0

* Interpolations.

Ground counts.

¢ Aerial count used.

** Not included in totals.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

VII MONTAGUE DISTRICT		WEEK ENDING DATE													Cum. Weekly Totals	Cal. Season Totals EW÷2.5
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25		
739	Swamp Creek					0	60	600	240	500	260	250*	130*	70*	2110	840
740	Kelez Creek					0	0	50	40	60*	80	60*	30*	20*	340	140
741	Chalmers River					0	0	0	80*	150	300*	150*	80*	40*	800	320
744	Wilby Creek					0	0	100	0	250	270	250*	130*	70*	1070	430
745	Wild Creek					0	0	0	20	100	10	10*			140	60
746	Schuman Creek					0	0	200	70	450	280	140*	70*	30*	1240	500
747	Cabin Creek					0	0	400	430	2400	2910	2500*	1250*	620*	10510	4200
748	Gilmour Creek						0	0	50*	100	200*	100*	50*	30*	530	210
749	Shad Creek						0	200	110	350	340	350*	120*	60*	1530	610
752	Stockdale Creek							0	150*	300	300*	300*	150*	80*	1280	510
753	Stockdale Bay							0	50*	100	100*	50*	30*	20*	350	140
754	Dry Creek							0	50*	100	100*	50*	30*	20*	350	140
758	Head Rocky Bay						0	0	80	600	960	600*	300*	150*	2690	1080
759	Rocky Creek						0	0	320	1000	750	500*	250*	120*	2940	1180
766	Carr Creek						0	0	.	0					0	0
770	Udall Creek						0	0	2	0	10				10	10##
771	McKernan Creek						0	0		0					0	0
774	Rosswog Creek						0	150	10	20	280	250*	130*	60*	900	360
775	Pautzke Creek						0	0	2	0	100	80*	40*	20*	240	100
							0		0*							
Montague Totals							60	1700	2130	7330	8200	6340	3290	1670	30720	12260

* Interpolations. _____ Ground counts. ## Ground count used as total escapement.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

VIII SOUTHEASTERN DISTRICT		WEEK ENDING DATE													Cum. Weekly Totals	Cal. Season Totals EW÷2.5
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25		
806	Dog Salmon Creek						0	0	60	800	290	150*	80*	40*	1420	570
807	Beaver Creek						0	0	10*	20	20*				50	20
810	Garden Creek						0	30	0	1800	1950	1500*	750*	380*	6410	2560
811	Etches Creek						0	0	30*	50	50*	30*	20*		180	70
812	Nuchek Creek			0		320*	650	1800	560	3500	3950	3500*	1750*	900*	16930	6770
815	Constantine Creek		50*	100	500*	1000*	2010	6300	2850	14000	10580	10000*	5000*	2500*	54890	21960
817	Deer Creek				110*	220*	450	1100	950*	800	800*	400*	200*	100*	5130	2050
818	Juania Creek				40*	80*	150	300	750*	1200	1000*	500*	250*	130*	4400	1760
821	Brown Bear Creek					0	0	400	850*	1300	1100*	550*	270*	130*	4600	1840
827	Captain Creek					0	0	50	0	1500	1120	1000*	500*	250*	4420	1770
828	Cook Creek				400*	800	190	1300	1520	4500	1200	1100*	550*	270*	12240	4900
829	King Creek						1	0	0	500	500*	250*	130*	70*	1450	580
831	Double Creek				50*	100	300	900*	1500	1440	1500*	750*	380*		6920	2770
833	Bates Creek					0									0	0
834	Hardy Creek				400*	800	1800	3150*	4500	4000*	2000*	1000*	500*		18150	7260
835	Scott Creek				20*	50	1000	1650*	2400	2000*	1000*	500*	250*		8890	3550
836	Dan's Creek					0	0								0	0
837	Dan's Bay					0	400	750*	1100	1000*	500*	250*	130*		4130	1650
839	Dan's Bay						150*	300*	600	500*	250*	130*	70*		2000	800
844	Makarka Creek				50*	100	1020	"	7850	7500*	5000*	2500*	1250*		29700	11910
847	Hawkins Creek				100*	200	3750	4500* ^{\$}	3000	7280	7000*	3500*	1750*	900*	30030	12010
849	Rollins Creek					0	190	450	1850	3140	2500*	1250*	630*		10010	4000
							0		1600							

* Interpolations. _____ Ground counts. ¢ Aerial survey count used. " Poor counting conditions due to rain.
\$ Interpolation used. (Unable to count in Makarka Creek)

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

VIII SOUTHEASTERN DISTRICT		WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW÷2.5	
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25
850	Canoe Creek					0	500	<u>1270</u>	<u>1950</u>	<u>4170</u>	<u>5380</u>	5000*	2500*	1250*	22020	8810
								<u>600</u>		<u>2200</u>						
851	Zillesenoff Creek					0	0	<u>480</u>	<u>620</u>	<u>2620</u>	3000*	2500*	1250*	630*	11100	4440
								<u>0</u>		<u>2000</u>						
856	Cedar Bay						0	0	<u>60</u>	<u>900</u>	800*	400*	200*	100*	2460	980
										<u>600</u>						
857	Cedar Bay						0	<u>50</u>	<u>80</u>	<u>980</u>	900*	450*	230*	110*	2800	1120
								<u>100</u>		<u>350</u>						
858	Cedar Bay					50*	100	<u>150</u>	<u>30</u>	<u>1230</u>	1000*	500*	250*	130*	3440	1380
										<u>200</u>						
861	Bernard Creek					100	100	<u>590</u>	<u>2380</u>	<u>6380</u>	6000*	3000*	1500*	750*	20800	8320
								<u>800</u>		<u>2500</u>						
862	Clamdiggers Creek						0	0	50*	100	100*	50*	30*		330	130
863	Orca Creek						50	250	<u>680</u>	1100	1000*	500*	250*	130*	3960	1580
Southeastern Totals		50	100	1050	3190	5860	22680	30680	74530	67320	47630	23840	11980	288910	115560	

* Interpolations. _____ Ground counts.

Appendix Table A. Weekly estimate of live pink salmon in Prince William Sound spawning streams, 1976
(continued).

DISTRICT	WEEK ENDING DATE												Cum. Weekly Totals	Cum. Season Totals EW+2.5	
	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25
EASTERN	0	100	10550	55700	65710	69170	59260	91520	108090	178430	195560	179200	143900	1157190	446470
NORTHERN	0	0	0	21720	21010	23250	26090	49600	74930	75600	21600	12160	6130	332090	123380
COGHILL	0	0	920	1950	3880	5000	7440	12300	16400	11550	1850	930	470	62690	20450
NORTHWESTERN	0	1330	2740	11260	21930	22780	31940	38440	46620	35070	14300	8720	5390	240520	96280
ESHAMY			0	10	190	370	740	2500	3560	2760	1810	1120	710	13770	5500
SOUTHWESTERN			0	3350	6590	12390	16670	15510	20310	19280	14940	7830	3900	120770	45700
MONTAGUE					0	60	1700	2130	7330	8200	6340	3290	1670	30720	12260
SOUTHEASTERN		50	100	1050	3190	5860	22680	30680	74530	67320	47630	23840	11980	288910	115560
TOTAL	0	1480	14310	95040	122500	138880	166520	242680	351770	398210	304030	237090	174150	2246660	865600

APPENDIX B

Chum salmon escapement estimates by stream and district, and calculated season total by stream and district.

A recapitulation by district, by week and season total estimated spawning escapement is given at the end of district totals.

Appendix Table B. Weekly estimate of live chum salmon in Prince William Sound spawning streams, 1976.

I EASTERN DISTRICT		WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW±2.5	
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25
2	Hartney Creek					10*	10*	<u>20</u>	10*	10*	<u>1</u> 0\$				60	20
5	Eccles Creek							<u>3</u>			<u>5</u>					10&&
20	Spring Creek					0	0	0							0	0
21	Rouge Creek					<u>0</u>	0	0		0					0	0
23	Chase River					<u>0</u>	0	<u>50</u>	50	<u>0</u>		0			100	50&&
35	Koppen Creek@	0	0	1000	500*	<u>580</u> 1000	500	<u>150</u>	200	<u>30</u> 100	10*	0			2970	1190
36	Sheep River		0				0	100	100	100	50*	0			350	140
46	Comfort Creek						0	0	0	0		0			0	0
48	Beartrap River@	0	500	400	620*	<u>850</u> 500	500	<u>230</u> 100	200	<u>140</u> 150	70*	0			3510	1400
50	Gravina River**							1500								
51	Olsen Creek@	0	10	300	360*	<u>430</u> 1000	500	<u>130</u> 300	200	<u>180</u> 100	90*	0			2200	880
52	Control Creek@	0	0	0	20*	<u>30</u> 0	20*	<u>10</u> 0	10*	<u>3</u> 0*\$		0			90	40
54	Carlson Creek		0	0		<u>0</u> 0	0	<u>0</u> 0	0	<u>0</u> 0		0			0	0
56	St. Matthews Ck.**					<u>10</u> 0		<u>20</u> 0		<u>1</u> 0						
76	Irish Creek**					<u>0</u>		<u>0</u>		<u>0</u>						
80	Whalen Creek	0	0	0	10*	<u>10</u> 0	10*\$	<u>0</u> 0	0	<u>0</u> 0		0			30	10
83	Keta Creek						0	0	0	<u>10</u> 0		0			10	10&&
87	Sunny River						0	0	0	500	950*	1400	2000*	2000*	6350	2740
89	Fish Creek	0	0	0	50*	<u>90</u> 0	50*\$	<u>10</u> 200	20*\$	<u>20</u> 0	10*	0			250	100

* Interpolations. _____ Ground counts. \$ Interpolation used. && Ground count used as total.

@ Also surveyed 6/26. Total count 0. ** Not included in totals.

Appendix Table B. Weekly estimate of live chum salmon in Prince William Sound spawning streams, 1976
(continued).

Stream No.	Stream Name or Location	WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW=2.5		
		7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25	
92	Shale Creek**					0		0									
99	Lagoon Creek		50*	100	120*	<u>130</u> 100	250	<u>130</u> 100	60* \$	0	150*	300	500*	500*	2290	920	
116	Duck River †		250*	500*	1000*	<u>50</u> 2000	2500	<u>10</u> 5000	2000	1000	1000*	1000	1000*	1000*	18250	7300	
117	Indian Creek @	150*	300	300	320*	<u>340</u> 500	180* \$	<u>20</u> 300	10* \$	<u>3</u> 0			0		1620	650	
120	Donaldson Ck.**					<u>1</u>											
121	Levshakoff Ck.	0	0	0	20*	<u>30</u> 200	20* \$	<u>1</u> 0*	0	0			0		70	30	
123	Gregorieff Ck.	0	0	50	40*	<u>20</u> 200	50	<u>0</u>	0	<u>0</u> 0			0		160	60	
127	Naomoff Creek			50*	100*	200	100	300*	500	500	250*	0			2000	800	
129	Vlasoff Creek			0	0	0	0	0	0	300	250*	200	100*	50*	900	360	
131	Gorge Creek	0	0	50*	100*	<u>200</u>	200	<u>10</u>	10* \$	<u>10</u>	10*				590	240	
133	Sawmill Creek	30*	50*	100	70*	<u>40</u>	50	<u>0</u> 30*	20* \$	<u>0</u>					390	160	
148	Mineral Creek Fl.					10*	20	40*	50	30*	10*				160	60	
152	Twin Falls Ck.					30*	50*	100*	200	100	50*	100	100*	50*	780	310	
153	Stellar Creek @	0	0	60*	110*	<u>230</u> 500	500	<u>20</u>	20* \$	<u>20</u> 0	10*	0			980	390	
Eastern District		180	1170	2910	3440	5230	5510	6350	3660	2950	2910	3000	3700	3600	44610	17870	

* Interpolations. _____ Ground counts. ** Not included in totals. \$ Interpolation used.

† Aerial count used. @ Also surveyed 6/26. Total count 0.

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Appendix Table B. Weekly estimate of live chum salmon in Prince William Sound spawning streams, 1976
(continued).

II NORTHERN DISTRICT		WEEK ENDING DATE													Cum. Weekly Totals	Cal. Season Totals EW#2.5
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25		
214	Long Creek		0	0	3000	<u>380</u> 650	1500	<u>100</u>	100	<u>190</u> 1500¢	1000*	500	250*	150*	8460	3380
216	Vanishing Creek		0	0	200	<u>770</u> 300	400	<u>450</u>	400	<u>350</u> 500	280*	200	100*	50*	3200	1280
217	Spring Stream			0	300*	600	600	300*	400*	500	400*	300	150*	80*	3630	1450
221	Eickelberg Ck.					0	0	<u>0</u>	0	<u>0</u> 0		0			0	0
229	Cedar Creek			0	1500	<u>2940</u> 1400	2500	<u>440</u>	500	<u>40</u> 500	20*	10*			7950	3180
234	Wells River @@	200	1500	8000	2500	<u>6600</u> 9000¢	6000	640	500	<u>100</u> 500¢	250*	180*	90*	50*	32120	12850
259	Jonah Creek			0	120*	<u>240</u>	500	<u>170</u>	100	<u>300</u> 100	150*	80*	40*	20*	1720	690
264	Siwash River			0	10*	<u>10</u>	20*	<u>20</u>	200	<u>290</u> 100	150*	80*	40*	20*	840	340
265	Unakwik Creek**					<u>10</u>		<u>10</u>		<u>10</u>						
276	Black Bear Creek		80*	150	1000	<u>600</u>	500	<u>240</u>	200	<u>150</u> 100	80*	40*	20*	10*	3070	1230
279	Canyon Creek			0	300*	600*	1200	800*	500	500	250*	120*	60*	30*	4360	1740
282	Eaglek Riv. Del.				10*	10*	20	10*	0	0		0			50	20
283	Eaglek Riv. Del.				50*	100*	200	200*	150*	<u>100</u>	50*	30*	20*	10*	910	360
Northern Totals		200	1580	8150	8990	15250	13440	5980	3050	4230	2630	1540	770	400	66310	26520

* Interpolations. _____ Ground counts. ¢ Aerial survey used. \$ Interpolation used.

@@ Interpolation of 6/26 = 100. Used in total. ** Not included in totals.

Appendix Table B. Weekly estimate of live chum salmon in Prince William Sound spawning streams, 1976
(continued).

III COGHILL DISTRICT		WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW÷2.5	
Stream No.	Stream Name or Location	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25
310	Golden Lagoon								0	0	0	0				
314	Avery River								0	0	0	0				
322	Coghill River	0		1500*	3000*	6000	12000*	13500*	15000	13000	10000	7000	3500*	1750*	86250	34500
Coghill Totals		0		1500	3000	6000	12000	13500	15000	13000	10000	7000	3500	1750	86250	34500

IV NORTHWESTERN DISTRICT

414	Harrison Lagoon			0		$\frac{0}{0}$		$\frac{4}{0^*}$		$\frac{2}{0}$		0			0	0
421	Mill Creek			0	80*	$\frac{150}{100}$	350	$\frac{320}{0}$	300	$\frac{60}{200}$	30*	0			1290	520
424	Hummer Bay			0		0	100	100*	100	100	50*	0			450	180
425	Hummer Creek			0		0	0	0	0	0	0	0			0	0
430	Meacham Creek			0	30*	$\frac{50}{0}$	30*	$\frac{10}{0}$	20*	$\frac{20}{0}$	10*	0			170	70
432	Swanson Creek			0	90*	$\frac{170}{0}$	200*	$\frac{230}{0}$	210*	$\frac{190}{0}$	100*	0			1190	480
450	Tebenkof Creek			0		0	0	0	0	$\frac{0}{0}$					0	0
451	Blackstone Ck.			0		0	0	0	0	0					0	0
454	Halferty Creek			0	50*	$\frac{100}{0}$	500	$\frac{500}{0}$	500	300	150*	0			2100	840
455	Paulson Creek			0	90*	$\frac{180}{0}$	140*	$\frac{100}{200}$	100	$\frac{10}{0}$		0			620	250
458	Parks Creek				200*	400	600	800	500	300	150*	0			2950	1180

* Interpolations. _____ Ground counts.

Appendix Table B. Weekly estimate of live chum salmon in Prince William Sound spawning streams, 1976
(continued).

Stream No.	Stream Name or Location	WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW±2.5	
		7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25
476	Shrode Creek			0		0	0	0	0					0	0	0
479	Culross Creek			0	10*	20	10*	0	0					0	40	20
480	Mink Creek				70*	140	80*	10	10*	10					320	130
484	Finger Creek E.				30*	50	40*	20	10*	0					150	60
485	Finger Creek W.				60*	120	110*	90	50*	10					440	180
493	Most Creek					10*	10*	10	10*	1					40	20
495	Chimevisky Lagoon					0	0	0	20*	30	20*				70	30
Northwestern Totals				0	710	1390	2170	2190	1830	1030	510	0			9830	3960
V ESHAMY DISTRICT																
506	Loomis Creek				0	0	0	0	0	0					0	0
510	Elishansky Creek				0	0	0	0	0	0					0	0
514	S. Shore, Eshamy Bay				0	0	0	0	0	0					0	0
515	S. Shore				0	0	0	0	0	0					0	0
Eshamy Totals					0	0	0	0	0	0	0				0	0

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* Interpolations. _____ Ground counts.

Appendix Table B. Weekly estimate of live chum salmon in Prince William Sound spawning streams, 1976
(continued).

Stream No.	Stream Name or Location	WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW±2.5		
		7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25	
604	Erb Creek					<u>21</u> 0	0	<u>0</u> 0		<u>0</u> 0							20
613	Jackson Creek			0		0	0	0		0							0
630	Bainbridge Creek			0		0	<u>2</u> 0	0	<u>40</u> 0		<u>2</u> 0*						40
633	Pablo Creek					0	<u>20</u> 0	0	<u>1</u> 0	0	<u>10</u> 0						30
666	O'Brien Creek					0	<u>0</u> 0	0	<u>0</u> 0	0	<u>1</u> 0*						0
Southwestern Totals																90##	

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VII MONTAGUE DISTRICT

707	MacLeod Creek							0		0							
710	Hanning Creek							0		0							
711	Quadra Creek							0		0							
726	Montague Creek					0		0		0							
738	Russell Creek					0		0		0							
739	Swamp Creek					0	<u>0</u> 0	0	<u>0</u> 0	0	<u>0</u> 0						
741	Chalmers River					0	<u>0</u> 0	0	<u>0</u> 0	0	<u>0</u> 0						
745	Wild Creek					0	<u>0</u> 0	0	<u>0</u> 0	0	<u>0</u> 0						
746	Schuman Creek					0	<u>0</u> 0	0	<u>0</u> 0	0	<u>0</u> 0						
747	Cabin Creek						<u>0</u> 0	0	<u>0</u> 0	0	<u>0</u> 0						

* Interpolations.

_____ Ground counts.

Ground count total used as escapement.

Appendix Table B. Weekly estimate of live chum salmon in Prince William Sound spawning streams, 1976
(continued).

Stream No.	Stream Name or Location	WEEK ENDING DATE												Cum. Weekly Totals	Cal. Season Totals EW±2.5	
		7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18			9/25
770	Udall Creek						<u>0</u>	0	<u>0</u>	0	<u>0</u>					
775	Pautzke Creek						<u>0</u>	0	<u>0</u>	0	<u>0</u>					
Montague Totals						0	0	0	0	0	0					0
VIII SOUTHEASTERN DISTRICT																
-44- 806	Dog Salmon Creek						<u>0</u>	0	<u>0</u>	0	<u>0</u>					
810	Garden Creek						<u>0</u>	0	<u>0</u>	0	<u>70</u>					70
812	Nuchek Creek			0			<u>40</u>	0	<u>3</u>	0	<u>120</u>					160
815	Constantine Creek			0			<u>190</u>	0	<u>160</u>		<u>290</u>					640
821	Brown Bear Creek					0	0	0		100	0					0
828	Cook Creek					0	<u>0</u>	0	<u>10</u>	0	<u>0</u>					10
831	Double Creek						0	0		0	<u>0</u>					0
834	Hardy Creek						0	0		0	<u>0</u>					0
835	Scott Creek						0	0		0	<u>0</u>					0
839	Dan's Creek						0	0		0	<u>0</u>					0
850	Canoe Creek					0	0	<u>60</u>	<u>10</u>	0	<u>0</u>					70
Southeastern Totals							230	60	180		480					950##

* Interpolations. _____ Ground counts. ## Cumulative ground count used as total escapement.

Appendix Table B. Recapitulation of weekly chum salmon counts by district, 1976.

DISTRICT	WEEK ENDING DATE													Cum. Weekly Totals	Cal. Season Totals EW±2.5
	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11	9/18	9/25		
EASTERN	180	1170	2910	3440	5230	5510	6350	3660	2950	2910	3000	3700	3600	44610	17870
NORTHERN**	200	1580	8150	8990	15250	13440	5980	3050	4230	2630	1540	770	400	66310	26520**
COGHILL	0	0	1500	3000	6000	12000	13500	15000	13000	10000	7000	3500	1750	86250	34500
NORTHWESTERN			0	710	1390	2170	2190	1830	1030	510	0	0	0	9830	3960
ESHAMY															0
SOUTHWESTERN***															90***
MONTAGUE															0
SOUTHEASTERN***															950***
TOTAL	380	2750	12560	16140	27870	33120	28020	23540	21210	16050	11540	7970	5750	207000	83890

** Total includes 6/26 interpolation of 100.

*** Ground count used as total escapement.

APPENDIX C

Pink and chum salmon egg deposition indices, by stream, date, and stream sample zones.

Appendix Table C. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1976.

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
Koppen Creek											
#35											
10/22											
N6'-8'	0	0	0	0	0	0	0	0	0	0	20
N8'-10'	2224	0	382	0	2606	3	0	0	0	3	20
N10'-12'	4218	0	934	0	5152	65	0	0	8	73	20
Sub Total	6442	0	1316	0	7758	68	0	0	8	76	60
08'-10'	1603	0	417	0	2020	3	0	0	0	3	20
010'-12'	1048	0	34	0	1082	3	0	0	0	3	20
Sub Total	2651	0	451	0	3102	6	0	0	0	6	40
OUPST	238	1	75	0	314	39	1	0	10	50	20
OUPST	1240	0	67	0	1307	0	0	0	0	0	20
Sub Total	1478	1	142	0	1621	39	1	0	10	50	40
Total	10,571	1	1909	0	12,481	113	1	0	18	132	140
Control Creek											
#52											
10/22											
N6'-8'	1680	0	164	0	1844	0	0	0	0	0	10
N8'-10'	1082	0	56	0	1138	0	0	0	0	0	12
N10'-12'	3261	0	381	1	3643	0	0	0	0	0	12
Sub Total	6023	0	601	1	6625	0	0	0	0	0	34
08'-10'	1335	0	167	0	1502	0	0	0	0	0	12
010'-12'	1667	0	333	0	2000	0	0	0	0	0	12
Sub Total	3002	0	500	0	3502	0	0	0	0	0	24
OUPST	1194	0	743	0	1937	0	0	0	0	0	10
Total	10,219	0	1844	1	12,064	0	0	0	0	0	68
Indian Creek											
#117											
10/23											
06'-8'	1971	11	838	6	2826	0	1	0	0	1	20
08'-10'	2726	485	260	8	3479	0	0	0	0	0	20
010'-12'	2225	147	130	4	2506	0	94	0	0	94	20
Sub Total	6922	643	1228	18	8811	0	95	0	0	95	60

Appendix Table C. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1976 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
OUPST	2473	332	229	0	3034	0	2	0	0	2	20
Total	9395	975	1457	18	11,845	0	97	0	0	97	80
Sawmill Creek											
#133											
10/23											
06'-8'	409	26	7	6	448	0	0	0	0	0	20
08'-10'	1927	150	39	15	2131	0	0	0	0	0	20
010'-12'	1660	5	36	4	1705	0	0	0	0	0	20
Sub Total	3996	181	82	25	4284	0	0	0	0	0	60
OUPST	1254	1	36	2	1293	0	0	0	0	0	20
Total	5250	182	118	27	5577	0	0	0	0	0	80
Cannery Creek											
#241											
10/24											
08'-10'	379	0	467	0	846	0	0	0	0	0	16
08'-10'	994	2	717	1	1714	0	0	0	0	0	16
010'-12'	1361	1	617	0	1979	0	0	0	0	0	16
010'-12'	2402	0	494	0	2896	0	0	0	0	0	16
Total	5136	3	2295	1	7435	0	0	0	0	0	64
Black Bear Crk.											
#276											
10/24											
N6'-8'	2055	3	27	0	2085	0	0	0	0	0	8
N8'-10'	1571	0	37	0	1608	4	0	0	0	4	8
N10'-12'	1137	2	14	0	1153	511	84	1	0	596	8
Sub Total	4763	5	78	0	4846	515	84	1	0	600	24
NUPST	55	1	6	0	62	0	0	0	0	0	16
Total	4818	6	84	0	4908	515	84	1	0	600	40

Appendix Table C. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1976 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
Meacham Creek											
#430											
10/25											
N6'-8'	187	0	26	0	213	0	0	0	0	0	8
N6'-8'	583	0	19	0	602	0	0	0	0	0	8
N8'-10'	223	0	94	0	317	0	0	0	0	0	8
N8'-10'	55	0	16	0	71	0	0	0	0	0	12
N10'-12'	128	0	72	0	200	6	0	0	0	6	8
N10'-12'	258	0	201	0	459	0	0	0	0	0	8
Sub Total	1434	0	428	0	1862	6	0	0	0	6	52
NUPST	216	0	7	0	223	0	0	0	0	0	8
NUPST	782	0	228	0	1010	0	0	0	0	0	8
Sub Total	998	0	235	0	1233	0	0	0	0	0	16
Total	2432	0	663	0	3095	6	0	0	0	6	68
Mink Creek											
#480											
10/25											
O6'-8'	803	34	95	14	946	0	0	0	0	0	20
O8'-10'	2676	194	107	24	3001	0	0	0	0	0	20
O10'-12'	1843	780	90	25	2738	0	0	0	0	0	20
Sub Total	5322	1008	292	63	6685	0	0	0	0	0	60
OUPST	617	0	73	0	690	0	0	0	0	0	20
Total	5939	1008	365	63	7375	0	0	0	0	0	80
Erb Creek											
#604											
10/26											
N6'-8'	259	0	215	0	474	0	0	0	0	0	8
N8'-10'	137	38	14	2	191	0	0	0	0	0	16
N10'-12'	215	0	13	0	228	0	0	0	0	0	8
Sub Total	611	38	242	2	893	0	0	0	0	0	32
NUPST	5	0	0	0	5	0	0	0	0	0	10
Total	616	38	242	2	898	0	0	0	0	0	42

Appendix Table C. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1976 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
Constantine Creek											
#815											
10/27											
N8'-10'	46	17	5	1	69	0	0	0	0	0	20
N8'-10'	1876	218	94	23	2211	0	0	0	0	0	20
N10'-12'	616	43	332	0	991	0	0	0	0	0	20
N10'-12'	772	0	32	0	804	0	0	0	0	0	20
N12'-15'	630	0	14	0	644	0	0	0	0	0	20
Sub Total	3940	278	477	24	4719	0	0	0	0	0	100
06'-8'	136	0	7	0	143	0	0	0	0	0	20
08'-10'	0	0	0	0	0	0	0	0	0	0	20
010'-12'	0	0	0	0	0	0	0	0	0	0	20
Sub Total	136	0	7	0	143	0	0	0	0	0	60
OUPST	0	0	0	0	0	0	0	0	0	0	20
Total	4076	278	484	24	4862	0	0	0	0	0	180
Bernard Creek											
#861											
10/28											
N6'-8'	9	0	81	0	90	0	0	0	0	0	16
N8'-10'	677	0	112	0	789	0	0	0	0	0	16
N10'-12'	1546	109	211	4	1870	0	0	0	0	0	16
Sub Total	2232	109	404	4	2749	0	0	0	0	0	48
08'-10'	2089	12	933	0	3034	0	0	0	0	0	16
010'-12'	17	0	4	0	21	0	0	0	0	0	16
Sub Total	2106	12	937	0	3055	0	0	0	0	0	32
OUPST	1449	68	247	2	1766	0	0	0	0	0	16
Total	5787	189	1588	6	7570	0	0	0	0	0	96

APPENDIX D

Pink and chum salmon pre-emergent fry indices by stream, date, and stream sample zones.

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977.

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
Humpback Creek											
#11											
03/22											
N6'-8'	0	0	0	0	0	0	0	0	0	0	10
N8'-10'	0	0	0	0	0	0	0	0	0	0	10
N10'-12'	0	0	0	0	0	0	0	0	0	0	10
Sub Total	0	0	0	0	0	0	0	0	0	0	30
06'-8'	0	0	0	0	0	0	0	0	0	0	12
08'-10'	0	0	0	0	0	0	0	0	0	0	12
010'-12'	0	0	0	0	0	0	0	0	0	0	12
Sub Total	0	0	0	0	0	0	0	0	0	0	36
OUPST	0	0	0	0	0	0	0	0	0	0	12
Total	0	0	0	0	0	0	0	0	0	0	78
Koppen Creek											
#35											
03/07											
N6'-8'	0	2	20	0	22	0	0	0	0	0	20
N8'-10'	0	830	0	2	832	0	0	0	0	0	20
N10'-12'	0	377	265	0	642	0	0	0	0	0	20
Sub Total	0	1209	285	2	1496	0	0	0	0	0	60
08'-10'	0	0	0	0	0	0	0	0	0	0	20
010'-12'	0	193	130	0	323	0	6	5	0	11	20
Sub Total	0	193	130	0	323	0	6	5	0	11	40
OUPST	0	129	0	0	129	0	1	0	0	1	20
Total	0	1531	415	2	1948	0	7	5	0	12	120
Control Creek											
#52											
03/08											
N6'-8'	0	349	336	0	685	0	0	0	0	0	12
N8'-10'	0	198	66	0	264	0	0	0	0	0	12
N10'-12'	0	418	110	1	529	0	0	0	0	0	12
Subtotal	0	965	512	1	1478	0	0	0	0	0	36

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
06'-8'	0	2085	2	1	2088	0	0	0	0	0	12
08'-10'	0	742	40	4	786	0	0	0	0	0	12
010'-12'	0	344	9	1	354	0	0	0	0	0	12
Sub Total	0	3171	51	6	3228	0	0	0	0	0	36
OUPST	0	657	1080	0	1737	0	0	0	0	0	16
OUPST	0	16	345	0	361	0	0	0	0	0	10
Sub Total	0	673	1425	0	2098	0	0	0	0	0	26
Total	0	4809	1988	7	6804	0	0	0	0	0	98
Whalen Creek											
#80											
03/09											
N6'-8'	0	0	8	0	8	0	0	0	0	0	12
N8'-10'	0	237	7	0	244	0	0	0	0	0	12
N10'-12'	0	179	200	2	381	0	0	0	0	0	12
Sub Total	0	416	215	2	633	0	0	0	0	0	36
010'-12'	0	54	1170	0	1224	0	0	0	0	0	12
OUPST	0	81	227	13	321	0	0	0	0	0	12
Total	0	551	1612	15	2178	0	0	0	0	0	60
Sunny River											
#87											
03/08											
N6'-8'	0	0	0	0	0	0	0	0	0	0	8
N8'-10'	0	264	0	0	264	0	9	0	0	9	8
N10'-12'	0	103	0	0	103	0	0	0	0	0	8
N10'-12'	0	0	0	0	0	0	31	0	0	31	8
N10'-12'	0	0	0	0	0	0	0	0	0	0	8
Total	0	367	0	0	367	0	40	0	0	40	40
Gladhough Creek											
#106											
03/09											
06'-8'	0	2	30	0	32	0	0	0	0	0	10
08'-10'	0	54	94	0	148	0	0	0	0	0	10

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
010'-12'	0	357	6	0	363	0	0	0	0	0	10
Sub Total	0	413	130	0	543	0	0	0	0	0	30
OUPST	0	1027	35	0	1062	0	0	0	0	0	10
Total	0	1440	165	0	1605	0	0	0	0	0	40
Duck River											
#116											
03/10											
R6'-8'	0	510	20	0	530	0	0	0	0	0	8
L6'-8'	0	577	0	0	577	0	0	0	0	0	8
Sub Total	0	1087	20	0	1107	0	0	0	0	0	16
R8'-10'	0	787	10	2	799	0	1	0	0	1	8
L8'-10'	0	254	0	0	254	0	0	0	0	0	8
Sub Total	0	1041	10	2	1053	0	1	0	0	1	16
R10'-12'	0	451	0	0	451	0	2	0	0	2	8
L10'-12'	0	782	1	0	783	0	10	0	0	10	8
Sub Total	0	1233	1	0	1234	0	12	0	0	12	16
Total	0	3361	31	2	3394	0	13	0	0	13	48
RUPST	0	384	0	0	384	0	22	0	0	22	8
LUPST	0	513	0	0	513	0	98	0	0	98	8
HUPST	0	1063	250	12	1325	0	0	0	0	0	8
Sub Total	0	1960	250	12	2222	0	120	0	0	120	24
Sum Total	0	5321	281	14	5616	0	133	0	0	133	72
Indian Creek											
#117											
03/10											
06'-8'	0	309	188	0	497	0	0	0	0	0	20
08'-10'	0	1234	120	0	1354	0	1	0	0	1	20
010'-12'	0	2238	0	0	2238	0	58	0	0	58	20
Sub Total	0	3781	308	0	4089	0	59	0	0	59	60
OUPST	0	4870	33	0	4903	0	1032	0	0	1032	20
Total	0	8651	341	0	8992	0	1091	0	0	1091	80

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
Gregorioff Creek											
#123											
03/10											
06'-8'	0	112	0	12	124	0	0	0	0	0	12
08'-10'	0	854	0	0	854	0	0	0	0	0	12
010'-12'	0	59	6	0	65	0	0	0	0	0	12
Sub Total	0	1025	6	12	1043	0	0	0	0	0	36
OUPST	0	1050	250	0	1300	0	0	0	0	0	12
Total	0	2075	256	12	2343	0	0	0	0	0	48
Gorge Creek											
#131											
03/11											
06'-8'	0	149	6	0	155	0	0	0	0	0	14
08'-10'	0	827	12	0	839	0	79	0	0	79	14
010'-12'	35	2293	0	0	2328	0	569	0	0	569	14
Total	35	3269	18	0	3322	0	648	0	0	648	42
Sawmill Creek											
#133											
03/11											
06'-8'	0	38	2	0	40	0	0	0	0	0	20
08'-10'	0	1141	13	0	1154	0	0	0	0	0	20
010'-12'	0	1554	43	0	1597	0	0	0	0	0	20
Sub Total	0	2733	58	0	2791	0	0	0	0	0	60
OUPST	0	548	3	3	554	0	0	0	0	0	20
Total	0	3281	61	3	3345	0	0	0	0	0	80
Stellar Creek											
#153											
03/12											
06'-8'	0	111	117	0	228	0	0	0	0	0	8
08'-10'	0	300	205	0	505	0	0	0	0	0	14
010'-12'	0	1267	15	0	1282	0	0	0	0	0	18
010'-12'	Chum spring covered by ice.										(12)
Sub Total	0	1678	337	0	2015	0	0	0	0	0	40 (52)

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet	
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total		
OUPST	0	2328	0	0	2328	0	1	0	0	1	16	
OUPST	0	2154	450	0	2604	0	0	0	0	0	16	
Sub Total	0	4482	450	0	4932	0	1	0	0	1	32	
Total	0	6160	787	0	6947	0	1	0	0	1	72 (84)	
Eickelberg Creek												
#221												
03/12												
06'-8'	0	343	260	0	603	0	0	0	0	0	10	
08'-10'	0	17	1	0	18	0	0	0	0	0	10	
010'-12'	0	342	10	0	352	0	0	0	0	0	10	
Sub Total	0	702	271	0	973	0	0	0	0	0	30	
OUPST	0	230	10	0	240	0	0	0	0	0	10	
Total	0	932	281	0	1213	0	0	0	0	0	40	
Cannery Creek												
#241												
03/12												
N8'-10'	0	31	9	0	40	0	0	0	0	0	16	
N10'-12'	0	47	141	0	188	0	0	0	0	0	16	
N10'-12'	0	677	115	0	792	0	0	0	0	0	16	
N12'-15'	0	421	40	1	462	0	0	0	0	0	12	
Total	0	1176	305	1	1482	0	0	0	0	0	60	
Cutthroat Creek												
#265												
03/13												
N6'-8'	0	1174	10	0	1184	0	0	0	0	0	20	
N8'-10'	0	366	58	0	424	0	0	0	0	0	20	
N10'-12'	0	797	0	0	797	0	0	0	0	0	20	
Sub Total	0	2337	68	0	2405	0	0	0	0	0	60	
NUPST	Dry											(20)
Total	0	2337	68	0	2405	0	0	0	0	0	60 (80)	

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
Blackbear Creek											
#276											
03/13											
N6'-8'	0	301	5	0	306	0	110	0	0	110	8
N8'-10'	0	101	0	0	101	0	6	0	0	6	8
N10'-12'	0	429	5	0	434	0	370	1	0	371	8
Sub Total	0	831	10	0	841	0	486	1	0	487	24
NUPST	0	998	28	0	1026	0	231	0	0	231	16
Total	0	1829	38	0	1867	0	717	1	0	718	40
Mill Creek											
#421											
03/13											
N6'-8'	0	385	1	2	388	0	0	0	0	0	16
N8'-10'	0	1098	0	0	1098	0	14	0	0	14	16
N10'-12'	0	1482	0	0	1482	0	23	0	0	23	16
Sub Total	0	2965	1	2	2968	0	37	0	0	37	48
NUPST	0	17	0	0	17	0	0	0	0	0	12
Total	0	2982	1	2	2985	0	37	0	0	37	60
Meacham Creek											
#430											
03/13											
N6'-8'	0	276	0	0	276	0	0	0	0	0	8
N6'-8'	0	71	252	0	323	0	0	0	0	0	8
Sub Total	0	347	252	0	599	0	0	0	0	0	16
N8'-10'	0	10	9	0	19	0	0	0	0	0	8
N8'-10'	0	68	1	0	69	0	0	0	0	0	12
Sub Total	0	78	10	0	88	0	0	0	0	0	20
N10'-12'	0	29	301	0	330	0	0	0	0	0	8
N10'-12'	0	175	82	0	257	0	0	0	0	0	24
Sub Total	0	204	383	0	587	0	0	0	0	0	32
Total	0	629	645	0	1274	0	0	0	0	0	68
NUPST	0	1394	0	0	1394	0	0	0	0	0	12
Sum Total	0	2023	645	0	2668	0	0	0	0	0	80

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
Paulson Creek											
#455											
03/14											
N6'-8'	0	4	0	0	4	0	0	0	0	0	16
N8'-10'	0	400	0	0	400	0	0	0	0	0	12
N10'-12'	0	1	0	0	1	0	0	0	0	0	24
Sub Total	0	405	0	0	405	0	0	0	0	0	52
NUPST	ICE										(20)
Total	0	405	0	0	405	0	0	0	0	0	52 (72)
Mink Creek											
#480											
03/14											
06'-8'	0	519	38	0	557	0	0	0	0	0	20
08'-10'	0	2784	0	0	2784	0	159	0	0	159	20
010'-12'	0	1992	0	0	1992	0	23	0	0	23	20
Sub Total	0	5295	38	0	5333	0	182	0	0	182	60
OUPST	ICE										(20)
Total	0	5295	38	0	5333	0	182	0	0	182	60 (80)
Erb Creek											
#604											
03/15											
N6'-8'	0	28	0	0	28	0	0	0	0	0	8
N8'-10'	0	748	53	0	801	0	0	0	0	0	24
N10'-12'	0	0	0	0	0	0	0	0	0	0	8
Sub Total	0	776	53	0	829	0	0	0	0	0	40
NUPST	0	0	0	0	0	0	0	0	0	0	8
Total	0	776	53	0	829	0	0	0	0	0	48
Totemoff Creek											
#621											
03/15											
N6'-8'	0	4	6	0	10	0	0	0	0	0	10
N8'-10'	0	221	68	0	289	0	0	0	0	0	10

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
N10'-12'	0	816	70	0	886	0	6	0	0	6	20
Sub Total	0	1041	144	0	1185	0	6	0	0	6	40
NUPST	0	1107	231	5	1343	0	0	0	0	0	20
Total	0	2148	375	5	2528	0	6	0	0	6	60
Bainbridge Creek											
#630											
08/15											
N8'-10'	0	57	22	0	79	0	0	0	0	0	10
N10'-12'	0	552	49	0	601	0	0	0	0	0	16
Sub Total	0	609	71	0	680	0	0	0	0	0	26
08'-10'	ICE										(20)
010'-12'	0	502	0	0	502	0	0	0	0	0	10 (10)
Sub Total	0	502	0	0	502	0	0	0	0	0	10 (40)
OUPST	ICE										(20)
Total	0	1111	71	0	1182	0	0	0	0	0	36 (86)
Claw Creek											
#632											
03/15											
N6'-8'	DRY										(8)
N8'-10'	0	0	0	0	0	0	0	0	0	0	8
N10'-12'	0	0	0	0	0	0	0	0	0	0	16
Sub Total	0	0	0	0	0	0	0	0	0	0	24 (32)
NUPST	0	0	0	0	0	0	0	0	0	0	8
Total	0	0	0	0	0	0	0	0	0	0	32 (40)
Falls Creek											
#673											
03/16											
N6'-8'	0	4	2	0	6	0	0	0	0	0	20
N8'-10'	0	571	0	0	571	0	0	0	0	0	20

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
N10'-12'	0	44	3	0	47	0	0	0	0	0	20
Sub Total	0	619	5	0	624	0	0	0	0	0	60
NUPST	0	34	0	0	34	0	0	0	0	0	20
Total	0	653	5	0	658	0	0	0	0	0	80
Hayden Creek											
#677											
03/16											
N6'-8'	0	0	0	0	0	0	0	0	0	0	8
N8'-10'	0	0	0	0	0	0	0	0	0	0	8
N10'-12'	0	0	0	0	0	0	0	0	0	0	12
Sub Total	0	0	0	0	0	0	0	0	0	0	28
NUPST	0	0	0	0	0	0	0	0	0	0	12
Total	0	0	0	0	0	0	0	0	0	0	40
Cabin Creek											
#747											
03/17											
N6'-8'	0	0	0	0	0	0	0	0	0	0	20
N8'-10'	0	23	0	0	23	0	0	0	0	0	20
N10'-12'	0	1491	227	15	1733	0	0	0	0	0	20
Sub Total	0	1514	227	15	1756	0	0	0	0	0	60
NUPST	0	662	149	0	811	0	0	0	0	0	20
Total	0	2176	376	15	2567	0	0	0	0	0	80
Constantine Creek											
#815											
03/17											
N8'-10'	0	172	0	0	172	0	0	0	0	0	20
N8'-10'	0	0	0	0	0	0	0	0	0	0	20
Sub Total	0	172	0	0	172	0	0	0	0	0	40
N10'-12'	0	0	0	0	0	0	0	0	0	0	20
N10'-12'	0	18	0	0	18	0	0	0	0	0	20
Sub Total	0	18	0	0	18	0	0	0	0	0	40

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
N12'-15'	0	0	10	0	10	0	0	0	0	0	20
Total	0	190	10	0	200	0	0	0	0	0	100
06'-8'	0	0	0	0	0	0	0	0	0	0	20
08'-10'	0	0	0	0	0	0	0	0	0	0	20
010'-12'	0	0	0	0	0	0	0	0	0	0	20
Sub Total	0	0	0	0	0	0	0	0	0	0	60
OUPST	0	0	0	0	0	0	0	0	0	0	20
Sum Total	0	190	10	0	200	0	0	0	0	0	180
Cook Creek											
#828											
03/18											
N8'-10'	0	12	3	0	15	0	0	1	0	1	16
N10'-12'	0	278	15	0	293	0	0	0	0	0	12
Sub Total	0	290	18	0	308	0	0	1	0	1	28
06'-8'	0	328	214	0	542	0	0	0	0	0	12
08'-10'	0	10	30	0	40	0	0	0	0	0	8
010'-12'	0	482	60	0	542	0	0	0	0	0	12
Sub Total	0	820	304	0	1124	0	0	0	0	0	32
OUPST	0	0	0	0	0	0	0	0	0	0	12
Total	0	1110	322	0	1432	0	0	1	0	1	72
Canoe Creek											
#850											
03/18											
N6'-8'	0	287	0	0	287	0	0	0	0	0	10
N8'-10'	0	238	11	0	249	0	0	0	0	0	10
N10'-12'	0	0	0	0	0	0	0	0	0	0	10
Sub Total	0	525	11	0	536	0	0	0	0	0	30
08'-10'	0	18	0	0	18	0	0	0	0	0	10
010'-12'	0	1	0	0	1	0	0	0	0	0	10
Sub Total	0	19	0	0	19	0	0	0	0	0	20

Appendix Table D. Pink and chum salmon egg and pre-emergent fry data, by stream name and number, date and sample zone, Prince William Sound, 1977 (continued).

Stream Name, Number, Date and Sample Zone	Pink Salmon					Chum Salmon					Square Feet
	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	Live Eggs	Live Fry	Dead Eggs	Dead Fry	Total	
OUPST	0	14	2	0	16	0	0	0	0	0	10
Total	0	558	13	0	571	0	0	0	0	0	60
Bernard Creek											
#861											
03/18											
N6'-8'	0	39	0	0	39	0	0	0	0	0	16
N8'-10'	0	163	5	0	168	0	0	0	0	0	16
N10'-12'	0	99	0	0	99	0	0	0	0	0	16
Sub Total	0	301	5	0	306	0	0	0	0	0	48
08'-10'	0	14	0	0	14	0	0	0	0	0	16
010'-12'	0	217	0	0	217	0	0	0	0	0	16
Sub Total	0	231	0	0	231	0	0	0	0	0	32
OUPST	0	0	0	0	0	0	0	0	0	0	16
Total	0	532	5	0	537	0	0	0	0	0	96

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