STREAM CATALOG OF EASTERN SECTION OF KETCHIKAN MANAGEMENT DISTRICT OF SOUTHEASTERN ALASKA

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EXPLANATORY NOTE

The series embodies results of investigations, usually of restricted scope, intended to aid or direct management or utilization practices and as guides for administrative or legislative action. It is issued in limited quantities for official use of Federal, State or cooperating agencies and in processed form for economy and to avoid delay in publication.

United States Department of the Interior, Fred A. Seaton, Secretary
Fish and Wildlife Service, Arnie J. Suomela, Commissioner

STREAM CATALOG OF EASTERN SECTION OF KETCHIKAN MANAGEMENT DISTRICT OF SOUTHEASTERN ALASKA

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ABSTRACT

Information about part of Southeastern Alaska salmon streams is cataloged from the voluminous records of the Fisheries Research Institute of the University of Washington, U. S. Fish and Wildlife Service, Alaska Salmon Industry, and Alaska Department of Fish and Game, and other agencies. Stream descriptions, maps, historical records, and salmon escapement data are compiled for 117 salmon streams in the eastern section of the Ketchikan fishery management district. Each stream is located geographically by latitude and longitude, and by orientation to prominent land masses. A standard numbering system is used and designations formerly in use and common names of each stream are given. Physical descriptions are grouped for the intertidal zone and the upstream area of each stream. Available records of weather and water temperatures and notes useful to ground and aerial stream surveyors are presented in brief form. The species of salmon utilizing the spawning grounds and estimates of the escapement magnitude each year for many years are given.

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INTRODUCTION

The pink salmon of Southeastern Alaska are an important fishery resource. Millions of these fish are captured annually by the commercial fishery during their spawning migration. There are more than 1,100 known spawning streams, plus hundreds of small, individually unimportant ones, scattered along the 9,000 coastal miles of Southeastern Alaska.

For many years, management and research agencies of the federal and territorial governments, Alaska salmon canners, and the Fisheries Research Institute of the University of Washington, have independently conducted stream surveys of the salmon spawning grounds. A vast amount of valuable information has been accumulated and has been, in the main, kept on file in the offices of the various organizations.

To make full use of all these scattered materials, records from the various sources have been gathered together and methods of stream surveying have been studied on a comparative basis. This information has been consolidated into a standard form which is presented here as a stream catalog.

This catalog has been compiled under a contract given to the Fisheries Research Institute by the United States Fish and Wildlife Service. The material contained herein includes 117 major and numerous minor streams of the eastern section of the Ketchikan District.

Information on each stream is presented in three parts, a map, stream description, and the escapement record. Information pertinent to the identification of each stream by name, number, and location is given, and further physical features are described where necessary for positive identification. Descriptions of each stream are given as completely as available information allows. The catalog format is so designed that future surveys by various agencies can be recorded and conducted according to a uniform style.

Contribution No. 48, College of Fisheries, University of Washington, Seattle, Washington. It is the first part of a general catalog of salmon streams of Southeastern Alaska planned by the Service.

As a handbook of salmon streams, this catalog is expected to serve as an aid to conservation agencies as well as others who have an interest in the valuable salmon resource of Southeastern Alaska.

SOURCES OF DATA

The information compiled in this catalog is derived from a number of sources, both in and outside of the field of fisheries work. A complete list of these sources is given below.

Alaska Department of Fish and Game. Valuable stream and escapement information is available in reports by research personnel.

Alaska Salmon Industry. Surveys (made by individual members of the industry) are among some of the earliest records available.

Fisheries Research Institute. Records are available for each year starting with 1947. Many of the Institute research projects have been concerned with precise measurements of physical factors. Data from these projects provide some of the stream descriptions and escapement estimates included in this catalog. In 1950 and 1951 the Institute assembled a stream catalog for Southeastern Alaska with all the information then available. It has served as a guide for the present catalog.

U. S. Coast and Geodetic Survey. Charts used throughout the catalog for standardization of stream location coordinates are from this source. A number of large-scale charts have provided intertidal zone information. The U. S. Coast Pilot (1952, Southeast Alaska, Dixon Entrance to Yakutat Bay, vi, 544 pgs., plus charts) is the source of information on vessel approaches to stream mouths and the authority for spelling of proper names.

U. S. Fish and Wildlife Service. District catalogs of this agency are a major source of stream physical data and salmon escapement records. Escapement records from the streams where weirs were operated are actual counts. The F. W. S. stream numbering system is the basis for the numbering system used in this catalog. Information on some of the large mainland streams with headwaters in Canada was

obtained from the Canadian government by the U. S. Fish and Wildlife Service.

U. S. Federal Power Commission. The report, Water Power of Southeastern Alaska, published with the cooperation of the U. S. Forest Service, provides discharge rates and stream drainage areas, and other information about a number of important salmon streams.

U. S. Forest Service. Data on stream characteristics and salmon escapements are available on several streams in records of studies conducted by this agency on the effects of logging on the physical makeup of streams.

U. S. Geological Survey. Aerial photographs from this agency are the primary source for measurements of stream distances and areas and for valley features not visible from the ground. These photographs, which are of most of the streams in Southeastern Alaska, were made by the U. S. Navy (Patrol Squadron Four) in 1948.

Local residents. Another source is the descriptive information on several major streams provided by local residents.

LIMITATIONS OF DATA

Escapement estimates obtained by visual means are often limited in accuracy because fish are not seen in turbid water, under overhanging stream banks, or in areas inaccessible to observers. Actual counts throughout the duration of the salmon run past a counting weir or tower are relatively accurate estimates of total escapement. However, it is not economically feasible to establish a weir on each stream and escapement surveys are the only source of information for a large part of the area which must be covered. The value of the catalog as a history of the salmon escapements can be realized only if its limitations are fully known.

Escapement Estimates

Escapement estimates do not indicate the actual total escapement. At no time are all the salmon in the stream simultaneously since the spawning run extends over a period of weeks. Therefore, each escapement estimate is an index of the relative abundance at the time of survey.

The maximum estimate determined by survey methods at about the peak of the run is used as an estimate of the relative abundance of the total escapement. Reliable indices of relative abundance from year to year can be made only if the surveys are comparable. Evaluation of the following factors is necessary to determine the accuracy of the escapement estimates.

Observers. --The escapement records are from many different observers. Variability in estimating the number of salmon in a given area by different observers should be considered in judging the accuracy of the data. In general, with more observers variability increases.

Survey systems. --Different survey systems have been used by the various agencies. Reliability of the escapement estimates varies with the systems used.

Survey systems that employ standard counting techniques over standard distances are the most reliable method now available for comparison of abundance between years, particularly when streams can be only partially covered. Standard survey distances in comparatively long streams were not widely used prior to 1949.

Survey systems requiring periodic visits to each stream during the spawning period are more reliable for estimates of peak abundance than systems requiring only one or two visits. The peak period of abundance in a salmon stream is usually relatively short and one or two visits may miss the peak.

Type of survey. --Two basic methods for covering the streams during escapement surveys are being used.

The oldest method is the ground survey where the observer follows the stream course on foot or in a skiff with an outboard motor. Most parts of the stream can be closely observed by this type of survey.

The newer method is aerial survey. This is a fast, economical means of covering a large number of streams in a short period of time over stream distances greater than is possible on the ground. This method requires experienced personnel familiar with ground surveys as well.

Aerial surveys are best suited for large rivers and streams where ground coverage is limited usually to the lower portion of the stream near the banks. Ground surveys are more reliable than aerial surveys on small streams that offer poor visibility from the air.

Observation conditions. --Weather is an extremely important factor in the reliability of escapement estimates. Most streams are very difficult to travel on the ground during flooding. Visibility is also greatly reduced because of turbid water. Any

estimate made during years that had heavy rains of long duration during the peaks of spawning runs is not comparable with an estimate made during normal water levels.

Streams where intertidal spawning predominates may present difficult observation conditions at high tide. Spawning salmon in the intertidal zone behave differently when the spawning areas are flooded by the high tide.

Aerial observations vary with the different types of aircraft used. Observations made from small light planes capable of following winding stream courses are more reliable than those made from larger planes which must fly at considerable height above the stream and generally at greater speeds.

Physical Observations

Observations of the characteristics of each stream by different observers have been recorded with varying degrees of accuracy. Many details of stream descriptions are dependent upon the individual observer's ability and knowledge.

Many stream dimensions are merely estimates. Instruments for measurements were usually not available to observers and pacing and estimating were used.

Most basic stream distances have been taken from aerial photographs and are relatively accurate. However, some errors may have occurred where reference points were difficult to identify. Drainage estimates were based on compensating polar planimeter measurements of valley areas, but occasionally drainage divides were difficult to distinguish and the areas given are only approximate.

EXPLANATION OF CATALOG FORMAT

Further descriptions of the data such as estimates of timing, temperature ranges, spawning facilities, etc., are included under these specific headings in the explanation of the catalog format that follows:

Stream Designations

Statistical area number. --The number used by the Bureau of Commercial Fisheries to designate the statistical area is given in the upper left side of the heading.

Stream name. --This appears in the center of the first line of the heading. Recorded names or common local names are used when available. Otherwise unnamed streams of importance are given descriptive names corresponding to location or other distinguishing features. Some streams have identical names; they are retained without change due to local usage. Many minor streams have no names; hence they are identified only by number.

Stream number. --This number appears on the right side of the first line of the heading. The letter preceding the number designates the administrative district in Southeastern Alaska: e.g., "K" for Ketchikan. Continuity of stream numbers along a shoreline is followed where practical. Due to the numerous islands, breaks in the sequence have been necessary. Non-hyphenated numbers designate major or important streams. A catalog number which includes a hyphenated number designates a tributary to the stream of the same number. A catalog number combining numbers and letters designates a minor stream, either adjacent to or between major streams numbered in sequence. For example, stream number 17A is a minor stream adjacent to major stream number 17.

Latitude and longitude. --This appears on the second line, left side, of the heading. Location of streams is given by the use of "N" for north latitude, and "W" for west longitude, stated in degrees (°), minutes and tenths of minutes; minute symbol (') is omitted. Location of the high tide point on the stream is given for positive identification.

Previous number. --This appears on the second line, right side, of the heading. Stream number or numbers used in the past by Fish and Wildlife Service are given for positive identification of old stream records.

Geographic location. --This appears on the third line of the heading. Each stream location is described by the administrative district, major channel, bay or inlet, arm or cove, and location within the smallest division given by direction (from true north) and distance (nautical miles).

Major species. --Included are those species of salmon which comprise the bulk of spawning in the stream. Where more than one dominates, both (or more) are included.

Other species. --This indicates other known species of salmon and trout using the stream.

Escapement timing. --The timing is based on systematic stream survey records, which include a number of years of surveys with visits before, near, and after the peaks of abundance. Extensive stream temperature studies were conducted in conjunction with most of these surveys. The earliest runs of salmon occur along the colder mainland streams. The latest runs are in the outer channel and coastal areas where stream levels are dependent upon rainfall.

An intermediate timing of the runs occurs in the region lying between the mainland and outer coastal areas. Three major time divisions are used to indicate the peak period that the major species are found in the stream. "Early" designates peaks before August 15; "middle", peaks between August 15 and September 15; "late", peaks after September 15. The range of time in which the major species are found in the streams is given by months.

Escapement magnitudes. --These are estimates of the total escapement, based on stream counts of the peak abundance of salmon, multiplied by a certain factor. This factor was determined from stream tagging experiments conducted at Herman Creek in 1953 by the Fisheries Research Institute, who found the total escapement was between two and three times the peak count. The range of the escapement magnitude is given in thousands. For example, 50-200,000 refers to 50 thousand to 200 thousand fish.

Spawning facilities. --This includes a general classification rating of poor, fair, good, excellent, etc. The rating is based on estimates made by various individuals.

Stream temperatures. --In this classification, the following general ranges are used for each stream. Each range is for the three-month period (July, August, and September) in which the majority of the salmon spawning migrations occur:

Cold range, averaging less than 50°F., usually an early run stream.

Normal range, averaging between 50°F. and 55°F., usually middle run.

Warm range, averaging over 55°F., usually a late run stream.

These ranges generally correspond to the geographic location of the stream and time of the runs. Where only limited temperature information is available for a stream, the range has been estimated from its location and timing of run. Cold range streams are usually found along the mainland or on the larger islands in the northern part of Southeastern Alaska. Warm range streams are usually found along the outer channels and coastal areas, which are dependent upon precipitation as the primary source of supply. The normal range streams appear to fall geographically between and may combine characteristics of both cold - and warm - range streams. Timing of the salmon runs, especially pink salmon, also follows the geographic distribution outlined above. Recording thermograph data, available from a number of streams with known escapement timing, have been used as a basis for comparison.

Valley description. --Glacial, "stream-cut", etc., describe valley origin with a general description of the outstanding features such as length, width, timber, slopes, directions, etc. They have been obtained from aerial photographs, and by direct observations.

Drainage area. --This has been either estimated in square miles or computed with a polar planimeter from aerial photographs. Estimates of the drainage area of large systems have been taken from the small-scale key, composite photographs and are less reliable. Data from Water Powers of Southeastern Alaska 1947 are included when available. Descriptions are given of supply sources, and drainage topography, and characteristics governing water quality and temperature ranges during spawning from the editor's interpretation of aerial photos and local knowledge.

Stream mouth identification. --This is a description of some general features visible at the stream mouth.

Anchorage. --Descriptions of temporary anchorages which have been used for short stops by stream survey vessels are given. Overnight and storm anchorages are given in the U. S. Coast Pilot.

Trails and survey routes. --This includes descriptions of trails that have been used by ground parties on stream surveys. Where other than the stream bed was used, a description of routes is given, including difficult points, identification, outstanding features, presence of brown bears, etc.

Aerial survey notes. --The notes include remarks from various individual observations on the visibility in each stream and the conditions considered necessary for adequate observations. Approaches to valley, starting points, and any known hazards are described from aerial surveyor's notes and the editor's knowledge of the area.

Intertidal Zone

Length. --The distance is given in miles from mean high to mean low tide, obtained from aerial photographs measured to the nearest tenth of a mile. Where low tide locations were not known the measurement was made from the edge of tidal flats visible in the photographs.

Average width. --These estimates in feet, based on observations by various individuals.

Average depth. --These are estimates in inches, or in feet in larger systems, based on observation by various individuals.

Gradient. --Estimates in degrees from horizontal, based on observation by various individuals.

Velocity. --Estimates in feet per second during normal water levels, based on observation by various individuals.

Bottom. --A description is given of the composition such as gravel (range from 1/4 inch to over 5 inches in diameter, arbitrary division point), mud, silt, organic materials, broken and water-washed rock, boulders, large rocks, bedrock, etc., according to observations by various individuals.

Low tide location. --The location of the mean low tide point is an approximation and is given only where it falls near good identification points, usually found in restricted stream outlets.

High tide location. --The mean high tide location generally has been found to correspond to the tree line. Other methods of locating the high tides, such as markers, are described when present.

Salmon schooling areas. --The areas are usually found near high tide where pools often occur. The areas are described with reference to the mean high tide mark. Annual variations in stream beds may alter locations of schooling areas.

Spawning areas. --Major areas are described with reference to the high tide mark. Location may change with change in stream conditions.

General notes. --This includes notes pertinent to the intertidal stream that are of interest and importance in the description of runs.

Upstream

Length accessible. --The length given in miles was measured from aerial photographs along the course of the stream to the known upper limits of salmon migration. Where barriers restrict major species but allow more vigorous species to pass, secondary species limits are given under "Barriers".

Gradient. --Slope was estimated in degrees from horizontal, based on observation by various individuals.

Velocity. --It is in feet per second during normal water levels, and is an estimate from observations by various individuals.

Bottom. --A description is given as to whether gravel (range from 1/4 inch to over 5 inches in diameter, arbitrary division point), mud, silt, organic materials, broken and water-washed rock, boulders, bedrock, etc., are present, from observations by various individuals.

Marker distance. --Distance is given in miles along stream course to standard termination point for salmon counting.

Marker identification. --Description of an artificial marker or of identification feature marking termination point for salmon spawning surveys is given.

Barriers. --Distance and location above high tide point to known barriers, both passable and impassable, are listed. Descriptions are also given when available.

Tributaries. --Tributaries used by spawning salmon are listed by distance from the mouth of the main stream, by direction, and by importance. Tributaries not used by salmon, but numerous, are mentioned under "Drainage".

Salmon schooling areas. --Based on survey records, major salmon schooling areas are listed where specific locations have been observed for an individual stream.

Spawning areas. --Major areas are described by distance above high tide or from a reference point in the stream.

General notes. --The notes include data pertinent to the upstream areas that are of interest and importance in the description of salmon escapements.

Escapement Record

Statistical area number. --The number used by the Bureau of Commercial Fisheries to designate the statistical area is given in the upper left side of the heading.

Stream name. --This appears in the center of the first line of the heading.

Stream number. --The new and old numbers appear on the right side of the first line of the heading on the first page of the escapement record. The following pages give only the new number.

Date surveyed. --Surveys are listed chronologically.

Miles surveyed. --Distances are given as measured along stream course to the termination point of the regular survey. Ground surveys are designated by "G" and aerial by "A". These symbols precede miles surveyed.

Surveyed by. --Initials of surveying organizations are listed as follows: Alaska Department of Fish and Game, ADF; Alaska Salmon Industry, ASI; Fisheries Research Institute, FRI; U.S. Fish and

Wildlife Service, Bureau of Commercial Fisheries, FWS; and United States Forest Service, USFS.

Pink, chum, other species. --Abundance of salmon observed during surveys is given as a numerical estimate. Estimates of secondary species are usually less reliable than those for the primary species. Estimates of dead salmon of all species usually are very general, having been based on the percentage of the count.

Remarks. --Adjective ratings are given first when available. The ratings range from poor to excellent and describe the abundance of salmon for the surveyed date only. They do not indicate seasonal escapement abundance. Other notes entered in this column include survey conditions, behavior and distribution of salmon, and salmon observations beyond stated survey distances.

Alder

Anchorage

Bank

Bar

Beaver dam

Bedrock

Blazed trail

Boulder

Bridge

Brush

Cabin

Cable crossing

Canyon

Channel in sand and gravel

Cliffs (contour)

Cliffs (drawn)

Conifer

Dam (wooden)

Dry channel

Falls

f. Fathom

Forest Service trail marker

Fish and Wildlife limit marker

Game trail

Glacier

Gorge

Grass

Gravel

HT High tide marker

Improved trail

Instrument shelter

Leaning tree

Log (above water)

Log (totally or partially submerged)

Log crossing

Logging road

Marker

Mine

Muskeg

North (true)

Pier

Piling

Pool (clear)

Pool (sedimented)

Rapids

Ridge

Riffle

Sand

Section number

Skiff or boat

Slide

Stream gage

Stump

Trickle

Unexplored channel

Walk

Water body

Weir

ALAVA CREEK, Behm Canal, Alava Bay, N.E. corner	K 67	(67)
ANCHOR CREEK, Behm Canal, Bell Arm, Head	K 51	(46)
BADGER CREEK, Revillagigedo Channel, Boca de Quadra, Badger Bay, N. shore at head	K 25	(16)
BAKEWELL CREEK, Behm Canal, Smeaton Bay, Bakewell Arm, N. head	K 33	(28A)
BAKEWELL RIVER, Behm Canal, Smeaton Bay, Bakewell Arm, S. shore .9 mile from head	K 32	(28)
BARRIER CREEK, Behm Canal, Chickamin River System, 9 miles from Leduc River confluence on S. side of S. fork of Chickamin	K 44-4	(40-)
BASIN CREEK, Behm Canal, Chickamin River System, S. shore 1 mile above Chickamin slough confluence with main river	K 44-	
BEAVER CREEK, Behm Narrows, S. shore in small bight 2 miles S.W. of Anchor Pass	K 80	(80)
Behm Canal, E. shore opposite N. end Smeaton Island, .8 mile S.-S.E. southern entrance to Shoalwater Pass	K 36A	(32)
Behm Canal, Midway between Point Sykes and Point Nelson	K 29	(24)
Behm Canal, Opposite Smeaton Island, 1.3 miles N. Point Trollop	K 36	(31)
Behm Canal, W. shore 1.6 miles S. of Ella Point	K 71	(71)
BELL CREEK, Behm Narrows	K 81	(49)
BIG GOAT CREEK, Behm Canal, Rudyerd Bay, Head of S. arm	K 39	(37)
BLACK BEAR CREEK, Ernest Sound, Union Bay, Head	K 66	(61)
BLACK CREEK, Revillagigedo Channel, Black Island Cove	K 27	(22)
Blank Inlet, Head, Nichols Passage	K 114A	(115)
Boca de Quadra, N. shore 2 miles W. of Orca Point, Revillagigedo Channel	K 26A	
Bond Bay, W. of N. point of bay entrance, Behm Canal	K 61	(56B)
BOSTWICK CREEK, Nichols Passage, Bostwick Inlet, Head	K 114	(116)
BOULDER CREEK, Behm Canal, Rudyerd Bay, E. shore midway between N. and S. arms	K 40	(38A)
BREAKWATER CREEK, Dixon Entrance, Boat Harbor, 1.6 miles S. of Tree Point	K 17	(12)
BUSCHMANN CREEK, Revillagigedo Channel, Boca de Quadra, Tributary to Hugh Smith Lake	K 22-1	(19B)
BUSH CREEK, Revillagigedo Channel, Nadzaheen Cove, N.W. head	K 112	(112)
CABIN CREEK (Bartholomew Creek), Behm Canal, Smeaton Bay Cabin Cove, N. shore 4 miles E. of Carp Island	K 35	(30)
CANINE CREEK, Pearse Canal, Fillmore Inlet, 1 mile N. of Edward Passage	K 9	(5B)
CANNERY CREEK, Portland Canal, Gwent Cove, At Hidden Inlet Cannery	K 7	(4A)
CARLANA CREEK, Behm Canal, Tongass Narrows, E. shore just N. of Sunny Point	K 90A	(86A)
CARP CREEK, Behm Canal, Smeaton Bay, S.E. corner of Carp Island anchorage	K 30	(25)
Carroll Inlet, E. shore 4 miles N. of Shoal Cove	K 99B	(97)
Carroll Inlet, W. shore 1.2 miles N. of Osten Island	K 97	(93)
CARROLL RIVER, Carroll Inlet, Head	K 99	(95)
Cascade Inlet, Head, Revillagigedo Channel	K 111A	(111)
CHECATS CREEK, Behm Canal, Checats Cove, S.E. corner of cove	K 38	(34)
CHICKAMIN RIVER, Behm Canal, Mainland shore 37 miles N. of S. entrance to canal	K 44	(40)

Clarence Strait, 4.5 miles N. of Nelson Cove on W. Gravina Island	K 117	(116C)
Clarence Strait, W. shore Gravina Island, 5 miles N. Dall Head	K 117A	(116B)
CLEAR CREEK, Behm Canal, Burroughs Bay, Unuk River System, N. side 3.5 miles above Forest Service cabin	K 48-	
CLEARWATER CREEK, Behm Canal, Chickamin River System, N. bank near high tide	K 44-5	(40A)
Clover Passage, E. shore opposite Joe Island, Behm Canal	K 89A	(85N)
COBB CREEK, Revillagigedo Channel, Boca de Quadra, Tributary to Hugh Smith Lake	K 22-2	(19A)
Coho Cove, Center head of cove, Revillagigedo Channel	K 101	(101)
Coho Cove, Right head of cove, Revillagigedo Channel	K 101A	(101A)
COHO CREEK, Behm Canal, Chickamin River System, S. side 3 miles above Chickamin delta	K 44-1	(40-)
COW CREEK, Behm Narrows, S.-S.W. of Claude Point	K 79	(79)
CRAB CREEK, Revillagigedo Channel, Crab Bay, Head	K 111	(110)
DALL CREEK, Nichols Passage, Dall Bay, N.E. shore	K 117B	(116A)
Dixon Entrance, S. Duke Island, 1 mile N.E. Cape Northumberland	K 107A	(106D)
ELLA CREEK, Behm Canal, W. shore 1.8 miles W. of Eddystone Rock	K 72	(72)
EULACHON CREEK, Behm Canal, Burroughs Bay, Unuk River System, Tributary N. side of valley about high tide	K 48-1	(43-)
Felice Strait, .4 mile W. of Annette Point	K 109	(108)
Felice Strait, N.W. head of cove, 2.3 miles W. of Annette Point	K 108A	(108A & 108B
Fillmore Inlet, E.-N.E. shore outer chuck, .9 mile from narrows at entrance	K 8B	(5)
Fillmore Inlet, .9 mile W.-N.W. of Edward Passage, Pearse Canal	K 9A	
Fillmore Inlet, S.W. corner of extreme inner bay outside of lagoon	K 8A	
Fillmore Inlet, 3.2 miles N.E. of Just Island on N. shore, Pearse Canal	K 10	(5C)
FILLMORE RIVER, Fillmore Inlet, Extreme head	K 8	(5A)
FISH CREEK, Portland Canal, Salmon River tributary, 5 miles N. of Hyder	K 1-1	
FISH CREEK, Thorne Arm, Head, E. of Mop Point and Pop Point	K 103	(103)
FITZGIBBON CREEK, Behm Canal, Fitzgibbon Cove, S. shore 1 mile from entrance	K 46A	(42A)
FLAT CREEK, Willard Inlet, .7 mile N.W. of chuck entrance at head of inlet	K 11A	(7)
George Inlet, E. shore	K 96A	(91)
GRACE CREEK, Behm Canal, W. shore 1.5 miles S. of Snip Point	K 75	(75)
Grant Cove, S. corner, Clarence Strait	K 116A	(116D)
GRANT CREEK, Behm Canal, Burroughs Bay, N. shore, 3 miles N. of Point Fitzgibbon	K 49	(44)
Halibut Bay, N.E. at head, Portland Canal	K 4A	(2A)
Halibut Bay, W. shore .7 mile from Halibut Point, Portland Canal	K 4B	(2B)
HALIBUT CREEK, Portland Canal, Halibut Bay, N.W. head	K 4	(2)
Hall Cove, Dixon Entrance	K 107	
HALLECK RIVER, Portland Canal, River Point, 9 miles N. of Tombstone Bay	K 2	(1B)
HARRY CREEK, Nakat Bay, Harry Bay, Head	K 16	(11)
HATCHERY CREEK, Behm Canal, Yes Bay, Lake McDonald	K 54-1	(50A)
HECKMAN CREEK, Behm Canal, Heckman Point, S. of Point	K 55D	(51D)
Helm Bay, Head, Behm Canal	K 59	(54)
HELM CREEK, Behm Canal, Helm Bay, N.E. shore 4.5 miles from entrance	K 58	(55)

HERMAN CREEK, Behm Canal, N. shore 3 miles W. of Burroughs Bay	K 50	(45)
HERRING CREEK, George Inlet, Herring Cove, Head	K 92	(86C)
HIDDEN CREEK, Portland Canal, Hidden Inlet, Head	K 6	(4)
Hidden Inlet, 1.5 miles from head, Portland Canal	K 6A	(4C)
HUMPBACK CREEK, Revillagigedo Channel, Boca de Quadra Mink Arm, E. shore .7 mile from head	K 21	(18)
HUMPY CREEK, Behm Canal, Chickamin River System, 4 miles up lower Chickamin slough, N. side	K 44-3	(40-)
INDIAN CREEK, Behm Canal, W. shore N.W. of Chickamin River	K 78	(78)
JIM CREEK, Clarence Strait, E. shore 1.3 miles N. of Ship Island	K 63	(58)
Kah Shakes Cove, S.E. head of cove, Revillagigedo Channel	K 19A	(14)
KAH SHAKES CREEK, Revillagigedo Channel, Kah Shakes Cove, N.E. arm of cove	K 19	(14A)
KETA RIVER, Revillagigedo Channel, Boca de Quadra, Main Arm, Head	K 24	(21)
KETCHIKAN CREEK, Behm Canal, Tongass Narrows, Thomas Basin	K 91	(86B)
KING SALMON CREEK, Behm Canal, Chickamin River System, S. side 3.6 miles above Chickamin delta	K 44-2	(40-)
KLAHINI RIVER, Behm Canal, Burroughs Bay, S. shore at head	K 47	(43A)
KLAM CREEK, Behm Canal, Gedney Pass, Klu Bay, N.W. corner	K 82A	(81A)
KLU CREEK, Behm Canal, Gedney Pass, Klu Bay, E. head	K 83	(81)
KWAIN CREEK, Revillagigedo Channel, Kwain Bay, S.W. corner	K 110	(109)
LAKE CREEK, Behm Canal, Burroughs Bay, Unuk River System, S. side 7.5 miles above Unuk slough confluence	K 48-	
LEASK CREEK, George Inlet, Head	K 95	(89)
LORING CREEK, Behm Canal, Naha Bay, E. of Loring at old cannery ruins	K 86	(85G)
LUCKY CREEK, Revillagigedo Channel, Lucky Cove, Head	K 105	(105)
MAHONEY CREEK, George Inlet, W. shore, 4 miles S. of Leask Cove	K 93	(87)
MANZANITA CREEK, Behm Canal, Manzanita Bay, N.W. corner	K 74	(74)
MARGARET CREEK, Behm Canal, Traitors Cove, S. shore 2 miles from entrance	K 85	(83)
MARTEN RIVER, Revillagigedo Channel, Boca de Quadra, Marten Arm, N. head	K 23	(20)
MEYERS CREEK, Clarence Strait, Meyers Chuck	K 65	(60)
MINK CREEK, Revillagigedo Channel, Boca de Quadra, Mink Arm, Head	K 21A	(18A)
MOSER CREEK, Behm Canal, Moser Bay, Head	K 89	(85L & 85
NAHA RIVER, Behm Canal, Naha Bay, Head of Roosevelt Lagoon	K 87	(85)
Nakat Bay, Small cove in S. tip of Round Hill Peninsula between Harry Bay and Nakat Inlet	K 15	(10)
NAKAT CREEK, Nakat Bay, Nakat Inlet, Center of head	K 13	(8A)
Nakat Inlet, .5 mile from head on E. shore, Nakat Bay	K 13A	(8)
Nakat Inlet, On E. shore 4 miles from entrance to inlet, Nakat Bay	K 14A	(9A)
Nakat Inlet, 1.5 miles from head on W. shore Nakat Bay	K 13B	(8B)
Nakat Inlet, W. shore 2.5 miles inside entrance to inlet, N. shore of cove, Nakat Bay	K 14B	(9B)
NARROW PASS CREEK, Behm Canal, W. shore 2 miles N.W. of Rudyerd Island	K 68	(68)
NEETS CREEK, Behm Canal, Neets Bay, E. head	K 83	(82)
NIBLACK CREEK, Clarence Strait, E. shore 7 miles N.E. of Caamano Point	K 62	(57)
NIGELIUS CREEK, Carroll Inlet, In Shelter Cove just S. of Nigelius Point	K 98	(94)
NOOYA CREEK, Behm Canal, Rudyerd Bay, N. arm, W. shore .8 mile	K 42	(38)

Pearse Canal, W. of entrance to Willard Inlet	K 12	(7A)
POND CREEK, Felice Strait, Pond Bay, S.W. corner at head	K 106	(106B)
Port Stewart, S.W. shore opposite entrance to anchorage, Behm Canal	K 56A	(52A)
PORTAGE CREEK (Swedish Meadows), Behm Canal, Portage Cove, Opposite Chickamin River	K 77	(77)
Princess Bay, N.W. corner, Behm Canal	K 69	(69)
RAYMOND CREEK (Granite Creek), Behm Canal, Raymond Cove	K 57	(53)
RED RIVER, Revillagigedo Channel, Boca de Quadra, Marten Arm, Marten River intertidal zone	K 23A	(20A)
Revillagigedo Channel, N. cove 1.5 miles S. of Point Sykes	K 28	(23)
Revillagigedo Channel, S. cove 1.5 miles S. of Point Sykes	K 28A	(23A)
ROBINSON CREEK (Humpy Creek), Behm Canal, E. shore 6 miles N.W. of Chickamin River	K 45	(41)
Rudyerd Bay, S. shore at head of N. arm, Behm Canal	K 41A	(36A)
RUDYERD RIVER, Behm Canal, Rudyerd Bay, Head of N. arm	K 41	(36)
SAKS CREEK, Behm Canal, Saks Cove, S. head	K 46	(42)
SALMON RIVER, Portland Canal, Head at the town of Hyder	K 1	(1A)
SALT CREEK, George Inlet, Head of Salt Lagoon	K 96	(90)
SANDFLY CREEK, Portland Canal, Sandfly Bay, Head	K 5	(3)
Sargent Bay, N.W. corner on W. shore, Behm Canal	K 73	(73)
SEA LEVEL CREEK (Gokachin River), Thorne Arm, E. shore near head 1.5 miles S.E. of Pop Island	K 104	(104)
SHELOKUM CREEK, Behm Canal, Bailey Bay, W. shore .5 mile from head	K 53	(48A)
SHERIDAN CREEK, Behm Canal, Smeaton Bay, S. shore opposite Cabin Cove	K 31B	(27A)
Shoal Cove, Head, Carroll Inlet	K 99C	(98)
SHORT CREEK, Behm Canal, Short Bay, Bell Arm, Head	K 52	(47)
SKULL CREEK, Behm Canal, Smeaton Bay, .6 mile E. of Short Point	K 31	(26)
Smeaton Bay, S. shore 2 miles E. of Carp Island, Behm Canal	K 31A	(27)
SMUGGLERS CREEK, Behm Canal, Smugglers Cove, Head	K 60	(56)
SOCKEYE CREEK, Revillagigedo Channel, Boca de Quadra, Opposite Cygnet Island	K 22	(19)
SOCKEYE CREEK, Nakat Bay, Nakat Inlet, E. shore 3.5 miles from head	K 14	(9)
SNIP CREEK, Behm Canal, W. shore W. of Snip Island	K 76	(76)
SPACIOUS CREEK (Wasta Creek), Behm Canal, Spacious Bay, Center head	K 55	(51)
Spacious Bay, Head of cove N. of Square Island, Behm Canal	K 55A	(51A)
Spacious Bay, N.W. shore at head, Behm Canal	K 55B	(51B)
Spacious Bay, S. shore opposite Square Island, Behm Canal	K 55C	(51C)
SPIT POINT CREEK, Carroll Inlet, S.E. shore between Brunn Point and Spit Point	K 100	(100)
STEELHEAD CREEK, Behm Canal, Naha Bay, S. shore opposite Naha River float	K 87A	(85J)
STEWART CREEK, Behm Canal, Port Stewart	K 56	(52)
SWAN CREEK, Carroll Inlet, E. shore 2 miles from head of inlet	K 99A	(96)
SWANSONS CREEK, Behm Canal, Princess Bay, E. shore 1 mile from Wasp Point	K 70	
TAMGAS CREEK, Tamgas Harbor, E. shore opposite Civil Aeronautics Administration Station	K 108	(107)
Thorne Arm, Head between Mop Point and Pop Point	K 102	(102)
TOMBSTONE RIVER, Portland Canal, Tombstone Bay	K 3	(1)
Tongass Narrows, E. shore opposite Wards Cove	K 115	
TRAITORS CREEK, Behm Canal, Traitors Cove, Head of inner cove	K 84	(84)
TROUT CREEK, Nichols Passage, Port Chester, N.E. corner	K 113	(114)
Union Bay, E. shore 1.3 miles N. of head, Ernest Sound	K 66A	(61A)
UNUK RIVER, Behm Canal, Burroughs Bay	K 48	(43)
VALLENAR CREEK, Clarence Strait, Vallenar Bay, Head	K 116	(117)

VERY CREEK, Revillagigedo Channel, Very Inlet, Northern extremity of inlet	K 18	(13)
Very Inlet, Revillagigedo Channel	K 18D	(13D)
Very Inlet, N.E. shore at head of inlet, Revillagigedo Channel	K 18A	(13A)
Very Inlet, N.E. shore of first S.E. branch of inlet 1.5 miles inside entrance	K 18C	(13C)
Very Inlet, S.W. head of branch extending from S.W. head of inlet, Revillagigedo Channel	K 18B	(13B)
Vixen Bay, W. shore at head, Revillagigedo Channel, Boca de Quadra	K 20A	(17A)
VIXEN CREEK, Revillagigedo Channel, Boca de Quadra, Vixen Bay, Head	K 20	(17)
Walker Cove, N. head, Behm Canal	K 43B	(39C)
Walker Cove, S. shore at head, Behm Canal	K 43A	(39A & 39B)
WALKER CREEK, Behm Canal, Walker Cove, 5 miles from entrance on S. shore	K 43	(39)
WARD CREEK, Behm Canal, Tongass Narrows, Ward Cove, Head	K 90	(86)
Weasel Cove, Head, Revillagigedo Channel, Boca de Quadra	K 26	(15)
WHITE RIVER, George Inlet, W. shore N.W. of Coon Island	K 94	(88)
WILLARD CREEK, Willard Inlet, Head	K 11	(6 & 6A)
Willard Inlet, 6 miles from entrance to inlet on E. shore, Pearse Canal	K 11B	(7B)
WILSON RIVER, Behm Canal, Smeaton Bay, Wilson Arm, Head, Main fork (West)	K 34	(29)
WILSON RIVER, EAST FORK, Behm Canal, Smeaton Bay, Wilson Arm, Large tributary of Wilson River	K 34-1	
WINSTANLEY CREEK, Behm Canal, E. shore at S. entrance to Shoalwater Passage	K 37	(33)
WOLF CREEK, Clarence Strait, E. shore 3.3 miles N. of Ship Island	K 64	(59)
WOLF CREEK, Behm Canal, Moser Bay, E. shore near entrance	K 88	(85K)
WOLVERINE CREEK, Behm Canal, Smeaton Bay, Wilson Arm, E. shore of lower intertidal flats at head	K 34A	(29A)
Yes Bay, Head, Behm Canal	K 54A	(50B)
Yes Bay, 1.6 miles W. of Yes River, Behm Canal	K 54B	(50C)
YES RIVER, Behm Canal, Yes Bay, N. shore 2.5 miles from entrance	K 54	(50)

K 1	(1A)	SALMON RIVER, Portland Canal, Head at the town of Hyder
K 1-1		FISH CREEK, Portland Canal, Salmon River tributary, 5 miles N. of Hyder
K 2	(1B)	HALLECK RIVER, Portland Canal, River Point, 9 miles N. of Tombstone Bay
K 3	(1)	TOMBSTONE RIVER, Portland Canal, Tombstone Bay
K 4	(2)	HALIBUT CREEK, Portland Canal, Halibut Bay, N.W. head
K 4A	(2A)	Portland Canal, Halibut Bay, N.E. at head
K 4B	(2B)	Portland Canal, Halibut Bay, W. shore .7 mile from Halibut Point
K 5	(3)	SANDFLY CREEK, Portland Canal, Sandfly Bay, Head
K 6	(4)	HIDDEN CREEK, Portland Canal, Hidden Inlet, Head
K 6A	(4C)	Portland Canal, Hidden Inlet, 1.5 miles from head
K 7	(4A)	CANNERY CREEK, Portland Canal, Gwent Cove, At Hidden Inlet Cannery
K 8	(5A)	FILLMORE RIVER, Fillmore Inlet, Extreme head
K 8A		Fillmore Inlet, S.W. corner of extreme inner bay outside of lagoon
K 8B	(5)	Fillmore Inlet, E.-N.E. shore outer chuck, .9 mile from narrows at entrance
K 9	(5B)	CANINE CREEK, Pearse Canal, Fillmore Inlet, 1 mile N. of Edward Passage
K 9A		Pearse Canal, Fillmore Inlet, .9 mile W.-N.W. of Edward Passage
K 10	(5C)	Pearse Canal, Fillmore Inlet, 3.2 miles N.E. of Just Island on N. shore
K 11	(6 & 6A)	WILLARD CREEK, Willard Inlet, Head
K 11A	(7)	FLAT CREEK, Willard Inlet, .7 mile N.W. of chuck entrance at head of inlet
K 11B	(7B)	Pearse Canal, Willard Inlet, 6 miles from entrance to inlet on E. shore
K 12	(7A)	Pearse Canal, W. of entrance to Willard Inlet
K 13	(8A)	NAKAT CREEK, Nakat Bay, Nakat Inlet, Center of head
K 13A	(8)	Nakat Bay, Nakat Inlet, .5 mile from head on E. shore
K 13B	(8B)	Nakat Bay, Nakat Inlet, 1.5 miles from head on W. shore
K 14	(9)	SOCKEYE CREEK, Nakat Bay, Nakat Inlet, E. shore 3.5 miles from head
K 14A	(9A)	Nakat Bay, Nakat Inlet, On E. shore 4 miles from entrance to inlet
K 14B	(9B)	Nakat Bay, Nakat Inlet, W. shore 2.5 miles inside entrance to inlet, N. shore of cove
K 15	(10)	Nakat Bay, Small cove in S. tip of Round Hill Peninsula between Harry Bay and Nakat Inlet
K 16	(11)	HARRY CREEK, Nakat Bay, Harry Bay, Head
K 17	(12)	BREAKWATER CREEK, Dixon Entrance, Boat Harbor, 1.6 miles S. of Tree Point
K 18	(13)	VERY CREEK, Revillagigedo Channel, Very Inlet, Northern extremity of inlet
K 18A	(13A)	Revillagigedo Channel, Very Inlet, N.E. shore at head of inlet
K 18B	(13B)	Revillagigedo Channel, Very Inlet, S.W. head of branch extending from S.E. head of inlet
K 18C	(13C)	Revillagigedo Channel, Very Inlet, N.E. shore of first S.E. branch of inlet 1.5 miles inside entrance
K 18D	(13D)	Revillagigedo Channel, Very Inlet
K 19	(14A)	KAH SHAKES CREEK, Revillagigedo Channel, Kah Shakes Cove, N.E. arm of cove
K 19A	(14)	Revillagigedo Channel, Kah Shakes Cove, S.E. head of cove

K 20	(17)	VIXEN CREEK, Revillagigedo Channel, Boca de Quadra, Vixen Bay, Head
K 20A	(17A)	Revillagigedo Channel, Boca de Quadra, Vixen Bay, W. shore at head
K 21	(18)	HUMPBACK CREEK, Revillagigedo Channel, Boca de Quadra, Mink Arm, E. shore .7 mile from head
K 21A	(18A)	MINK CREEK, Revillagigedo Channel, Boca de Quadra, Mink Ar Head
K 22	(19)	SOCKEYE CREEK, Revillagigedo Channel, Boca de Quadra, Oppos Cygnet Island
K 22-1	(19B)	BUSCHMANN CREEK, Revillagigedo Channel, Boca de Quadra, Tributary to Hugh Smith Lake
K 22-2	(19A)	COBB CREEK, Revillagigedo Channel, Boca de Quadra, Tributary to Hugh Smith Lake
K 23	(20)	MARTEN RIVER, Revillagigedo Channel, Boca de Quadra, Marte Arm, N. head
K 23A	(20A)	RED RIVER, Revillagigedo Channel, Boca de Quadra, Marten Arm, Marten River intertidal zone
K 24	(21)	KETA RIVER, Revillagigedo Channel, Boca de Quadra, Main Arm Head
K 25	(16)	BADGER CREEK, Revillagigedo Channel, Boca de Quadra, Badge Bay, N. shore at head
K 26	(15)	Revillagigedo Channel, Boca de Quadra, Weasel Cove, Head
K 26A		Revillagigedo Channel, Boca de Quadra, N. shore 2 miles W. of Orca Point
K 27	(22)	BLACK CREEK, Revillagigedo Channel, Black Island Cove
K 28	(23)	Revillagigedo Channel, N. cove 1.5 miles S. of Point Sykes
K 28A	(23A)	Revillagigedo Channel, S. cove 1.5 miles S. of Point Sykes
K 29	(24)	Behm Canal, Midway between Point Sykes and Point Nelson
K 30	(25)	CARP CREEK, Behm Canal, Smeaton Bay, S.E. corner of Carp Island anchorage
K 31	(26)	SKULL CREEK, Behm Canal, Smeaton Bay, .6 mile E. of Short Point
K 31A	(27)	Behm Canal, Smeaton Bay, S. shore 2 miles E. of Carp Island
K 31B	(27A)	SHERIDAN CREEK, Behm Canal, Smeaton Bay, S. shore opposite Cabin Cove
K 32	(28)	BAKEWELL RIVER, Behm Canal, Smeaton Bay, Bakewell Arm, S. shore .9 mile from head
K 33	(28A)	BAKEWELL CREEK, Behm Canal, Smeaton Bay, Bakewell Arm, N. head
K 34	(29)	WILSON RIVER, Behm Canal, Smeaton Bay, Wilson Arm, Head, Main fork (West)
K 34-1		WILSON RIVER, EAST FORK, Behm Canal, Smeaton Bay, Wilson arm, Large tributary of Wilson River
K 34A	(29A)	WOLVERINE CREEK, Behm Canal, Smeaton Bay, Wilson Arm, E. shore of lower intertidal flats at head
K 35	(30)	CABIN CREEK (Bartholomew Creek), Behm Canal, Smeaton Bay, Cabin Cove, N. shore 4 miles E. of Carp Island
K 36	(31)	Behm Canal, Opposite Smeaton Island, 1.3 miles N. Point Trollop
K 36A	(32)	Behm Canal, E. shore opposite N. end Smeaton Island, .8 mile S.-S.E. southern entrance to Shoalwater Pass
K 37	(33)	WINSTANLEY CREEK, Behm Canal, E. shore at S. entrance to Shoalwater Passage
K 38	(34)	CHECATS CREEK, Behm Canal, Checats Cove, S.E. corner of cc
K 39	(37)	BIG GOAT CREEK, Behm Canal, Rudyerd Bay, Head of S. arm
K 40	(38A)	BOULDER CREEK, Behm Canal, Rudyerd Bay, E. shore midway between N. and S. arms
K 41	(36)	RUDYERD RIVER, Behm Canal, Rudyerd Bay, Head of N. arm
K 41A	(36A)	Behm Canal, Rudyerd Bay, S. shore at head of N. arm
K 42	(38)	NOOYA CREEK, Behm Canal, Rudyerd Bay, North Arm, W. shore .8 mile

K 43	(39)	WALKER CREEK, Behm Canal, Walker Cove, 5 miles from entrance on S. shore
K 43A	(39A & 39B)	Behm Canal, Walker Cove, S. shore at head
K 43B	(39C)	Behm Canal, Walker Cove, N. head
K 44	(40)	CHICKAMIN RIVER, Behm Canal, Mainland shore 37 miles N. of S. entrance to canal
K 44-		BASIN CREEK, Behm Canal, Chickamin River System, S. shore 1 mile above Chickamin slough confluence with main river
K 44-1	(40-)	COHO CREEK, Behm Canal, Chickamin River System, S. side 3 miles above Chickamin delta
K 44-2	(40-)	KING SALMON CREEK, Behm Canal, Chickamin River System, S. side 3.6 miles above Chickamin delta
K 44-3	(40-)	HUMPY CREEK, Behm Canal, Chickamin River System, 4 miles up lower Chickamin slough, N. side
K 44-4	(40-)	BARRIER CREEK, Behm Canal, Chickamin River System, 9 miles upstream from Leduc River confluence on S. side of S. fork of Chickamin
K 44-5	(40A)	CLEARWATER CREEK, Behm Canal, Chickamin River System, N. bank near high tide
K 45	(41)	ROBINSON CREEK, Behm Canal, E. shore 6 miles N.W. of Chickamin River
K 46	(42)	SAKS CREEK, Behm Canal, Saks Cove, S. head
K 46A	(42A)	FITZGIBBON CREEK, Behm Canal, Fitzgibbon Cove, S. shore 1 mile from entrance
K 47	(43A)	KLAHINI RIVER, Behm Canal, Burroughs Bay, S. shore at head
K 48	(43)	UNUK RIVER, Behm Canal, Burroughs Bay
K 48-		CLEAR CREEK, Behm Canal, Burroughs Bay, Unuk River System, N. side 3.5 miles above Forest Service cabin
K 48-		LAKE CREEK, Behm Canal, Burroughs Bay, Unuk River System, S. side 7.5 miles above Unuk slough confluence
K 48-1	(43-)	EULACHON CREEK, Behm Canal, Burroughs Bay, Unuk River System Tributary N. side of valley about high tide
K 49	(44)	GRANT CREEK, Behm Canal, Burroughs Bay, N. shore, 3 miles N. of Point Fitzgibbon
K 50	(45)	HERMAN CREEK, Behm Canal, N. shore 3 miles W. of Burroughs Bay
K 51	(46)	ANCHOR CREEK, Behm Canal, Bell Arm, Head
K 52	(47)	SHORT CREEK, Behm Canal, Short Bay, Bell Arm, Head
K 53	(48A)	SHELOKUM CREEK, Behm Canal, Bailey Bay, W. shore .5 mile from head
K 54	(50)	YES RIVER, Behm Canal, Yes Bay, N. shore 2.5 miles from entrance
K 54-1	(50A)	HATCHERY CREEK, Behm Canal, Yes Bay, Lake McDonald
K 54A	(50B)	Behm Canal, Yes Bay, Head
K 54B	(50C)	Behm Canal, Yes Bay, 1.6 miles W. of Yes River
K 55	(51)	SPACIOUS CREEK (Wasta Creek), Behm Canal, Spacious Bay, Center head
K 55A	(51A)	Behm Canal, Spacious Bay, Head of cove N. of Square Island
K 55B	(51B)	Behm Canal, Spacious Bay, N.W. shore at head
K 55C	(51C)	Behm Canal, Spacious Bay, S. shore opposite Square Island
K 55D	(51D)	HECKMAN CREEK, Behm Canal, Heckman Point, S. of point
K 56	(52)	STEWART CREEK, Behm Canal, Port Stewart
K 56A	(52A)	Behm Canal, Port Stewart, S.W. shore opposite entrance to anchorage
K 57	(53)	RAYMOND CREEK (Granite Creek), Behm Canal, Raymond Cove
K 58	(55)	HELM CREEK, Behm Canal, Helm Bay, N.E. shore 4.5 miles from entrance
K 59	(54)	Behm Canal, Helm Bay, Head
K 60	(56)	SMUGGLERS CREEK, Behm Canal, Smugglers Cove, Head
K 61	(56B)	Behm Canal, Bond Bay, W. of N. point of bay entrance
K 62	(57)	NIBLACK CREEK, Clarence Strait, E. shore 7 miles N.E. of Caamano

K 63	(58)	JIM CREEK, Clarence Strait, E. shore 1.3 miles N. of Ship Island
K 64	(59)	WOLF CREEK, Clarence Strait, E. shore 3.3 miles N. of Ship Island
K 65	(60)	MEYERS CREEK, Clarence Strait, Meyers Chuck
K 66	(61)	BLACK BEAR CREEK, Ernest Sound, Union Bay, Head
K 66A	(61A)	Ernest Sound, Union Bay, E. shore 1.3 miles N. of head
K 67	(67)	ALAVA CREEK, Behm Canal, Alava Bay, N.E. corner
K 68	(68)	NARROW PASS CREEK, Behm Canal, W. shore 2 miles N.W. of Rudyerd Island
K 69	(69)	Behm Canal, Princess Bay, N.W. corner
K 70		SWANSONS CREEK, Behm Canal, Princess Bay, E. shore 1 mile from Wasp Point
K 71	(71)	Behm Canal, W. shore 1.6 miles S. of Ella Point
K 72	(72)	ELLA CREEK, Behm Canal, W. shore 1.8 miles W. of Eddystone Rock
K 73	(73)	Behm Canal, Sargent Bay, N.W. corner on W. shore
K 74	(74)	MANZANITA CREEK, Behm Canal, Manzanita Bay, N.W. corner
K 75	(75)	GRACE CREEK, Behm Canal, W. shore 1.5 miles S. of Snip Point
K 76	(76)	SNIP CREEK, Behm Canal, W. shore W. of Snip Island
K 77	(77)	PORTAGE CREEK (Swedish Meadows), Behm Canal, Portage Cove, Opposite Chickamin River
K 78	(78)	INDIAN CREEK, Behm Canal, W. shore N.W. of Chickamin River
K 79	(79)	COW CREEK, Behm Narrows, S.-S.W. of Claude Point
K 80	(80)	BEAVER CREEK, Behm Narrows, S. shore in small bight 2 miles S.W. of Anchor Pass
K 81	(49)	BELL CREEK, Behm Narrows
K 82	(81)	KLU CREEK, Behm Canal, Gedney Pass, Klu Bay, E. head
K 82A	(81A)	KLAM CREEK, Behm Canal, Gedney Pass, Klu Bay, N.W. corner
K 83	(82)	NEETS CREEK, Behm Canal, Neets Bay, E. head
K 84	(84)	TRAITORS CREEK, Behm Canal, Traitors Cove, Head of inner cove
K 85	(83)	MARGARET CREEK, Behm Canal, Traitors Cove, S. shore 2 miles from entrance
K 86	(85G)	LORING CREEK, Behm Canal, Naha Bay, E. of Loring at old cannery ruins
K 87	(85)	NAHA RIVER, Behm Canal, Naha Bay, Head of Roosevelt Lagoon
K 87A	(85J)	STEELHEAD CREEK, Behm Canal, Naha Bay, S. shore opposite Naha River float
K 88	(85K)	WOLF CREEK, Behm Canal, Moser Bay, E. shore near entrance
K 89	(85L & 85M)	MOSER CREEK, Behm Canal, Moser Bay, Head
K 89A	(85N)	Behm Canal, Clover Passage, E. shore opposite Joe Island
K 90	(86)	WARD CREEK, Behm Canal, Tongass Narrows, Ward Cove, Head
K 90A	(86A)	CARLANA CREEK, Behm Canal, Tongass Narrows, E. shore just N. of Sunny Point
K 91	(86B)	KETCHIKAN CREEK, Behm Canal, Tongass Narrows, Thomas Basin
K 92	(86C)	HERRING CREEK, George Inlet, Herring Cove, Head
K 93	(87)	MAHONEY CREEK, George Inlet, W. shore, 5 miles S. of Leask Cove
K 94	(88)	WHITE RIVER, George Inlet, W. shore N.W. of Coon Island
K 95	(89)	LEASK CREEK, George Inlet, Head
K 96	(90)	SALT CREEK, George Inlet, Head of Salt Lagoon
K 96A	(91)	George Inlet, E. shore
K 97	(93)	Carroll Inlet, W. shore 1.2 miles N. of Osten Island
K 98	(94)	NIGELIUS CREEK, Carroll Inlet, In Shelter Cove just S. of Nigelius Point
K 99	(95)	CARROLL RIVER, Carroll Inlet, Head
K 99A	(96)	SWAN CREEK, Carroll Inlet, E. shore 2 miles from head of inlet
K 99B	(97)	Carroll Inlet, E. shore 4 miles N. of Shoal Cove
K 99C	(98)	Carroll Inlet, Shoal Cove, Head

K 100	(100)	SPIT POINT CREEK, Carroll Inlet, S.E. shore between Brunn Point and Spit Point
K 101	(101)	Revillagigedo Channel, Coho Cove, Center head of cove
K 101A	(101A)	Revillagigedo Channel, Coho Cove, Right head of cove
K 102	(102)	Thorne Arm, Head between Mop Point and Pop Point
K 103	(103)	FISH CREEK, Thorne Arm, Head, E. of Mop Point and Pop Point
K 104	(104)	SEA LEVEL CREEK (Gokachin River), Thorne Arm, E. shore near head 1.5 miles S.E. of Pop Island
K 105	(105)	LUCKY CREEK, Revillagigedo Channel, Lucky Cove, Head
K 106	(106B)	POND CREEK, Felice Strait, Pond Bay, S.W. corner at head
K 107		Dixon Entrance, Halls Cove
K 107A	(106D)	Dixon Entrance, S. Duke Island, 1 mile N.E. Cape Northumberland
K 108	(107)	TAMGAS CREEK, Tamgas Harbor, E. shore opposite Civil Aeronautics Administration Station
K 108A	(108A & 108B)	Felice Strait, N.W. head of cove 2.3 miles W. of Annette Point
K 109	(108)	Felice Strait, .4 mile W. of Annette Point
K 110	(109)	Revillagigedo Channel, Kwain Bay, S.W. corner
K 111	(110)	CRAB CREEK, Revillagigedo Channel, Crab Bay, Head
K 111A	(111)	Revillagigedo Channel, Cascade Inlet, Head
K 112	(112)	BUSH CREEK, Revillagigedo Channel, Nadzaheen Cove, N.W. Head
K 113	(114)	TROUT CREEK, Nichols Passage, Port Chester, N.E. corner
K 114	(116)	BOSTWICK CREEK, Nichols Passage, Bostwick Inlet, Head
K 114A	(115)	Nichols Passage, Blank Inlet, Head
K 115		Tongass Narrows, E. shore opposite Wards Cove
K 116	(117)	VALLENAR CREEK, Clarence Strait, Vallenar Bay, Head
K 116A	(116D)	Clarence Strait, Grant Cove, S. corner
K 117	(116C)	Clarence Strait, 4.5 miles N. of Nelson Cove on W. Gravina Island
K 117A	(116B)	Clarence Strait, W. shore Gravina Island, 5 miles N. Dall head
K 117B	(116A)	DALL CREEK, Nichols Passage, Dall Bay, N.E. shore

101-11		
WARD CREEK, Behm Canal, Tongass Narrows, Ward Cove, Head	K 90	(86)
CARLANA CREEK, Behm Canal, Tongass Narrows, E. shore just N. of Sunny Point	K 90A	(86A)
KETCHIKAN CREEK, Behm Canal, Tongass Narrows, Thomas Basin	K 91	(86B)
HERRING CREEK, George Inlet, Herring Cove, Head	K 92	(86C)
Coho Cove, Center head of cove, Revillagigedo Channel	K 101	(101)
Coho Cove, Revillagigedo Channel, Right head of cove	K 101A	(101A)
BUSH CREEK, Revillagigedo Channel, Nadzaheen Cove, N.W. head	K 112	(112)
101-12		
MAHONEY CREEK, George Inlet, W. shore, 5 miles S. of Leask Cove	K 93	(87)
WHITE RIVER, George Inlet, W. shore N.W. of Coon Island	K 94	(88)
LEASK CREEK, George Inlet, Head	K 95	(89)
SALT CREEK, George Inlet, Head of Salt Lagoon	K 96	(90)
George Inlet, E. shore	K 96A	(91)
101-13		
Carroll Inlet, W. shore 1.2 miles N. of Osten Island	K 97	(93)
NIGELIUS CREEK, Carroll Inlet, In Shelter Cove just S. of Nigelius Point	K 98	(94)
CARROLL RIVER, Carroll Inlet, Head	K 99	(95)
SWAN CREEK, Carroll Inlet, E. shore 2 miles from head of inlet	K 99A	(96)
Carroll Inlet, E. shore 4 miles N. of Shoal Cove	K 99B	(97)
Shoal Cove, Carroll Inlet, Head	K 99C	(98)
SPIT POINT CREEK, Carroll Inlet, S.E shore between Brunn Point and Spit Point	K 100	(100)
101-14		
Thorne Arm, Head between Mop Point and Pop Point	K 102	(102)
FISH CREEK, Thorne Arm, Head, E. of Mop and Pop Points	K 103	(103)
SEA LEVEL CREEK (Gokachin River), Thorne Arm, E. shore near head, 1.5 miles S.E. of Pop Island	K 104	(104)
101-21		
CHICKAMIN RIVER, Behm Canal, Mainland shore 37 miles N. of S. entrance to canal	K 44	(40)
ROBINSON CREEK, Behm Canal, E. shore 6 miles N.W. of Chickamin River	K 45	(41)
SAKS CREEK, Behm Canal, Saks Cove, S. head	K 46	(42)
FITZGIBBON CREEK, Behm Canal, Fitzgibbon Cove, S. shore 1 mile from entrance	K 46A	(42A)
HERMAN CREEK, Behm Canal, N. shore 3 miles W. of Burroughs Bay	K 50	(45)
MANZANITA CREEK, Behm Canal, Manzanita Bay, N.W. corner	K 74	(74)
GRACE CREEK, Behm Canal, W. shore 1.5 miles S. of Snip Point	K 75	(75)
SNIP CREEK, Behm Canal, W. shore W. of Snip Island	K 76	(76)
PORTAGE CREEK, Behm Canal, Portage Cove, Opposite Chickamin River	K 77	(77)
INDIAN CREEK, Behm Canal, W. shore N.W. of Chickamin River	K 78	(78)
101-22		
BASIN CREEK, Behm Canal, Chickamin River System, S. shore 1 mile above Chickamin slough confluence with main river	K 44-	
COHO CREEK, Behm Canal, Chickamin River System, S. side 3 miles above Chickamin delta	K 44-1	(40-)

101-22		
KING SALMON CREEK, Behm Canal, Chickamin River System, S. side 3.6 miles above Chickamin delta	K 44-2	(40-)
HUMPY CREEK, Behm Canal, Chickamin River System, 4 miles up lower Chickamin slough, N. side	K 44-3	(40-)
BARRIER CREEK, Behm Canal, Chickamin River System, 9 miles upstream from Leduc River confluence on S. side of S. fork of Chickamin	K 44-4	(40-)
CLEARWATER CREEK, Behm Canal, Chickamin River System, N. bank near high tide	K 44-5	(40A)
101-23		
WALKER CREEK, Behm Canal, Walker Cove, 5 miles from entrance on S. shore	K 43	(39)
Walker Cove, S. shore at head, Behm Canal	K 43A	(39A & 39B)
Walker Cove, N. head, Behm Canal	K 43B	(39C)
101-24		
BIG GOAT CREEK, Behm Canal, Rudyerd Bay, Head of S. arm	K 39	(37)
BOULDER CREEK, Behm Canal, Rudyerd Bay, E. shore midway between N. and S. arms	K 40	(38A)
RUDYERD RIVER, Behm Canal, Rudyerd Bay, Head of N. arm	K 41	(36)
Rudyerd Bay, S. shore at head of N. arm, Behm Canal	K 41A	(36A)
NOOYA CREEK, Behm Canal, Rudyerd Bay, North Arm, W. shore .8 mile	K 42	(38)
101-31		
Behm Canal, Midway between Point Sykes and Point Nelson	K 29	(24)
Behm Canal, Opposite Smeaton Island, 1.3 miles N. Point Trollop	K 36	(31)
Behm Canal, E. shore opposite N. end Smeaton Island, .8 mile S.-S.E. southern entrance to Shoalwater Pass	K 36A	(32)
WINSTANLEY CREEK, Behm Canal, E. shore at S. entrance to Shoalwater Passage	K 37	(33)
CHECATS CREEK, Behm Canal, Checats Cove, S.E. corner of cove	K 38	(34)
ALAVA CREEK, Behm Canal, Alava Bay, N.E. corner	K 67	(67)
NARROW PASS CREEK, Behm Canal, W. shore 2 miles N.W. of Rudyerd Island	K 68	(68)
Princess Bay, N.W. corner, Behm Canal	K 69	(69)
SWANSONS CREEK, Behm Canal, Princess Bay, E. shore 1 mile from Wasp Point	K 70	
Behm Canal, W. shore 1.6 miles S. of Ella Point	K 71	(71)
ELLA CREEK, Behm Canal, W. shore 1.8 miles W. of Eddystone Rock	K 72	(72)
Sargent Bay, N.W. corner on W. shore, Behm Canal	K 73	(73)
101-32		
CARP CREEK, Behm Canal, Smeaton Bay, S.E. corner of Carp Island anchorage	K 30	(25)
SKULL CREEK, Behm Canal, Smeaton Bay, .6 mile E. of Short Point	K 31	(26)
Smeaton Bay, S. shore 2 miles E. of Carp Island, Behm Canal	K 31A	(27)
SHERIDAN CREEK, Behm Canal, Smeaton Bay, S. shore opposite Cabin Cove	K 31B	(27A)
BAKEWELL RIVER, Behm Canal, Smeaton Bay, Bakewell Arm, S. shore .9 mile from head	K 32	(28)
BAKEWELL CREEK, Behm Canal, Smeaton Bay, Bakewell Arm, N. head	K 33	(28A)
WILSON RIVER, Behm Canal, Smeaton Bay, Wilson Arm, Head, Main fork (West)	K 34	(29)
WILSON RIVER, EAST FORK, Behm Canal, Smeaton Bay, Wilson Arm, Large tributary of Wilson River	K 34-1	
WOLVERINE CREEK, Behm Canal, Smeaton Bay, Wilson Arm, E. shore of lower intertidal flats at head	K 34A	(29A)

101-32		
CABIN CREEK, Behm Canal, Smeaton Bay, Cabin Cove, N. shore 4 miles E. of Carp Island	K 35	(30)
101-41		
VERY CREEK, Revillagigedo Channel, Very Inlet, Northern extremity of inlet	K 18	(13)
Very Inlet, N.E. shore at head of inlet	K 18A	(13A)
Very Inlet, S.W. head of branch extending from S.E. head of inlet, Revillagigedo Channel	K 18B	(13B)
Very Inlet, N.E. shore of first S.E. branch of inlet, 1.5 miles inside entrance, Revillagigedo Channel	K 18C	(13C)
Very Inlet, Revillagigedo Channel	K 18D	(13D)
KAH SHAKES CREEK, Revillagigedo Channel, Kah Shakes Cove, N.E. arm of cove	K 19	(14A)
Kah Shakes Cove, S.E. head of cove, Revillagigedo Channel	K 19A	(14)
BLACK CREEK, Revillagigedo Channel, Black Island Cove	K 27	(22)
Revillagigedo Channel, N. cove 1.5 miles S. of Point Sykes	K 28	(23)
Revillagigedo Channel, S. cove 1.5 miles S. of Point Sykes	K 28A	(23A)
LUCKY CREEK, Revillagigedo Channel, Lucky Cove, Head	K 105	(105)
Cascade Inlet, Revillagigedo Channel, Head	K 111A	(111)
101-42		
VIXEN CREEK, Revillagigedo Channel, Boca de Quadra, Vixen Bay, Head	K 20	(17)
Vixen Bay, W. shore at head, Revillagigedo Channel, Boca de Quadra	K 20A	(17A)
HUMPBACK CREEK, Revillagigedo Channel, Boca de Quadra, Mink Arm, E. shore .7 mile from head	K 21	(18)
MINK CREEK, Revillagigedo Channel, Boca de Quadra, Mink Arm, Head	K 21A	(18A)
SOCKEYE CREEK, Revillagigedo Channel, Boca de Quadra, Opposite Cygnet Island	K 22	(19)
BUSCHMANN CREEK, Revillagigedo Channel, Boca de Quadra, Tributary to Hugh Smith Lake	K 22-1	(19B)
COBB CREEK, Revillagigedo Channel, Boca de Quadra, Tributary to Hugh Smith Lake	K 22-2	(19A)
MARTEN RIVER, Revillagigedo Channel, Boca de Quadra, Marten Arm, N. head	K 23	(20)
RED RIVER, Revillagigedo Channel, Boca de Quadra, Marten Arm, Marten River intertidal zone	K 23A	(20A)
KETA RIVER, Revillagigedo Channel, Boca de Quadra, Main Arm, Head	K 24	(21)
BADGER CREEK, Revillagigedo Channel, Boca de Quadra, Badger Bay, N. shore at head	K 25	(16)
Weasel Cove, Head, Revillagigedo Channel, Boca de Quadra	K 26	(15)
Boca de Quadra, Revillagigedo Channel, N. shore 2 miles W. of Orca Point	K 26A	
101-43		
BREAKWATER CREEK, Dixon Entrance, Boat Harbor, 1.6 miles S. of Tree Point	K 17	(12)
101-44		
NAKAT CREEK, Nakat Bay, Nakat Inlet, Center of head	K 13	(8A)
Nakat Inlet, .5 mile from head on E. shore, Nakat Bay	K 13A	(8)
Nakat Inlet, 1.5 miles from head on W. shore, Nakat Bay	K 13B	(8B)
SOCKEYE CREEK, Nakat Bay, Nakat Inlet, E. shore 3.5 miles from head	K 14	(9)
Nakat Inlet, On E. shore 4 miles from entrance to inlet, Nakat Bay	K 14A	(9A)
Nakat Inlet, W. shore 2.5 miles inside entrance to inlet, N. shore of cove, Nakat Bay	K 14B	(9B)
Nakat Bay, Small cove in S. tip of Round Hill Peninsula between Harry Bay and Nakat Inlet	K 15	(10)

101-44		
HARRY CREEK, Nakat Bay, Harry Bay, Head	K 16	(11)
101-45		
FILLMORE RIVER, Fillmore Inlet, Extreme head	K 8	(5A)
Fillmore Inlet, S.W. corner of extreme inner bay outside of lagoon	K 8A	
Fillmore Inlet, E.-N.E. shore outer chuck, .9 mile from narrows at entrance	K 8B	(5)
CANINE CREEK, Pearse Canal, Fillmore Inlet, 1 mile N. of Edward Passage	K 9	(5B)
Fillmore Inlet, .9 mile W.-N.W. of Edward Passage, Pearse Canal	K 9A	
Fillmore Inlet, 3.2 miles N.E. of Just Island on N. shore, Pearse Canal	K 10	(5C)
WILLARD CREEK, Willard Inlet, Head	K 11	(6 & 6A)
FLAT CREEK, Willard Inlet, .7 mile N.W. of chuck entrance at head of inlet	K 11A	(7)
Willard Inlet, 6 miles from entrance to inlet on E. shore, Pearse Canal	K 11B	(7B)
Pearse Canal, W. of entrance to Willard Inlet	K 12	(7A)
101-51		
HIDDEN CREEK, Portland Canal, Hidden Inlet, Head	K 6	(4)
Hidden Inlet, 1.5 miles from head, Portland Canal	K 6A	(4C)
CANNERY CREEK, Portland Canal, Gwent Cove, At Hidden Inlet Cannery	K 7	(4A)
101-52		
SALMON RIVER, Portland Canal, Head at the town of Hyder	K 1	(1A)
FISH CREEK, Portland Canal, Salmon River tributary, 5 miles N. of Hyder	K 1-1	
HALLECK RIVER, Portland Canal, River Point, 9 miles N. of Tombstone Bay	K 2	(1B)
TOMBSTONE RIVER, Portland Canal, Tombstone Bay	K 3	(1)
HALIBUT CREEK, Portland Canal, Halibut Bay, N.W. head	K 4	(2)
Halibut Bay, N.E. at head, Portland Canal	K 4A	(2A)
Halibut Bay, W. shore .7 mile from Halibut Point, Portland Canal	K 4B	(2B)
SANDFLY CREEK, Portland Canal, Sandfly Bay, Head	K 5	(3)
102		
KLAHINI RIVER, Behm Canal, Burroughs Bay, S. shore at head	K 47	(43A)
UNUK RIVER, Behm Canal, Burroughs Bay	K 48	(43)
CLEAR CREEK, Behm Canal, Burroughs Bay, Unuk River System, N. side 3.5 miles above Forest Service cabin	K 48-	
LAKE CREEK, Behm Canal, Burroughs Bay, Unuk River System, S. side 7.5 miles above Unuk slough confluence	K 48-	
EULACHON CREEK, Behm Canal, Burroughs Bay, Unuk River System, Tributary N. side of valley about high tide	K 48-1	(43-)
GRANT CREEK, Behm Canal, Burroughs Bay, N. shore, 3 miles N. of Point Fitzgibbon	K 49	(44)
111-10		
STEWART CREEK, Behm Canal, Port Stewart	K 56	(52)
Port Stewart, S.W. shore opposite entrance to anchorage, Behm Canal	K 56A	(52A)
RAYMOND CREEK, Behm Canal, Raymond Cove	K 57	(53)
HELM CREEK, Behm Canal, Helm Bay, N.E. shore 4.5 miles from entrance	K 58	(55)
Helm Bay, Head, Behm Canal	K 59	(54)
SMUGGLERS CREEK, Behm Canal, Smugglers Cove, Head	K 60	(56)
Bond Bay, W. of N. point of bay entrance, Behm Canal	K 61	(56B)
111-20		
TRAITORS CREEK, Behm Canal, Traitors Cove, Head of inner cove	K 84	(84)

111-20		
MARGARET CREEK, Behm Canal, Traitors Cove, S. shore 2 miles from entrance	K 85	(83)
LORING CREEK, Behm Canal, Naha Bay, E. of Loring at old cannery ruins	K 86	(85G)
NAHA RIVER, Behm Canal, Naha Bay, Head of Roosevelt Lagoon	K 87	(85)
STEELHEAD CREEK, Behm Canal, Naha bay, S. shore opposite Naha River float	K 87A	(85J)
WOLF CREEK, Behm Canal, Moser Bay, E. shore near entrance	K 88	(85K)
MOSER CREEK, Behm Canal, Moser Bay, Head	K 89	(85L & 85M)
Clover Passage, E. shore opposite Joe Island, Behm Canal	K 89A	(85N)
111-30		
ANCHOR CREEK, Behm Canal, Bell Arm, Head	K 51	(46)
SHORT CREEK, Behm Canal, Short Bay, Bell Arm, Head	K 52	(47)
SHELOKUM CREEK, Behm Canal, Bailey Bay, W. shore .5 mile from head	K 53	(48A)
YES RIVER, Behm Canal, Yes Bay, N. shore 2.5 miles from entrance	K 54	(50)
HATCHERY CREEK, Behm Canal, Yes Bay, Lake McDonald	K 54-1	(50A)
Yes Bay, Head, Behm Canal	K 54A	(50B)
Yes Bay, 1.6 miles W. of Yes River, Behm Canal	K 54B	(50C)
SPACIOUS CREEK, Behm Canal, Spacious Bay, Center head	K 55	(51)
Spacious Bay, Head of cove N. of Square Island, Behm Canal	K 55A	(51A)
Spacious Bay, N.W. shore at head, Behm Canal	K 55B	(51B)
Spacious Bay, S. shore opposite Square Island, Behm Canal	K 55 C	(51C)
HECKMAN CREEK, Behm Canal, Heckman Point, S. of point	K 55D	(51D)
COW CREEK, Behm Narrows, S.-S.W. of Claude Point	K 79	(79)
BEAVER CREEK, Behm Narrows, S. shore in small bight 2 miles S.W. of Anchor Pass	K 80	(80)
BELL CREEK, Behm Narrows	K 81	(49)
KLU CREEK, Behm Canal, Gedney Pass, Klu Bay, E. head	K 82	(81)
KLAM CREEK, Behm Canal, Gedney Pass, Klu Bay, N.W. corner	K 82A	(81A)
NEETS CREEK, Behm Canal, Neets Bay, E. head	K 83	(82)
112-10		
VALLENAR CREEK, Clarence Strait, Vallenar Bay, Head	K 116	(117)
Grant Cove, Clarence Strait, S. corner	K 116A	(116D)
Clarence Strait, 4.5 miles N. of Nelson Cove on W. Gravina Island	K 117	(116C)
Clarence Strait, W. shore Gravina Island, 5 miles N. Dall head	K 117A	(116B)
112-20		
TROUT CREEK, Nichols Passage, Port Chester, N.E. corner	K 113	(114)
BOSTWICK CREEK, Nichols Passage, Bostwick Inlet, Head	K 114	(116)
Blank Inlet, Nichols Passage, Head	K 114A	(115)
Tongass Narrows, E. shore opposite Wards Cove	K 115	
DALL CREEK, Nichols Passage, Dall Bay, N.E. shore	K 117B	(116A)
112-30		
POND CREEK, Felice Strait, Pond Bay, S.W. corner at head	K 106	(106B)
Hall Cove, Dixon Entrance	K 107	
Dixon Entrance, S. Duke Island, 1 mile N.E. Cape Northumberland	K 107A	(106D)
TAMGAS CREEK, Tamgas Harbor, E. shore opposite Civil Aeronautics Administration Station	K 108	(107)
Felice Strait, N.W. head of cove 2.3 miles W. of Annette Point	K 108A	(108A & 108
Felice Strait, .4 mile W. of Annette Point	K 109	(108)
KWAIN CREEK, Revillagigedo Channel, Kwain Bay, S.W. corner	K 110	(109)
CRAB CREEK, Revillagigedo Channel, Crab Bay, Head	K 111	(110)

114-20

NIBLACK CREEK, Clarence Strait, E. shore 7 miles N.E. of Caamano Point	K 62	(57)
JIM CREEK, Clarence Strait, E. shore 1.3 miles N. of Ship Island	K 63	(58)
WOLF CREEK, Clarence Strait, E. shore 3.3 miles N. of Ship Island	K 64	(59)
MEYERS CREEK, Clarence Strait, Meyers Chuck	K 65	(60)
BLACK BEAR CREEK, Ernest Sound, Union Bay, Head	K 66	(61)
Union Bay, E. shore 1.3 miles N. of head, Ernest Sound	K 66A	(61A)

KETCHIKAN, PORTLAND CANAL, Head at the town of Hyder

MAJOR SPECIES Chum OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Early. July -Aug.-Sep. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Unknown.
STREAM TEMPERATURES Cold range. Less than 50°F. estimated.
VALLEY DESCRIPTION Typical glacial valley.
DRAINAGE Approximately 65 square miles. Originates in snow fields and glaciers. Several large lakes in Canada. Low water discharge 50 cubic feet per second estimated.
STREAM MOUTH IDENTIFICATION Town of Hyder is at mouth.
ANCHORAGE Hyder.
TRAILS AND SURVEY ROUTES A road follows the river up the valley to the Texas glacier. Surveys have been made only on Fish Creek, a tributary 5 miles N. of Hyder.
AERIAL SURVEY NOTES No visibility in the river for aerial counting.

INTERTIDAL ZONE

LENGTH Over 4 miles AVERAGE WIDTH >100' (Summer)
GRADIENT AND VELOCITIES Less than .5° at several feet per second. Silted during Summer and Fall
BOTTOM Silt and sand.
LOW TIDE LOCATION At Hyder (See Coast Pilot).
HIGH TIDE LOCATION
SCHOOLING AREAS None observed.
SPAWNING AREAS None.
GENERAL NOTES Navigable by skiff.

UPSTREAM

LENGTH ACCESSIBLE 10 miles to forks AVERAGE WIDTH >100' (Summer)
GRADIENT AND VELOCITIES Less than .5° at several feet per second
BOTTOM Sand and silt.
MARKER DISTANCE None.
BARRIERS None in main river.
TRIBUTARIES The primary spawning area is in Fish Creek. The river forks 10 miles above Hyder into Texas and Cascade Creeks. A number of small tributaries enter the river.
SCHOOLING AREAS The only known schooling area in the river is at the confluence of Fish Creek.
SPAWNING AREAS Fish Creek tributary is the only reported spawning area in the system.
GENERAL NOTES The spawning potential of glacial streams is unknown. There have been observations of chum salmon found on gravel bars in the silted river but no positive evidence that spawning occurs there is available. A small coho stream is reported to enter Salmon River about 11 miles upstream.

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

Counts listed under separate tributaries.

KETCHIKAN, PORTLAND CANAL, Salmon River tributary, 5 miles N. of Hyder

MAJOR SPECIES Chum OTHER SPECIES Trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE 50,000 (estimated)
SPAWNING FACILITIES Excellent.
STREAM TEMPERATURES Normal range. 50-55° (estimated).
VALLEY DESCRIPTION Stream cut. The major spawning area is in the main Salmon River valley.
DRAINAGE The area is approximately 6 square miles. There are no glaciers in the system. It rises on the W. slope of Bear River Ridge at the 4,000 to 5,500 foot elevation on the International Boundary. The creek flows 3 miles S. through narrow gorges to confluence with Skookum Creek, a tributary at the 600 foot elevation. Joins the Salmon River at 220 foot elevation.
TRAILS AND SURVEY ROUTES The Texas Creek road passes along the lower part of the creek and crosses at the Fish Creek bridge about . 2 miles upstream.
AERIAL SURVEY NOTES Adequate aerial visibility for satisfactory surveys.

INTERTIDAL ZONE

A Salmon River tributary above tidal influence.

UPSTREAM

LENGTH ACCESSIBLE 1.5 miles (estimated) AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES <1° at 2' per second
BOTTOM Gravel.
MARKER DISTANCE 1.5 miles (estimated).
MARKER IDENTIFICATION 65' waterfall blocking salmon migration about 1.3 miles above bridge.
BARRIERS See marker identification.
TRIBUTARIES None below falls.
SCHOOLING AREAS A pool at the confluence with the Salmon River. Stream resting areas are available. Possible schooling at falls.
SPAWNING AREAS Reported to be throughout stream.
GENERAL NOTES Little information available for all streams in this area.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1956								
Aug 3		FWS			20,000			
Aug 3		FWS			10,000			Estimated spawned out
Aug 28		FWS						Numerous carcasses
1957								
July 9	G 2.0	FWS			1,000			
July 21		FWS			2,000			
Aug 2		FWS			7,500			
Aug 2		FWS			2,000			
Aug 7		FWS			7,500			
Aug 17		FWS			7,000	2,000		
Sep 7		FWS			38,000			

KETCHIKAN, PORTLAND CANAL, RIVER POINT, 9 miles N. of Tombstone Bay

MAJOR SPECIES Chum
OTHER SPECIES
ESCAPEMENT TIMING
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES
STREAM TEMPERATURES
VALLEY DESCRIPTION Stream cut glacial. The main valley forks 1 mile above stream delta.
DRAINAGE Snow fields in Halleck Mountain Range.
STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS

TRIBUTARIES

SCHOOLING AREAS

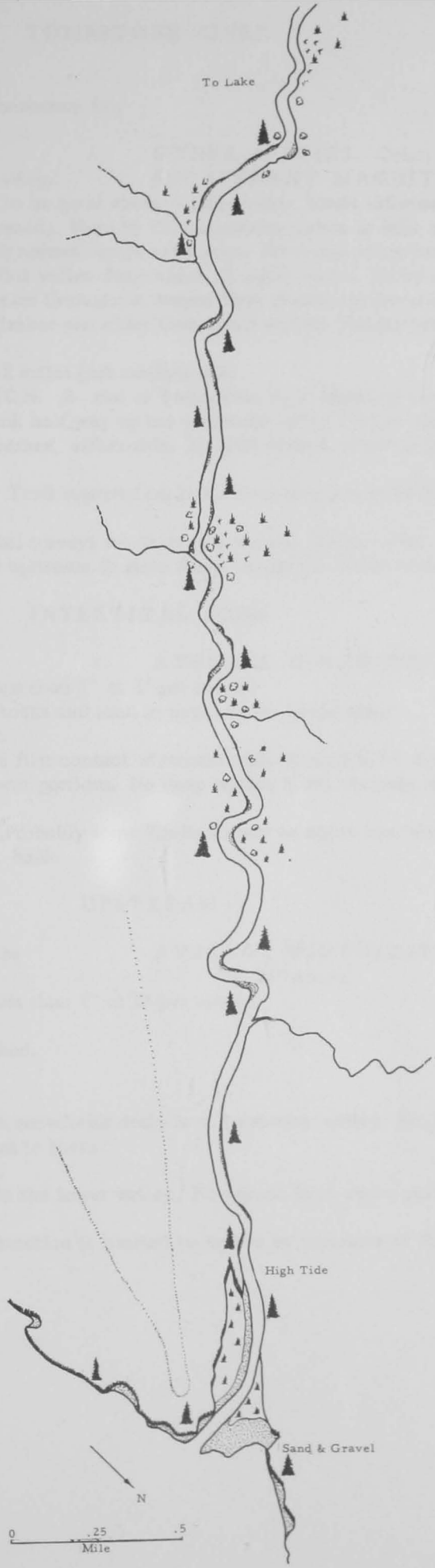
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1957								
Aug 8	G	FWS			3,000			


To Lake
High Tide
Sand & Gravel
N
0
.25
.5
Mile

KETCHIKAN, PORTLAND CANAL, Tombstone Bay

MAJOR SPECIES Chum and pink
OTHER SPECIES Coho, king, and trout
ESCAPEMENT TIMING Early. July-Aug.
ESCAPEMENT MAGNITUDE >25,000
SPAWNING FACILITIES Reported to be good above 1 mile mark. Little information available on upper stream. Lake reported at 12 miles (not confirmed). Used by coho spawning above in lake tributaries.
STREAM TEMPERATURES Cold to normal range estimated. No temperature records available.
VALLEY DESCRIPTION Glacial. Flat valley floor about .5 miles across. Steep valley sides to snow covered ridges. Numerous small tributaries enter throughout stream from stream cut ravines. Small deatas at the bottom of each ravine shape river course. Timber and alder throughout valley. Ridges vare rock. Valley narrows for last mile.
DRAINAGE Snowfields. One lake at 12 miles (not confirmed).
STREAM MOUTH IDENTIFICATION S. end of Tombstone Bay. Mouth is next to S. bank. Several buildings and a small vessel ways on N.W. bank half way up the intertidal zone. Stream runs W.-S.W.
ANCHORAGE Off delta during fair weather, either side. N. side of delta close to shore preferred. N. end of bay exposed to southerly winds.
TRAILS AND SURVEY ROUTES Trail reported on N.W. bank along hillside leading to lake. Bypass first mile on survey.
AERIAL SURVEY NOTES Few aerial surveys made on this stream. Valley width sufficient for easy maneuvering for light planes. Similar valley type upstream to Keta River across the divide which is easily surveyed by air.

INTERTIDAL ZONE

LENGTH .6 miles
AVERAGE WIDTH/DEPTH 60'/36"
GRADIENT AND VELOCITIES Less than 1° at 3' per second
BOTTOM Silt throughout lower zone. Rocks and sand in upper zone. Some clay.
LOW TIDE LOCATION At S. point.
HIGH TIDE LOCATION 400' above first contact of stream with wooded N.W. shore.
SCHOOLING AREAS Limited to slower portions. No deep resting holes. Salmon have been observed throughout upper zone, but were all ascending.
SPAWNING AREAS None observed. Probably some limited areas in upper zone near high tide.
GENERAL NOTES Survey from N.W. bank.

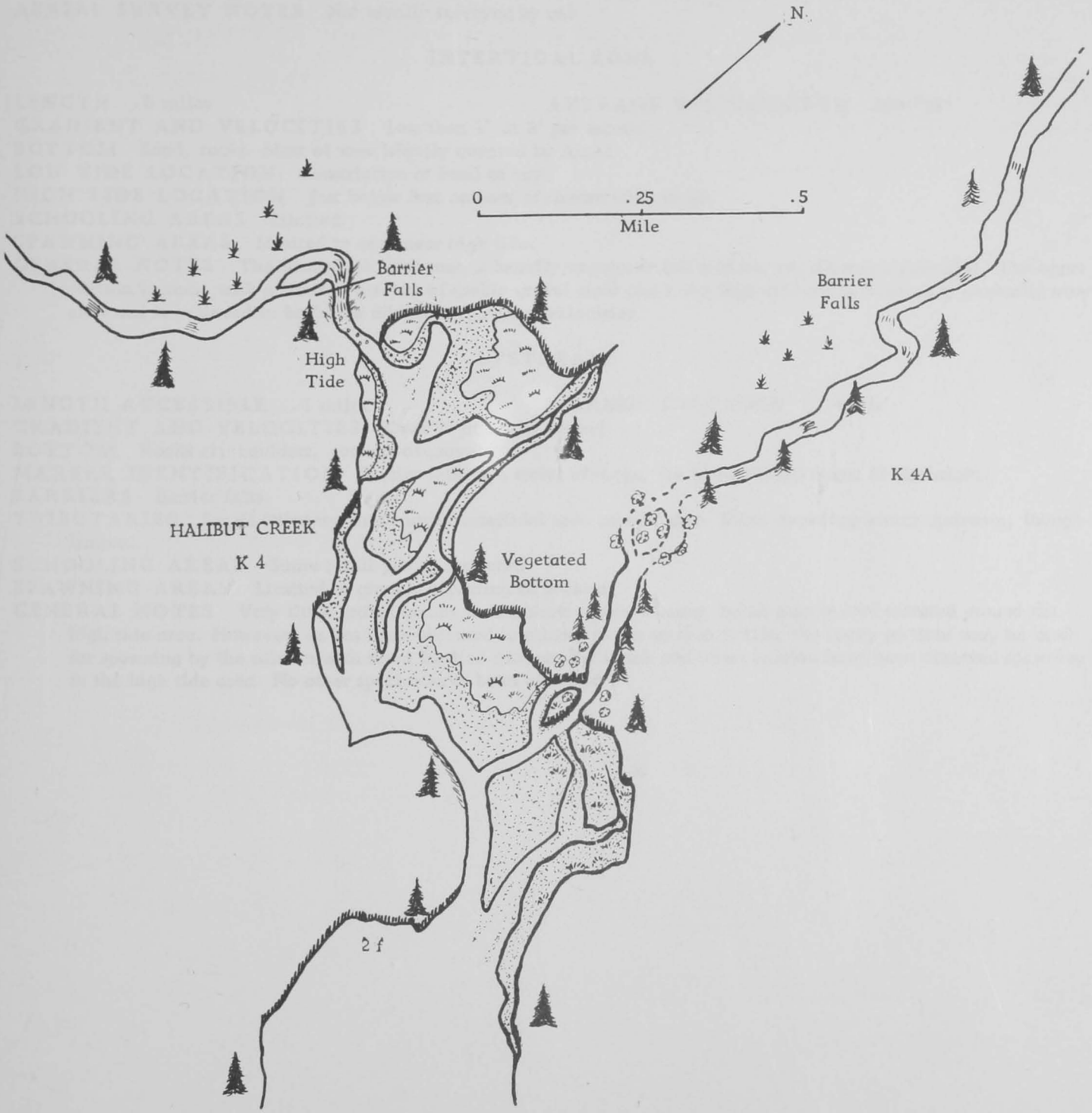
UPSTREAM

LENGTH ACCESSIBLE Over 12 miles
AVERAGE WIDTH/DEPTH 50'/36" first mile, 80'/24" above
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand and gravel.
MARKER DISTANCE None established.
MARKER IDENTIFICATION
BARRIERS None reported.
TRIBUTARIES Numerous ravines with snowfields drain into the stream valley. Each tributary has a delta extending into the valley and the river conforms to them.
SCHOOLING AREAS None reported.
SPAWNING AREAS Reported good in the lower valley. No reports from upper valley below lake. Tributaries to lake reported good for coho.
GENERAL NOTES Upper valley information is limited to reports by members of the Kristovich family residing at the mouth of the river.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1928								
Aug 24		FWS	20,000		15,000			
1930								
Sep 9	G 3.0	FWS	2,000		8,000		30 coho	Poor
1940								
Sep 23	G 2.0	FWS	500		300			Poor
1948								
Aug 22	G 2.0	FRI	4,580	6	110	3		
1949								
July 18	G 1.0	FRI						200 fish off mouth, none in stream
1950								
July 26	G .5	FRI	200					Chum present. 1-2,000 off mouth
1953								
July 7	A 1.5	FWS						No fish seen
July 10	G .0	FWS						Chum present. Few pink. Chum at mou
Aug 13	G .0	FWS						Light, steady chum run. Few pink.
Aug 23	G 1.3	FWS						250 chum, pink. No dead present
Aug 25	A 2.5	FWS			2,000			New fish. Poor visibility
1955								
June 27		FWS	400					
July 4		FWS	2,500					475 pink at mouth
1956								
July 10		FWS	300					
July 12		FWS						4,000 pink at mouth
July 17		FWS						1,000 chum and pink
July 23		FWS						5,000 pink at mouth
July 24		FWS	2,000					
Aug 3		FWS			7,000			
Aug 25		FWS	16,200					
Sep 14		FWS						5,000 pink at mouth
1957								
July 29		FWS						1,000 each of chum, pink at mouth
July 31		FWS						2,000 each of chum, pink at mouth
Aug 1		FWS	1,000		1,000			
Aug 3		FWS	500		200			
Aug 5		FWS						200 pink at mouth
Aug 7		FWS	1,900		1,800			
Aug 9		FWS	500					1,000 pink at mouth
Aug 10		FWS						200 at mouth
Aug 13		FWS	50		500			
Aug 19		FWS	100		300			
Aug 20		FWS	50		400			
Aug 22		FWS	21		150			
Aug 26		FWS	300		50			
Aug 28		FWS	400		25			


N
0
.25
.5
Mile
Barrier
Falls
High
Tide
Barrier
Falls
K 4A
HALIBUT CREEK
K 4
Vegetated
Bottom
2 f

KETCHIKAN, PORTLAND CANAL, Halibut Bay, N.W. head

MAJOR SPECIES Pink and chum OTHER SPECIES
ESCAPEMENT TIMING Middle. Aug. -Sep. ESCAPEMENT MAGNITUDE <10,000
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES Range 50-60° F., estimated.
VALLEY DESCRIPTION Stream cut glacial.
DRAINAGE Small lake fed by early snow fields, Aug. -Sep. precipitation.
STREAM MOUTH IDENTIFICATION N.W. head of Halibut Bay. Falls visible from mouth.
ANCHORAGE Off delta in 2 fathoms of water, N.W. shore. Steer along E. shore past 1 fathom bar several hundred yards S. of point on W. shore.
TRAILS AND SURVEY ROUTES Easily walked flats to barrier falls just above high tide.
AERIAL SURVEY NOTES Not usually surveyed by air.

INTERTIDAL ZONE

LENGTH .5 miles AVERAGE WIDTH/DEPTH 100'/18"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand, rocks. Most of zone heavily covered by Algae.
LOW TIDE LOCATION Constriction at head of bay.
HIGH TIDE LOCATION Just below first contact of stream with woods.
SCHOOLING AREAS Limited.
SPAWNING AREAS Limited to area near high tide.
GENERAL NOTES The lower intertidal zone is heavily vegetated and without any spawning potential. The upper portion is sand, with a limited amount of usable gravel right about the high tide mark. Current is generally very slow and is believed to be below adequate spawning velocities.

UPSTREAM

LENGTH ACCESSIBLE .1 miles MARKER DISTANCE .1 miles
GRADIENT AND VELOCITIES Over 1° at 3' per second
BOTTOM Rocks and boulders, pockets of gravel.
MARKER IDENTIFICATION Barrier falls in a series of drops, the lowest being about 15' in height.
BARRIERS Barrier falls.
TRIBUTARIES Small tributary enters upper intertidal zone on east side. Some spawning occurs upstream, though limited.
SCHOOLING AREAS Some small pools, scattered.
SPAWNING AREAS Limited to gravels occurring in pockets.
GENERAL NOTES Very little gravel occurs in this short upstream area, being mostly concentrated around the high tide area. However, as has been observed in other streams similar to this, the rocky portions may be used for spawning by the salmon with some limited success. Both pink and chum salmon have been observed spawning in the high tide area. No other species have been observed.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1928								
July 26		FWS			500			
Aug 3		FWS	500		500			
Aug 16		FWS	12,000		3,000			
1930								
Sep 10	G .5	FWS	4,800		200			Good
1940								
Sep 23	G .1	ASI,FWS	1,000					500 fish off mouth
1949								
July 19	G .1	FRI						No fish in stream
1950								
Sep 10	G .1	FRI	129	52	5			
1955								
Season		FWS	3,500		100			
1956								
July 16		FWS	200		300			
Aug 19		FWS	3,700		400			
1957								
Aug 11		FWS	2,500		2,500			Fair

KETCHIKAN, PORTLAND CANAL, HALIBUT BAY, N.E. at head

MAJOR SPECIES Pink and chum OTHER SPECIES
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Excellent, though limited.
STREAM TEMPERATURES Cold range. 45° F. in mid-Sep. 1950.
VALLEY DESCRIPTION Stream cut. A short valley less than 5 miles long.
DRAINAGE The stream originates in 2 cirques with early snow fields. Probably dependent upon precipitation during Aug.-Sep.
STREAM MOUTH IDENTIFICATION Enters stream K4 in lower intertidal zone.
ANCHORAGE See K 4 (Previous No. 2).
TRAILS AND SURVEY ROUTES Stream bed easily walked. Take either split upstream to falls and return down other.
AERIAL SURVEY NOTES Over 75% of stream visible from the air.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Clean, water rounded gravel to 4" diameter.
LOW TIDE LOCATION At point of entry into K 4; 300 yards above low water.
HIGH TIDE LOCATION At entry into woods.
SCHOOLING AREAS Several small pools around the high tide point.
SPAWNING AREAS Throughout entire intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .4 miles AVERAGE WIDTH/DEPTH 25'/18"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel, clean and water rounded, to 4" diameter.
MARKER DISTANCE .4 miles
MARKER IDENTIFICATION Falls.
BARRIERS Marker falls is considered impassable to salmon.
TRIBUTARIES Split in stream .3 miles above high tide is not a tributary.
SCHOOLING AREAS Scattered shallow pools.
SPAWNING AREAS Throughout stream to falls.
GENERAL NOTES The stream bed is twice the width of the stream during normal water levels and may indicate that considerable fluctuations in discharge occur.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 23	G 1.0	ASI,FWS	3,000					3,000 fish off mouth
1949								
July 19	G .5	FRI				1		
1950								
Sep 10	G .3	FRI	760	41	12			
1953								
Aug 13	A .0	FWS						800 fish present
Aug 25	A .0	FWS						Fair. 1-2,000. Fair at mouth
Sep 26	G .0	FWS						No fish. At extreme flood stage

KETCHIKAN, PORTLAND CANAL, HALIBUT BAY, W. shore .7 miles from Halibut Point

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Middle
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Poor.
STREAM TEMPERATURES Cold range. The only reported observations in mid-Sep. was 45°F., 1950.
VALLEY DESCRIPTION Stream cut.
DRAINAGE Early snow fields. Dependent upon precipitation during Aug. and Sep. Probably spring-fed also. Clear water.
STREAM MOUTH IDENTIFICATION Due W. of Astronomical Point. Steep intertidal zone.
ANCHORAGE .1 mile N. of mouth at 8 fathoms depth.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .05 mile
AVERAGE WIDTH/DEPTH 25'/18"
GRADIENT AND VELOCITIES 3° at 3' per second
BOTTOM Rocks and boulders, little gravel.
LOW TIDE LOCATION Lower delta.
HIGH TIDE LOCATION At entry into woods.
SCHOOLING AREAS None.
SPAWNING AREAS Very limited around the high tide point.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .4 mile
AVERAGE WIDTH/DEPTH 25'/18"
GRADIENT AND VELOCITIES 3° estimated at 3' per second
BOTTOM Rocks and boulders becoming coarser upstream.
MARKER DISTANCE .4 mile.
MARKER IDENTIFICATION Falls.
BARRIERS Falls are reported impassable.
TRIBUTARIES None to falls.
SCHOOLING AREAS None noted.
SPAWNING AREAS Limited to gravel pockets most numerous in lower stream.
GENERAL NOTES Is not considered to be a good spawning stream, though a report of 5,000 pink was made by the Bureau of Fisheries in 1930.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles		By	Live	Dead	Live	Dead	Live	Adjective Rating
1930									
Sep 10			FWS	5,000					Well seeded
1940									
Sep 23	G	.3	ASI,FWS	150					Poor
1950									
Sep 10 S	G	.1	FRI	10	1				Poor spawning facilities

KETCHIKAN, PORTLAND CANAL, SANDFLY BAY, head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE 1,000
SPAWNING FACILITIES Limited to upper intertidal zone.
STREAM TEMPERATURES Normal range (estimated). 48° F., 9/10/50 is the only reported temperature.
VALLEY DESCRIPTION Stream cut. A short valley with the headwaters to the N.W. of the mouth.
DRAINAGE Early snow fields. Precipitation fed in Aug.-Sep.
STREAM MOUTH IDENTIFICATION A 50 foot falls at high tide is visible from the bay.
ANCHORAGE At the drop-off midway between the stream and the E. point of the bay.
TRAILS AND SURVEY ROUTES The W. side of the falls is more easily climbed to the stream above.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 30'/12"
GRADIENT AND VELOCITIES 2° estimated at 2' per second
BOTTOM Gravel.
HIGH TIDE LOCATION Falls. A 14.5' tide reaches the base.
SCHOOLING AREAS Pool at the base of the falls.
SPAWNING AREAS Upper intertidal zone. The area is reported to offer good facilities.
GENERAL NOTES

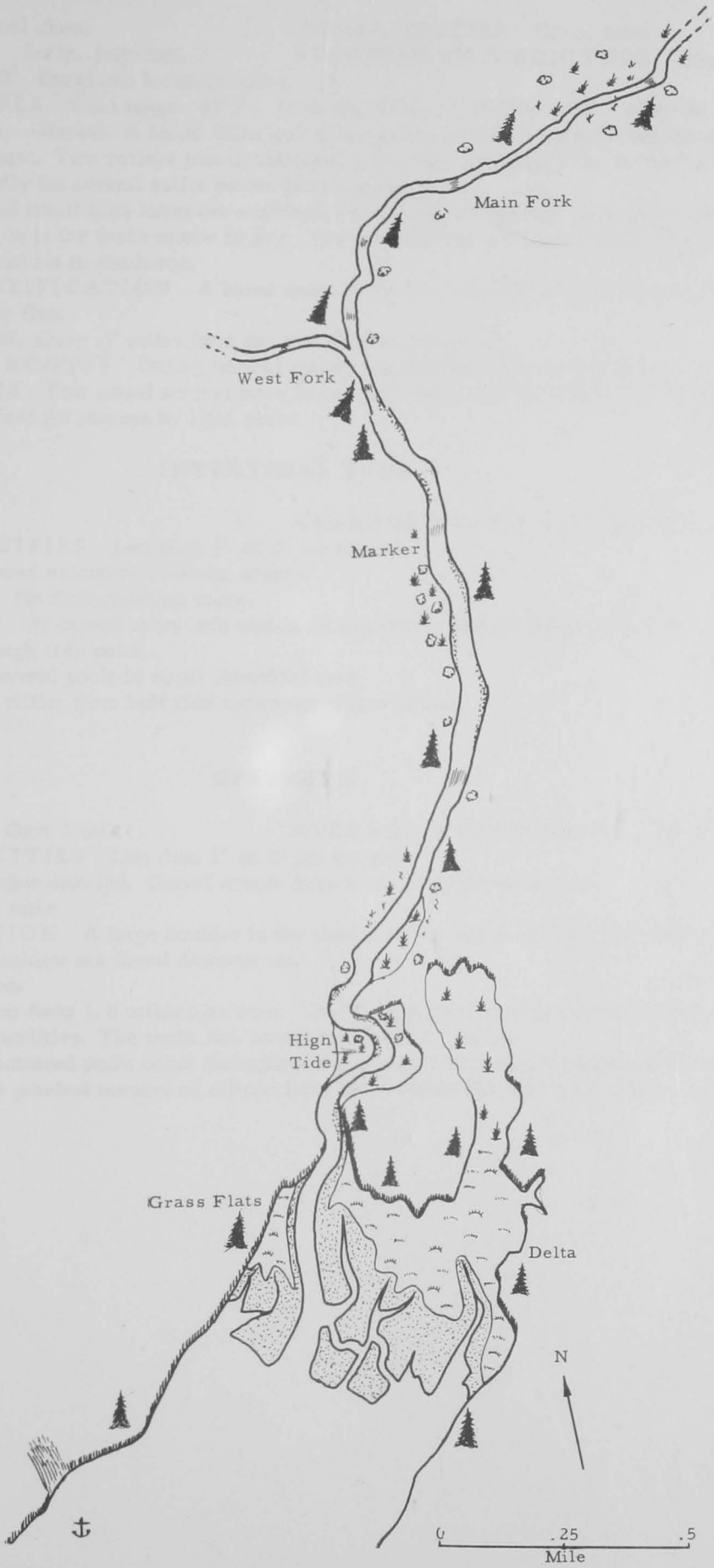
UPSTREAM

LENGTH ACCESSIBLE Zero. AVERAGE WIDTH/DEPTH 30'/12"
GRADIENT AND VELOCITIES
BOTTOM Gravel.
MARKER DISTANCE Zero.
MARKER IDENTIFICATION Falls at high tide.
BARRIERS Falls prevent migration beyond intertidal zone.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1930								
Sep 10	G	FWS	2,000					
1940								
Sep 23	G .3	ASI,FWS	1,500					Fair
1950								
Sep 10 S	G .0	FRI	175	5				Falls block stream
1956								
Aug 9	G	FWS	400					
1957								
July 31	G	FWS		6,000				300 chum,1,500 coho at mouth
Aug 11	G	FWS		100				


Main Fork
West Fork
Marker
Hign
Tide
Grass Flats
Delta
N
0
.25
.5
Mile

KETCHIKAN, PORTLAND CANAL, Hidden Inlet, head

MAJOR SPECIES Pink and chum OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE >20,000
SPAWNING FACILITIES Excellent for three miles.
STREAM TEMPERATURES Cold range. 41°F., 7/23/49; 49°F., 7/25/50; 50°F., 9/10/50.
VALLEY DESCRIPTION Glacial. A broad delta and lower valley about .3 miles across show stream bed changes for the first mile of stream. Two valleys join at the forks 1.8 miles upstream. The W. valley rises rapidly. The E. valley continues gently for several miles before becoming steeper.
DRAINAGE Snowfields and small high lakes are scattered throughout the system. Most of the snowfields are gone by Aug. and precipitation is the main source in Sep. The upper ridges are barren rock. The stream bed shows evidence of wide fluctuations in discharge.
STREAM MOUTH IDENTIFICATION A broad delta at the head of Hidden Inlet with the stream crossing the N.W. side through grassy flats.
ANCHORAGE Off the N.W. shore .7 miles from the tree line on the delta.
TRAILS AND SURVEY ROUTES During normal water, the stream bed is easily walked.
AERIAL SURVEY NOTES Few aerial surveys have been made here, but the valley and light colored gravels in the stream are excellent for surveys by light plane.

INTERTIDAL ZONE

LENGTH .6 miles AVERAGE WIDTH/DEPTH 80'/24"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Small gravels, sand extensive in lower stream.
LOW TIDE LOCATION No distinguishing mark.
HIGH TIDE LOCATION At stream entry into woods. A log jam is usually found a short distance inside of woods and is about the high tide point.
SCHOOLING AREAS Several pools in upper intertidal area.
SPAWNING AREAS All riffles from half tide upstream. Clean gravel.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Over 3 miles AVERAGE WIDTH/DEPTH 60'/24"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Clean gravel, water rounded. Gravel ranges from 2" to 5" in lower stream.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION A large boulder in the stream at the lower end of a long curved part of the stream with rocks and boulders not found downstream.
BARRIERS None in 3 miles.
TRIBUTARIES The stream forks 1.8 miles upstream. The W. fork rises rapidly through coarse gravels and rocks with limited spawning facilities. The main fork continues up the E. valley.
SCHOOLING AREAS Scattered pools occur throughout the stream. No major schooling pool observed.
SPAWNING AREAS The greatest number of salmon have been within the first mile. However, facilities are excellent for 3 miles.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1927								
Sep 16		FWS	3,000					
1928								
July 7		FWS						No fish
July 19		FWS			1,000			
Aug 3		FWS	10,000		30,000			
Aug 21		FWS	25,000		35,000			
1930								
Sep 10	G 3.0	FWS	100,000					Excellent. Few chum, coho
1940								
Sep 24	G 3.0	ASI,FWS	5,500					Fair. Few chum, coho
1941								
Sep 8	G 1.8	FWS	25,000		200			Water high, many dead fish
1942								
Sep 30	G .8	FWS	75,000		10,000			Excellent
1949								
July 23	G 1.0	FRI	1,100		500			
1950								
July 25	G 1.0	FRI	150		1,100	1		Initial run
Sep 10	G 1.0	FRI	1,750	150	480	15	25 coho	Past peak
1953								
July 8	A,G 1.0	FWS			2,000			Fair
July 27	G 1.0	FWS	550					
Aug 13	A 2.0	FWS						2,000 dead, chum?
Aug 25	A 1.6	FWS						Fair. 3,000 new fish
Sep 27	G .3	FWS						None in stream, 10 chum in slough
1954								
Aug 7	A .5	FWS						Poor. Few pink
1955								
Aug 1		FWS						1,500 mixed
Sep 17	G 1.0	FWS	6,200					
1956								
Aug 3		FWS	20,000		10,000			
Aug 4		FWS	9,500		11,000			
Aug 25		FWS	9,500		5,000			
1957								
July 13		FWS			2,000			
July 14		FWS			1,500			
July 15		FWS			1,000			
July 16		FWS	300		700			
July 17		FWS			1,000			
July 18		FWS			1,500			
July 19		FWS			1,500			
July 20		FWS	100		1,000			
July 21		FWS			2,000			
July 22		FWS			1,000			
July 23		FWS			600			
July 24		FWS			300			
July 25		FWS	4		200			
July 26		FWS	100		500			
July 27		FWS	100		100			

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1957								
July 28		FWS	100		200			
July 29		FWS	300		600			
July 30		FWS	2,000		2,700			
Aug 21		FWS	15,000		38,000			
Sep 5	G 1.0	FRI						Too muddy to survey
Sep 15 S	G 1.0	FRI	15		400			2-3,000 dead unidentified
Sep 15		FWS	15		400			

101-51 K 6A
N55°00.6 W130°21 Previous No. 4C

KETCHIKAN, PORTLAND CANAL, HIDDEN INLET, 1.5 miles from head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Aug (estimated) ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Good, though probably limited (estimated).
STREAM TEMPERATURES Normal range (estimated).
VALLEY DESCRIPTION A very short glacial valley rising steeply a short distance from the mouth. The delta and lower .5 miles of valley are typically wide and level. The valley floor is well timbered.
DRAINAGE The area is estimated to be less than 3 square miles. The headwaters are in high mountains (over 3,000 feet) and probably drain snowmelt waters until the middle of summer.
STREAM MOUTH IDENTIFICATION The stream emerges from a well forested flat valley floor. The valley behind is very scenic with steep glacially carved walls.
ANCHORAGE At the drop-off.
TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles (estimated) AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM Gravel and granite rocks.
HIGH TIDE LOCATION At the tree line.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Less than .5 miles (estimated) AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM Granite gravels, sand and rock.
MARKER DISTANCE
MARKER IDENTIFICATION None.
BARRIERS

TRIBUTARIES

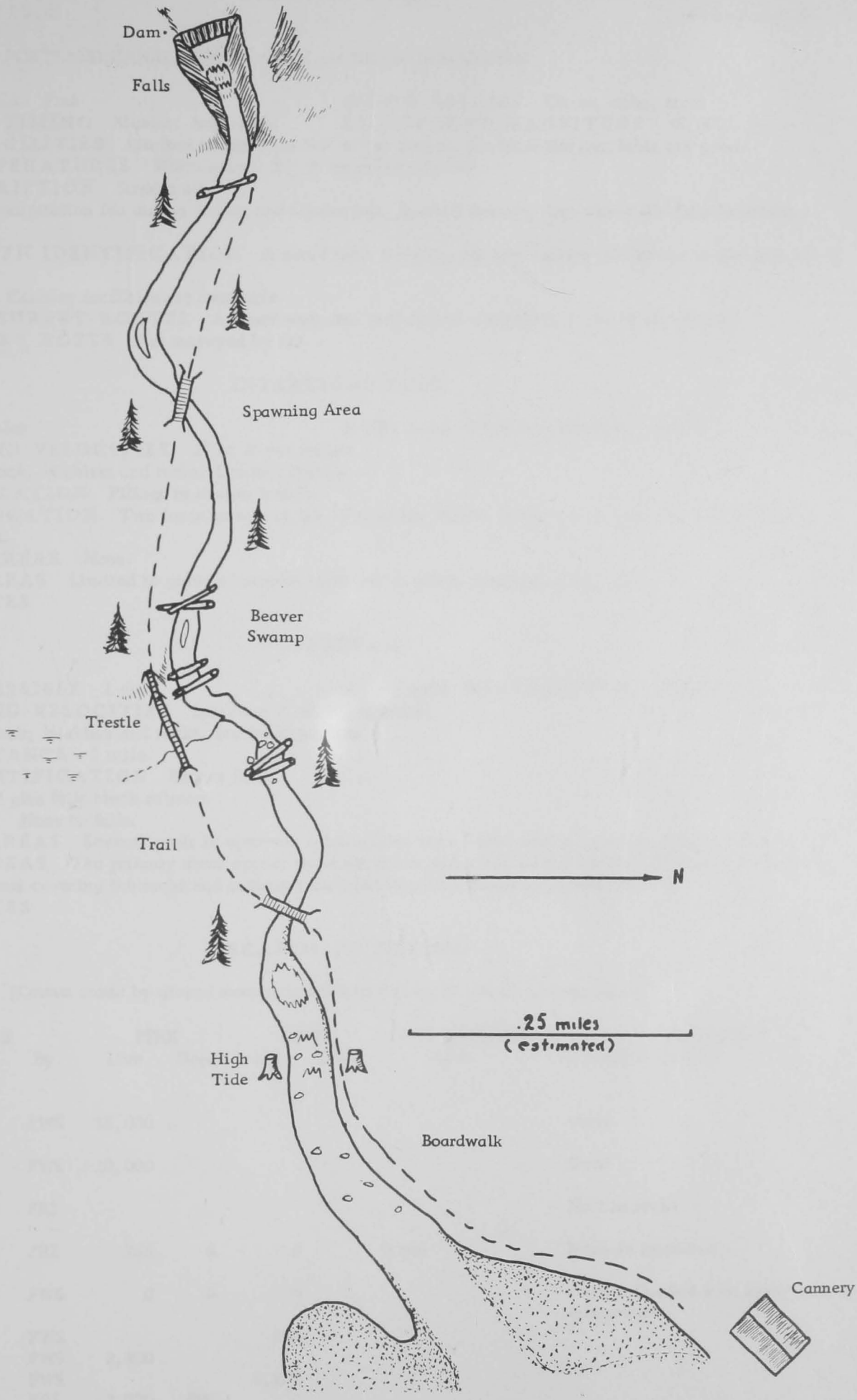
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES No information available.

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating


Dam
Falls
Spawning Area
Beaver
Swamp
Trestle
Trail
N
.25 miles
(estimated)
High
Tide
Boardwalk
Cannery

KETCHIKAN, PORTLAND CANAL, GWENT COVE, at Hidden Inlet Cannery

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE <5,000
SPAWNING FACILITIES Limited to less than 30% of the stream, the facilities available are good.
STREAM TEMPERATURES Warm range. 57° F. reported 9/9/50.
VALLEY DESCRIPTION Stream cut.
DRAINAGE Precipitation fed during August and September. A small cannery dam above the falls impounds a small pond.
STREAM MOUTH IDENTIFICATION A board walk from the cannery follows the stream to the dam above the falls.
ANCHORAGE Cannery facilities are available.
TRAILS AND SURVEY ROUTES A board walk and trail follow the stream to the terminal falls.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 35'/12"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Bedrock, boulders and rocks. Limited gravel.
LOW TIDE LOCATION Pilings in stream mouth.
HIGH TIDE LOCATION Two large stumps at the edge of the woods. These are on each side of the stream below a pool.
SCHOOLING AREAS None.
SPAWNING AREAS Limited to gravels between rocks and boulders near high tide point.
GENERAL NOTES

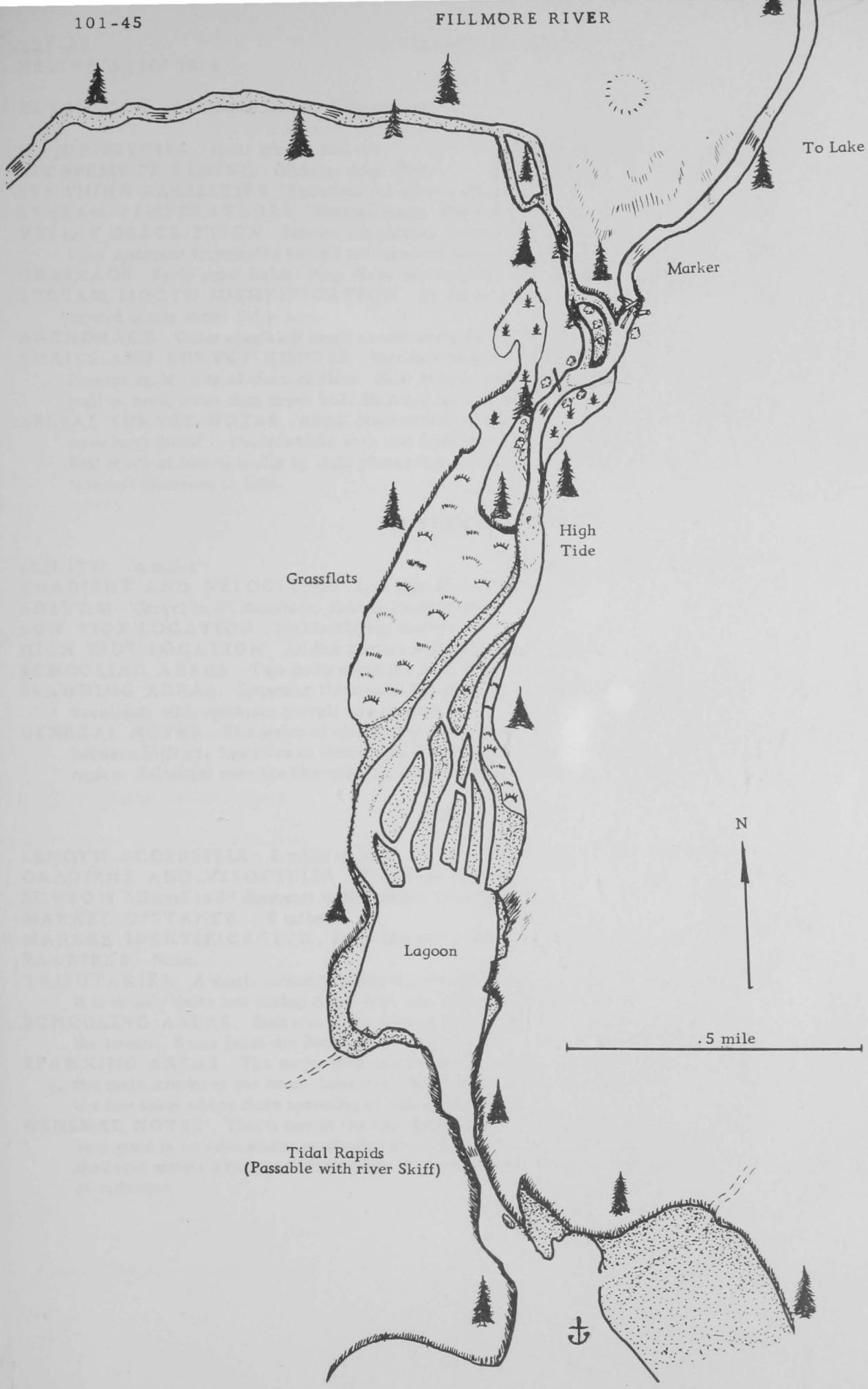
UPSTREAM

LENGTH ACCESSIBLE 1 mile AVERAGE WIDTH/DEPTH 35'/12"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Bedrock, boulders and rocks, scattered gravels.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION Barrier falls.
BARRIERS 30' plus falls block salmon.
TRIBUTARIES None to falls.
SCHOOLING AREAS Several pools in upstream section near falls. Some resting pools in lower stream.
SPAWNING AREAS The primary areas appear to be all in the upper half of the stream. The lower stream has algae and moss covering the rocks and indicates currents below optimum for spawning.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1927								
Sep 16		FWS	15,000					Good
1930								
Sep 11	G 1.0	FWS	10,000					Good
1949								
July 17	G 1.0	FRI						No fish seen
1950								
Sep 9	G 1.0	FRI	756	4	8		2 red	None in intertidal
1953								
Sep 27	G 1.0	FWS	0	0	0	0		Stream flooded. Fair early pink escapement
1957								
July 24		FWS			600			
Aug 9		FWS	2,200					
Sep 1		FWS			3,500			
Sep 5	G 1.0	FRI	2,700	500	0			


To Lake
Marker
High
Tide
Grassflats
N
Lagoon
.5 mile
Tidal Rapids
(Passable with river Skiff)

KETCHIKAN, FILLMORE INLET, Extreme head

MAJOR SPECIES Pink, chum, and red
OTHER SPECIES Coho and trout
ESCAPEMENT TIMING Middle. Aug.-Sep.
ESCAPEMENT MAGNITUDE >100,000
SPAWNING FACILITIES Excellent for all species.
STREAM TEMPERATURES Normal range. Observed 7/26/50, 51°F.; 9/11/50, 55°F.
VALLEY DESCRIPTION Stream cut glacial. Broad delta with extensive grass-flats. Lower valley stream cut. Lake upstream impounded behind old terminal moraine. Upper valley retains glacial U-shape.
DRAINAGE Early snow fields. Aug.-Sep. precipitation fed. Some springs below talus slopes around lake.
STREAM MOUTH IDENTIFICATION At the head of the inner lagoon. At low tide, channels of the stream extend across entire delta base.
ANCHORAGE Outer chuck off small stream delta in N.E. corner. Inner chucks and lagoon are uncharted.
TRAILS AND SURVEY ROUTES Entrance to lagoon narrow with rock on S. side extending into mid-channel. Passage on N. side of channel clear. Skiff may be taken short distance above high tide point on high tides. No trail or route other than creek bed. Difficult on high water.
AERIAL SURVEY NOTES Aerial observations can be made of most of the stream. The maximum concentrations have been found in the intertidal zone and lower stream where visibility is unobstructed. Surveys to the lake are best made at low altitudes by light planes due to restricted turning in the narrow valley. Adequate landing and take-off distances in lake.

INTERTIDAL ZONE

LENGTH .4 miles
AVERAGE WIDTH/DEPTH 150'/12"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Gravel to 3" diameter, sand in lower zone.
LOW TIDE LOCATION No identifying marker.
HIGH TIDE LOCATION At first contact with trees on N. bank.
SCHOOLING AREAS Two pools about the high tide point.
SPAWNING AREAS Spawning throughout the upper 2/3 of the entire intertidal zone. These spawning areas are excellent, with optimum gravels and currents.
GENERAL NOTES The series of chucks and the lagoon with its restricted outlet tend to reduce the variations between high and low tides so that the intertidal zone of the stream has less range than other streams in this region. Salinities over the intertidal zone during tidal fluctuations are probably quite low.

UPSTREAM

LENGTH ACCESSIBLE 2 miles to lake
AVERAGE WIDTH/DEPTH 50'/24"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel to 5" diameter in first mile, larger beyond.
MARKER DISTANCE .5 miles.
MARKER IDENTIFICATION Large log jam below a rock wall on N. bank. An alder just above is blazed.
BARRIERS None.
TRIBUTARIES A small tributary enters the stream .3 miles upstream. This drains a small valley to the north. It is usually quite low during Aug.-Sep. and very few salmon enter it.
SCHOOLING AREAS Pink and chum salmon school just above high tide. Resting pools are scattered throughout the stream. Some holes are found beyond the marker where reds are observed in August.
SPAWNING AREAS The major pink and chum areas are in the lower stream. Reds enter the lake and spawn in the main stream at the head. Lake shore spawning occurs along most of the talus slope S. shore. This is one of the few lakes where shore spawning of reds has been noted.
GENERAL NOTES This is one of the best streams in the Portland Canal area. Its production has continued to be very good in an area where most other streams have been reduced to very small runs. It is believed that the sheltered waters adjacent to the stream are instrumental in protecting young migrants during the early stages of saltwater.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1927								
Aug 24		FWS	2,000					
Sep 18		FWS	20,000					
1928								
Aug 8		FWS	45,000		5,000		200 red	
1930								
Sep 12		FWS	300,000					Excellent. 50,000 fish off mouth
1940								
Sep 5	G 2.0	FWS	400					Poor
Sep 24	G 2.0	ASI,FWS	75,000		100			Excellent. Few at mouth
1942								
Sep 28	A 1.5	FWS	50,000		25,000		500 coho	Excellent. 25,000 at mouth
1946								
Oct 2	A	FWS						Very poor. 2,000 live, very few dea
1948								
Aug 16	G 2.0	FWS	50		200			Poor
Aug 20	G 1.5	FRI	156		129		1 red	
Sep 1	G 1.0	FWS	100		400			Poor
Sep 27	G 1.0	ASI	1,000		200			Poor
1949								
July 20	G 1.5	FRI					6 red, 1 dead red	
Aug 19	G 1.0	FRI	5,000					
Oct 1	G 1.0	FWS	4,000	6,000	100			
1950								
July 26	G .5	FRI	0		0			Visit too early
Sep 11	G .5	FRI	519	4	28		6 coho	
1953								
Aug 13	A 1.0	FWS	10,000		0		0	Fair. Streamguard reports 30,000 pi
Aug 19	A 3.0	FWS	20,000					Fair
Aug 25	A 2.0	FWS	20,000					Fair. Fish at high tide mark or belov
Sep 28	G .3	FWS	0		0		0	Fair. Dead pink. Stream flooded
1954								
Sep 27	A 2.0	FRI	100	0				None at mouth
1955								
Aug 4		FWS	100					
Aug 14		FWS	500					
Sep 8	G 2.0	FWS						40-45,000 fish in creek and lake
Sep 14	G 3.0	FWS	20,000	2,000	500		200 coho	
Sep 15	A 2.0	FRI	45,000					Past peak. Live, dead chum. Dead p
Sep 16	G	FWS	40,000		25,000		8,000 coho	
Sep 25	A 2.0	FRI	20,000	>10,000			Red beach spawning	Live, dead chum
1956								
July 11		FWS					4,500 red	
July 24		FWS					8,000 red	
Aug 16		FWS					9,000 red	
Aug 19		FWS	1,500					
Aug 25		FWS	8,000		2,000			
Aug 26		FWS	13,000					
Aug 29		FWS	12,000					600 pink at mouth
Sep 1		FWS	13,500		1,500			
Sep 6	A 2.0	FRI	>60,000	0				Most in schools in intertidal zone
Sep 19	G 3.0	FWS	100,000		2,500			

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1957								
Aug 17		FWS	2,700					
Aug 21		FWS						20,000 chum and pink
Aug 25		FWS	3,100		400			
Sep 1 S	A 2.0	FRI	12,000		>5,000			Some at mouth. Lake spawning red
Sep 4 S	G 2.0	FRI	12,000	1,250	1,000	250		
Sep 5		FWS	11,600		1,000			
Sep 8 S	A 2.0	FRI	15,000	>200				Some chum. Red beach spawning in lake
Sep 13		FWS	7,000		2,000			

101-45 K 8A
N54°55.2 W130°29 No Previous No.

KETCHIKAN, FILLMORE INLET, S.W. corner of extreme inner bay outside of lagoon

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE 5,000
SPAWNING FACILITIES Excellent, though limited.
STREAM TEMPERATURES Normal range (estimated).
VALLEY DESCRIPTION Stream cut. A good low gradient intertidal area extends a short distance into the valley above high tide. The valley ends abruptly where the stream turns sharply northward to the steep valley wall.
DRAINAGE Less than 4 square miles (estimated). There is a small lake 3 air miles N.W. of the stream mouth. 2,000 foot mountains lie on either side of the upper valley and provide fairly good stream discharge even during very dry summers.
STREAM MOUTH IDENTIFICATION The intertidal zone is long and flat. The mouth lies 1 mile S.E. of the entrance into the lagoon at the mouth of Fillmore River (see K 8, Previous No. 5A).
ANCHORAGE See K 8, Previous No. 5A. No reports available on anchorage at the mouth of this stream, but probably is satisfactory at the drop-off. Note that this inner system of bays at the head of Fillmore Inlet are not charted and courses should be checked carefully for rocks.
TRAILS AND SURVEY ROUTES Appears to be relatively easy to survey on foot. The distances are short and the stream splits above high tide into several easily walked channels.
AERIAL SURVEY NOTES Most of the major spawning occurs in the upper intertidal and lower stream which is easily visible from the air. This stream is directly on the aerial route from outer Fillmore Inlet to Fillmore River.

INTERTIDAL ZONE

LENGTH .4 miles AVERAGE WIDTH/DEPTH 20-30' (estimated)
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand, gravel, small rock.
HIGH TIDE LOCATION At entry into woods.
SCHOOLING AREAS Several pools in the upper intertidal zone have been observed holding several hundred salmon.
SPAWNING AREAS Most of the area from half tide up is utilized by spawning salmon.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Less than .5 miles (est.) AVERAGE WIDTH/DEPTH 20'/18"
GRADIENT AND VELOCITIES Less than 1° at 2' per second (estimated)
BOTTOM Sand, gravel, small rock in lower stream.
MARKER DISTANCE Less than .5 miles.
MARKER IDENTIFICATION Falls where stream comes down the steep valley wall.
BARRIERS Falls.
TRIBUTARIES None.
SCHOOLING AREAS None noted.
SPAWNING AREAS Lower stream.
GENERAL NOTES

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

KETCHIKAN, FILLMORE INLET, E.-N.E. shore outer chuck, .9 miles from narrows at entrance

MAJOR SPECIES Pink and chum
OTHER SPECIES
ESCAPEMENT TIMING Late Sep.
ESCAPEMENT MAGNITUDE < 5,000 estimated
SPAWNING FACILITIES Good, estimated.
STREAM TEMPERATURES Warm range estimated.
VALLEY DESCRIPTION Stream cut.
DRAINAGE Precipitation fed during Sep.
STREAM MOUTH IDENTIFICATION A gravel delta extends out from the woods with grass flats along the tree line.
ANCHORAGE At delta drop-off.
TRAIL AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 24	G 1.5	FWS	20,000					Excellent
1942								
Sep 29	G 1.0	FWS	50,000		5,000			Good. Stream very low
1945								
Sep 16	G 1.2	ASI	15,000					Excellent. 5,000 at mouth
1954								
Aug 7	A 1.0	FWS						No pink
Sep 16	A 1.0	FRI	50					
1955								
Aug 25	G	FWS						1,500 at mouth
Sep 9	G	FWS	1,500					
1957								
Aug 7		FWS	30					
Sep 13		FWS	31					

KETCHIKAN, PEARSE CANAL, FILLMORE INLET, 1 mile N. of Edward Passage

MAJOR SPECIES Pink chum OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Sep. ESCAPEMENT MAGNITUDE >10,000

SPAWNING FACILITIES Some limited spawning area in the upper intertidal zone, moderately swift first .5 miles of stream and very little in the .5 mile to 1 mile area (slough). However, from the 1 mile mark upstream for over 1.5 miles, the stream provides excellent spawning facilities. These facilities have not been reported in the past due to difficulty in reaching the upper stream on foot.

STREAM TEMPERATURES Normal range (estimated). No records available. However, the headwaters are on the E. slope of Cone Mountain (elevation 3,800') and probably provide a fairly good discharge even during dry weather.

VALLEY DESCRIPTION Stream cut. The valley runs N. from the inlet. The first .5 miles of valley is through a cross-bedded area which has a moderate gradient. This section of valley is narrow and lies between two hills. Above the .5 mile mark, the valley is level and relatively wide for over 1.5 miles. At the 2 mile mark, the valley begins rising toward the Cone Mountain slopes.

DRAINAGE Precipitation fed during late summer months. Snow fields are present on the upper slopes until July. The drainage area is estimated to be over 4 square miles. Though a small pond lies at the .5 mile mark, there are no lakes in the system.

STREAM MOUTH IDENTIFICATION The stream lies at the head of a cove directly N. of the N. entrance to Edward Passage. The stream leaves the valley on the E. side of the cove. There is a relatively short intertidal zone. The stream appears to be fairly steep from inlet.

ANCHORAGE In cove. The inlet is clear for navigation. However, there are uncharted rocks and reefs along the shores and caution should be used when approaching the cove.

TRAILS AND SURVEY ROUTES This stream is not accessible on foot during flooding stages. The first .5 miles of stream may be walked without great difficulty. The flat valley above the .5 mile mark is marshy and the depth of the stream is too great for wading on normal water levels. The stream above the 1 mile mark is easily waded and easily surveyed on foot. No trails.

AERIAL SURVEY NOTES This stream can be surveyed by air with little difficulty. The valley width permits an adequate turning radius for light planes. Though the spawning areas have heavy forest to the stream edge, visibility is adequate for counting. The water has a light muskeg coloring during normal water levels, but doesn't obscure fish. Visibility is limited from the air during floods. Aerial survey is more effective on this stream than foot surveys.

INTERTIDAL ZONE

LENGTH .2 miles (estimated) AVERAGE WIDTH/DEPTH 30'/12"
GRADIENT AND VELOCITIES 1° at estimated 2' per second
BOTTOM Sand, some gravel and boulders.
HIGH TIDE LOCATION At entry into the canyon above bend to the E.
SCHOOLING AREAS Several small pools in the upper intertidal areas.
SPAWNING AREAS Good spawning facilities in the upper area, though limited to the gravel areas between the rock and boulders.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >1.5 miles AVERAGE WIDTH/DEPTH 30'/24"
GRADIENT AND VELOCITIES >2° at 2-3' per second to .5 mile mark. <1° at 1' per second above to 1 mile mark. 1° at 2' per second above.
BOTTOM Rocks and boulders in canyon, sand and gravel above.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None noted.
TRIBUTARIES One minor tributary enters on the W. side .8 miles upstream. A second tributary enters at the 1.5 mile mark. Neither are important as spawning areas.
SCHOOLING AREAS The first section of the slough above the canyon has been observed with schooling salmon, none noted in the slough above. The ascending salmon probably pass through to the spawning areas above fairly rapidly.
SPAWNING AREAS From the 1 mile mark upstream for over 1.5 miles. The stream in this area appears to be nearly all riffles and excellent spawning gravel. The capacity of this stream is undoubtedly far greater than is shown by the past survey records.
GENERAL NOTES Though no observations have been made on the coho runs in this stream, the existence of the long slough in the lower stream may provide excellent rearing conditions for that species.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1930								
Sep 11	G 3.0	FWS	12,500		12,500			Good
1940								
Sep 24	G 1.5	FWS	1,000		0			
1942								
Sep 29		FWS						Creek fished out by gill netters
1945								
Aug 19		FWS						Inlet loaded with fish
Sep 15	G 1.0	FWS						Poor. Few pink. Few in inlet, at mouth
1947								
Sep 27	G .3	ASI						Poor
1948								
Sep 2	G .5	FWS	500					Poor
1949								
Aug 19	G 1.0	FWS	3,000					
Oct 1	G 1.0	FWS	7,000					
1953								
Aug 13	G	FWS	6,000					Fair
Aug 19	A 1.0	FWS						No fish. All fish above first mile
Aug 24	G	FWS						Jumps in bay. 2 fair schools
Aug 25	A 2.0	FWS	2,000					Poor. Vis. poor. Fish above mouth
1954								
Sep 16	A .5	FRI	50					None observed off mouth
Sep 27	A 1.0	FRI						No pink. None at mouth
1955								
Aug 25	G	FWS	1,000		1,000			
Sep 9		FWS	1,500					
Sep 13	G	FWS	3,000		1,500		1,500 coho	
Sep 15	G 1.0	FWS	125				100 coho	
1956								
July 11		FWS					600 red	
July 17		FWS					Several coho	
Sep 18	G 1.1	FWS	320		60			
1957								
July 11		FWS					600 red	
Sep 8	A 2.0	FRI	<100		<100			A few at mouth

101-45
N54°52.5 W130°33

K 9A
No Previous No.

KETCHIKAN, PEARSE CANAL, FILLMORE INLET, .9 miles W.-N.W. of Edward Passage

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Very limited.
STREAM TEMPERATURES
VALLEY DESCRIPTION Short stream cut valley less than 1 mile long with the headwaters in low hills.
DRAINAGE Less than .5 square miles. Precipitation fed.
STREAM MOUTH IDENTIFICATION Not positively identified.
ANCHORAGE

TRAILS AND SURVEY ROUTES None reported.
AERIAL SURVEY NOTES Not usually surveyed from the air.
GENERAL NOTES This stream is not of importance. It has been included due to the confusion of this stream with K 9 in the past.

INTERTIDAL ZONE

LENGTH Less than .1 miles
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM Rock and boulders, little gravel.
HIGH TIDE LOCATION

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.3 miles
AVERAGE WIDTH/DEPTH 10'/8"
GRADIENT AND VELOCITIES Moderate current
BOTTOM Gravel and small rock.
MARKER DISTANCE
MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES This stream is not easily located due to small size. However, this stream has been mistaken for K 9 often in the past. The information regarding this stream is very limited.

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

101-45 K 10
N54°51.7 W130°35 Previous No. 5C

KETCHIKAN, PEARSE CANAL, FILLMORE INLET, 3.2 N.E. of Just Island on N. shore

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES The extent of the spawning facilities are unknown. There are the remains of several Indian intertidal rock salmon traps and these indicate that the stream had good runs at one time.
STREAM TEMPERATURES Warm range (estimated). 57° F., 7/20/49
VALLEY DESCRIPTION Stream cut to 1 mile mark. A lake extends 2 miles beyond.
DRAINAGE Precipitation fed. 6 square miles (estimated). Lake is estimated to be .6 square miles in surface area. Stream at head of lake about 1 mile long. Nakat Mountain (2,921') lies to the W. of lake.
STREAM IDENTIFICATION E. side of cove.
ANCHORAGE In cove.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Lower stream and intertidal area may be surveyed from the air on good surveying days. No visibility from the air during floods.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES 1° at 1-2' per second (estimated)
BOTTOM Sand and rocks
HIGH TIDE LOCATION

SCHOOLING AREAS None noted.
SPAWNING AREAS Very limited, except for area near high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES 1° at 2' per second (estimated)
BOTTOM Rocks, gravel to 5" in diameter.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None noted.
TRIBUTARIES Small tributary enters W. side .2 miles above intertidal zone.
SCHOOLING AREAS

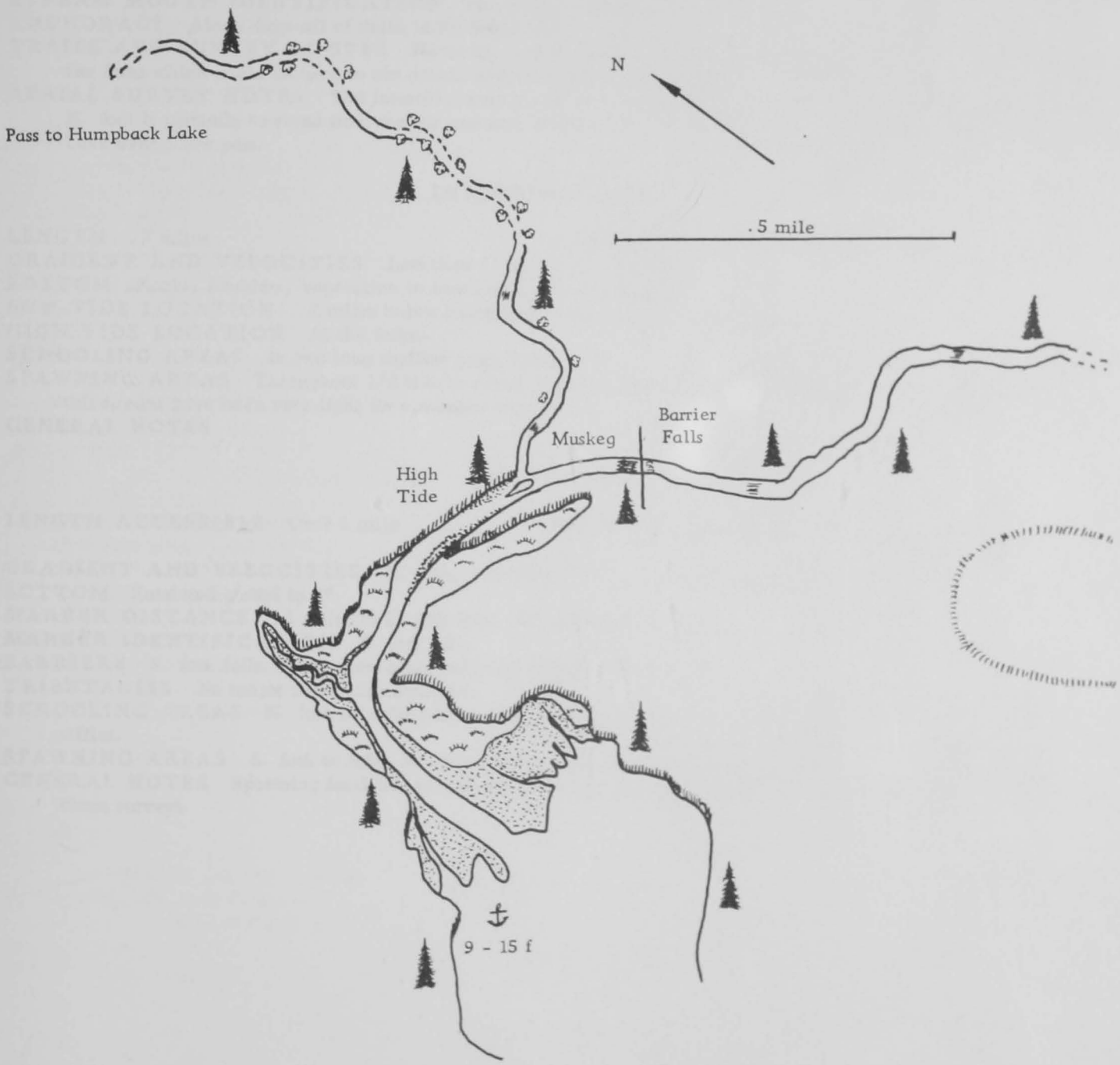
SPAWNING AREAS

GENERAL NOTES There is little information available. Presence of coho fry in stream may indicate that the lake 1 mile upstream may be accessible to spawning coho. Trout are present in the lake.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1927								
Sep 18		FWS	1,250		1,250			
1930								
Sep 12		FWS	100					No good
1940								
Sep 24	G .3	ASI,FWS	10,000					Excellent. Few chum. 5,000 off mouth
1941								
Oct 4	G .5	ASI						Few pink
1942								
Sep 28	G .8	FWS	10,000		10,000		100 coho	
1947								
Sep 27	G .3	ASI						Poor
1948								
Sep 2	G .5	FWS	10		40			Poor
1949								
July 20	G .1	FRI						No fish in stream
Aug 19		FWS						No fish in stream
1953								
Aug 24	G	FWS						Poor. 200 near mouth, intertidal
1954								
Sep 27	A .3	FRI		10				Very few pink. None off mouth
1955								
Aug 25	G	FWS	300		300		600 coho	
Sep 9	G	FWS	1,000		500		1,500 coho	
Sep 15	G 1.0	FWS	2,000		50		20 coho	
1957								
Aug 7		FWS	200					
Aug 14		FWS	60					
Aug 17		FWS	100					
Aug 21		FWS	120					
Aug 25		FWS	150					
Sep 8	A 3.0	FRI	>2,000					
Sep 14		FWS	25		125			


N
Pass to Humpback Lake
.5 mile
Barrier
Falls
Muskeg
High
Tide
9 - 15 f

101-45 WILLARD CREEK K 11
N54°58.5 W130°36.7 Previous No. 6 & 6A

KETCHIKAN, WILLARD INLET, Head

MAJOR SPECIES Pink and chum OTHER SPECIES Coho
ESCAPEMENT TIMING Late. Sep. ESCAPEMENT MAGNITUDE <5,000
SPAWNING FACILITIES Good. Limited to upper third of intertidal zone and upstream to barrier falls on S. fork and to small N. fork.
STREAM TEMPERATURES Warm range (estimated). The N. fork flows through a series of slow pools with beaver ponds adjacent to the stream. This fork is several degrees warmer than the S. fork, originating in a small lake.
VALLEY DESCRIPTION Stream cut.
DRAINAGE Precipitation fed. Small lakes in drainage. Barren rock peaks in drainage system. Several small early snow fields on the S. fork.
STREAM MOUTH IDENTIFICATION Broad flats, stream entry on N. side.
ANCHORAGE Along drop-off of delta in 9-15 fathoms.
TRAILS AND SURVEY ROUTES No trails, walking easy. Survey both forks. A small muskeg lies between the forks which could be used to cut across from the falls to the N. fork.
AERIAL SURVEY NOTES The intertidal zone and S. fork to the falls are easily observed from the air. The N. fork is partially covered from the air and only sections may be viewed. The N. fork leads into Humpback Lake over a low pass.

INTERTIDAL ZONE

LENGTH .7 miles AVERAGE WIDTH/DEPTH 100'/12"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Rocks, boulders, vegetation in lower half. To 4" gravel above.
LOW TIDE LOCATION .2 miles below contact with the woods on the N. bank.
HIGH TIDE LOCATION At the forks.
SCHOOLING AREAS In two long shallow pools below forks.
SPAWNING AREAS Throughout 1/2 tide to forks. Area appears to have good spawning gravels, though runs in this stream have been very light for a number of years.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Over 1 mile AVERAGE WIDTH/DEPTH N. fork 30'/12"
S. fork 50'/24"
GRADIENT AND VELOCITIES N. fork, less than 1° at 1-2' per second. S. fork, 1° at 2' per second
BOTTOM Sand and gravel to 4".
MARKER DISTANCE .1 miles to S. fork falls. No marker on N. fork.
MARKER IDENTIFICATION S. fork falls.
BARRIERS S. fork falls. No barriers observed in N. fork for over 1 mile.
TRIBUTARIES No major tributaries observed.
SCHOOLING AREAS N. fork schooling areas in small pools scattered throughout the stream. S. fork is mainly riffles.
SPAWNING AREAS S. fork to falls. N. fork scattered throughout first mile of stream.
GENERAL NOTES Spawning facilities judged good throughout. Coho fry observed in stream during pink and chum surveys.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1927								
Sep 19		FWS	200		100			
1928								
July 8		FWS	50					
July 25		FWS	10,000		50		1,000 red	
Aug 8		FWS	15,000		5,000		2,000 red	
Aug 15		FWS	20,000		6,000		100 coho, 3,900 red	
Aug 28		FWS	500		200			
1930								
Sep 13	G 1.0	FWS	15,000					Good
1940								
Sep 25	G 1.5	ASI,FWS	7,000					Poor
1941								
Sep 9	G 2.0	FWS	5,000					Fair. 2,000 left fork
1942								
Sep 27	G 1.0	FWS	10,000		1,000			Good
1946								
Oct 2	G .8	ASI						Good. 7-8,000 fish, many dead
1947								
Sep 26	G 2.0	ASI						Poor
1948								
Aug 18	G .5	FWS	0		30			Poor
Aug 21	G .8	FRI	125		247			
Sep 2	G 1.0	FWS	20		500			Poor
1949								
July 21	G 1.0	FRI	21					
Sep 1	A	FRI	2,500		200			
1953								
Aug 13	A .5	FWS	500					Pink at forks. Red tide in inlet
Aug 24	G	FWS						250 left fork, below both forks
Aug 25	A 1.0	FWS						Poor. 500 at forks
Aug 25	G	FWS						Very little water present
1954								
Sep 16	A .5	FRI						None seen in stream or off mouth
Sep 27	A .5	FRI						None seen in stream or off mouth
1955								
Season		FWS	1,000					All the stream surveyed
1956								
Aug 17		FWS			60			
Aug 29		FWS						250 chum at mouth
Sep 17		FWS	30		193			
1957								
Aug 21		FWS	200					
Sep 1	A .3	FRI	0		0			Sev. 100 pink at mouth
Sep 8	A 1.0	FRI	>200					Some dead pink. None observed at mouth or inlet
Sep 16	G	FWS	4		16			

KETCHIKAN, WILLARD INLET, .7 miles N.W. of chuck entrance at head of inlet

MAJOR SPECIES Pink and chum
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.
ESCAPEMENT MAGNITUDE <5,000
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES Warm range.
VALLEY DESCRIPTION Stream cut.
DRAINAGE Precipitation fed. Believed to go dry during dry Aug. weather.
STREAM MOUTH IDENTIFICATION Stream flows out of woods along W. side of delta.
ANCHORAGE Off W. delta in 3 1/2 fathoms.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles
AVERAGE WIDTH/DEPTH 10'/6"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Sand and gravel.
HIGH TIDE LOCATION Entry of the stream into the woods.
SCHOOLING AREAS None noted.
SPAWNING AREAS Upper intertidal.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >1 mile
AVERAGE WIDTH/DEPTH 10'/6"
GRADIENT AND VELOCITIES >3°
BOTTOM Rocks and boulders, limited gravel. Increasingly coarse upstream.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None noted.
TRIBUTARIES
SCHOOLING AREAS None noted.
SPAWNING AREAS First .3 miles.
GENERAL NOTES This is a minor salmon stream with limited facilities and insignificant runs in recent years.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1928								
Aug 16		FWS	9,000		1,000			
1930								
Sep 15	G 1.3	FWS	500					Poor
1942								
Sep 27	G .3	FWS	6,000		500			Fair
1953								
Aug 24	G	FWS						No fish showing
1954								
Sep 16	A .5	FRI	0					Water low, none off mouth
Sep 27	G .5	FRI						None seen in stream or off mouth

101-45 K 11B
N54°54.5 W130°39.5 Previous No. 7B

KETCHIKAN, PEARSE CANAL, WILLARD INLET, 6 miles from entrance to inlet on E. shore

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. Headwaters in mountains W. of Cone Mountain. Valley about 3 miles long.
DRAINAGE Precipitation fed. Area 2-3 square miles (estimated), no lakes or ponds.
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 mile AVERAGE WIDTH/DEPTH 10'/6"
GRADIENT AND VELOCITIES 1° at 2' per second (estimated)
BOTTOM Gravel.
HIGH TIDE LOCATION At the tree line.
SCHOOLING AREAS None.
SPAWNING AREAS Upper intertidal area, limited.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .5 mile (reported) AVERAGE WIDTH/DEPTH 10'/6"
GRADIENT AND VELOCITIES Moderate (reported)
BOTTOM Gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1928								
July 8		FWS						No fish
1942								
Sep 27	G .5	FWS	2,000					Fair
1948								
Sep 2	G .1	FWS	10					
1949								
Sep 20	G .5	FWS						No fish seen
1953								
Aug 24	G	FWS						Poor. Few stragglers
1954								
Sep 27 S	A .5	FRI	0					None off mouth
1956								
Aug 15		FWS	250					
1957								
Sep 16		FWS	0		0			

101-45 K 12
N54°49.5 W130°39 No Previous No.

KETCHIKAN, PEARSE CANAL, W. of entrance to Willard Inlet

MAJOR SPECIES
OTHER SPECIES
ESCAPEMENT TIMING
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut.
DRAINAGE Precipitation fed.
STREAM MOUTH IDENTIFICATION At head of narrow cove . 2 miles W. of entrance to Willard Inlet. Large intertidal flats.
ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS

TRIBUTARIES

SCHOOLING AREAS

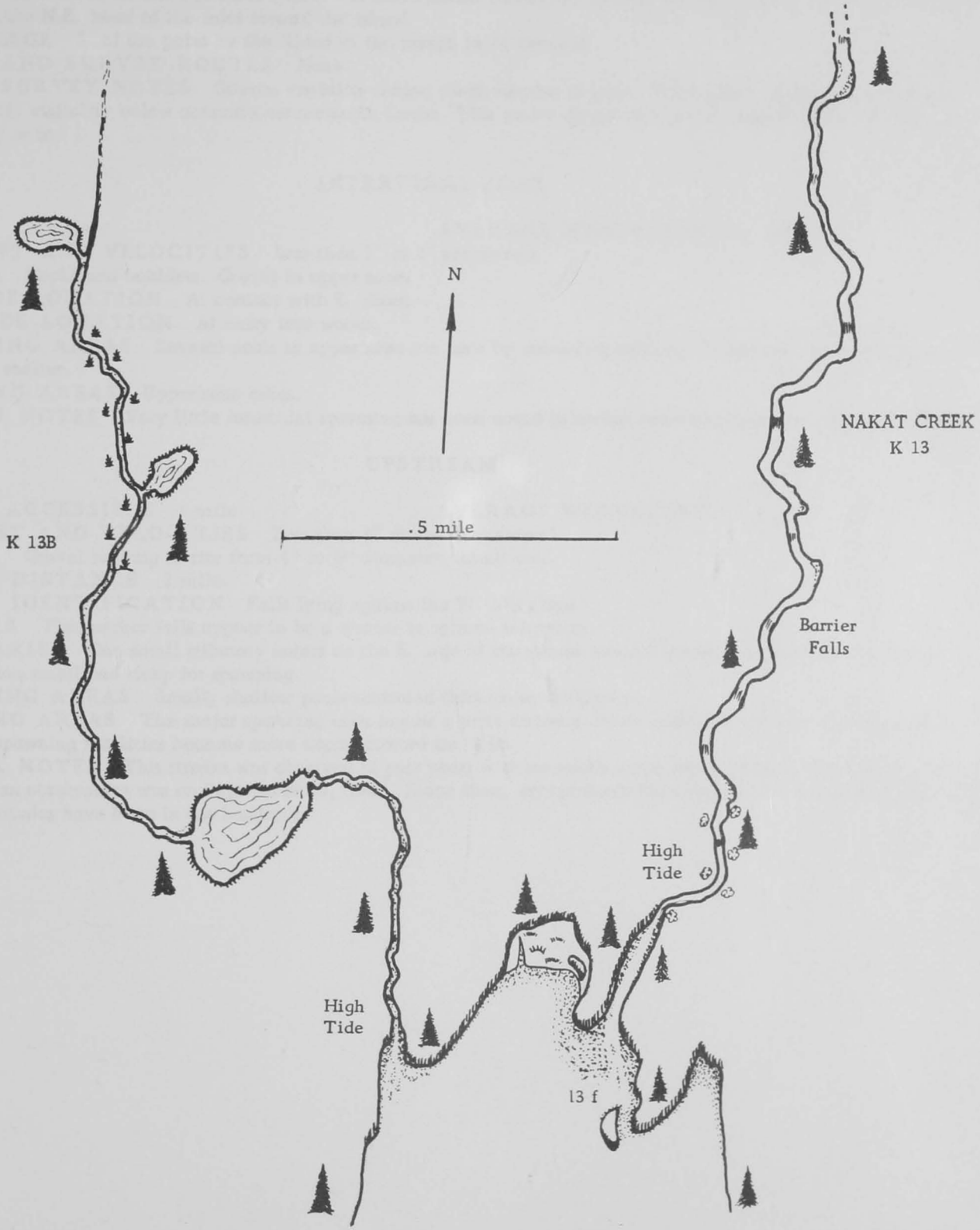
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1941								
Oct 4	G .5	ASI	2		0		0 coho, 0 red	No seeding


N
.5 mile
NAKAT CREEK
K 13
K 13B
Barrier
Falls
High
Tide
High
Tide
13 f

NAKAT CREEK

KETCHIKAN, NAKAT INLET, center of head

MAJOR SPECIES Pink
OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.
ESCAPEMENT MAGNITUDE <5,000 (recent years)
SPAWNING FACILITIES Very good.
STREAM TEMPERATURES Warm range.
VALLEY DESCRIPTION Stream cut. Low hills in this area.
DRAINAGE Precipitation fed.
STREAM MOUTH IDENTIFICATION A small island lies off the stream mouth. A point of land extends out from the N.E. head of the inlet toward the island.
ANCHORAGE S. of the point by the island at the mouth in 13 fathoms.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Stream visibility during clear weather is good. During high water, discoloration reduces visibility below accurate enumeration limits. This entire area should be by-passed following rains for a day or so.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH 25'/6"
GRADIENT AND VELOCITIES Less than 1° at 1' per second
BOTTOM Rocks and boulders. Gravel in upper zone.
LOW TIDE LOCATION At contact with E. shore.
HIGH TIDE LOCATION At entry into woods.
SCHOOLING AREAS Several pools in upper zone are used by ascending salmon, though not deep enough to offer shelter.
SPAWNING AREAS Upper zone areas.
GENERAL NOTES Very little intertidal spawning has been noted in recent years during low escapement levels.

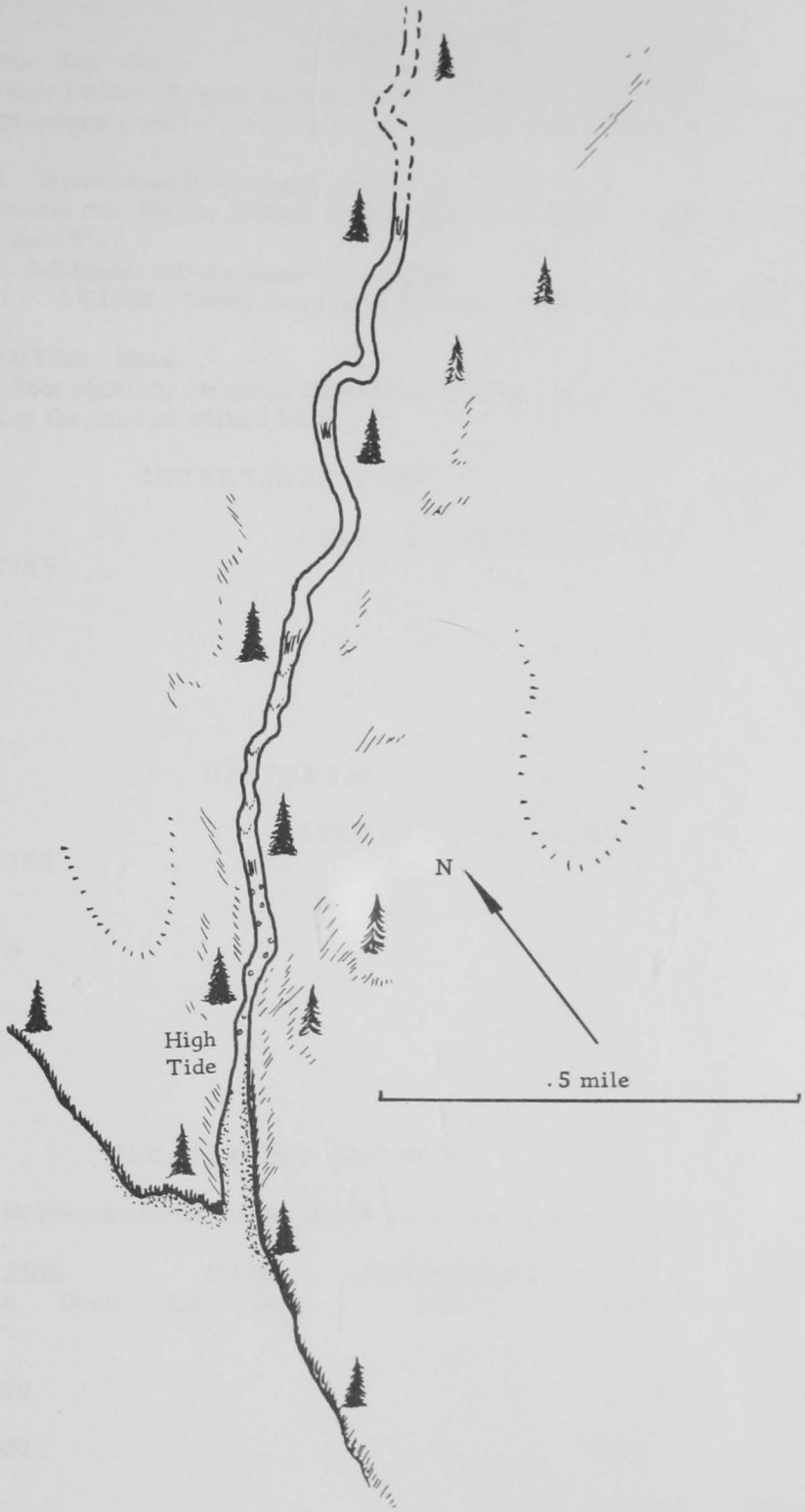
UPSTREAM

LENGTH ACCESSIBLE 1 mile
AVERAGE WIDTH/DEPTH 15'/6"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Gravel ranging in size from 4" to 8" diameter, some sand.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION Falls lying against the W. hill slope.
BARRIERS The marker falls appear to be a barrier to salmon migration.
TRIBUTARIES One small tributary enters on the E. side of the stream several hundred yards below the falls. It is too small and steep for spawning.
SCHOOLING AREAS Small, shallow pools scattered throughout the stream.
SPAWNING AREAS The major spawning area begins a short distance above high tide and continues upstream. The spawning facilities become more coarse toward the falls.
GENERAL NOTES This stream was observed in past years with unusually large escapements. The last record of such an observation was on September 15, 1945. Since then, escapements have been light. In recent years, the magnitudes have been in the hundreds.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1929								
Sep 16		FWS	45,000		5,000			
1930								
Sep 14	G 3.0	FWS	250,000		50,000			Excellent
1940								
Sep 6	G 1.0	FWS	1,000					Poor
Sep 26	G 1.0	ASI,FWS	20,000		100			Excellent
1941								
Sep 10	G 2.0	FWS	5,000		500			20,000 off mouth
Oct 4	G .5	ASI	15,000		1,000			Good
1942								
Sep 13	G 1.5	ASI	7,000		5,000			Good
Sep 26	G 1.5	ASI	8,000		2,000			Good
1943								
Sep 13		FWS	6,000					Fair. Few chum. Pink fresh
1945								
Sep 15	G 2.0	ASI	150,000					Excellent. 150,000 at mouth
Sep 16	G .5	FWS	100,000					Excellent. Few chum
1946								
Oct 2	A	ASI	>500					Poor
1947								
Sep 23	G .1	FRI	100		200			Poor
Sep 27		ASI						Very poor
1948								
Aug 18	G 1.5	FWS	0		8			Poor
Sep 3	G 1.5	FWS	50		100			Poor
1949								
July 22	G .3	FRI						No fish in stream or off mouth
Sep 6	A 1.0	FRI	43		125			
1953								
Aug 25	G	FWS						Poor. Few at mouth and in creek
1954								
Sep 27	A .3	FRI						Few pink. Jumps off mouth
1955								
Sep 15	A 1.0	FRI						None observed
Sep 25	A 1.0	FRI						Few observed
1956								
Sep 5		FWS			500			Few pink
Sep 17		FWS	110		84			
Sep 24	A 1.0	FRI	>200					
1957								
July 14		FWS	250					
Sep 8	A 1.0	FRI						None observed


N
High
Tide
.5 mile

KETCHIKAN, NAKAT BAY, NAKAT INLET, .5 miles from head on E. shore

MAJOR SPECIES Pink
OTHER SPECIES Coho (?), trout
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Very limited for pink salmon. Beyond the 2 mile mark, there are beaver ponds, sloughs, and riffle areas that suggest good coho conditions. The first two miles of stream are not suitable for spawning.
STREAM TEMPERATURES Warm range (estimated). 50.5° F., 9/23/47.
VALLEY DESCRIPTION Stream cut. Narrow valley, steep sides for 1.5 miles, widens above for over 2 miles, with gentle gradient of less than 1°.
DRAINAGE Precipitation fed. 4-5 square miles estimated, no lakes.
STREAM MOUTH IDENTIFICATION Short, steep intertidal zone, with steep valley sides. Stream runs N.E.
ANCHORAGE
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Poor visibility for aerial observation in lower stream. This is the pass from the head of Nakat Inlet to Mink Arm or the head of Willard Inlet.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1927								
Sep 16		FWS	5,000					
1940								
Sep 26	A .1	ASI,FWS	1,000					Good
1941								
Oct 4	G .3	FWS						Poor. Fish showing
1942								
Sep 26	G .5	FWS	2,000		500			Fair. 2,000 off mouth
1943								
Sep 13	G 1.0	FWS	1,500					Few chum, coho
1945								
Sep 16	G .3	FWS	15,000					Good
1947								
Sep 23	G .1	FRI						Poor. No fish seen
1948								
Aug 18	G .3	FWS						No fish in the stream

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1948								
Sep 3	G .3	FWS	50		50			Poor
Sep 26	G .5	FWS						No fish seen
1949								
July 22 S	G .3	FRI						No fish seen
1953								
Aug 25	G	FWS						No fish seen
1954								
Sep 27 S	A 1.0	FRI						Few pink. None off mouth
1956								
Sep 24 S	A 2.0	FRI						None observed

101-44 K 13B
N54°56.6 W130°45.5 Previous No. 8B

KETCHIKAN, NAKAT BAY, NAKAT INLET, 1.5 miles from head on W. shore

MAJOR SPECIES Pink
OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited. Rated as poor.
STREAM TEMPERATURES Warm range. (estimated)
VALLEY DESCRIPTION Shallow valley stream cut in folded geologic structure running N.-S.
DRAINAGE Precipitation fed. Less than 2 square miles.
STREAM MOUTH IDENTIFICATION Mouth lies inside cove .5 miles W. of island in the middle of the inlet 1.5 miles from head of inlet.
ANCHORAGE
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

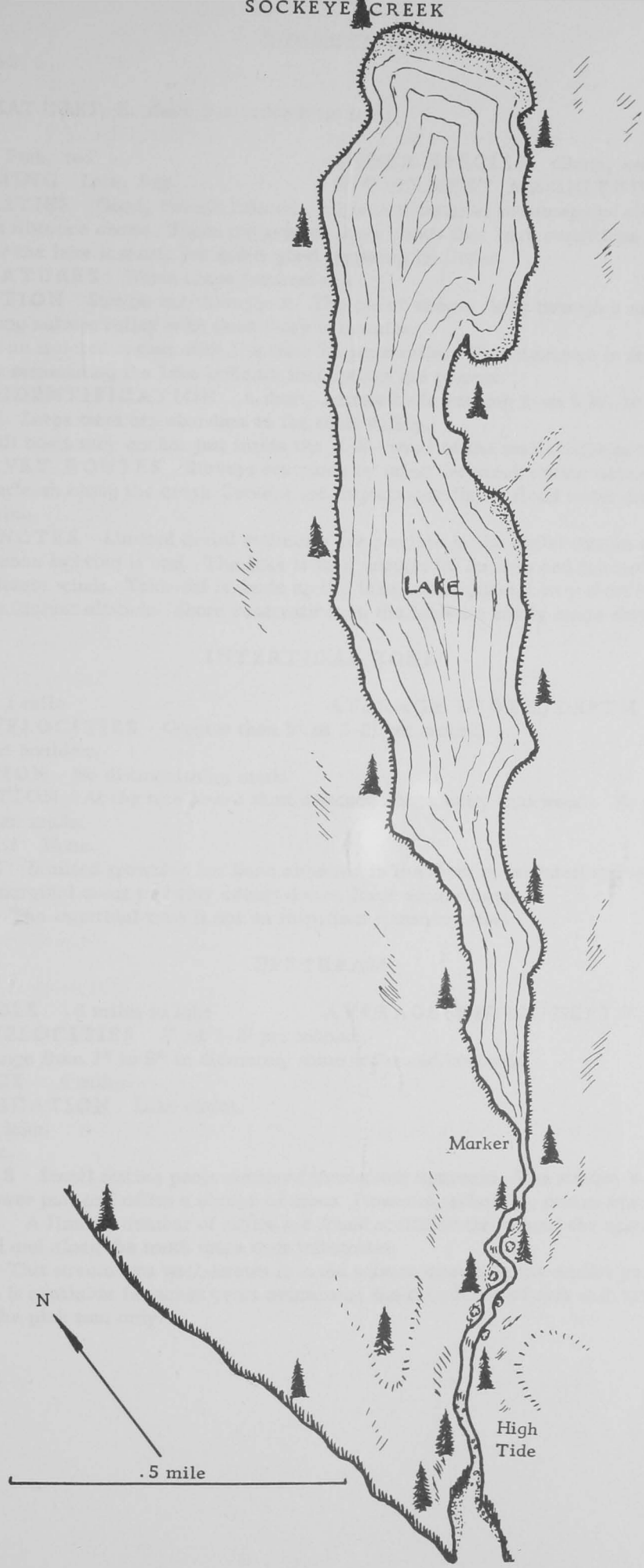
UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 26	G .5	ASI, FWS	5,000		500			Adequate. 2,000 off mouth
1941								
Oct 4	G .3	ASI						Poor. Few pink and chum
1942								
Sep 26	G .5	FWS	1,000		100			Fair
1948								
Sep 26	G .3	ASI						Dead fish on banks. Early spawning
1953								
Aug 25	G	FWS						Very little water


LAKE
Marker
High
Tide
N
.5 mile

KETCHIKAN, NAKAT INLET, E. shore 3.5 miles from head

MAJOR SPECIES Pink, red OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Late. Sep. ESCAPEMENT MAGNITUDE <10,000
SPAWNING FACILITIES Good, though limited. All lake tributaries are steep and allow spawning only in the deltas and a short distance above. There are several shore points that have conditions suitable for shore spawning. The stream below the lake is short, but offers good spawning facilities.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut throughout. The outlet stream flows through a narrow V valley. The lake is situated in a long narrow valley with short steep tributaries.
DRAINAGE This is an isolated system with less than 2 square miles. The discharge is dependent upon precipitation. The abrupt slopes surrounding the lake indicate that springs are present.
STREAM MOUTH IDENTIFICATION A short, narrow bight running from S.W. to N.E. with the stream mouth at its head. Large trees are abundant in the short valley.
ANCHORAGE Small boats may anchor just inside the N.W. point of the small bight in shallow water.
TRAILS AND SURVEY ROUTES Surveys are made by using the creek during normal water levels. There is considerable underbrush along the creek. Surveys are impractical during flood water due to poor visibility and difficulty of walking.
AERIAL SURVEY NOTES Limited aerial estimates are possible in the outlet stream during adequate light conditions. Afternoon lighting is best. The lake is long enough for landing and take-off for a light float plane with light to moderate winds. Take-off is made up the lake and requires a very short turning radius at the head in order to gain sufficient altitude. Shore observations in the lake are easily made during flight.

INTERTIDAL ZONE

LENGTH Less than .1 mile AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES Greater than 3° at 2-3' per second
BOTTOM Gravel and boulders.
LOW TIDE LOCATION No distinguishing mark.
HIGH TIDE LOCATION At the tree line a short distance above entry into woods. No distinguishing mark is known to have been made.
SCHOOLING AREAS None.
SPAWNING AREAS Limited spawning has been observed in the short upper intertidal zone. However, more extensive use of marginal areas probably occurs during large escapements.
GENERAL NOTES The intertidal zone is not an important spawning area.

UPSTREAM

LENGTH ACCESSIBLE .6 miles to lake AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Gravels range from 1" to 5" in diameter, some rocks and boulders.
MARKER DISTANCE .6 miles.
MARKER IDENTIFICATION Lake outlet.
BARRIERS None to lake.
TRIBUTARIES None.
SCHOOLING AREAS Small resting pools scattered throughout upstream. The stream breaks into several channels in the lower part and offers a choice of areas. However, schooling occurs upstream from the split area.
SPAWNING AREAS A limited number of riffles are found scattered throughout the upstream. Some lake spawning occurs at the head and along the south shore near tributaries.
GENERAL NOTES This stream was well-known as a red salmon stream in the earlier years of the salmon fishery. Little information is available in recent years concerning the abundance of reds and coho since most surveys are made during the pink runs only.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1930								
Sep 14		FWS						Excellent. 75,000 stream, 60,000 mouth
1940								
Sep 26	G .8	ASI,FWS	30,000		2,000			Excellent
1941								
Sep 10	G .5	FWS						50,000 off mouth. Stream very low
Oct 4	G .3	ASI	2,000		200			Fair. Many dead fish
1942								
Sep 13	G .5	ASI	4,000		500			Adequate. 10,000 fish off mouth
Sep 15	G .5	FWS	1,000		500			Fair. Few coho
1943								
Sep 13		ASI,FWS	25,000					Poor. Few chum, coho
1947								
Sep 23	G .3	FRI	500		100			Poor
1948								
Sep 4	G .5	FWS	100		100			Poor
Sep 26	G .5	ASI	15,000		500			Good
1953								
Aug 25	G	FWS	0	0	0	0	0	50 fish off mouth
1954								
Aug 7	A .5	FWS						No pink
Sep 27	A .5	FRI	2,000					
1955								
Sep 14	G .8	FWS	700		50		2 red	
Sep 25	A .5	FRI	>200					None at mouth or in bay
1956								
July 11		FWS					4,000 red	
July 24		FWS					6,000 red	
Sep 5		FWS			500			
Sep 15	A .5	FRI						None observed
Sep 16	G 1.0	FWS	2,400		50			
Sep 24	A .5	FRI	>200					None observed at mouth
1957								
Sep 8	A .5	FRI						Few pink. 3-400 red at head of lake

KETCHIKAN, NAKAT BAY, NAKAT INLET, on E. shore 4 miles from entrance to inlet

MAJOR SPECIES Pink
OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Limited. Rated by two different observers as poor and fair.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. Appears to lie in folded geologic structure common in this area.
DRAINAGE Precipitation fed. Hillside drainage of less than 1 square mile. No lakes or ponds.
STREAM MOUTH IDENTIFICATION Head of small cove on E. shore, cove points S.-S.E.
ANCHORAGE
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Lower stream and intertidal areas can be observed by air during normal or lower water levels. Water colors during rains.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 26	G .3	ASI,FWS	10,000					Excellent. 5,000 fish off mouth
1941								
Oct 4	G .3	ASI	1,000		100			Fair. Survey too late
1948								
Sep 4	G .5	FWS			4			
Sep 26	G .3	ASI,FWS						No live fish or carcasses
1953								
Aug 25	G	FWS						None observed

101-44 K 14B
N54°51.2 W130°44.5 Previous No. 9B

KETCHIKAN, NAKAT BAY, NAKAT INLET, W. shore 2.5 miles inside entrance to inlet, N. shore of cove

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited. Rated as fair, 9/26/40.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. Wooded valley bottom, muskeg and rocky valley sides.
DRAINAGE 2 square miles (estimated). Precipitation fed.
STREAM MOUTH IDENTIFICATION May have two mouths. Main mouth appears to be on N. side at head of cove.
ANCHORAGE
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 26	G .5	ASI,FWS	6,000		200			Excellent. 800 fish off mouth
1948								
Sep 26	G .3	ASI						No live fish or carcasses

KETCHIKAN, NAKAT BAY, small cove in S. tip of Round Hill Peninsula between Harry Bay and Nakat Inlet

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES 90% intertidal. Limited by the small size of the stream.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. The valley is a short slot between Round Hill and the smaller hill on the S. end of the peninsula. The intertidal zone is level between two ridges. The stream rises rapidly above the high tide mark.
DRAINAGE Precipitation fed. Less than 1 square mile.
STREAM MOUTH IDENTIFICATION Long, flat intertidal zone through grass flats.
ANCHORAGE Small vessel anchorage at entrance to cove (see U.S.C.&G.S. Chart No. 8141).
TRAILS AND SURVEY ROUTES Grass flats easily walked through intertidal zone. Survey above high tide mark limited to a short distance only.
AERIAL SURVEY NOTES Intertidal zone visibility by plane satisfactory for counts in intertidal zone, the major spawning area.

INTERTIDAL ZONE

LENGTH AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

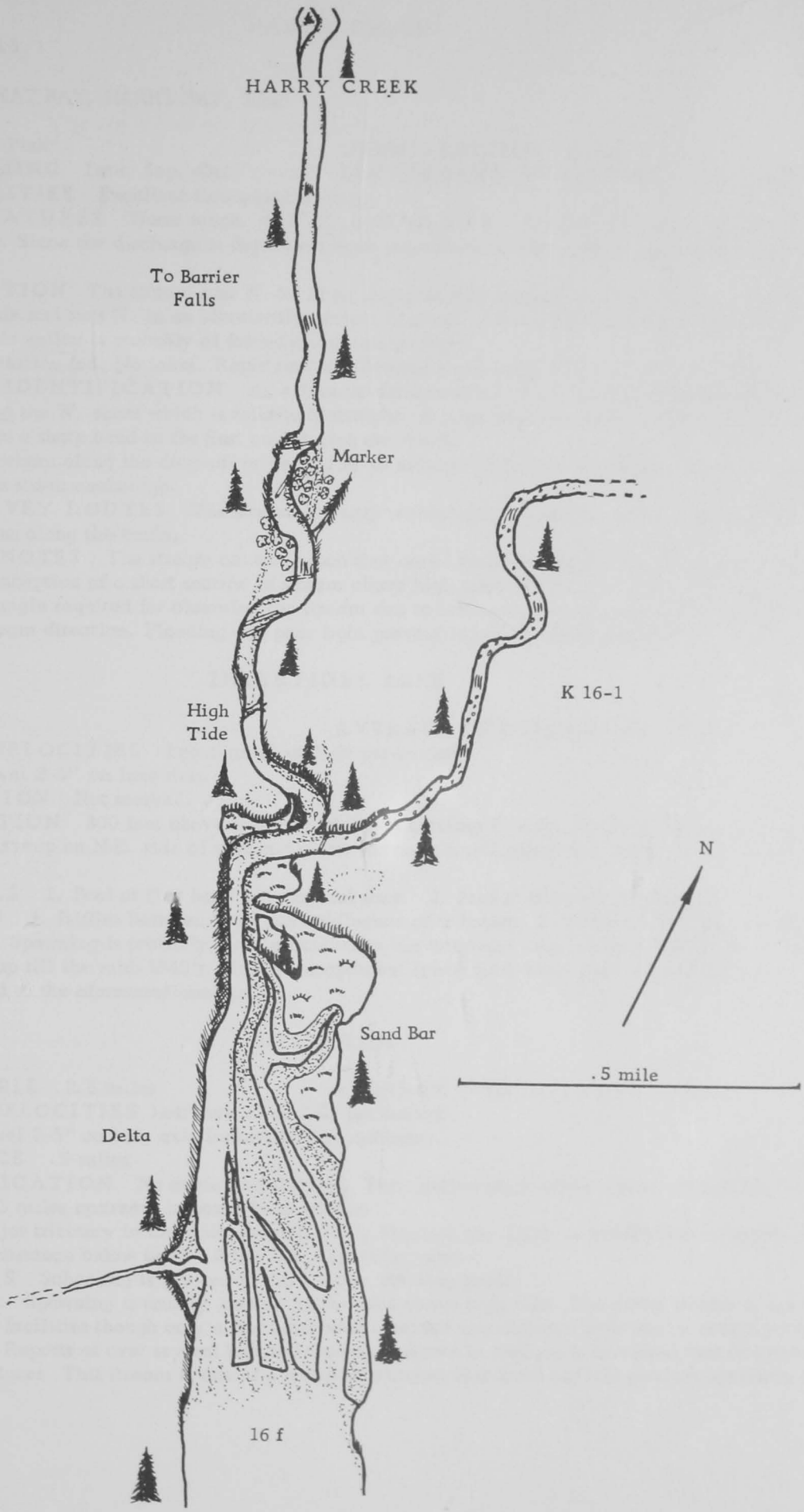
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS	
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective	Rating
1930									
Sep 14		FWS			1				
1941									
Oct 4	G .3	ASI						Poor. Few chum and pink	

HARRY CREEK


To Barrier Falls
Marker
K 16-1
High Tide
N
Sand Bar
.5 mile
Delta
16 f

KETCHIKAN, NAKAT BAY, HARRY BAY, Head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <10,000 at present
SPAWNING FACILITIES Excellent throughout stream.
STREAM TEMPERATURES Warm range. 48.5° F., 9/23/47; 53° F., 7/22/49; 50° F., 9/24/49; 51° F., 9/18/50; 45° F., 9/30/50. Since the discharge is dependent upon precipitation, the stream temperatures drop rapidly during rains.
VALLEY DESCRIPTION The stream runs N.-S. in an exceptionally straight channel. A stream in Very Inlet heads at the divide and runs N. in an identically straight channel. The valley lies between two ridges without much timber. The valley is probably of folded sedimentary origin.
DRAINAGE Precipitation fed. No lakes. Rapid run-off. Several small dendritic tributaries upstream.
STREAM MOUTH IDENTIFICATION An extensive delta reaches .8 miles from the mouth. The intertidal channels lie along the W. shore which is relatively straight. A large sand bar forms the E. shore at the mouth. The stream makes a sharp bend to the East on entering the woods.
ANCHORAGE Anywhere along the drop-off or beyond in 16 fathoms of water. The entire bay is exposed to S.E. winds and is not a storm anchorage.
TRAILS AND SURVEY ROUTES The stream is easily walked during normal and low water levels. Game trails are numerous along the banks.
AERIAL SURVEY NOTES The stream course is such that aerial observations can be made easily during good light. With the exception of a short section of stream above high tide, the stream course is straight and, despite the high angle required for observing the stream due to tall trees, the plane may fly without course correction for stream direction. Flooding and poor light prevent effective aerial observation.

INTERTIDAL ZONE

LENGTH .7 miles AVERAGE WIDTH/DEPTH 50'/24"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Shale gravel 2-5" on long axis.
LOW TIDE LOCATION Not marked.
HIGH TIDE LOCATION 300 feet above tributary (K 16-1) entering E. side. Has been blazed and a metal marker nailed to stump on N.E. side of stream. On low water, a small gravel bar is bare in the middle of the stream.
SCHOOLING AREAS 1. Pool at first bend in intertidal zone. 2. Pool at tributary confluence.
SPAWNING AREAS 1. Riffles between bend and confluence of tributary. 2. Riffles above pool at confluence.
GENERAL NOTES Spawning is probably more extensive in the intertidal zone during larger escapements, such as were reported up till the mid-1940's. Recent escapement levels have been very low and spawning distributions have been limited to the aforementioned points.

UPSTREAM

LENGTH ACCESSIBLE 2.3 miles AVERAGE WIDTH/DEPTH 30'/12"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second.
BOTTOM Shale gravel 2-5" on long axis. Increasing size upstream.
MARKER DISTANCE .5 miles
MARKER IDENTIFICATION No marker established. Termination point where stream straightens out.
BARRIERS Falls 2.3 miles upstream impassable to salmon.
TRIBUTARIES Major tributary in intertidal zone (K 16-1, Previous no. 11A). A small tributary enters W. side of stream a short distance below barrier falls. Not a spawning area.
SCHOOLING AREAS Schooling is limited in the stream. No deep pools.
SPAWNING AREAS Spawning is usually greatest in the area above high tide. The entire stream is considered to offer excellent facilities though only a few have been observed any distance upstream in recent years.
GENERAL NOTES Reports of over several hundred thousand salmon in past years indicated that this stream was once a major producer. This stream is one of a group in this area that have not had good escapements for over ten years.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1927								
Sep 20		FWS	24,000		1,000			
1928								
July 28		FWS						No fish seen
1929								
Sep 25	G 2.0	FWS	6,000		4,000		50 coho	
1930								
Sep 15		FWS						Excellent. 325,000 in stream, mouth
1940								
Sep 6	G 1.5	FWS	5,000					Fair. 5,000 off mouth
Sep 27	G 2.5	ASI,FWS	120,000		1,000			Excellent
1941								
Sep 10	G 2.0	FWS	10,000		250			Good. 100,000 off mouth. Water low
Oct 4	G 1.0	FWS	40,000		1,500			Good. Many dead. Water low
1942								
Sep 12	G 2.0	ASI	22,000		3,000			Fair
Sep 25	G 1.0	FWS	20,000		5,000			Good
1943								
Sep 12	G 1.5	ASI,FWS	25,000					Good
1945								
Sep 16	G .5	FWS	60,000					Excellent. 150,000 off mouth. Few chu
Oct 2	G 1.0	FWS	25,000					Excellent. Few chum, coho
1946								
Oct 2	G 1.0	FWS	25,000					Excellent. Few chum, coho
1947								
Aug 19	G 1.0	FRI	1					Poor
Sep 23	G .3	FRI	500					Poor
1948								
Aug 17	G 1.0	FRI						None in stream
Sep 5	G 1.0	FWS	200		400			Poor
Sep 22	G 1.0	FWS	400		400			Poor
Sep 28	G 1.0	FWS	10,000		0			Poor
1949								
July 22	G .5	FRI						No fish in stream
Aug 19	G 1.0	FWS						No fish in stream
Sep 6	A	FRI						Few pink
Sep 24	G .5	FRI	220	22				
Oct 1	G 1.0	FWS	300					
1950								
Sep 18	G .3	FRI	2,500		50		Sev. coho, 3 red	Sev. dead pink. Run beginning
Sep 30	G .3	FRI	760	19	2			Run past
1953								
Aug 25	G	FWS						No sign of fish
1954								
Aug 7	A 2.0	FWS						Water low. No fish
Sep 16	G 2.0	FRI	250					Several chum
Sep 27	A 2.0	FRI	1,000					None at mouth
1955								
Sep 15	A 2.0	FRI	>200					
Sep 25	A 2.0	FRI	>200					None in mouth or bay
1956								
July 11		FWS						Few pink
Aug 25		FWS	50		5			

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1956								
Sep 1		FWS	500					
Sep 5		FWS			500			
Sep 11	G 1.0	FWS	3,200		1			500 pink at mouth
Sep 16	A 2.0	FRI						Sev. 1,000 at mouth
Sep 24	A 2.0	FRI	2,000					Few at mouth. Some dead pink
Sep 30	A 2.0	FRI	>500					Few dead pink
1957								
July 16		FWS			200			
July 28		FWS			300			
Aug 21		FWS						Many at mouth
Sep 8	A 2.0	FRI						None observed

KETCHIKAN, BOAT HARBOR, 1.6 miles south of Tree Point

MAJOR SPECIES
OTHER SPECIES
ESCAPEMENT TIMING
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Extremely limited. No information available.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION There is no valley. The stream flows W. through low flat muskeg country lying W. of Peninsula Ridge.
DRAINAGE Entirely dependent upon precipitation. The area drained is estimated to be less than 1 square mile.
STREAM MOUTH IDENTIFICATION The stream mouth lies inside a small bight in Boat Harbor. Two small points of land mark the entrance into the bight. A rock lies off the N. point and another rock lies in mid-channel. The stream flows out of the woods over a sand beach and delta.
ANCHORAGE See Coast Pilot, Boat Harbor.
TRAILS AND SURVEY ROUTES No information.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS

TRIBUTARIES

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

KETCHIKAN, REVILLAGIGEDO CHANNEL, VERY INLET, northern extremity of inlet

MAJOR SPECIES Pink
OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE >20,000
SPAWNING FACILITIES Excellent.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. Runs N. along base of mountains 3 air miles before running easterly into the valley on the S. side of South Quadra mountain. Wooded and brushy. Muskeg areas throughout.
DRAINAGE Precipitation fed. Some small lakes and ponds scattered throughout the lower valley. Amber colored water.
STREAM MOUTH IDENTIFICATION Stream lies inside a lagoon .4 miles long which is entered through a relatively narrow outlet N. of the large basin used for small boat anchorage.
ANCHORAGE Caution advised for entry into Very Inlet and approach to the basin in the N.E. head. Complete entry description in Coast Pilot. Anchorage is clear.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES During normal water levels the visibility is usually satisfactory for enumeration. The water has some color, but is sufficiently clear for identification of species. There is a falls over 2 miles upstream that prevents salmon from ascending further. The stream course is relatively straight and is easily followed by plane. Upper stream may be reached easily one mile S.E. of Kah Sheets Lake at entrance to Boca de Quadra.

INTERTIDAL ZONE

LENGTH >.5 miles
AVERAGE WIDTH/DEPTH 50-70'/12-24"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand, some gravel, rocks and boulders.
LOW TIDE LOCATION Reported near the lower lagoon near the outlet.
HIGH TIDE LOCATION At the head of the lagoon where the stream emerges from the woods. Grassflats extend below the high tide mark.
SCHOOLING AREAS Large schools have been observed schooled in the lagoon.
SPAWNING AREAS Upper intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >2 miles
AVERAGE WIDTH/DEPTH 60'/18"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Sand, gravel, some rock and scattered boulders.
MARKER DISTANCE Over 2 miles.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls reported to block upstream migration of pink and chum. No report on passability for coho.
TRIBUTARIES Small precipitation fed stream enters from E. side 1 mile upstream. Small pond 2.5 miles upstream in muskeg area.
SCHOOLING AREAS Numerous pools throughout stream.
SPAWNING AREAS Spawning riffles throughout accessible stream.
GENERAL NOTES Very Creek is the major producing salmon stream in Very Inlet. Due to the difficulty of entering Very Inlet, little past information on salmon escapements is available.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1927								
Sep 21		FWS	50,000					
1936								
Sep 13		FWS	9,000					5,000 off mouth
1940								
Sep 11	G 1.5	FWS	14,000		1,000			Fair. 8,000 off mouth
1948								
Sep 24	G 1.5	ASI	20,000					Good
1950								
Aug 10	A	ASI,FRI,FWS						No salmon observed in stream
1954								
Sep 16	A 1.0	FRI			250			No pink. Poor visibility
1955								
Aug 25		FWS	600					
1956								
Sep 10	G 2.0	FWS	19,000					
Sep 24	A 1.0	FRI	15,000					Few dead pink
1957								
Sep 10	G 2.0	FWS	1,900					Poor

KETCHIKAN, REVILLAGIGEDO CHANNEL, VERY INLET, N.E. shore at head of inlet (see Coast Pilot)

MAJOR SPECIES Pink
OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE 5,000
SPAWNING FACILITIES Rated as fair.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut valley originating in mountains to 2,000'. Wooded slopes, brushy, muskeg areas. Stream bed below outlet of lake follows angular course to head of inlet, with long straight sections.
DRAINAGE 10-12 square miles (estimated). Precipitation fed through two lakes 2 miles upstream. The lower lake is .7 miles long and the upper "L" shaped lake 1.5 miles long.
STREAM MOUTH IDENTIFICATION
ANCHORAGE Off the mouth in a bight just E. of the entrance to the main stream in the inlet (K 18) in 10 fathoms (Chart 8075).
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Aerial visibility restricted by trees, windfalls.

INTERTIDAL ZONE

LENGTH Less than .05 miles
AVERAGE WIDTH/DEPTH 40'/12"
GRADIENT AND VELOCITIES Over 3° at 2-3' per second
BOTTOM Sand, some gravel, rocks, scattered boulders.
HIGH TIDE LOCATION Above grassflats at edge of woods.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.5 miles
AVERAGE WIDTH/DEPTH 40'/12"
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in .5 miles.
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1928								
July 2		FWS						No fish in stream
July 31		FWS	1,000					
Aug 25		FWS	9,000		1,000			
1940								
Sep 11	G 1.0	FWS	2,000		50			Fair. 4,000 off mouth
1941								
Oct 9		FWS	5,000		5,000			Fair
1946								
Oct 2	A	FWS						Very poor
1948								
Sep 24	G .5	ASI						Poor. Few chum
1953								
Aug 28	G	FWS						No salmon in stream

KETCHIKAN, REVILLAGIGEDO CHANNEL, VERY INLET, S.W. head of branch extending S.E. from head of inlet

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Good, though limited to intertidal and short stream section accessible below impassable falls.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut in folded sedimentary structure, runs S.-S.E., lake basin 1.3 miles upstream.
DRAINAGE 10-12 square miles (estimated). Precipitation fed through 1.7 miles long lake, 1.3 miles upstream. Drains rocky ridges S. of Very Inlet. Small lake just W. of lake outlet.
STREAM MOUTH IDENTIFICATION The inside S.E. branch of Very Inlet can only be entered safely at high-water slack through a narrow entrance that bares at low water. Ebb current runs 1 to 2 hours after low tide. The stream mouth has numerous boulders. The stream is on the E. side of a projection extending from the center of the head.
ANCHORAGE Preferred anchorage is at the head of the inlet (see Coast Pilot) and survey the stream by skiff. Entry into the S.E. branch can be made as described above with anchorage available at the head of the branch (see Chart 8075).
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Adequate visibility for enumeration of salmon during normal water levels. Flooding waters are colored and restrict visibility. The falls less than a mile above high tide prevent passage of salmon and mark survey termination. Head of lake is pass to Nakat Inlet.

INTERTIDAL ZONE

LENGTH .4 miles AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM Sand, gravel, scattered boulders.
LOW TIDE LOCATION Just off the wooded point E. of the stream.
HIGH TIDE LOCATION Head of flats at entry into woods.
SCHOOLING AREAS

SPAWNING AREAS Upper intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Less than .1 miles AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM Gravel, rock and boulders.
MARKER DISTANCE <.1 miles.
MARKER IDENTIFICATION Falls.
BARRIERS Falls <.1 miles upstream impassable to salmon.
TRIBUTARIES Small (20' wide, 18" deep) intertidal tributary accessible to salmon for unknown distance.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1928								
Sep 3		FWS	12,000					
1948								
Sep 24	G .5	ASI	6,000		300			Good. 1,000 fish at mouth
1953								
Aug 28	G	FWS						No salmon in stream
1956								
Sep 24	G .1	FRI	>2,000					

101-41 K 18C
N54°57.3 W130°53 Previous No. 13C

KETCHIKAN, REVILLAGIGEDO CHANNEL, VERY INLET, N.E. shore of first S.E. branch of inlet 1.5 miles inside entrance

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Good, though limited to lower stream and intertidal zone.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION
DRAINAGE
STREAM MOUTH IDENTIFICATION
ANCHORAGE See Coast Pilot and chart 8075 for entry into the first S.E. arm of Very Inlet. Survey parties prefer entering this branch by skiff and outboard. There is considerable foul ground in the branch.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Adequate visibility from the air for enumeration of salmon. The lower stream turns frequently and vertical observation of the stream in turns is necessary.

INTERTIDAL ZONE

LENGTH AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1948								
Sep 25	G .3	ASI						Poor. Few at mouth
1953								
Aug 28	G	FWS						No salmon in stream
1957								
Sep 10	G 1.0	FWS	1,000					Poor

101-41
N54°56.2 W130°54.3

K 18D
Previous No. 13D

KETCHIKAN, REVILLAGIGEDO CHANNEL, VERY INLET

MAJOR SPECIES
ESCAPEMENT TIMING
SPAWNING FACILITIES
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

OTHER SPECIES
ESCAPEMENT MAGNITUDE

INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

AVERAGE WIDTH/DEPTH

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

AVERAGE WIDTH/DEPTH

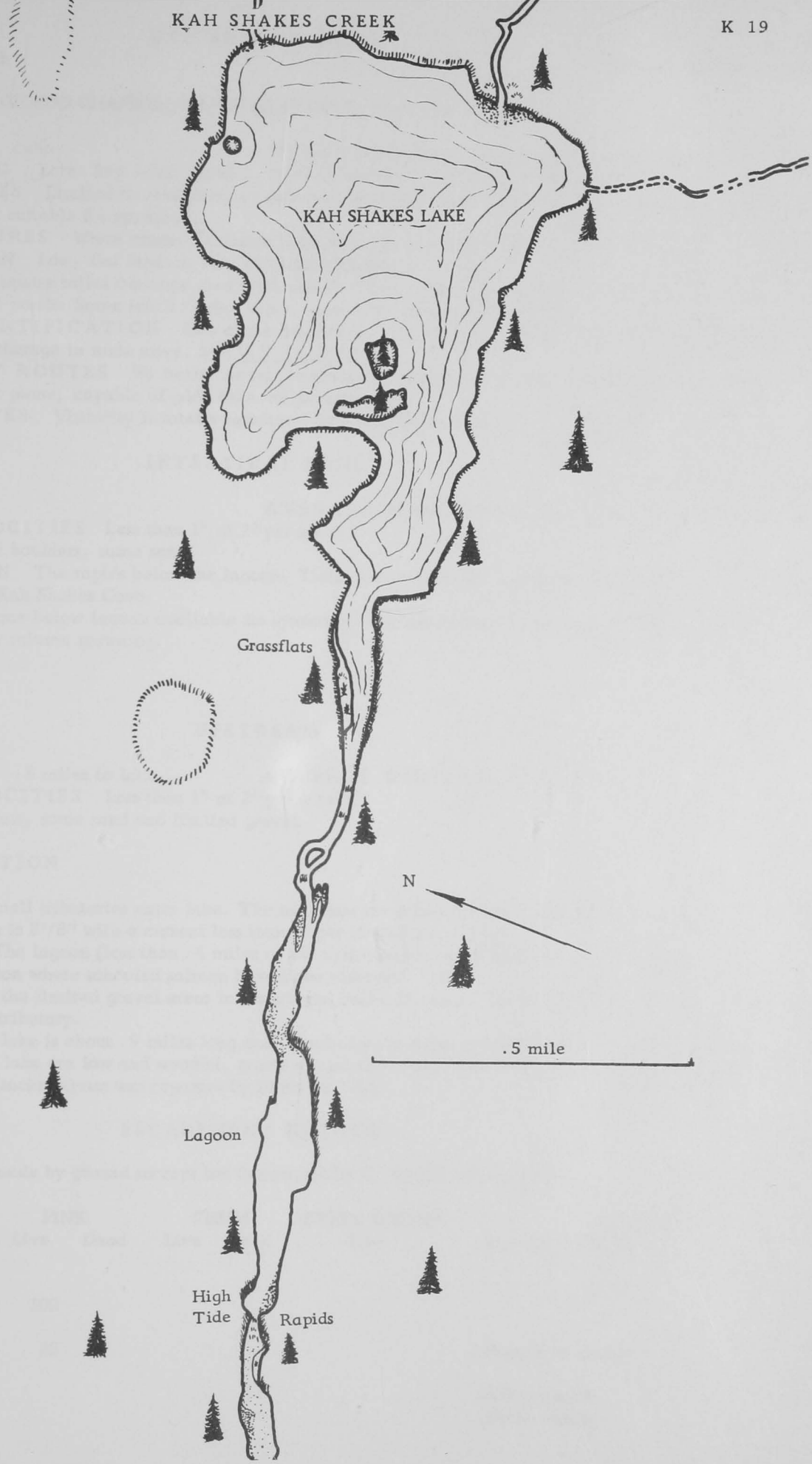
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1927								
Sep 20		FWS	3,800		200			
1941								
Oct 8	G 1.0	FWS	5,000					Poor
1953								
Aug 28	G	FWS						No salmon in stream
1956								
Sep 10	G .7	FWS	600		20			450 pink at mouth


KAH SHAKES CREEK
KAH SHAKES LAKE
Grassflats
N
.5 mile
Lagoon
High
Tide
Rapids

KETCHIKAN, REVILLAGIGEDO CHANNEL, KAH SHAKES COVE, N.E. arm of cove

MAJOR SPECIES Red, coho OTHER SPECIES Pink, chum, trout
ESCAPEMENT TIMING Late. Sep.-Oct. (pinks) ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited to several small streams above Kah Shakes lake. Intertidal and .2 miles of stream below lake not suitable for spawning.
STREAM TEMPERATURES Warm range. Drainage is in lowlands with small ponds and muskeg.
VALLEY DESCRIPTION Low, flat lands at base of Quadra Mountain.
DRAINAGE Less than 3 square miles drainage area (estimated). Precipitation fed through three small tributaries, one with several small ponds. Some small timber areas, most with brushy muskeg flats.
STREAM MOUTH IDENTIFICATION Lies at the head of a small inlet running E.-N.E. from Kah Shakes Cove.
ANCHORAGE Good anchorage in main cove. See U.S. Coast Pilot.
TRAILS AND SURVEY ROUTES No trails. Access to stream by skiff through intertidal lagoon. Lake tributaries are accessible by light plane, capable of good take-off performance.
AERIAL SURVEY NOTES Visibility is totally restricted for aerial enumeration.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 15'/9" (stream section)
GRADIENT AND VELOCITIES Less than 1° at 1' per second
BOTTOM Bedrock, small boulders, some sand.
HIGH TIDE LOCATION The rapids below the lagoon. Tides greater than 17' are reported to flow into the lagoon.
SCHOOLING AREAS Kah Shakes Cove.
SPAWNING AREAS None below lagoon available for spawning. One small area at rapids below lagoon has been observed to have a few salmon spawning.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .8 miles to lake AVERAGE WIDTH/DEPTH 10'/<12"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Bedrock, boulders, some sand and limited gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None.
TRIBUTARIES Three small tributaries enter lake. The main stream enters the S.E. head of the lake through grass flats. This stream is 8'/8" with a current less than 2' per second over gravel.
SCHOOLING AREAS The lagoon (less than .4 miles of the upstream) is a schooling area. There are a number of pools above the lagoon where schooled salmon have been observed.
SPAWNING AREAS In the limited gravel areas in the stream below the lake. The major spawning area above the lake is in the S.E. tributary.
GENERAL NOTES The lake is about .9 miles long and .6 miles wide at an elevation of 10' above mean high tide. The shores of the lake are low and wooded, grassy around the edges, with beaches of rock, gravel, and sand. The red salmon (sockeye) run was reported by Moser in 1901.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1927								
Sep 28		FWS	100					
1947								
Oct 1	G .1	FRI,FWS	25					Poor. 5 at mouth
1955								
July 25	G	FWS						500 at mouth
Aug 24	G	FWS						300 at mouth

KETCHIKAN, REVILLAGIGEDO CHANNEL, KAH SHAKES COVE, S.E. head of cove

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep. -Oct.
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Very limited. Rated as poor.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION There is no valley. The stream flows across the low flatlands W. of the mountains.
DRAINAGE Precipitation fed. Less than 2 square miles. A lake about .3 square miles in area lies in line with the stream course 1 mile from high tide, but does not drain into this stream. Two very small tributaries enter from the E. side and drain several small ponds E. of the stream.
STREAM MOUTH IDENTIFICATION
ANCHORAGE See U.S.C.&G.S. Chart No. 8075.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air, visibility restricted.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOACTION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

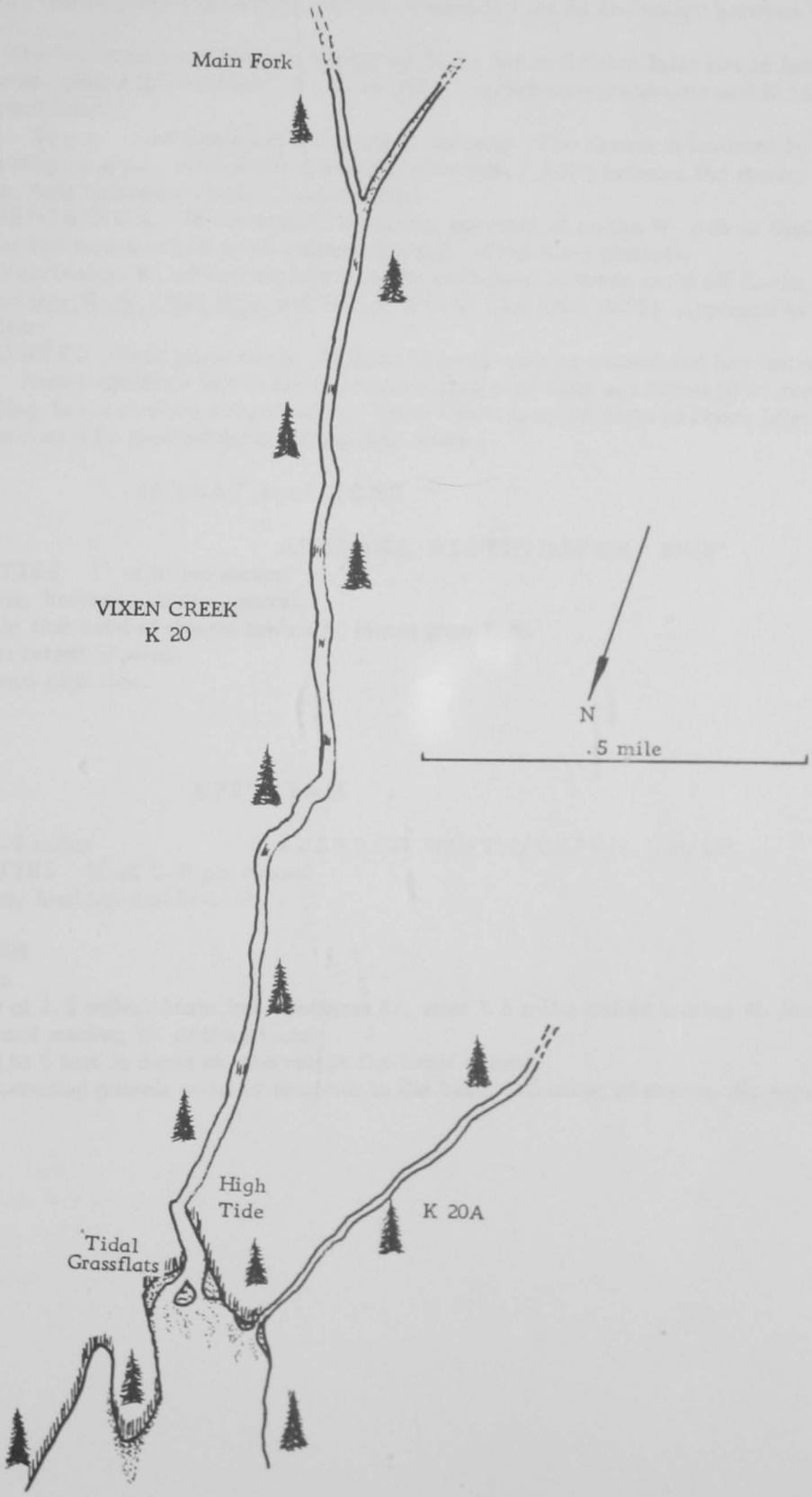
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1927								
Sep 28		FWS	50					
1953								
Aug 27	G .3	FWS						No salmon present
1956								
Sep 9	G .8	FWS	140					


Main Fork
VIXEN CREEK
K 20
N
.5 mile
High
Tide
K 20A
Tidal
Grassflats

KETCHIKAN, BOCA DE QUADRA, VIXEN BAY, head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >5,000
SPAWNING FACILITIES Limited spawning areas rated as excellent. The general stream facilities are rated as fair.
STREAM TEMPERATURES Warm range (estimated). Stream headwaters are in low valley between Vixen Bay and Nakat Inlet.
VALLEY DESCRIPTION The low stream-cut valley connecting Vixen Bay and Nakat Inlet lies in folded geologic structure common in this area, generally running N.-S. A low ridge lies between the stream and K 13 (Previous No. 8 A) at the head of Nakat Inlet.
DRAINAGE Precipitation fed. Several small ponds are in the upper drainage. The stream is bordered by muskeg and brush areas. A small valley on the E. side of the mountain (elevation 2,124') between the stream and Very Inlet drains into the stream. Area estimated about 3 square miles.
STREAM MOUTH IDENTIFICATION At the head of the Inlet, approached on the W. side of Gosling Island. There are tidal grass flats at the mouth with a small channel lying E. of the main channel.
ANCHORAGE Shallow water anchorage W. of Gosling Island. Good anchorage between rocks off Raven Island and the N. end of Gosling Island (see U. S. Coast Pilot and U. S. C. & G. S. Chart No. 8075). Approach head of bay along W. shore which is clear.
TRAILS AND SURVEY ROUTES Only game trails. Walking in creek easy on normal and low water stages.
AERIAL SURVEY NOTES Aerial visibility fair in lower stream during good light conditions (thin overcast). Visibility zero during flooding due to muskeg colored water. Vixen Creek is aerial route to Nakat Inlet during regular surveys. Entire area should be avoided during strong S.E. winds.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 30'/6"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Small rock, boulders, bedrock, limited gravel.
HIGH TIDE LOCATION At first bend of stream toward E. above grass flats.
SCHOOLING AREAS Upper intertidal area.
SPAWNING AREAS Area near high tide.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >1.5 miles AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Limited gravel areas, boulders and bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None in 1.5 miles
TRIBUTARIES Stream forks at 1.5 miles. Main fork continues S., over 1.5 miles before turning W. Smaller fork drains mountain slope and muskeg W. of the stream.
SCHOOLING AREAS Pools to 4 feet in depth at intervals in the lower stream.
SPAWNING AREAS Good spawning gravels occur at intervals in the lower 1.5 miles of stream. No reports available above forks.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1928								
Oct 14		FWS	20					
1939								
Sep 15	G 1.5	FWS	6,000					Fair. Few 100 at mouth
1940								
Sep 7	G 1.5	FWS	400					Poor
Sep 29	G 1.5	FWS	35,000					Excellent
1941								
Oct 4	G 1.0	ASI,FWS	10,000					Fair
1942								
Oct 6	G .3	FWS	1,000		200			Fair
1947								
Sep 17	G .8	FWS	300		20			Poor
1954								
Sep 27	A 3.0	FRI	>200					Some at mouth
1956								
Sep 8	G 1.0	FWS	1,140		6			

101-42 K 20A
N55°01.8 W130°47 Previous No. 17A

KETCHIKAN, BOCA DE QUADRA, VIXEN BAY, west shore at head

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Very limited. Rated as poor.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream-cut across folded geologic structure.
DRAINAGE Small lake in headwaters on mountain to the west. Less than 2 square miles in area.
STREAM MOUTH IDENTIFICATION Mouth is less than .1 miles W. of K 20 (Previous No. 17). Short intertidal zone and stream rises rapidly from high tide mark.
ANCHORAGE See U.S. Coast Pilot, U.S.C.&G.S. Chart No. 8075.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.
GENERAL NOTES This is not a salmon stream of any importance.

INTERTIDAL ZONE

LENGTH AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

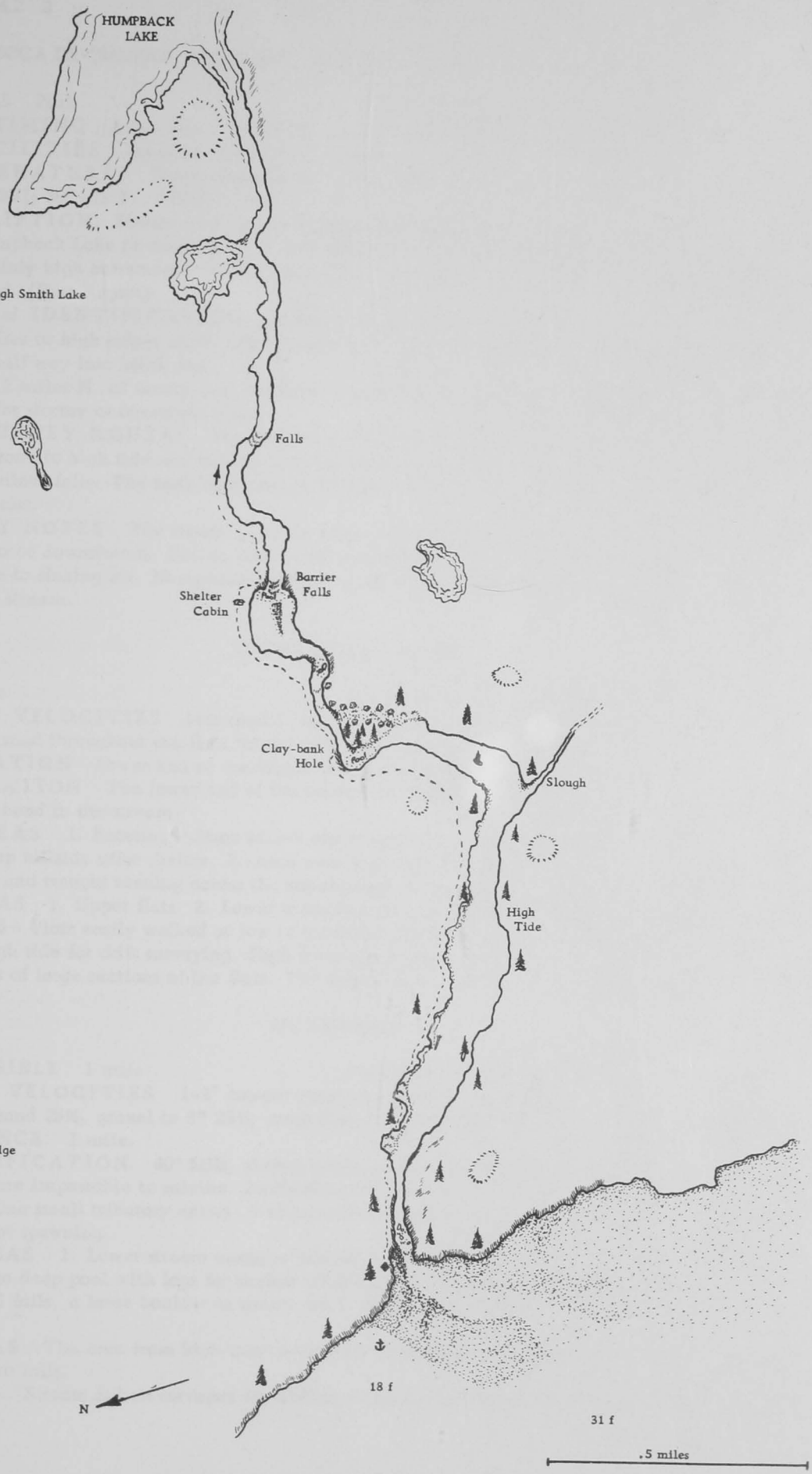
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1942								
Oct 6	G .5	FWS	500		100			Fair


HUMPBACK LAKE
Pass to Hugh Smith Lake
Falls
Barrier Falls
Shelter Cabin
Clay-bank Hole
Slough
High Tide
High Ridge
18 f
31 f
N
.5 miles

KETCHIKAN, BOCA DE QUADRA, MINK ARM, East shore .7 miles from head

MAJOR SPECIES Pink **OTHER SPECIES** Chum, coho, red, trout
ESCAPEMENT TIMING Aug.-Sep., peak Sep. **ESCAPEMENT MAGNITUDE** 50-200,000
SPAWNING FACILITIES Excellent throughout stream.
STREAM TEMPERATURES Warm range in Aug.-Sep. (Observed range 51°-64°F., 1949; 54°-59°F., 1950; 52°-62°F., 1951; 50°-63°F., 1953).
VALLEY DESCRIPTION Stream cut glacial valley. High mountains. Granite and quartz.
DRAINAGE Humpback Lake (4 miles long, 1,000 acres) at 240' elevation. Drainage area about 20 square miles. Mountains mainly high barren rock with some small cirque lakes and early snow fields. Discharge is 285 cubic feet per second. (Dort Report)
STREAM MOUTH IDENTIFICATION Mouth is a narrow opening in shore line. Steep hill side on S. of opening and rises to high ridges on N. trail marker on N. side of mouth. Stream flows through a rapids. Delta extends over half way into Mink Arm.
ANCHORAGE .2 miles N. of mouth next to shore. Anchorage is at drop-off and other anchorages in Mink Arm are preferred for stormy or overnight stays.
TRAILS AND SURVEY ROUTES Forest Service trail starts at trail marker at mouth on N. Side. It follows the intertidal zone to high tide and cuts through the woods to the clay bank hole and through to the shelter cabin beside the terminal falls. The trail continues to Humpback Lake. The surveys on foot can be made downstream with better results.
AERIAL SURVEY NOTES The stream is easily observed from the air. Flights in light planes may be made either upstream or downstream. During winds, the windward side of the stream above the high tide point should be avoided due to sinking air. Humpback Lake head has a pass on the S. side into the head of Fillmore Inlet (K 8) lake and stream.

INTERTIDAL ZONE

LENGTH .8 miles **AVERAGE WIDTH/DEPTH** 350'/18"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Coarse sand throughout the flats mixed with small gravel to 3" diameter.
LOW TIDE LOCATION Lower end of the rapids at the mouth of the stream.
HIGH TIDE LOCATION The lower end of the constricted stream above the broad intertidal flats, .25 miles below the first bend in the stream.
SCHOOLING AREAS 1. Entering salmon school above rapids at mouth in narrows below flats. Deeper water and shade from steep hillside offer shelter. 2. Area near high tide. 3. Entire flats during peak of run. The intertidal zone has ridges and troughs running across the stream that the salmon lie in during schooling and spawning.
SPAWNING AREAS 1. Upper flats. 2. Lower schooling area (limited). 3. Entire flats during large runs.
GENERAL NOTES Flats easily walked at low to moderate water levels and mid to low tide. Skiffs may be taken upstream on high tide for drift surveying. High trees along the shore or on a small island on S. bank may be used for observations of large sections of the flats. The ridges and depressions make walking difficult during high water.

UPSTREAM

LENGTH ACCESSIBLE 1 mile **AVERAGE WIDTH/DEPTH** 200'/24"
GRADIENT AND VELOCITIES 1-2° toward upper stream at 2' per second
BOTTOM Coarse sand 25%, gravel to 3" 25%, more than 3" gravel 50%. Clean, some algae in upper areas.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION 40' falls, shelter cabin on N. bank, large gravel and boulders below falls.
BARRIERS Falls are impassable to salmon. Inclination over 45° over granite.
TRIBUTARIES One small tributary enters .3 miles above high tide on S. bank as a slough. Little current and not important for spawning.
SCHOOLING AREAS 1. Lower stream contains salmon at all stages of run. 2. Clay bank hole .5 miles above high tide is large deep pool with logs for shelter. Difficult observations. 3. Hole .7 miles above high tide below flats at terminal falls, a large boulder in stream on S. bank offers shelter. 4. Some salmon lie in hole at base of falls.
SPAWNING AREAS The area from high tide to the clay bank hole is the primary area. Early spawning is above clay bank hole to falls.
GENERAL NOTES Stream is best surveyed by drifting in skiff. Stream can be ascended by skiff and propeller protected motor.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1928								
Sep 7		FWS	80,000		20,000			
1929								
Sep 24	G 1.7	FWS	425,000		20			
1937								
Aug 12	G 2.0	FWS						500 fish off mouth. None in stream
Sep 27		FWS	300,000					Large number of dead fish
1938								
Sep 9		FWS	10,000		500			20,000 fish off mouth
1939								
Sep 15		FWS						Poor. <100,000 in bay and creek
1940								
Sep 12		FWS	35,000		4,000			Poor. 8,000 off mouth
Sep 28	G 2.0	ASI, FWS	200,000					Fair. Few chum
1941								
Sep 6	G .2	FWS						Poor. 100,000 fish off mouth
Sep 10	G 1.0	FWS	100,000					Fair. 100,000 fish off mouth
Oct 3	G 2.0	FWS	150,000					Good. 150,000 may have spawned.
1942								
Aug 14	G 1.0	FWS						No fish in stream
Sep 13	G 1.0	FWS	200,000					Good. 10,000 off mouth
Sep 14	G 2.0	ASI	200,000					Fair. Few chum. 20,000 fish off mouth
Sep 22		ASI	250,000					Good
1943								
Sep 12		FWS	275,000		50			25,000 fish off mouth
Sep 19	G 1.0	FWS	75,000		10,000			Fair. 100,000 fish off mouth
1945								
Sep 14	G 1.2	FWS	250,000					Good. Few chum. 20,000 fish off mouth
1946								
Oct 2	A 2.0	ASI						Good escapement. No estimate
1947								
Sep 21	G 1.2	FRI	200,000		2,000			Excellent. Several 1,000 off mouth
Oct 1	G 1.2	FRI, FWS	200,000		4,000		200 coho	Excellent
1948								
Aug 8	G .1	ASI						No fish seen
Aug 19	G 1.2	ASI	35,000				200 red	2,000 fish off mouth
Aug 28	G 1.0	FWS	50,000					Poor
Sep 10	G 2.5	FWS	15,000	100	100		20 red	
Sep 27	G 1.0	FWS	150,000					Good
1949								
July 24	G 1.2	FWS	300					
Aug 14	G 1.2	FRI	17,000	2	7		1 coho, 200 red	
Aug 30	G 1.2	FRI	27,400	180				Some chum and coho
Sep 23	G 1.2	FRI	60,000	8,000	1,000			
Oct 2	G 1.2	FWS	180,000					
1950								
Aug 6	G .7	FRI	10,350		0		4 red	
Aug 10	A 1.0	ASI, FRI, FWS						Excellent
Aug 15	G 1.0	FRI	16,000	0	100	0	6 red, 0 dead red	
Aug 27	G 1.0	FRI	24,000		250	0	6 red, 0 dead red	Several dead pink
Sep 8	G 1.0	FRI	32,000	150	3,000	0		10,000 at mouth
Sep 19	G 1.0	FRI	50,000	6,000	1,000		coho, red present	20,000 at mouth
Sep 30	G 1.0	FRI	13,400	770	112	13	8 coho	

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1951								
Aug 6	G 1.0	FRI	10,350	0	0	0		Very few off mouth
Aug 16	G .8	FRI	8,700	0	0	0	4 red	Limited visibility
Aug 29	G .8	FRI	11,900		0	0	5 red, few coho	Few dead pink
Sep 12	G .8	FRI	22,400	1,400	150	0	Some coho, red	5-10,000 off mouth
Sep 26	G .8	FRI	3,100	2,900	400	350	Some coho	10-12,000 in rocky chuck at mouth
1952								
Aug 20	G 1.0	FRI	14,800	0	0	0		Few off mouth. Water discolored
Sep 1	G 1.0	FRI	9,450	350	45		8 coho	Sev. dead chum. Some outside
Sep 13	G 1.0	FRI	11,800	800	610		150 coho, 1 red	Few dead chum. Some fresh fish
Sep 13	G Weir	FWS	3,299					Final total. Weir installed July 12
Oct 7	G 1.0	FRI	100	500	50		1,000 coho	Few dead chum
1953								
July 1	G 1.0	FWS						No salmon present
July 17	A .0	FWS						Jumpers present at mouth
July 18	A .0	FWS						No jumpers seen at mouth, few present
July 28	A .5	FWS						No fish seen. Streamguard saw few
Aug 7	G .0	FWS						Pink present at mouth
Aug 16	G 1.0	FRI	16,850	10			1 red	Few chum. Might be promising
Aug 19	A .0	FWS						Poor. Few on wide riffle
Aug 21		FWS	14,000					Poor
Aug 25	A 1.0	FWS	18,000					Poor. Poor visibility
Aug 29	G 1.0	FRI	24,500	0	0	0		Stream very high, visibility 10%
Sep 5		FWS						Few chum, coho, and pink
Sep 10		FWS						Coho and pink going up into creek
Sep 13	G 1.0	FRI	13,750	1,850	190	20	290 coho, 150 red	Visibility 40%. A few off mouth
Sep 25	G .7	FRI	5,500	800	1,700	150	350 coho	Peak, very high water
Sep 25	G	FWS	2,600		2		2 red	Poor. Some coho. Couple 100 dead
Oct 2	A .8	FRI	4,000	1,000				Some chum
1954								
Aug 19	G .7	ADF	2,900		0			3,000 at creek mouth
Aug 23	A 1.0	FRI	3,500					Few chum. Few at mouth
Aug 25	G .0	FWS	27,000					Fair. Few pink lower stream
Sep 16	A 1.0	FRI	18,000		1,000			None observed in bay
Sep 27	A 1.0	FRI	25,000		1,000			Few at mouth
1955								
July 31	A 1.0	FRI	200					>1,000 at mouth
Aug 12	G 1.0	ADF	10,300					2,000 at mouth
Aug 12	A 1.0	FRI	13,000					
Aug 23	A 1.0	FRI	30,000					12,000 at mouth. In bay
Sep 6	A 1.0	FRI	60,000					12,000 at mouth
Sep 7	A 1.0	FRI	60,000					12,000 at mouth
Sep 8	G 1.5	FWS	>38,000					
Sep 15	A 1.0	FRI	100,000					10,000 at mouth
Sep 25	A 1.0	FRI	150,000					All spawning equal to 1949
1956								
July 23	A 1.0	FRI						None observed
July 31	A 1.0	FRI						None observed
Aug 13	A 1.0	FRI	3,000					Some at mouth
Aug 16		FWS	35,000					
Aug 19		FWS	5,800					
Aug 21		FWS	9,000					
Aug 24	A 1.0	FRI	25,000					Most fresh and just entered
Aug 26	G 1.0	FWS	6,000					
Aug 28		FWS	11,000					
Sep 3		FWS	15,100		950		950 coho	

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1956								
Sep 6	A 1.0	FRI	>20,000					None observed at mouth
Sep 6		FWS	28,000		2,000		100 coho	
Sep 16	A 1.0	FRI	25,000					30,000 at mouth
Sep 24	A 1.0	FRI	50,000					None at mouth, many in intertidal
1957								
July 20		FWS	500		1,000			
July 21		FWS	5,000		1,000			
July 22		FWS	1,200					
July 26		FWS						3-4,000 pink at mouth
July 27		FWS						1,000 pink at mouth
July 28	A 1.0	FRI	4,000					Lower stream, pools, upper flats fresh
July 28		FWS	1,000					
July 30		FWS	1,500					
July 31		FWS	10,000					
Aug 1		FWS						8,000 pink off mouth
Aug 3		FWS	20,000					
Aug 9		FWS	30,000					
Aug 10	A 1.0	FRI	25,000					Jumpers observed. All fresh
Aug 11	A 1.0	FRI	17,000					
Aug 13		FRI	33,000					400 pink off mouth
Aug 14		FWS	40,000					1,000 new fish
Aug 19	A 1.0	FRI	50,000					Few chum. Fresh, schooled, in pools
Aug 25		FWS	1,000					Few fish in stream
Sep 1	A 1.0	FRI	65,000					Fresh moving, schooled in flats, holes
Sep 6	G	FRI	65,000		100			
Sep 6		FWS	60,000		100			5,000 pink at mouth
Sep 8	A 1.0	FRI	80,000	>100				Many fresh, scattered throughout
Sep 16	G 1.0	FRI	65,000	2,500				
Sep 16	A 1.0	FRI	70,000					Some dead pink
Sep 16		FWS	80,000		100			Fair
Sep 20	A 1.0	FRI	45,000	1,000				

KETCHIKAN, BOCA DE QUADRA, MINK ARM, Head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Good, though limited by low stream levels during dry weather. The lower stream has a swift, boulder area, though gravel is available. Above, the gradient is less and extensive gravel areas are available.
STREAM TEMPERATURES Warm Range (estimated).
VALLEY DESCRIPTION Stream cut. Wooded valley slopes, muskeg areas in valley bottom.
DRAINAGE 7-9 square miles (estimated). Precipitation fed. Muskeg and several small ponds.
STREAM MOUTH IDENTIFICATION Mouth is on E. side of grass flat. High ridge along valley on E.
ANCHORAGE Approach head of Mink Arm along W. shore past delta of Humpback Creek. Anchor off drop-off of Mink Creek mid-way between small point on E. shore and a small stream on the W. shore.
TRAILS AND SURVEY ROUTES No trails.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 15-25'/12"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Gravel, rock, some small boulders.
HIGH TIDE LOCATION Head of grass flats at tree line.
SCHOOLING AREAS Near high tide mark.
SPAWNING AREAS Upper intertidal zone, limited.
GENERAL NOTES

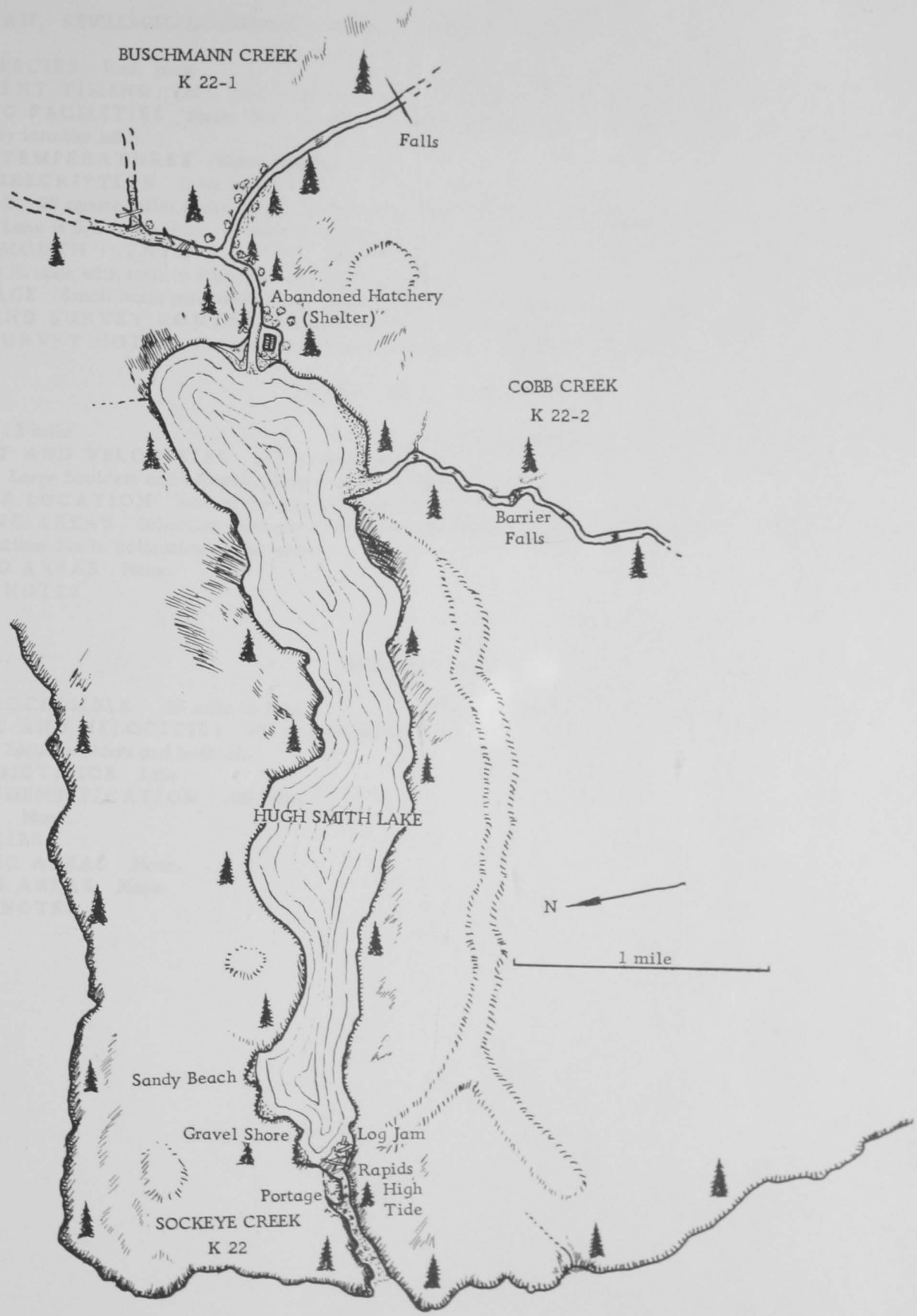
UPSTREAM

LENGTH ACCESSIBLE >2 miles AVERAGE WIDTH/DEPTH 15-20'/6-12"
GRADIENT AND VELOCITIES 2° at 3' per second in first .5 miles, less above
BOTTOM Some gravel, small rock, small boulders and bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in 2 miles to small pond.
TRIBUTARIES Small tributary enters from E. at the small pond 2 miles upstream. Short, small tributary enters just above high tide from the E.
SCHOOLING AREAS Pools in lower stream.
SPAWNING AREAS Limited in first .5 miles, good facilities above to 2 miles mark.
GENERAL NOTES A small stream with limited productive potential. It may receive some escapement from straying salmon from the highly productive Humpback Creek.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1937								
Sep 27		FWS	5,000					Good. Few chum
1938								
Sep 8			200					2,000 fish off mouth
1939								
Sep 15		FWS						Poor. Few pink. Large schools off mouth
1940								
Sep 28		ASI,FWS	5,000					Excellent
1941								
Oct 3	G 1.5	FWS	25,000					Excellent. Many dead. Overstocked
1947								
Sep 19	G .3	FRI						No fish seen


BUSCHMANN CREEK
K 22-1
Falls
Abandoned Hatchery
(Shelter)
COBB CREEK
K 22-2
Barrier
Falls
HUGH SMITH LAKE
N
1 mile
Sandy Beach
Gravel Shore
Log Jam
Rapids
High
Tide
Portage
SOCKEYE CREEK
K 22

KETCHIKAN, REVILLAGIGEDO CHANNEL, BOCA DE QUADRA, Opposite Cygnet Island

MAJOR SPECIES Red, pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Late. Aug.-Sep.-Oct. ESCAPEMENT MAGNITUDE >20,000
SPAWNING FACILITIES None. Sockeye Creek is outlet stream of Hugh Smith Lake and all species migrate directly into the lake.
STREAM TEMPERATURES Warm range.
VALLEY DESCRIPTION Lake outlet.
DRAINAGE 25 square miles (Estimated). Precipitation fed lake system. Early snowfields persist into July. Hugh Smith Lake is 3.5 miles long, .5 mile at greatest width.
STREAM MOUTH IDENTIFICATION Narrow Cove .3 mile long with steep rock sides. Intertidal gravel flat on N. side with trail to lake, marker above grassflat.
ANCHORAGE Small basin just inside cove offers small boat anchorage in stream current.
TRAILS AND SURVEY ROUTES Portage trail on N. side of stream may be used to skid small skiff to lake.
AERIAL SURVEY NOTES Not surveyed by air, no salmon visibility in dark water.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH 45'/24"
GRADIENT AND VELOCITIES 1-2° at 2-4' per second
BOTTOM Large boulders and bedrock, gravel fringe at high tide.
HIGH TIDE LOCATION Base of the rapids below lake.
SCHOOLING AREAS Schooling throughout the cove and intertidal area. Visibility is never adequate for salmon observations due to coloration of the water.
SPAWNING AREAS None.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .05 mile to lake AVERAGE WIDTH/DEPTH 45'/24"
GRADIENT AND VELOCITIES >3° at 3-4' per second
BOTTOM Large boulders and bedrock.
MARKER DISTANCE Lake.
MARKER IDENTIFICATION .05 mile.
BARRIERS None.
TRIBUTARIES
SCHOOLING AREAS None.
SPAWNING AREAS None.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1941								
Oct 3	G .3	FWS	2,000					Fair
1947								
Sep 17	G .5	FRI	300		30			50 at mouth
1948								
Aug 7	G .5	ASI						No fish in stream
Aug 18	G .5	ASI	60					
1953								
July 4	G .0	FWS						No fish present
July 11	G .0	FWS						First red appeared
July 15	G .0	FWS						Good for red. Pink emerging
July 17	A,G .0	FWS					40,000 red	Many red jumpers
July 18	A .0	FWS						Many red jumpers
July 21	G .0	FWS						Chum, pink run poor
July 26	G .0	FWS						Good, red. Poor, chum & pink. Red run over
Aug 30	G .0	FWS						Red going into lake
Sep 2	G .0	FWS						No more red present
Sep 9	G .0	FWS						Coho going into creek
1956								
July 15		FWS					1,000 red	
Aug 19		FWS					6,000 red	
1957								
June 17		FWS					50 red	Daily estimate of salmon entering creek
June 18		FWS					200 red	
June 19		FWS					240 red	
June 20		FWS					80 red	
June 21		FWS					40 red	
June 22		FWS					30 red	
June 23		FWS					3,000 red	
June 24		FWS					1,500 red	
June 25		FWS					200 red	
June 26		FWS					100 red	
June 27		FWS					350 red	
June 28		FWS					500 red	
June 29		FWS					2,400 red	
June 30		FWS					600 red	
July 1		FWS					100 red	
July 2		FWS					100 red	
July 7		FWS					4,750	
July 8		FWS					950 red	
July 9		FWS					2,500 red	
July 10		FWS					1,600 red	
July 11		FWS					1,200 red	
July 12		FWS					1,000 red	
July 13		FWS					400 red	
July 14		FWS					1,800 red	
July 15		FWS					1,200 red	
July 16		FWS					900 red	
July 17		FWS					800 red	
July 18		FWS					300 red	
July 19		FWS					50 red	
July 20		FWS					80 red	
July 22		FWS					200 red	
July 30		FWS					412 red	
Aug 10	A	FRI						>10,000 in lake
Aug 19	A	FRI						>6,000 in lake

KETCHIKAN, REVILLAGIGEDO CHANNEL, BOCA DE QUADRA, Tributary to Hugh Smith Lake

MAJOR SPECIES Red, pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Aug.-Sep.-Oct. ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Excellent. Stream forks a short distance upstream and offers both coldwater and fast spawning velocity currents in the S. fork and warmer lower current velocities in the N. fork. Excellent gravels in main stream and both forks.
STREAM TEMPERATURES Normal range. Observed temperatures: 44.5-50°F., 1949 in main trunk stream. S. fork (main stream) is cold range. N. fork (tributary) is warm range.
VALLEY DESCRIPTION Glacial origin. Main valley to S. heads in high mountain ridge. Timbered throughout with relatively steep gradient upstream. Tributary valley to N. is short and flat with its head at the pass to Marten Arm.
DRAINAGE 4-5 square miles (Estimated). Precipitation, ground water and early season snow-fed.
STREAM MOUTH IDENTIFICATION Delta extends into lake. Old hatchery buildings on S. side at mouth. Mouth is at E. end of Hugh Smith Lake.
TRAILS AND SURVEY ROUTES Game trails. Streams are easily walked at normal water levels. Bears are relatively abundant during the salmon runs and caution is advised.
AERIAL SURVEY NOTES Easily surveyed by air from the forks to the mouth. Light colored gravel and clear water aid in aerial visibility. Schools at mouth are best seen from the air. N. fork is pass to Marten Arm.

UPSTREAM

LENGTH ACCESSIBLE >.5 mile AVERAGE WIDTH/DEPTH 15-30'/12"
GRADIENT AND VELOCITIES 1-3° at 1-3' per second
BOTTOM Sand, gravel, small rocks.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in .5 mile.
TRIBUTARIES N. fork .2 mile upstream is warmer and appears to be used more by pink salmon.
SCHOOLING AREAS Off the mouth of the stream. Several shallow pools in the first .2 mile of stream are also used.
SPAWNING AREAS Good spawning riffles throughout stream and tributary. Main spawning area is below forks to mouth.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1941								
Aug 13	G 6.0	FWS						2,000 red at mouth
1947								
Sep 20	G .3	FRI	50				500 red	Poor
1948								
Aug 15	G 1.0	ASI					2,000 red	
Sep 1	G 1.5	ASI					3,050 red	
Sep 11	G 1.0	ASI					500 red. 150 dead red	
Sep 29	G .3	ASI	3,000	150			3,000 red	
1949								
Aug 5	G .5	FRI	100				3,000 red	
Aug 15	G .5	FRI	10				1,600 red. 110 dead red	
Sep 10	G .5	FRI	200	200			300 red. 4,000 dead red	
Oct 2	G .5	FRI	2,000	100			10,000 red. 1,000 dead red	
1954								
Aug 19	G .2	ADF	0		2		1,700 red	4-5,000 red at mouth
1955								
Aug 13	G	ADF					100 red	3-4,000 red at mouth
1956								
Aug 24		FWS					5,500 red	
Aug 27		FWS					10,000 red	
1957								
Aug 4		FWS					2,000 red	
Aug 27		FWS					1,500 red	

KETCHIKAN, REVILLAGIGEDO CHANNEL, BOCA DE QUADRA, Tributary to Hugh Smith Lake

MAJOR SPECIES Red, pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Late. Aug.-Sep.-Oct. ESCAPEMENT MAGNITUDE >5,000
SPAWNING FACILITIES Good. Limited by upstream bedrock areas and barrier falls.
STREAM TEMPERATURES Warm range. Observed temperatures: 47-52°F., 1949.
VALLEY DESCRIPTION Stream cut in valley of glacial origin. Small lake at head. Steep mountain slopes, bare rock ridges. Several high lakes on the E. side are tributary to the creek.
DRAINAGE 6-7 square miles (estimated). Precipitation fed through lake system. Early snow fields persist into July. Extensive muskeg in valley. Timbered slopes.
STREAM MOUTH IDENTIFICATION Broad delta just E. of prominant point on S. side of Hugh Smith Lake.
TRAILS AND SURVEY ROUTES Game trails. Easily walked banks above delta. Skiff may be taken up delta about 100 yards.
AERIAL SURVEY NOTES Surveyed only in delta. Upstream visibility is unsatisfactory.

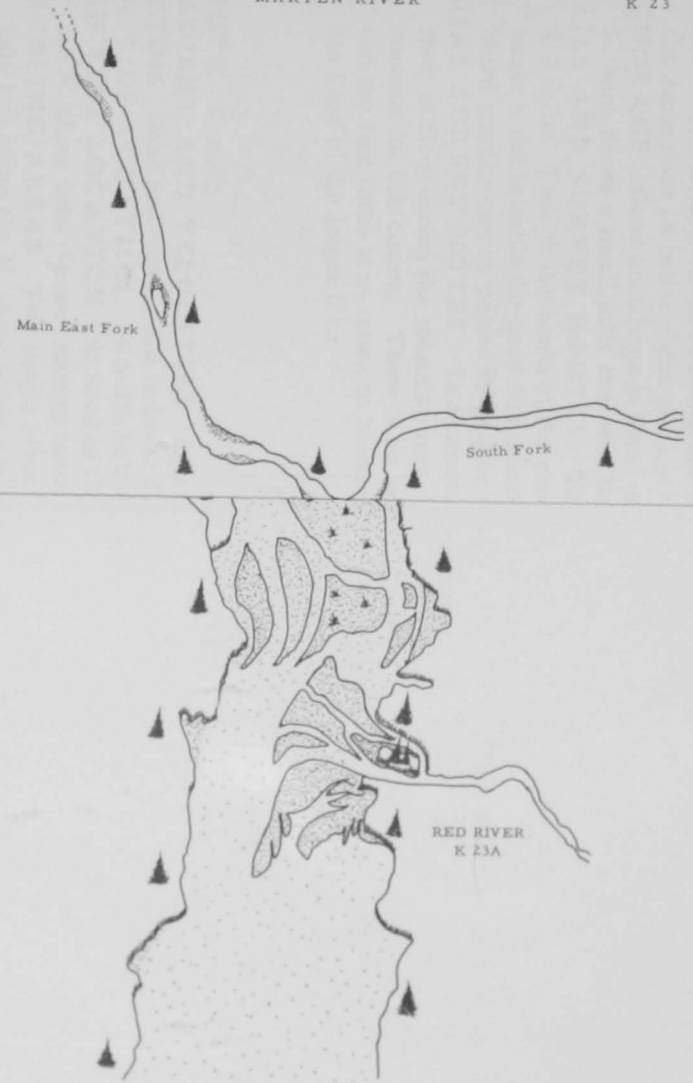
UPSTREAM

LENGTH ACCESSIBLE .5 mile AVERAGE WIDTH/DEPTH 30'/12"
GRADIENT AND VELOCITIES .5-1° at 2' per second
BOTTOM Sand, gravel to 6" in diameter, bedrock rapids.
MARKER DISTANCE .5 mile
MARKER IDENTIFICATION Barrier falls
BARRIERS Barrier falls over 30' in height. Small falls .4 mile upstream drops 4' in 20', but is not a barrier.
TRIBUTARIES Small tributary enters on E. bank .3 mile upstream, accessible to salmon for short distance.
SCHOOLING AREAS In the lake at the edge of the delta. Small, scattered pools throughout the accessible stream. Large pool between falls.
SPAWNING AREAS Spawning throughout accessible stream from riffle above low falls to stream mouth.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1929								
Sep 24	G .8	FWS	100				50 red	
1947								
Sep 20	G .3	FRI	25				50 red	Poor. 75 at mouth
1948								
Aug 15	G .3	ASI					250 red	
Sep 1	G .3	ASI					600 red. 20 dead red	
Sep 11	G .3	ASI	10		12		200 red. 100 dead red	
Sep 29	G .3	ASI	600		900		500 red	
1949								
Aug 5	G .3	FRI	150				2,030 red	
Aug 15	G .3	FRI	1,200		4		1,000 red	Several dead pink
Sep 10	G .3	FRI	1,000	1,700			300 red. 500 dead red	
Oct 2	G .3	FRI	2,000	500			3,000 red. 2,000 dead red	
1956								
Aug 24		FWS					350 red	
1957								
Aug 19	A .3	FRI					1,000 red	>6,000 red in lake. 1 brown bear


Main East Fork
South Fork
RED RIVER
K 23A

KETCHIKAN, BOCA DE QUADRA, MARTEN ARM, N. head

MAJOR SPECIES Pink, chum OTHER SPECIES Coho, king, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE 10-100,000
SPAWNING FACILITIES Excellent. Based on the facilities available for spawning, this river has a potential greater than 99% of the streams in Southeastern Alaska. However, actual escapements observed in the past indicate that factors other than available facilities may be limiting its production.
STREAM TEMPERATURES Cold range. 45°F., 8/14/49; 50°F., 8/29/49; 47°F., 9/24/49; 46°F., 7/16/50; 46.5°F., 7/28/50; 47°F., 8/7/50; 50.5°F., 8/17/50; 48°F., 8/28/50; 50°F., 9/9/50; 48°F., 7/21/51; 49°F., 7/29/51; 50°F., 8/6/51; 49°F., 8/17/51; 50°F., 8/20/51; 44°F., 7/21/52; 48.5°F., 7/28/52; 52°F., 8/7/52; 47°F., 7/22/53; 51°F., 7/29/53; 55°F., 8/7/53; 51°F., 8/17/53.
VALLEY DESCRIPTION Glacial. A broad flat valley in the lower stream and delta becoming narrow above the forks about 5 miles upstream. Above this point, the valley again widens into a typical Glacial U shape and continues to the head cirques. A cirque lake just below the 2,000 foot level is at the head 18 miles from the mouth.
DRAINAGE Snow fields, and a few small glaciers. Precipitation. This is one of the larger streams in this area. The main stream forks 4.3 miles above high tide. The smaller S. fork rises into a glacial valley with snow fields. The main E. fork continues eastward up the main valley to the headwaters at the divide.
STREAM MOUTH IDENTIFICATION The stream mouth is on the N. side of the delta at the head of Marten Arm. The delta is .4 miles across and is common with the Red River (K 23A, Previous No. 20A) which enters the main river .4 miles above the low tide point on the S. side.
ANCHORAGE Good anchorage is found near the S. shore at the drop-off. A small stream dropping from the steep S. bank forms a small falls that will lie just down the shore from the drop-off.
TRAILS AND SURVEY ROUTES The Marten River is navigable by small skiff for the full survey distance of 4.3 miles. Though the banks of the river can be hiked during low to normal water levels, the visibility from the banks is not suitable for good fish counts. During low water stages the few riffles that offer difficult skiff and outboard passage can be passed by pulling the skiff above to deeper water.
AERIAL SURVEY NOTES This stream is excellent for aerial survey. The valley is broad enough for turns. The river is clear during the spawning runs, except for flooding periods. The river bottom is light and offers ideal contrast for fish counts. There is no low pass up above the terminal for crossing to Keta River (K 24, Pre. No. 21) and the best route is to return to Marten Arm lake on the N. side of the arm and cross through the low pass N. of the head of the larger lake.

INTERTIDAL ZONE

LENGTH 2 miles AVERAGE WIDTH/DEPTH 200'/50"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Sand and gravel, silt in lower delta. Excellent gravel conditions.
LOW TIDE LOCATION .4 miles below Red River on N. side (in upper intertidal zone).
HIGH TIDE LOCATION At head of riffle area above large rock on S. bank. A large pool lies above, deepest on the N. shore side. Several stumps usually are found in the vicinity of high tide, subject to washing out during floods.
SCHOOLING AREAS Two major schooling areas are found above the confluence with the Red River. A long deep hole lies along the N. shore below the large rock prominence on the S. shore. Fish school in the upper part. The second hole is at the base of the rock prominence below the riffle area.
SPAWNING AREAS The major intertidal spawning area is above the rock prominence to the high tide point. The river splits into several channels through gravel. The gradient is about 1° with velocities about 2' per second. A less important intertidal spawning riffle is found at the bend above the confluence with the Red River.
GENERAL NOTES Both brown and black bears are seen frequently in the large flats S. of the intertidal area during the salmon runs. Caution is advised if on foot. A gravel excavation site is located in the S. flats above the Red River.

UPSTREAM

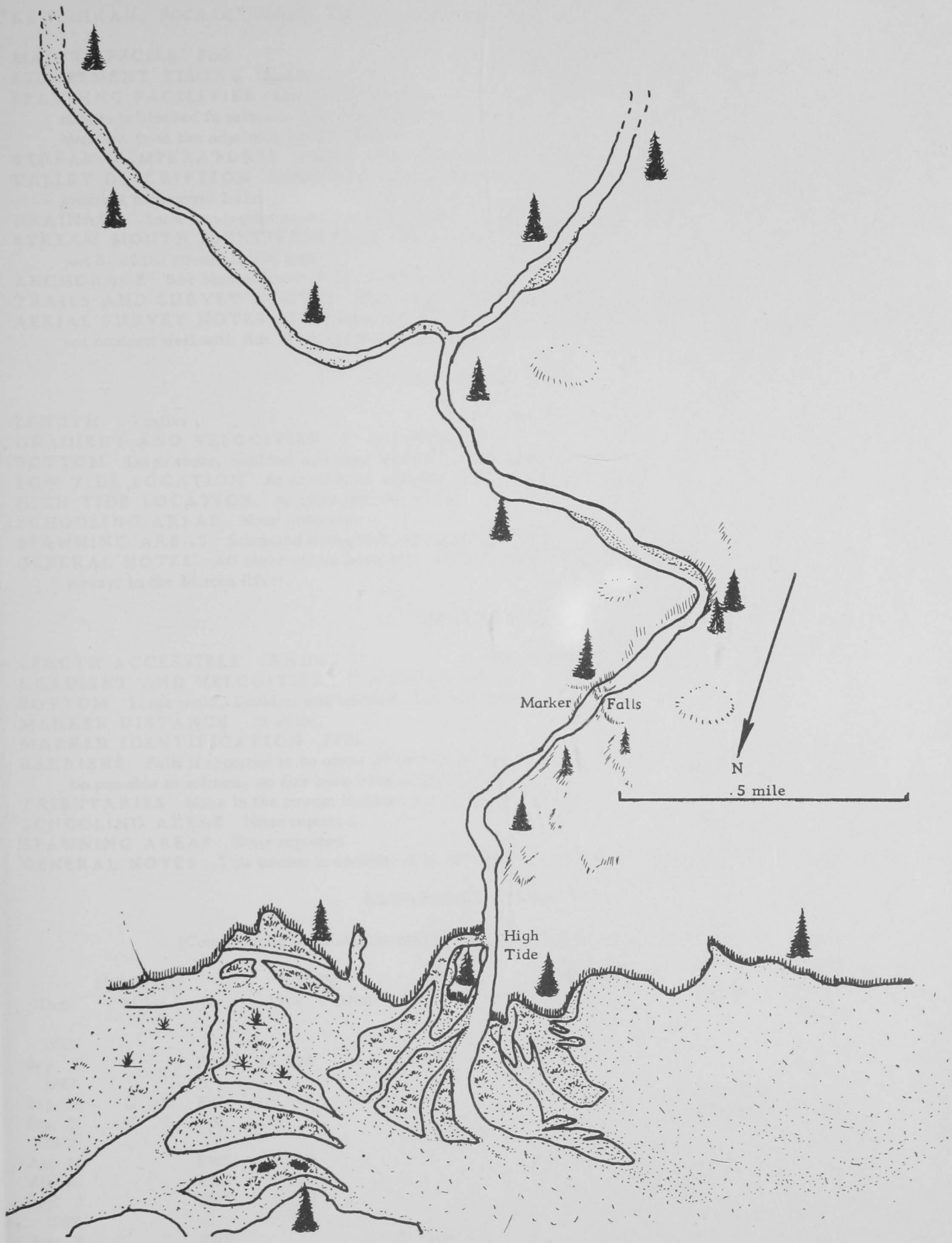
LENGTH ACCESSIBLE >10 miles AVERAGE WIDTH/DEPTH 200'/50"
GRADIENT AND VELOCITIES 1-2' per second, less than 1°
BOTTOM Sand, gravel, and some large rocks. Most riffles are suitable for spawning.
MARKER DISTANCE 4.3 miles.
MARKER IDENTIFICATION The forks is the termination point, marked by a metal plate on a tree at the forks.
BARRIERS None observed in over 6 miles on the main fork. None in 1 mile observed on the S. fork.
TRIBUTARIES Small streams enter the main river at intervals from the steep valley slopes and are not large enough for more than a small number of salmon.
SCHOOLING AREAS The salmon school at the lower ends of every large pool from high tide to the forks. The largest concentrations have been observed schooled in the first four large pools above high tide.
SPAWNING AREAS The major spawning areas observed during the recent years of small runs have been in the first mile of the lower stream. However, in the better years every riffle has been occupied, including the first mile of the S. fork and a mile above the forks of the main stream.
GENERAL NOTES The Marten River is classified as an early run pink salmon stream. However, during the small escapements, the peak of the runs has been observed to be later than usual, falling toward the latter part of Aug.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1928								
Sep 6		FWS	85,000		15,000		500 coho	
1937								
Aug 13		FWS	10,000					10,000 fish off mouth
Sep 28		FWS	2,000					Poor. Chum spent, pink bright
1939								
Sep 16	G 1.0	FWS						Poor. Evidence seen of early run
1940								
Sep 12	G 4.0	FWS	5,000		8,000			Poor. 500 at mouth
Sep 28	G 1.0	ASI,FWS	1,000					Poor
1941								
Sep 20		ASI,FWS						Many reported before rainy period
Oct 3	G 1.0	ASI,FWS						Few chum, pink. Water high, discolored
1942								
Sep 13	G 4.0	FWS	10,000		10,000			Poor. 10,000 off mouth. Run declining
1947								
Sep 19	G 1.0	FWS	10,000		2,000			Poor. 10,000 fish at mouth
1948								
Aug 8	G .0	ASI						None in intertidal zone
Aug 11	G 2.0	FWS	25,000		25,000			Good
Aug 18	G 2.0	FWS	200,000		30,000			Good
Aug 21	G 4.5	ASI	41,000	2,400	1,900	600		
Sep 12	G 2.5	ASI	2,500	300	900	50		
Sep 27	G 2.0	FWS	4,000		4,000			Poor
Sep 30	G 2.0	ASI	5,000		9,000			
1949								
July 24	G 2.0	FWS	2,500					
Aug 14	G 1.5	FRI	>25,000	>3,000	2,000			
Aug 27	A 8.4	FRI	159,000					
Aug 29	G 4.3	FRI	62,200	17,300				
Sep 10	G 2.0	FWS	75,000					
Sep 24	G 4.3	FRI	300	600	2,500			
1950								
July 16	G 4.3	FRI	1,150	0	200	0	300 king	
July 28	G 4.3	FRI	20,000	0	5,000	0	100 king	10,000 off mouth
Aug 7	A 4.3	FRI	30,000					Coho present. 30-50,000 off mouth
Aug 10	A	ASI,FRI,FWS						Excellent condition
Aug 17	G 4.3	FRI	27,700	1,000	3,000		500 coho, 1 red, 20 king.	Some dead chum
Aug 28	G 4.3	FRI	13,000	4,000				Some chum
Sep 9	G 4.3	FRI	4,000	10,000	7,000		4,000 coho	Some dead chum
1951								
July 21	G 4.3	FRI	1,500	0	30			Sev. dead chum. Intertidal discolored
July 25	A 8.4	FRI						10,000 present. Jumps Boca de Quadra
July 29	G 4.3	FRI	29,500	0	700	0	85 king	25,000 pink off mouth
Aug 6	G 4.3	FRI	71,600	100	1,100	100	130 king, 21 red	Some fish off mouth
Aug 17		FRI						River flooded, no visibility
Aug 30	G 4.3	FRI	24,300	12,600	650	300	Few coho, king	Few fish at mouth
1952								
July 21	G 2.0	FRI	550	0	280	0		Few off mouth
July 26	A 7.0	FRI						10,600 present. 3-5,000 in inlet
July 28	G 4.3	FRI	13,000	0	975	0	60 king	>10,000 off mouth
Aug 7	G 4.3	FRI	41,800		1,300	350	70 king	Few dead chum. Fish in first 1/2 mile
Sep 23	A	FRI					350 coho	Possibly a few chum

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1953								
July 18	A .0	FWS						3 jumps noted in all of Quadra
July 22	G 4.3	FRI	2,500		320		8 dead king	
July 23	G .5	FWS						Few present. 3 jumpers in Marten Arm
July 24	G 2.0	FWS						Poor. <8,000 fish
July 28	G 5.5	FWS						Poor. 11,000 fish estimated
July 29	G 4.3	FRI	7,700		600		19 king	
Aug 6	G 4.3	FRI	9,100		750	125	121 king	Fish moving up
Aug 7	G 3.3	FRI	7,140	200	120	15	16 king, 1 red	Some new fish
Aug 13		FWS						Poor. Few additional fish in river
Aug 17	G 2.0	FWS						Poor. 4,000 new fish
Aug 19	G 3.0	FWS						Poor. 3,000 new fish
Aug 25	G 2.0	FWS						Poor. 1-2,000 new fish
Aug 27	G 2.0	FWS	2,000					
Sep 5	G .0	FWS						No fish present
Oct 2	A .0	FRI						No fish present
1954								
Aug 3	A 4.3	FRI	8,300		1,200			
Aug 7	A 5.0	FWS						Poor
Aug 12	A 4.3	FRI	14,000		450			None at mouth
Sep 24	G 1.5	FWS						Poor. Water high
1955								
July 24	A 4.3	FRI	200		100			Several 1,000 at mouth
July 31	A 4.3	FRI	2,500					Few at mouth
Aug 1	G	FWS	2,500					Few at mouth
Aug 12	A 4.3	FRI	4,000					Chum present
Aug 23	A 4.3	FRI	7,000					Fresh pink entering
Sep 6	A 4.3	FRI	1,800		450			
Sep 8	G 3.0	FWS	5,000		500		10 coho	2-300 at mouth
1956								
July 12		FWS			500			
July 23	A 4.3	FRI	1,800		1,500			
July 31	A 4.3	FRI	18,000					Some chum. Fresh. Schools at mouth
Aug 2		FWS						10,000 pink and chum
Aug 5		FWS						26,000 pink and chum
Aug 13	A 4.3	FRI	26,000					Some chum
Aug 21		FWS	28,000					
Aug 24	A 4.3	FRI	22,000					
Sep 7	A 3.0	FRI	1,500		400			
1957								
July 9		FWS						10-15,000 chum at mouth Marten Arm
July 22		FWS			2,400			
July 28	A 4.3	FRI	1,000	0	2,000	0		None observed off mouth
July 28		FWS	1,500					
July 30		FWS			1,800			
Aug 5		FWS	3,000		1,000			
Aug 6		ADF	1,500		1,500			
Aug 7		FWS	6,000					
Aug 9		FWS	1,000		600			
Aug 10	A 4.3	FRI	2,500		500			None observed off mouth
Aug 19	A 4.3	FRI	3,100		200			Some dead chum. None at mouth
Aug 22		FWS	750		340			
Aug 24		FWS	2,500					New fish. 1,000 pink off mouth
Sep 1	A 4.3	FRI	1,100		100			Few dead chum, pink. Chum jumping
Sep 8	A 4.3	FRI	1,000		500			Few dead chum, pink
Sep 16	A 4.3	FRI	1,000		1,000			Few dead chum, pink. None off mouth


Marker
Falls
N
.5 mile
High
Tide

KETCHIKAN, BOCA DE QUADRA, MARTEN ARM, Marten River intertidal zone

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Middle. About Sep. 1 ESCAPEMENT MAGNITUDE A few 100 to sev. 1,000
SPAWNING FACILITIES Limited by coarse gravel, boulders and bedrock in much of the stream bed. The upper stream is blocked to salmon. This is not an important spawning stream. Larger escapements observed here may be overflow from the adjoining Marten River.
STREAM TEMPERATURES Middle range (estimated).
VALLEY DESCRIPTION Stream eroded glacial valley. The upper valley is relatively flat with only a slight gradient for several miles.
DRAINAGE Snow fields prior to the spawning runs in Aug.-Sep. Precipitation fed.
STREAM MOUTH IDENTIFICATION On S. side of the Marten River intertidal zone. A gravel site lies just E. of the stream in the flats.
ANCHORAGE See Marten River (K 23, Previous No. 20).
TRAILS AND SURVEY ROUTES May be surveyed on foot except for flood stage.
AERIAL SURVEY NOTES The stream available to salmon is easily observed from the air. The dark bottom does not contrast well with fish. This stream is not usually surveyed, either by air or on foot.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 60'/36"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Large rocks, boulders and some bedrock. Little gravel.
LOW TIDE LOCATION At confluence with Marten River intertidal zone.
HIGH TIDE LOCATION At entry into the woods.
SCHOOLING AREAS None observed.
SPAWNING AREAS Scattered throughout the intertidal zone.
GENERAL NOTES All observations have been limited to secondary surveys done in conjunction with the main surveys in the Marten River.

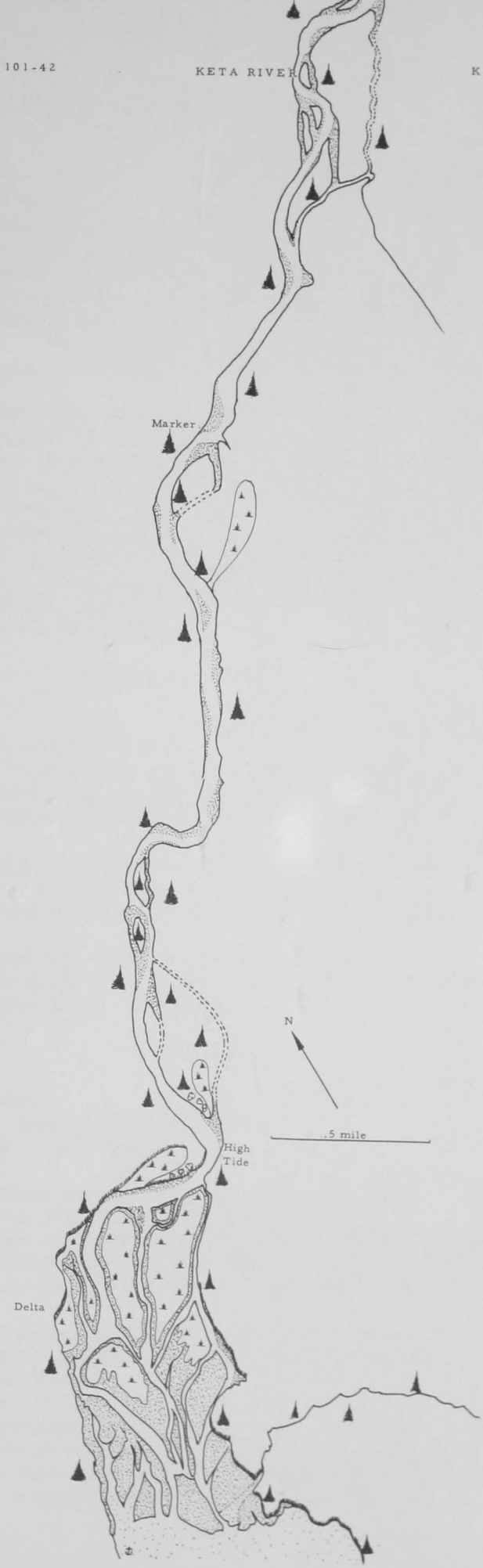
UPSTREAM

LENGTH ACCESSIBLE .5 miles AVERAGE WIDTH/DEPTH 50'/48"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Large rocks, boulders and bedrock. Limited gravel.
MARKER DISTANCE .5 miles.
MARKER IDENTIFICATION Falls.
BARRIERS Falls is reported to be about 30 feet high over a distance of 75 yards. Though the falls is reported to be passable to salmon, no fish have been observed above.
TRIBUTARIES None in the stream distance accessible to salmon.
SCHOOLING AREAS None reported.
SPAWNING AREAS None reported.
GENERAL NOTES This stream is considered by all observers to be very limited as a salmon stream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1928								
Sep 6		FWS	12,000		3,000			
1947								
Sep 18	G .5	FRI	2		25			Very poor
Sep 29	G .3	ASI						Very poor. No fish
1956								
Aug 24		FWS	250					
Aug 26		FWS	225					
Sep 7		FWS	90					
1957								
Aug 3		FWS			100			


Marker
N
.5 mile
High
Tide
Delta

KETCHIKAN, BOCA DE QUADRA, MAIN ARM, head

MAJOR SPECIES Pink and chum OTHER SPECIES King, coho, and trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE 10-100,000
SPAWNING FACILITIES Excellent. Over 8 miles of stream are known to be used by salmon.
STREAM TEMPERATURES Range: 44-48°F., 8/4 to 9/23/49; 45-51°F., 7/15 to 9/9/50; 46-50°F., 7/21 to 8/30/51; 45-51°F., 7/21 to 8/21/52; 48-54°F., 7/21 to 8/17/53.
VALLEY DESCRIPTION Glacial. Even gradient throughout first 8 miles of valley. The valley walls are steep and numerous small stream beds cut the sides. Two fair sized tributaries enter from relatively steep valleys.
DRAINAGE Snow fields and several small glaciers. The stream is clear except during floods.
STREAM MOUTH IDENTIFICATION Enters through a long, wide delta. The stream is at present flowing out the N. side of the delta. A small stream enters the lower intertidal zone from a steep valley on the S. side of the head.
ANCHORAGE At any point along the drop-off. Sheltered anchorage is available in a small bight at the S. end of the drop-off just beyond the point where the small stream enters.
TRAILS AND SURVEY ROUTES Foot surveying can be done easily during lower water stages. However, the stream is navigable for four miles during moderate or higher water levels and is preferred for surveys.
AERIAL SURVEY NOTES Aerial surveys may be made either up or downstream. The valley is wide and has no obstructions. Fish are easily visible against the light colored stream gravels. Air surveys are conducted beyond the terminal marker to the first large tributary entering from the south. This upper area is usually occupied by spawning king salmon. A pass to the E. fork of the Wilson River lies on the N. side of the valley 6 miles from high tide and 1 mile downstream from the tributary entering from the south. The pass is broad and unobstructed at an altitude of less than 3,000 feet.

INTERTIDAL ZONE

LENGTH 1.3 miles AVERAGE WIDTH/DEPTH 100'/24"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Gravel ranging from 1-5" in diameter, some sand in the lower region.
LOW TIDE LOCATION In line with the small point on the south side by the small creek.
HIGH TIDE LOCATION At the base of the riffle where the stream enters the woods. There is a deep pool lying against the S. hillside.
SCHOOLING AREAS 1. The first pool where the river contacts a logged area on the N. bank. 2. Shallows at lower end of pool below high tide. 3. In the deep pool at high tide.
SPAWNING AREAS 1. Riffles below pool at contact with logged area on N. bank. 2. Riffles below pool at high tide.
GENERAL NOTES The main channel cuts across the upper intertidal zone from the S. side of the valley to the N. side and then out to the bay on the N. side. A small channel cuts down the intertidal zone from the middle of the upper intertidal stream. Some limited spawning occurs there.

UPSTREAM

LENGTH ACCESSIBLE Over 8 miles AVERAGE WIDTH/DEPTH 80'/30"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Gravel. Some larger rocks, mostly granite.
MARKER DISTANCE 2.7 miles.
MARKER IDENTIFICATION Metal plate placed on tree on N. bank at base of an extensive gravel bar. River around this bar is navigable by river skiff only on moderate or greater level.
BARRIERS River becomes more rapid with coarser bottom beyond 8 miles. However, no barriers have been observed.
TRIBUTARIES Numerous small tributaries feed the main stream throughout the valley. However, only two in the first 8 miles are of any size and are usually low during the salmon runs. Neither has been observed with many salmon.
SCHOOLING AREAS 1. The first pool above high tide. 2. Scattered pools in the first mile. 3. Long pool above large bend in the river course 1 mile upstream. 4. Scattered pools throughout upper river, including king salmon schooling holes 4 to 7 miles upstream.
SPAWNING AREAS 1. All riffles in the first 2.7 miles are used. 2. Areas above marker where the river divides are all used. 3. Upper river king salmon areas are usually in the main river in deeper riffles.
GENERAL NOTES Past records indicate that this is a river with a large potential capacity for salmon, primarily pink and chum. This is one of the better king salmon rivers in this area. Coho runs are later than most surveys in the past and little information is available on the magnitudes using the river.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1926								
Sep 5		FWS	50,000		20,000		4,500 coho, 800 red	
1940								
Sep 12	G 2.0	FWS	5,000		7,000			Poor
Sep 28	G 2.0	ASI,FWS	500		5,000			Poor
1941								
Oct 4	G 1.0	FWS			2,000			Poor. Pink showing
1947								
Sep 18	G 2.5	FRI	5,000		200,000			Excellent. Several 1,000 off mouth
1948								
Aug 12	G 2.0	FWS	75,000					Excellent
Aug 18	G 2.0	FWS	75,000					Excellent
Aug 20	G 3.5	ASI	45,300	6,300	1,020	240	500 king, 2 dead king	
Sep 13	G 2.0	ASI	600	300	2,450			
Oct 1	G 2.5	ASI	9,700		15,000			
1949								
July 26	G .5	FWS	250					
Aug 4	G 1.0	FRI	5,100		500			Stream high
Aug 13	G 2.7	FRI	22,000	50	2,000			
Aug 27	A 11.0	FRI						84,000 salmon
Sep 9	G 1.0	FRI	1,120	3,100	4,200		3,000 coho	
Sep 23	G 2.7	FRI	1		6,000			
Oct 2	G .5	FRI	0		100			Conditions poor
1950								
July 15	G 1.0	FRI	1,250	0	350	0	130 king	
July 27	G 2.7	FRI	54,000	0	2,500	0	210 king	100,000 at mouth
Aug 6	G 2.7	FRI	60,000	0				
Aug 7	A 7.5	FRI						As many fish above marker as below
Aug 10	A	ASI,FRI,FWS						Excellent
Aug 16	G 2.7	FRI	20,000	700	200		10 king	Sev. dead chum. Sev. 1,000 off mouth
Aug 29	G 2.7	FRI	4,500	4,000	5,000			
Sep 9	G 1.5	FRI	300	4,000	6,500		2,500 coho	
1951								
July 21	G 2.7	FRI	6,450	0	1,150	0		Several 1,000 off mouth
July 25	A 2.7	FRI						8,700 salmon. Jumps in Boca de Quadra
July 28	G 2.7	FRI	56,500	0	1,900	0	80 king	Pink, chum off mouth
Aug 5	G 2.7	FRI	71,500	60	2,100	300	120 king	Very few off mouth
Aug 17	G 1.5	FRI						Estimate impossible. River high
Aug 30	G 1.5	FRI	8,700	1,400	1,425	30	300 coho	Some chum, coho in bay
1952								
July 21	G 2.7	FRI	700	0	500	0	30 king	Very few off mouth
July 26	A 6.0	FRI						6,800 salmon. None at mouth. Schools in
July 27	G 2.7	FRI	7,460	0	950	0	328 king	>1,000 off mouth
Aug 6	G 2.7	FRI	24,800		625	200	462 king	Most fish in first 1/2 mile
Aug 21	G 1.0	FRI	1,230	1,700	40	50		Coho present
Sep 23	A	FRI						4,000, mainly chum. Few coho, king
1953								
July 19	G .0	FWS						Small schools above high tide mark
July 21	G 2.7	FRI	1,250	0	1,520	0	18 king	Fish moving up
July 23	A .0	FWS						Poor. Good run going into river
July 24	A 1.0	FWS	<1,000					Poor. 2 jumpers at head of Keta Arm
July 28	A 6.0	FWS						4 jumpers at mouth of Swan Creek
July 29	G 2.7	FRI	7,600		1,250		150 king	

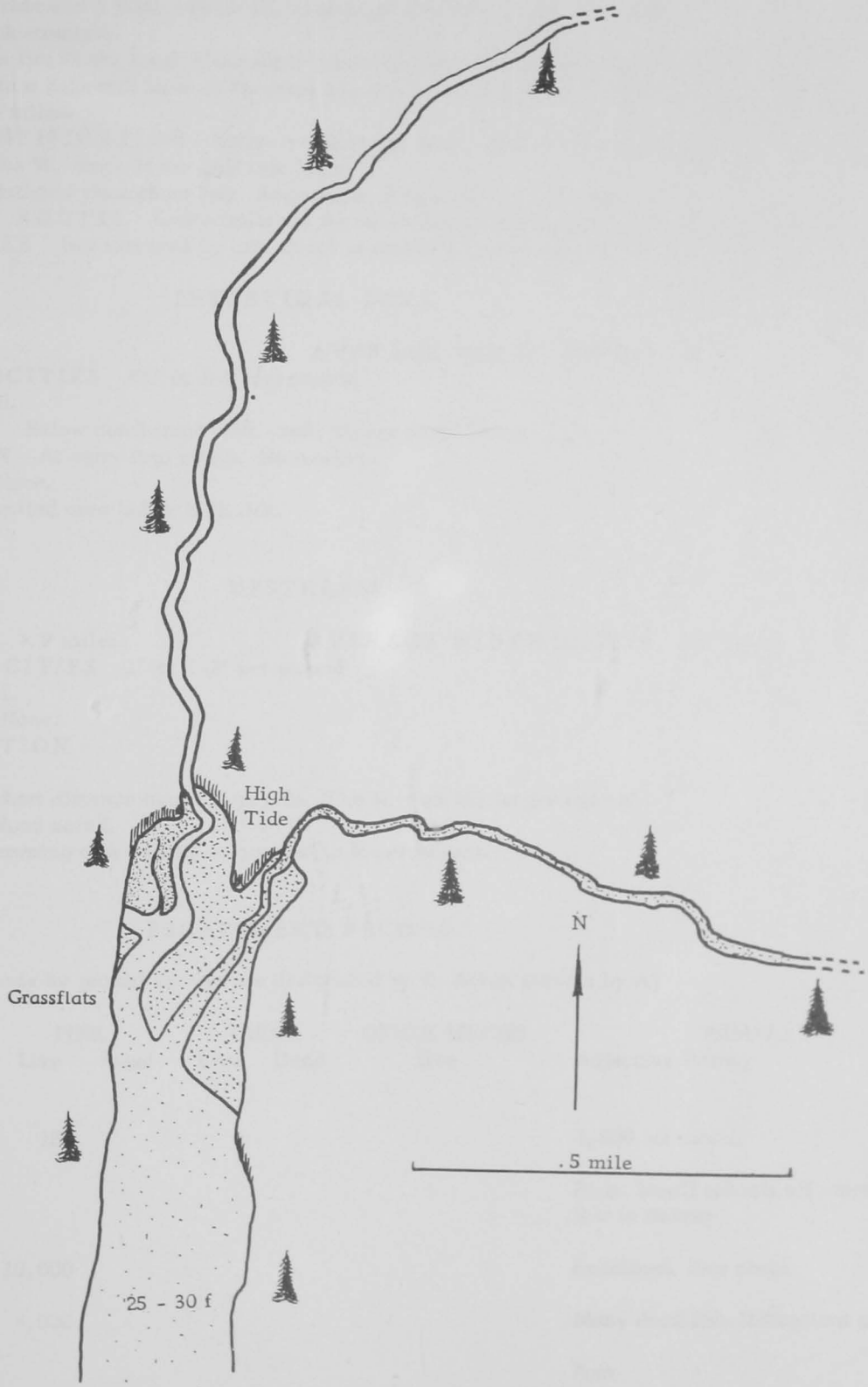
	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1953								
July 29	G .0	FWS						Few fish present
Aug 3	A 8.0	FWS						Poor. 13,000 present
Aug 6	G 2.7	FRI	7,000	0	1,210	25	156 king	None off mouth. Run appears to be in
Aug 17	G 2.7	FRI	3,850	320	780	90	63 king	Many new chum
Aug 17	A 2.0	FWS						Poor. 10,000 new fish present
Aug 25	A 2.5	FWS						Poor. 3-4,000 new fish in schools
Aug 29	G .0	FWS						No fish present or in arm
Sep 4	G .0	FWS						Chum, pink entering river
Sep 11	G .0	FWS						Chum, pink entering river
Sep 14	G .0	FWS						Poor. Chum, pink entering river
1954								
Aug 3	A 2.7	FRI	2,400		1,000			3-5,000 at mouth
Aug 7	G 2.7	FWS						Poor. Few 1,000 mixed
Aug 12	A 2.7	FRI	12,500		2,000			Some off mouth
Aug 23	A 2.7	FRI	7,500				300 king	Some chum. Many dead
Sep 27	A 2.7	FRI	100		6,000			Few dead chum, pink. 5,000 chum above marker
1955								
July 24	A 2.7	FRI	1,100					1,000 pink above marker. 1,000 king
July 31	A 2.7	FRI	2,200					Several 1,000 near mouth
Aug 1	G	FWS	2,200					
Aug 21	A 2.7	FRI	1,300					Chum present
Aug 23	A 2.7	FRI	1,600					
Aug 26		FWS	1,000					
1956								
July 14		FWS	1,000					
July 18		FWS						10,000 chum, pink estimated
July 23	A 2.7	FRI	11,000	3,000				1,500 king above marker
July 31	A 2.7	FRI	20,000					Some dead pink. >2,000 pink above marker
July 31		FWS	25,000					
Aug 6		FWS	23,400		2,600			
Aug 9		FWS	36,700		4,100			
Aug 13	A 2.7	FRI	10,000					Some king above marker
Aug 16		ADF,FWS	12,000					Many dead
Aug 26		FWS			1,000			
Sep 8	G 2.5	FWS	150		1,500		40 coho	200 pink at mouth
1957								
July 28	A 2.7	FRI	300	0	1,700	0		2,000 chum, 2,000 pink, 200 king above marker
July 30		FWS			600			
Aug 9		FWS	200		300			
Aug 10	A 2.7	FRI	2,500	0	500			500 king above marker
Aug 11	A 2.7	FRI	4,000					500 off mouth
Aug 19	A 2.7	FRI	500		300			Few dead chum, pink. 200 king above marker spawning
Sep 1	A 2.7	FRI	1,000					Some chum. Few dead chum, pink
Sep 8	A 2.7	FRI			5,000			Some pink

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1926								
Sep 5		FWS	50,000		20,000		4,500 coho, 800 red	
1940								
Sep 12	G 2.0	FWS	5,000		7,000			Poor
Sep 28	G 2.0	ASI,FWS	500		5,000			Poor
1941								
Oct 4	G 1.0	FWS			2,000			Poor. Pink showing
1947								
Sep 18	G 2.5	FRI	5,000		200,000			Excellent. Several 1,000 off mouth
1948								
Aug 12	G 2.0	FWS	75,000					Excellent
Aug 18	G 2.0	FWS	75,000					Excellent
Aug 20	G 3.5	ASI	45,300	6,300	1,020	240	500 king, 2 dead king	
Sep 13	G 2.0	ASI	600	300	2,450			
Oct 1	G 2.5	ASI	9,700		15,000			
1949								
July 26	G .5	FWS	250					
Aug 4	G 1.0	FRI	5,100		500			Stream high
Aug 13	G 2.7	FRI	22,000	50	2,000			
Aug 27	A 11.0	FRI						84,000 salmon
Sep 9	G 1.0	FRI	1,120	3,100	4,200		3,000 coho	
Sep 23	G 2.7	FRI	1		6,000			
Oct 2	G .5	FRI	0		100			Conditions poor
1950								
July 15	G 1.0	FRI	1,250	0	350	0	130 king	
July 27	G 2.7	FRI	54,000	0	2,500	0	210 king	100,000 at mouth
Aug 6	G 2.7	FRI	60,000	0				
Aug 7	A 7.5	FRI						As many fish above marker as below
Aug 10	A	ASI,FRI,FWS						Excellent
Aug 16	G 2.7	FRI	20,000	700	200		10 king	Sev. dead chum. Sev. 1,000 off mouth
Aug 29	G 2.7	FRI	4,500	4,000	5,000			
Sep 9	G 1.5	FRI	300	4,000	6,500		2,500 coho	
1951								
July 21	G 2.7	FRI	6,450	0	1,150	0		Several 1,000 off mouth
July 25	A 2.7	FRI						8,700 salmon. Jumps in Boca de Quadra
July 28	G 2.7	FRI	56,500	0	1,900	0	80 king	Pink, chum off mouth
Aug 5	G 2.7	FRI	71,500	60	2,100	300	120 king	Very few off mouth
Aug 17	G 1.5	FRI						Estimate impossible. River high
Aug 30	G 1.5	FRI	8,700	1,400	1,425	30	300 coho	Some chum, coho in bay
1952								
July 21	G 2.7	FRI	700	0	500	0	30 king	Very few off mouth
July 26	A 6.0	FRI						6,800 salmon. None at mouth. Schools in l
July 27	G 2.7	FRI	7,460	0	950	0	328 king	>1,000 off mouth
Aug 6	G 2.7	FRI	24,800		625	200	462 king	Most fish in first 1/2 mile
Aug 21	G 1.0	FRI	1,230	1,700	40	50		Coho present
Sep 23	A	FRI						4,000, mainly chum. Few coho, king
1953								
July 19	G .0	FWS						Small schools above high tide mark
July 21	G 2.7	FRI	1,250	0	1,520	0	18 king	Fish moving up
July 23	A .0	FWS						Poor. Good run going into river
July 24	A 1.0	FWS	<1,000					Poor. 2 jumpers at head of Keta Arm
July 28	A 6.0	FWS						4 jumpers at mouth of Swan Creek
July 29	G 2.7	FRI	7,600		1,250		150 king	

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1953								
July 29	G .0	FWS						Few fish present
Aug 3	A 8.0	FWS						Poor. 13,000 present
Aug 6	G 2.7	FRI	7,000	0	1,210	25	156 king	None off mouth. Run appears to be in
Aug 17	G 2.7	FRI	3,850	320	780	90	63 king	Many new chum
Aug 17	A 2.0	FWS						Poor. 10,000 new fish present
Aug 25	A 2.5	FWS						Poor. 3-4,000 new fish in schools
Aug 29	G .0	FWS						No fish present or in arm
Sep 4	G .0	FWS						Chum, pink entering river
Sep 11	G .0	FWS						Chum, pink entering river
Sep 14	G .0	FWS						Poor. Chum, pink entering river
1954								
Aug 3	A 2.7	FRI	2,400		1,000			3-5,000 at mouth
Aug 7	G 2.7	FWS						Poor. Few 1,000 mixed
Aug 12	A 2.7	FRI	12,500		2,000			Some off mouth
Aug 23	A 2.7	FRI	7,500				300 king	Some chum. Many dead
Sep 27	A 2.7	FRI	100		6,000			Few dead chum, pink. 5,000 chum above marker
1955								
July 24	A 2.7	FRI	1,100					1,000 pink above marker. 1,000 king
July 31	A 2.7	FRI	2,200					Several 1,000 near mouth
Aug 1	G	FWS	2,200					
Aug 21	A 2.7	FRI	1,300					Chum present
Aug 23	A 2.7	FRI	1,600					
Aug 26		FWS	1,000					
1956								
July 14		FWS	1,000					
July 18		FWS						10,000 chum, pink estimated
July 23	A 2.7	FRI	11,000	3,000				1,500 king above marker
July 31	A 2.7	FRI	20,000					Some dead pink. >2,000 pink above marker
July 31		FWS	25,000					
Aug 6		FWS	23,400		2,600			
Aug 9		FWS	36,700		4,100			
Aug 13	A 2.7	FRI	10,000					Some king above marker
Aug 16		ADF,FWS	12,000					Many dead
Aug 26		FWS			1,000			
Sep 8	G 2.5	FWS	150		1,500		40 coho	200 pink at mouth
1957								
July 28	A 2.7	FRI	300	0	1,700	0		2,000 chum, 2,000 pink, 200 king above marker
July 30		FWS			600			
Aug 9		FWS	200		300			
Aug 10	A 2.7	FRI	2,500	0	500			500 king above marker
Aug 11	A 2.7	FRI	4,000					500 off mouth
Aug 19	A 2.7	FRI	500		300			Few dead chum, pink. 200 king above marker spawning
Sep 1	A 2.7	FRI	1,000					Some chum. Few dead chum, pink
Sep 8	A 2.7	FRI			5,000			Some pink


High
Tide
Grassflats
N
.5 mile
25 - 30 f

KETCHIKAN, BOCA DE QUADRA, BADGER BAY, N. shore at head

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Good in the limited area available.
STREAM TEMPERATURES Warm range (estimated). No temperature records.
VALLEY DESCRIPTION A short valley, less than 2 miles long, extends N. in line with Badger Bay. A low rock ridge borders the west side and a high, relatively steep slope borders the east side. The valley is stream-cut in folded sedimentary rock structure.
DRAINAGE A small lake lies at the head of the short valley and may have high water outlets into both branches. A large lake draining into Bakewell Lake in Smeaton Bay lies just beyond over a very low divide. Precipitation-fed, less than 2 square miles.
STREAM MOUTH IDENTIFICATION Enters woods at the center of the inlet through grass flats. The intertidal channel pass by the W. shore at the half tide point.
ANCHORAGE 25 to 30 fathoms throughout bay. Anchorage .6 miles from head clear.
TRAILS AND SURVEY ROUTES Game trails not useful on foot surveys. Creek bed easily walked.
AERIAL SURVEY NOTES Not surveyed by air. Creek is pass to Smeaton Bay via K 31.

INTERTIDAL ZONE

LENGTH .5 miles AVERAGE WIDTH/DEPTH 15'/6"
GRADIENT AND VELOCITIES <1° at 1-2' per second
BOTTOM Sand and gravel.
LOW TIDE LOCATION Below confluence with small stream on E. shore.
HIGH TIDE LOCATION At entry into woods. No marker.
SCHOOLING AREAS None.
SPAWNING AREAS Limited area below high tide.
GENERAL NOTES

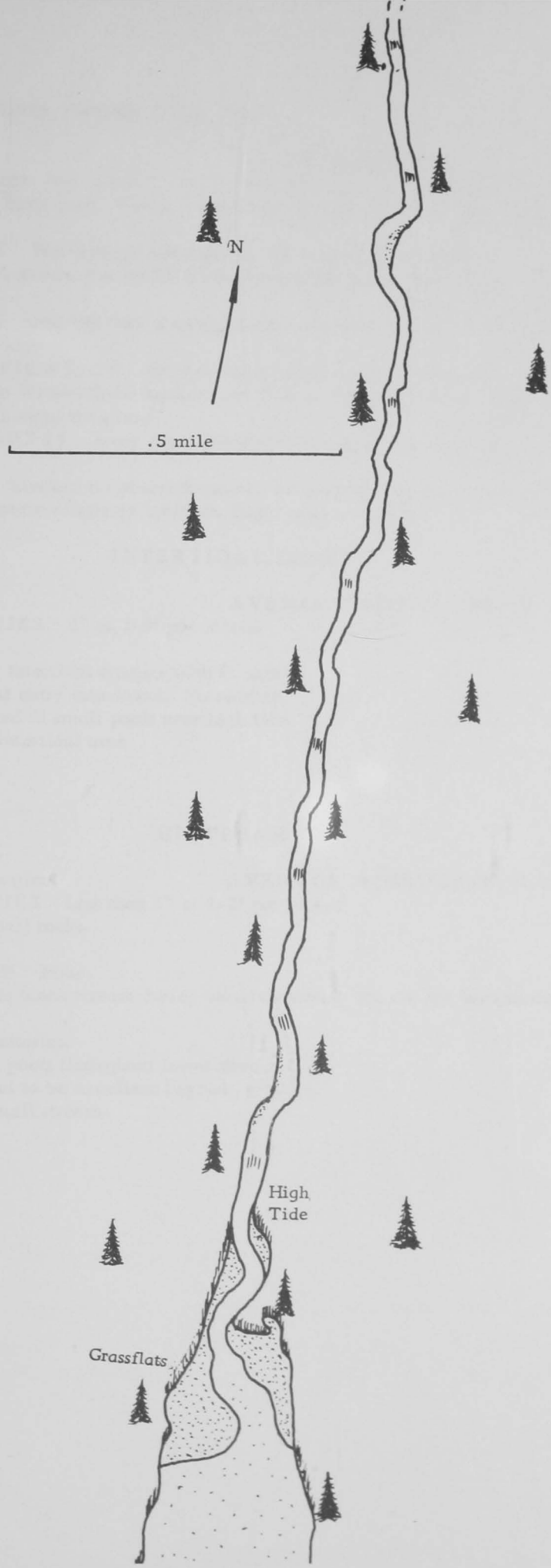
UPSTREAM

LENGTH ACCESSIBLE >.9 miles AVERAGE WIDTH/DEPTH 10'/10"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Sand and gravel.
MARKER DISTANCE None.
MARKER IDENTIFICATION
BARRIERS None noted.
TRIBUTARIES Forks a short distance above high tide. The N. fork has longer access.
SCHOOLING AREAS None noted.
SPAWNING AREAS Spawning observed to be greatest in lower stream.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1938								
Sep 8		FWS	150					4,500 off mouth
1939								
Sep 16	G .3	FWS						Poor. Small schools off mouth, few in stream
1940								
Sep 18	G .3	ASI,FWS	10,000					Excellent. Few chum
1941								
Oct 5	G 1.0	FWS	3,000					Many dead fish. Indications good
1946								
Oct 2	A	ASI,FWS						Poor
1947								
Sep 16	G 1.0	FRI	1,200		5			Poor. 150 off mouth
Sep 29	G .3	ASI						No fish


N
.5 mile
High
Tide
Grassflats

KETCHIKAN, BOCA DE QUADRA, WEASEL COVE, Head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <5,000
SPAWNING FACILITIES Very good. This is a small stream typical of hundreds of late streams in Southeastern Alaska.
STREAM TEMPERATURES Warm range (estimated). No temperature records available.
VALLEY DESCRIPTION A stream-cut valley in folded sedimentary rock structure, generally found in this area. Valley runs S.W. to N.E.
DRAINAGE Precipitation fed. Area less than 2 square miles. No lakes, some muskeg and limited timber in drainage area. Bare rocks along E. ridge.
STREAM MOUTH IDENTIFICATION Stream enters woods on W. side of grass flats.
ANCHORAGE .5 miles inside Weasel Cove entrance in 17 to 19 fathoms. Small vessels may anchor near the delta drop-off. Entrance and anchorage are clear.
TRAILS AND SURVEY ROUTES Some game trails along stream, but not of use on foot surveys. Stream bed offers best route.
AERIAL SURVEY NOTES Limited air observations can be made during good light and water conditions. The relatively straight stream course allows an optimum flight path for vision.

INTERTIDAL ZONE

LENGTH .4 miles AVERAGE WIDTH/DEPTH 25'/10"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Sand and gravel.
LOW TIDE LOCATION At intertidal contact with E. shore.
HIGH TIDE LOCATION At entry into woods. No marker.
SCHOOLING AREAS Limited to small pools near high tide.
SPAWNING AREAS Upper intertidal area.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >2 miles AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Sand, gravel and small rocks.
MARKER DISTANCE None.
MARKER IDENTIFICATION None.
BARRIERS Numerous windfalls block stream during very low water, but are not barriers during normal stream levels at the end of Sep.
TRIBUTARIES No major tributaries.
SCHOOLING AREAS Small pools throughout lower stream.
SPAWNING AREAS Reported to be excellent beyond .4 miles.
GENERAL NOTES A good small stream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1928								
Sep 6		FWS	600		400			
1938								
Sep 8		FWS	200					5,000 off mouth
1939								
Sep 16	G 1.5	FWS	2,500					Fair. 4,000 off mouth
1940								
Sep 7	G 2.0	FWS	800					Poor. 2,000 off mouth
Sep 28	G .3	ASI,FWS	15,000					Excellent. 3,000 off mouth
1941								
Oct 5	G .5	FWS	1,500					Poor
1943								
Sep 19	G .8	FWS	8,000					Fair. 10,000 off mouth
1947								
Sep 16	G 1.0	FRI	2,500		50			Poor
Sep 28	G 2.0	ASI						Only 1/4 as many as could be handled
1954								
Sep 26	G .5	FWS	850		50			Fair
1956								
July 8		FWS	1,200					
Aug 21		FWS	1,800					
Sep 3		FWS	2,000					
Sep 8	G 2.0	FWS	60,000		400			
1957								
Season	A	FWS						Very poor. Few fish showing

101-42 K 26A
N55°16.8 W130°53 No Previous No.

KETCHIKAN, REVILLAGIGEDO CHANNEL, BOCA DE QUADRA, N. shore 2 miles W. of Orca Point

MAJOR SPECIES OTHER SPECIES
ESCAPEMENT TIMING ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES (Aerial inspection of upstream portions only). There are extensive pond areas which might be suitable for coho. Spawning riffles are available.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Stream cut valley heading in ridge N. of outer Boca de Quadra. It follows a long relatively flat muskeg valley floor for several miles before descending rapidly to its mouth in the inlet. Valley direction is relatively straight, apparently following geologic structures.
DRAINAGE Precipitation fed through muskeg areas. Dark colored water. Many long deep pools upstream.
STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES Aerial visibility restricted by water coloration.

INTERTIDAL ZONE

LENGTH AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES Intertidal zone is very short and steep and has only very limited gravel areas near high tide.

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Reported to have a number of bedrock rapids and falls that may be barriers to salmon migration. However, aerial observations have been very limited.
TRIBUTARIES

SCHOOLING AREAS

SPAWNING AREAS

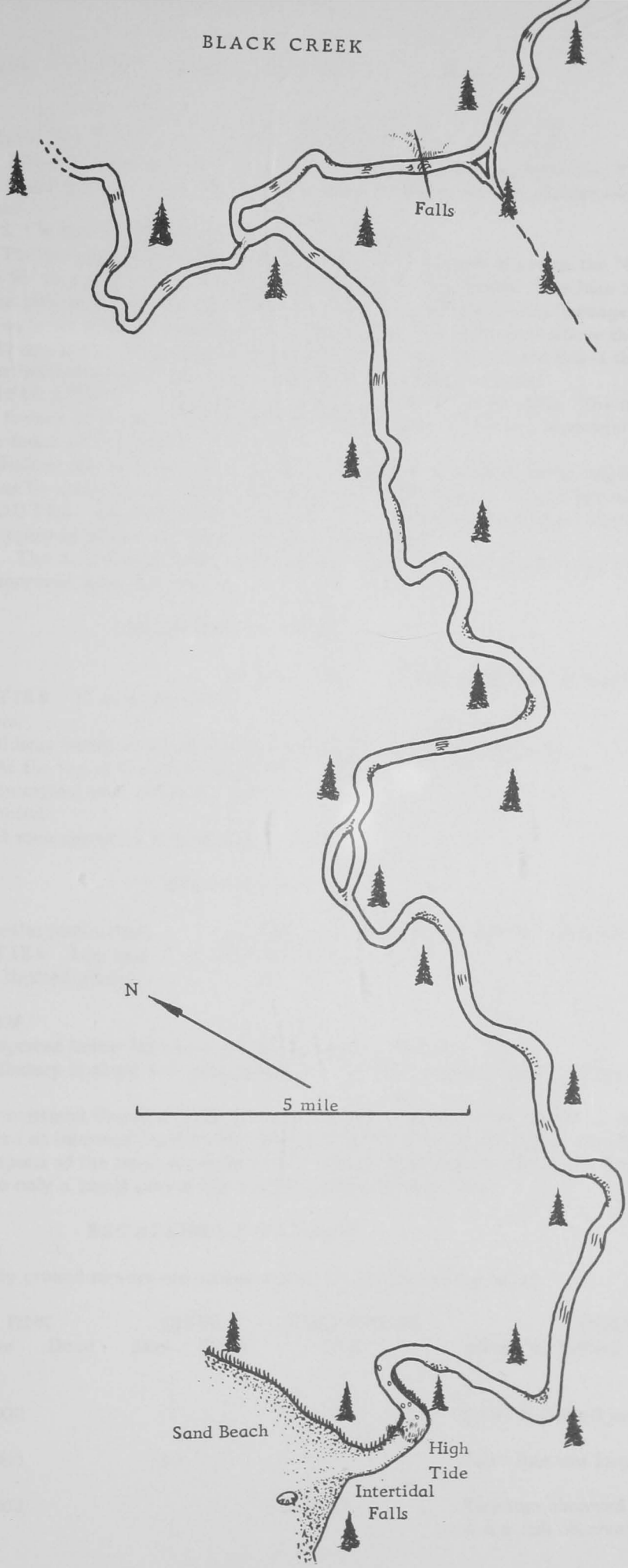
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

BLACK CREEK



KETCHIKAN, REVILLAGIGEDO CHANNEL, BLACK ISLAND COVE

MAJOR SPECIES Pink OTHER SPECIES Chum, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited. The stream has extensive areas of bedrock and boulders. The gravels are suitable for spawning, but found only at points between slow water and bedrock and boulder areas. Gravel areas are more abundant upstream.
STREAM TEMPERATURES Warm range (estimated). 52° F., 9/10/50.
VALLEY DESCRIPTION The stream flows through lowland flats. The headwaters are on the N. slope of North Quadra Mountain and flow W. to a lake 3 air miles from the mouth of Black Creek. The lake is about 1.5 miles long. The stream below the lake is precipitous and falls visible from the air may block passage.
DRAINAGE The drainage area is estimated at less than 15 square miles. The mountains above the headwaters are usually bare of snow by July and the major source of discharge during late summer and fall is through precipitation. The dark color of the water indicates that muskeg is extensive in the drainage system.
STREAM MOUTH IDENTIFICATION The stream mouth has a small intertidal falls. The mouth lies in the S.E. corner of small bight formed by a small peninsula E. of Black Island. There is a long sand beach N. of the stream mouth. Garnets are found on this beach.
ANCHORAGE The bight is shallow and contains rocks. Small boat anchorage may be found inside of the island. Approach to the drop-off can be along the N. side of the peninsula. Anchorage is in sand bottom.
TRAILS AND SURVEY ROUTES No trails other than game trails. Walking during normal water levels is not difficult. The bottom is slippery in places and pools can be passed easily.
AERIAL SURVEY NOTES The dark stream bottom and colored water limit the visibility for counting salmon. This stream is not usually surveyed from the air.

INTERTIDAL ZONE

LENGTH .1 mile AVERAGE WIDTH/DEPTH 30'/24"
GRADIENT AND VELOCITIES 1° at 1' per second
BOTTOM Bedrock and boulders.
LOW TIDE LOCATION Midway between the stream mouth and the end of the peninsula.
HIGH TIDE LOCATION At the top of the intertidal falls.
SCHOOLING AREAS The intertidal pool below the falls.
SPAWNING AREAS None noted.
GENERAL NOTES Intertidal zone spawning is negligible.

UPSTREAM

LENGTH ACCESSIBLE 4 miles (estimated) AVERAGE WIDTH/DEPTH 40'/24"
GRADIENT AND VELOCITIES Less than 1° at 1' per second
BOTTOM Bedrock, boulders, limited gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Falls and rapids reported below lake may prevent passage of salmon.
TRIBUTARIES One small tributary is about 3.5 miles upstream. It is not considered to be important as a spawning area.
SCHOOLING AREAS Pools scattered throughout the lower 1.5 miles of stream offer shelter for schooling salmon.
SPAWNING AREAS Scattered at intervals between the pools and bedrock areas throughout first 1 1/2 miles of stream.
GENERAL NOTES Earlier reports of the large capacity of this stream for salmon are in error. The spawning areas are good, but are limited to only a small part of the stream accessible to salmon.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 11	G .5	FWS	1,000					Poor. 2,000 off mouth
1947								
Oct 5	G .8	FRI	1,000		50			Fair. Run was largely over
1950								
Sep 10	G 1.5	FRI	1,000				100 coho	No chum observed
Sep 30	A 5.0	FRI						A few fish observed

101-41 K 28
N55°10.5 W131°04.5 Previous No. 23

KETCHIKAN, REVILLAGIGEDO CHANNEL, North cove 1.5 miles S. of Point Sykes

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Flows across flat lowland W. of Behm Mountain.
DRAINAGE Precipitation fed drainage. Muskeg areas in drainage system. Drainage area less than 4 square miles.
STREAM MOUTH IDENTIFICATION At head of N. cove 1.5 miles S. of Point Sykes.
ANCHORAGE In cove. Best anchorage is in the lee of the point on the S. side of the cove in 8 to 10 fathoms, rock and sand bottom.
TRAILS AND SURVEY ROUTES Trail reported on N. side of stream.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES Less than 1° at 1' per second
BOTTOM Rocks, boulders and sand.
HIGH TIDE LOCATION At the stream entry into the woods.
SCHOOLING AREAS None noted.
SPAWNING AREAS Limited in upper intertidal area.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >1 mile AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES Less than 1° at 1' per second (in first mile)
BOTTOM Boulders and sand (in first 1/2 mile).
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None noted in first mile.
TRIBUTARIES None.
SCHOOLING AREAS

SPAWNING AREAS Spawning noted in sandy areas (1947). Area of splits about 1 mile upstream may offer spawning areas (estimated from aerial photo).
GENERAL NOTES A very small pond lies to the S. of the stream .5 miles upstream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 5	G .8	FRI	400					Poor

101-41 K 28A
N55°10 W131°04.2 Previous No. 23A

KETCHIKAN, REVILLAGIGEDO CHANNEL, South cove 1.5 miles S. of Point Sykes

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Very limited.
STREAM TEMPERATURES Warm range.
VALLEY DESCRIPTION Stream cut in lowland flats.
DRAINAGE Precipitation fed. Short drainage through muskeg areas, several small ponds about 1 mile upstream. Less than 2 square miles (estimated).
STREAM MOUTH IDENTIFICATION In south cove head. Beach adjoins stream mouth.
ANCHORAGE See anchorage, K28.
TRAILS AND SURVEY ROUTES
GENERAL NOTES This is not an important salmon stream. Though salmon have been observed in the stream, it is very doubtful if more than several hundred salmon will spawn here.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

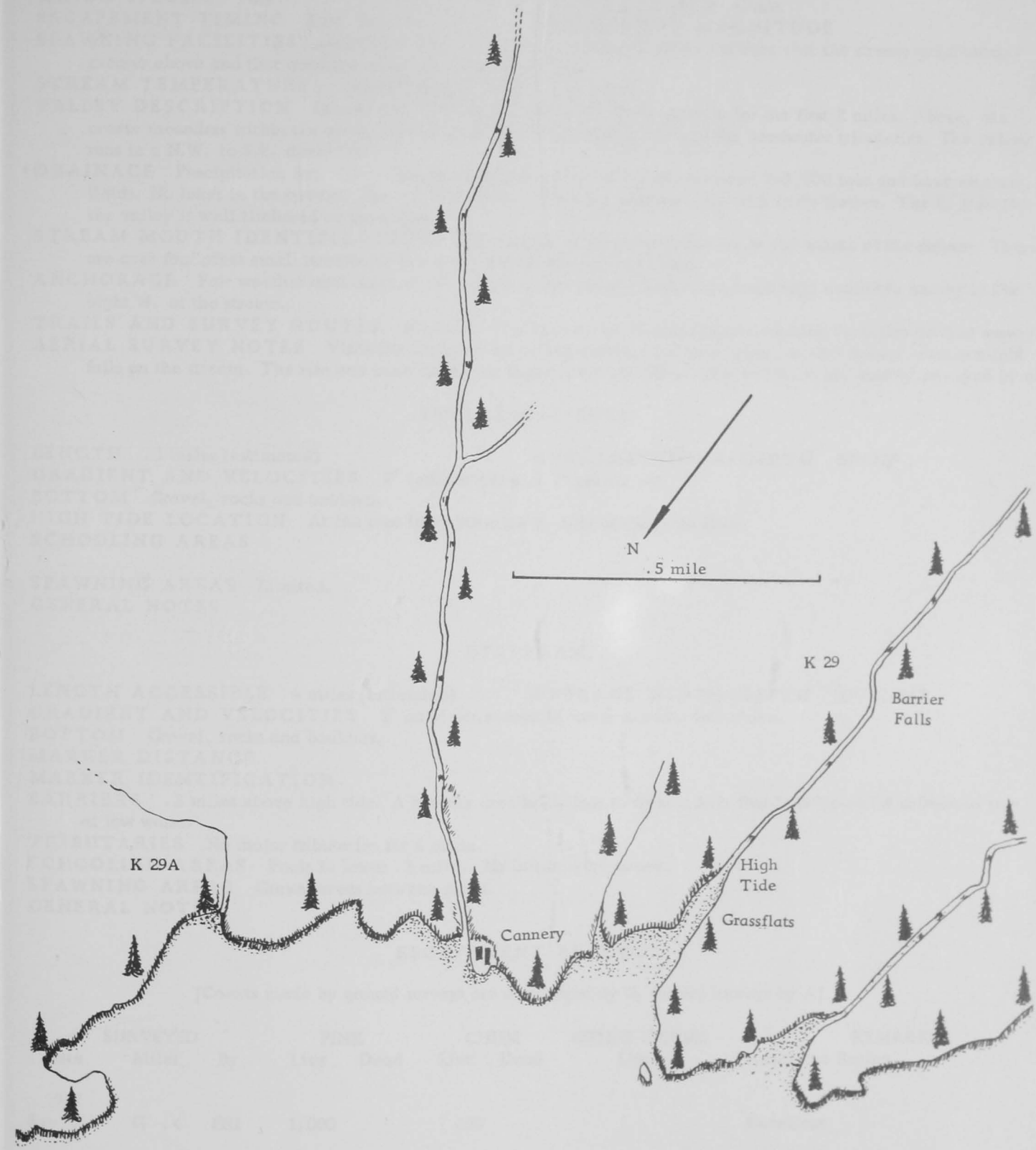
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 5	G .2	FRI	25		0			Poor. None at mouth


N
.5 mile
K 29
Barrier
Falls
K 29A
High
Tide
Grassflats
Cannery

KETCHIKAN, BEHM CANAL, Midway between Point Sykes and Point Nelson

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited in first .3 miles. Aerial observations indicate that the stream gradient decreases above and that good spawning areas are available.
STREAM TEMPERATURES Normal range. 49.1°F., 9/16/47.
VALLEY DESCRIPTION Stream cut. The stream bed is relatively straight for the first 2 miles. Above, the course meanders within the same general direction for another 2 miles to the headwater tributaries. The valley runs in a N.W. to S.E. direction.
DRAINAGE Precipitation fed. The ridges on each side of the valley are between 2-3,000 feet and have no snow fields. No lakes in the system. The W. side of the valley has muskeg areas with little timber. The E. side of the valley is well timbered to the ridges.
STREAM MOUTH IDENTIFICATION The remains of an old cannery are at the mouth of the stream. There are over four other small streams in this area, but all are smaller in size.
ANCHORAGE Fair weather anchorage at the mouth of the stream. Overnight anchorage available nearby in the bight W. of the stream.
TRAILS AND SURVEY ROUTES No trails. The stream bed offers adequate walking facilities for foot survey.
AERIAL SURVEY NOTES Visibility from the air is very restricted during sunny weather except when sunlight falls on the stream. The size and trees lining the banks limit visibility. This stream is not usually surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles (estimated) AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES 2° (estimated) at 2-3' per second
BOTTOM Gravel, rocks and boulders.
HIGH TIDE LOCATION At the tree line above the E. side of the grass flats.
SCHOOLING AREAS

SPAWNING AREAS Limited.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE 4 miles (estimated) AVERAGE WIDTH/DEPTH 20'/12-14"
GRADIENT AND VELOCITIES 2° at 3' per second in lower stream, less above.
BOTTOM Gravel, rocks and boulders.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS .3 miles above high tide. A boulder area holds logs to form a falls that is difficult for salmon to pass at low water.
TRIBUTARIES No major tributaries for 4 miles.
SCHOOLING AREAS Pools in lower .3 miles. No information above.
SPAWNING AREAS Gravel areas between pools.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 16	G .4	FRI	1,000		250			Excellent

KETCHIKAN, BEHM CANAL, SMEATON BAY, S.E. corner of Carp Island anchorage

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep. ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Very limited. Rated by most observers as poor. Gravel areas are in short sections between boulders and bedrock.
STREAM TEMPERATURES Warm range. 54.5°F., 9/2/47; 46°F., 0830, 9/17/47.
VALLEY DESCRIPTION Stream cut through muskeg flats lying N. of mountains reaching less than 2,000'. A granite shelf just above high tide forms a falls. Granite throughout the area.
DRAINAGE Estimated 5-6 square miles. Precipitation fed. No snow fields. Muskeg flats along E. side of valley. Mountain ridge along W. side.
STREAM MOUTH IDENTIFICATION .4 miles S.E. of Carp Island. An extensive delta lies off the mouth. The intertidal stream bed lies in a stream cut trench through the upper intertidal zone along the E. side.
ANCHORAGE Behind Carp Island or just E. of the stream delta in sand bottom.
TRAILS AND SURVEY ROUTES Access to the falls by walking up stream banks.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Rock, boulders and some gravel.
HIGH TIDE LOCATION At tree line at first bend to the E.
SCHOOLING AREAS One pool below high tide.
SPAWNING AREAS None noted.
GENERAL NOTES

UPSTREAM

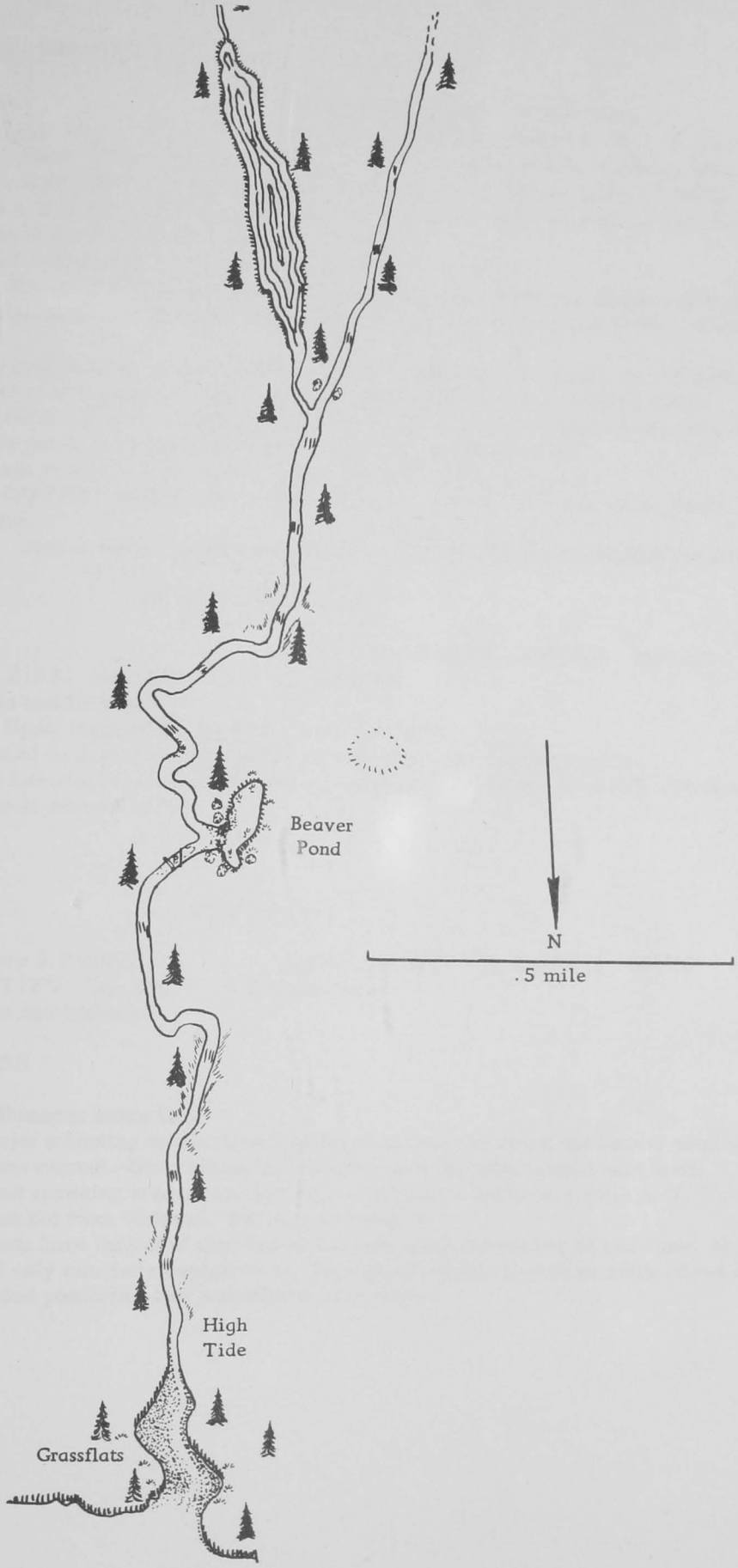
LENGTH ACCESSIBLE .2 miles AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Bedrock, boulders and limited gravel.
MARKER DISTANCE .2 miles.
MARKER IDENTIFICATION Falls.
BARRIERS Falls 16' high in a series of steps 1-3' high with the final step being vertical at 4'. Salmon have not been observed above.
TRIBUTARIES None below falls.
SCHOOLING AREAS Relatively large pool at base of falls.
SPAWNING AREAS Limited to small gravel areas below falls.
GENERAL NOTES This stream is not an important producer. The stream above the falls is judged to have good spawning facilities which could be made available by proper ladder facilities at the falls.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 13	G .3	FWS	1,000					Fair. 2,000 off mouth
1943								
Sep 18	G .5	FWS	3,000					Fair. 5,000 off mouth
1947								
Sep 17	G .3	FRI	60		1			
1948								
Aug 10	G .1	ASI	200					
1949								
Aug 26	G .1	FRI						No fish, low water
1951								
Sep 14	G .1	FRI	60	0	0	0		Some off mouth
1957								
July 24		FWS	1,000		1,000			Fair

SKULL CREEK



KETCHIKAN, BEHM CANAL, SMEATON BAY, .6 miles E. of Short Point

MAJOR SPECIES Pink, coho OTHER SPECIES Chum, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >5,000
SPAWNING FACILITIES Good. The first mile of stream is excellent pink salmon spawning area. Above the rocky rapids, the stream is slow with numerous pools and a small adjacent beaver pond 1.7 miles upstream. The stream velocities increase again above this area with good spawning facilities for over a mile. No information on accessibility of the lake 3.5 miles upstream.
STREAM TEMPERATURES Warm range. 50.6°F., 9/17/47.
VALLEY DESCRIPTION Stream cut. The stream lies in low flatlands between mountains running N.-S. The valley is muskeg with timber along the stream. The valley is about 6 miles long and heads 1 mile N. of Badger Bay in Boca de Quadra.
DRAINAGE 10 square miles (estimated). A small lake is 3.5 miles upstream, being about 1.3 miles long. Precipitation fed. A large part of the drainage system is muskeg and colors the water during floods.
STREAM MOUTH IDENTIFICATION The stream mouth is at the head of a small cove. A grass flat is on the W. side at the low tide point. A larger grass flat lies E. of the intertidal zone.
ANCHORAGE Good anchorage in cove off W. shore just outside of W. bank grass flats.
TRAILS AND SURVEY ROUTES Stream bed is easily walked on normal or lower water levels. Game trails on some sections of the bank.
AERIAL SURVEY NOTES Aerial survey possible on limited sections during good visibility conditions.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 30'/10"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Sand, gravel, rocks and boulders.
HIGH TIDE LOCATION Upper limit of the grass flats on the E. bank.
SCHOOLING AREAS Limited to deeper sections of the intertidal stream. No large pools.
SPAWNING AREAS Upper intertidal section above mid-tide riffles. Most of the intertidal area is rocky and only limited spawning gravels are available.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Over 2.7 miles AVERAGE WIDTH/DEPTH 30'/10"
GRADIENT AND VELOCITIES Less than 1° at 2-3' per second
BOTTOM Sand, gravel, rocks and bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported.
TRIBUTARIES No major tributaries below lake.
SCHOOLING AREAS A major schooling area is found upstream in the area about the beaver pond section. This area has deep pools with slow current. Observations in this area have included salmon and trout.
SPAWNING AREAS The best spawning areas occur just below and above the beaver pond area. The .9 miles of stream below the lake has not been observed, but may be suitable.
GENERAL NOTES Past reports have indicated that this stream was quite productive at one time. More recent observations have disclosed only moderate escapements. Though no reports have been made of red salmon in this system, there is a good possibility that a small run may occur.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 13	G 3.0	FWS	5,000		1,000			Fair. 3,000 off mouth
Sep 29	G 1.5	FWS	15,000					Fair
1942								
Sep 21	G .5	ASI	3,000		300			Excellent
1943								
Sep 18	G 1.0	FWS	15,000					Fair. 4,000 off mouth
1947								
Sep 17	G 2.5	FRI	700				10 coho	Good
Sep 25	G 1.5	ASI						Fair. Some pink
1948								
Aug 10	G 1.0	ASI						No fish in stream
1949								
Aug 26	G .5	FRI	50					
1950								
Sep 18	G 3.8	FRI	520		1		80 coho	100 off mouth
1951								
Sep 14	G .1	FRI	1,800	0	0	0		Many fish in bay
1957								
July 24		FWS	600					

KETCHIKAN, BEHM CANAL, SMEATON BAY, S. shore 2 miles E. of Carp Island

MAJOR SPECIES Pink
OTHER SPECIES Chum and coho
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE 2,000
SPAWNING FACILITIES Limited. Some good spawning gravels available.
STREAM TEMPERATURES Warm range. 52.5°F., 9/2/47.
VALLEY DESCRIPTION Stream cut. Valley lies between low ridge on the W. side and a high ridge to the E. Heavy wooded stream banks.
DRAINAGE 3 square miles (estimated). A wooded drainage with some bare rock areas on the high slope to the E. of the stream. Some muskeg areas adjacent to the stream bed 1-2 miles upstream. Precipitation fed. No lakes or ponds.
STREAM MOUTH IDENTIFICATION A broad intertidal delta with grass flats lying on the S. side of the bay just E. of the fjord sill.
ANCHORAGE Day-light anchorage at the drop-off point near the W. shore of the bight.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Restricted aerial visibility.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH 20'/10"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Sand, gravel and rock.
HIGH TIDE LOCATION At entry into woods.
SCHOOLING AREAS Shallow pools near high tide.
SPAWNING AREAS Limited to upper intertidal.
GENERAL NOTES No reported heavy intertidal spawning.

UPSTREAM

LENGTH ACCESSIBLE Over .3 miles
AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Sand, gravel, rocks and some boulders.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Several log jams upstream are effective barriers during low water, but are probably passable during normal and high water levels.
TRIBUTARIES None other than small trickles.
SCHOOLING AREAS In shallow pools.
SPAWNING AREAS Throughout first .2 miles. Information lacking for upstream area. Presence of coho fry in the stream indicates that the upstream is accessible for some distance to coho.
GENERAL NOTES This stream has a small split starting .1 miles above high tide and meets again just below high tide.

ESCAPEMENT RECORDS

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 13	G .3	FWS	500					Fair. 1,000 at mouth
1941								
Sep 27	G .3	FWS	1,000					Good
1948								
Aug 26	G .5	FWS						No fish seen
1949								
Aug 26	G .0	FRI						No fish seen, water very low
1951								
Sep 14	G .0	FRI	200	0	0	0		Fish in lower intertidal zone

101-32 SHERIDAN CREEK K 31B
N55°17.8 W130°47.3 Previous No. 27A

KETCHIKAN, BEHM CANAL, SMEATON BAY, S. shore opposite Cabin Cove

MAJOR SPECIES Coho OTHER SPECIES Cutthroat trout
ESCAPEMENT TIMING Late. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Very limited in first 4 miles.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut in folded geologic structure, some evidence of glacial erosion. Flat valley bottom with muskeg and beaver pond areas. Timbered slopes.
DRAINAGE Precipitation fed. Muskeg and beaver ponds. 6-7 square miles (estimated).
STREAM MOUTH IDENTIFICATION Intertidal falls visible from Smeaton Bay in line with Cabin Cove.
ANCHORAGE None.
TRAILS AND SURVEY ROUTES None. May be walked during normal water levels with some difficulty in the first .4 miles to the upper valley.
AERIAL SURVEY NOTES Colored water and dark bottom prevent adequate visibility in upper valley stream. First .4 miles steep and heavily wooded.

INTERTIDAL ZONE

LENGTH 100' AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES Over 3° at 3-5' per second
BOTTOM Bedrock.
HIGH TIDE LOCATION Just above intertidal falls.
SCHOOLING AREAS None.
SPAWNING AREAS None.
GENERAL NOTES This stream falls directly into the bay. At low tide an impassable falls is bared.

UPSTREAM

LENGTH ACCESSIBLE Over 4 miles AVERAGE WIDTH/DEPTH 15-40'/1-3'
GRADIENT AND VELOCITIES Over 3° at 3-4' per second in first .4 miles, less than 1° above
BOTTOM Boulders for .4 miles. Sand above.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS The first .4 miles is swift with considerable white water that may be an effective barrier to pink and chum. However, coho and cutthroat trout are found in the upper stream.
TRIBUTARIES None.
SCHOOLING AREAS None noted.
SPAWNING AREAS None reported.
GENERAL NOTES The upper valley is flat and the stream course meanders through muskeg and beaver pond areas. The cutthroat population is known to be stunted.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 13	G	FWS						Fair showing

KETCHIKAN, BEHM CANAL, SMEATON BAY, BAKEWELL ARM, S. shore .9 miles from head

MAJOR SPECIES
OTHER SPECIES
ESCAPEMENT TIMING
EXCAPEMENT MAGNITUDE

SPAWNING FACILITIES Very limited. The falls .2 miles upstream completely block all salmon migration. The stream bed below the falls and in the intertidal is bedrock and boulders. However, fish ladder construction began in 1958 and will open the lake and its tributaries to salmon and trout.

STREAM TEMPERATURES Warm range (estimated). Bakewell Lake, 4 miles long, has been observed with high summer surface temperatures.

VALLEY DESCRIPTION Glacial lake system. Two lakes fill about 6 miles of the over 10 mile long valley and are bordered on the E. by high mountains with steep cliffs. Bakewell lake runs S. W. and about 1.5 miles of connecting stream turn westerly to the smaller second lake which heads near the head of Badger Bay in Boca de Quadra.

DRAINAGE 12 square miles (estimated). Snow fields and precipitation fed. One large tributary to Bakewell Lake drains the eastern ridge and snow field area. The other major tributary enters the head of Bakewell from the second lake 1.5 miles W.

STREAM MOUTH IDENTIFICATION A broad delta lying just E. of the second point on the S. shore from the head. A Forest Service trail marker is visible several hundred feet E. of the stream.

ANCHORAGE Good anchorage off shore from the Forest Service trail marker.

TRAILS AND SURVEY ROUTES A good trail to the lower lake does not follow the river. Walking along the river is very difficult.

AERIAL SURVEY NOTES The stream below the falls is not surveyed by air.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

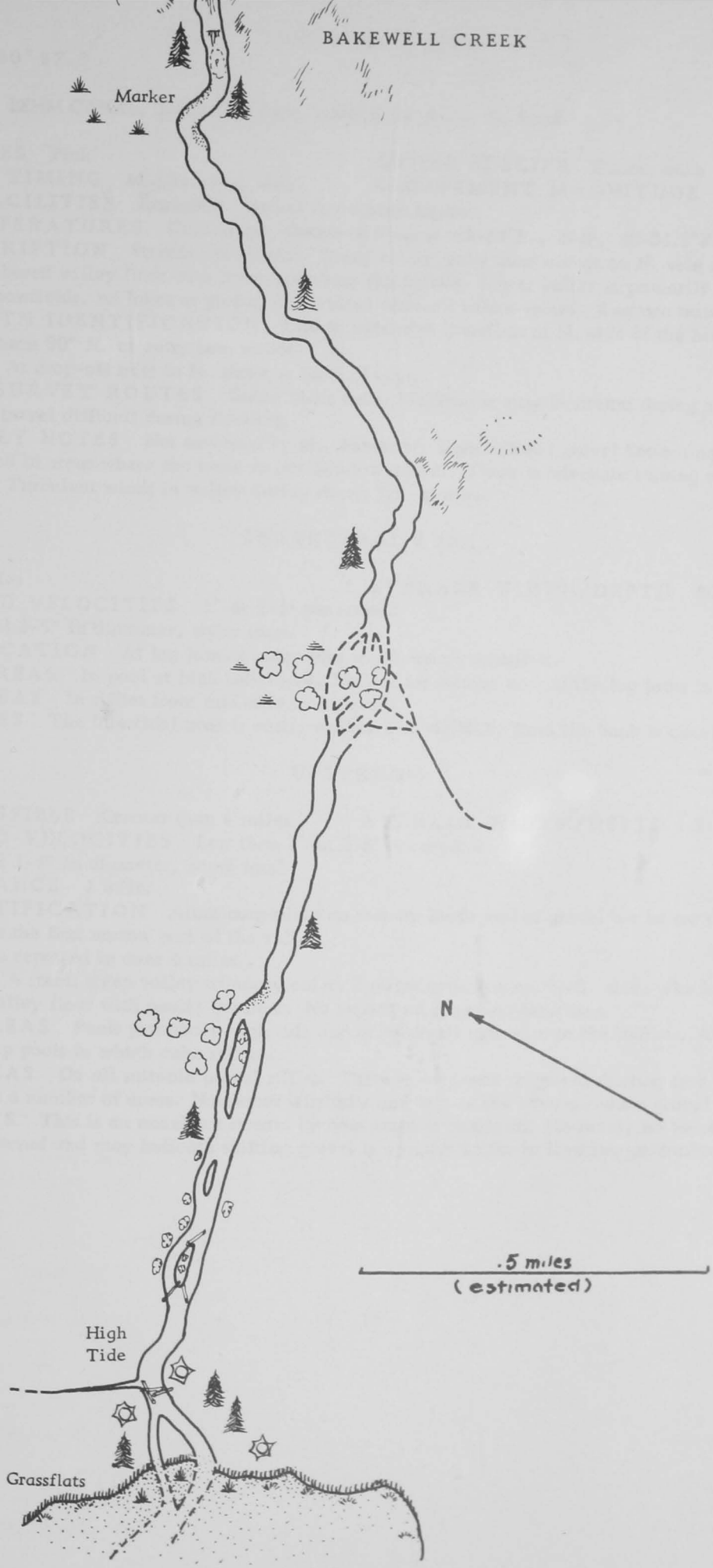
LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating


BAKEWELL CREEK
Marker
N
.5 miles
(estimated)
High
Tide
Grassflats

KETCHIKAN, BEHM CANAL, SMEATON BAY, BAKEWELL ARM, N. head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE 10,000
SPAWNING FACILITIES Excellent. Gravel throughout stream.
STREAM TEMPERATURES Cold range. Observed ranges: 45-50°F., 1949; 45-51.5°F., 1950.
VALLEY DESCRIPTION Stream cut glacial. Steep valley walls most abrupt on N. side and at the head of the valley. Timbered valley floor with brush and alder throughout. Lower valley is primarily gravel.
DRAINAGE Snowfields, no lakes or ponds, high ridges surround entire valley. 8 square miles (estimated).
STREAM MOUTH IDENTIFICATION Lies in extensive grassflats at N. side of the head of Bakewell Arm. Stream bed turns 90° N. at entry into woods.
ANCHORAGE At drop-off next to N. shore at head of arm.
TRAILS AND SURVEY ROUTES Game trails only. Walking is easy in stream during normal to low water levels. Foot travel difficult during flooding.
AERIAL SURVEY NOTES Not surveyed by air. However, light colored gravel bottom and clear water make visibility good in areas where the trees do not obscure stream. There is adequate turning radius upstream for light planes. Turbulent winds in valley during strong S.E. storms.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 50'/18"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Gravel 3-5" in diameter, some sand.
HIGH TIDE LOCATION At log jam at entry into woods above grassflats.
SCHOOLING AREAS In pool at high tide mark. Shelter for salmon around the log jams in this area.
SPAWNING AREAS In riffles from mid-tide to high tide.
GENERAL NOTES The intertidal area is easily walked and visibility from the bank is excellent.

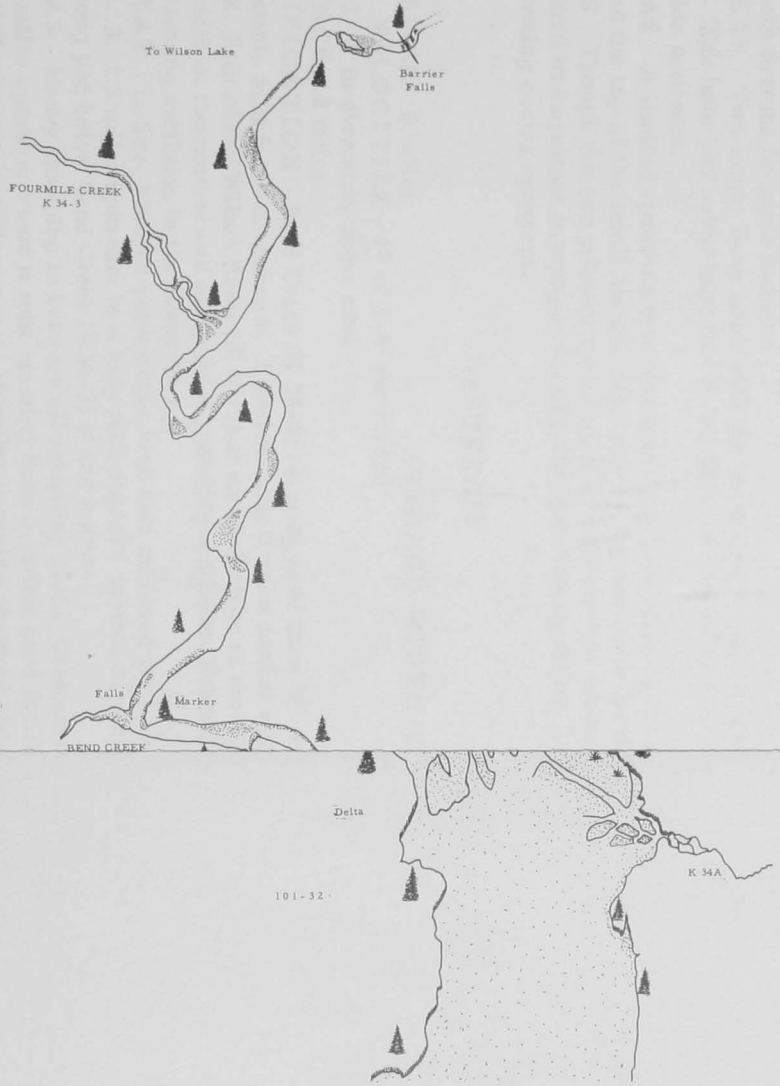
UPSTREAM

LENGTH ACCESSIBLE Greater than 4 miles AVERAGE WIDTH/DEPTH 30-40'/12-24"
GRADIENT AND VELOCITIES Less than 1° at 2-3' per second
BOTTOM Gravel 1-4" in diameter, some sand.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION Aluminum plate on tree on lower end of gravel bar below series of deep holes. This area is in the first narrow part of the valley.
BARRIERS None reported in over 4 miles.
TRIBUTARIES A small steep valley tributary enters 2 miles upstream on the S. side. The lower tributary is in the main valley floor with gentle gradient. No reports on spawning facilities.
SCHOOLING AREAS Pools just above high tide and at intervals upstream to the marker. Above the marker are a series of deep pools in which coho school.
SPAWNING AREAS On all suitable gravel riffles. There is evidence of gravel shifting in a number of places which restricts a number of areas. Numerous windfalls and logs in the stream reduce gravel movement.
GENERAL NOTES This is an excellent stream by comparative standards. However, no large runs of salmon have been observed and may indicate shifting gravel is a major factor in limiting production.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1928								
Oct 8		FWS	4,000					
1937								
Sep 29		FWS	1,500		1,500			Poor
1939								
Sep 13	G .3	ASI,FWS	2,000					Poor
1940								
Sep 13	G 2.5	FWS	3,000		1,000			Fair. 2,000 off mouth
1941								
Sep 26	G 1.5	FWS	40,000					Good
1945								
Sep 17	G .8	FWS	20,000					Good. Few chum
1946								
Oct 11	G .5	ASI,FWS						Poor to fair
1947								
Sep 24	G .5	FRI	3,000		600			Fair
1948								
Aug 11	G 2.5	ASI	2,404	4	602	2		
Aug 24	G .8	ASI						None observed. Water silted
Aug 25	G 1.0	FWS			5,000			Poor
Aug 29	G 3.5	ASI	3,145	100	315	10	8 red	
Sep 9	G 1.5	ASI	1,050	20	50			
Sep 16	G 2.0	ASI	910	50	260	10		
Sep 23	G 1.5	ASI	6,010	10	78			
Oct 6	G 1.8	ASI	950	200	700	700		
1949								
Aug 8	G 1.5	FRI	2,006	67	6		1 red	
Aug 18	G 2.0	FRI	4,400	150	30		200 coho	
Aug 31	G 2.0	FRI	3,750	300	4		50 coho	
Sep 11	G 2.0	FRI	1,710	58	32	6	1 coho, 11 red, 2 dead red	
Sep 26	G 2.0	FRI	1,700	150	200		2 coho	
1950								
July 22	G 1.3	FRI	74					
July 28	G 1.0	FRI	500		8			1,000 off mouth
Aug 7	G 1.0	FRI	1,426		11			Very few off mouth
Aug 13	G 1.0	FRI	1,429		2		8 red	
Aug 23	G 4.5	FRI	1,690		44		27 red	
Sep 2	G 1.5	FRI	861		73		12 red	
Sep 10	G 1.8	FRI	603		189		39 red	Small school off mouth
Sep 29	G 1.0	FRI	50		3		5 coho	
1951								
Aug 8	G .5	FRI	6,100	73	15	4		None seen off mouth
Sep 14	G .3	FRI	500	430	105	80	30 coho, 3 red	Very few off mouth
1952								
Aug 14	G 1.0	FRI	3,570	120	36	8		
1953								
July 3	G .0	FWS						No fish seen
July 26	G 1.0	ADF	410		17			
Aug 18	G .5	FRI	140	5	10	15	70 red	No great amount of fish
Aug 19	G .1	FWS	100		30		25 red	Poor
Aug 21	G 1.0	ADF	450		40		61 red	
1954								
July 31	G .5	ADF	50		0			
Aug 7	A	FWS						Poor. Small school at mouth
1956								
Aug 7	G .8	ADF	14					
Sep 1		FWS	300					
Sep 15	G .3	FWS	200		10			300 pink at mouth


To Wilson Lake
Barrier Falls
FOURMILE CREEK
K 34-3
Falls
Marker
BEND CREEK
Delta
K 34A

KETCHIKAN, BEHM CANAL, SMEATON BAY, WILSON ARM, head, main fork (West)

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, king, trout
ESCAPEMENT TIMING Early July-Aug.-Sep. ESCAPEMENT MAGNITUDE >100,000
SPAWNING FACILITIES Excellent and extensive. This is one of the most productive salmon streams in Southeastern Alaska. Past records indicate that escapements greater than one-half million occur during good years. The spawning areas extend from the half tide point to a barrier falls 5.5 miles up the W. fork and over 10 miles in the E. fork (K 34-1).
STREAM TEMPERATURES Normal range. Observed ranges: 52.5°F., 9/24/47; 48°F.-56°F., 1949; 50°-56°F., 1950; 50°-57°F., 1951; 48°-58°F., 1952; 50°-57°F., 1953.
VALLEY DESCRIPTION Stream cut glacial. Broad lower valley floor, well timbered. Cross-bedded area beginning 5.5 miles upstream and above forms two falls. Wilson Lake, 8 miles upstream, is 5 miles long, 1,100 acres at 280 foot elevation. The glacial valley extends beyond the lake an additional 5-6 miles with steep rock sides. A number of cirques and hanging valleys throughout.
DRAINAGE 110-150 square miles. Lake fed with snowfields and several small glaciers in the upper drainage. A number of tributaries drain small snowfields and lakes throughout the system. Several small beaver pond areas are in the lower valley. The water is clear except during flood levels.
STREAM MOUTH IDENTIFICATION 2 miles of delta with extensive grass flats at the head of Wilson Arm. River enters Wilson Arm along W. shore.
ANCHORAGE Daylight anchorage just off W. shore at drop-off. This is inside point 2 miles from the timber at the head of the grass flats. Overnight anchorage off opposite shore near bedrock beach.
TRAILS AND SURVEY ROUTES Best surveyed by river skiff which may be taken to area below first falls (about 4.5 miles). High tides reach to the forks and other types of skiffs may be taken that far with ease. Foot survey is practical only in the lower stream since crossing the river is usually difficult on foot except on low water levels.
AERIAL SURVEY NOTES Excellent visibility on most water levels and light conditions. The broad valley allows full maneuverability for most planes. Pass to Rudyerd Bay, S. Arm, over Big Goat Lake, at about 1,000' above W. side of Wilson Lake.

INTERTIDAL ZONE

LENGTH 2 miles AVERAGE WIDTH/DEPTH 100-150'/2-4'
GRADIENT AND VELOCITIES Less than 1° at 2-3' per second
BOTTOM Silt, sand, gravel in the upper area.
LOW TIDE LOCATION Just inside anchorage point, some snags visible.
HIGH TIDE LOCATION At the confluence of the E. fork with the main stream. Extreme tides go beyond, backing freshwater up both streams for some distance.
SCHOOLING AREAS Two large, deep holes with the major one being the lower hole opposite the logged area on the E. bank. The hole just below high tide is too deep for visibility, but contains large numbers during the peak of migration upstream.
SPAWNING AREAS A limited spawning area lies below the hole opposite the logged area on the riffles of the main stream and the top of the small branch. Heavy spawning occurs on the riffles at the forks.
GENERAL NOTES Though the two primary spawning areas may contain substantial numbers of spawning salmon, it is not considered as important in comparison with the upstream spawning. In recent years of reduced abuncance, most of the spawning occurs upstream.

UPSTREAM

LENGTH ACCESSIBLE 5 miles AVERAGE WIDTH/DEPTH 70-100'/2-4'
GRADIENT AND VELOCITIES 1° at 1-3' per second
BOTTOM Gravel 1-4" in diameter, some sand.
MARKER DISTANCE 2 miles.
MARKER IDENTIFICATION Bend Creek (K 34-2) entering river from W. valley at sharp bend eastward (120°).
BARRIERS Impassable falls 5 miles upstream. A second falls 2 miles further upstream is also impassable (32').
TRIBUTARIES E. Fork of the Wilson River (K 34-1) at its confluence at the high tide mark. Bend Creek (K 34-2) is 2 miles upstream at the marker and offers some spawning facilities. Fourmile Creek (K 34-3) entering from the W. has good spawning facilities in the lower stream.
SCHOOLING AREAS 1. Sev. hundred yards above high tide in a long pool. 2. 1 mile upstream in deep holes against the hill. 3. 1.3 miles upstream in a long pool opposite an area of numerous dead trees. 4. The long pool over .2 miles long just below Bend Creek (K34-2) at the marker.
SPAWNING AREAS Heavy spawning in between all schooling areas. Greatest density observed around high tide mark. Good area 1.4 miles upstream where a split entering from S. offers good facilities as far as log jam and above the log jam to the riffles below schooling area 4. Heaviest spawning observed above marker on riffles at Fourmile Creek.
GENERAL NOTES A trail, beginning at the forks, was once used to reach Wilson Lake.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1937								
Sep 29		FWS						Poor. Few pink and spent chum
1938								
Sep 14		FWS			5,000			Few pink. 1,000 off mouth
1939								
Sep 13	G .8	ASI,FWS	1,000					Poor. Majority of fish females
1940								
Sep 13	G 2.5	FWS	6,000		2,000			Poor. 2,000 off mouth
Sep 29	G 3.0	ASI	2,000					Poor
1941								
Sep 26	G 1.5	FWS						Fair. Water high and muddy
1943								
Sep 18	G 1.0	FWS	30,000		5,000			Fair
1948								
Aug 4	G 2.0	FWS	150,000		50,000		100 king	Excellent
Aug 12	G 3.0	ASI	155,240		7,210			
Aug 28	G 4.0	ASI	105,000		2,700		1 coho	
Sep 8	G 1.0	ASI	75,300					Some spent chum present in bay
Sep 15	G 2.5	ASI	50,500		9,700		1,700 coho	
Oct 8	G 2.0	ASI	1,800		3,500			
1949								
July 15	G .3	FRI	437		5			
July 26	G 1.5	FWS	400					
Aug 6	G 4.0	FRI	47,400	135		3		Few chum
Aug 11	G 3.0	FWS	50,000					
Aug 19	G 4.0	FRI	117,000	9,300	10,000	500		
Aug 27	A 8.0	FRI						227,000 salmon, species not separated
Sep 1	G 4.0	FRI	120,000	2,000	12,000			60,000 pink, 6,000 chum, 1,000 king above marker
Sep 11	G 4.0	FRI	32,000	30,000	3,200		1,000 coho	
Sep 26	G 4.0	FRI	2,500	5,000	6,000		11,000 coho	
1950								
July 18	G 4.0	FRI	30,000	0	2,000	0		River flooding
July 30	G 4.0	FRI	70,000	0	5,000	0		
Aug 7	A 11.5	FRI						Salmon on all suitable riffles
Aug 8	G 4.0	FRI	100,000					Chum present. Dead pink. 30,000 off mouth
Aug 18	G 4.0	FRI	100,000	1,500	7,000		Some coho, 10 king.	Some dead chum
Aug 30	G 4.0	FRI	55,000	7,000	5,000			
Sep 11	G 4.0	FRI	21,000	4,000	11,000		6,000 coho	Some dead chum
1951								
July 22	G 4.0	FRI	20,500	0		0		Few chum. Intertidal zone discolored
July 25	A 5.5	FRI						18,350 salmon, many in intertidal
July 29	A 4.0	FRI						12,000 salmon. None off mouth
July 30	G 4.0	FRI	79,600	0	150	0	60 king	Very few fish in Smeaton Bay. 4,000 above marker
Aug 8	G 4.0	FRI	75,200	100	260			Some dead chum. Many fish at termination point on W. fork. 3,000 above marker
Aug 18	G 4.0	FRI	29,000	400	200	50	Coho present	15,000 above marker
Aug 31	G 4.0	FRI	29,000	14,000	300		100 coho, 8 red, 25 king.	Few dead chum. Schools at mouth
Sep 14	G 4.0	FRI	11,600		5,500		2,250 coho	Recent high water removed dead

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1952								
July 16	A 4.0	FRI						No salmon
July 21	G 3.5	FRI	4,100		450			Very few off mouth
July 26	A 4.0	FRI	18,500					
July 29	G 2.5	FRI	46,700		250	0	45 king	Fair showing at mouth
Aug 8	G 4.0	FRI	72,200		400	300	50 king	Few dead pink. Fish well distributed through left fork
Aug 23	G 4.0	FRI	50,000	>2,000				Some chum
Sep 2	G 4.0	FRI	10,950	3,450	275		Some coho, 1 red, 61 king.	Few dead chum, very few fish
Sep 15	G 4.0	FRI	5,000					Some chum. Vis. 40% left fork, 0 on right. No fresh pink, few chum. Some in bay.
Sep 23	A 4.0	FRI					100 coho	800 mixed salmon
1953								
July 3	G .0	FWS						No fish present
July 9	G .0	FWS						Many jumpers noted
July 13	G .0	FWS						Jumpers in bay. No fish seen
July 17	A, G .0	FWS						Many jumpers noted
July 23	G 4.0	FRI	6,470	0	511	0		
July 23	A .5	FWS	2,000					No jumpers seen in bay
July 24	A 2.5	FWS						15,000 present. No jumps seen
July 28	A 4.0	FWS						Poor. 15,000 present
July 30	G 4.0	FRI	16,900		620		9 king	
Aug 8	G 4.0	FRI	16,850		315		24 red, 138 king	
Aug 8	G 2.5	FWS	12,000		650		30 king, 25 red	Poor
Aug 12	G .0	FWS						Many finners in bay, off tideflat
Aug 13	G .0	FWS						School of pink in middle of arm
Aug 17	A 2.5	FWS						Poor. 16,000 present
Aug 19	G 4.0	FRI	20,000	200	1,000	50	90 king, some coho.	Sev. 100 off mouth
Aug 25	A 2.5	FWS	40,000					Poor. Few 1,000 above forks
Aug 29	G 4.0	FRI	31,000	500	2,000		Some coho, 20 dead red.	Fish mostly spawning, many new
Sep 5	G 2.0	ADF	4,750	450			150 coho	
Sep 10	G .0	FWS	0		10,000		0 coho	
Sep 17	G .0	FWS	0		10,000		0 coho	
Sep 23	G .0	FWS	0		1,000		0 coho	
Oct 5	G 4.0	FRI						800 chum, coho, pink
Oct 8	G .5	FWS						Few chum far upstream
1954								
July 30	G 5.0	ADF	9,000		500			8,000 pink in lower 2 miles
Aug 3	A 4.0	FRI	20,000					Few chum. None off mouth
Aug 12	A 4.0	FRI	24,000		400			None off mouth
Aug 23	A 4.0	FRI	26,500					Few chum. 6,000 above marker
Sep 4	A 4.0	FRI	16,000					Some chum. Few in right fork
Sep 24	G 4.0	FWS						Poor. No improvement, water high
Sep 27	A 11.0	FRI			3,500		Some coho	Few jumps in Wilson Arm
1955								
July 24	A 4.0	FRI	2,000				Sev. 100 king in left fork	
July 31	A 4 0	FRI	3,500					
Aug 12	A 4.0	FRI	6,000					
Aug 26		FWS	5,000		200			
Sep 6	A 4.0	FRI	12,000					
Sep 15	A 4.0	FRI	20,000					Sev. 1,000 at mough
1956								
July 22	A 4.0	FRI	25,000					
July 29	A 4.0	FRI	26,000					
July 29		FWS			3,000			

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1956								
July 31	A 4.0	FRI	35,000					Some chum. Sev. 1,000 above marker
Aug 4		FWS	40,000					
Aug 13	A 4.0	FRI	52,000					
Aug 16		ADF, FWS	20,000					Many in lower stream
Aug 24	A 4.0	FRI	45,000					
Sep 3	G 1.0	FWS	100,000		5,000			
Sep 6	A 4.0	FRI	25,000					Most spawning in lower stream
Sep 15	G 2.0	FWS	300		100			
Sep 16	A 4.0	FRI	7,000		6,000			Some dead chum, pink. Chum fresh
1957								
July 28	A 4.0	FRI	6,000	0		0		Some chum. Few above marker
July 29	G 2.0	FWS	270		30			
Aug 4		FWS	350					
Aug 7		ADF	9,100		1,500		14 king	
Aug 10	A 4.0	FRI	7,000	0		0		Some chum
Aug 10	G .8	FWS	100		100			
Aug 11		FRI	7,500					
Aug 19	A 4.0	FRI	9,000					Some chum. Dead chum, pink
Sep 1	A 4.0	FRI	7,300	>200	600			Some dead chum. >500 above marker
Sep 7	G 4.0	FRI						Too muddy to survey
Sep 8	A 4.0	FRI	3,000					Some dead pink
Sep 16	A 4.0	FRI	1,000		1,000			Dead chum, pink. None off mouth
Sep 17	G 4.0	FRI			400			Few pink. 1,000 unidentified dead
Sep 24	A 4.0	FRI			4,000	>200		Live, dead pink. 2,000 chum above marker

KETCHIKAN, BEHM CANAL, SMEATON BAY, WILSON ARM, large tributary of Wilson River

MAJOR SPECIES Pink, chum, king, coho OTHER SPECIES Trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Excellent and extensive. Accessible for over 14 miles. Beyond the slow current, deep water lower stream terminating at a large log jam 1.3 miles upstream, the river consists of alternating deep pools and broad riffles.
STREAM TEMPERATURES Cold range. Observed ranges: 44°-47°F., 1949; 44°-50°F., 1950; 44°F., 8/23/52.
VALLEY DESCRIPTION Glacial. Typical "U" shaped valley, timbered floor, numerous cirques and hanging valleys, running upstream 21 miles to cirque lake, 4,000'. High steep rock sides.
DRAINAGE Greater than 110 square miles. Large snowfields and a number of small hanging glaciers in the upper valley. Water is usually tinged with glacial silt, though clear. Occasionally, the color is milky during increased glacial and snowfield run-off.
STREAM MOUTH IDENTIFICATION Deep hole at the confluence with the main Wilson River at the high tide mark. Glacial coloration of water evident downstream in the intertidal zone for some distance.
ANCHORAGE See Wilson River, K 34.
TRAILS AND SURVEY ROUTES The lower river is easily run by skiff to the log jam 1.3 miles upstream. Light skiffs have been taken over the log jam and run upstream for several miles. The river is accessible by skiff and outboard motor above the log jam for over 8 miles. No trails reported.
AERIAL SURVEY NOTES Usually surveyed from 8 air miles upstream where the pass from Keta River (K 24) joins river. Valley width sufficient for adequate light plane maneuvering. Stream course easily followed for aerial visibility. Caution advised in stream areas near S.E. side of valley during moderate to strong S.E. winds due to down-drafts.

UPSTREAM

LENGTH ACCESSIBLE >14 miles AVERAGE WIDTH/DEPTH 60-90'/2-5'
GRADIENT AND VELOCITIES Less than 1° at 1-3' per second
BOTTOM Silt, sand, little gravel in first 2 miles. Sand and gravel above.
MARKER DISTANCE 1.3 miles.
MARKER IDENTIFICATION Log jam which prevents further skiff travel.
BARRIERS No barriers to salmon in first 14 miles of stream. Rapids above tributary entering from S.E. about 14 miles upstream may be a barrier. No salmon have been observed above the rapids in the few flights made that far.
TRIBUTARIES Numerous small tributaries along the valley are not important salmon spawning areas.
SCHOOLING AREAS Throughout the first 1.3 miles of deep, slow current stream.
SPAWNING AREAS Very limited in first 1.3 miles of stream. Above, most riffles have been observed with some salmon spawning. King salmon usually are observed spawning above the 6 mile mark. During 1949 when the only large escapement was observed in the stream the heaviest spawning concentrations were observed above the six mile mark.
GENERAL NOTES This stream is best surveyed by air. The difficulties and distance to the spawning areas makes ground surveys impractical unless a passage through the log jam can be made.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1949								
Aug 6	G 1.3	FRI	15,500	70	1	0		
Aug 19	G 1.3	FRI	2,000	1,000	3			
Sep 1	G 1.3	FRI	<1,000	90	0	0		
Sep 11	G 1.3	FRI	400	200	100		50 coho	
Sep 26	G 1.3	FRI	100		500		1,000 coho	
1950								
July 30	G 1.3	FRI	6,000					
Aug 8	G 1.3	FRI	5,000	10				
Aug 18	G 1.3	FRI	3,000					
Aug 30	G 1.3	FRI	300	200	100	0		
Sep 11	G 1.3	FRI	200					Chum and coho in pools
Sep 30	G 1.3	FRI	0		3,000			
1951								
July 22	G 1.3	FRI	5,000					
July 25	A >10.0	FRI	8,000					
July 29	A >10.0	FRI	30,000					
July 30	G 1.3	FRI	7,000		60			
Aug 8	G 1.3	FRI	10,000		15			
Aug 18	G 1.3	FRI	1,000					Very few dead pink
Aug 30	G 1.3	FRI	75	300	10			Some dead chum
Sep 14	G 1.3	FRI			650		500 coho	Very few dead
1952								
July 16	A 5.0	FRI						None observed
July 21	G 1.3	FRI	2,650	0	300	0	Few king	
July 23	G 1.3	FRI	200		1			
July 29	G 1.3	FRI	6,900		50			
Aug 8	G 1.3	FRI	2,050	0	120	20		
Sep 23	A 4.0	FRI						None observed
Oct 5	A 6.0	FRI			3,500	1,000		
1953								
Aug 19	G 1.3	FRI	90		6			
Sep 30	G 1.3	FRI	450		70		2 king	
Oct 5	A 6.0	FRI			3,500			1,000 dead fish
1954								
Aug 3	A 3.0	FRI			300			
Aug 12	A 3.0	FRI	500					
Aug 23	A 3.0	FRI	400					
Sep 3	A 5.0	FRI	0					
1955								
July 31	A 12.0	FRI	0		0			
1956								
July 22	A 10.0	FRI	0		0			
July 31	A 10.0	FRI	0		0			Some king >6 miles upstream
Aug 13	A 10.0	FRI	3,000				500 king	
1957								
July 28	A 10.0	FRI	100		100		100 king	
Aug 10	A 10.0	FRI					Some king	300 fish. Visibility good
Aug 19	A 10.0	FRI	300				100 king	
Sep 1	A 10.0	FRI	0		0		2 king	

KETCHIKAN, BEHM CANAL, SMEATON BAY, WILSON ARM, E. shore of lower intertidal flats at head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE 2,000
SPAWNING FACILITIES Good, but limited.
STREAM TEMPERATURES Normal range (estimated).
VALLEY DESCRIPTION Glacial basin surrounded by steep valley walls. Wooded valley floor with considerable brush and alder.
DRAINAGE 4-5 square miles (estimated). Several small snow fields, no lakes. Clear water.
STREAM MOUTH IDENTIFICATION Intertidal grass-flats are part of the large delta of the Wilson River (K 34). Stream enters woods 1 mile from delta drop-off on E. shore.
ANCHORAGE See anchorage, Wilson River (K 34).
TRAILS AND SURVEY ROUTES Difficult walking through brush and windfalls. No trails or survey route other than stream bed.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .5 miles AVERAGE WIDTH/DEPTH 15'/8"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Sand and rock.
LOW TIDE LOCATION Obscured by the intertidal channels of the delta.
HIGH TIDE LOCATION At the edge of the grass flats where stream enters woods.
SCHOOLING AREAS None reported.
SPAWNING AREAS Just below high tide mark.
GENERAL NOTES The intertidal area is part of the Wilson River delta and only a short distance near the high tide mark is distinctly part of Wolverine Creek.

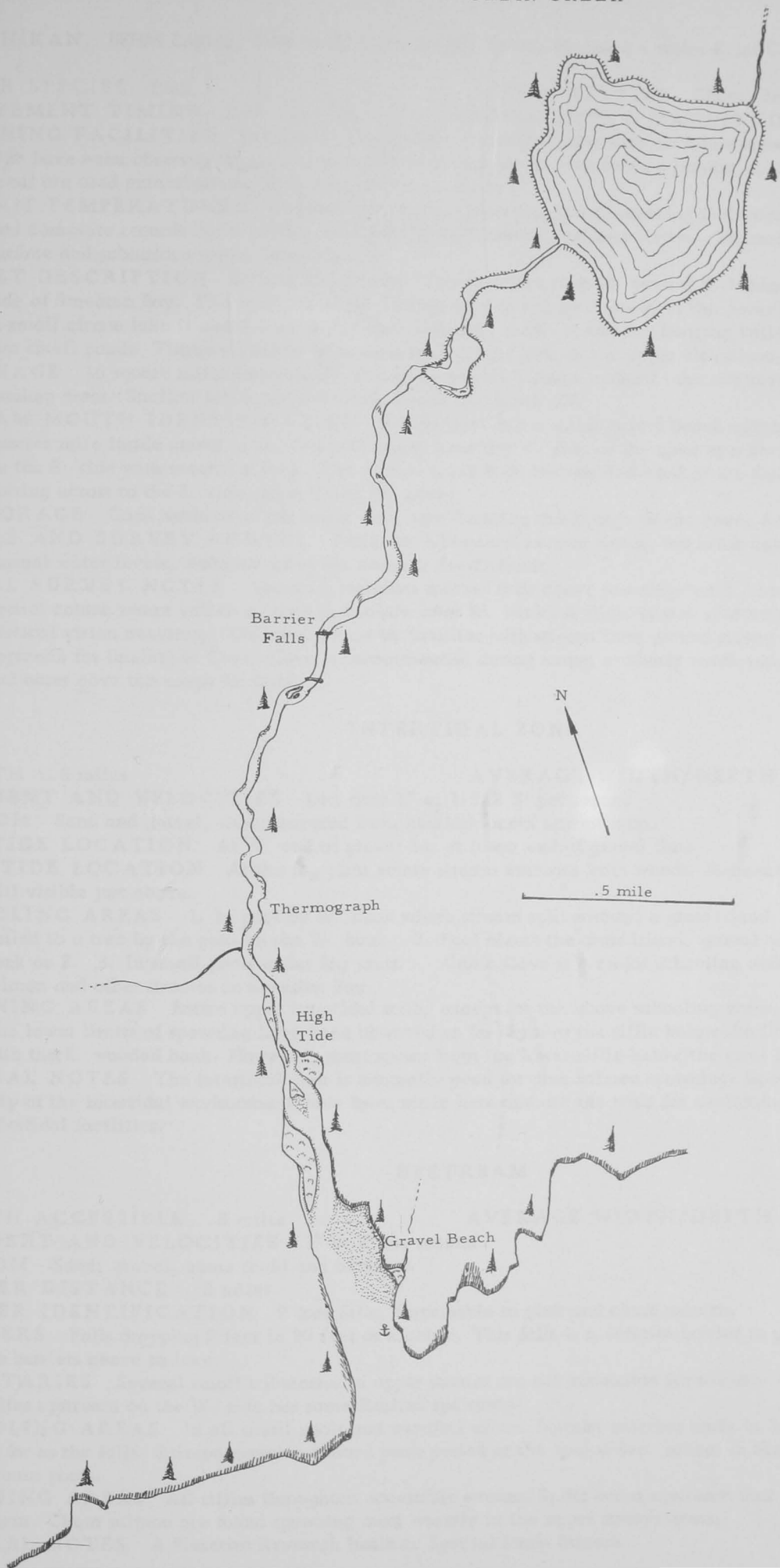
UPSTREAM

LENGTH ACCESSIBLE Over 2 miles AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES 2-3° at 2-4' per second
BOTTOM Sand, some gravel and large rocks.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in 2 miles.
TRIBUTARIES No major tributaries.
SCHOOLING AREAS None reported. There are numerous small pools throughout the stream.
SPAWNING AREAS Numerous small splits in the stream are utilized.
GENERAL NOTES This stream is not considered to be of importance and many of the salmon observed in the stream may be strays from the large runs of the Wilson River.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1939								
Sep 13		FWS	500					Most fish males, indicating pre-season escapement
1940								
Sep 29	G .8	FWS	5,000					Fair
1946								
Sep 28	A	ASI,FWS						Good
1947								
Aug 20	G 1.0	FRI						Many dead
1948								
Aug 4	G 1.0	FWS						Very good showing, pink and chum
Aug 13	G 2.0	ASI	25	1	408	80		
Sep 24	G 1.0	ASI	1,040	40	52			
1951								
Sep 14	G .1	FRI	2,150	100	10		Coho present	Few dead chum. All schooled intertidal zone


Barrier
Falls
N
.5 mile
Thermograph
High
Tide
Gravel Beach

KETCHIKAN, BEHM CANAL, SMEATON BAY, CABIN COVE, N. shore 4 miles E. of Carp Island

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout, red (few)
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 10-30,000
SPAWNING FACILITIES Excellent. An extensive intertidal zone with excellent spawning facilities above half tide have been observed to contain over 50% of the spawning pink salmon present at the peak. Upstream spawning areas are used extensively by both pink and chum salmon.
STREAM TEMPERATURES Warm range. Cabin Creek has had a recording thermograph operating since 1949 and complete records are available at the Fisheries Research Institute library. Thermograph records include both surface and subsurface gravel temperatures.
VALLEY DESCRIPTION Stream cut glacial. Valley curves from N. toward E. behind high ridge bordering N. side of Smeaton Bay. The valley is about 7 miles long to the headwaters in the peaks (about 3,000' elevation). A small cirque lake is about 2 air miles from high tide mark. A smaller hanging valley extends beyond with two small ponds. Timbered valley with muskeg and bare rock in the upper elevations.
DRAINAGE 16 square miles (estimated). Precipitation fed through a small lake and several high ponds. Some muskeg areas. Shallow soil layer over rock allows quick run-off.
STREAM MOUTH IDENTIFICATION Cabin Cove has a small gravel beach extending from the E. side one-quarter mile inside across to the low tide mouth near the W. side of the cove as a bar. A gravel flat lies beyond on the E. side with several pilings. The stream flows from the wooded head of the flats along the W. side, cutting across to the E. side, then to the W. again.
ANCHORAGE Good anchorage just inside snag over-hanging the E. side of the cove. Rock bottom.
TRAILS AND SURVEY ROUTES Trails have been cut several times, but brush covers them quickly. During normal water levels, walking along the creek is not difficult.
AERIAL SURVEY NOTES Approach terminal marker falls above low ridge on E. side of creek. Turn on to the stream course where valley narrows and follow over W. bank. A slight slip or skid necessary for the nearly vertical vision necessary. Observer should be familiar with stream from ground survey experience. A similar approach for landing in Cabin Cove is recommended during strong southerly winds which make Smeaton Bay and outer cove too rough for landing.

INTERTIDAL ZONE

LENGTH .6 miles AVERAGE WIDTH/DEPTH 30-40'/12-18"
GRADIENT AND VELOCITIES Less than 1° at 1.5-2.5' per second
BOTTOM Sand and gravel, algae covered from half tide mark downstream.
LOW TIDE LOCATION At W. end of gravel bar at lower end of gravel flats.
HIGH TIDE LOCATION At the log jams where stream emerges from woods. Remnants of research markers still visible just above.
SCHOOLING AREAS 1. In pool by W. bank where stream splits around a grass island. An instrument box is nailed to a tree by the pool on the W. bank. 2. Pool above the grass island, gravel bar on W. side and grass bank on E. 3. In small pools under log jams. Cabin Cove is a major schooling area for both Cabin Creek salmon and other streams in Smeaton Bay.
SPAWNING AREAS Entire upper intertidal zone, except for the above schooling areas, is utilized for spawning. The lower limits of spawning have been observed as far down as the riffle below the first contact the stream makes with the E. wooded bank. However, most spawn from the lower riffle below the grass island to high tide.
GENERAL NOTES The intertidal area is unusually good for pink salmon spawning. Special studies of the relationship of the intertidal environment have been made here and are the basis for evaluating other pink salmon intertidal facilities.

UPSTREAM

LENGTH ACCESSIBLE .8 miles AVERAGE WIDTH/DEPTH 20-25'/12-18"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Sand, gravel, some rocks and boulders.
MARKER DISTANCE .8 miles.
MARKER IDENTIFICATION 9 foot falls, impassable to pink and chum salmon.
BARRIERS Falls dropping 9 feet in 20 feet as a chute. This falls is a definite barrier to pink and chum salmon. No barriers above to lake.
TRIBUTARIES Several small tributaries in upper stream are not accessible for salmon. One small tributary .5 miles upstream on the W. side has some limited spawning.
SCHOOLING AREAS In all small pools and windfall areas. Salmon entering early in Sep. tend to school upstream as far as the falls. Salmon entering toward peak period at the end of Sep. school in the upper intertidal and lower stream pools.
SPAWNING AREAS All riffles throughout accessible stream. Splits occur upstream that are utilized by both pink and chum. Chum salmon are found spawning most heavily in the upper stream areas.
GENERAL NOTES A Fisheries Research Institute Special Study Stream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1938								
Sep 14		FWS	4,000		1,000			6,000 off mouth
1939								
Sep 13	G .5	ASI,FWS	3,000					Good showing in bay
1940								
Sep 13	G 1.5	FWS	9,000		2,000			Good. 1,000 off mouth
Sep 29	G 1.5	FWS	12,000					Good
1941								
Sep 27	G 1.0	FWS	75,000					Excellent
1942								
Sep 12	G .5	ASI,FWS	15,000		10,000			Fair
Sep 21	G 1.0	ASI	50,000		500			Excellent. Stream overseeded
1943								
Sep 15	G 1.0	ASI	7,500		1,000			25,000 fish off mouth
Sep 18	G .8	FWS	25,000		4,000			Good. 10,000 off mouth
1945								
Sep 17	G .8	FWS	30,000		10,000			Excellent. 30,000 off mouth
1947								
Aug 20	G .8	FRI	0		30			Jumps off the mouth
Sep 2	G .2	FRI						Pink and chum numerous
Sep 19	G .8	FRI	4,000		1,500		1 red	Good
Sep 25	G .8	ASI						Fair showing
Sep 28	G .3	FRI	10,000		500		5 red	Excellent
1948								
Aug 13	G .8	ASI	150					
Aug 27	G .8	ASI	120		265			
Sep 7	G .8	ASI	705					
Sep 17	G .8	ASI	1,650		245		1 red	
Sep 22	G .8	ASI	15,800		1,325			
Oct 5	G .8	ASI	860		2,190		24 red	
1949								
Aug 5	G .8	FRI	1,100		26			
Aug 11	G .8	FRI	755	13	9		8 red	
Aug 16	G .8	FRI	912	5	25		11 red	
Aug 21	G .8	FRI	934	2	37		27 red	
Aug 26	G .8	FRI	1,917	36	76		25 red	
Aug 31	G .8	FRI	2,397	118	137	7	31 red	
Sep 4	G .8	FRI	4,312	89	147	8	16 red	
Sep 9	G .8	FRI	4,144	251	89	12	20 red	
Sep 15	G .8	FRI	11,935	153	473	37	19 red	
Sep 27	G .8	FRI	11,300	1,354	362	157	26 red	
Oct 7	G .8	FRI	3,100	2,286	75	104		
1950								
July 28	G .5	FRI	4		2			1,000 off mouth
Aug 7	G .8	FRI	97		29			Large school off mouth
Aug 11	G .8	FRI	121		38			Large school off mouth
Aug 16	G .8	FRI	142		41			Large school off mouth
Aug 21	G .8	FRI	297		47			Small school off mouth
Aug 26	G .5	FRI	278		162			Small school off mouth
Aug 31	G .8	FRI	933		746			Small school off mouth
Sep 4	G .7	FRI	1,741		1,389		8 red	400 off mouth
Sep 15	G .8	FRI	2,115		699		12 red	500 off mouth
Sep 20	G .8	FRI	3,055		670			
Sep 28	G .8	FRI	2,400		200			

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1951								
Aug 7	G .8	FRI	1,400	0	12	0	3 red	
Aug 18	G .8	FRI	1,926	0	43	0	2 coho, 3 red	Few fish off mouth
Sep 1	G .8	FRI	4,375	51	186	15	8 coho, 42 red	2,000 fish off mouth
Sep 13	G .8	FRI	11,500		490		33 red, coho present.	Few dead chum, pink. 3-5,000 off mouth. Many in bay
1952								
July 16	A .8	FRI						No salmon
Aug 14	G .5	FRI	727	0	4	0	3 red	1,000 off mouth
Aug 23	G .5	FRI	1,120	0	69	0	6 red	Very high water, very poor vision
Sep 2	G .5	FRI	1,520	40	230	15	2 coho, 25 red, 1 dead red	
Sep 15	G .8	FRI	1,800	250	175	90	2 coho, 7 red, 1 dead red.	Poor vision
Sep 30	G .0	FRI	150	1		4		Some chum. Stream flooding
1953								
June 10	G .8	FRI,FWS						No red present
June 21	G .0	FWS						Few jumpers present
June 26	G .0	FWS						Several jumpers in bay
July 5	G .0	FWS						More jumpers
July 12	G .0	FWS						Jumpers present, nothing in stream
July 16	G .0	FWS						Many fish jumping
July 18	G .3	FWS	2,000					
July 20	G .1	FWS						No salmon present
July 23	A .0	FWS						Many jumps
July 24	G .8	ADF						20 red in pool below falls
July 24	A .0	FWS						No jumps
July 30	G .8	FRI					20 red	
Aug 8	G .8	FRI	25	1	6	0	13 red	No new fish. A few off mouth
Aug 11	G .0	FWS						Many at mouth, few in stream
Aug 12	G .1	FWS						300 pink,chum in creek,more in bay
Aug 15	G .1	FWS						Few more present. Schools of dolly in creek
Aug 18	G .8	FWS						1 school of salmon, many trout in pools
Aug 20	G .8	FRI	133	0	32	3	44 red	Very few off mouth
Aug 28	G .0	FWS						Nearly all salmon taken by seiners
Aug 30	G .8	FRI	950		270	0	35 red	Very poor. Some off mouth. Some dead pink
Sep 14	G .8	FRI	1,250		405		36 red, 3 dead red	Some dead pink, many dead chum. Peak. Vis. 80%
Sep 26	G .0	FRI	500	200	25		4 dead red	Few dead chum. Flooding
1954								
Sep 4	G .3	FRI	1,600		250			Good showing at mouth
Sep 19	A .8	FRI	14,000		1,000		4 red	1,500-2,000 at mouth
1955								
Aug 30	G 2.5	FWS	6,000					
Sep 6	A .8	FRI	25,000					15,000 spawning in intertidal zone
Sep 11	G .8	FRI	15,000					
Sep 15	A .8	FRI	20,000	0				5,000 at mouth
Sep 25	A .8	FRI	25,000					15,000 spawning in intertidal zone. Some chum, many dead pink
1956								
July 14		FWS	850					
Aug 24	A .8	FRI						Few pink. >5,000 at mouth
Aug 26		FWS	1,000		1,000			
Sep 6	A .8	FRI	2,000					Chum jumps in Smeaton Bay
Sep 14	A .8	FWS	5,000		1,000			1,000 pink at mouth
Sep 16	A .8	FRI	6,000					3-5,000 at mouth. Some chum
Sep 24	A .8	FRI	15,000					Some at mouth. Some live chum, few dead pink

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1957								
Aug 2		FWS	800					
Aug 10		FWS	5,000					
Sep 1	A .8	FRI	3,200	0				Some chum. >500 fresh at mouth
Sep 6		FWS	2,000		1,400			
Sep 7	G .8	FRI	7,200	300	1,400			
Sep 8	A .8	FRI	3,000					Few dead pink. Some at mouth
Sep 16	A .8	FRI	1,500	>500				Some chum. Some in cove
Sep 17	G .8	FRI	2,700					2-3,000 dead unidentified
Sep 24	A .8	FRI	1,000		2,000			Some dead pink, many dead chum. Some at mouth

101-31
N55°20 W130°52.3

K 36
Previous No. 31

KETCHIKAN, BEHM CANAL, Opposite Smeaton Island, 1.3 miles N. Point Trollop

MAJOR SPECIES
OTHER SPECIES
ESCAPEMENT TIMING
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited to intertidal zone and portions of the short upstream section below falls. No observations have been made during spawning and evaluation of facilities unknown. Rated as poor (1947).
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Lower 2 miles of stream flows across flat lava bed area at base of mountains. Above 2 mile mark, stream flows from short glacial valley 4 miles long to cirque head. Flats are well timbered.
DRAINAGE Precipitation fed. Small pond in lava flats. Some muskeg in flats and glacial valley. Bare rock in upper elevations.
STREAM MOUTH IDENTIFICATION Inside a lava point on S.E. corner of small bight. Igneous rock on S. side of stream, granitic on N. side. Small gravel beach on N. side of mouth.
ANCHORAGE Just inside of the lava point on S. side of bight. Exposed to swells from S.W.
TRAILS AND SURVEY ROUTES Short, easily walked stream.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles
AVERAGE WIDTH/DEPTH 40-50'/12"
GRADIENT AND VELOCITIES 2° at 2-3' per second
BOTTOM Rock and boulders, some gravel and sand.
HIGH TIDE LOCATION Head of riffle at bend toward E. just inside tree line.
SCHOOLING AREAS None reported.
SPAWNING AREAS None reported.
GENERAL NOTES The intertidal zone comprises 75% of the stream suitable for spawning. Only one survey available at this time made too late reported no fish. However, streams like this have been observed to have runs of several thousand.

UPSTREAM

LENGTH ACCESSIBLE .1 miles
AVERAGE WIDTH/DEPTH 40-50'/12"
GRADIENT AND VELOCITIES 2° at 2-3' per second
BOTTOM Bedrock and boulders, little gravel.
MARKER DISTANCE .1 miles.
MARKER IDENTIFICATION 15' falls.
BARRIERS Falls.
TRIBUTARIES None accessible to salmon.
SCHOOLING AREAS None reported.
SPAWNING AREAS None reported.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 4	G .1	FRI						No fish seen

KETCHIKAN, BEHM CANAL, E. shore opposite N. end Smeaton Island, .8 miles S.-S.E. southern entrance to Shoalwater Pass

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Rated as fair (1947). A small stream with limited spawning facilities.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION A short valley running S.E. and having short stream cut rivulets entering from the slope of the mountain to the E. Wooded bottom, bare rock in upper elevations.
DRAINAGE 4 square miles (estimated). Precipitation fed. No lakes or ponds. Some muskeg, bare rock in upper elevations.
STREAM MOUTH IDENTIFICATION Broad intertidal delta with stream running N.W.-S.E. into woods in S.E. corner of the shallow bight. Gravel delta with algae and weeds in shallows.
ANCHORAGE N. of the stream delta in shallow water. An exposed anchorage.
TRAILS AND SURVEY ROUTES No trails. Many windfalls obstruct foot travel.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH 20-30'/12"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Sand, gravel and small rock.
HIGH TIDE LOCATION Above the grass flats at stream emergence for the woods.
SCHOOLING AREAS None noted.
SPAWNING AREAS Upper areas offer good facilities. Best riffles are near high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.3 miles
AVERAGE WIDTH/DEPTH 15-20'/12"
GRADIENT AND VELOCITIES 2-3° at 2-4' per second
BOTTOM Sand, gravel and small rock. Larger gravel and rock upstream.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS None noted.
SPAWNING AREAS Occasional riffles between the numerous windfalls in the stream.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 3	G .2	FRI	10					10 at mouth

KETCHIKAN, BEHM CANAL, E. shore at S. entrance to Shoalwater Passage

MAJOR SPECIES Pink OTHER SPECIES Chum, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Rated fair (1947) in lower stream. Probably limited to lower stream by unpassable upper stream barriers. Not a large producer of salmon, though better than average for short streams.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut lower valley, lake filled glacial upper valley. First half mile of stream lies in a narrow, steep-sided ravine. Above, cuts through cross-bedding to lower lake (.7 miles). Large upper lake lies in glaciated valley. Wooded lower slopes, bare rock ridges.
DRAINAGE 13.4 square miles. Lower Winstanley Lake, 1.4 miles upstream, has 175 acres at 340' elevation. Upper Winstanley Lake, 2.1 miles upstream, has 465 acres at 355' elevation. The mean discharge at the gaging station in 1936-37 was 142 cubic feet per second.
STREAM MOUTH IDENTIFICATION A Forest Service trail marker is visible for Shoalwater Passage. The stream appears as a long, straight course with rapids and large boulders visible from the mouth. Has a relatively broad, gravel delta.
ANCHORAGE Use southern Shoalwater Passage anchorage (see Coast Pilot). Forest Service has had floats at mouth of creek in the past and reports depth of 41'. Floats were located off trail marker.
TRAILS AND SURVEY ROUTES Forest Service trail to lake.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 40-50'/12-18"
GRADIENT AND VELOCITIES 3° at 2-4' per second
BOTTOM Small rocks and scattered boulders, some gravel.
HIGH TIDE LOCATION Above grass flats at tree line.
SCHOOLING AREAS Mid-tide pools at edge of the grass flats and just below high tide mark.
SPAWNING AREAS Mid-tide mark to high tide. Best appearing area is just below high tide mark. This stream was reported to have fair spawning facilities during only survey on record in 1947.
GENERAL NOTES

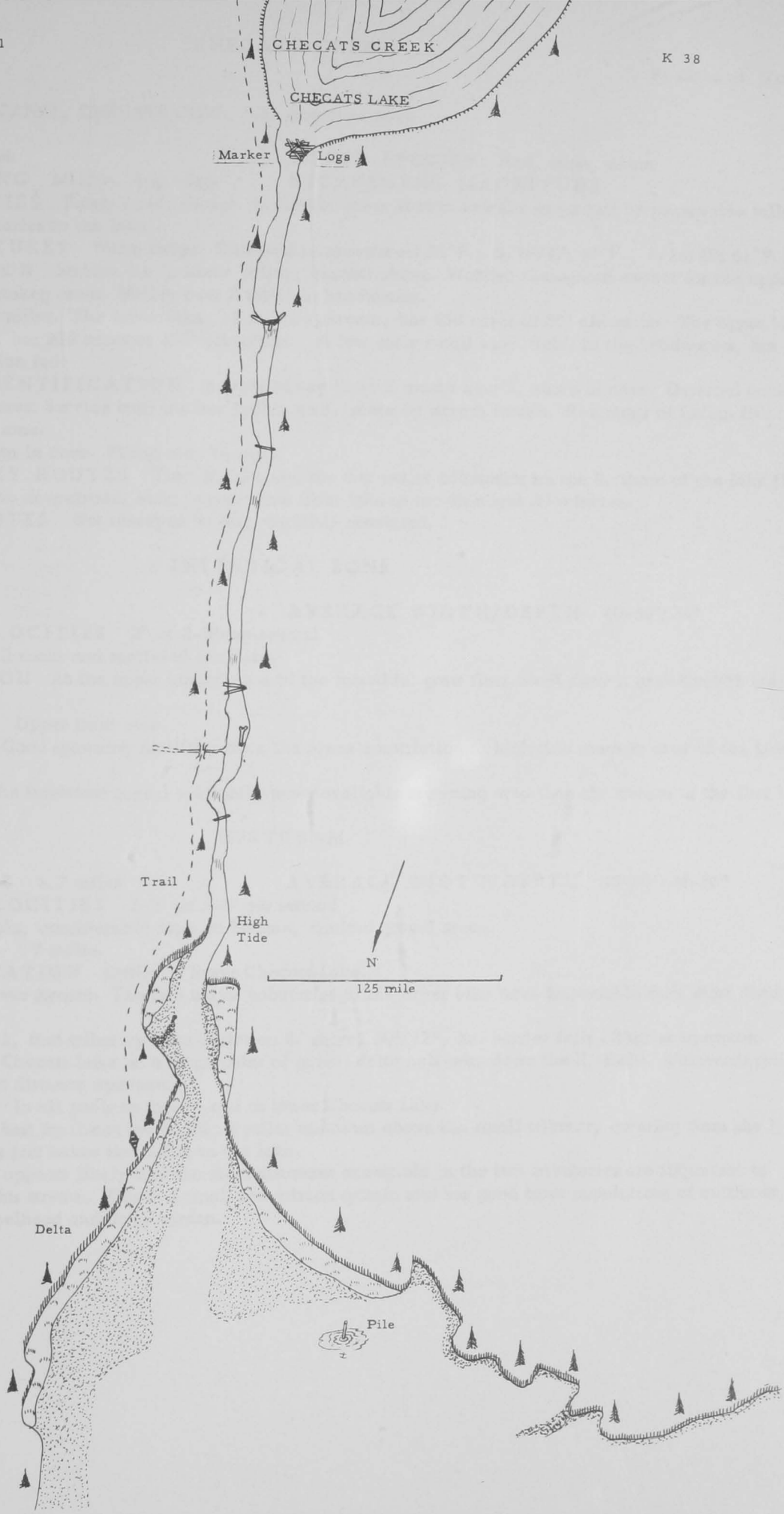
UPSTREAM

LENGTH ACCESSIBLE >.7 miles AVERAGE WIDTH/DEPTH 40-50'/18"
GRADIENT AND VELOCITIES 3° at 2-4' per second
BOTTOM Small rocks and scattered boulders.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Believed to have barriers to salmon in stream area above .7 miles to lake.
TRIBUTARIES Very small rainy weather tributary enters N. side at .7 mile mark. Very limited facilities.
SCHOOLING AREAS None reported.
SPAWNING AREAS Reported in first .2 miles. No reports above.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 3	G .5	FRI	882	582	200			700 off mouth
1954								
Sep 15	G .2	ADF	1,000		200			


CHECATS CREEK
CHECATS LAKE
Marker
Logs
Trail
High
Tide
N
125 mile
Delta
Pile

KETCHIKAN, BEHM CANAL, CHECATS COVE, S.E. corner of cove

MAJOR SPECIES Pink OTHER SPECIES Red, trout, chum
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Fairly good, though limited in lower stream to riffle areas and by impassable falls on the two major tributaries to the lake.
STREAM TEMPERATURES Warm range. Observed temperatures: 55°F., 9/18/47; 61°F., 7/16/49; 61°F., 7/27/49.
VALLEY DESCRIPTION Stream cut in lower valley, glacial above. Wooded throughout except for the upper elevations. Some muskeg areas. Valley over 7 miles to headwaters.
DRAINAGE 15 square miles. The lower lake, .7 miles upstream, has 250 acres at 50' elevation. The upper lake, 2.5 miles upstream, has 950 acres at 350' elevation. A few early small snow fields in the headwaters, but primarily precipitation fed.
STREAM MOUTH IDENTIFICATION A large piling lies off mouth near S. shore of cove. Deserted cabin on N. shore of cove. Forest Service trail marker visible on E. shore by stream mouth. Remnants of Indian fish trap (stone) in intertidal zone.
ANCHORAGE Off delta in cove. Piling may be used.
TRAILS AND SURVEY ROUTES Trail to lake and the two major tributaries on the E. shore of the lake (K 38-1 and K 38-2). Walking downstream easy, survey time from lake to mouth about 20 minutes.
AERIAL SURVEY NOTES Not surveyed by air, visibility restricted.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 40-60'/24"
GRADIENT AND VELOCITIES 2° at 2-3' per second
BOTTOM Gravel, small rocks and scattered boulders.
HIGH TIDE LOCATION At the upper constriction of the intertidal grass flats. Swift current area through large rocks just above.
SCHOOLING AREAS Upper tidal area.
SPAWNING AREAS Good spawning facilities from the lower constriction to high tide mark in area of the Indian stone trap.
GENERAL NOTES The intertidal zone has slightly more available spawning area than the stream to the first lake.

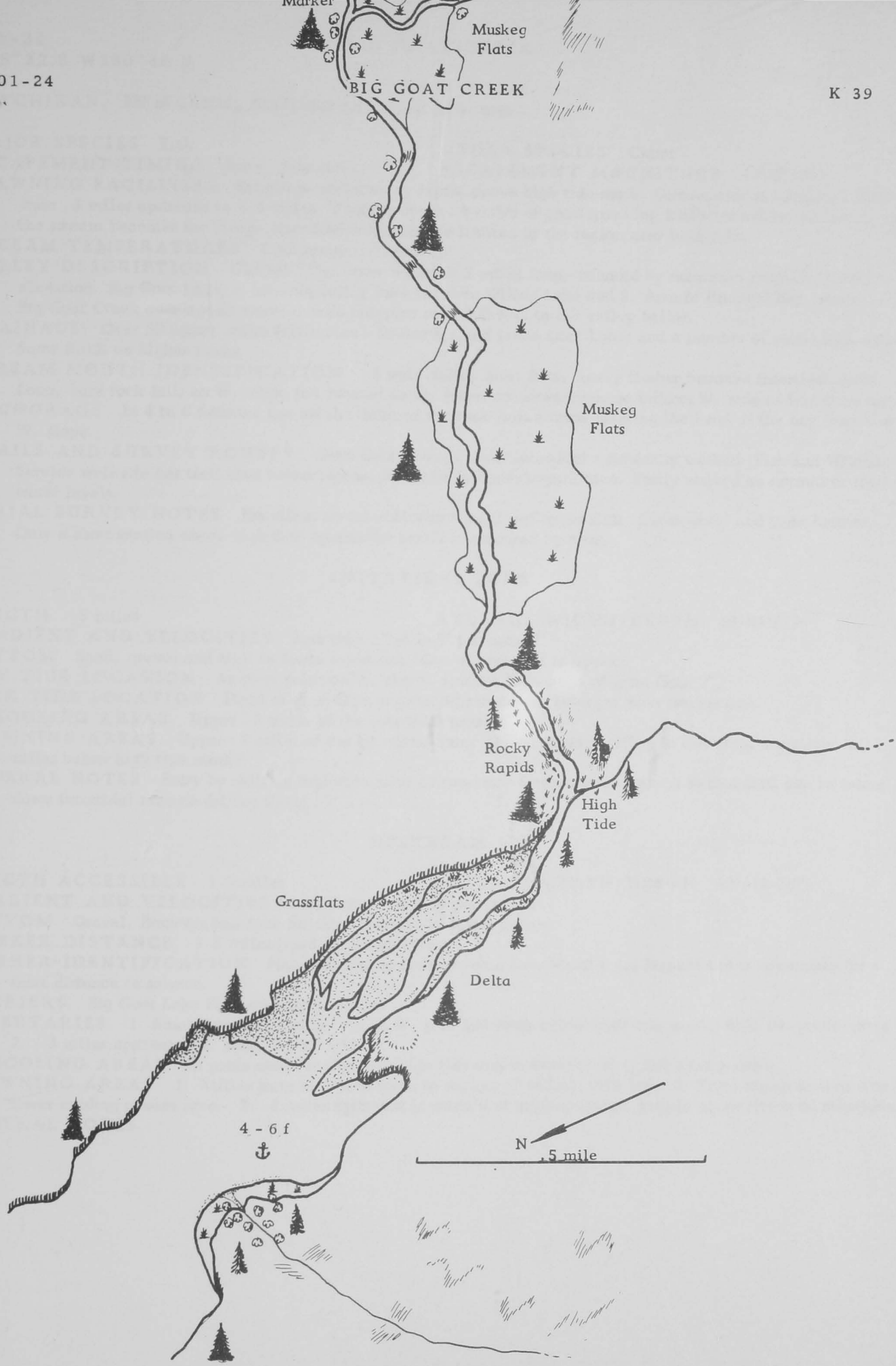
UPSTREAM

LENGTH ACCESSIBLE >.7 miles AVERAGE WIDTH/DEPTH 40-60'/24-36"
GRADIENT AND VELOCITIES 1-2° at 2-4' per second
BOTTOM Boulders, rocks, considerable moss on bottom, limited gravel areas.
MARKER DISTANCE .7 miles.
MARKER IDENTIFICATION Outlet of lower Checats Lake.
BARRIERS None in lower stream. The two major tributaries to the lower lake have impassable falls short distances from their mouths.
TRIBUTARIES K 38-1, first tributary from outlet on E. shore, 30'/12", has barrier falls .2 miles upstream. K 38-2 enters lower Checats Lake on a large point of gravel delta half-way down the E. shore. Numerous splits. Has barrier falls short distance upstream.
SCHOOLING AREAS In all pools in stream and in lower Checats Lake.
SPAWNING AREAS Best facilities are about .4 miles upstream above the small tributary entering from the N. Another riffle area is just below the outlet to the lake.
GENERAL NOTES It appears likely that the short distances accessible in the two tributaries are important to the productivity of this stream. This is a small red salmon system and has good trout populations of cutthroat, resident rainbow, steelhead and dolly varden.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1943								
Sep 15		ASI						Good. Some pink. Some at mouth
1947								
Sep 18	G .7	FRI	6,000		300		200 red	Good
Sep 28	G .7	FRI	5,000		400			Good
1949								
July 16	G .7	FRI						1 unidentified salmon seen
July 27	G .7	FRI	0		0		30 red	
1953								
June 19	A .7	FWS						No fish seen
July 6	G .7	FWS					No red present	
July 17	A .0	FWS						No jumps present
July 23	A .0	FWS						No jumps present
Aug 17	A .7	FWS						500 red at mouth off feeder stream. 3 jumps at mouth
Aug 19	A .7	FWS						500 red at feeder stream. No jumps at mouth
1954								
Sep 15	G .1	ADF	3,000					
1956								
Sep 14	G 1.0	FWS	5,000		100			100 pink at mouth
1957								
Sep 14		FWS	5,000		100			Fair


Marker
Muskeg
Flats
BIG GOAT CREEK
Muskeg
Flats
Rocky
Rapids
High
Tide
Grassflats
Delta
4 - 6 f
N
.5 mile

KETCHIKAN, BEHM CANAL, RUDYERD BAY, Head of S. arm

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Early July-Aug. ESCAPEMENT MAGNITUDE 10-20,000
SPAWNING FACILITIES Excellent above rocky rapids above high tide mark. Stream crosses extensive flats from .3 miles upstream to 1.4 miles. There is about .4 miles of good spawning facilities above the flats before the stream becomes too steep. Intertidal facilities are limited to the region near high tide.
STREAM TEMPERATURES Cold range (estimated).
VALLEY DESCRIPTION Glacial. The lower valley is 3 miles long, bounded by mountain ridges to 4,000' elevation. Big Goat Lake, a hanging valley lake between Wilson Lake and S. Arm of Rudyerd Bay, drains into Big Goat Creek over a near vertical falls dropping over 800 feet to the valley below.
DRAINAGE Over 20 square miles (estimated). Drains Big and Little Goat Lakes and a number of small, high lakes. Snow fields on higher peaks.
STREAM MOUTH IDENTIFICATION .5 mile delta, grass flats, heavy timber surround intertidal delta. Long, bare rock falls on W. slope just beyond delta. Intertidal stream course follows W. side of intertidal zone.
ANCHORAGE In 4 to 6 fathoms just off the delta of the rock falls stream entering the head of the bay from the W. slope.
TRAILS AND SURVEY ROUTES Grass flats through upper intertidal zone easily walked. Fish and Wildlife Service weir site has trail area below rapids. No trails in upper stream area. Easily walked on normal or lower water levels.
AERIAL SURVEY NOTES Excellent aerial visibility throughout upper flats. Clear water and light bottom. Only a short section above high tide around the rapids is obscured by trees.

INTERTIDAL ZONE

LENGTH .5 miles AVERAGE WIDTH/DEPTH 60-80'/12"
GRADIENT AND VELOCITIES Less than 1° at 2-3' per second
BOTTOM Sand, gravel and mud in lower intertidal. Gravel and rock in upper.
LOW TIDE LOCATION At short point on W. shore .4 miles from head of grass flats.
HIGH TIDE LOCATION Head of grass flats at point where stream emerges from timber line.
SCHOOLING AREAS Upper .2 miles of the intertidal zone.
SPAWNING AREAS Upper .2 miles of the intertidal zone. Good spawning riffles in this area, excellent in .1 miles below high tide mark.
GENERAL NOTES Entry by skiff on high tide most convenient. Stream large enough so that skiff can be taken down intertidal zone on falling tides.

UPSTREAM

LENGTH ACCESSIBLE 1.8 miles AVERAGE WIDTH/DEPTH 40'/12-16"
GRADIENT AND VELOCITIES Less than 1° at 2-3' per second
BOTTOM Gravel. Boulders and rock for short distance in lower stream.
MARKER DISTANCE 1.5 miles (used for aerial survey).
MARKER IDENTIFICATION Head of muskeg flats. Stream rises rapidly just beyond and is accessible for a short distance to salmon.
BARRIERS Big Goat Lake Falls and rapids below.
TRIBUTARIES 1. Small run-off tributary enters W. side 100 yards above high tide mark, falls 100 yards upstream. 2. .3 miles upstream, S. side, 10-12' wide.
SCHOOLING AREAS In pools above rapids near high tide and in lower muskeg flat stream area.
SPAWNING AREAS 1. Riffles from high tide mark to rapids, .1 miles, excellent. 2. From rapids upstream to lower muskeg stream area. 3. .8 miles upstream in middle of muskeg stream area to upper limits of migration.
GENERAL NOTES

ESCAPEMENT RECORD

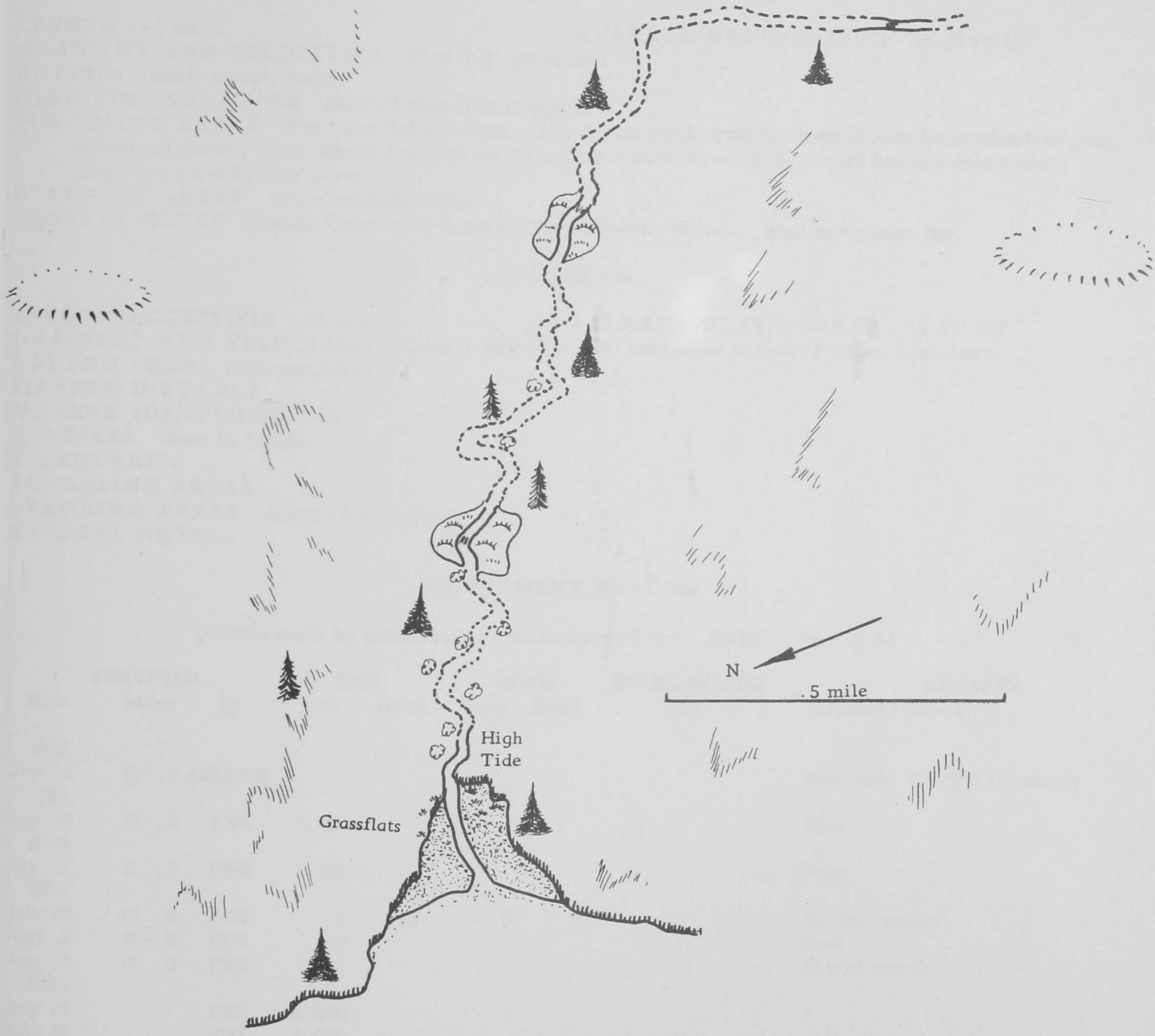
[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1933								
Aug 17		FWS	1,500				1 king	Water high
1937								
July 14		FWS	2,500					100 fish off mouth
Oct 1		FWS	200					Poor
1940								
Sep 20	G .8	FWS	5,000		1,000			Poor
1941								
Sep 26	G .8	FWS	7,000		250			Poor
1943								
Sep 17	G 1.0	FWS	15,000		1,000			Good. 2,000 off mouth
1949								
July 16	G .5	FRI						No fish in the stream
Aug 27	A .7	FRI	15,000					Stream full
1950								
Sep 12	A .1	FRI	200	>2,000	>200	0		Several 100 chum off mouth
1951								
July 25	A 1.5	FRI						3,000 salmon. 1,000 off mouth
Aug 19	G .3	FRI	3,200					Chum present. Few dead chum, pink
1953								
June 19	G 1.5	FWS						Few steelhead, dolly. Bear out of hibernation
July 8	A 1.8	FWS						No fish present
July 17	A .0	FWS						Few jumpers present
July 21	G .0	FWS	15		5			Poor
July 22	G .0	FWS	80		20			Poor
Aug 27	G Weir	FWS	3,306		2,001		11 coho, 9 king	Final total. Weir installed July 22
1955								
Sep 15	G Weir	FWS	24,232		2,697		203 coho, 67 king	Final total. Weir installed July 14
1956								
July 24		FWS	5,000		150			
Sep 13	G .5	FWS	700		5			600 pink at mouth
1957								
July 13		FWS						3 chum, 50 pink at mouth
Aug 3		FWS	1,400		100			
Aug 10		FWS	2,850		150			
Aug 19	G .3	FWS	2,000		300			
Sep 8	G 1.5	FWS	500		200		30 red	

U. S. Fish & Wildlife Service Weir Counts

Date	Pink	Chum	Coho	Red	King	Stream Gauge A. M.	Water Temp. A. M.	Water Temp. P. M.	Remarks
1953									
July 22	73	40							Occasional rain
23	132	78							Occasional rain
24	133	37							Occasional rain
25	210	45							Sunny
26	219	71							Thunder showers
27	225	84							
28	241	97							
29	133	32							
30	374	97							
31	158	26							
Aug 1	88	71							
2	123	38							
3	42	13							5% pink spawning
4	260	115							
5	108	49							10% pink spawning
6	84	55			1				
7	62	68							5% chum spawning
8	56	99							Showers
9	38	53							30% pink & 20% chum spawning
10	405	390			1				Heavy rain A. M.
11	7	68							60% pink and 50% chum spawning
12	2	16							75% fish spawning
13	1	9							95% pink and 75% chum spawning. Bear taking numbers of fish above weir
14	4	8							
15	2	10							95% fish spawning
16	4	16			1				
17	2	16	1						Rain
18	4	49			1				Rain
19	3	25							
20	4	22							100% pink spawning
21	3	37	1		4				
22	11	15							
23	9	28	2						Bears taking fish below rapids
24	15	17	3						100% fish spawning
25	20	12	2						
26	18	50							
27	33	45	2		1				Rain
Total	3,306	2,001	11		9				
1954									
July 14	15	1			2		47	53	
15	6				1		50	51	
16	20	1					50	49	
17	77	1					49	50	
18	16		1				47	51	
19	17	1					49	50	
20	4	1	1				50	49	
21	5						49	49	
22	117	5					48	47	
23	113	6					47	49	
24	88	6			2		47	48	
25	324	7				1'7"	48	49	
26	873	26				1'8"	48	50	
27	1,900	36			3	1'7"	49	52	
28	1,868	16			1	1'6"	49	52	
29	1,291	7			1	1'5"	50	54	
30	1,319	17				1'4"	50	52	
31	423	2				1'5"	50	54	
Aug 1	667	6				1'6"	51	53	

Date	Pink	Chum	Coho	Red	King	Stream Gauge A. M.	Water Temp. A. M.	Water Temp. P. M.	Remarks
1954									
Aug 2	844	2				1'4.5"	51	53	
3	639	7				1'6"	51	52	
4	1,454	67			6	2'1"	51	54	
5	640	29			1	1'9"	52	53	
6	456	12				1'7.5"	53	54	
7	116	5				1'7"	53	57	
8	562	14				1'6"	53	58	
9	273	2			1	1'6"	53	58	
10	374	12				1'6"	54	56	
11	654	15			2	1'5"	54	56	
12	367	7			1	1'5"	54	56	
13	852	9			2	1'5"	54	57	
14	390	14			2	1'5"	55	57	
15	502	28			2	1'6.5"	55	55	
16	742	55				1'6"	52	54	
17	238	9				1'6"	51	54	(The following are dead
18	567	26			2	1'6"	53	57	removed from weir)
19	307	32				1'6"	53	58	96
20	121	19				1'6"	54	57	121
21	87	20			1	1'5"	56	57	147
22	70	16			1	1'4"	53	55	130
23	79	35			1	1'4"	56	57	150
24	118	18			1	1'4"	54	57	184
25	185	30				1'2"	54	58	190
26	238	33				1'1"	56	59	212
27	225	46			3	1'2"	55	59	147
28	124	58			1	1'3"	54	58	268
29	242	80			2	1'1"	54	58	281
30	222	66			1	1'0"	55	58	304
31	508	125			1	1'3"	54	56	380
Sep 1	465	252			3	1'4"	54	57	604
2	88	36			1	1'2"	54	56	409
3	64	10			3	1'1"	54	57	363
4	28	21				1'3"	55	56	293
5	50	92				1'1"	54	55	294
6	50	66			2	1'2"	53	54	393
7	226	281	3		4	1'6"	52	53	517
8	120	104				1'5"	53	54	336
9	43	87				1'3"	49	55	272
10	10	71				1'1"	51	56	199
11	68	78				1'2"	52	56	153
12	239	30			1	1'1"	54	54	191
13	544	336	72		4	2'0"	53	53	505
14	623	160	112		6	1'10"	51	53	409
15	275	43	14		2	1'5"	51	54	263
Total	24,232	2,697	203		67				


N
.5 mile
High
Tide
Grassflats

KETCHIKAN, BEHM CANAL, RUDYERD BAY, E. shore midway between N. and S. Arms

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Good, though limited in stream beyond .3 miles. The lower stream is steep and difficult to ascend. The upper section extends over .5 miles, though no information is available on the extent of the facilities.
STREAM TEMPERATURES Lower normal range (estimated).
VALLEY DESCRIPTION Glacial. 5 miles to cirque head in mountain ridge over 3,000' elevation. Steep valley walls and cliffs.
DRAINAGE 5 square miles (estimated). Early snow patches, ground water, no lakes or ponds.
STREAM MOUTH IDENTIFICATION At head of small cove, grass flats around high tide area, Fish and Wildlife Service streamguard cabin on N. shore .1 miles from head of cove, stream appears steep and brushy with timber throughout first .3 miles. Lower gradient upper valley not visible from bay.
ANCHORAGE In cove.
TRAILS AND SURVEY ROUTES No trails. Difficult walking in first .3 miles. Creek more easily walked upstream.
AERIAL SURVEY NOTES Not surveyed by air. However, short upper valley may be surveyed by air in light plane. Restricted valley for flight maneuvers.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 15-25'/6-12"
GRADIENT AND VELOCITIES 2° at 2-3' per second
BOTTOM Sand, gravel, rocks.
HIGH TIDE LOCATION Head of grass flats at tree line.
SCHOOLING AREAS The intertidal and cove of this stream are frequently observed with large schools of pink salmon. However, these observed salmon are migrating to other streams in Rudyerd Bay and only a small proportion enter Boulder Creek.
SPAWNING AREAS Upper intertidal zone.
GENERAL NOTES Boulder Creek cove is the heaviest saltwater schooling area in Rudyerd Bay.

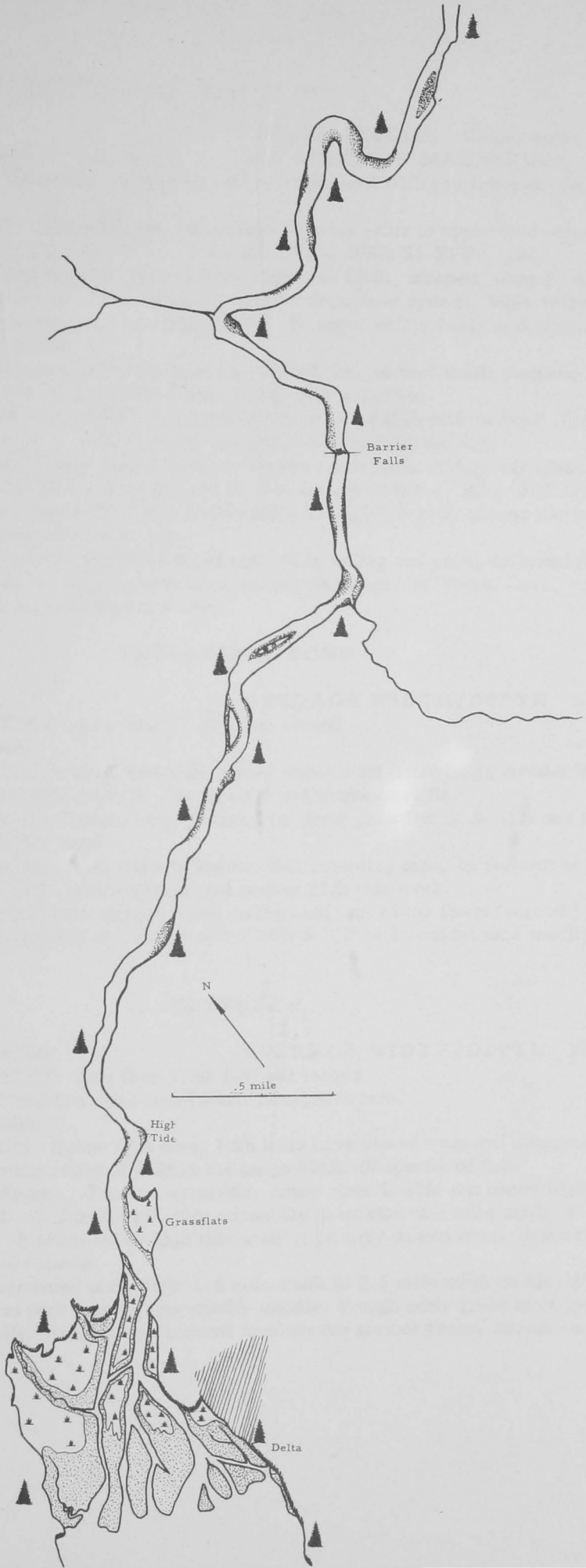
UPSTREAM

LENGTH ACCESSIBLE >1 mile AVERAGE WIDTH/DEPTH 15-20'/12"
GRADIENT AND VELOCITIES Greater than 3° at 3-4' per second in first .3 miles. Less above.
BOTTOM Gravel, rocks and boulders.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None in 1 mile.
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS Above .3 mile mark.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1939								
Sep 14	G .1	ASI,FWS						Few pink. Few fish off mouth
1941								
Sep 26	G .3	FWS	1,000					Poor
1943								
Sep 17	G .5	FWS	5,000					Poor
1953								
July 22	G .0	FWS	0	0	0	0		No fish present
Aug 7	G .8	FWS	17					Poor
Aug 12	G .0	FWS						Few at mouth
1956								
July 24		FWS	6,000					
July 29		FWS	8,000					
Sep 14	G .1	FWS	3					


Barrier
Falls
N
.5 mile
High
Tide
Grassflats
Delta

KETCHIKAN, BEHM CANAL, RUDYERD BAY, Head of N. arm

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, king
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE 10-30,000
SPAWNING FACILITIES Excellent, though limited to occasional riffles in lower stream and several large riffles upstream.
STREAM TEMPERATURES Normal range. Has varied in some years to upper cold range. Observed ranges: 46-49°F., 1949; 48-53°F., 1950; 48-53°F., 1951; 47-51°F., 1952; 51-53°F., 1953.
VALLEY DESCRIPTION Glacial. U-shaped valley, high rock cliffs, steepest along S. side of valley. Glacial till valley floor, spruce, alder and brush. Hanging valleys throughout system. Main valley divided above ancient ice-falls, marked by narrow gorge and impassable falls. E. upper valley leads to divide. N. valley leads to lake with several cirque valleys above .
DRAINAGE Greater than 120 square miles (estimated). Snowfields, several small glaciers, two large lakes and a few high, small lakes. Drains high mountain area over 5,000' elevation.
STREAM MOUTH IDENTIFICATION Large silt delta to N. of high cliff at head. Grass flats in upper intertidal. Main stream flows along S. side of delta. Largest stream in Rudyerd Bay.
ANCHORAGE Along drop-off. During warm days, anchorage near center of drop-off affords some breeze.
TRAILS AND SURVEY ROUTES Not surveyed on foot for any distance. River skiff and protected outboard motor are necessary to reach terminal. River is navigable during all levels, though low water makes some portage (pulling) over shallow riffles necessary.
AERIAL SURVEY NOTES Aerial visibility excellent. Wide valley and easily followed stream course make aerial survey very effective. N. valley above terminal is pass to head of Walker Cove, passing over large barren lake and down valley at S. head of Walker Cove.

INTERTIDAL ZONE

LENGTH 1.2 miles AVERAGE WIDTH/DEPTH 80-100'/24-36"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Silt, sand and gravel.
HIGH TIDE LOCATION Pool at bend toward N. above upper grass flats. Large boulder in middle of pool was marked with red paint. Tributary enters S. side of river just above on riffle.
SCHOOLING AREAS 1. Pool, .2 miles long, bounded by upper grass flat on S. side and timber on N. side. 2. Long, deep pool at high tide mark.
SPAWNING AREAS Limited to a short riffle below the first schooling area, in shallows in upper part of first schooling area and in good riffle between there and pool at high tide mark.
GENERAL NOTES A herd of seal are usually found on the sand bars of the lower intertidal zone, appears to be a rookery area. A small snow patch at the foot of the cliff S. of the intertidal zone usually persists into Aug. and is available for ice.

UPSTREAM

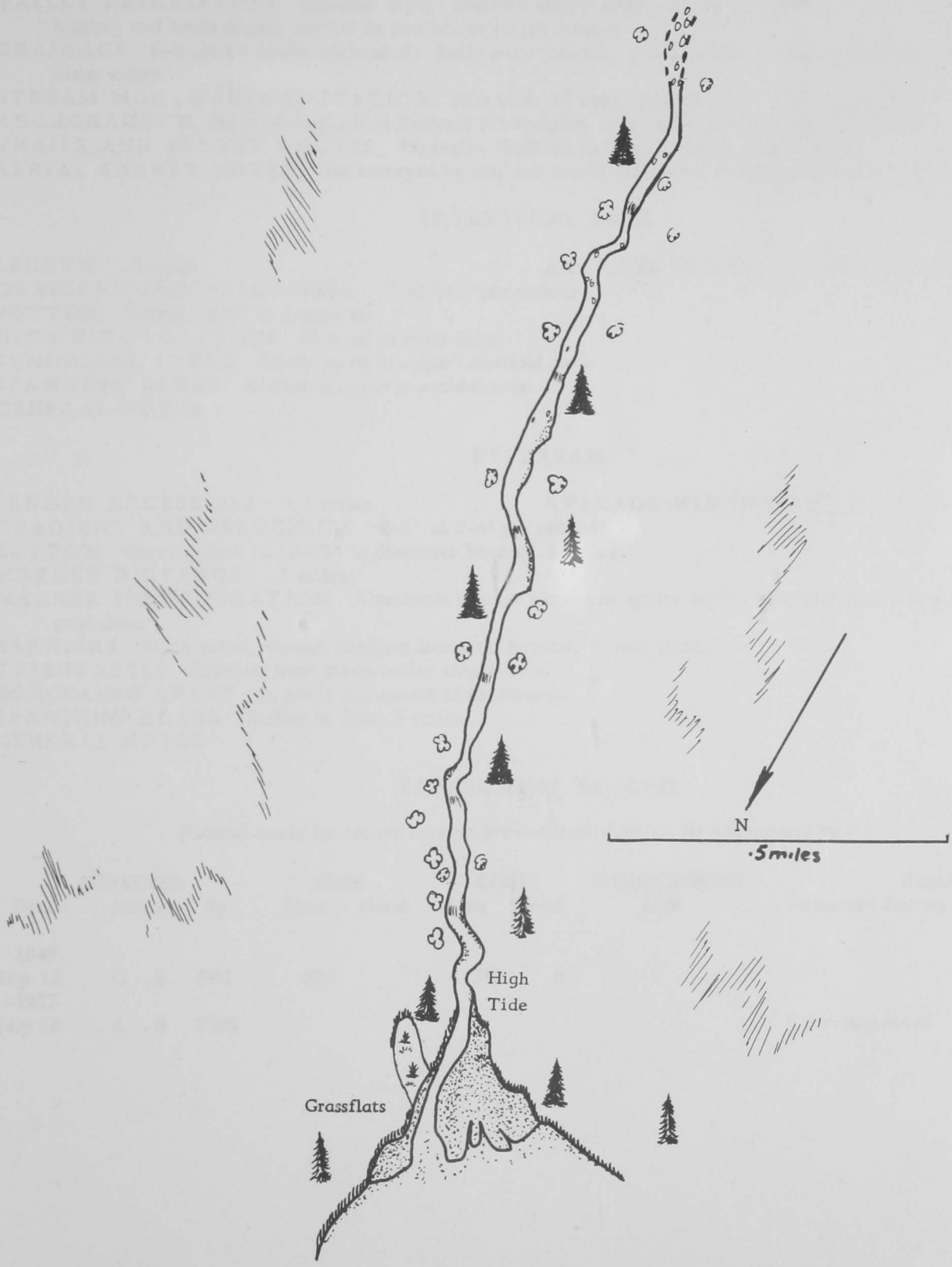
LENGTH ACCESSIBLE 3 miles AVERAGE WIDTH/DEPTH 70-80'/24-36"
GRADIENT AND VELOCITIES Less than 1° at 1-3' per second
BOTTOM Sand, gravel, scattered boulders, small rocks in upper stream.
MARKER DISTANCE 3 miles.
MARKER IDENTIFICATION Below falls area, both sides have blazed trees and aluminum markers.
BARRIERS Series of rapids below series of falls in the gorge block all species of fish.
TRIBUTARIES 1. Small tributary, .2 miles accessible, enters river S. side just above high tide mark. 2. At 1.2 mile mark, N. side, small. 3. Largest tributary accessible to salmon at 2 mile mark, S. side.
SCHOOLING AREAS First .5 miles above high tide mark is primary stream area. Upstream schooling in deep pools between 1.2 and 2 mile marks.
SPAWNING AREAS Main spawning areas from 1.4 mile mark to 2.5 mile mark on all riffles.
GENERAL NOTES Timing of pink salmon runs usually middle, though early peaks have been observed. A late chum run occurs occasionally. Red salmon in small numbers are seen at times, though no lakes are accessible.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
937								
y 15		FWS						Only few king present
1		FWS						Fair. Few pink. Many bright chum
939								
13	G .3	ASI,FWS	1,500					No signs of earlier spawning
940								
20	G 1.0	FWS						Poor. Pink showing. High muddy water
941								
25	G 2.0	FWS						Poor. High muddy water
943								
17	G 1.0	FWS	10,000		2,000			Poor
947								
25	G .5	FRI	0		6,000			Fair
949								
g 20	G 3.0	FRI	4,000	30	1,000			Few dead chum
g 27	A 3.0	FRI	12,000					
2	G 3.0	FRI	12,000	500	6,000			
12	G 3.0	FRI	3,050	10,200	12,500	200		
27	G 3.0	FRI	100	529	13,000	550	2,100 coho	
950								
g 9	G 3.0	FRI	30,000		1,000			Sev. dead pink. 2,000 off mouth
g 19	G 3.0	FRI	31,200	1,700	1,100			Sev. dead chum. Probably peak
g 31	G 3.0	FRI	15,400	3,000	5,200		200 coho, sev. king, 6 red.	Some dead chum
12	G 3.0	FRI	6,000	5,000	13,000		1,000 coho	Some dead chum. Chum in bay
951								
y 23	G 2.0	FRI	120	0	0	0		Water slightly discolored
y 25	A 3.0	FRI						2,100 salmon. Many jumps in bay
y 29	A 3.0	FRI						5,000 salmon. None off mouth
y 31	G 3.0	FRI	2,000	0	50	0		None observed off mouth
g 9	G 3.0	FRI	11,150	0	70	0		Poor visibility
g 19	G 2.0	FRI	21,000	20	200		5 king, some coho	Few dead chum. Fish schooled
1	G 3.0	FRI	29,600	3,700	715	0	50 coho, 9 king	No fish seen at mouth. Peak of run
952								
y 22	G 3.0	FRI	500	0	0	0		None at mouth
y 26	A 3.0	FRI						1,150 salmon. Good showing in main bay
y 30	G 3.0	FRI	1,600	0	0	0		Some fish from stream K 41A (Pre. No. 36A)
g 9	G 3.0	FRI	10,300	0	45	0	2 coho	Not more than 25% visibility
g 24	G 3.0	FRI	14,150	1,300	100		1 red	Few dead chum. Good visibility
3	G 3.0	FRI	1,900	3,200	850		38 king,15 dead coho,3 dead red.	Few dead chum.Run over,none fresh
23	G 3.0	FRI						2-300 chum and coho
953								
y 9	G .0	FWS						No fish present
y 18	A .0	FWS						3 jumpers, 2 of which were at mouth of stream K 41A (Pre. No. 36A)
y 19	A .0	FWS						No fish present
y 22	G .0	FWS						No fish present
y 23	G 3.0	FRI	13	0	0	0	1 red	
y 29	G .1	FWS						None present, few may be upstream
y 31	G 3.0	FRI	220		40			
g 9	G 3.0	FRI	1,250	0	260	0	15 king	Enough room, but no fish
g 20	G 3.0	FRI	660	0	250	5	10 king	
g 22	G .0	FWS						Few fish present
g 30	G .5	FRI	650		900			Vis. very poor. All new fish
g 31	G .0	FWS						Few fish present

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1953								
Sep 5	G .0	FWS						A few more fish present
Oct 5	A 3.0	FRI			1,700	>200		
1954								
Aug 3	A 3.0	FRI	2,300	0				Few chum. None off mouth
Aug 7	A 2.5	FWS						Poor-fair. Few 1,000 mixed
Aug 12	A 3.0	FRI	9,500					Few chum, few dead chum, pink. None off mouth
Aug 23	A 3.0	FRI	7,800					Some chum. Dead chum, pink
Sep 4	A 3.0	FRI	4,000					Some chum. Dead chum, pink. Run nearly over
1955								
July 24	A 3.0	FRI	0		0			No jumps observed in bay
July 31	A 3.0	FRI	0					None observed. Vis. excellent
Aug 3	G	FWS	4,000					
Aug 12	A 3.0	FRI	600					
Aug 23	A 3.0	FRI	1,500					
Sep 6	A 3.0	FRI	400					
1956								
July 22	A 3.0	FRI						None observed. Jumps at conjunction of North & South arms
July 27		FWS	8,000					
July 29	A 3.0	FRI	4,000					15,000 pink near mouth
Aug 13	A 3.0	FRI	27,000					Few dead pink. Some pink at mouth
Aug 16		ADF,FWS	8,000					Many dead
Aug 24	A 3.0	FRI	10,000					Some dead pink. Spawning
Aug 26		FWS	4,000					500 seeding
1957								
July 31	A 3.0	FRI						None observed
Aug 10	A 3.0	FRI	100	0	0	0		None observed at mouth
Aug 11	A	FRI						No fish present
Aug 13	G 2.0	FWS	250		350			
Aug 19	A 3.0	FRI	300	0				None observed at mouth
Sep 1	A 3.0	FRI	100	0	400	0		None observed at mouth
Sep 8	A 3.0	FRI	200	0	600			Several dead chum
Sep 8	G	FRI						Too muddy to survey
Sep 16	A 3.0	FRI			10,000			Few pink. Few dead chum. Some pink at mouth
Sep 18	G	FRI	0	2	4,000	500		None observed at mouth
Sep 24	A 3.0	FRI	0		14,000	>1,000		None observed at mouth


N
.5 miles
High
Tide
Grassflats

101-24
N55°38.2 W130°38.8

K 41A
Previous No. 36A

KETCHIKAN, BEHM CANAL, RUDYERD BAY, S. shore at head of N. arm

MAJOR SPECIES Pink
OTHER SPECIES Chum
ESCAPEMENT TIMING Middle. Aug. -Sep.
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Fair and limited. Spawning gravel areas limited to first .5 miles of stream, becoming rock and boulders above.
STREAM TEMPERATURES Lower normal range (estimated).
VALLEY DESCRIPTION Glacial. Steep, bedrock valley walls. Valley terminates in high mountain ridge (cirque). Muskeg and brush slopes, timber in patches in valley bottom.
DRAINAGE 5-6 square miles (estimated). Early snow patches, ground water, no lakes or ponds, little muskeg, clear water.
STREAM MOUTH IDENTIFICATION Lies to S. of high, bedrock cliff at head of bay.
ANCHORAGE N. shore at drop-off of Rudyerd River delta, or S. shore off base of S. side of cliff.
TRAILS AND SURVEY ROUTES No trails. Walking in first .5 miles not difficult.
AERIAL SURVEY NOTES Not surveyed by air, but would offer good visibility for enumeration.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH 25-30'/18"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Gravel, 2-4" in diameter.
HIGH TIDE LOCATION At head of grass flats.
SCHOOLING AREAS Small pools in upper intertidal zone.
SPAWNING AREAS Riffles in upper intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.5 miles
AVERAGE WIDTH/DEPTH 25'/12-18"
GRADIENT AND VELOCITIES 2-3° at 2-4' per second
BOTTOM Gravel, rock to 10-20" in diameter beyond .5 miles.
MARKER DISTANCE .7 miles.
MARKER IDENTIFICATION Aluminum marker placed on spruce on W. bank just above boulder and deep pool area.
BARRIERS None noted, though gradient increases beyond .7 mile mark.
TRIBUTARIES Rivulets from steep valley slopes only.
SCHOOLING AREAS In pools throughout lower stream.
SPAWNING AREAS Riffles in first .5 miles.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1949								
Sep 12	G .8	FRI	370		74	5		
1953								
July 18	A .0	FWS						2 jumpers noted


N
.5 mile
NOOYA LAKE
Barrier
Falls
High
Tide
Intertidal
Delta

KETCHIKAN, BEHM CANAL, RUDYERD BAY, NORTH ARM, W. shore .8 miles

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Middle Aug.-Sep. ESCAPEMENT MAGNITUDE 10,000
SPAWNING FACILITIES Good, though limited to sections of the stream suitable for spawning by stream current.
STREAM TEMPERATURES Normal range (estimated). Stream accessible to salmon combines Nooya Lake temperatures and the N. tributary temperatures from early snow fields in a high cirque and the ridge between Rudyerd Bay and upper Granite Creek lake system.
VALLEY DESCRIPTION Glacial. Nooya Lake valley lies W. of the confluence with the steep stream-cut valley entering from the cirque N. of the outlet. Nooya Lake lies in the basin of the glacial valley with its upper valley turning N. to the divide. Steep valley walls, timbered in the valley and lower slopes, bedrock extensive in upper drainage.
DRAINAGE A small stream that drains Nooya Lake at an altitude of 260 feet. The total drainage of the lake and creek is 10 square miles. The average discharge of the creek is 85 cubic feet per second (estimated). The N. tributary drains 2 square miles of this area and is usually low during the salmon runs.
STREAM MOUTH IDENTIFICATION Stream mouth lies W. of small point on W. shore .8 miles beyond N. point of entrance to N. arm. Timbered lower slopes and valley. Stream bed along E. side of delta.
ANCHORAGE Intertidal delta extends to a line between the outer point and the S.W. shore. Better anchorage in cove opposite Nooya Creek (K 40), S.E. of N. point.
TRAILS AND SURVEY ROUTES Blazed trail leads to Nooya Lake along W. side of Creek. May be followed to point near falls, then cut through brush to creek.
AERIAL SURVEY NOTES Aerial visibility adequate during good light conditions. Bright morning shadows restrict lower stream observations. Mid-day and afternoon shadows over entire stream offer better visual conditions.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 35'/12"
GRADIENT AND VELOCITIES Less than 1° at 2-3' per second
BOTTOM Sand, gravel and small rock.
LOW TIDE LOCATION Line between outer point and SW shore.
HIGH TIDE LOCATION Head of grass flats at first bend to W. Steep bank on E. side.
SCHOOLING AREAS Upper intertidal stream.
SPAWNING AREAS Upper intertidal.
GENERAL NOTES

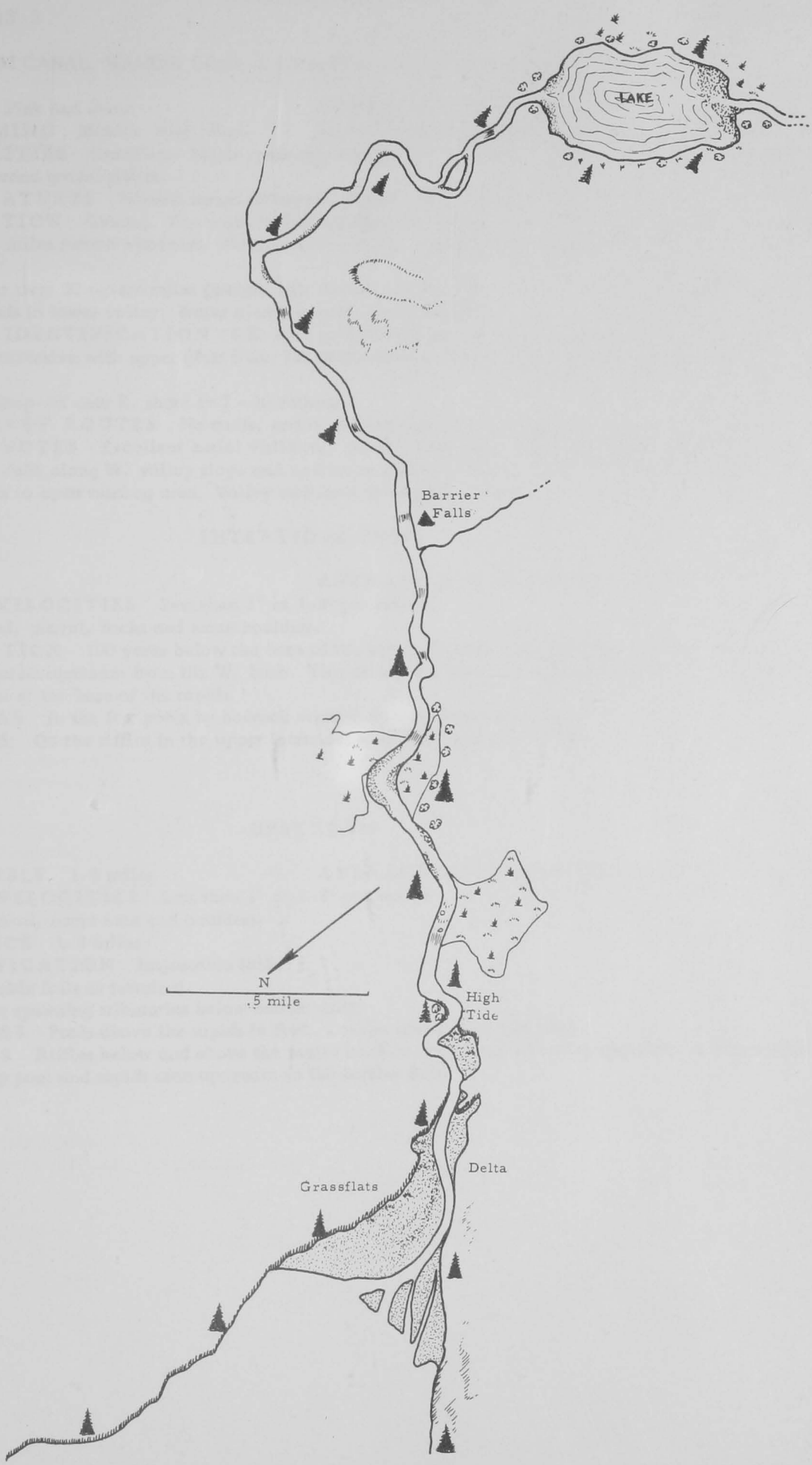
UPSTREAM

LENGTH ACCESSIBLE .8 miles AVERAGE WIDTH/DEPTH 25-30'/12"
GRADIENT AND VELOCITIES 2° at 2-4' per second
BOTTOM Small rock, some sand, scattered boulders, some bedrock.
MARKER DISTANCE .8 miles.
MARKER IDENTIFICATION Confluence with N. tributary where Nooya Creek turns W. to falls.
BARRIERS Falls area drops 200' in .2 miles.
TRIBUTARIES The stream forks .8 miles from the tidewater. The N. tributary is small, rocky and steep, usually low during salmon runs.
SCHOOLING AREAS Heaviest concentrations observed in lower stream in scattered pools.
SPAWNING AREAS Throughout middle section of stream to confluence with N. tributary.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
Sep 20	G .8	FWS	300		100			Poor
1943								
Sep 17	G 1.0	FWS	15,000		5,000			Excellent. 5,000 off mouth
1946								
Oct 12	G 1.0	ASI,FWS						Poor
1947								
Sep 24	G .5	ASI			6,000			Fair. Few pink
1948								
Aug 27	G 1.0	FWS						Fair
1953								
July 9	G .0	FWS						No fish present
July 22	G .0	FWS						No fish present
Aug 7	G .5	FWS	5			1		Poor
1954								
Aug 12	A .8	FRI						Sev. thousand at mouth, few in stream
Aug 23	A .8	FRI	4,000	0	0	0		Few still off mouth
1956								
Sep 14	G .8	FWS	2,500		400			50 pink at mouth
1957								
Aug 7		FWS	600		120			


LAKE
Barrier Falls
N
.5 mile
High Tide
Delta
Grassflats

KETCHIKAN, BEHM CANAL, WALKER COVE, 5 miles from entrance on S. shore

MAJOR SPECIES Pink and chum OTHER SPECIES Coho
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE >50,000
SPAWNING FACILITIES Excellent. Major spawning area begins .5 miles above high tide mark. The spawning areas consist of broad gravel riffles.
STREAM TEMPERATURES Normal range. Observed ranges: 58°F., 7/30/52; 51-58°F., 1953.
VALLEY DESCRIPTION Glacial. The main valley extends from the mouth S. for 3 miles, then turns W. to the headwaters 5 miles further upstream. Wooded valley floor, muskeg areas, steep glaciated valley walls, bedrock ridges.
DRAINAGE Greater than 30 square miles (estimated). Several small, high lakes, snowfields and ground water. Some beaver ponds in lower valley. Water clear, except during flooding.
STREAM MOUTH IDENTIFICATION S.E. of a prominent square point 3 miles from the head of Walker Cove, S. shore. Delta extensive with upper grass flats. Intertidal stream course along W. side of delta. Steep hill along W. side.
ANCHORAGE At drop-off near E. shore in 7 - 10 fathoms.
TRAILS AND SURVEY ROUTES No trails, easily walked during normal water levels.
AERIAL SURVEY NOTES Excellent aerial visibility, groad, clear water and light colored stream bottom. Approach barrier falls along W. valley slope and turn on to stream at falls. Use steep diving turn and follow W. side of stream to open muskeg area. Valley turbulent during S.E. winds.

INTERTIDAL ZONE

LENGTH .9 miles AVERAGE WIDTH/DEPTH 60'/18-24"
GRADIENT AND VELOCITIES Less than 1° at 1-3' per second
BOTTOM Some sand, gravel, rocks and some boulders.
HIGH TIDE LOCATION 100 yards below the base of the rapids at the second bend in the intertidal zone. A small tributary enters upstream from the W. bank. This area has a broad spawning riffle with a gravel bar in upper mid-stream at the base of the rapids.
SCHOOLING AREAS In the few pools by bedrock areas and in the boulder areas.
SPAWNING AREAS On the riffles in the upper intertidal zone near high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE 1.3 miles AVERAGE WIDTH/DEPTH 65'/18-24"
GRADIENT AND VELOCITIES Less than 1° at 1-3' per second
BOTTOM Sand, gravel, some rock and boulders.
MARKER DISTANCE 1.3 miles.
MARKER IDENTIFICATION Impassable falls.
BARRIERS Impassable falls at terminal.
TRIBUTARIES No spawning tributaries below barrier falls.
SCHOOLING AREAS Pools above the rapids in first .1 miles above high tide mark.
SPAWNING AREAS Riffles below and above the major bend in the stream .5 miles upstream. A second area lies above a deep pool and rapids area upstream to the barrier falls.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1928								
Oct 10		FWS	7,000				3 coho	
1933								
Aug 16		FWS	10,000					Few chum
1937								
July 15		FWS						10,000 fish in stream
Oct 2		FWS			2,000			Poor
1938								
Sep 15		FWS	1,000		1,000			
1940								
Sep 20	G 1.0	FWS						Poor. Pink showing. Water high
1941								
Aug 10	G 1.0	FWS	6,000		250			Poor
Sep 25	G .8	FWS	3,500		500			Poor
1942								
Sep 20	G .3	FWS	3,000		500			Fair
1947								
Sep 26	G .3	FRI	30		1,000			Fair
1948								
Sep 4	G 1.0	FWS						Fair. Chum, pink fair
1951								
Sep 2	G .5	FRI	8,200	1,500	150		2 red, 1 dead king	Few dead chum
1952								
July 30	G .3	FRI	2,025	0	0	0		Very few at mouth
Aug 10	G 1.0	FRI	17,700	10		0		Few chum. 90% schooled
Aug 25	G 1.0	FRI	8,600	655	70	>50		Few coho. Peak present or past
Sep 23	A 2.0	FRI			600			A few dead old carcasses
1953								
July 19	A .0	FWS						None present, no jumpers in bay
July 28	A .0	FWS						No jumpers noted
Aug 1	G 1.0	FRI	3,750		210		1 red	
Aug 10	G .5	FRI	2,550	0	160	0		High water. Fish spawning
Aug 21	G 1.0	FRI	1,632	30	137	20	10 red	Run appears over
Aug 31		FRI						Unable to travel up. High water
Oct 5	A 2.0	FRI			3,800	200	500 coho	
1954								
Aug 23	A 2.0	FRI	9,000		2,500			Some dead chum, pink
Sep 4	A 2.0	FRI	4,000				Some fresh coho	Many dead pink. Some live, dead chum
1955								
July 24	A 2.0	FRI	100					
July 31	A 2.0	FRI	1,100					
Aug 5	A .3	ADF	1,500					
Aug 12	A 2.0	FRI	4,500					Some chum
Aug 23	A 2.0	FRI	3,500				Coho present	>500 at mouth
Sep 6	A 2.0	FRI	1,000		100			
1956								
July 22	A 2.0	FRI	4,000	0				>20 seals at mouth
July 29	A 2.0	FRI	30,000					Some fish at mouth
Aug 13	A 2.0	FRI	26,000					Some fish at mouth. Few dead pink
Aug 16		ADF,FWS	15,000					
Aug 24	A 2.0	FRI	17,000	>200				Spawning

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1957								
July 31	A 2.0	FRI	300	0				None observed at mouth
Aug 10	A 2.0	FRI	500	0		0		Some chum. None observed at mouth
Aug 11	A 2.0	FRI	1,500					
Aug 19	A 2.0	FRI	500	0				None observed at mouth
Sep 1	A 2.0	FRI		0	300	0		Few pink. Sev. 100 chum at mouth
Sep 8	A 2.0	FRI	300	0	500	0		Some at mouth
Sep 8	G 2.0	FRI	100		4,500			
Sep 16	A 2.0	FRI	1,000		3,000			Few dead pink, chum. >20,000 chum at mouth
Sep 24	A 2.0	FRI			15,000			No pink observed. 5,000 chum at mouth


N
.5 mile
High
Tide
Grassflats
Delta

101-23 K 43A
N55°45.1 W130°42 Previous No. 39A & B

KETCHIKAN, BEHM CANAL, WALKER COVE, S. shore at head

MAJOR SPECIES Pink and chum OTHER SPECIES
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE 2,000
SPAWNING FACILITIES Excellent, though limited.
STREAM TEMPERATURES Normal range (estimated).
VALLEY DESCRIPTION Glacial. Vertical cliffs on N. side of valley, steep bedrock along S. side. Valley is continuation of the N. fork of the Rudyerd River with the divide 1 mile W. of the N. fork lake. Some timber, muskeg and brush in valley bottom. Valley rises rapidly 1.5 miles upstream.
DRAINAGE Snowfields, several small hanging glaciers high up S. ridge. Area 6-8 square miles (estimated). Ground water seepage in upper valley.
STREAM MOUTH IDENTIFICATION Grass flats across upper delta, stream crosses center of flats. Several small channels cross delta on each side of main stream.
ANCHORAGE S. of point between the two valleys at the head, near the E. side of the drop-off.
TRAILS AND SURVEY ROUTES No trails. Easily walked.
AERIAL SURVEY NOTES Good aerial visibility, clear water, light colored bottom, though upstream narrow and brushy.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 20-30'/12"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Some sand, gravel and small rock.
HIGH TIDE LOCATION Head of grassflats at tree line.
SCHOOLING AREAS In first .1 miles below high tide mark.
SPAWNING AREAS In first .1 miles below high tide mark.
GENERAL NOTES

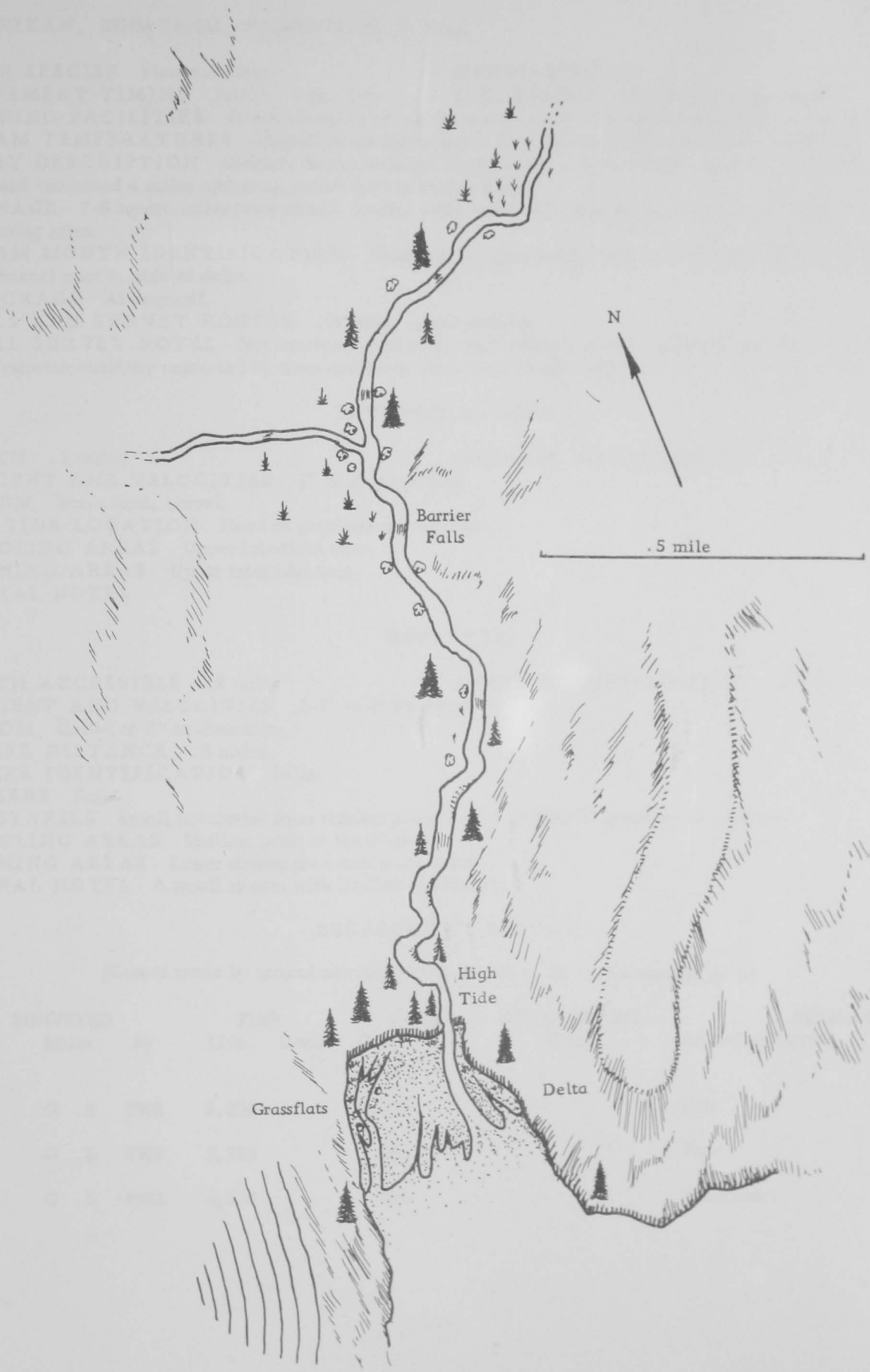
UPSTREAM

LENGTH ACCESSIBLE Less than 1 mile AVERAGE WIDTH/DEPTH 20'/12-18"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel to 6" in diameter.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Stream becomes small and steep beyond 1 mile. Probable limits of migration are below this point at dry gravel bar area entering from S. side from high cliff.
TRIBUTARIES Small streams enter from valley sides not important as spawning areas. Small stream N. of main stream considered as part of the system.
SCHOOLING AREAS Small pools in lower stream.
SPAWNING AREAS Riffles in the first .5 miles of stream are major upstream spawning areas.
GENERAL NOTES A small stream having both pink and chum escapements. Stream potential limited.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1928								
Oct 10		FWS			3,000		7,000 coho	
1940								
Sep 20	G .5	FWS	2,000		1,000			Poor
1941								
Sep 25	G .5	FWS	1,500		500			Poor
1942								
Sep 21	G .5	ASI	7,200		6,300			Excellent
1947								
Sep 26	G .3	FRI	50		700			
1948								
Oct 11	G .5	FWS	300		2,500			Good
1954								
Sep 4	A .5	FRI	4,000					Some chum, some fresh coho
1955								
Sep 10	G 3.0	FWS			400			
Sep 19	G 3.0	FWS			300			50 at mouth


N
.5 mile
Barrier
Falls
High
Tide
Delta
Grassflats

101-23 K 43B
N55°45.7 W130°42.5 Previous No. 39C

KETCHIKAN, BEHM CANAL, WALKER COVE, N. head

MAJOR SPECIES Pink and chum OTHER SPECIES
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE 2,000
SPAWNING FACILITIES Good, though limited. Numerous splits in lower stream offer good gravel areas.
STREAM TEMPERATURES Normal range (estimated). Observed remperatures: 48°F., 9/26/47.
VALLEY DESCRIPTION Glacial. Steep, bedrock slopes on N. side of valley, vertical cliffs on S. side. Valley head estimated 4 miles upstream, small lake in cirque basin.
DRAINAGE 7-9 square miles (estimated). Small, early snowfields, one small lake, ground waters, quick run-off during rains.
STREAM MOUTH IDENTIFICATION Grassflats in upper delta, boulder erratics on N. side of delta, stream channel near S. side of delta.
ANCHORAGE At drop-off.
TRAILS AND SURVEY ROUTES No trails, easily walked.
AERIAL SURVEY NOTES Not surveyed. However, light colored bottom and clear water aid aerial visibility. Upstream visibility restricted by trees and brush cover over small channels.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 10-15'/6"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Some sand, gravel.
HIGH TIDE LOCATION Head of grassflats at tree line.
SCHOOLING AREAS Upper intertidal zone.
SPAWNING AREAS Upper intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .8 miles AVERAGE WIDTH/DEPTH 10'/6"
GRADIENT AND VELOCITIES 1-2° at 2' per second
BOTTOM Gravel to 6" in diameter.
MARKER DISTANCE .8 miles.
MARKER IDENTIFICATION Falls.
BARRIERS Falls.
TRIBUTARIES Small tributaries from rivulets along valley of little importance in spawning.
SCHOOLING AREAS Shallow pools in lower stream.
SPAWNING AREAS Lower stream area and in the splits.
GENERAL NOTES A small stream with limited productivity.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 20	G .5	FWS	3,000		1,000			Fair
1941								
Sep 25	G .8	FWS	2,750		250			Poor
1942								
Sep 21	G .5	FWS	6,500		500			Excellent

KETCHIKAN, BEHM CANAL, CHICKAMIN RIVER SYSTEM, S. shore 1 mile above Chickamin Slough confluence with main river

MAJOR SPECIES Pink, chum
OTHER SPECIES
ESCAPEMENT TIMING Early. July-Aug.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Very limited.
STREAM TEMPERATURES Normal range (Estimated).
VALLEY DESCRIPTION Glacial origin. Accessible stream valley is old split from main river and still receives flooding main river water through flood channel above Basin Creek entry into slough.
DRAINAGE 3-4 square miles (Estimated). Snowfields and precipitation fed. Bare rock areas throughout, rapid run-off.
STREAM MOUTH IDENTIFICATION Amber colored slough waters entering main river, have been reported as "Turbid Blue." Lower slough up to 50-60' wide and 4-5' deep.
ANCHORAGE See Chickamin River K 44.
TRAILS AND SURVEY ROUTES Skiff may be taken almost .4 mile up slough to shallow riffle areas near end of accessible stream.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

Basin Creek is a tributary to the Chickamin River K 44, therefore, it has no intertidal zone.

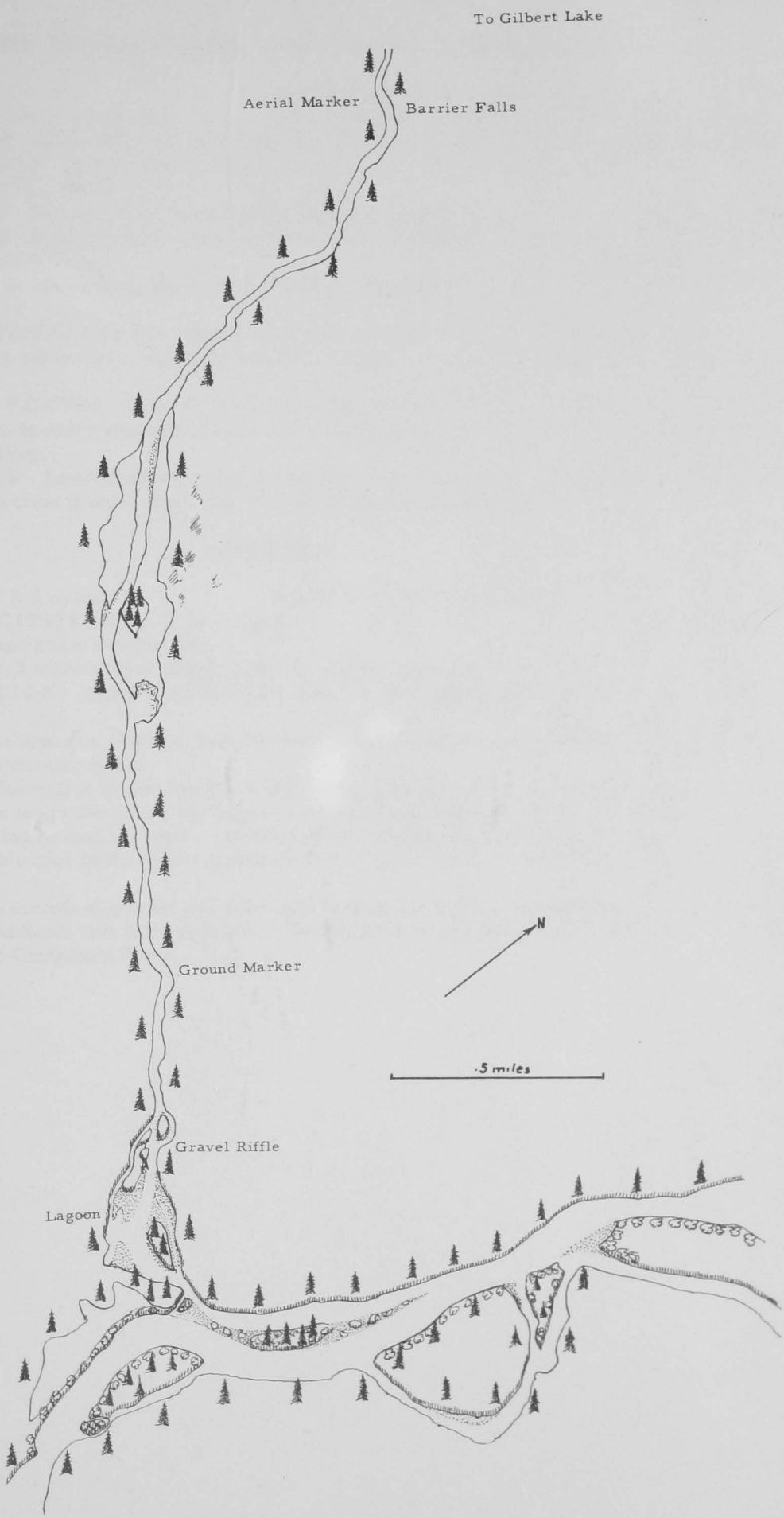
UPSTREAM

LENGTH ACCESSIBLE .6 mile.
AVERAGE WIDTH/DEPTH 30'/12-24"
GRADIENT AND VELOCITIES .5-1° at 1-2' per second
BOTTOM Silt, sand and fine gravel.
MARKER DISTANCE .6 mile.
MARKER IDENTIFICATION Barrier Falls.
BARRIERS Barriers falls reported 20' high.
TRIBUTARIES None below barrier falls.
SCHOOLING AREAS Slough is used by schooling salmon. However, many of the schooling fish pass on up the main river.
SPAWNING AREAS Limited to the upper stream area by the low current velocities in the slough. There are about 100 yards of spawning area below the barrier falls to the slough.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1949								
July 20		FRI						Chum, pink present at mouth
1951								
Aug 11	G .0	FRI	1,500	0	0	0		


To Gilbert Lake
Aerial Marker
Barrier Falls
Ground Marker
N
.5 miles
Gravel Riffle
Lagoon

KETCHIKAN, BEHM CANAL, CHICKAMIN RIVER, S. side 3 miles above Chickamin delta

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE 10-20,000
SPAWNING FACILITIES Good. Limited areas upstream. Main spawning areas above lagoon for .5 miles.
STREAM TEMPERATURES Normal range. Observed ranges: 52-64°F., 1950; 54-60°F., 1951; 51-63°F., 1952; 57-60°F., 1953.
VALLEY DESCRIPTION Glacial. Steep valley sides, bare rock ridges. Runs S. 2 miles from confluence and turns W. to Gilbert Lake. A short valley, steep walled to the cirque head 9 miles from the mouth which lies over the ridge N. of Walker Cove.
DRAINAGE Greater than 20 square miles (estimated). Several small snowfields drain into Gilbert Lake (1.3 miles long).
STREAM MOUTH IDENTIFICATION Mouth lies behind a chain of sand bars in the main Chickamin River. Beyond the narrow, deep outlet lies a lagoon in which the salmon school. A long, gravel riffle is just above the lagoon.
TRAILS AND SURVEY ROUTES Coho Creek is easily reached by skiff and outboard up the main Chickamin River. The lower stream is easily hiked until stream becomes very brushy. Upper stream is reached through a narrow section of the valley.
AERIAL SURVEY NOTES Lower stream and lagoon are easily surveyed by air. Upper stream from barrier falls down to narrow valley section is broad and clear. Gilbert Lake clear for landing.

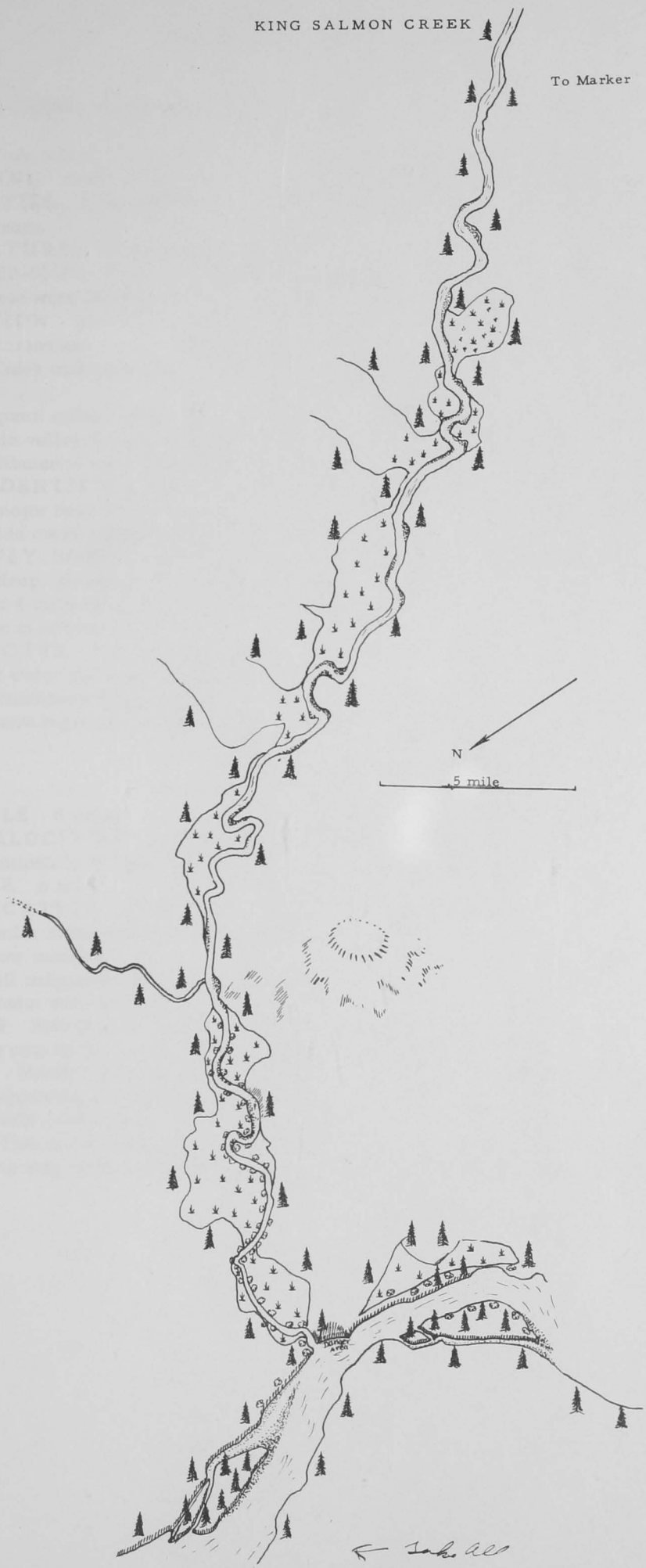
UPSTREAM

LENGTH ACCESSIBLE 2.5 miles AVERAGE WIDTH/DEPTH 18-24"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel, some sand and a few boulders.
MARKER DISTANCE 2.5 miles (aerial survey marker), .5 miles (ground).
MARKER IDENTIFICATION Aerial marker: barrier falls. Ground marker: split area above long spawning riffle above lagoon.
BARRIERS Falls 2.5 miles upstream is a high bedrock slide over 30° inclination. Impassable to all salmon.
TRIBUTARIES No important tributaries.
SCHOOLING AREAS Throughout lagoon and lower riffle area. Few schooling fish have been observed beyond.
SPAWNING AREAS The long riffle above the lagoon is an excellent spawning area and has had the greatest concentrations of spawning salmon observed. .5 miles above, the stream splits frequently and offers good facilities. Little available area in the narrow valley section. A short, good section of spawning riffle is available below the falls.
GENERAL NOTES Large schools of salmon are found each year in the lagoon. A number of king salmon have been observed also and may indicate that some upstream migrating salmon will school in this lower river section before ascending further up the Chickamin River.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1949								
July 20	G 2.0	FRI						800 pink, 1,200 chum in slough at mouth
Sep 5		FWS						Crowded conditions in late August
1950								
July 20	G .3	FRI	550	0	550	0		
Aug 1	G .3	FRI	20,000	0		0		Chum present
Aug 10	G .3	FRI	23,000	300	5,000			Some dead chum
Aug 21	G .3	FRI	11,000	2,000				
Sep 2	G .3	FRI	6,000	5,000				Several chum
1951								
July 24	G .3	FRI	7,000	0	118	4		
July 25	A .3	FRI						1,000 salmon
July 29	A .3	FRI						2,000 salmon
Aug 1	G .3	FRI	8,250	0	200	0		
Aug 11	G .3	FRI	15,000	80	400	10	Sev. king present	
Aug 21	G .3	FRI	11,600	400		10	Some coho & king present. Few chum	
Sep 3	G .3	FRI	10,700	1,800	30	0		
1952								
July 22	G .3	FRI	3,500	0	1,000	0		
July 26	A 3.0	FRI						700, mostly at mouth
Aug 11	G .3	FRI	10,700	100	200		35 king, few dead coho. Spawning peak appears here	
Aug 26		FRI	6,300	500	0		30 king, sev. coho	
1953								
July 24	G .3	FRI	250	0	370	0		
Aug 1	G .3	FRI	1,230		560			
Aug 10	G .3	FRI	1,610		250		5 king, 10 red	
Aug 22	G .3	FRI	1,460	50	110	0	25 king, 10 red, sev. coho	
Oct 5	A 2.5	FRI						No salmon
1955								
July 24	A .2	FRI						None observed
July 31	A .2	FRI	7,000					Some chum. Some dead chum, pink
Aug 12	A .2	FRI	4,000					Chum present. 2,000 pink 1/2 mile upstrea
1956								
July 22	A .2	FRI	>2,000					
July 29	A .2	FRI	5,000		5,000			At confluence, lagoon
Aug 13	A .2	FRI	20,000					Some dead pink. Many spawning in lower stream
Aug 16		ADF,FWS	15,000					Many dead pink
1957								
July 31	A .2	FRI	5,000	0				Some chum
Aug 10	A .2	FRI	3,000	0	500			Few dead chum. In lagoon and lower strean
Aug 11	A .2	FRI	2,000					
Aug 19	A .2	FRI	5,000					Some chum, dead chum. Many dead pink


To Marker
N
.5 mile
← Lake Ill

KETCHIKAN, BEHM CANAL, CHICKAMIN RIVER, S. side 3.6 miles above Chickamin delta

MAJOR SPECIES Pink, chum, king OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE >50,000
SPAWNING FACILITIES Excellent for over 6 miles. Spawning riffles are nearly continuous beyond the first 1 mile of lower stream.
STREAM TEMPERATURES Normal range. Observed ranges: 49-54°F., 1950; 48-53°F., 1951; 48-57°F., 1952; 50-53°F., 1953. The higher temperatures observed during the spawning period were of short duration. These were observed during the latter part of a long, sunny period in August.
VALLEY DESCRIPTION Glacial. The stream lies at the base of a high vertical cliff visible from Behm Canal. Muskeg and alder throughout valley. Valley runs N.-S. with an exceptionally straight ridge to the W. separating the King Salmon Creek and Coho Creek drainages. Valley terminates just N. of the head of Walker Cove in cirques.
DRAINAGE 25-30 square miles (estimated). Snowfields in upper eastern part of system, some small high lakes, ground waters. Main valley drainage heads N. of Walker Cove head. Smaller valley enters from E. 5 miles upstream. Small tributaries enter from the high ridges on each side of valley. Clear water, muddy during floods.
STREAM MOUTH IDENTIFICATION At base of high cliff visible from Behm Canal. Stream enters river at middle of first major bend N. A bedrock point causes the main river to boil just below stream mouth, clear water pool just inside creek mouth out of river current. A silt bar is on the N. side of the mouth.
TRAILS AND SURVEY ROUTES Stream reached by skiff and outboard. Lower stream navigable through lower .8 miles of deep, slower current. Walking above is slow and requires normal or lower water levels. Stream may be covered for 4 miles by lining skiff over riffles and running in deeper sections. This is grizzly bear country and caution is advised for foot surveyors.
AERIAL SURVEY NOTES A wide valley with no obstructions, has low gradient and may be run upstream and downstream. Clear water and light colored bottom offers optimum visibility from the air. Aerial terminal is at upper limits of maximum migration. This is above the one major tributary at the 4 mile mark. Stream gradient increases and becomes rapids and small falls at a moraine which rises to an upper valley.

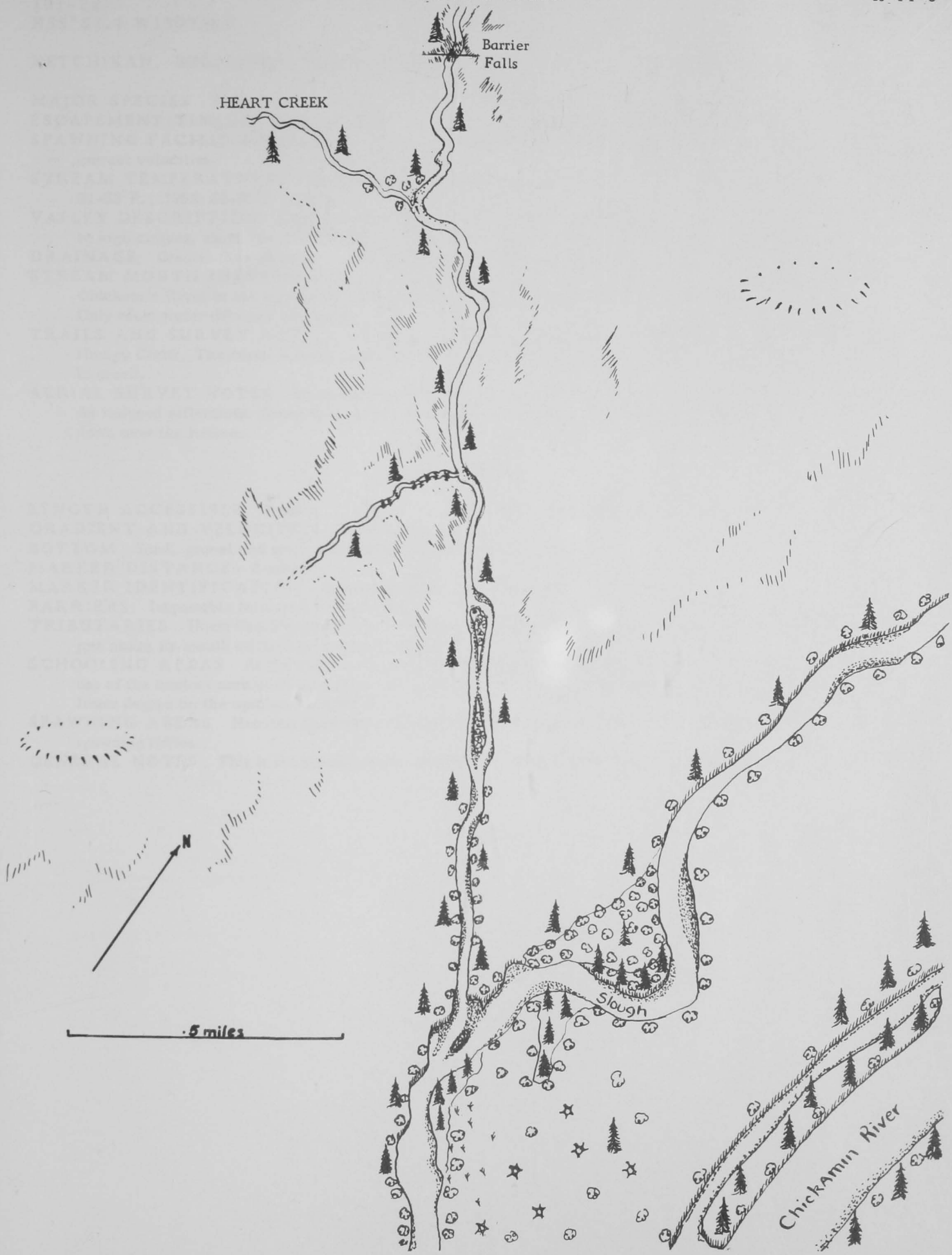
UPSTREAM

LENGTH ACCESSIBLE 6 miles AVERAGE WIDTH/DEPTH 30-50'/18-30"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand predominantly in lower stream, excellent gravels above.
MARKER DISTANCE 6 miles.
MARKER IDENTIFICATION Rapids and series of small falls as stream rises on to moraine below upper valley. This moraine is 1 mile above tributary valley, entering from the E. Coarse moraine debris in stream bed.
BARRIERS None below moraine.
TRIBUTARIES Small tributaries enter from ridges. Major tributary 5 miles upstream on E. side has only short section by main stream with low gradient.
SCHOOLING AREAS First 2 miles of stream has number of deep holes which are used by schooling salmon. Several large holes next to W. valley wall used by schooling king salmon.
SPAWNING AREAS Nearly continuous spawning riffles above 2 mile mark to 6 mile termination of accessible stream. Optimum spawning gravels throughout. Smaller gravels from 2 to 4 mile marks used by pinks predominantly, larger gravels above used by chum and king salmon.
GENERAL NOTES This is the most extensive spawning tributary in the Chickamin River system. The greatest numbers of spawning king salmon have been observed here and may be the major spawning stream for this species.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1949								
July 20		FRI						200 mixed chum, pink at mouth
Sep 5		FWS						Crowded conditions in late August
1950								
July 20	G 1.3	FRI	6	0	2	0		
Aug 1	G 1.3	FRI	500	0		0		Some chum
Aug 10	G 1.3	FRI	3,000		500	0		Several dead pink
Aug 21	G 1.3	FRI	1,000	500	2,000			Some dead chum
Sep 2	G 1.3	FRI	100	5,000	50	0		
1951								
July 24	G .8	FRI	1,000	0	40			Sev. dead chum. Most at mouth
July 25	A	FRI						4,000 salmon
July 29	A	FRI						12,000 salmon
Aug 1	G 1.3	FRI	13,600	0	200		22 king	Sev. dead chum. Good at forks
Aug 11	G 1.3	FRI	12,900	650	650	150	14 king	
Aug 21	G 1.3	FRI	1,700	1,000			Some king	Live, dead chum. Blind pink
Sep 3	G .8	FRI	550	1,150	60	0	45 coho	
1952								
July 22	G 2.0	FRI	200		25			
July 26	A 4.0	FRI	1,500				King (?) far upstream	Few salmon at mouth
July 31	G 1.3	FRI	1,700	0		0	60 king	Few chum. Most schooled at mouth
Aug 11	G 1.3	FRI	8,700	470	150	200	88 king, sev. coho	Spawning peak appears here
Aug 26	G 1.3	FRI	25	30			5 coho	
Sep 23	A 2.0	FRI						3-500 mostly in pools. Few dead
1953								
July 24	G 1.3	FRI	48	0	78	0		
Aug 1	G 1.3	FRI	143	0	45	0		
Aug 10	G 1.3	FRI	320	10	160	35		
Aug 22	G 1.3	FRI	1	50	1	40	1 coho	
Oct 5	A 3.0	FRI			2,000	500	Some coho	
1955								
July 24	A 1.3	FRI	5					2 king, all mouth
July 31	A 1.3	FRI	1,000				Some king	Some chum. 500 fish at mouth, 1,000 above marker
Aug 12	A 4.0	FRI	4,000		1,000		500 king	Chum spawning, king, pink fresh
1956								
July 22	A 4.0	FRI	>200				>200 king	
July 29	A 4.0	FRI	6,000				2,000 king	
Aug 13	A 4.0	FRI	35,000	>200			>3,000 king	Scattered throughout
Aug 16		ADF,FWS	30,000				350 king	
1957								
July 31	A 4.0	FRI	10,000	0	4,000	0	>200 king	
Aug 10	A 4.0	FRI	5,000		3,000	>2,000	300 king	Some dead pink. Many spawning
Aug 11	A 4.0	FRI	26,500					
Aug 19	A 4.0	FRI	2,000	>200		>200	>500 king	Some chum


Barrier
Falls
HEART CREEK
N
.5 miles
Slough
Chickamin River

KETCHIKAN, BEHM CANAL, CHICKAMIN RIVER, 4 miles up lower Chickamin Slough, N. side

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE >50,000
SPAWNING FACILITIES Excellent. Gravel riffles throughout accessible stream, broad, clear water, optimum current velocities.
STREAM TEMPERATURES Normal range. Observed ranges: 50-58°F., 1950; 48.5-59°F., 1951; 51-55°F., 1952; 52-55°F., 1953.
VALLEY DESCRIPTION Glacial. Steep valley sides, bedrock upper slopes and ridges. Valley extends N. 6 miles to high cirques, short, steep valley on W. side rises to hanging valley with Heart Lake cirque.
DRAINAGE Greater than 25 square miles. Snowfields, high lakes and ground water.
STREAM MOUTH IDENTIFICATION The stream is reached by ascending the slough which joins the Chickamin River in the upper delta. Stream has long high bar on E. side of outlet with long shallow pools. Only clear water tributary on slough.
TRAILS AND SURVEY ROUTES There is a trail along the N. side of the Chickamin valley which leads to Humpy Creek. The creek is easily hiked on normal water levels. Slough is easily navigated by skiff and outboard to creek.
AERIAL SURVEY NOTES Stream easily observed from air. Afternoon light makes W. side of stream preferred for reduced reflections. Steep wall on W. side requires above normal altitude for slipping nearly vertically down over the stream.

UPSTREAM

LENGTH ACCESSIBLE 2 miles AVERAGE WIDTH/DEPTH 50-60'/12-18"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Sand, gravel and small rock. More coarse in upper stream.
MARKER DISTANCE 2 miles.
MARKER IDENTIFICATION Impassable falls easily identified.
BARRIERS Impassable falls over bedrock shelf.
TRIBUTARIES Heart Creek enters .3 miles below barrier falls from steep W. side of valley. A limited section just above its mouth utilized by spawning salmon.
SCHOOLING AREAS At the confluence with the Chickamin Slough. Schooling salmon in glacial streams make use of the contact area of clear and silt water for concealment. Several pool areas up the creek are used to a lesser degree on the upstream migration.
SPAWNING AREAS Heaviest spawning concentrations observed from .5 to 1.5 miles upstream on excellent spawning riffles.
GENERAL NOTES This is the second largest spawning tributary known to be in the Chickamin River system.

No Previous No.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1949								
July 19	G 3.0	FRI						12 chum at mouth
1950								
July 20	G .2	FRI	2,000	0	2,100	0		
Aug 1	G .2	FRI	6,000	0		0		Chum present
Aug 10	G .2	FRI	10,000	0		0		Chum present
Aug 21	G .2	FRI	4,000	1,500	200			
Sep 2	G .2	FRI	300	4,000				
1951								
July 24	G .3	FRI	4,800	0	30	0		Mostly at mouth
July 25	A 2.0	FRI						6,000 salmon
July 29	A 1.5	FRI						13,000 salmon
Aug 1	G .3	FRI	9,000	0	75	0		90% at mouth
Aug 11	G .3	FRI	17,200	600	150	60		3,100 pink in 250 yds. above marker
Aug 21	G .3	FRI	6,800	1,350	50	50	Some king	Some blind pink
Sep 3	G .3	FRI	4,800	1,900	10		Some coho	Some dead chum
1952								
July 22	G .1	FRI	1,250	0	85	0		
July 26	A 3.0	FRI						1,700 just above mouth, none at mouth
July 31	G .2	FRI	6,200	0	300	3	Sev. king	
Aug 11	G .3	FRI	10,800	380	26	127	Sev. coho, 18 king.	Spawning peak
Aug 26	G .3	FRI	3,650	955			10 coho, 10 king	
1953								
July 24	G .3	FRI	810	0	185	0		
Aug 1	G .3	FRI	1,714	0	939		1 red	
Aug 10	G .3	FRI	1,560	10	300	25		
Aug 22	G .3	FRI	840	100	55		5 coho, 10 king, 6 red.	Several dead chum
Oct 5	A 2.0	FRI						No salmon
1955								
July 24	A 2.0	FRI	0					
July 31	A 2.0	FRI	500					Schooled at confluence. Few first 1/2 mil
Aug 12	A 2.0	FRI	4,000		1,000			Surveyed to riffles
1956								
July 22	A 2.0	FRI	30,000					
July 29	A 2.0	FRI	50,000					
Aug 13	A 2.0	FRI	50,000	>5,000				Many spawning
Aug 16		ADF,FWS						15,000 present. 10,000 dead
1957								
July 31	A 2.0	FRI	15,000	0				Some chum
Aug 10	A 2.0	FRI	5,000		500	>200		Some dead pink. All spawning
Aug 11	A 2.0	FRI						20,000 fish. Good visibility
Aug 19	A 2.0	FRI	2,000		500		>200 king	Many dead chum, pink

KETCHIKAN, BEHM CANAL, CHICKAMIN RIVER, 9 miles upstream from Leduc River confluence on S. side of S. fork of Chickamin

MAJOR SPECIES OTHER SPECIES
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE Unknown
SPAWNING FACILITIES Good. Clearwater tributary with good spawning gravel in lower stream to barrier falls.
STREAM TEMPERATURES Cold range (estimated).
VALLEY DESCRIPTION Glacial. Steep valley walls, muskeg valley floor. Bedrock ridges.
DRAINAGE Greater than 35 square miles (estimated). Snowfields, small, high altitude lakes in system.
STREAM MOUTH IDENTIFICATION Only major clear water tributary in lower S. fork of the Chickamin above the confluence with the Leduc River.
TRAILS AND SURVEY ROUTES Can be reached by large river boat. No trails known. Stream appears to be easily walked during normal water levels (from aerial observations).
AERIAL SURVEY NOTES Clear water and light colored bottom allows good aerial visibility. Broad valley affords adequate maneuvering for light planes.

UPSTREAM

LENGTH ACCESSIBLE 2 miles (estimated) AVERAGE WIDTH/DEPTH 50-70'/24" (estimated)
GRADIENT AND VELOCITIES 1° at 2' per second (estimated)
BOTTOM Sand and gravel.
MARKER DISTANCE 2 miles (estimated).
MARKER IDENTIFICATION Barrier falls.
BARRIER Barrier falls.
TRIBUTARIES None reported in accessible 2 miles.
SCHOOLING AREAS At confluence with silted S. fork of the upper Chickamin River.
SPAWNING AREAS Riffles throughout accessible 2 miles of stream.
GENERAL NOTES This clear water stream is 19 miles above the Chickamin delta and only two visits have been recorded. No reports have been made on trips further up the S. fork of the upper Chickamin River (above the Leduc River), but the glacial silted waters indicate that Barrier Creek is the last major clear water tributary in the upper system.

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

101-22 CLEARWATER CREEK K 44-5
N55°49.5 W130°55.6 Previous No. 40A

KETCHIKAN, BEHM CANAL, CHICKAMIN RIVER SYSTEM, N. bank near high tide

MAJOR SPECIES Coho OTHER SPECIES Pink, chum
ESCAPEMENT TIMING ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Good spawning facilities are available above the series of rapids and cascades beginning at the high tide mark, though probably limited to coho that can pass the barriers. The facilities below and available to pink and chum are good but extremely limited.
STREAM TEMPERATURES Normal range (Estimated).
VALLEY DESCRIPTION Glacial origin. Steep rock walls and "U" shaped valley with timbered valley floor.
DRAINAGE 6-8 square miles (Estimated). Precipitation fed after snowfields which persist until August are nearly gone. Rapid run-off during rains.
STREAM MOUTH IDENTIFICATION Crosses large grassflats first encountered on N. bank of Chickamin River. Cascades .3 mile from confluence.
ANCHORAGE See Chickamin River K 44.
TRAILS AND SURVEY ROUTES Skiff can be taken to base of cascades.
AERIAL SURVEY NOTES Not surveyed by air above cascades.

INTERTIDAL ZONE

Clearwater Creek is a tributary to the Chickamin River K 44, therefore, it has no intertidal zone.

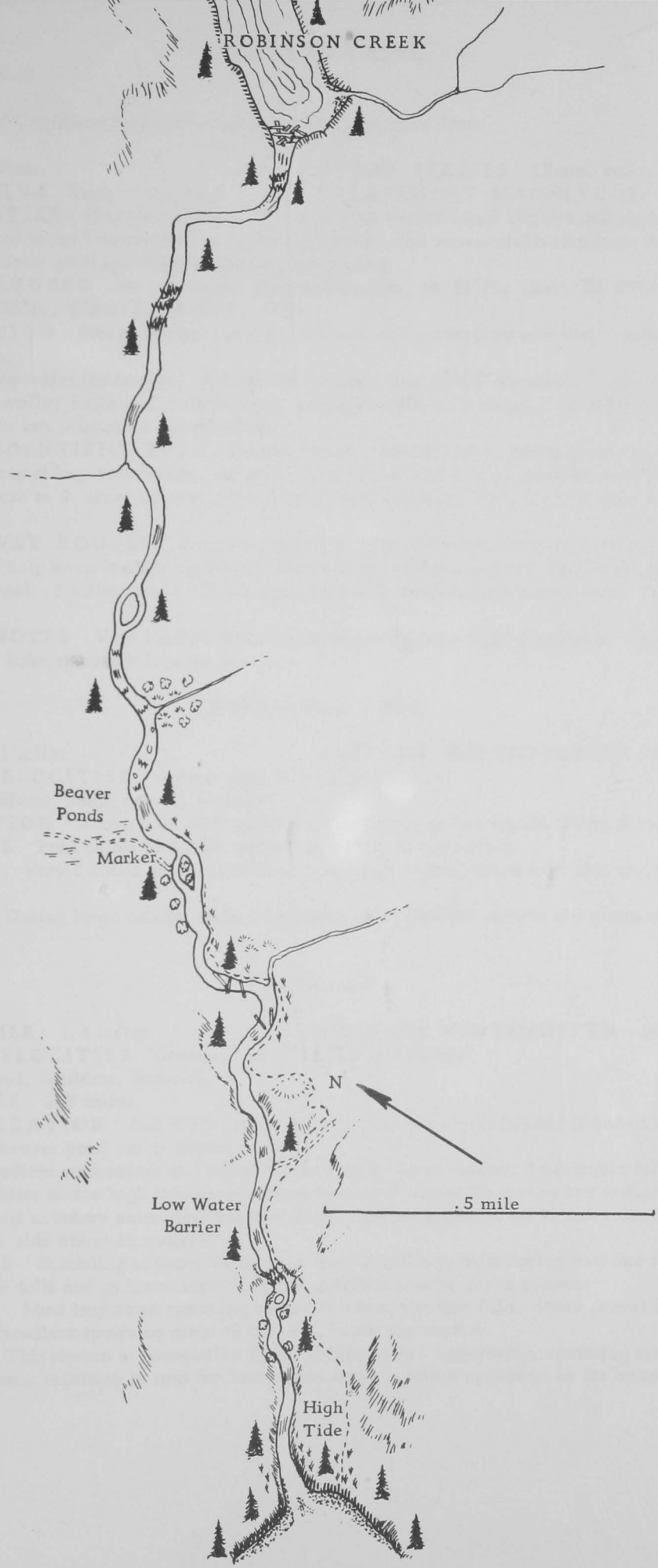
UPSTREAM

LENGTH ACCESSIBLE .3 mile AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Silt, sand, gravel, small boulders, bedrock.
MARKER DISTANCE .3 mile.
MARKER IDENTIFICATION Cascades and rapids at head of grassflats.
BARRIERS Cascades and rapids at head of grassflats is barrier to pink and chum migration. Coho have been reported above barrier.
TRIBUTARIES None.
SCHOOLING AREAS At confluence with Chickamin River and pools in lower section.
SPAWNING AREAS .1 mile below barrier cascades has good facilities, though very limited.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1947								
Sep 19	G .2	FRI	10					Some chum, coho
1949								
Aug 4		FWS						Very good
1950								
July 20	G .0	FRI	0		0			
Aug 1	G .0	FRI	0		0			
Aug 10	G .0	FRI	500		200	0		Several dead pink
Aug 21	G .0	FRI	200	50	50	0		
Sep 2	G .0	FRI	150	100		0		Several chum. Some coho
1951								
July 25	G .3	FRI						50 salmon
July 29	G .3	FRI						None seen
Aug 11	G .1	FRI	800		50			Few dead chum, pink. 1/3 pink spawning. Jumps
1952								
July 22	G 1.5	FRI	200	0	25	0		
July 26	A .0	FRI						25 salmon. None at mouth
July 31	G 1.0	FRI	1,700	0		0	60 king	Few chum. Fish schooled at mouth
Aug 11	G .8	FRI	8,700	470	150	200	Sev. coho, 88 king	Spawning peak appears here
1953								
Aug 24		FWS						Poor. No pink. All season very unusual


ROBINSON CREEK
Beaver
Ponds
Marker
N
.5 mile
Low Water
Barrier
High
Tide

KETCHIKAN, BEHM CANAL, E. shore 6 miles N.W. of Chickamin River

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE >50,000
SPAWNING FACILITIES Good above falls. The spawning facilities are limited and do not appear to be nearly as good as are found in far less productive streams. However, the escapements that have been observed here indicate that unusually good spawning conditions are present.
STREAM TEMPERATURES Normal range. Observed ranges: 48-55°F., 1949; 53-63°F., 1950; 51-59°F., 1951; 55°F., 8/26/52; 54-58°F., 1953.
VALLEY DESCRIPTION Steep, stream cut glacial lower valley, wooded and very brushy. Upper valley glacial, heading in cirques.
DRAINAGE 20 square miles (estimated). Snowfields in peaks over 4,000' elevation. Lake with outlet 2 miles upstream in upper valley basin is 1.3 miles long, average width is .2 miles, .3 miles wide at head. Becomes precipitation fed in late August and September.
STREAM MOUTH IDENTIFICATION Narrow, steep intertidal zone, lower stream with bedrock walls and large boulders, steep sides, very brushy. Mouth in small cove with a long point extending S. from N. side.
ANCHORAGE In close to S. shore of cove, 100 feet off bedrock bank. Very little shelter during strong southerly winds.
TRAILS AND SURVEY ROUTES Trappers trail on S. side of stream starts up through brush and follows steep valley side. Bears help keep it clear upstream. Above falls, climb steep hill on S. side starting up small tributary and cut back to creek .1 miles above. Game trails follow S. bank to rapids and barrier falls area above beaver ponds.
AERIAL SURVEY NOTES Very limited visibility even during good light conditions. Steep valley sides, limited altitude of flight. Lake size sufficient for landing.

INTERTIDAL ZONE

LENGTH Less than .1 miles AVERAGE WIDTH/DEPTH 30-40'/18"
GRADIENT AND VELOCITIES Greater than 3° at 3' per second
BOTTOM Rocks, boulders, some gravel, bedrock.
HIGH TIDE LOCATION Above pool 100' upstream from beach at low rapids. Steep sides, and boulders.
SCHOOLING AREAS Pool below high tide and at the mouth of the stream.
SPAWNING AREAS Very limited gravel section at lower end of pool below high tide and riffle at upper beach section.
GENERAL NOTES During large escapements, the mouth and intertidal section are jammed with salmon during the initial run.

UPSTREAM

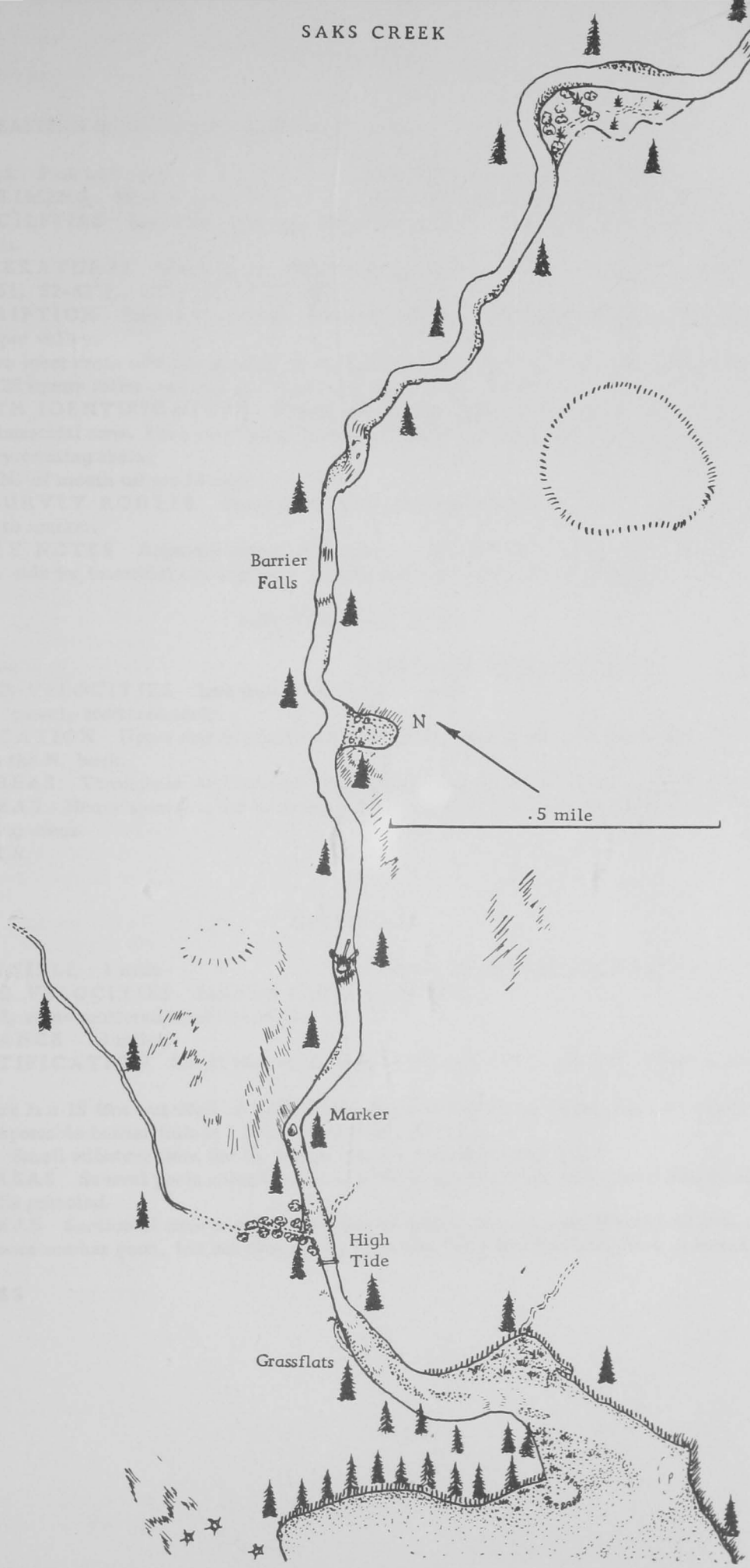
LENGTH ACCESSIBLE 1.4 miles AVERAGE WIDTH/DEPTH 30-40'/18-24"
GRADIENT AND VELOCITIES Greater than 3° at 2-3' per second
BOTTOM Sand, gravel, boulders, bedrock.
MARKER DISTANCE 1.3 miles.
MARKER IDENTIFICATION Blazed tree on S. bank above first rapids beyond island at head of the low gradient section. Beaver pond across stream.
BARRIERS Steep gradient with rapids and series of small falls above marker. Impassable falls below lake. The series of falls .3 miles above high tide are a serious barrier to migration during low water.
TRIBUTARIES Small tributary enters low gradient area .8 miles upstream on S. side. Several small trickles enter stream on N. side above to marker.
SCHOOLING AREAS Schooling is found throughout first .3 miles to falls during runs due to hinderance of falls. Resting pool above falls and in lower section of low gradient stream above canyon.
SPAWNING AREAS Most important spawning areas are above the first falls. Some gravel areas between the falls and the canyon. Excellent spawning areas in the area below the marker.
GENERAL NOTES This stream is remarkable for its productivity. Apparently, spawning conditions are unusually good for pink salmon, resulting in runs far better than streams which appear to be far better.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1933								
July 12		FWS						2-3,000 pink at mouth
July 26		FWS						Stream full to obstruction. 2,000 above
Aug 16			20,000					
1937								
July 26	G .5	FWS						30,000 in stream
Aug 16		FWS	32,000		8,000			
1938								
Aug 21		FWS	800		200			
Sep 6			1,000					
1940								
Sep 19	G 1.5	FWS						No fish seen
1941								
Aug 2	G .8	FWS	50,000					Excellent
1942								
Sep 21	G .3	ASI	1,000		50			Poor
1943								
Sep 16	G .5	FWS	5,000		1,000			Fair. Indications of good early run
1947								
Aug 22	G .2	FRI	5,000					Few chum
Sep 12	G 1.0	FRI	6,000					
Sep 21	G .8	FRI	300		25			Many dead pink. 2,000 tallied
1948								
July 11	G .1	FRI						No fish seen
Aug 12	G 1.0	FWS						Fair. Some chum and pink
1949								
July 16	G .4	FRI	7,950	5				
July 20	G .8	FWS	50,000					
July 29	G 1.3	FRI	68,000	200	10			
Aug 8	G 1.3	FRI	80,000	500		3		Some chum
Aug 22	G 1.3	FRI	73,000	4,000				
Sep 3	G 1.3	FRI	45,000	14,000				
Sep 17	G 1.3	FRI	150	2,400	3			
1950								
July 20	G .1	FRI	0	0	100	0		
July 25	G .3	FRI	350	0	155	0		
Aug 10	G .3	FRI	5,000		1,100	250		Some dead pink. >2,000 off mouth
Aug 21	G .3	FRI	900	1,800	1,000			Some dead chum. None off mouth
1951								
July 24	G 1.3	FRI	29,000	0		0		Few chum. 10-15,000 off mouth
July 25	A 2.3	FRI						3,000 salmon. 4,000 off mouth
July 30	A .5	ASI	9,000					
Aug 1	G .3	FRI	50,000	400	150			Extreme crowding
Aug 11	G .3	FRI	18,000	1,200	400	150		Falls now a partial block
Aug 21	G .3	FRI	5,000	1,900				Very few chum. Nearly half pink blind
Sep 3	G .3	FRI	800	1,100	25	0		
1952								
July 23	G .3	FRI	1,000	0		0		Few chum
July 26	A	FRI						None off mouth, stream not flown
Aug 1	G .3	FRI	4,800		400			Some dead chum, pink
Aug 11	G .3	FRI	1,250	450	50	10		
Aug 26	G .3	FRI	150					Few dead pink. Run is over
1953								
July 8	A .0	FWS						No jumpers seen

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1953								
July 17	A,G .8	FWS						No fish present
July 22	G 1.0	FWS	700					Poor
July 24	G .3	FRI	2,800		300			
July 29	G .0	FWS						Poor. Streamguard, small showing
Aug 2	G 1.3	FRI	3,550		440	5		
Aug 11	G .3	FRI	3,300	120	760	40		
Aug 22	G .3	FRI	1,000	400	17	30		
1954								
Aug 5	G .8	FWS	4,000		3,500			Poor
Aug 7	G .0	FWS						Poor. Few jumpers present
Aug 11	G .0	FWS	100		40			Most chum, pink have gone upstream
Aug 12	G .3	FWS	3,300	120	720	40		Fish spawning, but unable to get over falls. No new pink
Aug 19	A .3	FWS	2,000					No jumps. Old fish
Aug 19	G .3	FWS	2,000					Poor. Old fish
Aug 22	G .3	FWS	950	420	15	30		
Aug 24	A .0	FWS						No jumps
1955								
July 24	A 2.3	FRI						Several at mouth
July 31	A 1.0	FRI						Very few observed
Aug 2	G	FWS	19,000					
Aug 12	A 1.0	FRI	<3,000					
Aug 26	A	FWS	12,000					
1956								
Sep 12	G 1.3	FWS	21		3			Few dead
1957								
July 28	G 1.0	FWS	700		150		150 red	
Aug 11		FWS	5,000					
Aug 24		FWS	45		5			


Barrier
Falls
N
.5 mile
Marker
High
Tide
Grassflats

KETCHIKAN, EASTERN BEHM CANAL, SAKS COVE, S. head

MAJOR SPECIES Pink and chum OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Middle. Aug. -Sep. ESCAPEMENT MAGNITUDE 30,000
SPAWNING FACILITIES Extensive intertidal spawning facilities. Good upstream, though limited to lower stream by falls.
STREAM TEMPERATURES Warm range. Observed temperatures: 46°F., 7/17/49; 53-58°F., 1950; 58°F., 9/15/51; 52-63°F., 1952; 51-55°F., 1953.
VALLEY DESCRIPTION Stream cut glacial. Steep valley slope, wooded and brush valley floor. Boulder erratics in upper valley.
DRAINAGE Two lakes drain into this stream, the larger being just N. of the lake on Robinson Creek (K 45). Greater than 25 square miles (estimated). Snowfields on the high ridges.
STREAM MOUTH IDENTIFICATION Stream enters Saks Cove on S. side of delta. A number of old piling in the lower intertidal zone. Long sand beach extends across delta. Grassflats extensive on S. side of intertidal, small tributary crossing them.
ANCHORAGE N. of mouth off sand beach.
TRAILS AND SURVEY ROUTES Game trails. Intertidal zone long, but easily walked. On high tide, skiff can be taken to marker.
AERIAL SURVEY NOTES Approach second falls along S. side of valley, turn onto S. side for best visibility, crossing to N. side for intertidal observations. Excellent lower stream aerial visibility.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 60-80'/12-18"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand, gravel, scattered rocks.
HIGH TIDE LOCATION Upper end of small island formed by split in stream. This is below the tributary entering from the N. bank.
SCHOOLING AREAS Throughout the mid-tide mark to high tide mark, most in the shallow pools around the bend.
SPAWNING AREAS Heavy spawning has been observed throughout the upper intertidal area. This is suitable even in the schooling areas.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE 1 mile AVERAGE WIDTH/DEPTH 40-50'/18-24"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Gravel, some scattered small boulders.
MARKER DISTANCE .3 miles.
MARKER IDENTIFICATION Small pool at the base of the rock cliff on N. side. Farthest skiff can be taken with ease.
BARRIERS There is a 15 foot waterfall .5 miles above high tide which serves as a serious obstacle to the passage of fish. An impassable barrier falls is 1 mile above high tide mark.
TRIBUTARIES Small tributary from the N. valley enters creek above high tide.
SCHOOLING AREAS Several pools along S. side of riffle areas near high tide. Some salmon have been observed below first falls schooled.
SPAWNING AREAS Section of stream above high tide to marker is most heavily spawned area of upstream. Riffle area above marker good, but not used nearly as much. Very few fish have been observed above first falls to barrier.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1933								
Aug 15		FWS						5-6,000 fish in the stream
1938								
Sep 16		FWS	3,000					
1942								
Sep 21	G .5	ASI	30,000		500			Excellent
1943								
Sep 16	G .5	FWS	7,000		1,000			Poor
1947								
Sep 23	G 1.0	ASI						Poor. Some chum and pink
Sep 27	G .3	FRI	300		150			3 times more dead than live
1949								
July 17	G .3	FRI	0		25			
1950								
Aug 11	G .3	FRI	4,500	25	825	100		Approaching peak. Good showing
Sep 13	G .3	FRI	1,400	2,000	2,000			Some dead chum. Past peak
1951								
July 26	A .3	FRI						Good showing. 2,000 salmon
Aug 21	G .3	FRI	9,400	320	250	50		Mostly schooled at top of intertidal
Sep 4	G .3	FRI	11,000	2,700	325	20	20 coho	4,600 above marker
Sep 15	G .3	FRI	5,750	3,000	300			Some dead chum. Spawning. No fresh fish
1952								
July 26	A .3	FRI						700 chum, pink, none at mouth
Aug 1	G .3	FRI	2,950	0	930	12		Run just starting
Aug 11	G .3	FRI	5,500	50	180			Few dead chum
Aug 27	G .3	FRI	3,000	500	20		Several coho	Few dead chum. Peak spawning now
Sep 4	G .3	FRI	870	2,000	81			Few dead chum. Run over
1953								
July 17	A .0	FWS						No fish present
July 19	A .0	FWS						No fish present
Aug 3	A .3	FWS						Estimate 1,500 fish
Aug 5	G .3	FWS	250		1,500			
Aug 12	G .3	FRI	2,125	20	550	225	1 red	Chum well spawned. Pink spawning
Aug 17	A .3	FWS						3,000 fish. 50 fish in tideflat
Aug 19	A .3	FWS						Fair. 200 dead
Aug 19	G .8	FWS	3,900		1,600			
Aug 23	G .3	FRI	1,200	500	140	960	2 red	Poor. No new fish
Aug 24	A .3	FWS						No live. Few dead. Run over
Sep 1	G .3	FRI	600	300	150	200		Run definitely over
Sep 15	G .3	FRI	115	300	230	220	35 coho, 1 red	Visibility 95%
1954								
Aug 12	A .3	FRI	10,000	0		0		Few chum. None at mouth or spawning
Aug 23	A .3	FRI	11,000					Few chum. Some dead chum, pink
Sep 4	A .3	FRI	5,000					Some chum, some dead chum, pink. No fresh fish
1955								
July 24	A .3	FRI	0		2			
July 31	A .3	FRI	500		300			
Aug 12	A .3	FRI	3,000		1,000			
Aug 23	A .3	FRI	6,000					Chum present. Sev. 100 at mouth
Aug 26		FWS	3,000		100		Few coho	
Sep 6	A .3	FRI	3,000		1,000			
1956								
July 22	A .3	FRI						Few chum, pink. 300 chum at mouth, several 100 in bay

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1955								
Jul 29	A .3	FRI	700		2,200			15,000 chum at mouth, in bay
Au 66	G 1.0	ADF,FWS	10,000					
Au 77	A .3	FRI	6,000		3,000			Some dead chum, pink. Rev. 1,000 at mouth
Au 77	G 1.0	FWS						5,000 chum and pink
Au 44	A .3	FRI	13,000	0				15,000 chum in intertidal zone
Se 22	G .8	FWS	300		35			
1977								
Jul 77		FWS	4,000					
Au 44		FWS	7,000					
Au 66		FWS	5,000					
Au 88		FWS	5,000					
Au 00	A .3	FRI	4,000	0	3,000	500		Some pink at mouth
Au 11	A .3	FRI	17,500					
Au 99	A .3	FRI	8,000		1,000			Dead chum, pink. None at mouth
Au 55		FWS	230		10			
Se 11	A .3	FRI	400	>200	100	>200		None observed at mouth
Se 88	A .3	FRI						Few pink, some dead
Se 00	G .3	FRI	10		150			None observed at mouth

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1933								
Aug 15		FWS						5-6,000 fish in the stream
1938								
Sep 16		FWS	3,000					
1942								
Sep 21	G .5	ASI	30,000		500			Excellent
1943								
Sep 16	G .5	FWS	7,000		1,000			Poor
1947								
Sep 23	G 1.0	ASI						Poor. Some chum and pink
Sep 27	G .3	FRI	300		150			3 times more dead than live
1949								
July 17	G .3	FRI	0		25			
1950								
Aug 11	G .3	FRI	4,500	25	825	100		Approaching peak. Good showing
Sep 13	G .3	FRI	1,400	2,000	2,000			Some dead chum. Past peak
1951								
July 26	A .3	FRI						Good showing. 2,000 salmon
Aug 21	G .3	FRI	9,400	320	250	50		Mostly schooled at top of intertidal
Sep 4	G .3	FRI	11,000	2,700	325	20	20 coho	4,600 above marker
Sep 15	G .3	FRI	5,750	3,000	300			Some dead chum. Spawning. No fresh fish
1952								
July 26	A .3	FRI						700 chum, pink, none at mouth
Aug 1	G .3	FRI	2,950	0	930	12		Run just starting
Aug 11	G .3	FRI	5,500	50	180			Few dead chum
Aug 27	G .3	FRI	3,000	500	20		Several coho	Few dead chum. Peak spawning now
Sep 4	G .3	FRI	870	2,000	81			Few dead chum. Run over
1953								
July 17	A .0	FWS						No fish present
July 19	A .0	FWS						No fish present
Aug 3	A .3	FWS						Estimate 1,500 fish
Aug 5	G .3	FWS	250		1,500			
Aug 12	G .3	FRI	2,125	20	550	225	1 red	Chum well spawned. Pink spawning
Aug 17	A .3	FWS						3,000 fish. 50 fish in tideflat
Aug 19	A .3	FWS						Fair. 200 dead
Aug 19	G .8	FWS	3,900		1,600			
Aug 23	G .3	FRI	1,200	500	140	960	2 red	Poor. No new fish
Aug 24	A .3	FWS						No live. Few dead. Run over
Sep 1	G .3	FRI	600	300	150	200		Run definitely over
Sep 15	G .3	FRI	115	300	230	220	35 coho, 1 red	Visibility 95%
1954								
Aug 12	A .3	FRI	10,000	0		0		Few chum. None at mouth or spawning
Aug 23	A .3	FRI	11,000					Few chum. Some dead chum, pink
Sep 4	A .3	FRI	5,000					Some chum, some dead chum, pink. No fresh fish
1955								
July 24	A .3	FRI	0		2			
July 31	A .3	FRI	500		300			
Aug 12	A .3	FRI	3,000		1,000			
Aug 23	A .3	FRI	6,000					Chum present. Sev. 100 at mouth
Aug 26		FWS	3,000		100		Few coho	
Sep 6	A .3	FRI	3,000		1,000			
1956								
July 22	A .3	FRI						Few chum, pink. 300 chum at mouth, several 100 in bay

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1956								
July 29	A .3	FRI	700		2,200			15,000 chum at mouth, in bay
Aug 16	G 1.0	ADF,FWS	10,000					
Aug 17	A .3	FRI	6,000		3,000			Some dead chum, pink. Sev. 1,000 at mouth
Aug 17	G 1.0	FWS						5,000 chum and pink
Aug 24	A .3	FRI	13,000	0				15,000 chum in intertidal zone
Sep 12	G .8	FWS	300		35			
1957								
July 27		FWS	4,000					
Aug 4		FWS	7,000					
Aug 6		FWS	5,000					
Aug 8		FWS	5,000					
Aug 10	A .3	FRI	4,000	0	3,000	500		Some pink at mouth
Aug 11	A .3	FRI	17,500					
Aug 19	A .3	FRI	8,000		1,000			Dead chum, pink. None at mouth
Aug 25		FWS	230		10			
Sep 1	A .3	FRI	400	>200	100	>200		None observed at mouth
Sep 8	A .3	FRI						Few pink, some dead
Sep 10	G .3	FRI	10		150			None observed at mouth

101-21 FITZGIBBON CREEK K 46A
N55°59.1 W131°10.9 Previous No. 42A

KETCHIKAN, BEHM CANAL, FITZGIBBON COVE, S. shore 1 mile from entrance

MAJOR SPECIES Pink
OTHER SPECIES Trout
ESCAPEMENT TIMING Late. Sep. -Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Poor.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut on N. slope of mountain ridge.
DRAINAGE Precipitation fed. Small lake on S. fork.
STREAM MOUTH IDENTIFICATION Steep intertidal zone, narrow creek mouth, brushy.
ANCHORAGE See Coast Pilot.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

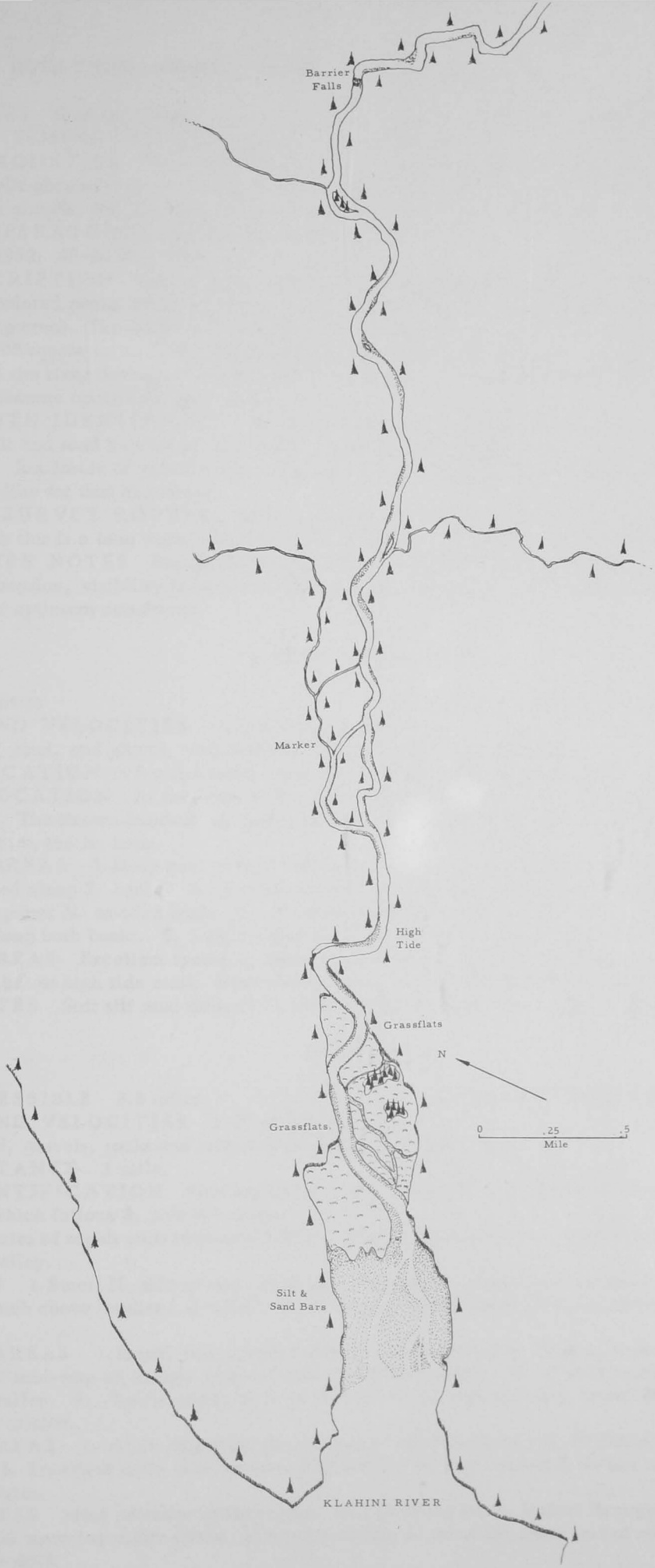
LENGTH Less than .1 miles
AVERAGE WIDTH/DEPTH 10-20'/6"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Rocks and boulders, some sand and gravel.
HIGH TIDE LOCATION At tree line.
SCHOOLING AREAS None reported.
SPAWNING AREAS None reported.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Unknown
AVERAGE WIDTH/DEPTH 10-15'/6"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Rock, boulders, bedrock, some sand and gravel.
MARKER DISTANCE None.
MARKER IDENTIFICATION None.
BARRIERS None reported.
TRIBUTARIES Stream forks .2 miles from high tide mark. W. fork to lake .1 miles, E. fork leads to muskeg pond .3 miles.
SCHOOLING AREAS None reported.
SPAWNING AREAS Lower stream gravel areas.
GENERAL NOTES This stream is small and has high water temperatures until late in the season when the fall rains begin.

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating


Barrier
Falls
Marker
High
Tide
Grassflats
N
Grassflats
0
.25
.5
Mile
Silt &
Sand Bars
KLAHINI RIVER

KETCHIKAN, BEHM CANAL, BURROUGHS BAY, S. shore at head

MAJOR SPECIES Pink and chum OTHER SPECIES King, coho, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE >20,000
SPAWNING FACILITIES Excellent. Extensive riffle areas through accessible stream. About 2 miles of the stream has many split channels which are excellent spawning areas. The last mile of accessible stream has rapids and more coarse gravels, but has been observed with good spawning populations.
STREAM TEMPERATURES Cold range. Observed ranges: 42-49°F., 1949; 47-54°F., 1950; 47-51°F., 1951; 46-49°F., 1952; 48-50°F., 1953.
VALLEY DESCRIPTION Glacial valley running E. 5 miles, then S.E. 3 miles, then E. 4 miles to the headwaters in high, glaciated peaks. Hanging valleys throughout system. Valley floor flat, deep glacial till, wooded and some muskeg areas. The main river valley is over 16 miles long.
DRAINAGE 100 square miles (Polar Planimeter). Large snowfields and some small hanging glaciers maintain the discharge of the river throughout the low rainfall periods. The water is usually slightly cloudy. Occasionally, the water will become opaque for short periods.
STREAM MOUTH IDENTIFICATION Stream lies in a large valley S.E. of the main Unuk River delta. Extensive silt and sand bars lie at the mouth, large grassflats above.
ANCHORAGE Just inside of point between the Unuk and Klahini rivers 100 yards off shore. Silted water necessitates use of lead-line for first anchorage.
TRAILS AND SURVEY ROUTES Game trails only. Stream can be hiked on normal water levels to barrier falls, though this is a long walk. River skiff can be taken 1 mile above high tide on most water levels.
AERIAL SURVEY NOTES Except for low visibility conditions which occur during floods and heavy glacial silting on occasion, visibility is excellent from the air. The wide valley and wide stream with light colored bottom offer optimum conditions.

INTERTIDAL ZONE

LENGTH 1.6 miles AVERAGE WIDTH/DEPTH 100-150'/3-5'
GRADIENT AND VELOCITIES <1° at 2-3' per second
BOTTOM Silt, sand, and gravel, with scattered boulders in upper intertidal.
LOW TIDE LOCATION .3 miles inside point between Unuk and Klahini rivers.
HIGH TIDE LOCATION At the head of the pool against the N. side of the valley with the very large boulder in mid-stream. The stream bends S. at approximately 130°. A small tributary enters on the E. bank. This is above the grassflats on the N. bank.
SCHOOLING AREAS 1. Deep pool at high tide marker. 2. .3 miles below high tide mark, grassflats along N. bank, wooded along S. bank. 3. .4 miles below high tide mark, deep hole extends downstream from sharp right bend against N. wooded bank. 4. .7 miles below high tide mark, long, deep run with steep N. bank. Grassflats along both banks. 5. 1 mile below high tide mark, deep hole at rocky S. bank point.
SPAWNING AREAS Excellent spawning riffle extends from deep hole .4 miles below high tide mark (see above) to .3 miles below high tide mark. Scattered spawning occurs throughout intertidal stream.
GENERAL NOTES Soft silt mud throughout lower intertidal zone. Brown bear frequently observed in grassflats.

UPSTREAM

LENGTH ACCESSIBLE 3.3 miles AVERAGE WIDTH/DEPTH 75-100'/24-36"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM Sand, gravels, rocks and scattered boulder areas, some silt.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION First branching of river along N. side of valley. A split occurs below the marker (.4 miles) which follows S. side of valley.
BARRIERS Series of rapids with impassable falls 3.3 miles upstream at S. bend of valley. Ridge above falls on S. side of valley.
TRIBUTARIES 1. Small N. side stream, from lake flows down .8 miles of the main N. side valley to confluence with N. branch above marker (.2 miles). 2. S. side tributary enters .8 miles above marker, small steep above .3 miles.
SCHOOLING AREAS 1. Broad, deep section above mark to steep clay bank at bend. 2. .3 miles mark in broad, deep section mid-way up straight channel along S. side of valley. 3. .5 mile mark, deep pool at bend toward N. side of valley. 4. .8 mile mark, at bend of river on N. side of valley, broad deep pools. 5. Scattered pools above marker.
SPAWNING AREAS 1. Above high tide mark along E. bank shallows. 2. Riffles above clay bank bend at S. side of valley. 3. Excellent riffle area between first bend to N. and bend to E. below marker. 4. Scattered spawning riffles to barrier.
GENERAL NOTES Most extensive spawning has been observed above marker throughout branching area and 1.5 miles of good spawning riffles above. However, marker is set at the lower end of riffles which are difficult to pass by river skiff.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1943								
Sep 16	G .1	ASI						Very few seen. Mainly bright
1947								
Sep 10	G .0	FRI						30-35 dead pink along banks
1948								
Aug 9	G .3	FWS					No coho or red	Poor. Poor pink, fair chum
1949								
July 15	G 3.3	FRI	2,000		3,000			
July 31	G .3	FRI	11,000		1,100			Vis. poor. Estimate only
Aug 23	G 1.0	FRI	18,000	4,500	4,000	1,000		
Sep 4	G 1.0	FRI	2,000	10,000				
Sep 18	G .3	FRI	19	800				
1950								
July 21	G .8	FRI	3,000	0	10,000	0		
Aug 2	G 1.0	FRI	10,000	0	30,000	400		
Aug 10	A 2.0	FRI,FWS						Good numbers in clear water, many dead in tributaries
Aug 11	G 1.0	FRI	30,000	0	10,000	2,000		
Aug 22	G 1.0	FRI	6,000	6,500	1,200	5,000		
Sep 3	G .8	FRI	10	5,000	0			
1951								
July 25	G 1.0	FRI	1,500	0	1,000	50		Discolored
July 26	A 3.3	FRI						3,000 pink and chum
July 29	A 3.3	FRI						15,000 salmon. Sev. 100 dead chum
July 30	A 3.3	ASI						21,000 salmon, 1,000 dead chum
Aug 2	G 1.0	FRI	11,250		5,650	400	7 king	Few dead pink. Discolored. Probably many fish overlooked
Aug 13	G 1.0	FRI	6,450	870	690	1,500		Some fresh pink in lower intertidal zone
Aug 22	G 1.0	FRI	1,700	1,000	60	600	Coho present	Run over, most fish spent
1952								
July 23	G 1.0	FRI	550		1,100			Chum spawning
July 26	A 3.3	FRI						1,000 in lower stream. None at mouth
Aug 2	G 1.0	FRI	1,250	0	1,650	170		Poor visibility
Aug 12	G 1.0	FRI	3,860	104	1,070	400		
Oct 3	A 2.0	FRI						No salmon seen
1953								
July 25	G 1.0	FRI	2,540		2,265		17 king	
Aug 3	G 1.0	FRI	4,000	0	1,670	165		
Aug 5	G .5	FWS						Blank
Aug 12	G 1.0	FRI	765	565	280	635		
Aug 13	A 4.0	ADF						1,000 live, 500 dead. Vis. fair
Aug 23	G 1.0	FRI	330	740	54	150	4 coho, 41 king	Run over
1954								
July 24	G 1.0	FRI	500	0	500			Some dead chum
Aug 3	A 1.0	FRI	1,000	0	800	0		Vis. not good
Aug 7		FWS	500					
Aug 12	A 1.0	FRI	200		450			Some dead chum, pink. None off mouth
1955								
July 24	A 1.0	FRI	1,000	0		0		Some chum. Sev. 100 pink above to falls
July 31	G 1.0	FWS	3,000		1,000			500 pink, 1,000 chum above to falls
Aug 12	A 1.0	FRI	700					Some chum. Spawning
1956								
July 22	A 1.0	FRI	>200		>200			Some at mouth
July 29	A 1.0	FRI	5,000		5,000			3,000 chum, pink above marker

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1956								
July 29	G .5	FWS	2,500					
Aug 8		FWS	8,500					
Aug 16		ADF,FWS	9,000		1,000			
Aug 17	A 1.0	FRI	6,000		>2,000			Some dead chum, pink. 4,000 above marker spawning
1957								
July 15		FWS						12 chum at mouth
July 31	A 1.0	FRI	2,000	0	6,000	0		2,000 pink, 6,000 chum above marker
Aug 7		FWS	1,000		5,500			Poor
Aug 10	A 1.0	FRI	2,000		1,000			Many dead chum, few dead pink. 1,000 pink, 3,000 chum above marker
Aug 11	A 3.3	FRI						11,000 salmon, many dead pink
Aug 25		FWS	122		15			

KETCHIKAN, BEHM CANAL, BURROUGHS BAY

MAJOR SPECIES Pink, chum, king, coho, red OTHER SPECIES Trout
ESCAPEMENT TIMING Early. June-July-Aug.-Sep. ESCAPEMENT MAGNITUDE No estimate possible
SPAWNING FACILITIES A number of tributaries are known to have excellent facilities. However, complete information on all salmon tributaries and spawning facilities in the main river is not available. Information on the Canadian section of the Unuk River is very limited.
STREAM TEMPERATURES Cold range (estimated). Numerous glaciers drain into the upper river and observed temperatures during the salmon runs have been below 50°F.
VALLEY DESCRIPTION Glacial. Valley runs N.E. through the coast range to glacier headwaters in Canada. The lower valley is broad and flat with extensive flood plains, steep valley walls and numerous tributary valleys of glacial origin.
DRAINAGE 500 square miles (Polar Planimeter) lies inside Southeastern Alaska, 1200 square miles (estimated) lies in Canadian territory. Numerous glaciers are in the upper headwaters and some small lakes are found in tributary systems. The main river is heavily silted throughout most of the year, clearing somewhat during mid-winter.
STREAM MOUTH IDENTIFICATION The broad, glacial valley mouth and distinctive glacial silted discharge are easily identified. A navigation light on the N. shore marks a point just off the low tide mouth of the river.
ANCHORAGE Fair weather anchorage along the margin of the delta. Waters off the navigational light are used by vessels prior to entering the river on high tide. Moderate or stronger winds are frequent, even during clear weather, and other anchorages are preferred (see K 47).
TRAILS AND SURVEY ROUTES Trails and old unused roadbeds are available in the lower river valley. River boats are commonly used, the mouths of all tributaries below the Canadian border being accessible by boat. However, local knowledge of the river is desirable for safe navigation. Light planes can land at points on the river near tributaries accessible to salmon.
AERIAL SURVEY NOTES The larger tributaries are easily observed from the air. Aerial survey is the most practical means of observing the spawning tributaries. Lakes commonly used by seaplanes are Blue and Boundary Lakes. The main river is used occasionally. The Unuk Landing below the mouth of Eulachon Creek is used frequently by planes. Strong winds are common in the valley, especially during easterly winds.

INTERTIDAL ZONE

LENGTH 5 miles AVERAGE WIDTH/DEPTH 300-500'/>5'
GRADIENT AND VELOCITIES Less than 1° at 3-4' per second
BOTTOM Silt and sand.
LOW TIDE LOCATION Just E. of N. shore navigation light.
HIGH TIDE LOCATION Estimated to be in the first section of river along the S. side of the valley about 2 miles above the junction of the Unuk Slough.
SCHOOLING AREAS Opaque silted water prohibits any observations.
SPAWNING AREAS None reported.
GENERAL NOTES Main channel follows N. shore and is navigable during normal water levels by river skiff.

UPSTREAM

LENGTH ACCESSIBLE 45 miles (estimated) AVERAGE WIDTH/DEPTH 300-400'/>5'
GRADIENT AND VELOCITIES Less than 1° at 3-4' per second
BOTTOM Sand, silt, rocks and gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Undescribed barriers reported to obstruct migration beyond junction of Sulphurets and Kaypros Creeks in Canada.
TRIBUTARIES Numerous clearwater and glacial tributaries throughout system. Known salmon spawning tributaries listed under Unuk River tributaries.
SCHOOLING AREAS None reported in main river, except at confluences with clearwater tributaries.
SPAWNING AREAS Main river spawning (unconfirmed) reported around the first canyon at the confluence with the Blue River. No information on main river available from Canadian side.
GENERAL NOTES The Canadian Unuk River system is not well known. Information concerning spawning streams beyond Border Lake have been taken in part from the report written for the Fisheries Research Institute by Stanley Bishop, a long time resident of the Unuk River, who had spent considerable time in the upper river valley.

KETCHIKAN, BEHM CANAL, BURROUGHS BAY, UNUK RIVER SYSTEM, N. side 3.5 miles above Forest Service Cabin

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Early, July-Aug. ESCAPEMENT MAGNITUDE <5,000
SPAWNING FACILITIES Good. Limited to stream section in valley floor by barrier falls.
STREAM TEMPERATURES Cold range. Observed temperatures: 48°F., July 23, 1949; 48.5-50°F., 1952.
VALLEY DESCRIPTION Glacial origin. Stream flows .3 mile along main valley before turning N. toward the steep valley wall. Upper valley has lake (Lake Minnie) in basin formed by old cirque. Bare rock ridges surround the upper valley.
DRAINAGE >20 square miles (Estimated). Snowfield fed through lake system. Lake Minnie is about 3 miles long. Several smaller lakes in the system.
STREAM MOUTH IDENTIFICATION First major stream on N. side of valley reached by the Chickamin slough above Eulachon Creek.
TRAILS AND SURVEY ROUTES Trail originating at Forest Service Cabin at mouth of Eulachon Creek up Unuk Valley crosses Clear Creek.
AERIAL SURVEY NOTES No surveys by air on record.

INTERTIDAL ZONE

Clear Creek is a tributary to Unuk River K 48, therefore, it has no intertidal zone.

UPSTREAM

LENGTH ACCESSIBLE >.3 mile AVERAGE WIDTH/DEPTH 60'/24"
GRADIENT AND VELOCITIES .5" at 2-3' per second
BOTTOM Gravel, small boulders, rocks.
MARKER DISTANCE .3 mile.
MARKER IDENTIFICATION 50' falls 200' above confluence with side slough.
BARRIERS 50' falls barrier to salmon.
TRIBUTARIES Overflow from Unuk Slough above Clear Creek joins creek and continues .3 mile downstream to main slough.
SCHOOLING AREAS Slough and two pools near falls.
SPAWNING AREAS Riffles in section below falls and in side slough which parallels main slough.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1949								
July 23	G .2	FRI	20		80			
1952								
Aug 21		FRI	600				5 king	Some chum
Aug 25		FRI	360	100	8	30		

KETCHIKAN, BEHM CANAL, BURROUGHS BAY, UNUK RIVER SYSTEM, S. side 7.5 miles above Unuk Slough confluence

MAJOR SPECIES Pink, coho, red, chum OTHER SPECIES Trout
ESCAPEMENT TIMING Early. July-Aug.-Sep. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Good. Limited to suitable areas above lake in main stream and lake tributary. Lake and slough outlet offer excellent rearing conditions for fingerling.
STREAM TEMPERATURES Cold range. Observed temperature: 45°F., 7/13/49.
VALLEY DESCRIPTION Glacial origin. Lower valley parallels main river valley for 4 miles, being separated by a ridge. The upper valley turns S. over a high falls and runs S.E. over 26 miles into mountains to the S.
DRAINAGE Over 50 square miles (Estimated). Large snowfields and several small glaciers in headwaters, small cirque lakes. Moderate silting from main stream observed in lake.
STREAM MOUTH IDENTIFICATION Matney Creek enters Lake Creek slough .3 mile upstream from main Unuk River where a cabin on the W. shore at the mouth marks the creek entrance.
ANCHORAGE See Unuk River K 48.
TRAILS AND SURVEY ROUTES Accessible to head of lake by skiff. Light planes land in the lake.
AERIAL SURVEY NOTES Aerial survey visibility usually adequate for enumeration. Not usually surveyed by air.

INTERTIDAL ZONE

Lake Creek is a tributary to the Unuk River, therefore, it has no intertidal zone.

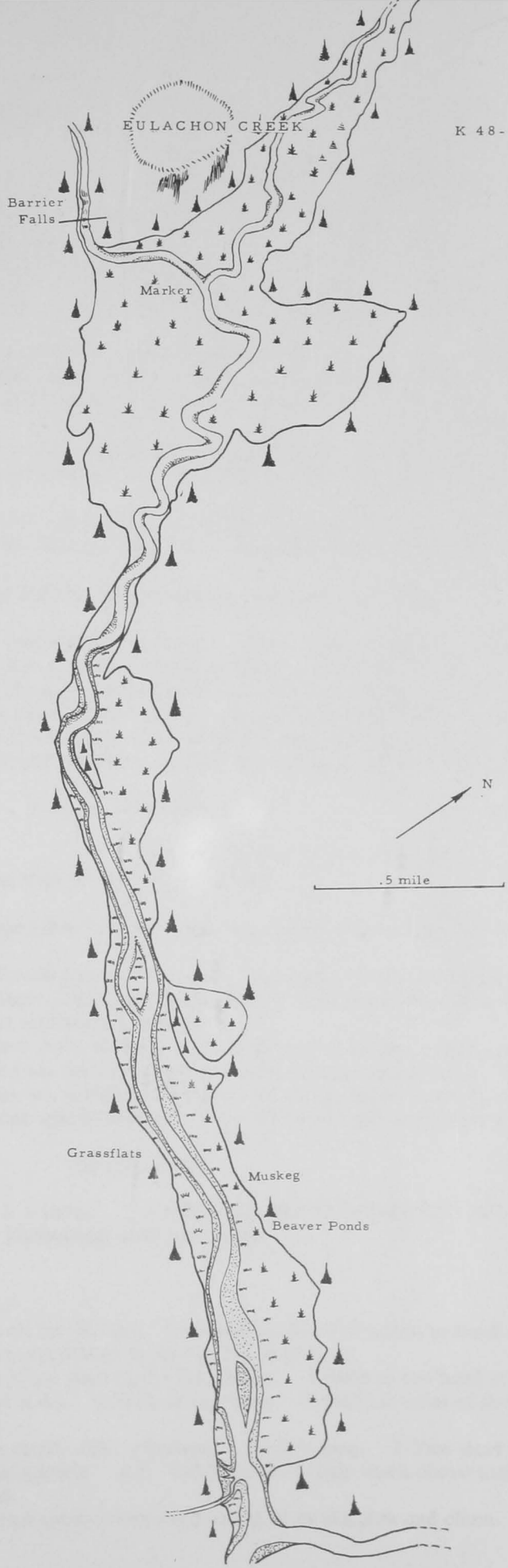
UPSTREAM

LENGTH ACCESSIBLE 4 miles AVERAGE WIDTH/DEPTH 60'/5-6"
GRADIENT AND VELOCITIES <.5° at 1' per second
BOTTOM Silt and sand, fine red gravel in upper stream.
MARKER DISTANCE 4 miles
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls on main stream 60' high.
TRIBUTARIES Matney Creek .3 mile from mouth reported to have good runs for the short distance accessible. Tributary to the lake enters in N.E. corner and is reported to have good runs utilizing excellent gravel areas.
SCHOOLING AREAS At confluence with Unuk River and in the lake.
SPAWNING AREAS .3 mile of main stream below falls. .5 mile of N.E. lake tributary.
GENERAL NOTES Has been reported to have had excellent salmon runs.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1949								
July 14		FRI						No fish seen
1951								
July 26	A	FRI						200 fish
1952								
Aug 10	G 3.0	FRI	500	20	220	50	25 red	


EULACHON CREEK
K 48-1
Barrier Falls
Marker
N
.5 mile
Grassflats
Muskeg
Beaver Ponds

KETCHIKAN, BEHM CANAL, BURROUGHS BAY, UNUK RIVER TRIBUTARY, N. side of valley about high tide

MAJOR SPECIES Pink, chum OTHER SPECIES King, coho, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE 50,000
SPAWNING FACILITIES Excellent. Lower stream from confluence with Unuk Slough for a distance of 2.2 miles is not suitable for spawning. However, beyond to the forks (.6 miles) are broad gravel riffles that have been used extensively by all species (1.2 square yards per pink, 1950). Both forks also have excellent facilities.
STREAM TEMPERATURES Cold range. Observed ranges: 48-54°F., 1950; 48-52°F., 1951; 45-52°F., 1952; 46-51°F., 1953. Diurnal fluctuations in temperature occur during low water periods in late summer (July 21, 1952: 45°F., 10:30; 51°F., 14:45).
VALLEY DESCRIPTION Glacial. Extends N.W. from mouth of Unuk valley, broad and flat for 2 miles, then turning N. W. fork at 3 mile point with headwaters in 4,000' mountain cirques 7 miles above junction. E. fork extends N. to cirque headwaters in 4,000' mountains 6 miles above junction. Lower valley with grassflats, muskeg and beaver pond areas.
DRAINAGE 48 square miles (Polar Planimeter). Main source is from large snowfields along the high ridges. Some beaver ponds and muskeg in lower stream areas do not color water except for short periods during heavy rains. No lakes.
STREAM MOUTH IDENTIFICATION Broad shallow mouth with clear water flowing out into Unuk Slough under the silted water. Grassflats on W. side and rocky bank with timber on E. side. Home site on E. bank .2 miles upstream.
ANCHORAGE Small vessels enter Unuk Slough on high tides and moor at Unuk Landing .3 miles below mouth of creek.
TRAILS AND SURVEY ROUTES Small skiffs can be run to base of the spawning riffles 3 miles upstream with ease. Light river skiffs can be dragged over shallow spawning riffles to the forks where the E. fork is accessible beyond, for an additional .5 miles. The lower valley is easily walked, though time-consuming.
AERIAL SURVEY NOTES Excellent aerial visibility with light colored bottom, clear water and easily followed stream course. A light plane may land in the lower stream during normal water levels and take off down the Unuk Slough. The broad valley has no obstructions or unusual flying conditions during normal survey weather.

TIDAL INFLUENCE

LENGTH 2.7 miles AVERAGE WIDTH/DEPTH 100-200'/24-36"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand.
HIGH TIDE LOCATION Log jam area below the first spawning gravels is only point which is difficult to pass by skiff.
SCHOOLING AREAS Large initial schooling area at the confluence with the slough. Overlayer of silt water offers shelter for salmon schooled in clear water below. All pools from .8 miles upstream and above have been observed with schooling salmon during stages of migration upstream.
SPAWNING AREAS Very limited gravel areas between pools in the upper section near the limits of tidal influence.
GENERAL NOTES Tidal influence zone has not been observed to be brackish at any time. The large discharge of the Unuk River is sufficient to displace any saltwater during the incoming tides at the mouth of the Eulachon. Silt water has been observed over 1 mile upstream and the tidal rise to the location given above.

UPSTREAM

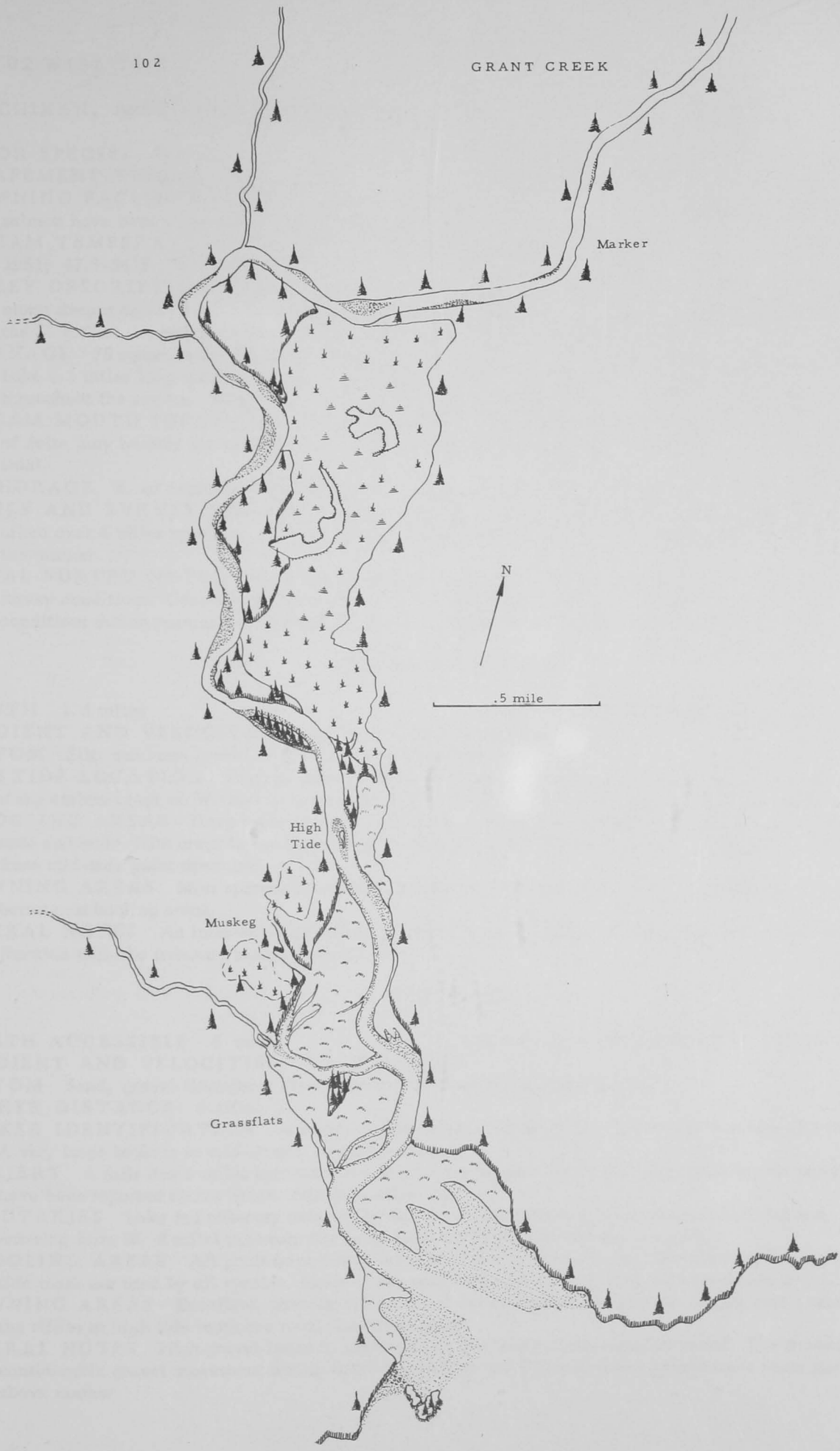
LENGTH ACCESSIBLE Greater than 2.5 miles AVERAGE WIDTH/DEPTH 50'/18"
GRADIENT AND VELOCITIES 2° (estimated) at 2' per second
BOTTOM Sand and gravel.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION Forks.
BARRIERS .3 miles to impassable falls on the W. fork. None observed in 1.5 miles on the E. fork.
TRIBUTARIES No important tributaries reported as far as the above barriers.
SCHOOLING AREAS 1. Several holes below base of the first riffles. 2. Hole at the head of the first long riffle. 3. Hole between head of first riffle and forks. 4. Hole at the forks. 5. First .5 miles of the E. fork is deep and slow with schooling points throughout.
SPAWNING AREAS 1. First long riffle above tidal influence, .2 miles long. 2. Two short riffles to forks. 3. .2 miles of W. fork offer excellent gravels. 4. E. fork beyond .5 mile mark above forks for greater than 1 mile, becoming more coarse beyond.
GENERAL NOTES King salmon enter and spawn about the same time as the pink and chum. Spawning king have been observed with spawning pink.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1948								
Aug 9	G 1.5	FWS						Good. Chum, pink good
Aug 12	G .5	FWS						Pink good
1949								
July 12	G 2.0	FRI	150		50			Fish in intertidal zone only
July 16	G 1.0	FRI	350		100			
July 22	G 1.0	FRI	2,000		500		1 red	Fish resting off mouth
1950								
July 21	G 1.0	FRI	5,000	0	3,000	0	220 king	
Aug 3	G 1.0	FRI	45,000	0	5,500	0	1,100 king	
Aug 10	A 1.0	FRI,FWS						Fish below and above right fork
Aug 11	G 1.0	FRI	70,000	1,200			1,000 king	Chum present
Aug 22	G 1.0	FRI	13,000	8,500	600	500	500 coho, 700 king	
Sep 3	G 1.0	FRI	3,000	10,000				Some chum
1951								
July 25	G 1.0	FRI	11,000	0	500	0	75 king	
July 26	A 1.0	FRI						35,000 salmon. 1,500 at mouth
July 29	A 1.0	FRI						20,000 salmon. 10,000 at mouth
Aug 2	G 1.0	FRI	20,000		400	35	200 king	Few dead pink
Aug 12	G 1.0	FRI	7,500	350	235	100	190 king	Good showing in left fork
Aug 22	G 1.0	FRI	2,500	300	10	150	150 coho, 100 king	Very few fresh pink
1952								
July 19	G 1.0	FRI	1,700	0	2,200	0	13 king	
July 21	G 1.0	FRI	2,610	0	1,550	0	50 king	
July 24	G 1.0	FRI	6,270		2,290		48 king	
July 26	A 1.0	FRI						1,500 below forks. Few in slough
July 28	G 1.0	FRI	1,700	0	3,120	8	107 king	
Aug 4	G 1.0	FRI	10,500	40	1,300	60	169 king	
Aug 9	G 1.0	FRI	17,160	148	590	140	244 king	
Aug 16	G 1.0	FRI	14,170	1,700	47	225	1 red, 1 coho, 235 king, 16 dead king	
Aug 22	G 1.0	FRI						Stream high, no count
Aug 25	G 1.0	FRI	1,930	660	39	29	142 coho, 68 king	
Oct 3	A 1.0	FRI					500 coho	
1953								
June 11	A 1.0	FWS						2 at mouth, none in stream
July 8	A 1.0	FWS						No fish in stream
July 17	A .0	FWS						No fish present
July 25	G 1.0	FRI	2,590		1,740			
Aug 2	G 1.0	FRI	2,900	0	1,900	0	415 king	
Aug 3	A 1.0	FWS						4,000 above forks
Aug 5	G .2	FWS			2			
Aug 12	G 1.0	FRI	1,470	90	200	210	10 coho, 510 king	Pink up forks. Peak almost reached
Aug 13	A 1.0	ADF						900 fish. Scattered dead. Vis. fair
Aug 19	A 1.0	FWS						Light poor
Aug 23	G 1.0	FRI	590	1,000	70	310	6 coho, 427 king	Run appears over
Sep 1	G 1.0	FRI	450	1,200	55		55 coho, 120 king	Some dead chum. Run over
Oct 5	A 1.5	FRI	0		0			No salmon
1954								
Aug 3	A 1.0	FRI	5,400		300			None at mouth
Aug 7	A 1.0	FWS	5,000					
Aug 12	A 1.0	FRI	6,000		0	0		Few dead pink. Some spawning near high tide island

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1955								
July 24	A 1.0	FRI	500	0			300 king	
July 31	A 1.0	FRI	6,000		200		600 king	
Aug 1		FWS	6,000		200			
Aug 12	A 1.0	FRI	4,000					Some chum, some dead pink. Sev. 100 spawning
1956								
July 10	A	FWS						100 pink at mouth
July 22	A 1.0	FRI	600	0			160 king	
July 29	A 1.0	FRI	10,000				1,000 king at confluence.	Some chum
Aug 1		FWS						1,000 chum, pink
Aug 8		FWS						10,000 chum, pink
Aug 16	A 1.0	ADF,FWS	7,500				200 king	
Aug 17	A 1.0	FRI	10,000		300			Some dead pink. 8,000 above marker spawning
1957								
July 31	A 1.0	FRI	5,000	0			500 king	Some chum
Aug 8		FWS	4,000		2,000			Very poor
Aug 10	A 1.0	FRI	3,000				300 king	Some chum. 2,000 pink, 300 king above marker
Aug 11	A 1.5	FRI	8,500					


Marker
N
.5 mile
High
Tide
Muskeg
Grassflats

KETCHIKAN, BEHM CANAL, BURROUGHS BAY, N. shore 3 miles N. of Point Fitzgibbon

MAJOR SPECIES Pink and chum OTHER SPECIES King, coho, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE 30-50,000
SPAWNING FACILITIES Excellent and extensive. Spawning gravels are found throughout the stream. King salmon have been observed spawning as far as the barrier falls.
STREAM TEMPERATURES Cold Range. Observed temperatures: 42-48.2°F.,1949; 45-56°F., 1950; 48-49°F., 1951; 47.5-54°F., 1952; 50-51°F., 1953.
VALLEY DESCRIPTION Glacial. Lower 3 miles of valley broad and flat with grassflats, muskeg and timber only along stream course and valley margins. Main valley divides 7 miles above high tide mark and both head above the S. fork of the Bradfield River in high mountains. Bare rock ridges throughout.
DRAINAGE 78 square miles (Polar Planimeter). Several small glaciers and permanent snowfields in upper valley. Lake 1.1 miles long drains into river, 1.7 miles upstream from the W. Several small lakes and a number of ponds throughout the system. Water has slight glacial tinge at all times. 1953 had unusually heavy siltation.
STREAM MOUTH IDENTIFICATION Small rock islet at high tide lies on W. side of mouth. Piling on E. side of delta may be used for moorage at other than extreme low tide stages. Extensive grassflats visible in upper intertidal.
ANCHORAGE E. of center of delta mouth just inside line from islet to the nearest point visible on E. shore.
TRAILS AND SURVEY ROUTES River skiff is the most practical (during normal water levels), as it can be taken over 4 miles upstream. Further passage is hindered by rapids in the narrow valley section 1.4 miles above the marker.
AERIAL SURVEY NOTES Broad valley, light colored gravel bottom and usually clear water provide good aerial survey conditions. Convenient turning point in wide section of valley above marker. No obstructions or unusual conditions during normal survey weather. Very large midstream boulder at marker visible from air.

INTERTIDAL ZONE

LENGTH 1.6 miles AVERAGE WIDTH/DEPTH 100-150'/36"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Silt, sand and gravel from 2" to 6" in diameter.
HIGH TIDE LOCATION Head of broad riffles above grassflats. Extensive gravel bar with debris lies between steep embankment on W. and trees on bank on E. side. Long deep pool above follows E. bank.
SCHOOLING AREAS Deep holes in lower intertidal zone, broad holes and moderate current areas in mid-intertidal zone and wide riffle areas in the upper section offer schooling facilities. Major concentrations have been observed from mid-tide point upstream.
SPAWNING AREAS Most spawning has been observed in the upper third of the intertidal zone on the broad riffles between schooling areas.
GENERAL NOTES An interesting upwelling of ground waters has been noted at about the mid-tide point at the junction with the tributary slough from the W.

UPSTREAM

LENGTH ACCESSIBLE 6 miles AVERAGE WIDTH/DEPTH 100-200'/36-48"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Sand, gravel throughout lower stream. Some boulders above marker.
MARKER DISTANCE 3 miles.
MARKER IDENTIFICATION A metal marker was placed on an E. bank tree at the base of a long riffle. A very large boulder in mid-stream lies downstream.
BARRIERS A falls lies 6 miles upstream in a small canyon area. Cross-bedding occurs at this point. King salmon have been reported above barrier falls (unconfirmed).
TRIBUTARIES Lake fed tributary entering on W. 1.7 miles upstream is not accessible to salmon. Steep tributary entering from W. 2 miles upstream has been observed with a few salmon in rapids.
SCHOOLING AREAS All pools have been observed with schooling salmon. The first two large pools above high tide mark are used by all species. Many of the pools are over 10 feet deep with several nearly 20 feet.
SPAWNING AREAS Excellent spawning riffles are found throughout the stream. During small escapements, the riffles at high tide mark are most commonly used.
GENERAL NOTES High gravel banks in lower stream area show stream erosion marks. The stream may have considerable gravel movement during floods in some areas. Upper stream appearance is more stable, especially above marker.

ESCAPEMENT RECORD

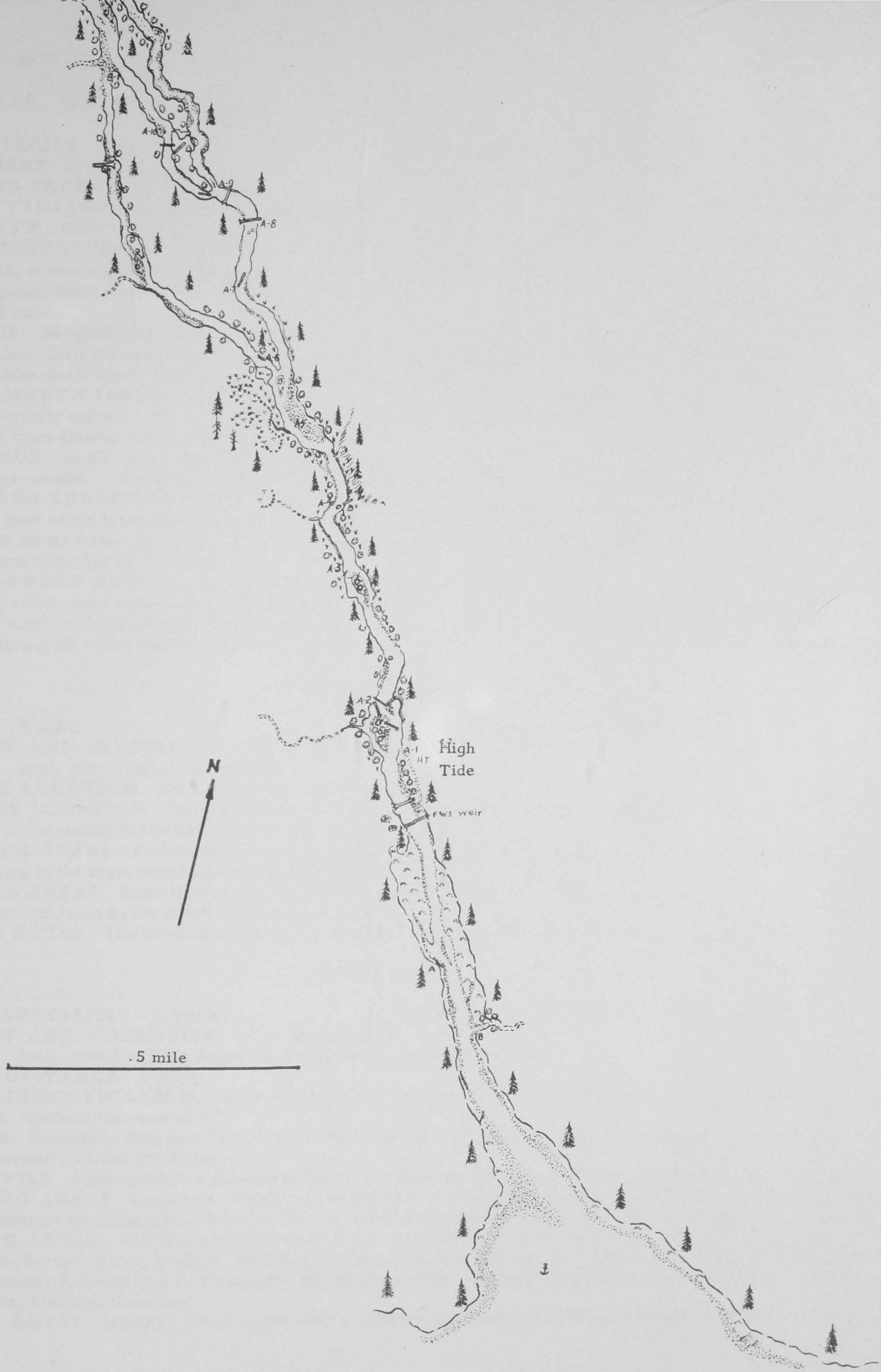
[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1942								
Sep 21	G 1.0	ASI						Poor. Few pink and chum
1943								
Sep 16	G .0	ASI						Very few fish seen
1947								
Sep 26	G 1.0	FRI	32		37		2 coho	Poor
1949								
July 17	G .0	FRI	76		6			
July 30	G 3.0	FRI	15,500		3,100		1 king	
Aug 23	G 4.5	FRI	7,400	1,600	700	400	200 king	
Sep 4	G 3.0	FRI	3,000	1,500				
Sep 18	G 1.0	FRI	300	1,500				
1950								
July 22	G 3.0	FRI	1,800	0	600	0		
Aug 2	G 3.0	FRI	28,000	0	6,000			Some dead chum. 2,000 above marker
Aug 10	A	FRI,FWS						Fish observed all the way on short flight
Aug 12	G 3.0	FRI	25,000	1,500	3,100	150		
Aug 23	G 3.0	FRI	15,000	8,500	2,500	3,000	Some king	
Sep 4	G 3.0	FRI	3,500	4,000	0			Some dead chum
1951								
July 25	G 3.0	FRI	1,800	0	2,800	0		
July 26	A 3.0	FRI						5,500 salmon
July 29	A 3.0	FRI						8,000 salmon. Sev. 100 dead chum
July 30	A	ASI	18,000					
Aug 2	G 2.8	FRI	30,000		5,000	200		Estimated. Some dead pink. Very poor visibility
Aug 13	G 1.5	FRI	8,000		3,000			Many dead pink, chum. Poor vis. Good on riffles
Aug 22	G 3.0	FRI	3,700	1,100	75	275	25 king	
Sep 3	G 1.0	FRI	375	100	0	0		Very poor vis. Run about over
1952								
July 23	G 3.0	FRI	450	0	1,900	0	Some king	
July 26	A 3.0	FRI						3,000, 2/3 chum. None at mouth
Aug 2	G 3.0	FRI	4,500	0	4,750	0		Few live king. Reduced visibility
Aug 12	G 3.0	FRI	7,800		1,155	500	25 king	Few dead pink.
Oct 3	A 5.0	FRI						No fish seen. Vis. 90%
1953								
July 25	G 2.5	FRI	43		223			10% vis., due to glacial silt
Aug 2	G 4.0	FWS						Good chum showing. Vis. poor
Aug 12	G .5	FRI					5 king	No visibility
Aug 13	A 3.0	ADF						500 live, 1,500 dead. Vis. poor
Aug 23	G .5	FRI						No visibility
Oct 5	A 2.0	FRI						None observed. Vis. poor
1954								
Aug 3	A 3.0	FRI	5,800	0	200	0		None off mouth. Fish low in stream
Aug 12	A 3.0	FRI	7,500		200	0		None off mouth. Few dead pink
1955								
July 24	A 3.0	FRI	0		0			None at mouth
July 31	A 3.0	FRI	200					None observed at mouth
Aug 12	A 3.0	FRI	600					

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1956								
July 11		FWS						250 pink at mouth
July 22	A 3.0	FRI	2,500					Chum present. None off mouth
July 29	A 3.0	FRI	16,000		2,500			None off mouth
Aug 2		FWS	300					Some dead pink
Aug 16		ADF,FWS						5,000 pink and chum
Aug 17	A 3.0	FRI	25,000					Chum present. Some dead chum, many dead pink. None at mouth
Sep 11	G 3.0	FWS	17		2			
1957								
July 31	A 3.0	FRI	3,000	0	5,000			Some dead chum. None observed at mouth
Aug 10	A 3.0	FRI	2,000		5,000		Sev. king	Few dead pink, some dead chum. None observed at mouth
Aug 11	A 3.0	FRI						8,600 salmon

Herman Cr.

JayMartin


A-10
A-9
A-8
A-7
A-4
A-3
A-2
A-1
HT
High
Tide
FWS weir
N
.5 mile
Herman Cr.
JWMartin

KETCHIKAN, BEHM CANAL, N. shore 3 miles W. of Burroughs Bay

MAJOR SPECIES Pink, chum
OTHER SPECIES Coho, king, trout
ESCAPEMENT TIMING Early. July-Aug.
ESCAPEMENT MAGNITUDE 50,000. Weir counts to 90,000
SPAWNING FACILITIES Excellent.
STREAM TEMPERATURES Cold range. Observed temperatures: 57°F., Aug. 22, 1947; 48-52°F., 1948; 46-50.3°F., 1949; 50.5-54°F., 1950; 48-66°F., 1951; 44-59°F., 1953; 44-58°F., 1954.
VALLEY DESCRIPTION Glacial. Evidence of fault-line erosion in upper stream. Wooded valley floor, some braiding stream course areas, steep valley walls generally wooded, bare rock ridges, alder and brush abundant throughout. Main stream valley runs N. W. for three miles before turning to N. E. through falls area to small lake 1 mile.
DRAINAGE 24 square miles (Polar Planimeter). Small lake 1 mile long, .3 miles wide estimated to lie at 500' elevation. Early snowfields maintain flow until Aug., precipitation fed thereafter. Clear water colored during rains from small beaver pond area .5 miles upstream and muskeg along valley slopes and ridges.
STREAM MOUTH IDENTIFICATION Stream mouth is narrow and not evident when approached from the W. until directly opposite. Bar extends toward E. side of small cove, E. bank steep gravel, wooded shores. Stream mouth looks directly down Behm Canal.
ANCHORAGE Small basin inside W. point at steep drop-off. Water usually milky from Unuk River discharge and requires sounding. Anchorage is exposed to S. and vessels should not be left untended.
TRAILS AND SURVEY ROUTES Stream is easily walked during normal and low water levels. Bear trails along most of the lower stream can be used. Research parties have cut sections of trail in past, but undergrowth rapidly covers them. Streambed splits for .6 miles at the .3 mile mark and either split may be surveyed in one direction and other on the return.
AERIAL SURVEY NOTES A narrow valley with high trees along the stream course requires careful flight planning for effective aerial survey. The visibility factors are such that only light planes are satisfactory. However, the clear water and light colored stream bottom make salmon enumeration easy. Upstream termination marked by numerous splits where stream is not visible from the air.

INTERTIDAL ZONE

LENGTH .3 miles
AVERAGE WIDTH/DEPTH 80'/18"
GRADIENT AND VELOCITIES .5 to 1° at 2' per second
BOTTOM Sand, gravel and scattered boulders.
LOW TIDE LOCATION Inside of the bar by the anchorage.
HIGH TIDE LOCATION Riffle above the head of the W. grassflats. A small flood channel along the E. side lies below and a second flood channel on the W. enters by the riffle.
SCHOOLING AREAS Shallow pools in the stream section bounded by the E. and W. side grassflats. Heaviest schooling in the upper section below the riffles at the head of the grassflats.
SPAWNING AREAS Some limited spawning above the small tributary entering from the E. at the lower E. grassflat. Heaviest spawning on the riffles at the head of the grassflats.
GENERAL NOTES The lower intertidal stream banks are steep and difficult to walk during high tide.

UPSTREAM

LENGTH ACCESSIBLE 2.3 miles
AVERAGE WIDTH/DEPTH 40-60'/18"
GRADIENT AND VELOCITIES .5° at 2' per second
BOTTOM Sand, gravel to 6" in diameter, occasional scattered boulder areas.
MARKER DISTANCE 2 miles.
MARKER IDENTIFICATION At the head of a long straight riffle section above pool with large boulder in mid-stream. Gradient increases to 1-2°.
BARRIERS Impassable falls over 100' high lies above the steep termination section. A narrow canyon with large boulders and falls lies just below.
TRIBUTARIES Minor tributaries throughout the stream drain the high ridges. None are important for spawning.
SCHOOLING AREAS Large pool .3 miles above high tide mark has been observed with largest concentrations above the intertidal schooling areas. Schooled fish are found in all pools in the stream during the spawning migration.
SPAWNING AREAS 90% of spawning occurred in first mile above high tide mark in 1948 (Fisheries Research Institute Special Stream Studies). 50% of spawning occurred in first mile in 1953 (Herman Creek Weir Tagging Experiment, Fisheries Research Institute). Except for the last .3 miles accessible, Herman Creek has excellent spawning facilities throughout.
GENERAL NOTES Intensive stream studies were conducted here by Fisheries Research Institute in 1948 and 1953.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1933								
Aug 15	G .8	FWS						1,500 mostly chum in stream
1942								
Sep 21	G .5	ASI	3,500		150			Fair
1943								
Sep 16	G .5	FWS	2,000		400			Poor. Many dead chum
1947								
Aug 22	G 1.0	FRI	5,000					Some chum
Sep 13	G 2.0	FRI	3,000					
Sep 26	G 1.5	FRI	300		500		100 coho	
1948								
July 11	G .1	FRI	0		8			
Aug 9	G 2.0	FRI	9,800					
Aug 16	G 1.5	FRI	10,100					
Aug 17	G 1.0	FWS	25,000				200 coho	Good. Chum fair
Aug 26	G 1.5	FRI	6,900					
Sep 3	G .5	FRI	3,800					
Sep 13	G 2.0	FRI	2,185					
Sep 22	G 2.0	FRI	1,118					
Oct 10	G 1.0	FWS	200				200 coho	Chum fair
1949								
July 29	G .0	FRI	1,800		200			Count below weir
Aug 8	G .0	FRI	1,500	30	500	10	1 coho	Count below weir
Aug 24	G .0	FRI	5,000	300	500	100	2 king	Count below weir
Sep 3	G .0	FRI	1,000	>100		>200	1 dead king	Count below weir
Sep 21	Weir	FWS	88,433		12,475		131 coho, 9 king	Final total. Weir installed July 22
1950								
Aug 3	G .3	FRI	18,000					
Aug 12	G .0	FRI	15,227	200	4,020	700		Count below weir
Aug 23	G .0	FRI	7,000					Count below weir
Sep 4	Weir	FWS	50,269		20,491		8 coho, 4 king	Final total. Weir installed July 21
1951								
Sep 6	Weir	FWS	90,764		13,670		8 coho, 17 king	Final total. Weir installed July 14
1952								
Aug 31	Weir	FWS	21,999		11,312			Final total. Weir installed July 14
1953								
Aug 24	Weir	FWS	4,593		12,505		1 coho, 6 king	Final total. Weir installed July 19
Sep 10	Tag Ratio*	FRI	7,800					Calculated from tagged-untagged dead ratios. Weir tagging experiment
1954								
Sep 4	Weir	FWS	13,630		4,300		20 coho, 24 king	Final total. Weir installed July 9
1955								
Sep 1	Weir	FWS	2,126		226		9 king	Final total. Weir installed July 16
1956								
July 24		FWS	5,234		1,039		8 king	4,000 pink at mouth
July 29	A 2.0	FRI	3,000		500			4,000 pink in intertidal zone
Aug 3		FWS	22,000		2,925			
Aug 17	A 2.0	FRI	17,500		>2,000			4,000 below weir
Sep 5	Weir	FWS	31,048		4,920		14 coho, 26 king	Final total. Weir installed July 18

* 780 pinks tagged at the Fish and Wildlife Service Weir for special population studies and stream survey evaluation by Fisheries Research Institute. 453 tagged dead recovered from 4,560 total dead examined. Experiment began July 19 and ended Sep. 10, 1953.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1933								
Aug 15	G .8	FWS						1,500 mostly chum in stream
1942								
Sep 21	G .5	ASI	3,500		150			Fair
1943								
Sep 16	G .5	FWS	2,000		400			Poor. Many dead chum
1947								
Aug 22	G 1.0	FRI	5,000					Some chum
Sep 13	G 2.0	FRI	3,000					
Sep 26	G 1.5	FRI	300		500		100 coho	
1948								
July 11	G .1	FRI	0		8			
Aug 9	G 2.0	FRI	9,800					
Aug 16	G 1.5	FRI	10,100					
Aug 17	G 1.0	FWS	25,000				200 coho	Good. Chum fair
Aug 26	G 1.5	FRI	6,900					
Sep 3	G .5	FRI	3,800					
Sep 13	G 2.0	FRI	2,185					
Sep 22	G 2.0	FRI	1,118					
Oct 10	G 1.0	FWS	200				200 coho	Chum fair
1949								
July 29	G .0	FRI	1,800		200			Count below weir
Aug 8	G .0	FRI	1,500	30	500	10	1 coho	Count below weir
Aug 24	G .0	FRI	5,000	300	500	100	2 king	Count below weir
Sep 3	G .0	FRI	1,000	>100		>200	1 dead king	Count below weir
Sep 21	Weir	FWS	88,433		12,475		131 coho, 9 king	Final total. Weir installed July 22
1950								
Aug 3	G .3	FRI	18,000					
Aug 12	G .0	FRI	15,227	200	4,020	700		Count below weir
Aug 23	G .0	FRI	7,000					Count below weir
Sep 4	Weir	FWS	50,269		20,491		8 coho, 4 king	Final total. Weir installed July 21
1951								
Sep 6	Weir	FWS	90,764		13,670		8 coho, 17 king	Final total. Weir installed July 14
1952								
Aug 31	Weir	FWS	21,999		11,312			Final total. Weir installed July 14
1953								
Aug 24	Weir	FWS	4,593		12,505		1 coho, 6 king	Final total. Weir installed July 19
Sep 10	Tag Ratio*	FRI	7,800					Calculated from tagged-untagged dead ratios. Weir tagging experiment
1954								
Sep 4	Weir	FWS	13,630		4,300		20 coho, 24 king	Final total. Weir installed July 9
1955								
Sep 1	Weir	FWS	2,126		226		9 king	Final total. Weir installed July 16
1956								
July 24		FWS	5,234		1,039		8 king	4,000 pink at mouth
July 29	A 2.0	FRI	3,000		500			4,000 pink in intertidal zone
Aug 3		FWS	22,000		2,925			
Aug 17	A 2.0	FRI	17,500		>2,000			4,000 below weir
Sep 5	Weir	FWS	31,048		4,920		14 coho, 26 king	Final total. Weir installed July 18

* 780 pinks tagged at the Fish and Wildlife Service Weir for special population studies and stream survey evaluation by Fisheries Research Institute. 453 tagged dead recovered from 4,560 total dead examined. Experiment began July 19 and ended Sep. 10, 1953.

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1957								
July 22		FWS						150 at mouth
July 31	A 2.0	FRI	>2,000	0	4,000			Some dead chum. Chum at mouth
Aug 8		FWS	3,000		3,000			
Aug 8		FWS	6,100		500			
Aug 10	A 2.0	FRI	3,000		5,000			Dead chum, pink. Fish at intertidal zone
Aug 11	A 2.0	FRI						8,500 fish in stream
Aug 19	A 2.0	FRI	1,000		500	>1,000		Some dead pink. None at mouth
Aug 24		FWS	43		216			
Sep 8		FWS	50		300		10 king	
Sep 9	G 2.0	FRI	20		110		1 king	

U. S. Fish & Wildlife Service Weir Counts

Date	Pink	Chum	Coho	Red	King	Stream Gauge A.M.	Stream Gauge P.M.	Water Temp. A.M.	Water Temp. P.M.	Remarks
1949										
July 22	19	52								
23	250	175								
24	238	115								
25	1,354	262								
26	1,755	209								
27	879	87								
28	2,137	389								
29	2,049	207								
30	1,074	315								
31										
Aug 5	8,000	2,000								Weir out - estimates entered
6	540	50								
7	2,051	238								
8	2,287	196								
9	5,018	339								
10	6,289	317								
11	7,031	409								
12	2,941	158								
13	3,217	503								
14	5,525	404								
15	3,055	214								
16	2,261	200								
17	1,857	304								
18	1,824	227								
19	1,778	376								
20	2,833	281								
21	4,572	316								
22	3,517	304	2		1					
23	3,518	283	5		3					
24	3,422	423	1							
25	1,354	189	13		2					
26	1,267	246	7							
27	729	180	12							
28	522	198	2							
29	433	226	6		1					
30	333	101	2							
31	1,078	356	2							
Sep 1	396	211	13		2					
2	155	145	5							
3	308	87	7							
4	104	51	7							
5	71	58	11							
6	109	66	8							
7	71	56	11							
8	84	56	4							
9	29	26	2							
10	44	45								
11	5	14								
12	12	17	3							
13	24	148	6							
14										
15		4								
16		22								
17		22								
18	6	28	6							

Date	Pink	Chum	Coho	Red	King	Stream Gauge A.M.	Stream Gauge P.M.	Water Temp. A.M.	Water Temp. P.M.	Remarks
1949										
Sep 19	5	32	2							
20	3	38								
21										Weir removed
Total	88,433	11,975	131		9					Estimated 500 chum above weir at installation, not included in total
1950										
July 21	147	48								
22	9	16								
23	255	276								
24	61	109								
25	763	410								
26	1,366	942								
27	594	239								
28	196	151								
29	871	1,158								
30	1,763	401								
31	480	214								
Aug 1	1,704	906								
2	2,404	596								
3	1,521	366								
4	99	110								
5	2,607	693								
6	436	274								
7	605	341								
8	530	322								
9	829	373	2							
10	825	301								
11	2,183	939								
12	3,152	1,048								
13	2,544	591								
14	2,134	673								
15	1,717	306								
16	2,400	236								
17	1,000	268								
18	901	351								
19	972	699								
20	532	332								
21	802	791								
22	642	134								
23	1,255	749								
24	4,800	1,747								
25	4,976	1,663								
26	276	247			2					
27	1,001	620								
28	387	242								
29	230	210	3							
30	173	162			2					
31	35	46	1							
Sep 1	60	93	2							
2	11	34								
3	21	64								
4										Started dismantling weir. 4,000 pink estimated spawning below weir, not included in total
Total	50,269	20,491	8		4					

Date	Pink	Chum	Coho	Red	King	Stream Gauge	Water Temp.	Remarks
1951								
July 14	2,000	1,000						Estimated at installation
15	45	15					60	Cloudy
16	543	138						Showers P.M.
17	666	83				1.51	50	Showers P.M. Sev. spawned
18	1,750	528				2.25	48	Heavy rain
19	1,861	301				1.70	56	Rain and fog
20	730	144				1.52	57	Showers
21	985	306				1.55	55	Showers and fog
22	1,001	503				1.88	56	Showers
23	1,360	193				1.15	55	Clear
24	638	114				1.10	56	Clear
25	1,085	117				0.95	57	Clear
26	1,025	218				0.81	56	Cloudy
27	686	221				0.85	58	Cloudy
28	1,111	124				0.84	57	Cloudy
29	2,110	382				0.68	57	Cloudy
30	4,012	374				0.81	60	Cloudy. Showers last night
31	9,660	946				1.10	60	Light rain
Aug 1	3,030	435				0.87	59	Light rain
2	6,666	861				1.20	61	Rain
3	4,044	609				1.00	56	Rain
4	5,555	378				1.10	57	Rain
5	3,535	238				0.95	56	Cloudy
6	1,666	248				0.90	57	Cloudy
7	4,567	135				0.90	57	Cloudy
8	2,000	104				0.70	58	Cloudy
9	4,001	250				0.67	61	Clear
10	2,727	241				0.66	61	Clear
11	1,405	111				0.60	65	Clear
12	4,000	260				0.65	59	Cloudy
13	2,255	202				0.70	60	Cloudy
14	7,000	1,495				1.62	57	Rain
15	2,444	367				1.52	58	567 dead. 1/2not spawned. Showers
16	555	146				1.45	55	Rain
17	1,221	400				1.38	55	774 dead. 1/2 not spawned.Showers
18	626	71				1.20	55	Clear
19	288	48				1.15	55	No large fish up. Clear
20	391	156			2	1.68	56	Showers
21	112	51			2	1.10	54	Showers
22	34	17				1.00	55	Many blind on weir. Clear
23	77	22				0.90	56	Cloudy
24	87	37				0.97	57	Clear
25	32	19				0.86	57	Clear
26	82	50				0.75	56	Clear
27	30	16				0.79	55	Clear
28	74	53				0.65	66	Clear
29	48	100				0.65	62	Clear
30	110	116				0.64	59	Clear
31	140	140				0.55	60	Cloudy
Sep 1	94	106				0.60	62	Clear
2	108	91	4			0.55	62	Clear
3	222	144				0.56	62	Clear
4	113	78	1			0.55	61	Clear
5	46	76	1			0.55	60	Clear
6	111	93	2			0.55	60	Clear. Weir removed
Total	90,764	13,670	8		17			

Date	Pink	Chum	Coho	Red	King	Stream Gauge	Water Gauge	Remarks
1952								
July 14		11						
15	5	29						
16	3	34						
17	18	86						
18	128	136						
19	20	70						
20	279	252						
21	353	239						
22	723	482						
23	767	542						
24	412	264						
25	295	531						
26	120	150						
27	274	144						
28	885	535						
29	481	634						
30	390	594						
31	591	715						
Aug 1	791	484						
2	879	333						
3	906	423						
4	1,292	353						
5	605	340						
6	699	635						
7	1,500	453						
8	2,184	252						
9	1,789	270						
10	247	133						
11	223	96						
12	484	217						
13	615	272						
14	528	144						
15	418	172						
16	550	198						
17	606*	402*						
18	400*	170*						
19	450*	175*						
20	200*	85*						
21	400*	150*						
22	200*	25*						
23	150*	10*						
24	74	29						
25	11	19						
26	9	7						
27	5	6						
28	5*	3*						
29	5*	3*						
30	25*	2*						
31	10*	3*						
Total	21,999	11,312						* Estimates
1953						A. M.		
July 19	190	1,700						Stream survey (1 1/2 miles)
20	12	49						Rain
21	8	22			1			Rain
22	1	31				2.15		Rain
23	56	566				2.0		Rain
24	149	677				1.92		

Date	Pink	Chum	Coho	Red	King	Stream Gauge A. M.	Water Temp.	Remarks
1953								
July 25	211	429			1	1.42		Sunny
26	176	672				1.38		Rain
27	266	1,164				1.44		Rain
28	109	558				1.36		Cloudy
29	185	304				1.28		Sunny
30	81	769				1.30		Overcast
31	44	365				1.29		Rain
Aug 1	62	247			1	1.30		Rain
2	321	796				1.30		Sunny
3	224	259			2	1.28		Sunny
4	274	848				1.29		Sunny
5	101	393				1.30		Cloudy
6	599	272				1.26		Sunny
7	278	589				1.25		Cloudy, water extremely low
8	92	352				1.37		
9	99	213				1.26		
10	1,038	513	1			2.10		Rain. 2 large holes under weir caused by flood. Estimate count taken from stream survey
11	8	56				1.50		Cloudy and rain
12		13				1.35		Cloudy
13		1				1.25		Cloudy
14	2	42				1.27		Cloudy
15		3				1.27		Cloudy
16		49				1.28		Cloudy and rain
17	3	42				1.40		Cloudy and rain
18	2	93				1.46		Cloudy and rain
19		25				1.34		Cloudy
20		47				1.28		Cloudy and rain
21		23				1.23		Cloudy and rain
22	1	85				1.23		Sunny
23	1	67				1.19		Rain
24		171			1	1.50		1/2 day
Total	4,593	12,505	1		6			

1954					A. M.	P. M.	A. M.	P. M.	
July 9		5					48	48	
10		10					48	47	
11		14					47	47	
12	1	18					44	45	
13		21					46	48	
14		10					46	48	
15		28					47	47	
16		32					47	47	
17	1	114					46	47	
18	12	122					47	48	
19	6	101					47	47	
20	8	18					47	48	
21	31	126					47	46	2 chum with metal tags on fin
22	34	96					46	46	
23	15	61					47	47	
24	15	45				2.25	47	48	
25	10	56			2.2	2.2	47	48	
26	73	113			2.2	2.1	47	49	
27	178	282			2.1	2.1	48	49	
28	238	118			2.1	2.2	48	49	
29	621	269		1	2.1	2.1	48	49	
30	163	203		2	2.1	2.2	49	50	
31	1,001	411		2	2.3	2.3	48	50	

Date	Pink	Chum	Coho	Red	King	Stream Gauge A. M.	Stream Gauge P. M.	Water Temp. A. M.	Water Temp. P. M.	Remarks
1954										
Aug 1	71	83				2.2	2.2	49	52	
2	351	109				2.2	2.2	50	50	
3	142	96				2.2	2.3	49	51	
4	341	138				3.3	2.4	51	52	
5	211	85				2.3	2.3	50	52	
6	242	116				2.3	2.3	51	52	
7	261	106			1	2.2	2.1	51	53	
8	273	76				2.1	2.25	51	53	
9	221	103				2.3	2.1	52	53	
10	611	93			2	2.2	2.2	52	53	
11	1,006	101				2.1	1.1	53	55	
12	1,735	122				2.0	2.0	54	56	
13	1,447	59				1.9	1.8	53	55	
14	495	59			1	1.9	1.9	53	55	
15	1,035	79	3		3	2.1	2.0	52	53	
16	41	57				1.9	1.9	53	54	
17	834	103	3			2.0	2.3	53	54	
18	44	67	2			2.3	2.1	53	53	
19	37	15	3		1	1.9	1.9	53	58	
20	46	23	1			1.9	1.9	53	56	
21	36	12				1.9	1.9	53	55	
22	31	21				1.9	1.9	53	56	
23	236	21			1	1.8	1.8	53	56	
24	119	26				1.8	1.8	54	56	
25	147	31				1.8	1.8	55	57	
26	339	41	1		1	1.8	1.8	56	58	
27	169	9				1.8	1.8	53	56	
28	97	4				1.8	1.8	53	56	
29	84	31				1.8	1.8	55	58	
30	83	19				1.8	1.7	56	55	
31	219	62	3		3	1.9	2.5	54	55	
Sep 1	134	30	1		6	2.4	2.3	54	56	
2	35	15	2			2.1	2.1	55	56	
3	43	15	1			1.9	1.9	56	57	
4	7					1.9	1.9			
Total	13,630	4,300	20		24					
1955										
July 16		2			1					
17		3								
18										No fish through weir
19										No fish through weir
20										No fish through weir
21										No fish through weir
22										No fish through weir
23										No fish through weir
24	2	4								
25	1	2								
26	1	5								
27	3	5			1					
28	3	2			1					
29	76	22								
30										No count made
31										No count made
Aug 1	65	10								
2	716	53			4					
3	247	10								

Date	Pink	Chum	Coho	Red	King	Stream Gauge	Water Temp.	Remarks
1955								
Aug 4	281	8						
5	249	8			2			
6	44							
7								Weir flooded, out
8								Weir flooded, out
9								Weir flooded, out
10								Weir flooded, out
11								Weir flooded, out
12								Weir flooded, out. Estimated 3,000 passed through during period flooded out
13	88	10						
14	12	2						
15	32	11						
16	29	4						
17	26	8						
18	8	1						
19	18	2						
20	14							
21	7							
22	31	9						
23	15	7						
24	4	2						
25	45	15						
26	88	9						
27	7	4						
28								
29								
30	7	4						
31								
Sep 1	7	4						No further count. Weir removed Sep 4, 1955
Total	2,126	226			9			Estimated 3,000, Aug 7-12, not included in total
1956								
July 18		56						Cloudy
19		44						Cloudy
20	1,506	252						Rain
21	1,237	191						
22	1,200	216			3			Rain
23	237	63			3			Rain
24	512	127			1			Cloudy
25	542	90			1			Sun, cloudy
26	2,175	290			3			
27	1,207	154			4			Sun
28	815	187			4			Sun
29	519	119						Sun
30	555	109						Sun
31	279	136						Sun
Aug 1	10,793	688			1			Rain
2	375	203						Rain
3	952	301						Rain
4	201	61						Sun, rain
5	2,125	416			1			Rain
6	161	56						Rain. Flood water over weir, level at 4.0
7	782	72						Rain, less water, still debris
8	232	29						Rain

Date	Pink	Chum	Coho	Red	King	Stream Gauge	Water Temp.	Remarks
1956								
Aug 9	99	35						Sun
10	30	8						Cloudy
11	134	42						Sun
12	101	21						Sun
13	45	25						Sun
14	162	31						Sun
15	48	40						Cloudy
16	61	34						Cloudy
17	753	94						Cloudy
18	610	71						Sunny
19	1,412	250			1			Cloudy, rain
20								Rain, water raised to 4.15. Weir packed with dead fish
21	230	56			1			Rain
22	60	37			1			Rain
23	181	62						Cloudy, rain
24	150	17			2			
25	76	18	1					Sunny
26	107	67						Rain
27	4	9	1					Cloudy, rain
28								Rain
29	29	11	3					Rain
30	91	41	3					Rain
31	34	12	2					Rain. Water reached 4.36
Sep 1	30	22	2					Cloudy, rain
2	155	36	2					Sunny
3	41	21						Sunny
4								Cloudy
5								Cloudy, rain
Total	31,048	4,920	14		26			Approximately 500 pink below weir

111-30 ANCHOR CREEK K 51
N56°00.8 W131°25.3 Previous No. 46

KETCHIKAN, BEHM CANAL, BELL ARM, head

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep. ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Good in sections examined, though limited by small size of stream. Availability of spawning areas is dependent upon stream levels.
STREAM TEMPERATURES Warm range, (estimated). Observed temperature: 56.5°F., 9/25/47.
VALLEY DESCRIPTION Extensive intertidal grassflats at the base of low pass to Eagle Lake which drains into Bradfield Canal to N. through Eagle River. Wooded with muskeg areas throughout. Valley length less than 2 miles.
DRAINAGE 3 square miles (Polar Planimeter). Small lake (.3 x .4 miles) lies in low pass. Precipitation fed. Water colored by muskeg.
STREAM MOUTH IDENTIFICATION Extensive grassflats easily identify stream.
ANCHORAGE 6 fathom anchorage just N.E. of E. entrance to Anchor Pass.
TRAILS AND SURVEY ROUTES Easily walked grassflats, numerous bear trails, upstream extremely brushy.
AERIAL SURVEY NOTES No aerial visibility due to small size and brush.

INTERTIDAL ZONE

LENGTH .8 miles AVERAGE WIDTH/DEPTH 10-15'/12"
GRADIENT AND VELOCITIES Less than .5° at 1' per second
BOTTOM Sand and limited gravels.
HIGH TIDE LOCATION Head of grassflats.
SCHOOLING AREAS None reported.
SPAWNING AREAS Upper intertidal zone has good gravel areas, though limited by water depth at time of observations.
GENERAL NOTES Many black bear have been observed in this stream area.

UPSTREAM

LENGTH ACCESSIBLE .3 miles AVERAGE WIDTH/DEPTH 10'/6"
GRADIENT AND VELOCITIES 2-3° at 2' per second
BOTTOM Some sand, gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Stream reported to be steep above .3 miles, with small falls and rapids.
TRIBUTARIES W. fork joins stream .1 miles below high tide mark. Similar size and characteristics as Anchor Creek.
SCHOOLING AREAS

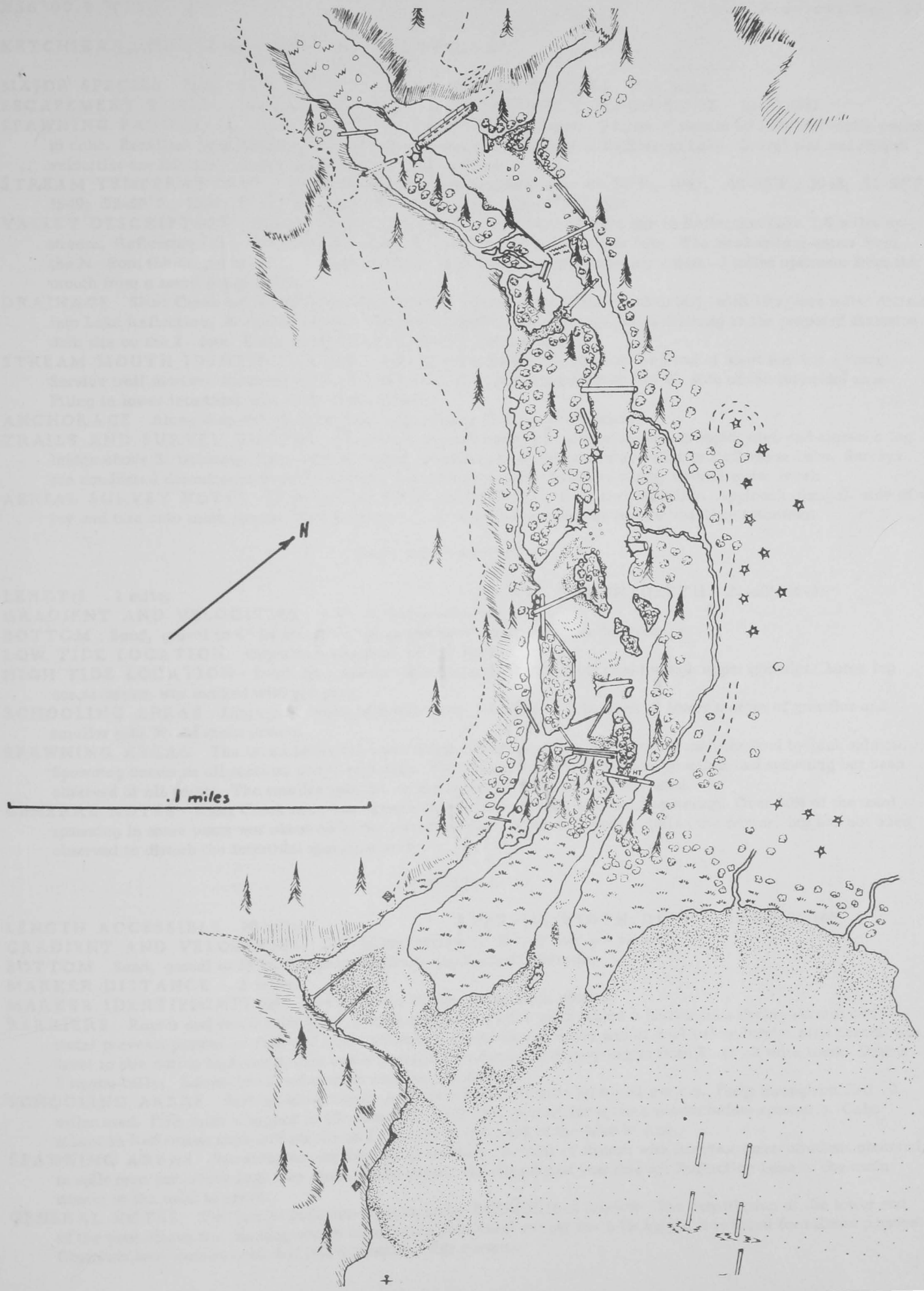
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1943								
Sep 18		FWS						Poor. Few fish present
1947								
Sep 25	G .3	FRI						Poor
1948								
July 28	G .1	FRI						No fish seen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.1 miles
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KETCHIKAN, BEHM CANAL, SHORT BAY, BELL ARM, head

MAJOR SPECIES Pink, chum, coho OTHER SPECIES Red, trout
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE 10-20,000
SPAWNING FACILITIES Excellent. Pink and chum limited to lower .3 miles of stream by falls and rapids passable to coho. Excellent coho spawning facilities in the stream at the head of Reflection Lake. Gravel size and stream velocities are suitable throughout the lower stream sections.
STREAM TEMPERATURES Normal range. Observed temperatures: 46-54°F., 1947; 45-68°F., 1948; 51-57°F., 1949; 53-59°F., 1950; 57-58°F., 1951; 50-63°F., 1952; 53-67°F., 1953.
VALLEY DESCRIPTION Glacial. Main valley runs W. from head of Short Bay to Reflection Lake 1.8 miles upstream. Reflection Lake, 5.5 miles in length, is a narrow, deep clearwater lake. The head stream enters from the N. from the cirque headwaters 3 miles above. A small clearwater tributary enters .3 miles upstream from the mouth from a small hanging valley.
DRAINAGE Short Creek has a total drainage area of 27 square miles (Polar Planimeter), with 19 square miles draining into Lake Reflection, 20 square miles to the gaging station, and 3 square miles draining to the proposed diversion dam site on the E. fork. Early snowfields drain into Reflection Lake.
STREAM MOUTH IDENTIFICATION A rocky point on the W. shore at the head of Short Bay has a Forest Service trail marker. Another trail marker is on the edge of the grassflat on the W. side of the intertidal zone. Piling in lower intertidal area on E. side of delta.
ANCHORAGE Along drop-off .3 miles from edge of grass flats, near W. shore.
TRAILS AND SURVEY ROUTES Forest Service trail follows E. side of stream to rapids area and crosses a log bridge above E. tributary. Trail crosses extensive muskeg to shelter cabin at outlet to Reflection Lake. Surveys are conducted downstream from the bridge. The stream is easily followed during normal water levels.
AERIAL SURVEY NOTES Clear water and light colored bottom aid aerial visibility. Approach along E. side of valley and turn onto main stream down E. tributary. Late afternoon shadows reduce visibility somewhat.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 20-60'/24-36"
GRADIENT AND VELOCITIES 3-5° at 2-3' per second
BOTTOM Sand, gravel to 4" in diameter, some scattered rocks to 12" in diameter.
LOW TIDE LOCATION Opposite rocky point on W. shore.
HIGH TIDE LOCATION Inside tree line at riffle above long intertidal pool through upper grassflat. Large log across stream was marked with red paint.
SCHOOLING AREAS Large pool below high tide mark, smaller pool by bank at lower margin of grassflat and smaller split W. of main stream.
SPAWNING AREAS The broad intertidal area has excellent spawning facilities extensively used by pink salmon. Spawning occurs in all sections above mid-tide. The stream fans out below the grassflats and spawning has been observed at all points. The smaller split W. of the main stream is extensively used.
GENERAL NOTES Short Creek is an excellent example of successful intertidal spawning. Over 50% of the total spawning in some years was observed in the intertidal zone. Short Bay freezes during the winter, but has not been observed to disturb the intertidal spawning areas.

UPSTREAM

LENGTH ACCESSIBLE >8 miles AVERAGE WIDTH/DEPTH 20-50'/24-36"
GRADIENT AND VELOCITIES 2-5° (short sections to 10°) at 2-4' per second
BOTTOM Sand, gravel to 5" in diameter, boulders and bedrock upstream.
MARKER DISTANCE .3 miles.
MARKER IDENTIFICATION Forest Service bridge across main stream.
BARRIERS Rapids and small falls from .3 mile mark to .4 mile mark where a barrier falls during normal and low water prevents passage of pink and chum salmon. Constriction of lower end of pool below barrier falls causes pool level to rise during high water with easier passage for salmon. Tributary enters from E. at .3 mile mark. Drains 3 square miles. Accessible to salmon for less than .1 miles.
SCHOOLING AREAS Earliest schooling in pools near Forest Service bridge at marker. Pools throughout first .3 miles used. Pink salmon tagged in the stream in 1948 were present for up to a month before spawning. Coho school in Reflection Lake and off the main stream at the head of the lake in Aug.
SPAWNING AREAS Spawning occurs throughout the first .3 miles of stream with heaviest concentrations observed in split area just above high tide mark. Coho ascend the stream and pass through Reflection Lake to the main stream at the head to spawn.
GENERAL NOTES The barrier falls noted above under BARRIER is of interest. The constriction at the lower end of the pool allows the flooding waters to raise the pool level so that the falls height is reduced for salmon passage. Observers have commented that this is a natural fish elevator.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1930								
Sep 6	G 1.8	FWS						10,000 in stream, 5,000 off mouth
1935								
Sep 25		FWS						Pink fair. All old. Many dead pink
1936								
Sep 18		FWS						Good escapement. 25% chum
1938								
Sep 24		FWS	1,000		1,000			3,000 off mouth
1941								
Aug 2	G .5	FWS	10,000					Good
1943								
Sep 15	G 1.0	FWS	20,000		10,000			Good. 20,000 off mouth
1946								
Oct 3	G .3	ASI						Fair
1947								
Sep 14	G .5	FRI	6,000					2,000 fish off mouth
1948								
July 29	G .3	FRI	114					
Aug 7	G .3	FRI	770					
Aug 14	G .3	FRI	2,150					
Aug 22	G .3	FRI	5,052					
Sep 1	G .3	FRI	11,565					
Sep 6	G .3	FRI	20,188					
Sep 15	G .3	FRI	13,010					
Sep 23	G .3	FRI	7,492					
1949								
Aug 1	G .3	FRI	4,200		100		Some coho & red	
Aug 10	G .3	FRI	4,500	250	400		Some coho	
Aug 25	G .3	FRI	8,400	321		50	Some coho	
Sep 6	G .3	FRI	12,000	2,000	1,500	200		
Sep 13	G .3	FRI	3,000	100	500	50		
Sep 18	G .3	FRI	5,500	1,800	700	80		
Sep 29	G .3	FRI	2,400	1,500	1,300	1,000		
1950								
Aug 4	G .3	FRI	2,500	0		0		Some chum
Aug 13	G .3	FRI	3,150	50	20			Several dead chum
Aug 24	G .3	FRI	5,000	400	300			Some dead chum
Sep 5	G .3	FRI	8,500		850			Dead chum, pink. 4,000 fish off mouth
Sep 15	G .3	FRI	8,000	5,500	1,500	1,000		None off mouth
Sep 21	G .3	FRI	5,000	5,000	2,500	1,000		
1951								
Aug 3	G .3	FRI	1,800	0	9	0		80% in intertidal zone
Aug 14	G .3	FRI	2,800	0	1	0		
Aug 23	G .3	FRI	2,900	30	0	0		Very little spawning
Sep 5	G .3	FRI	4,700	120	68	13	1 red	
Sep 16	G .3	FRI	5,500	200	600	200	Coho present	No fish seen at mouth
1952								
July 29	G .3	FRI	4,000	0	100	0		
Aug 3	G .3	FRI	3,850		140	150	Few coho	Sev. dead pink. A few fish off mouth
Aug 16	G .3	FRI	6,000	375	18	43		
Aug 27	G .3	FRI	4,450	400	69		1 king	Few dead chum. Stream high, poor vision
Sep 4	G .3	FRI	3,400	300	283			Few dead chum. Few fresh fish
Sep 17	G .3	FRI	1,550	600	375	200		Stream flooding
Oct 1	G .1	FRI	7					Stream flooding

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1953								
July 28	G .3	FRI					Several coho	Live, dead chum and pink. Very high
Aug 3	G .3	FRI	1,050	6	30	15		Run not in yet
Aug 3	G .3	FWS						400 pink and chum
Aug 14	G .3	FRI	1,810	5	45	0		Most of fish in intertidal zone
Aug 24	G .3	FRI	2,560	15	70	20		
Sep 2	G .3	FRI	786		332		2 coho	Some dead chum, pink.Peak of spawning
Sep 16	G .3	FRI	135	0	435	0	4 coho	Visibility 80%
Oct 25	G .3	FWS					Coho probably present. Vis. poor. None observed	
1954								
Aug 12	G .3	FRI	3,000	0		0		Few chum. Small school off mouth
Aug 23	A .3	FRI	3,200	0				Live, dead chum. 2,000 off mouth. Most spawning
Sep 4	A,G .3	FRI	3,100		400		Few dead coho	Few dead pink. A few still to enter
Sep 15	G .3	FWS	4,000	400				Few chum, many dead chum. 8,000 fish off mouth
1955								
Aug 19	A .3	FRI	300					Some at mouth
Aug 23	A .3	FRI	300					
Sep 6	A .3	FRI	500					
Sep 15	A .3	FRI	6,000					Some chum. Some fish at mouth
Sep 25	A .3	FRI	500					None at mouth
1956								
Aug 24	A .3	FRI	5,000					Jumps in bay. Some in mouth
Sep 7	A .3	FRI	15,000					Sev. thousand fresh fish at mouth
1957								
Aug 7		FWS			500			
Aug 16	A .3	FRI	700	0	500	0		Fresh run
Aug 25		FWS	900		40			
Sep 1	A .3	FRI	1,300	0	>100	0		Several hundred pink at mouth
Sep 8	A .3	FRI	3,000	0				Some chum. Some fish at mouth
Sep 10	G .3	FRI	400		700			None observed at mouth
Sep 10		FWS	80		100			
Sep 19	G .3	FRI	25		60			500 dead unidentified. None observed at mouth

KETCHIKAN, BEHM CANAL, BAILEY BAY, W. shore .5 miles from head

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Middle (estimated) ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Limited to intertidal zone by rapids and cascades to impassable falls .1 miles above high tide mark.
STREAM TEMPERATURES Normal range (estimated).
VALLEY DESCRIPTION Glacial. A lake system heading in high rock ridges.
DRAINAGE 25 square miles (Polar Planimeter). Lake Shelokum has an area of 357 acres at the 344' level. Lakes Nellie, Rowena, and Bess are tributary to Shelokum with 17 square miles of drainage. Lake Maud drains into Shelokum Creek .1 miles below the lake outlet. Spring Creek, a tributary to Shelokum has nine hot springs. 2.8 cubic feet per second average flow over 9 year period of gaging.
STREAM MOUTH IDENTIFICATION U.S. Forest Service trail markers identify Shelokum Creek.
ANCHORAGE Head of Bailey Bay.
TRAILS AND SURVEY ROUTES U.S. Forest Service trails to Shelokum and Maud Lakes.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 60'/24-36"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Sand, gravel and boulders.
HIGH TIDE LOCATION At head of grassflats.
SCHOOLING AREAS Pools in upper intertidal zone.
SPAWNING AREAS Limited.
GENERAL NOTES

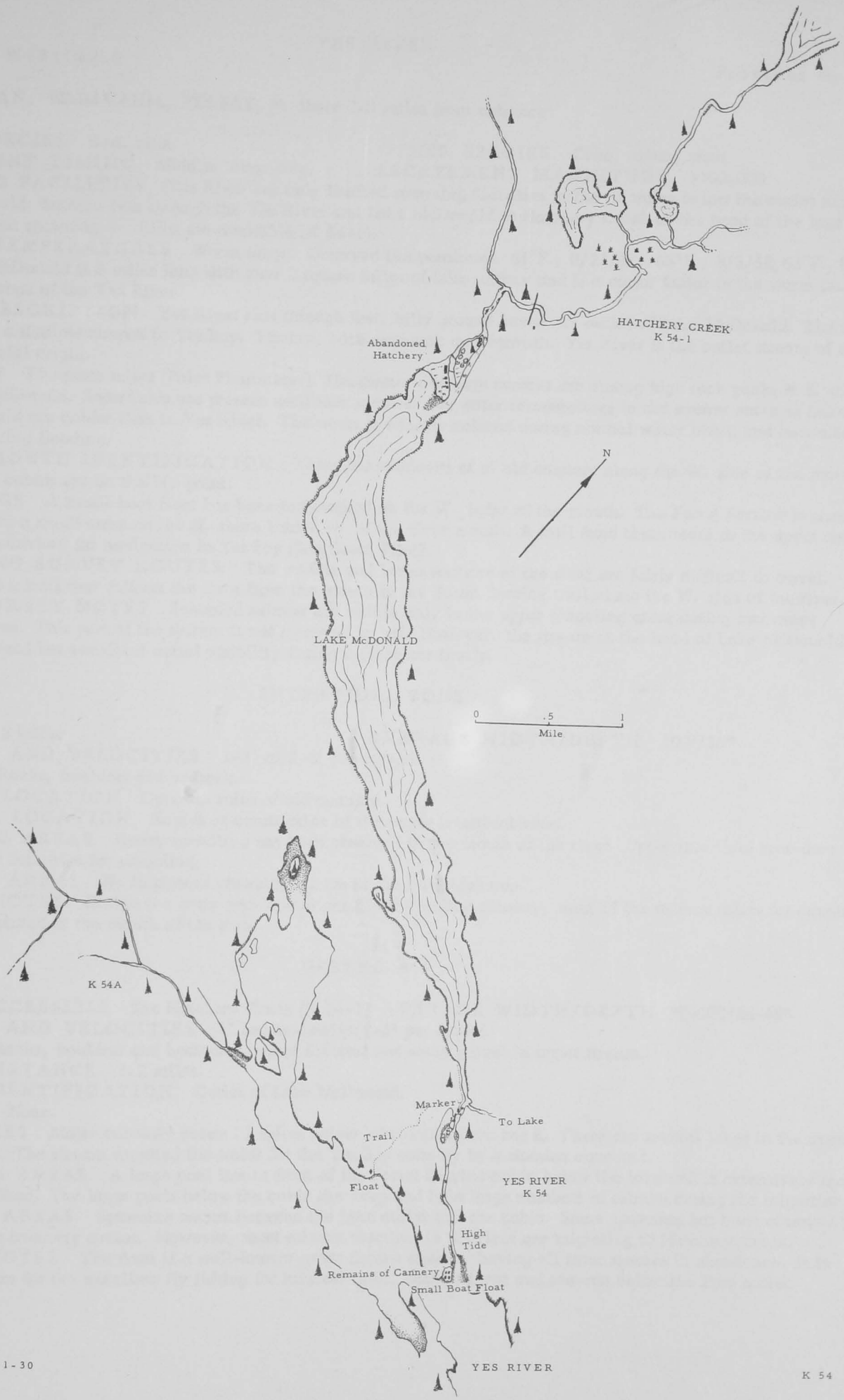
UPSTREAM

LENGTH ACCESSIBLE .1 miles AVERAGE WIDTH/DEPTH 50'/24-36"
GRADIENT AND VELOCITIES Greater than 5° at 3-4' per second
BOTTOM Boulders and bedrock, some sand.
MARKER DISTANCE .1 miles.
MARKER IDENTIFICATION Impassable falls estimated at 70'.
BARRIERS See marker identification.
TRIBUTARIES None below falls.
SCHOOLING AREAS None reported.
SPAWNING AREAS None reported.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1942 Sep 19	G 2.0	ASI						Poor seeding. Few at mouth, few pink, chum
1946 Oct 3	G	ASI						No spawning or dead fish
1947 Sep 7	G .8	FRI						Pink jump at mouth. No dead seen
1949 Aug 6	G .5	FWS						No fish seen
1953 July 6	G .0	FWS						No fish present


HATCHERY CREEK
K 54-1
Abandoned
Hatchery
N
LAKE McDONALD
0
.5
1
Mile
K 54A
Marker
To Lake
Trail
Float
YES RIVER
K 54
High
Tide
Remains of Cannery
Small Boat Float
YES RIVER

KETCHIKAN, BEHM CANAL, YES BAY, N. shore 2.5 miles from entrance

MAJOR SPECIES Red, pink OTHER SPECIES Coho, chum, trout
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE >100,000
SPAWNING FACILITIES Yes River has only limited spawning facilities in the .4 miles below the outlet of Lake McDonald. Salmon pass through the Yes River and Lake McDonald to Hatchery Creek at the head of the lake where excellent spawning facilities are available (K 54-1).
STREAM TEMPERATURES Warm range. Observed temperatures: 64°F., 8/23/47; 65°F., 8/3/52; 63°F., 8/25/53. Lake McDonald is 5 miles long with over 2 square miles of lake surface and is a major factor in the warm temperature range of the Yes River.
VALLEY DESCRIPTION Yes River runs through low, hilly ground below the outlet of Lake McDonald. The river has cut a shallow canyon to Yes Bay. Timber, with abundant undergrowth. Yes River is the outlet stream of a lake system of glacial origin.
DRAINAGE 76 square miles (Polar Planimeter). Headwater drainage sources are among high rock peaks N.E. of Lake McDonald. Snowfields are present until late summer and water temperatures in the stream entering Lake McDonald are colder than in Yes River. The water is slightly colored during normal water levels and becomes dark during flooding.
STREAM MOUTH IDENTIFICATION There are remnants of al old cannery along the W. side of the mouth. Several cabins are on the W. point.
ANCHORAGE A small boat float has been maintained on the W. point of the mouth. The Forest Service maintains a float in a small cove on the N. shore 1 mile W. of the river mouth. A trail from there leads to the upper river. Caution advised for navigation in Yes Bay (See Coast Pilot).
TRAILS AND SURVEY ROUTES The middle and lower sections of the river are fairly difficult to travel. There is a trail that follows the river from the mouth to the Forest Service trail along the W. side of the river.
AERIAL SURVEY NOTES Schooled salmon are visible only in the upper schooling areas during low water conditions. This part of the system is not surveyed by air. However, the stream at the head of Lake McDonald is clear and has excellent aerial visibility during most water levels.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 100'/36"
GRADIENT AND VELOCITIES 1-2° at 2-4' per second
BOTTOM Rocks, boulders and bedrock.
LOW TIDE LOCATION Opposite ruins of old cannery.
HIGH TIDE LOCATION Rapids at constriction of the upper intertidal zone.
SCHOOLING AREAS Heavy schooling has been observed in the mouth of the river. Upper intertidal zone does not offer facilities for schooling.
SPAWNING AREAS No important spawning occurs in the intertidal zone.
GENERAL NOTES During the early year operations of the Yes Bay cannery, most of the salmon taken for canning were captured at the mouth of the river.

UPSTREAM

LENGTH ACCESSIBLE See Hatchery Creek (K 54-1) AVERAGE WIDTH/DEPTH 80-100'/24-48"
GRADIENT AND VELOCITIES 1° (estimated) at 2-3' per second
BOTTOM Rocks, boulders and bedrock, except for sand and some gravel in upper stream.
MARKER DISTANCE 1.2 miles.
MARKER IDENTIFICATION Outlet of Lake McDonald.
BARRIERS None.
TRIBUTARIES Major tributary enters .1 miles below lake outlet from the E. There are several lakes in the upper tributary. The stream supplied the water for the Yes Bay cannery by a wooden aqueduct.
SCHOOLING AREAS A large pool lies in front of the Forest Service cabin below the lake and is extensively used for schooling. The large pools below the cabin are deep and hold large numbers of salmon during the migration.
SPAWNING AREAS Spawning occurs between the lake outlet and the cabin. Some spawning has been observed in the lower tributary stream. However, most salmon observed in the river are migrating to Hatchery Creek.
GENERAL NOTES The river is a well-known sports fishing stream, having all trout species in abundance. It is best known for the excellent fly fishing for rainbow trout, both resident and sea-run below the lake outlet.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
ep 19	G 1.3	ASI,FWS						Fair. Few chum, pink. Water high, discolored
1941								
ep 21	G 1.3	FWS	20,000		7,000			Good. 2,000 fish off mouth
1943								
ep 15	G .5	FWS						Poor. 300 fish off mouth
1945								
ep 21	G 1.3	FWS	20,000		7,000			Fair. 2,000 fish off mouth
1946								
eason		FWS						Fair. Low escapement, fair seeding
1947								
ep 24	G 1.3	FRI	2,000					Fair
1948								
uly 30		FRI						Pink, red entered stream last week
Aug 11	G 1.3	FRI						Few pink seen
Aug 21	G 1.3	FRI	4,300					
1949								
eason		FWS	20,000				25,000 red	Estimated total
1952								
Aug 3	G .5	FRI	500	0	0	0		Visibility to 10%
Aug 16	G .5	FRI	>200	0				Some chum. Discolored water. Estimate impossible
Aug 25	G 1.3	FRI	3,500				2,000 red	
Sep 5	G .3	FRI	1,000	0	5	0		Visibility greatly restricted
1953								
June 3	G .0	FWS						First small school of fish noted
July 19	A .0	FWS						No jumpers present
July 22	G .0	FWS						No fish seen
Aug 15	G .0	FWS						Small schools of red, 25-30 in each
Aug 17	A .0	FWS						1 jumper noted
Aug 18	G 1.3	ADF	1,500					1,500 pink in Hatchery Creek (see K 54-1)
Aug 25	G 1.3	FRI	3,500	10			2,000 red	Includes upper 1/2 mile only
Sep 11	G .5	FWS	0		0		4 coho	Poor. Water brown, turbulent
Sep 17	A 1.3	FRI					800-1,200 red	
Oct 24	G 1.3	FWS					Coho present, 2 red at outlet of lake	
1956								
June 23		FWS					600 red	
July 23		FWS					5,000 red	
July 31		FWS	5,000					
Aug 4		FWS						3,500 coho, chum, red
Aug 6		FWS						3,500 chum, pink
Aug 19		FWS	4,000					
Aug 24		FWS	4,450					
Sep 23	A	FRI						>40,000 pink and red in Hatchery Creek (see K 54-1). Many dead
1957								
Aug 6		FWS	150					
Sep 11	G .5	FRI,FWS						None observed, visibility poor

KETCHIKAN, BEHM CANAL, YES BAY, LAKE McDONALD

MAJOR SPECIES Red, pink OTHER SPECIES Coho, chum, trout
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE >100,000
SPAWNING FACILITIES Excellent. The stream delta and river section by the old hatchery are used extensively by all species.
STREAM TEMPERATURES Normal range. Observed temperatures: 59°F., 8/12/48 when Yes River temperature was 65°F.
VALLEY DESCRIPTION Glacial origin lake system. Timbered valley floor with high, steep valley walls. Bare rock ridges along E. side of valley. Over six lakes and numerous ponds are in the upper valley.
DRAINAGE 14 square miles (Polar Planimeter). Snowfields drain into the upper lakes until late summer. The water is clear except during floods when run-off from muskeg areas colors the water.
STREAM MOUTH IDENTIFICATION Old hatchery buildings lie W. of the extensive sand and gravel delta.
TRAILS AND SURVEY ROUTES Stream mouth is easily accessible by seaplane. The Forest Service has maintained a cedar skiff at the outlet of McDonald Lake which may be used with a small outboard brought in over the Forest Service trail (see K 54, Trails and Survey Routes). Hatchery Creek is easily walked during normal water levels.
AERIAL SURVEY NOTES Excellent aerial visibility in lower stream. Clear water and light colored bottom aid in contrast for observing salmon.

INTERTIDAL ZONE

Hatchery Creek is tributary to Lake McDonald.

UPSTREAM

LENGTH ACCESSIBLE 1.1 miles AVERAGE WIDTH/DEPTH 100-150'/18-36"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand, gravel 1" to 4", some larger gravel upstream.
MARKER DISTANCE 1.1 miles.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls 1.1 miles upstream block all salmon migration.
TRIBUTARIES Tributary enters from W. 1 mile upstream and is accessible to salmon for .1 miles.
SCHOOLING AREAS 1. Mouth of the stream. 2. Pools from .4 miles to falls.
SPAWNING AREAS 1. Delta. 2. First .4 miles of broad spawning riffles. 3. Riffles above to below falls. 4. Extensive gravel area in old outdoor hatchery ponds which is a split from the main stream.
GENERAL NOTES Hatchery Creek was first named during the operation of the Yes Bay hatchery. In recent years, it has been known as Walker Creek.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 24	G .5	FRI	250				8,000 red	Good
1948								
Aug 12	G .3	FRI	2,500					
1953								
June 11	A .0	FWS						No fish present, no jumps noted
Aug 3	A .8	FWS						Blank. No jumps at mouth
Aug 18	G .8	ADF	1,050		4		400 red	
Sep 2	A 1.0	FWS					16,000 red, incl. at mouth.	Fair for red. No old fish noted
Sep 17	A .8	FRI					11,000 red, 2,500 dead red.	2,000 at mouth
1954								
Sep 17	G .8	ADF					12,000 red	2,500 off mouth. Spawning past peak. Large number dead
1956								
Sep 23	A .8	FRI	20,000		20,000			Some dead chum

111-30 K 54A
N55°56.8 W131°50.1 Previous No. 50B

KETCHIKAN, BEHM CANAL, YES BAY, head

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. A short valley heading in the pass to Santa Anna Inlet. Wooded and brushy.
DRAINAGE Precipitation fed. Muskeg and some small ponds. Area less than 3 square miles.
STREAM MOUTH IDENTIFICATION Mouth behind small intertidal island, wooded.
ANCHORAGE 10-12 fathoms in basin inside of group of islands near head of bay.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .3 miles
AVERAGE WIDTH/DEPTH 15'/6"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Sand and gravel, mud in lower zone.
LOW TIDE LOCATION Lower end of intertidal island.
HIGH TIDE LOCATION At tree line.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1942								
Sep 15	G 1.5	FWS	10,000					Fair
1943								
Sep 15	G .5	FWS						Poor. 500 fish off mouth

111-30
N55°56.8 W131°50.7

K 54B
Previous No. 50C

KETCHIKAN, BEHM CANAL, YES BAY, 1.6 miles W. of Yes River

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut hill slope. Wooded along stream, brushy.
DRAINAGE Precipitation fed. Series of small ponds in upstream muskeg area.
STREAM MOUTH IDENTIFICATION Mouth is W. of the group of islands at the entrance to the inner basin of Yes Bay. Small intertidal island is in mouth.
ANCHORAGE 7 fathom anchorage S. of the group of islands. See Coast Pilot for navigational hazards in Yes Bay.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed from the air.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

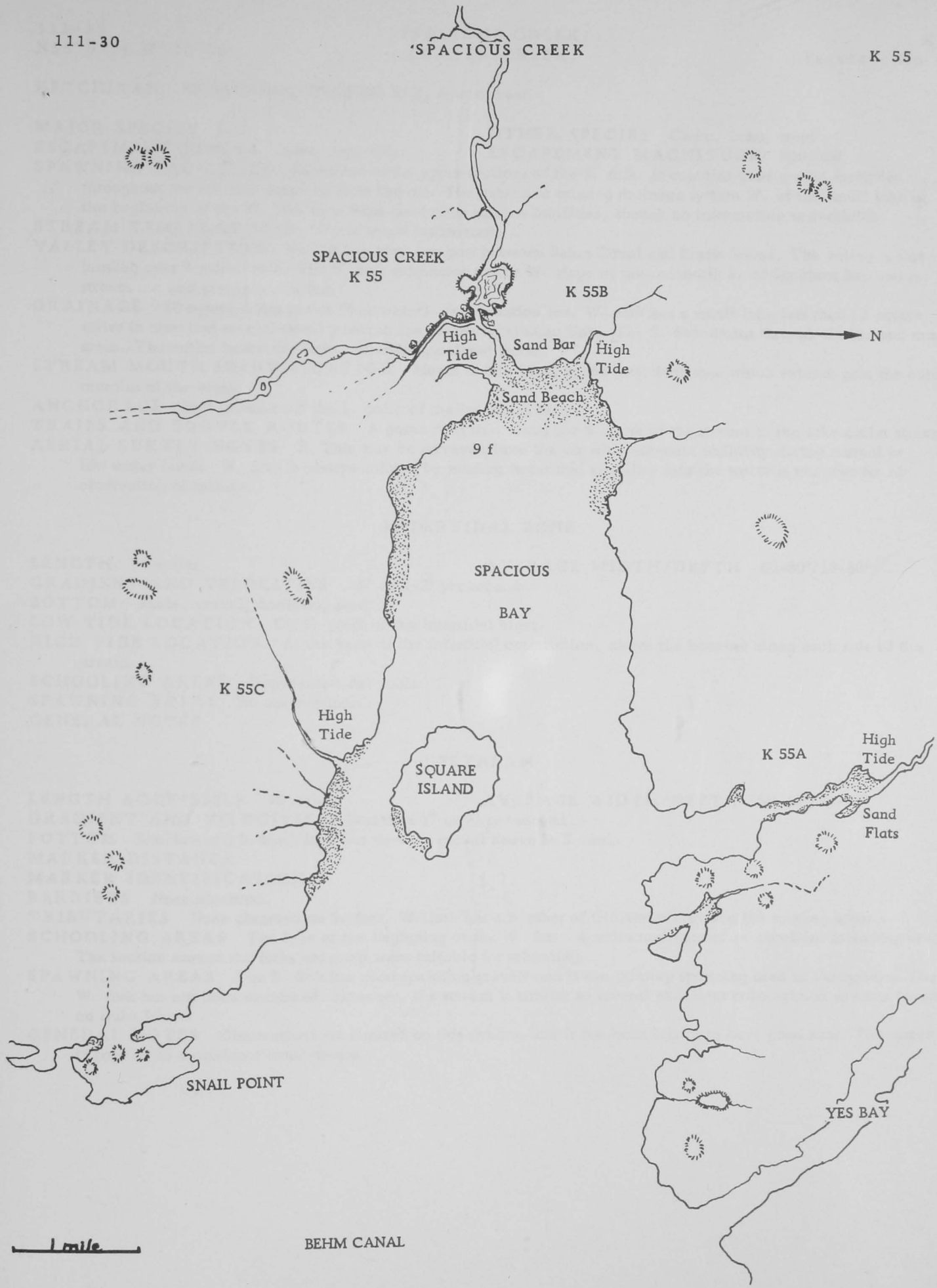
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1942								
Sep 15	G 1.0	FWS	5,000					Poor
1956								
Aug 24		FWS	250					
1957								
July 30		FWS	100					


N
0
5
1
Mile
High
Tide
9 f


SPACIOUS CREEK
K 55
SPACIOUS CREEK
K 55
K 55B
High
Tide
Sand Bar
High
Tide
N
Sand Beach
9 f
SPACIOUS
BAY
K 55C
High
Tide
SQUARE
ISLAND
K 55A
High
Tide
Sand
Flats
SNAIL POINT
YES BAY
1 mile
BEHM CANAL

KETCHIKAN, BEHM CANAL, SPACIOUS BAY, Center head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Excellent in the upper sections of the S. fork. It contains good gravel facilities throughout the sections observed from the air. The extensive muskeg drainage system W. of the small lake at the beginning of the W. fork may have good coho salmon facilities, though no information is available.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Valley is a very low pass between Behm Canal and Ernest Sound. The valley is flat muskeg over 4 miles wide. The S. fork originates on the W. slope of the mountain S. of Spacious Bay and is stream cut and precipitation fed.
DRAINAGE 32 square miles (Polar Planimeter). Precipitation fed. W. fork has a small lake less than .1 square miles in area and several small ponds in the extensive muskeg flats. The S. fork drains through timber and muskeg areas. The outlet below the forks has muskeg colored water.
STREAM MOUTH IDENTIFICATION Mouth is in a bight in the intertidal zone which extends past the outer margins of the bight.
ANCHORAGE In 9 fathoms off the S. point of the intertidal bight.
TRAILS AND SURVEY ROUTES A game trail runs along the S. bank of the stream to the lake outlet stream.
AERIAL SURVEY NOTES S. fork may be surveyed from the air with adequate visibility during normal or low water levels. W. fork is always colored by muskeg water and visibility into the water is too poor for air observation of salmon.

INTERTIDAL ZONE

LENGTH .5 miles AVERAGE WIDTH/DEPTH 60-80'/18-30"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Shale, gravel, boulders, sand.
LOW TIDE LOCATION Off S. point of the intertidal bight.
HIGH TIDE LOCATION At the head of the intertidal constriction, above the beaches along each side of the stream.
SCHOOLING AREAS Upper intertidal pools.
SPAWNING AREAS No observations.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >2 miles AVERAGE WIDTH/DEPTH 50-60'/24-36"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Boulders and bedrock in lower stream, gravel above in S. fork.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None observed.
TRIBUTARIES None observed on S. fork. W. fork has a number of tributaries draining the muskeg areas.
SCHOOLING AREAS The lake at the beginning of the W. fork .4 miles upstream is an excellent schooling area. The section around the forks has deep areas suitable for schooling.
SPAWNING AREAS The S. fork has good spawning gravels and is the primary spawning area in the system. The W. fork has not been examined. However, the stream is similar to several excellent coho salmon streams found on Duke Island.
GENERAL NOTES Observations are limited on this stream, but it has been known to have good runs. The system is popular as a cutthroat trout stream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1936								
ep 18		FWS						Adequately seeded with chum, pink
1945								
ep 5	G .8	FWS						2,000 fish off mouth
1946								
Oct 2	G .5	ASI						No fish in the creek
1947								
ep 6	G .5	FRI						Several pink
1953								
ep 11	G .0	FWS						1 jump noted at mouth
1955								
ep 9	G 1.0	FWS	300					
1956								
ep 7	G 1.0	FWS	200					

KETCHIKAN, BEHM CANAL, SPACIOUS BAY, Head of cove N. of Square Island

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Excellent, though limited by the small size of the stream. The intertidal zone has facilities in the high tide area. The extent of the upstream facilities is unknown.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Cove lies between a low ridge on the E. and mountains to 2,000' in elevation on the W. The valley extends N.W. up the slope of the mountain S. of the pass to Santa Anna Inlet.
DRAINAGE 6 square miles (Polar Planimeter). Precipitation fed. Muskeg areas throughout the slope of the mountain. Small pond 1 mile from mouth on small tributary on E. side of stream.
STREAM MOUTH IDENTIFICATION A narrow constriction joins the cove with the broad intertidal flats. Extensive sand flats throughout intertidal zone.
ANCHORAGE Near shore on either side of the constriction outlet.
TRAILS AND SURVEY ROUTES None reported.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .6 miles AVERAGE WIDTH/DEPTH 20-25'/12-18"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Sand, some gravel in the upper streambed.
LOW TIDE LOCATION Midway through the constriction.
HIGH TIDE LOCATION Head of the intertidal flats at the point stream enters woods.
SCHOOLING AREAS Schooling has been observed at the head of the cove and in pools in the intertidal zone near high tide.
SPAWNING AREAS Riffles in the gravel areas around high tide.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Greater than 1 mile AVERAGE WIDTH/DEPTH 15-20'/12-18"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Sand and gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None in 1 mile.
TRIBUTARIES Small tributary enters from W. 1.4 miles upstream. Drains muskeg slope of mountain.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES Information on this stream is limited. However, the stream is considered to be a good, small spawning stream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 18		FWS						Some pink
1947								
Sep 6	G .5	FRI	15					Few jumps at mouth
1953								
Sep 11	G 1.0	FWS	7	1	25	2	9 coho	

111-30
N55°52 W131°55

K 55B
Previous No. 51B

KETCHIKAN, BEHM CANAL, SPACIOUS BAY, N.W. shore at head

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Rated as fair.
STREAM TEMPERATURES Warm range, (estimated).
VALLEY DESCRIPTION Stream flows across flat muskeg area for a short distance before rising onto S. side of the mountain slope with headwaters about 2,200' elevation. Timbered stream banks.
DRAINAGE 3 square miles (Polar Planimeter). Precipitation fed. Muskeg in drainage.
STREAM MOUTH IDENTIFICATION Extensive sand intertidal and beaches. Intertidal stream bed along N. shore. Sand bar extends E. along the S. intertidal bank.
ANCHORAGE Rocks in lower intertidal area and along drop-off. See anchorage, K 55.
TRAILS AND SURVEY ROUTES A good trail follows the E. bank.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH Greater than .5 miles
AVERAGE WIDTH/DEPTH 15-20'/6"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand, gravel in upper intertidal area
HIGH TIDE LOCATION Above the N. and S. bank beaches at the first bend to the N.
SCHOOLING AREAS

SPAWNING AREAS Limited spawning around high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Greater than .5 miles
AVERAGE WIDTH/DEPTH 10-15'/3-6"
GRADIENT AND VELOCITIES 1° at 1-2' per second in lower stream
BOTTOM Some sand, small rock and boulders.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1945								
Sep 5	G .8	FWS						No fish in stream, few in bay

111-30 K 55C
N55°50.3 W131°49.5 Previous No. 51C

KETCHIKAN, BEHM CANAL, SPACIOUS BAY, S. shore opposite Square Island

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Fair in upper intertidal zone and first .2 miles of stream.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Mountain slope stream cut. Wooded along stream course. Muskeg extensive.
DRAINAGE 5 square miles (Polar Planimeter). Precipitation fed. No lakes or ponds, muskeg area throughout lower slope.
STREAM MOUTH IDENTIFICATION No distinguishing features.
ANCHORAGE Between stream mouth and S. point of Square Island.
TRAILS AND SURVEY ROUTES None reported.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 10-15'/3"
GRADIENT AND VELOCITIES Over 3° at 2-3' per second (less during low water).
BOTTOM Sand and gravel.
HIGH TIDE LOCATION At point of entry into woods.
SCHOOLING AREAS

SPAWNING AREAS Upper intertidal area around high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Greater than .2 miles AVERAGE WIDTH/DEPTH 5-15'/3-6"
GRADIENT AND VELOCITIES 1° (lower stream) at 1-2' per second
BOTTOM Some gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES Small muskeg drainage tributary enters W. side .1 miles upstream.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1953								
Sep 11	G .5	FWS	0		0			No other species. Nice small stream

111-30 HECKMAN CREEK K 55D
N55°45.1 W131°48.2 Previous No. 51D

KETCHIKAN, BEHM CANAL, HECKMAN POINT, S. of point

MAJOR SPECIES Pink OTHER SPECIES Coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Excellent, though limited by small size of stream. Intertidal facilities are negligible. The upstream has shale type gravel which is clean. Logs and overhanging brush at scattered points in the stream offer shelter from predators.
STREAM TEMPERATURES Warm range. Observed temperature: 51°F., 9/16/50.
VALLEY DESCRIPTION A short stream cut valley heading in mountains to 2,400' elevation. Wooded throughout and brushy, alders along stream bed.
DRAINAGE 6 square miles (Polar Planimeter). Precipitation fed. No lakes or ponds, little muskeg. Water is clear.
STREAM MOUTH IDENTIFICATION Mouth is on S. side of Heckman Point with a small sand beach on each side. There is a pillared rock formation on the N. bank at the first bend.
ANCHORAGE Just inside the point at the drop-off. Exposed to southerly winds.
TRAILS AND SURVEY ROUTES An extremely easy stream to walk in park-like surroundings.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH Less than .1 miles AVERAGE WIDTH/DEPTH 10-12'/12"
GRADIENT AND VELOCITIES 2-3° at 2' per second (low water).
BOTTOM Shale gravel, boulders and bedrock.
HIGH TIDE LOCATION At small bedrock rapids below wide graveled stream bed. A boat rack lies below the high tide mark on the S. bank.
SCHOOLING AREAS Several small pools in the upper tidal area.
SPAWNING AREAS Limited to a small area just below high tide.
GENERAL NOTES

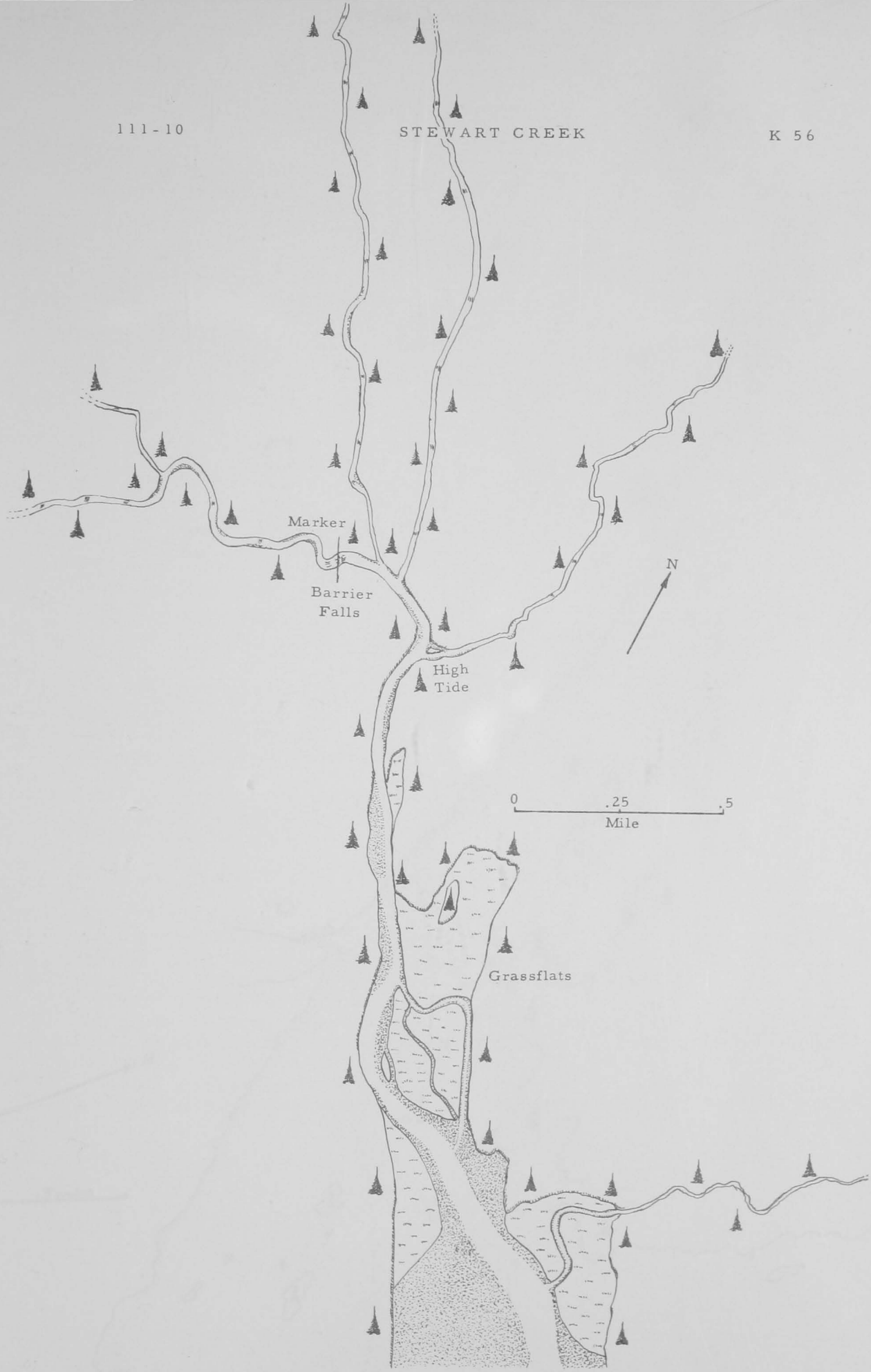
UPSTREAM

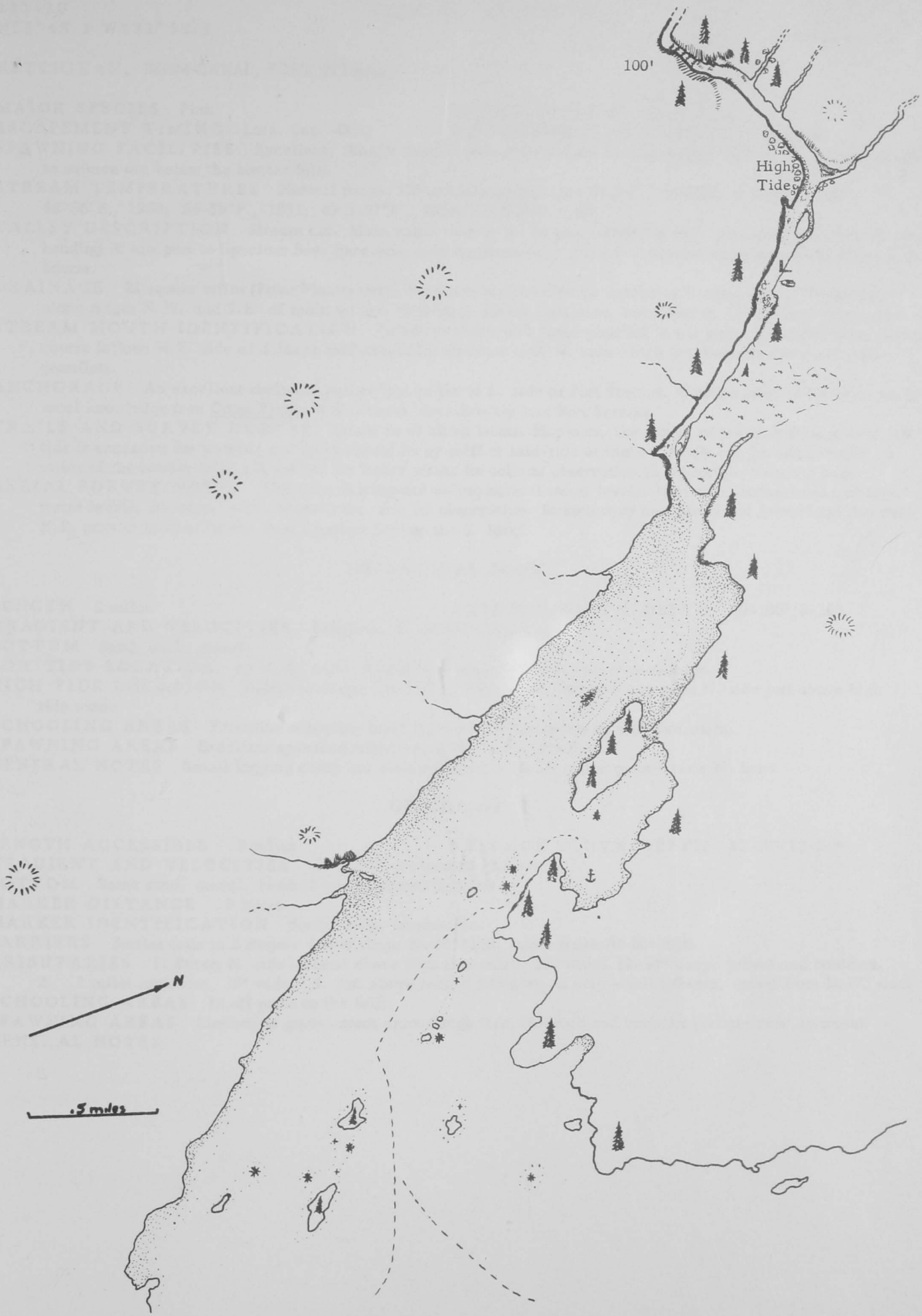
LENGTH ACCESSIBLE >.3 miles AVERAGE WIDTH/DEPTH 8-12'/6"
GRADIENT AND VELOCITIES 1-3° at 1-2' per second (low water).
BOTTOM Shale gravel, boulders and bedrock.
MARKER DISTANCE .2 miles.
MARKER IDENTIFICATION Blazed tree on N. bank above large log across the stream.
BARRIERS None in .3 miles.
TRIBUTARIES None in .3 miles.
SCHOOLING AREAS Scattered pools under logs and brush.
SPAWNING AREAS Gravel areas throughout observed stream are excellent and appear to be better than some good producing salmon streams of comparable size.
GENERAL NOTES Seiners reported good catches made at Heckman Point in early years and believed they were heading for this creek. However, the stream is too small to have provided the reported catches.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1950								
Sep 16 S	G .5	FRI	50	2				20 off mouth


Marker
Barrier
Falls
High
Tide
N
0
.25
.5
Mile
Grassflats


100'
High Tide
N
.5 miles

KETCHIKAN, BEHM CANAL, PORT STEWART

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep. -Oct. ESCAPEMENT MAGNITUDE 5-10,000
SPAWNING FACILITIES Excellent, though limited primarily to intertidal spawning. Several tributaries accessible to salmon are below the barrier falls.
STREAM TEMPERATURES Normal range. Observed temperatures: 48.5°F., 9/6/47; 45-50°F., 1949; 48-56°F., 1950; 54-59°F., 1951; 49.5-57°F., 1952; 46-53°F., 1953.
VALLEY DESCRIPTION Stream cut. Main valley runs S. W. to pass into Helm Bay. Tributary valley to N. short, heading in low pass to Spacious Bay. Extensive muskeg throughout valley. Timbered along slopes and along stream course.
DRAINAGE 21 square miles (Polar Planimeter). Precipitation fed through extensive muskeg areas. Headwaters along ridges N. W. and S. E. of main valley. Discharge during high water estimated at 110 cubic feet per second.
STREAM MOUTH IDENTIFICATION Extensive delta with large grassflat in the upper intertidal area. Stream course follows N. E. side of delta to mid-intertidal and cuts to S. W. side which it follows to the head of the grassflats.
ANCHORAGE An excellent sheltered harbor lies on the N. E. side of Port Stewart. Caution advised for entry without local knowledge (see Coast Pilot). S. E. storms blow directly into Port Stewart.
TRAILS AND SURVEY ROUTES Game trails along banks. However, the extent of the intertidal zone at low tide is excessive for walking and entry should be by skiff at mid-tide or higher. Skiffs can be taken within .3 miles of the barrier falls and provide far better vision for salmon observation than possible from the bank.
AERIAL SURVEY NOTES Visibility is adequate during normal water levels. However, during rains and high water levels, the color of the water is too dark for observation. Stream may be approached from Helm Bay over N. E. pass at head of bay or from Spacious Bay up the S. fork.

INTERTIDAL ZONE

LENGTH 2 miles AVERAGE WIDTH/DEPTH 80-100'/8-18"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand, shale gravel.
LOW TIDE LOCATION By N. W. point of small peninsula W. of sheltered anchorage.
HIGH TIDE LOCATION Riffles at major bend to W. First small tributary enters on N. side just above high tide mark.
SCHOOLING AREAS Extensive schooling holes from head of grassflats to high tide mark.
SPAWNING AREAS Excellent spawning riffles along the upper grassflats.
GENERAL NOTES Small logging camp has been operated in woods above grassflats on N. bank.

UPSTREAM

LENGTH ACCESSIBLE .3 miles AVERAGE WIDTH/DEPTH 30-40'/12-24"
GRADIENT AND VELOCITIES .5° at 1-2' per second (low water)
BOTTOM Some sand, gravel, bedrock and scattered boulders.
MARKER DISTANCE .3 miles.
MARKER IDENTIFICATION Barrier falls, impassable.
BARRIERS Barrier falls in 2 stages: Lower stage 30-40' high, upper stage 70-80' high.
TRIBUTARIES 1. Enters N. side at bend above high tide mark. 20' wide, 12-24" deep, gravel and boulders. 2. .1 miles upstream, 10' wide. 3. Just above second tributary, a very small tributary enters from N. W. side.
SCHOOLING AREAS In all pools to the falls.
SPAWNING AREAS Limited to gravel areas around high tide. Bedrock and boulders predominant upstream.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1935								
Sep 30	G .8	FWS						Very fair escapement observed
1936								
Sep 17		FWS						Stream fairly well seeded
1940								
Sep 17	G 2.0	FWS						Poor. 6,000 fish off mouth
Sep 23	G 1.0	FWS	48,000		2,000			Excellent
1946								
Oct 16		ASI,FWS						Poor
1947								
Sep 6	G 1.0	FRI			350			Poor
Sep 22	G 1.0	ASI						Poor
1949								
Sep 19	G .5	FRI	5,000	305	440	20		
Sep 29	G .5	FRI	11,500	1,960	500	100		
Oct 4	G .5	FRI	5,000					
1950								
Aug 25	G .5	FRI	400		700			Several dead chum, pink
Sep 6	G .5	FRI	750		600			
Sep 15	G .5	FRI	3,000	200	150			Some dead chum
Sep 22	G .5	FRI						Flooding
1951								
Aug 24	G .3	FRI	750	75	225	50	2 red	Water low. Fish mostly schooled
Sep 5	G .3	FRI	1,200	150	735	250	4 red	Flood tide
Sep 17	G .3	FRI	2,130	285	380	125	Coho present	No fish seen at mouth
1952								
Aug 29	G .3	FRI	14	0	250	11		Very high and discolored
Sep 5	G .3	FRI	600	0	580	80	2 coho, 6 red	Escapement is slow
Sep 17	G .3	FRI	104	0	137	0		Spawning
Oct 2	G .3	FRI	7		10			Few dead chum, pink. Vis. less than 25%
1953								
Sep 3	G .3	FRI	125	0	135	3	1 red	No fish at mouth
Sep 15	G 1.3	FWS	17		0			All fish in pool above tide dead
Sep 16	G .3	FRI	44		270		1 red	Visibility 50%
Sep 28	G .3	FRI	18		75	30	30 coho	Sev. dead pink. No fresh fish
1954								
Sep 15	A .3	FRI	50		150			Few dead chum,pink.None observed off mouth
Sep 27	A .3	FRI	600					Few chum, few dead pink. None off mout Past spawning peak
1955								
Sep 23	A .3	FRI	400					
Sep 28	A .3	FRI	400					Spawning. None at mouth
1956								
Sep 7	G 2.0	FWS	4,000		1,000			
Sep 23	A .3	FRI	14,000					None observed at mouth
Sep 28	A .3	FRI	10,000					Some chum. Some dead pink. None at mouth
1957								
Sep 8	G .3	FWS	25		200			25 dead
Sep 27	A .3	FRI		0	200	0		Few pink. None observed off mouth

111-10
N55°43.5 W131°52

K 56A
Previous No. 52A

KETCHIKAN, BEHM CANAL, PORT STEWART, S. W. shore opposite entrance to anchorage

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep. -Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Good, though limited by size of stream and accessibility for salmon.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. Timbered slopes, muskeg throughout.
DRAINAGE 6-8 square miles (estimated). Precipitation fed, one small lake . 3 miles long, 1 mile upstream.
STREAM MOUTH IDENTIFICATION Small stream . 5 miles N. W. of larger creek opposite entrance to anchorage.
ANCHORAGE See K 56.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH < . 1 miles
AVERAGE WIDTH/DEPTH 15-20'/8"
GRADIENT AND VELOCITIES 3° at 2-3' per second
BOTTOM Sand, gravel and boulders.
HIGH TIDE LOCATION
SCHOOLING AREAS None reported.
SPAWNING AREAS Limited.
GENERAL NOTES

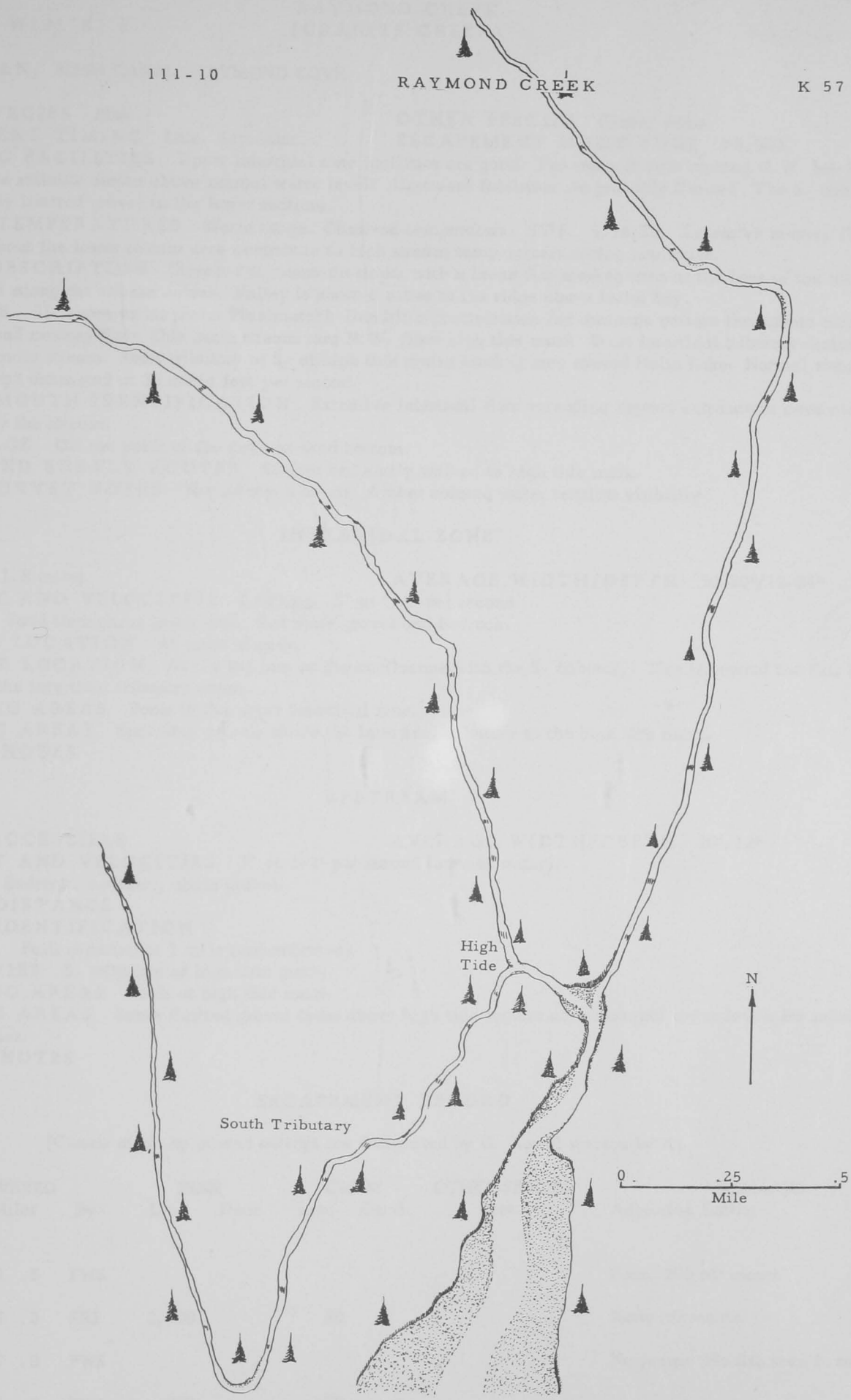
UPSTREAM

LENGTH ACCESSIBLE > . 2 miles
AVERAGE WIDTH/DEPTH 15-20'/ 6-12"
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Log jams above . 2 miles reported to be barriers during low water.
TRIBUTARIES None reported.
SCHOOLING AREAS

SPAWNING AREAS Reported to be good for size of stream.
GENERAL NOTES

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating


High
Tide
N
South Tributary
0
.25
.5
Mile

KETCHIKAN, BEHM CANAL, RAYMOND COVE

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >5,000
SPAWNING FACILITIES Upper intertidal zone facilities are good. The main stream running N. W. has facilities that are suitable during above normal water levels. Upstream facilities are probably limited. The S. tributary has only limited gravel in the lower sections.
STREAM TEMPERATURES Warm range. Observed temperature: 55°F., 9/16/50. Extensive muskeg flats throughout the lower stream area contribute to high stream temperatures during low water.
VALLEY DESCRIPTION Stream cut mountain slopes with a broad flat muskeg area at the base of the mountain. Timber along the stream course. Valley is about 8 miles to the ridge above Helm Bay.
DRAINAGE 15 square miles (Polar Planimeter). Dendritic precipitation fed drainage pattern throughout mountain slope and muskeg flats. One main stream runs N. W. from high tide mark. Short intertidal tributary drains slope N. of main stream. Short tributary to S. at high tide drains muskeg area toward Helm Lake. Normal water discharge estimated at 35 cubic feet per second.
STREAM MOUTH IDENTIFICATION Extensive intertidal flats extending beyond entrance to cove clearly identify the stream.
ANCHORAGE Off the point of the cove on sand bottom.
TRAILS AND SURVEY ROUTES Stream bed easily walked to high tide mark.
AERIAL SURVEY NOTES Not surveyed by air. Amber colored water restricts visibility.

INTERTIDAL ZONE

LENGTH 1.3 miles AVERAGE WIDTH/DEPTH 20-30'/12-24"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand throughout lower zone, flat shale gravel and bedrock.
LOW TIDE LOCATION At point of cove.
HIGH TIDE LOCATION At the log jam at the confluence with the S. tributary. This is beyond the first bend where the intertidal tributary enters.
SCHOOLING AREAS Pools in the upper intertidal zone.
SPAWNING AREAS Spawning gravels above the intertidal tributary to the high tide mark.
GENERAL NOTES

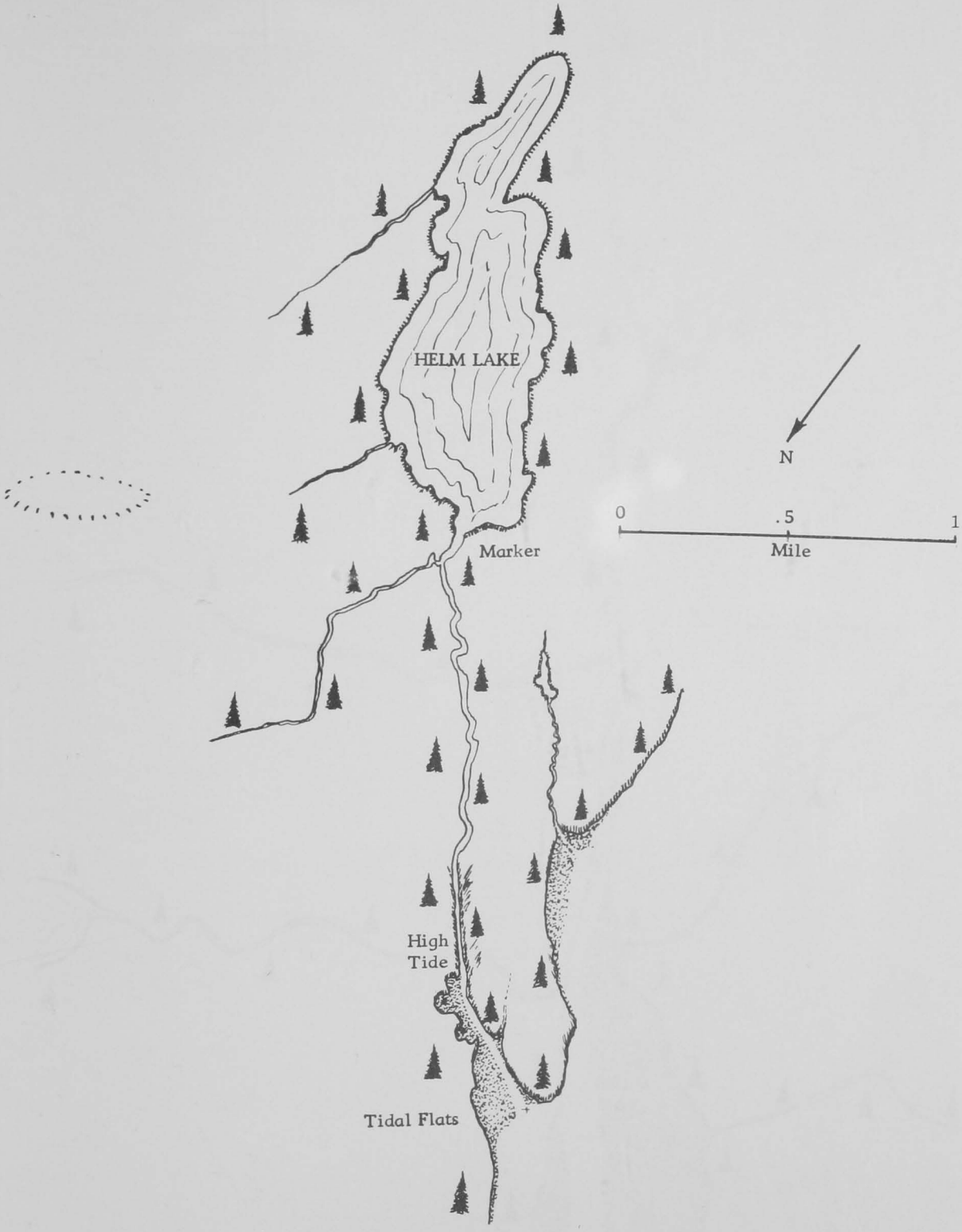
UPSTREAM

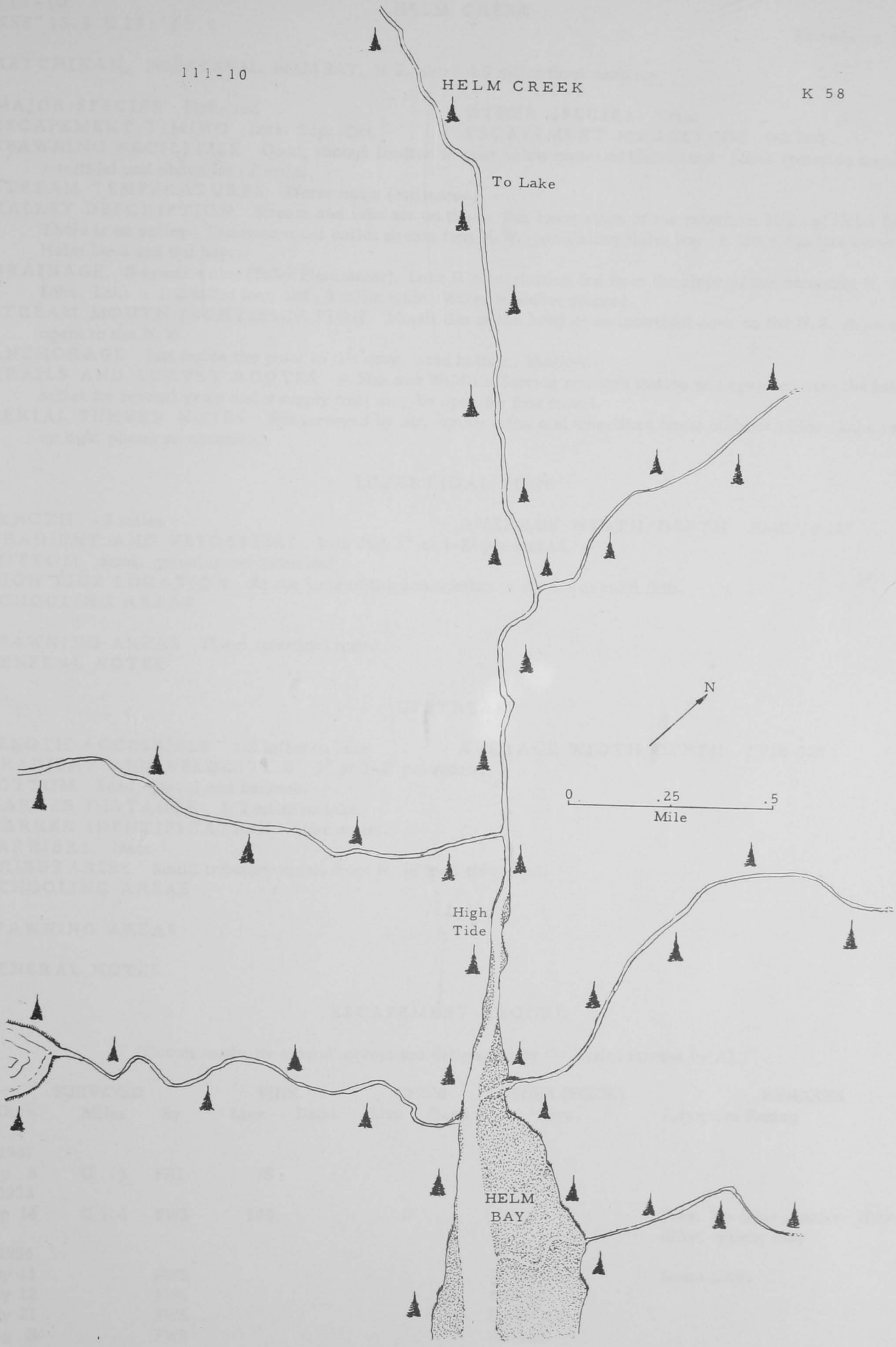
LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES 1° at 1-2' per second (normal water).
BOTTOM Bedrock, boulders, shale gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Falls reported at 1 mile (unconfirmed).
TRIBUTARIES S. tributary at high tide mark.
SCHOOLING AREAS Pools at high tide mark.
SPAWNING AREAS Some limited gravel areas above high tide require above normal water levels for suitable velocities.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1942								
Sep 8	G .5	FWS						Poor. 200 off mouth
1950								
Sep 16	G .3	FRI	2,000		50			None off mouth
1953								
Sep 15	G .3	FWS						No jumps. No fish seen in salt water
1956								
Sep 6	G .8	FWS	250		100			


HELM LAKE
N
0
.5
1
Mile
Marker
High
Tide
Tidal Flats


HELM CREEK
To Lake
N
0
.25
.5
Mile
High
Tide
HELM
BAY

KETCHIKAN, BEHM CANAL, HELM BAY, N.E. shore 4.5 miles from entrance

MAJOR SPECIES Pink, red OTHER SPECIES Trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >2,000
SPAWNING FACILITIES Good, though limited to area below outlet of Helm Lake. Some spawning areas in intertidal and above for .2 miles.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream and lake are on the S. flat lower slope of the mountain N.E. of Helm Bay. There is no valley. The stream cut outlet stream runs N.W. paralleling Helm Bay. A low ridge lies between Helm Lake and the bay.
DRAINAGE 8 square miles (Polar Planimeter). Lake is precipitation fed from the slope of the mountain N. of the Lake. Lake is 1.2 miles long and .3 miles wide. Water is amber colored.
STREAM MOUTH IDENTIFICATION Mouth lies at the head of an intertidal cove on the N.E. shore which opens to the N.W.
ANCHORAGE Just inside the point to the cove, sand bottom, shallow.
TRAILS AND SURVEY ROUTES A Fish and Wildlife Service research station was operated near the lake outlet for several years and a supply trail may be open for foot travel.
AERIAL SURVEY NOTES Not surveyed by air, amber color and tree-lined banks obstruct vision. Lake used by light planes on occasion.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 30-40'/6-12"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Sand, gravel upper intertidal
HIGH TIDE LOCATION At the head of the constriction of the upper tidal flats.
SCHOOLING AREAS

SPAWNING AREAS Upper intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE 1.2 miles to lake AVERAGE WIDTH/DEPTH 15'/8-12"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Sand, gravel and bedrock.
MARKER DISTANCE 1.2 miles to lake.
MARKER IDENTIFICATION Lake outlet.
BARRIERS None.
TRIBUTARIES Small tributary enters from N. at high tide mark.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 5	G .5	FRI	75					
1953								
Sep 14	G 1.4	FWS	183		0			Poor. No other species. Water dirty, mostly clay
1956								
July 11		FWS					75 red	Some chum
July 12		FWS					400 red	
July 21		FWS					5,000 red	
Aug 5		FWS					250 red	

KETCHIKAN, BEHM CANAL, HELM BAY, head

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >5,000
SPAWNING FACILITIES Excellent. There is good spawning gravel throughout the upper intertidal zone and in the first .5 miles that have been examined.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION A short, 3 mile long valley, heading in the pass to Black Bear Creek (K 66). Timbered floor and slopes, muskeg areas. Glacial origin with dendritic stream cutting.
DRAINAGE 8 square miles (Polar Planimeter). Precipitation fed. Small lake drains into S. side of stream .1 miles above high tide mark. Amber colored muskeg water.
STREAM MOUTH IDENTIFICATION Extensive intertidal zone, stream follows S. shore. Creek from Bugge Lake enters intertidal zone from S. over impassable falls.
ANCHORAGE 1 mile from head of grassflats where the intertidal zone constricts. Sand bottom.
TRAILS AND SURVEY ROUTES Stream bed is easily walked. Windfalls in stream are minor obstructions to foot travel.
AERIAL SURVEY NOTES Not surveyed by air. Valley is pass to Black Bear Creek and points N. W. of Ketchikan. Helm Bay is on route of scheduled airlines.

INTERTIDAL ZONE

LENGTH 1 mile AVERAGE WIDTH/DEPTH 20-30'/12-18"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand and gravel.
HIGH TIDE LOCATION At the head of the inner grassflats .2 miles beyond the intertidal tributary from Bugge Lake on the S. shore.
SCHOOLING AREAS Pools in the upper intertidal zone.
SPAWNING AREAS Good spawning riffles from the area around the Bugge Lake stream to the high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Greater than 1 mile AVERAGE WIDTH/DEPTH 20-30'/12"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Sand and gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in 1 mile.
TRIBUTARIES Small, steep tributary from lake on S. side above Bugge Lake enters .1 miles above high tide mark. A small intertidal tributary enters on the N. side just above the Bugge Lake stream.
SCHOOLING AREAS Pools scattered between riffles throughout first part of stream.
SPAWNING AREAS Good broad spawning riffles observed in lower stream.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1930								
Sep 17	G 2.0	FWS	3,300					Poor
1937								
Sep 28		FWS						Stream well seeded. 35% chum, 65% pink
1938								
Sep 1		FWS						1,000 pink off mouth. Water in stream very low
1940								
Sep 23	G 1.0	FWS	28,000		2,000			Excellent
1941								
Sep 19	G 1.5	FWS	15,000		10,000		500 coho	Good. Water low
1942								
Sep 8	G 1.0	FWS						1,000 fish off mouth
1946								
Oct 15	G .5	ASI,FWS						Good
1947								
Sep 5	G .5	FRI						Few scattered groups of pink in stream
1948								
Oct 22	G 1.0	FWS	500					Poor
1949								
Aug 23	G .5	FWS	320					
Sep 19	G .1	FRI	2,000					
1953								
Sep 14	G .8	FWS	1,400		1			Poor. No other species. Fish fairly fresh
1955								
Sep 13	G 2.0	FWS	900		100			1,000 at mouth


LAKE
Barrier
Falls
High
Tide
N
0
.25
.5
Mile

111-10 SMUGGLERS CREEK K 60
N55°35.5 W131°58 Previous No. 56

KETCHIKAN, BEHM CANAL, SMUGGLERS COVE, head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >2,000
SPAWNING FACILITIES Excellent intertidal facilities, though limited, are productive. A small tributary enters at high tide from the N. side and offers some limited facilities. This stream is considered to be an intertidal spawning stream.
STREAM TEMPERATURES Normal range. Observed temperatures: 53°F., 9/5/47; 56°F., 9/16/50; 59°F., 9/3/53.
VALLEY DESCRIPTION Above the impassable falls at high tide, the valley extends through muskeg flats and drains a lake 1.7 miles upstream. The main valley extends N.W. beyond the lake outlet tributary into a narrow valley with muskeg along the valley floor, glacial origin. Tributary drains mountain slope, no distinct valley.
DRAINAGE 12 square miles (Polar Planimeter). Precipitation fed. Tributary lake, extensive muskeg areas.
STREAM MOUTH IDENTIFICATION Cove is storage area for floating traps. High falls identifies stream.
ANCHORAGE Basin suitable for small vessels off the intertidal flats, opposite the inner point on the S. shore.
TRAILS AND SURVEY ROUTES Salmon enumeration may be made quickly and easily by skiff on high tide.
AERIAL SURVEY NOTES Aerial visibility adequate with good light during normal or low water levels. Afternoon shadows cover main spawning areas.

INTERTIDAL ZONE

LENGTH .8 miles AVERAGE WIDTH/DEPTH 40-50'/24-36"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand, gravel in upper zone.
HIGH TIDE LOCATION At the base of the lowest drop of the falls.
SCHOOLING AREAS In pools below the falls.
SPAWNING AREAS The upper .2 miles of intertidal zone offer good spawning facilities, with suitable gravels.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Barrier falls at high tide AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE Barrier falls.
MARKER IDENTIFICATION Barrier falls.
BARRIERS The barrier falls at high tide has been estimated to be over 80' in two major drops and a series of small drops.
TRIBUTARIES Tributary enters at high tide from N. side. Accessible for over .2 miles. However, facilities are very limited.
SCHOOLING AREAS In pools in intertidal section.
SPAWNING AREAS See tributaries.
GENERAL NOTES

SMUGGLERS CREEK

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
Sep 24		FWS						15,000 fish
1947								
Sep 5	G .1	FRI	18					
Sep 8	G .1	FRI	25					Few spawned out pink and chum observed
Oct 12	G .1	FRI						
1948								
Sep 10	G .1	FWS						Good seeding of pink in intertidal zone
Oct 22	G .1	FWS	500					
1950								
Sep 16	G .1	FRI	1,500		50		Sev. fresh coho	Sev. dead pink.
1952								
Aug 30	G .1	FRI	0	0	0	0		
1953								
Sep 3	G .1	FRI	14	0	4	2		
Sep 15	G .1	FWS	78		0			Fish fresh, most at tide head
Sep 17	G .1	FRI	30		50		2 red	Visibility 25%
1956								
Sep 6	G .0	FWS						1,000 pink at mouth
1957								
Oct 9		FWS	14,000		6,000			Excellent. 20,000 dead and spawned. 70% pink

111-10
N55°31.4 W131°57.8

K 61
Previous No. 56B

KETCHIKAN, BEHM CANAL, BOND BAY, W. of N. point of bay entrance

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep. -Oct.
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION
DRAINAGE 3-4 square miles (estimated). Precipitation fed.
STREAM MOUTH IDENTIFICATION Lies S. of N. W. corner of bay where a stream mouth exists.
ANCHORAGE
TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

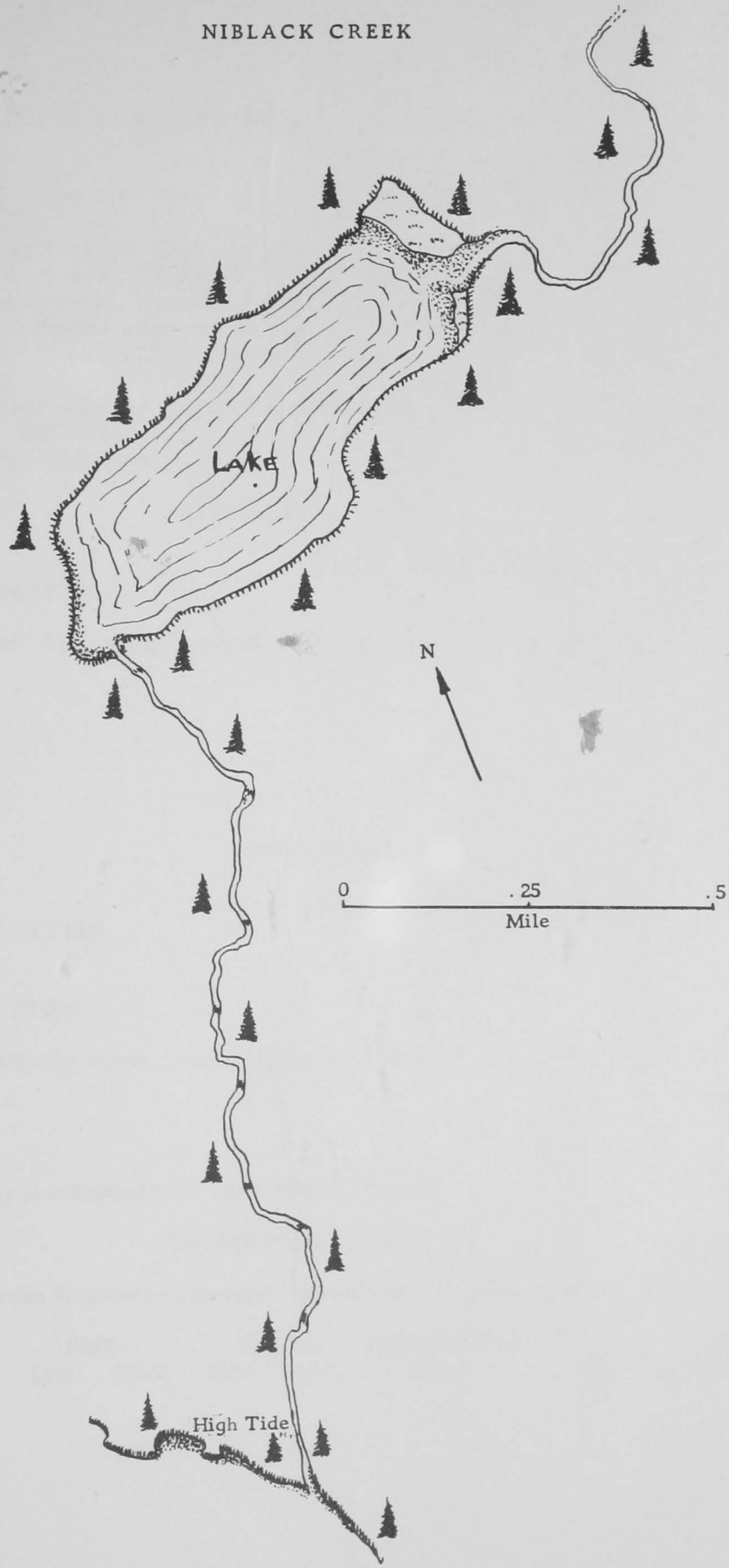
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1956								
Sep 6	G .3	FWS	35					


Lake
N
0
.25
.5
Mile
High Tide

114-20 NIBLACK CREEK K 62
N55°33.5 W132°08 Previous No. 57

KETCHIKAN, CLARENCE STRAIT, E. shore 7 miles N.E. of Caamano Point

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >5,000
SPAWNING FACILITIES
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION 4 miles valley heading in the ridge along the lower W. side of the Cleveland Peninsula. Lake in basin 1.3 miles upstream. Timbered valley, some muskeg areas.
DRAINAGE 8 square miles (Polar Planimeter). Precipitation fed lake.
STREAM MOUTH IDENTIFICATION No outstanding features. Stream lies .8 miles N.W. of Niblack Point (navigation light).
ANCHORAGE No sheltered anchorage. Temporary anchorage at stream mouth.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION The bend at the head of the bar along the N. bank of the intertidal zone marks the high tide location.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES Small tributary enters .2 miles upstream from S.
SCHOOLING AREAS

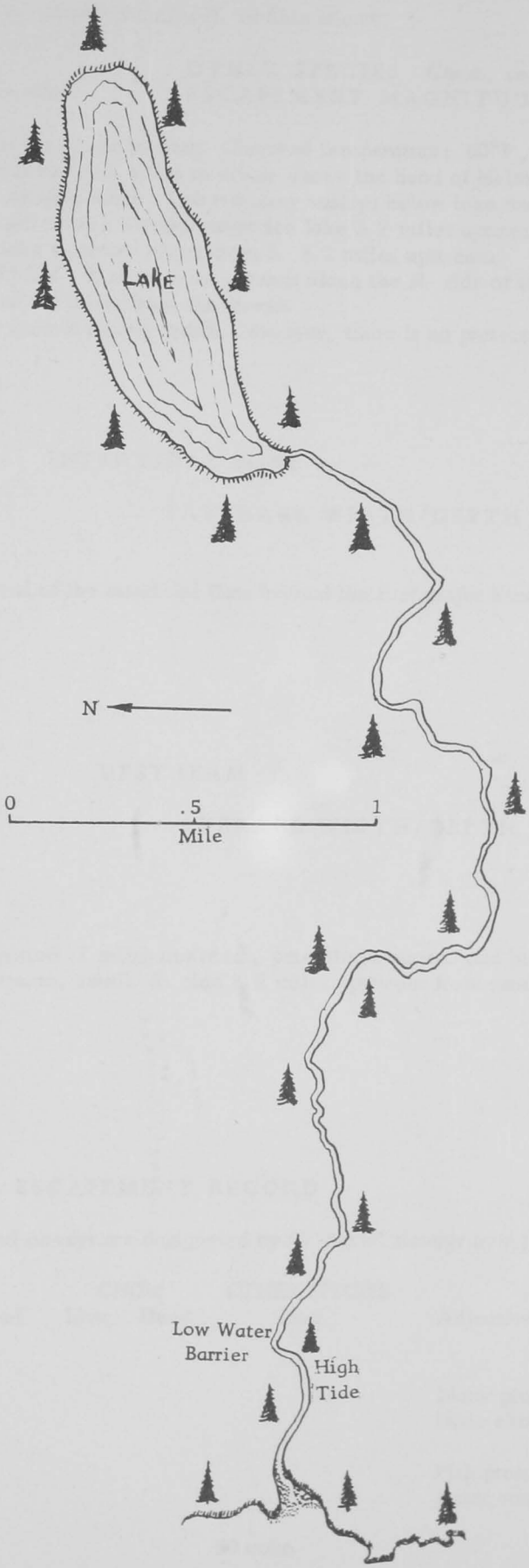
SPAWNING AREAS

GENERAL NOTES Lake is estimated to be about 400' elevation.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1949								
Nov 4	G .3	USFS		7,200		1,800		


LAKE
N
0
.5
1
Mile
Low Water
Barrier
High
Tide

KETCHIKAN, CLARENCE STRAIT, E. shore 1.3 miles N. of Ship Island

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES
STREAM TEMPERATURES Warm range (estimated). Observed temperature: 60°F., 9/16/51.
VALLEY DESCRIPTION Stream cut valley 6 miles to divide above the head of Helm Bay. Lake in basin 4 miles upstream. Timbered valley, some muskeg areas. Two tributary valleys below lake basin.
DRAINAGE 16 square miles (Polar Planimeter). Precipitation fed lake 3.7 miles upstream. Small tributary enters .3 miles upstream from N. Small lake tributary enters from S. 3.2 miles upstream.
STREAM MOUTH IDENTIFICATION A short point extends along the N. side of the mouth. The S. shore line is relatively straight to the point .2 miles from the mouth.
ANCHORAGE S. point offers shelter from southerly winds. However, there is no protection from winds from upper Clarence Strait.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION At the head of the intertidal flats beyond the first major bend in the stream toward the S.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Low water barrier falls reported .1 miles upstream, passable at normal and higher water levels.
TRIBUTARIES N. side .3 miles upstream, small. S. side 3.2 miles upstream from small lake 1.2 miles above confluence.
SCHOOLING AREAS

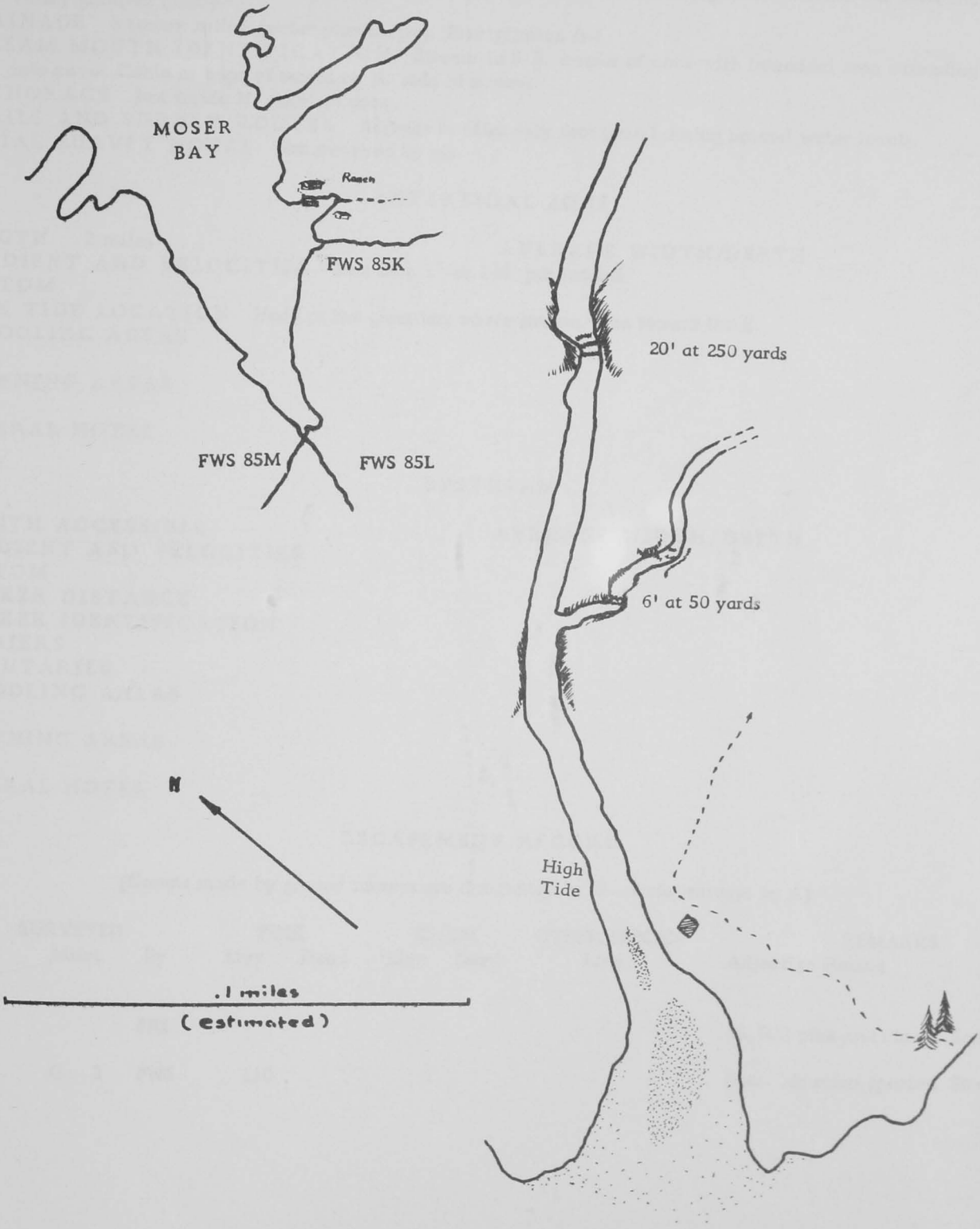
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1935 Sep 18	G .1	FWS						Many pink, few chum below falls. None above falls
1947 Oct 11		ASI						Fish present. No estimate, due to water conditions
1949 Sep 3	G .1	FWS					50 coho	
1953 Oct 3	G .6	FWS	0		200			Stream high


MOSER
BAY
Ranch
FWS 85K
FWS 85M
FWS 85L
20' at 250 yards
6' at 50 yards
High
Tide
N
.1 miles
(estimated)

114-20 WOLF CREEK K 64
N55°39 W132°11.8 Previous No. 59

KETCHIKAN, CLARENCE STRAIT, E. shore 3.3 miles N. of Ship Island

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Reported by resident at stream mouth as good.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Short 3 mile valley, timbered with some muskeg areas. Stream cut dendritic. Lower valley gradient gentle.
DRAINAGE 8 square miles (polar planimeter). Precipitation fed.
STREAM MOUTH IDENTIFICATION Stream in S.E. corner of cove with intertidal area extending well out into cove. Cabin at edge of woods on N. side of stream.
ANCHORAGE Just inside N. point of cove.
TRAILS AND SURVEY ROUTES Appears to offer easy foot travel during normal water levels.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM
HIGH TIDE LOCATION Head of the grassflats where stream turns toward the E.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1951								
Sep 7		FRI						15,000 pink and chum. Some coho
1953								
Oct 3	G .3	FWS	110		1			Poor. No other species. Stream high

114-20 MEYERS CREEK K 65
N55°44.3 W132°14.5 Previous No. 60

KETCHIKAN, CLARENCE STRAIT, MEYERS CHUCK

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >2,000
SPAWNING FACILITIES Fair spawning facilities in first .5 miles. Numerous windfalls across stream.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Straight, narrow stream cut valley 4 miles long heads behind the W. ridge of the Cleveland Peninsula. Wooded, flat long lake basin lies at W. base of mountain, joining main, shallow valley .6 miles upstream on the S.
DRAINAGE 7 square miles (Polar Planimeter). Precipitation fed from ridge muskeg areas and tributary lake 1.6 miles long.
STREAM MOUTH IDENTIFICATION Mouth lies N.E. of the anchorage and floats.
ANCHORAGE Either at the mouth of the creek in the narrow arm or in the outer harbor.
TRAILS AND SURVEY ROUTES Game trails along both banks are frequently obstructed by windfalls.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 30'/8"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Sand and gravel.
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >1 mile AVERAGE WIDTH/DEPTH 20-25'/8"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel, scattered boulders.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES Tributary from lake enters from the S., .7 miles upstream. No information on access for salmon.
SCHOOLING AREAS

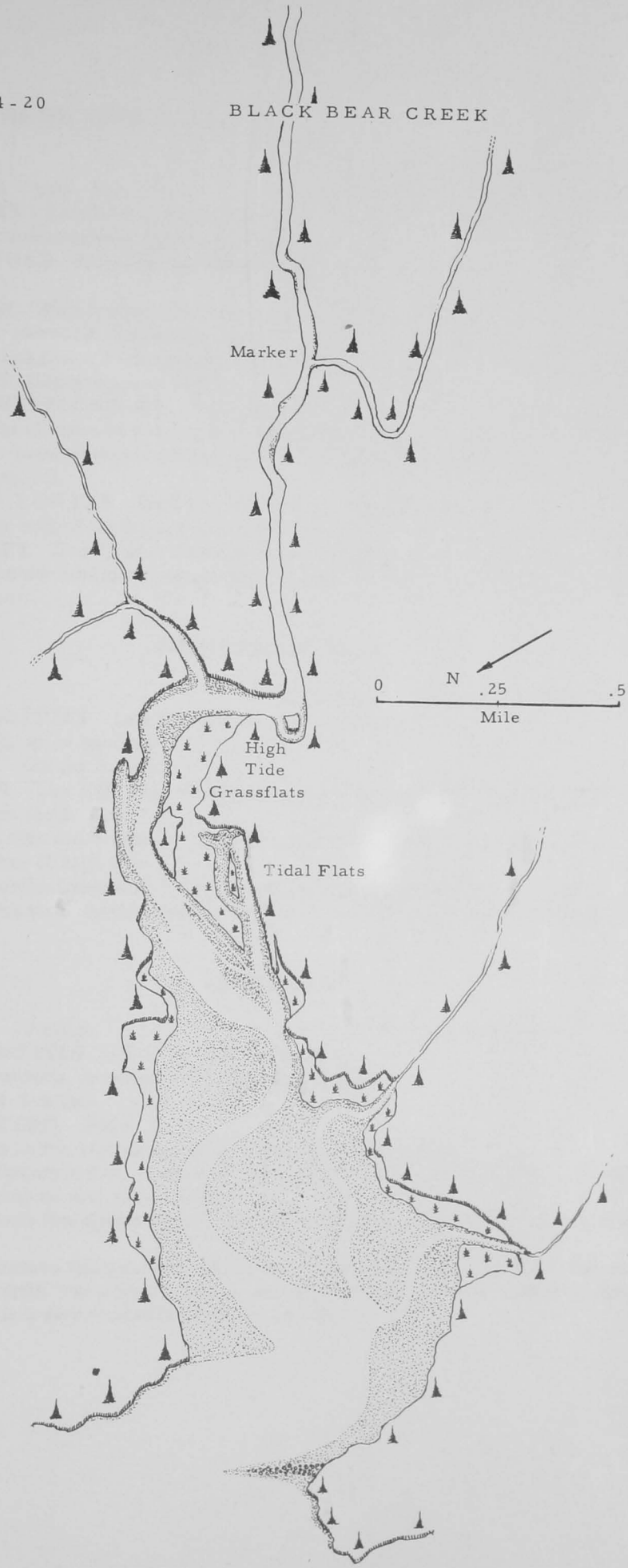
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 9	G .8	FRI	4,500		300			Good
1955								
Sep 15	G 1.0	FWS	5,000					


Marker
0
N
.25
.5
Mile
High
Tide
Grassflats
Tidal Flats

KETCHIKAN, ERNEST SOUND, UNION BAY, Head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >25,000
SPAWNING FACILITIES Excellent throughout upper intertidal zone and lower upstream. Some upstream areas beyond the forks also have excellent spawning facilities.
STREAM TEMPERATURES Warm range. Observed temperatures: 46-54°F., 1951; 49°F., 9/23/52; 47°F., 10/5/52.
VALLEY DESCRIPTION Main valley runs S.E. to low pass into Helm Bay. Timbered, with patches of muskeg. Upper valley turns into mountain headwaters to the S. of glacial origin. Lake basin at the foot of the mountains.
DRAINAGE 15 square miles (Polar Planimeter). Precipitation fed through lake 4 miles upstream. Two smaller tributaries enter from S. slopes in lower valley.
STREAM MOUTH IDENTIFICATION Extensive tidal flats, long bar at low tide extends from S.W. point .1 miles. Flats are used for floating trap storage. Several cabins are on the S. bank in the upper intertidal zone.
ANCHORAGE Off the E. point at the entrance to the tidal flats. (See Coast Pilot, Chart 8124.) Dolphin off W. point marks edge of drop-off.
TRAILS AND SURVEY ROUTES Skiff can be taken to high tide mark on high tides and return on dropping tide. Stream bed easily walked during low or normal water levels.
AERIAL SURVEY NOTES Good aerial visibility during normal water levels. Water becomes dark during rains and reduces visibility below minimum requirements for survey. Early run schooling at low tide area of flats best observed from the air.

INTERTIDAL ZONE

LENGTH 1.9 miles AVERAGE WIDTH/DEPTH 60-80'/8"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand and gravel, some boulders.
LOW TIDE LOCATION Off the E. point.
HIGH TIDE LOCATION The 100° bend to the S.E. above the grassflats marks the high tide point. A small tributary enters below on the E. side.
SCHOOLING AREAS There are two major schooling pools. One is at the first sharp bend to the S.W. in the upper grassflats, the other at high tide.
SPAWNING AREAS Excellent spawning riffles throughout the upper .5 miles of intertidal zone.
GENERAL NOTES During large escapements numerous schools have been observed throughout the lower tidal area and drop-off.

UPSTREAM

LENGTH ACCESSIBLE >3 miles AVERAGE WIDTH/DEPTH 40-50'/12"
GRADIENT AND VELOCITIES .5-1° at 1-2' per second
BOTTOM Gravel, some boulders, becomes more coarse upstream.
MARKER DISTANCE 1.2 miles.
MARKER IDENTIFICATION Forks.
BARRIERS None observed below increased gradient area below Bear Lake.
TRIBUTARIES Small tributary enters .1 miles below high tide mark. Stream forks 1.2 miles upstream, tributary fork to the S. small during normal water levels.
SCHOOLING AREAS Pools throughout stream. Largest schools have been observed in the lower stream, especially near high tide.
SPAWNING AREAS Spawning throughout main stream. Upper limits have not been defined. Riffles are excellent from high tide mark to forks. Main fork to the E. has good riffle areas about one mile upstream.
GENERAL NOTES This is a very productive late run stream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1943								
Season		FWS						Excellent seeding. Chum, pink excellent. Coho good.
1944								
Sep 16	G 4.0	FWS	5,000		100		200 coho	Very poor seeding
1945								
Sep 23	G 1.0	FWS						40,000 in creek, bay. Fish in good condition. Good showing chum, coho
1946								
Season	G .0	FWS						Fair seeding. 20,000 to high tide
1947								
Oct 7	A	FWS						Excellent seeding
Oct 10	G .5	FWS	5,000		500			Good
1948								
Sep 7	G .0	FWS	200,000				20,000 coho	Few chum
Sep 7	G 3.0	FWS	5,000		1,000		Few coho	Excellent seeding
1951								
Sep 16	G .7	FRI	14,500	50	340	25		
Sep 27	G .7	FRI	12,900					
Oct 9	G .7	FRI	4,900	1,250	30	3		
1952								
Sep 23	G .7	FRI	1,910	82	265	58	19 coho	
Oct 5	G .7	FRI	215	205	98	139	50 coho	
1953								
Sep 10	A 1.0	FWS						300 fish in section near mouth
Sep 17	G .0	FRI						No count, stream flooding. No vis.
Sep 30	G .7	FRI	625	66	30	5	120 coho	
Oct 2	G .8	FWS	240	50	15	10		Water high, poor visibility
1954								
Sep 17	A .7	FRI						8,000 pink at mouth. Good showing. Visibility limited
Sep 27	A .7	FRI	11,000					None off mouth. Some dead pink
1955								
Sep 16	A .7	FRI	25,000					Many above marker
Sep 23	A .7	FRI	30,000					Some chum, some dead pink. 5,000 pink above marker
Sep 28	A .7	FRI	17,000					Many dead pink, some live, dead chum. Most spawning peak past
1956								
Sep 9	A .7	FRI	45,000					30-50,000 at mouth. Sev. 1,000 chum above marker
Sep 23	A .7	FRI	80,000					Few dead pink, some live, dead chum. >15,000 above marker
Sep 28	A .7	FRI	60,000	>1,000				Chum present. Few at mouth. >20,000 live, many dead above marker
1957								
Aug 14		FWS	600		21			
Aug 21		FWS	10		2			Poor
Aug 27		FWS	14		3			Poor
Sep 9	A .7	FRI	500	0				Sev. 100 pink above marker
Sep 16	G 1.0	FWS	2,500		500			
Sep 22	A .7	FRI	1,000	>200				Few chum. Sev. 100 pink above marker
Sep 27	A .7	FRI	500	>200				Some live, dead chum. Few live, 1,000 dead pink and some live, dead chum above marker

114-20 K 66A
N55°45.7 W132°11 Previous No. 61A

KETCHIKAN, ERNEST SOUND, UNION BAY, E. shore 1.3 miles N. of head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 1,000
SPAWNING FACILITIES Poor. Limited spawning gravel and barrier falls .2 miles upstream.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. Straight valley runs E. between two ridges. Timbered, some upstream muskeg areas. Valley 6 miles long.
DRAINAGE 12 square miles (estimated). Precipitation fed.
STREAM MOUTH IDENTIFICATION Old cannery at mouth.
ANCHORAGE Cannery pilings for moorage.
TRAILS AND SURVEY ROUTES Board walk along water line to dam site at falls.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 40-50'/18-24"
GRADIENT AND VELOCITIES 3° at 2-3' per second
BOTTOM Small rock and boulders.
HIGH TIDE LOCATION Head of grassflats.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .2 miles AVERAGE WIDTH/DEPTH 30-40'/24"
GRADIENT AND VELOCITIES 3° at 2-3' per second
BOTTOM Small rock and boulders.
MARKER DISTANCE .2 miles.
MARKER IDENTIFICATION Falls in cascades up to 15' in height.
BARRIERS Impassable falls.
TRIBUTARIES None below falls.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 10	G .2	FWS	200		100			Cannery watchman reports good earlier escapement

101-31 ALAVA CREEK K 67
N55°14.2 W131°07.5 Previous No. 67

KETCHIKAN, BEHM CANAL, ALAVA BAY, N.E. corner

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 2,000
SPAWNING FACILITIES Excellent. Limited intertidal facilities, but upstream has extensive gravel riffle areas suitable for salmon.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream runs down slope of the mountains on the S. end of Revilla Island. The lower stream area is low gradient and relatively flat. Extensive muskeg areas.
DRAINAGE 3 square miles (Polar Planimeter). Precipitation fed. Muskeg colored water.
STREAM MOUTH IDENTIFICATION Beaches on either side of mouth. A small intertidal falls at the outlet from flats above flows through a narrow channel into the bay.
ANCHORAGE Between outer points of the bight of the stream mouth.
TRAILS AND SURVEY ROUTES Easily walked at normal water levels.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 10'/24"
GRADIENT AND VELOCITIES 3° at 3' per second
BOTTOM Bedrock and boulders.
LOW TIDE LOCATION At the S.E. point of the mouth.
HIGH TIDE LOCATION Head of the small falls.
SCHOOLING AREAS At the mouth of the stream.
SPAWNING AREAS No good facilities.
GENERAL NOTES Falls at high tide mark passable by skiff on high tide.

UPSTREAM

LENGTH ACCESSIBLE >1 mile AVERAGE WIDTH/DEPTH 30-60'/6"
GRADIENT AND VELOCITIES .5-1° at 1-2' per second
BOTTOM Sand in lower stream, gravel throughout spawning areas.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES Small tributary enters from E. .3 miles upstream.
SCHOOLING AREAS Pools in the broad flats above high tide mark.
SPAWNING AREAS Excellent gravel areas in upper flats above high tide mark. Stream above flats has continuous spawning areas for over 1 mile.
GENERAL NOTES Small falls may be a barrier during low water. They are present less than 1 mile upstream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 14	G .5	FWS	1,000					Excellent. 9,000 fish off mouth
1946								
Oct 12	G 1.5	FWS						Excellent.
1947								
Sep 16	G .3	FRI	4					
1948								
Sep 12	G 1.0	FWS	1,000					Poor
Sep 28	G 1.0	FWS	2,000					Poor
1954								
Aug 27	G .0	FWS	100		10			Sev. 100 at confluence

101-31 NARROW PASS CREEK K 68
N55°19.9 W131°03.2 Previous No. 68

KETCHIKAN, BEHM CANAL, W. shore 2 miles N. W. of Rudyerd Island

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep. -Oct. ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Spawning riffles limited by bedrock, boulders and barrier falls. Sand and gravel riffles are available.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream flows from ridge through low gradient muskeg areas. Lower section of stream area trenched parallel to shoreline by either glacial grooving or sedimentary folded structure. Numerous pothole lakes.
DRAINAGE 12 square miles (Polar Planimeter). Precipitation fed through a series of small pothole lakes scattered through the muskeg areas. Dendritic stream drainage pattern.
STREAM MOUTH IDENTIFICATION N. W. shore of upper cove above Narrow Pass has a narrow tree-lined mouth with a short point extending out on the N. side.
ANCHORAGE Shallow anchorage off point dividing the northern and middle coves.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 60-80'/18-24"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Bedrock, boulders, little sand or gravel.
HIGH TIDE LOCATION At second bend .1 miles above entry into woods. Bend is 90° toward N.
SCHOOLING AREAS

SPAWNING AREAS Limited.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .2 miles AVERAGE WIDTH/DEPTH 70'/24"
GRADIENT AND VELOCITIES 3° at 3-4' per second
BOTTOM Bedrock, boulders, gravel areas below falls.
MARKER DISTANCE .2 miles.
MARKER IDENTIFICATION Barrier falls estimated to be 50' in height.
BARRIERS Falls completely block salmon migration.
TRIBUTARIES Small tributary enters N. side below falls with poor spawning facilities and barrier falls 400' upstream.
SCHOOLING AREAS

SPAWNING AREAS Riffles below falls.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 4	G .3	FRI	500		100		100 coho	Some fish off the mouth

101-31 K 69
N55° 24.3 W131° 02.4 Previous No. 69

KETCHIKAN, BEHM CANAL, PRINCESS BAY, N. W. corner

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited by extensive bedrock areas in the upstream. The intertidal zone contains most of the gravel areas available to salmon.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Low gradient mountain slope in lower stream area. Stream heads in ridge about 3 miles N. of the mouth. Extensive muskeg areas upstream, timbered slope.
DRAINAGE 5.2 square miles (Polar Planimeter). Precipitation fed through muskeg areas in lower flat areas at the base of the ridge.
STREAM MOUTH IDENTIFICATION .3 miles of intertidal lagoon identifies stream.
ANCHORAGE E. of the point at the entrance to the lagoon. Exposed to southerly winds.
TRAILS AND SURVEY ROUTES Stream bed easily walked at normal water levels.
AERIAL SURVEY NOTES Intertidal aerial observations satisfactory.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 70-100'/6-8"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Bedrock and gravel.
LOW TIDE LOCATION At confluence with small stream at entrance to lagoon.
HIGH TIDE LOCATION At beginning of canyon at the head of the intertidal flats.
SCHOOLING AREAS Limited.
SPAWNING AREAS Broad gravel riffles in the upper mid-tidal area. Considerable aquatic grass and algae.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .8 miles AVERAGE WIDTH/DEPTH 30-40'/10-12"
GRADIENT AND VELOCITIES 1-2° at 2-4' per second
BOTTOM Bedrock, limited gravel.
MARKER DISTANCE .8 miles.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls reported impassable to salmon. Lower stream has numerous small falls that are barriers during very low water.
TRIBUTARIES Small tributary enters .3 miles upstream from W.
SCHOOLING AREAS Very limited.
SPAWNING AREAS Very limited.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
ep 14	G .8	FWS	1,000		200			Good. 4,000 fish off mouth
1941								
ct 6	G .5	FWS	10,000					Good
1946								
ct 12	G .5	ASI,FWS						Most salmon at mouth of stream
1947								
ct 4	G .5	FRI			2		3 coho	Poor. 300 fish at mouth
1951								
ep 15	G .5	FRI	3,200	500	55		1 red	Few dead chum. 2-3,000, mostly pink, off mouth
1952								
ug 14	G .1	FRI	80	0	0	0		
1954								
ep 10	G .8	FRI	1,600	400	26	20		None at mouth
ep 19	G .8	FRI	1,600	400	75	20		None observed off mouth
1956								
ep 14	G .3	FWS	200		150			200 pink at mouth

101-31 SWANSONS CREEK K 70
N55°23.5 W130°59.7 No Previous No.

KETCHIKAN, BEHM CANAL, PRINCESS BAY, E. shore 1 mile from Wasp Point

MAJOR SPECIES Coho
OTHER SPECIES
ESCAPEMENT TIMING
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited. The lake just above saltwater was poisoned by the Alaska Department of Fisheries in 1956. Experimental plants of coho fingerling were made in 1957.
STREAM TEMPERATURES Warm range.
VALLEY DESCRIPTION A small lake basin on the W. side of the peninsula E. of Princess Bay surrounded by very low hills.
DRAINAGE <1 square mile. Precipitation fed through the small lake.
STREAM MOUTH IDENTIFICATION A small bight with a rocky beach is at the mouth. The outlet stream is very small, flowing through a short brushy section.
ANCHORAGE At the outer margin of the small bight.
TRAILS AND SURVEY ROUTES A trail was cut through to the lake by the Alaska Department of Fisheries.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH < .1 miles
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES Greater than 3°
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES No intertidal spawning has been reported.

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES Not a salmon system of importance prior to the experimental work being conducted by the Alaska Department of Fisheries.

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

101-31 K 71
N55°28.4 W131°59.5 Previous No. 71

KETCHIKAN, BEHM CANAL, W. shore 1.6 miles south of Ella Point

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Believed to be primarily in the intertidal zone. The upstream is steep and aerial photograph inspection indicates that the accessible stream is limited to a short section above high tide.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION A short steep stream cut valley, timbered. A small lake basin lies two miles from saltwater over 600' elevation.
DRAINAGE 2 square miles (Polar Planimeter). Precipitation fed through small lake .4 miles long.
STREAM MOUTH IDENTIFICATION Eddystone Rock visible to N.E. from the high tide mark.
ANCHORAGE Shallow water anchorage off the mouth of the stream.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION At first bend to the N.W.
SCHOOLING AREAS

SPAWNING AREAS Upper intertidal area.
GENERAL NOTES

UPSTREAM

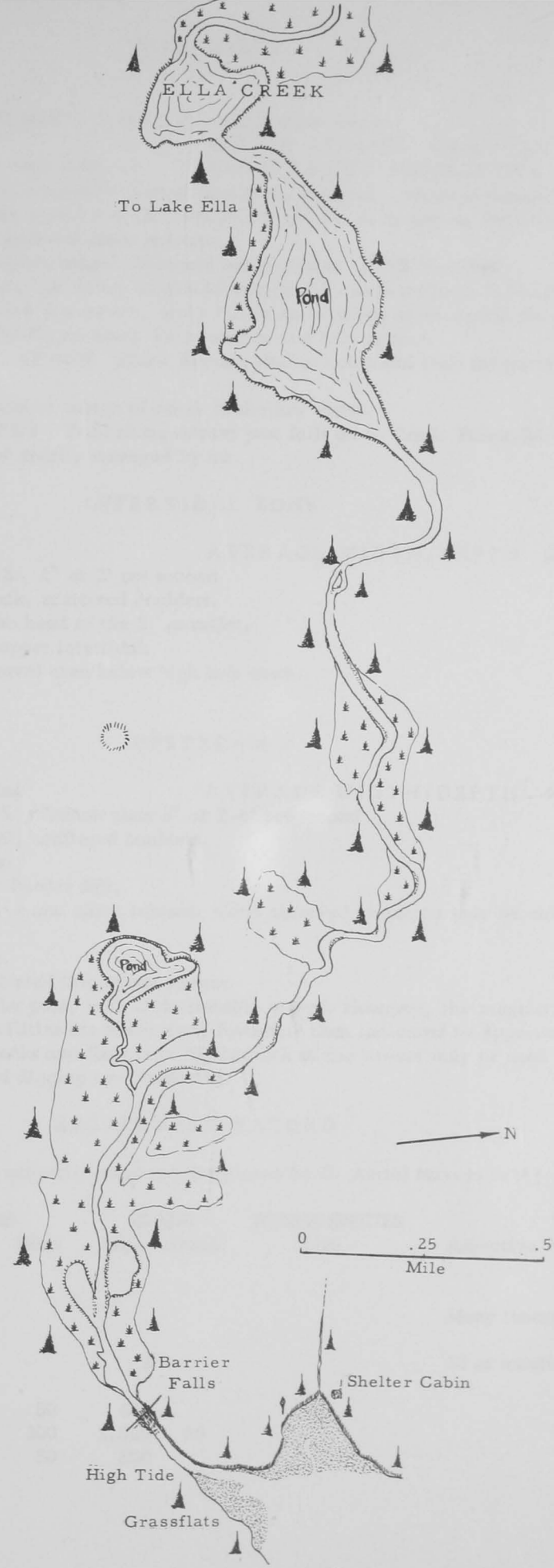
LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating


ELLA CREEK
To Lake Ella
Pond
Pond
N
0
.25
.5
Mile
Barrier
Falls
Shelter Cabin
High Tide
Grassflats

KETCHIKAN, BEHM CANAL, W. shore 1.8 miles W. of Eddystone Rock
MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 2-5,000
SPAWNING FACILITIES Very limited by normal standards. However, observed returns of salmon indicate that the facilities that exist are more productive than indicated by lack of "spawning facilities". Falls a short distance above high tide is a barrier to pink and chum salmon.
STREAM TEMPERATURES Warm range. Observed temperatures 52-55°F., 1949.
VALLEY DESCRIPTION Stream cut valley of glacial origin. Ella Lake outlet is 2.5 miles upstream. Extensive muskeg flats between the lake and the mouth, rocky ridges and muskeg areas around the lake.
DRAINAGE 34 square miles (Polar Planimeter). Precipitation fed lake system.
STREAM MOUTH IDENTIFICATION Forest Service shelter cabin and trail marker at edge of woods N. of stream mouth.
ANCHORAGE Just inside Ella Point at mouth of creek in shallow water.
TRAILS AND SURVEY ROUTES Trail along stream past falls on N. bank. Forest Service trail to Ella Lake.
AERIAL SURVEY NOTES Not usually surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 50'/24"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Sand, gravel and bedrock, scattered boulders.
HIGH TIDE LOCATION At the head of the S. grassflat.
SCHOOLING AREAS Pools in upper intertidal.
SPAWNING AREAS Limited gravel area below high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .1 miles AVERAGE WIDTH/DEPTH 40-60'/24"
GRADIENT AND VELOCITIES Greater than 3° at 2-4' per second
BOTTOM Bedrock and large gravel, scattered boulders.
MARKER DISTANCE .1 miles.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls impassable to pink and chum salmon. Coho observed in stream may be able to pass upstream during favorable water levels.
TRIBUTARIES None below falls.
SCHOOLING AREAS Pools scattered throughout stream.
SPAWNING AREAS Appear to be poor, with little suitable gravel. However, the magnitude of escapements observed here indicates that facilities are much more favorable than indicated by appearance.
GENERAL NOTES Numerous cracks and fissures in the bedrock of the stream may be used for egg deposition. Pink salmon have been observed digging over bedrock.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1943								
Sep 15		ASI,FWS						Many thousands at mouth
1947								
Oct 1	G .1	FRI	10		3			10 at mouth. Stream very high
1949								
Sep 17	G .1	FRI	4,000	50	600			
Sep 27	G .1	FRI	5,000	300	1,500	50		
Oct 3	G .1	FRI	600	50	500			

101-31 K 73
N55°34.5 W130°58.6 Previous No. 73

KETCHIKAN, BEHM CANAL, SARGENT BAY, N.W. corner on W. shore

MAJOR SPECIES
OTHER SPECIES
ESCAPEMENT TIMING
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Mountain slope drainage from rocky ridge E. of lower Manzanita Lake. Small lake system along ridge, several in lower slope area. Terraced muskeg areas along the slope.
DRAINAGE 9 square miles (Polar Planimeter). Precipitation fed lake system, muskeg abundant.
STREAM MOUTH IDENTIFICATION Short timbered point extends from W. shore on the S. side of the mouth.
ANCHORAGE

TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

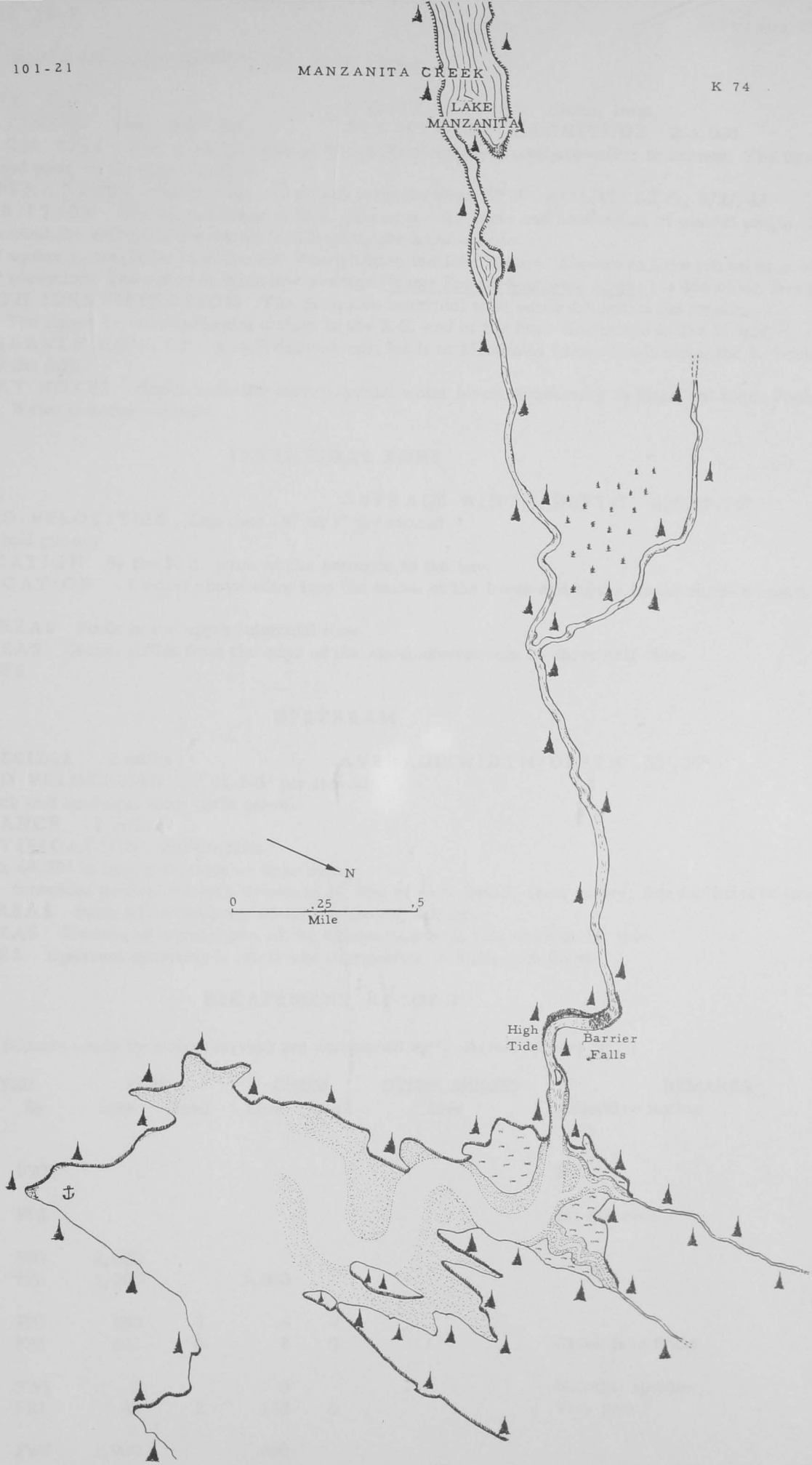
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating


MANZANITA CREEK
LAKE MANZANITA
N
0
.25
.5
Mile
High Tide
Barrier Falls

N55°35.7 W130°58.7 Previous No. 74

KETCHIKAN, BEHM CANAL, MANZANITA BAY, N.W. corner

MAJOR SPECIES Pink OTHER SPECIES Chum, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 2-4,000
SPAWNING FACILITIES Very limited facilities in the short upstream area accessible to salmon. The intertidal has good gravel areas in the upper section.
STREAM TEMPERATURES Warm range. Observed temperatures: 59°F., 8/21/47; 52°F., 9/27/49.
VALLEY DESCRIPTION Stream cut lower valley, extensive lake basin and headwaters of glacial origin. Bare rock ridges around the valley, some timber and muskeg areas throughout.
DRAINAGE 77 square miles (Polar Planimeter). Precipitation fed lake system. Manzanita Lake has an area of 1,600 acres at 232' elevation. The ten year discharge average (Water Powers Southeast Alaska) is 454 cubic feet per second.
STREAM MOUTH IDENTIFICATION The extensive intertidal zone easily identifies the stream.
ANCHORAGE The Forest Service maintains a float in the S.E. end of the bay. Anchorage in the S. end.
TRAILS AND SURVEY ROUTES A well defined trail leads to Manzanita Lake. Trails along the S. bank of the stream below the falls.
AERIAL SURVEY NOTES Aerial visibility during normal water levels satisfactory in intertidal zone. Pools above are too dark. Water is amber colored.

INTERTIDAL ZONE

LENGTH 1 mile AVERAGE WIDTH/DEPTH 100'/18-24"
GRADIENT AND VELOCITIES Less than .5° at 2' per second
BOTTOM Sand and gravel.
LOW TIDE LOCATION By the N.E. point at the entrance to the bay.
HIGH TIDE LOCATION .1 miles above entry into the woods at the lower end of the island above a broad, deep pool area.
SCHOOLING AREAS Pools in the upper intertidal zone.
SPAWNING AREAS Gravel riffles from the edge of the woods downstream to about half-tide.
GENERAL NOTES

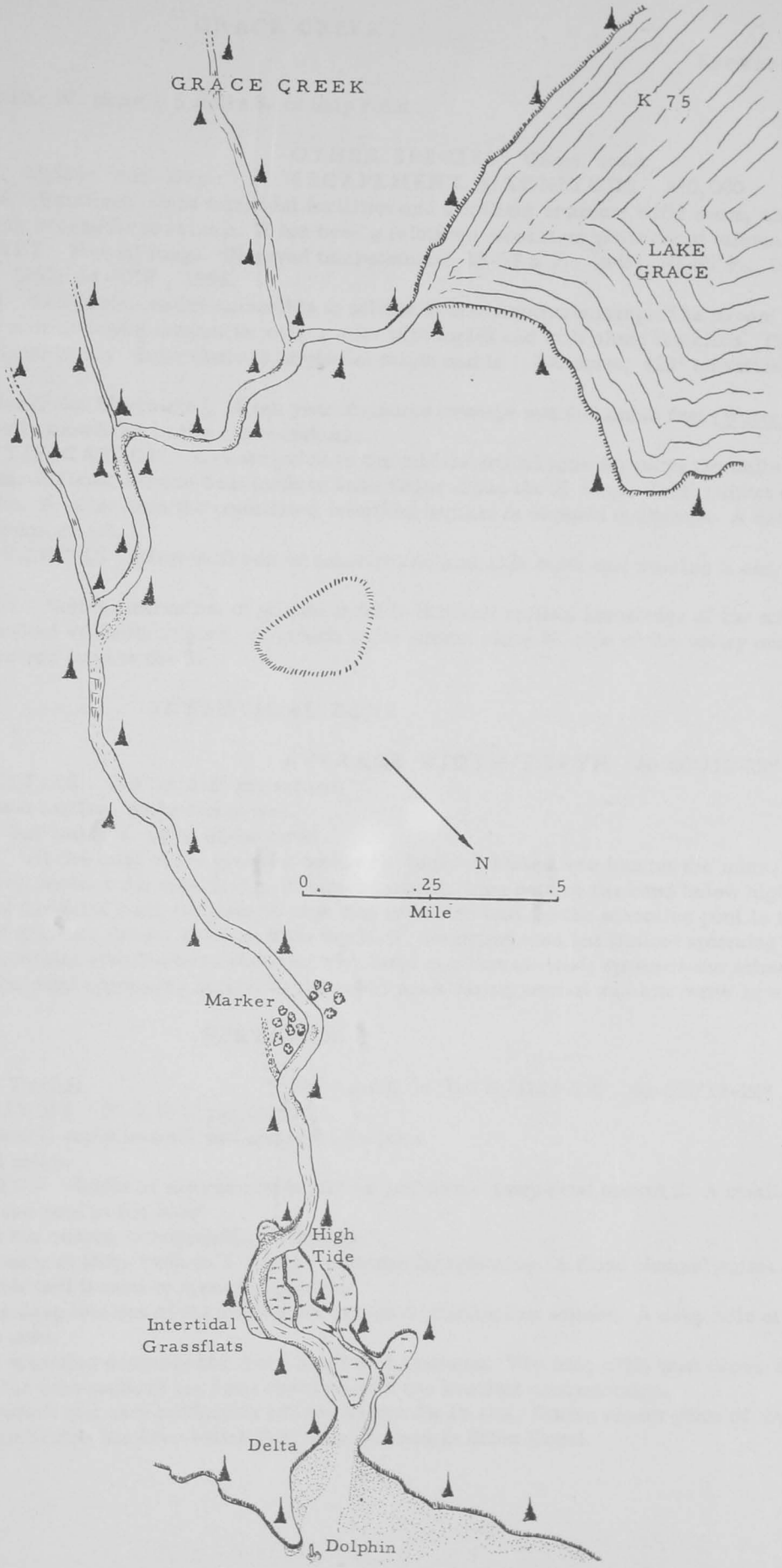
UPSTREAM

LENGTH ACCESSIBLE .2 miles AVERAGE WIDTH/DEPTH 50'/36"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Bedrock and boulders, very little gravel.
MARKER DISTANCE .2 miles.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls 40-50' in height impassable to salmon.
TRIBUTARIES Intertidal confluence with stream in N. end of bay. Small, short valley, fair facilities in lower stream.
SCHOOLING AREAS Pools below falls are used by schooling salmon.
SPAWNING AREAS Limited to a small part of the stream near high tide mark on N. side.
GENERAL NOTES Upstream spawning is relatively unimportant in Manzanita Creek.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1946								
Sep 26	A	FWS						Fair
1947								
Aug 21	G .1	FRI						No fish seen
1949								
Aug 20	G .1	FRI	2,000					
Sep 27	G .1	FRI	4,000		1,000			
1952								
Aug 15	G .1	FRI	250	0	6	0		
Sep 16	G .0	FRI	300	0	8	0		Creek is in flood
1953								
Aug 6	G .2	FWS	0		0			No other species
Aug 31	G .1	FRI	45	2	110	0		Very poor
1957								
Aug 9		FWS	1,900		200			


GRACE CREEK
K 75
LAKE GRACE
N
0
.25
.5
Mile
Marker
High Tide
Intertidal Grassflats
Delta
Dolphin

KETCHIKAN, BEHM CANAL, W. shore 1.5 miles S. of Snip Point

MAJOR SPECIES Pink OTHER SPECIES Chum, trout
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Excellent. Good intertidal facilities and excellent upstream riffle areas, though limited by the short stream length accessible to salmon. It has been a relatively consistent producer of salmon.
STREAM TEMPERATURES Normal range. Observed temperatures: 48-53.5°F., 1949; 50-65°F., 1950; 59°F., 1951; 58-67°F., 1952; 54-60°F., 1953.
VALLEY DESCRIPTION The stream valley accessible to salmon is comparatively steep. The stream cut outlet valley from Lake Grace runs through a canyon for over 1 mile with rapids and falls along the cliffs. The lower stream valley is wooded and brushy. Lake Grace is of glacial origin and is 1,700 acres, 425' elevation, with bare rock ridges.
DRAINAGE 53 square miles (Polar Planimeter). A ten year discharge average was 400 cubic feet (Water Power). Precipitation fed with early snowfields in the upper drainage.
STREAM MOUTH IDENTIFICATION A constriction in the mid-intertidal zone separates the delta from the upper intertidal grassflats. A Forest Service trail leads to Lake Grace along the N. bank. Trail marker at the mouth.
ANCHORAGE Off the delta .5 miles from the constricted intertidal section in exposed anchorage. A dolphin was at the drop-off in the stream mouth.
TRAILS AND SURVEY ROUTES River skiff can be taken to the high tide mark and walking is easy during normal water levels.
AERIAL SURVEY NOTES Aerial observation of salmon is fairly difficult without knowledge of the stream from ground observation. Intertidal visibility is good. Approach upper stream along N. side of the valley and turn on to stream just above the sharp bend to the S.

INTERTIDAL ZONE

LENGTH .6 miles AVERAGE WIDTH/DEPTH 40-60'/12-18"
GRADIENT AND VELOCITIES 2-3° at 2-3' per second.
BOTTOM Sand, clay in lower section, shale and gravel.
LOW TIDE LOCATION Just inside S. point of the cove.
HIGH TIDE LOCATION At the head of the grassflat on the N. bank. A blazed tree locates the mark.
SCHOOLING AREAS Deep pools at the constriction in mid-intertidal, long pool at the bend below high tide.
SPAWNING AREAS Good facilities from mid-tide to high tide separated only by the schooling pool in the bend below high tide. A small tributary stream entering from the N.W. intertidal area has limited spawning also.
GENERAL NOTES The intertidal area has been observed with large numbers of dead, spawned-out salmon after the peak of spawning. The dead apparently collect in the lower pools during normal and low water levels.

UPSTREAM

LENGTH ACCESSIBLE .7 miles AVERAGE WIDTH/DEPTH 40-50'/12-24"
GRADIENT AND VELOCITIES 3° at 2-4' per second
BOTTOM Sand, shale and gravel, some bedrock and scattered boulders.
MARKER DISTANCE .5 miles.
MARKER IDENTIFICATION Middle of straight rapids section just above sharp bend toward S. A small tributary enters from the N.W. at the pool in the bend.
BARRIERS A small falls in the canyon is impassable to salmon.
TRIBUTARIES Small tributary at sharp bend to S. is not important for spawning. A flood channel enters on the S. .2 miles above high tide and is used by spawning salmon.
SCHOOLING AREAS The deep sections of the riffle areas are used by schooling salmon. A deep hole at the bend below the marker is used.
SPAWNING AREAS Most spawning occurs in the first .3 miles of upstream. The long riffle area above high tide (a cable car station is at the mid-section) has been observed with the heaviest concentration.
GENERAL NOTES Grace Creek is a very productive salmon stream for its size. During recent years of low relative abundance, its production has been better than other streams in Behm Canal.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles		By	Live	Dead	Live	Dead	Live	Adjective Rating
1937									
July 31	G	.5	FWS						No fish seen
1947									
Sep 24	G	.5	ASI						Good. Some pink, chum
Sep 25	G	.5	FRI	3,000		3,000			Excellent
Sep 27	G	.0	FRI	2,000		2,000			3,437 dead fish
1949									
Sep 17	G	.5	FRI	16,000	15,000	2,000			
Sep 28	G	.5	FRI	8,500	6,000	5,300	1,500		
Oct 3	G	.5	FRI	1,100	7,000	5,000	3,000		
1950									
Aug 19	G	.5	FRI	6,200		50	0		Several dead pink
Sep 1	G	.5	FRI	11,000	400	200	0		
Sep 13	G	.5	FRI	7,000	2,000	9,000	2,000		
Sep 20	G	.5	FRI	1,000	3,000	2,000	7,000		
1951									
Aug 20	G	.5	FRI	7,500	300			Few coho, 1 red	Chum present, few dead chum
Sep 2	G	.5	FRI	13,000	850	500	25	1 dead red	Few fish, mostly chum, off mouth
Sep 15	G	.5	FRI	19,600	2,700	1,800			Few dead chum. Good showing above. At peak
1952									
Aug 9	G	.5	FRI	6,725	0	25	0		
Aug 26	G	.5	FRI	9,190	165	150	20		Few fish entering
Sep 3	G	.5	FRI	6,550	750	950			Few dead chum
Sep 16	G	.5	FRI						Flooding, but run is over. Few observed
Sep 30	G	.5	FRI						Flooding. Few chum, no pink observed
1953									
July 17	A	.0	FWS						No fish present
July 29	G	.0	FWS						Very few fish showing
Aug 6	G	.5	FWS	1		3			
Aug 18	G	.5	FWS	500					More at mouth
Aug 19	A	.0	FWS						No jumps or fish seen
Aug 21	G	.5	FRI	2,080	0	210	0		Very few spawning
Aug 31	G	.5	FRI	3,900	50	1,400	40	2 red	Fair
Sep 15	G	.5	FRI	570	1,050	1,080	440	2 coho	Vis. 85%. Pink run nearly over. Some new chum
1954									
Aug 7	A	.5	FWS						Poor. Few mixed
Aug 23	A	.5	FRI	14,500					Some chum. 9-10,000 pink in mouth
Sep 4	A,G	.5	FRI	27,000		2,500			Some in mouth. Few dead chum, pink
Sep 16	G	.0	FRI,FWS	5,000					Some chum. Few at mouth
Sep 23	A	.5	FRI	14,000	0				Some chum, few dead chum. 9-10,000 pink in mouth
1955									
Aug 23	A	.5	FRI	700					Chum present
Sep 6	A	.5	FRI	700					
Sep 15	A	.5	FRI	3,500		1,500			
Sep 25	A	.5	FRI	1,100					Few chum, some dead chum, pink
1956									
Aug 17	A	.5	FRI	1,000					Several 1,000 at mouth
Aug 24	A	.5	FRI	3,000	0				Fresh
Sep 6	A	.5	FRI	5,000	0				Some at mouth
Sep 12	G	.5	FWS	5,000		1,500			50 chum, 300 pink at mouth
Sep 16	A	.5	FRI	10,000		6,000			Many dead chum and pink. Sev. 1,000 chum at mouth

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1957								
Aug 10	A .5	FRI	300	0	200	0		Few at mouth
Aug 11	A .5	FRI	0	0	0	0		
Aug 19	A .5	FRI	500			0		Few chum, sev. dead pink. None at mouth
Aug 20	G .5	FWS	10,000		3,000			
Sep 1	A .5	FRI	700		600			Dead chum, pink. None at mouth
Sep 8	A .5	FRI	>600					
Sep 9	G .5	FRI	10,000	1,000	2,500			
Sep 9	G .5	FWS	10,000		2,400			Fair
Sep 16	A .5	FRI	1,200	>200	1,800	>200		None observed off mouth
Sep 18	G .5	FRI	500		1,000			Many dead unidentified
Sep 24	A .5	FRI	1,000	>300	1,500	>600		None observed off mouth

101-21 SNIP CREEK K 76
N55°41.2 W130°58.2 Previous No. 76

KETCHIKAN, BEHM CANAL, W. shore W. of Snip Island

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Poor. Limited in size and accessibility for pink salmon. However, stream gradient decreases 1 mile upstream and facilities for coho may be good.
STREAM TEMPERATURES Normal range (estimated).
VALLEY DESCRIPTION Stream cut canyon in lower stream area. Steep sides, timbered, muskeg areas upstream.
DRAINAGE 14 square miles (Polar Planimeter). Precipitation fed.
STREAM MOUTH IDENTIFICATION Broad delta area fills bight W. of Snip Island. Grassflats along N. bank.
ANCHORAGE Off-shore mid-way between Grace Creek and Snip Creek.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .3 miles AVERAGE WIDTH/DEPTH 20'/12-18"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Gravel and small rock.
HIGH TIDE LOCATION Head of grassflats at entry into woods. Stream above is very straight.
SCHOOLING AREAS

SPAWNING AREAS Upper intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 12-20'/15"
GRADIENT AND VELOCITIES Less than 1° at 2' per second for .2 miles, greater than 3° for .8 miles.
BOTTOM Gravel, small rock, boulders and bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS .8 miles of steep gradient stream through canyon.
TRIBUTARIES
SCHOOLING AREAS

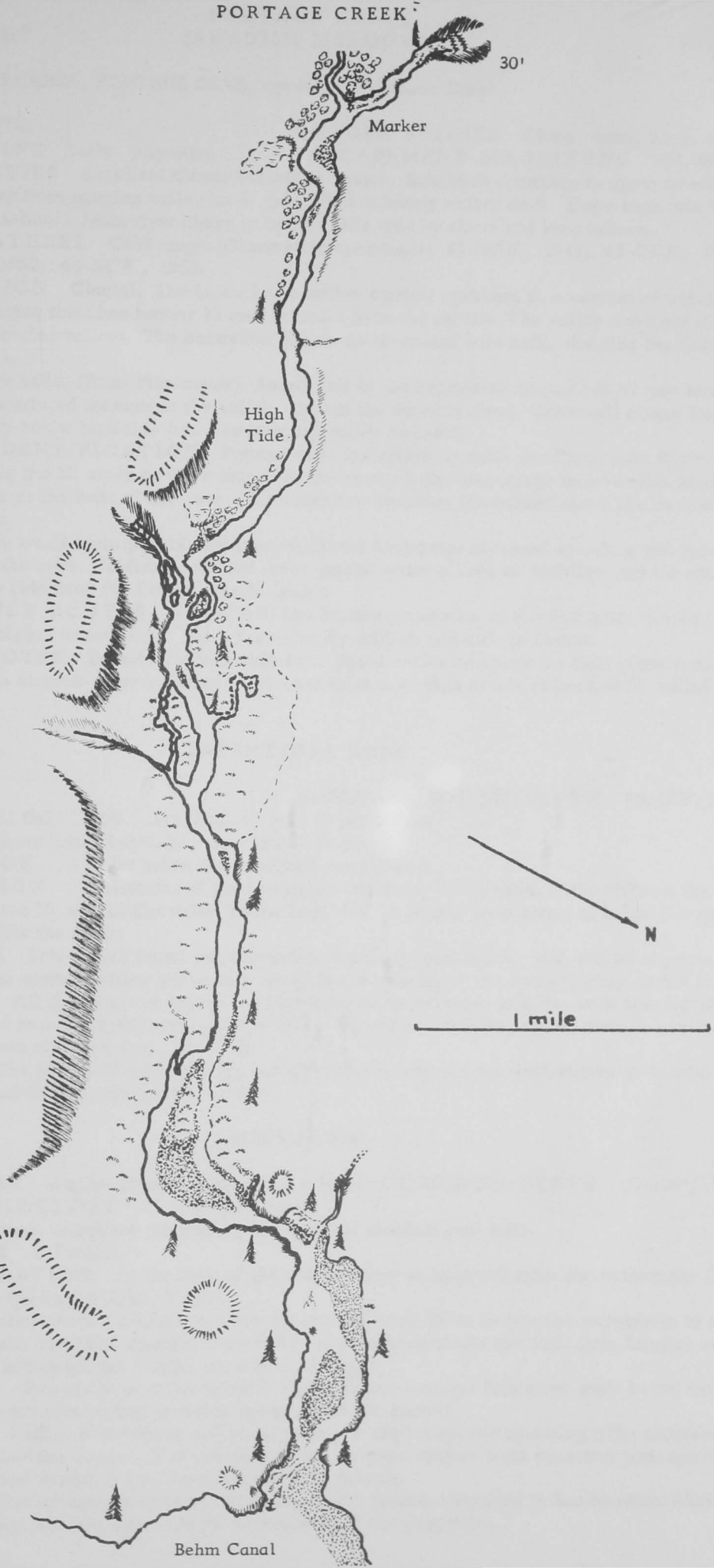
SPAWNING AREAS First .2 miles of stream. No information beyond 1 mile mark.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 27	G .2	FRI	75		25		4 possible coho	Poor. 200 fish off mouth
1951								
Sep 15	G .2	FRI	850	35	10	5		Few fish in vicinity of creek
1952								
Aug 8	G .1	FRI	185	6	0	0		
1953								
July 29	G .0	FWS						Poor. Very few fish showing

PORTAGE CREEK



KETCHIKAN, BEHM CANAL, PORTAGE COVE, opposite Chickamin River

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, king, trout
ESCAPEMENT TIMING Early. July-Aug. ESCAPEMENT MAGNITUDE >20,000
SPAWNING FACILITIES Excellent throughout entire stream. Extensive spawning in upper intertidal zone around first major tributary from hanging valley on S. side. First tributary valley on S. above high tide has excellent facilities for pink salmon. Main river above to barrier falls used by chum and king salmon.
STREAM TEMPERATURES Cold range. Observed temperatures: 44-45°F., 1949; 43-55°F., 1950; 48-57°F., 1951; 50-58°F., 1952; 46-54°F., 1953.
VALLEY DESCRIPTION Glacial. The broad lower valley extends upstream to a number of tributary valleys with the two farthest having their headwaters 11 and 12 miles from the mouth. The valley walls are steep, glaciated rock. Numerous hanging valleys. The headwater ridges are steep and bare rock, dividing the Carroll River system from Portage Creek.
DRAINAGE 47 square miles (Polar Planimeter). Snowfields in the headwater cirques persist into late summer. Some muskeg areas are scattered throughout the valley, though the water is clear. One small cirque lake drains into the first major tributary below high tide from the hanging valley on the S.
STREAM MOUTH IDENTIFICATION Portage cove is directly opposite the Chickamin River. A long sand beach extends along the N. shore at the entrance to the cove. A narrow passage into Swedish Meadows is just S. of a small creek at the head of the cove. The extensive meadows (grassflats) above the narrow passage easily identify the stream.
ANCHORAGE A very small basin suitable for semi-sheltered anchorage for small vessels is just inside the S. point at the entrance to the cove. Caution is advised since glacial water allows no visibility and the entrance to the cove is bare at low tide from the basin to the N. shore.
TRAILS AND SURVEY ROUTES A river skiff can be taken upstream to the first main tributary above high tide on normal or higher water levels. Entry should be by skiff at mid-tide or higher.
AERIAL SURVEY NOTES Excellent aerial visibility. Upper valley adequate for light plane maneuvering, difficult for heavier aircraft. Pass to Carroll River and inlet over high divide at head of N. valley. Gusty during southerly winds.

INTERTIDAL ZONE

LENGTH 3 miles AVERAGE WIDTH/DEPTH 90-150'/12-18"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand throughout lower intertidal, good gravel in upper.
LOW TIDE LOCATION .4 miles below the intertidal constriction.
HIGH TIDE LOCATION .2 miles above the first major tributary. The bottom of the riffle at the point where the stream approaches the N. side of the valley marks high tide. A beaver pond area just below the point on the S. bank further identifies the mark.
SCHOOLING AREAS Schools are found just above the intertidal constriction, with scattered pools from mid-tide up, and the heaviest concentrations are usually found in the vicinity of the first tributary on the S.
SPAWNING AREAS All riffles in the upper .5 miles are used by spawning salmon, with heaviest spawning concentrations observed around the tributary point of entry. Spawning densities ranging from 1.2 to 1.5 square yards per salmon were observed Aug. 20, 1950.
GENERAL NOTES The intertidal grassflats are exceptionally scenic and are well-known for the flocks of migratory birds found there in the spring and fall.

UPSTREAM

LENGTH ACCESSIBLE 2 miles (main stream). AVERAGE WIDTH/DEPTH 60-100'/12-18"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Some silt, sand, excellent gravels, larger rock and boulders near falls.
MARKER DISTANCE 1.7 miles
MARKER IDENTIFICATION At the forks of the main valley. A large tributary enters from the S. The main stream continues to the barrier falls .3 miles.
BARRIERS Falls .3 miles above terminal on main stream well over 50' in height and impassable to salmon.
TRIBUTARIES S. bank intertidal tributary accessible .1 miles to cascades and falls from hanging valley. S. tributary at marker accessible for 1 mile, snowfield drainage.
SCHOOLING AREAS Several large pools between high tide and marker. Schooling pools below marker have been observed with numerous salmon that probably spawn above the marker.
SPAWNING AREAS Riffles at the lower end of all pools are used. Heaviest spawning riffle observed above high tide mark is .3 miles below the marker. The tributary at the terminal marker is an excellent pink spawning stream. The main stream above the marker is used by chum and king salmon.
GENERAL NOTES This stream has some of the smallest pink salmon measured in Southeastern Alaska. They are outstanding in contrast with the large size of the majority of the population.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 21	G .0	FRI	250		20		1 coho	Poor
1948								
July 31	G .0	FRI						8,000 fish in stream
Aug 1	G 1.0	FWS	5,000					Fair
Oct 11	G 1.0	FWS						Early escapement only
1949								
July 16	G .0	FRI	100					
July 28	G 2.2	FRI	20,000	150	1,050	25		
Aug 7	G 2.2	FRI	18,200	2,860	300	300		
Aug 21	G 2.2	FRI	15,000	12,100	1,100	900	4 king	
1950								
July 19	G 2.2	FRI	1,600		2,100			
July 31	G 1.7	FRI	12,000		4,100			
Aug 9	G 1.7	FRI	20,000	300	1,250	150		
Aug 10	A	FRI, FWS						Fair. Only a fair showing
Aug 20	G 1.7	FRI	7,200	1,850	400			
Sep 1	G 1.7	FRI	3,000					Flooding
1951								
July 23	G 1.0	FRI	6,200	0	200	0		Fish above termination point
July 25	A 2.2	FRI						6,000 salmon. Jumps off mouth
July 29	A 2.2	FRI						50,000 salmon
July 30	A 2.2	ASI						45,000 salmon
July 31	G 1.5	FRI	20,000		550			Some dead chum, few dead pink
Aug 10	G 2.2	FRI	62,000	450	600	450	2 red	Many fish up all forks
Aug 20	G 1.7	FRI	9,000	2,550			Coho present, 2 king.	Few chum. Additional 3,500 pink in right fork
Sep 2	G 1.7	FRI	3,700	11,200			600 coho	Few chum. Few fresh fish. Most spent
1952								
July 22	G 1.7	FRI	3,325	0	1,100	0		Moving in fast
July 26	A 2.2	FRI						7,000 mostly well up. Few at mouth
July 31	G .0	FRI	5,700	0	170	0		Just starting to dig
Aug 10	G 1.7	FRI	10,500	250	230	170		
Aug 26	G .3	FRI	750	300			Sev. coho	Very few chum. Run is over
Sep 23	A 2.2	FRI			200			
1953								
July 24	G 1.0	FRI	700	0	226	0		
July 28	A .0	FWS						No jumpers
July 29	G .0	FWS						Very few fish showing
Aug 2	G 1.7	FRI	770	0	1,640	0		
Aug 3	G .7	FWS						3,000 in fork & short distance below
Aug 11	G 1.0	FRI	470	4	160	17		Visibility poor
Aug 18	G 1.0	FWS	700					
Aug 19	G .3	FWS						Less than 2,000 fish present
Aug 19	G .7	FWS						4,000 fish, most above forks
Aug 22	G 1.0	FRI	570	100	75	60	3 coho	
Oct 5	G 1.5	FRI						No salmon
1954								
Aug 3	A 1.7	FRI	6,000	0	650	0		None observed off mouth
Aug 12	A 1.7	FRI	9,000					Some chum. Some dead chum, pink. Spawning started. None at mouth

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1955								
July 24	A 2.2	FRI	1,000		20			
July 31	A 2.2	FRI	3,000		200			
Aug 12	A 2.2	FRI	4,000					Chum present. Spawning
1956								
July 22	A 1.7	FRI	40,000					Some chum
July 29	A 1.7	FRI	60,000					Some chum. None at mouth
Aug 13	A 1.7	FRI	35,000	>500				10,000 spawning above marker
Aug 16	G 1.0	ADF,FWS	25,000					Several dead pink
Sep 12	G 3.0	FWS	100		1			70 pink, 3 chum at mouth
1957								
July 25		FWS	1,500					
July 28	G .3	FWS	2,300		1,800			
July 31	A 2.2	FRI	10,000	0				Some chum. None observed at mouth
Aug 4		FWS	5,000		800			
Aug 6		FWS	6,000					
Aug 9		FWS	6,000		1,300			Poor
Aug 10	A 1.7	FRI	3,000	0	500	>200		1,000 chum above marker. No fish observed at mouth
Aug 11	A 1.7	FRI						12,000 salmon
Aug 19	A 1.7	FRI	1,500	>200				Few chum, some dead chum. No fish observed at mouth
Aug 22		FWS	309		114			

KETCHIKAN, BEHM CANAL, W. shore N. W. of Chickamin River

MAJOR SPECIES
OTHER SPECIES
ESCAPEMENT TIMING Middle (estimated)
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES
STREAM TEMPERATURES Normal range (estimated).
VALLEY DESCRIPTION Stream cut valley through extensive muskeg areas above 1 mile of narrow canyon. Lake basin 4 miles upstream. Bare rock ridges between 2,000-3,000' elevation.
DRAINAGE 33 square miles (Polar Planimeter). Early snowfields, and precipitation fed through a small lake. Muskeg extensive, water amber colored, very dark during flooding.
STREAM MOUTH IDENTIFICATION Mouth between two short points extending from shore. Grassflats in upper intertidal zone. Cabin on N. shore above intertidal zone.
ANCHORAGE Mouth exposed to swells. Good anchorage .5 miles S. behind point.
TRAILS AND SURVEY ROUTES Trail along N. bank of stream for unknown distance.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH 50-60'/12-18"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM
LOW TIDE LOCATION Between the points at the entrance to the stream.
HIGH TIDE LOCATION Above the head of the grassflats where the stream bends toward the N.
SCHOOLING AREAS

SPAWNING AREAS Very limited.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH 40-50'/12-24"
GRADIENT AND VELOCITIES Greater than 3° at 2-4' per second
BOTTOM Boulders and bedrock, some gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Canyon begins .1 miles above high tide mark and runs .9 miles with rapids and cascades to the muskeg flats upstream. Accessibility for salmon unknown.
TRIBUTARIES Small tributary on N. bank at the base of the canyon.
SCHOOLING AREAS

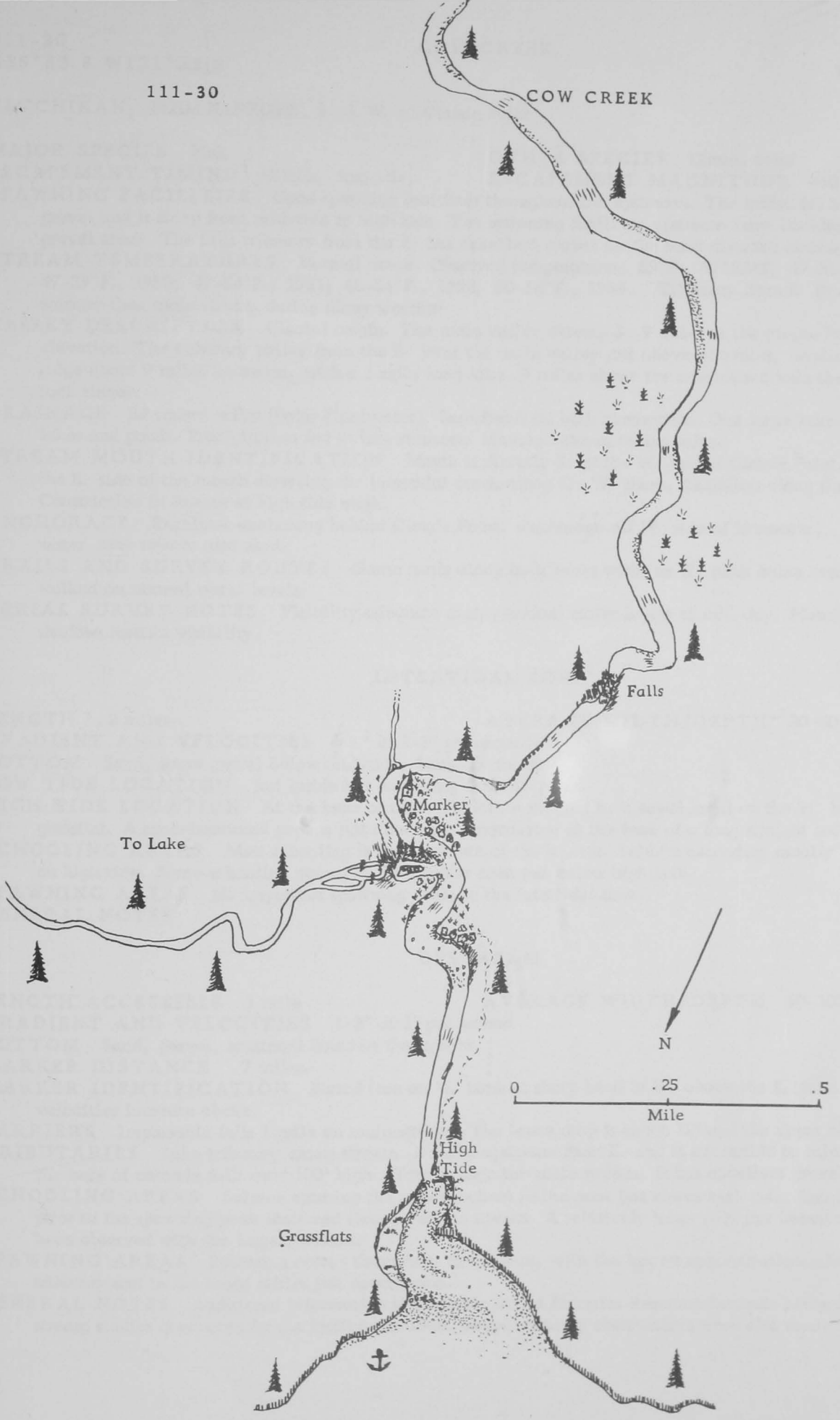
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 1	G .2	FRI						No fish seen. High water
1951								
Sep 15	G .1	FRI	150	300	0	0		No fresh fish. Mostly predator kills
1952								
Sep 3	G .2	FRI	20	3	0	0		
1953								
July 17	A .0	FWS						No fish present
July 28	A .0	FWS						No jumpers present
Aug 1	G .3	FWS	7					
Aug 5	G .3	FWS	1		5			


COW CREEK
Falls
Marker
To Lake
N
0
.25
.5
Mile
High
Tide
Grassflats

KETCHIKAN, BEHM NARROWS, S.-S.W. of Claude Point

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Middle Aug.-Sep. ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Good spawning facilities throughout the upstream. The intertidal zone has very little gravel and is steep from mid-tide to high tide. The spawning facilities upstream have boulders scattered through the gravel areas. The falls tributary from the E. has excellent gravel for the short distance accessible.
STREAM TEMPERATURES Normal range. Observed temperatures: 59°F., 8/18/48; 47-56.5°F., 1949; 47-59°F., 1950; 47-54°F., 1951; 48-54°F., 1952; 50-58°F., 1953. Tributary from E. through lake up to 5°F. warmer than main stream during sunny weather.
VALLEY DESCRIPTION Glacial origin. The main valley extends S. 9 miles to the cirque headwaters nearly 4,000' elevation. The tributary valley from the E. joins the main valley just above saltwater, heading in the same high ridge about 9 miles upstream, with a 1 mile long lake .9 miles above the confluence with the main stream. Bare rock ridges.
DRAINAGE 39 square miles (Polar Planimeter). Snowfields on both headwaters. One large lake and a number of small lakes and ponds. Precipitation fed in late summer. Muskeg colored during rains.
STREAM MOUTH IDENTIFICATION Mouth is directly S. of the W. end of Claude Point. A point extends from the E. side of the mouth diverting the intertidal creek along the W. shore. Grassflats along the E. intertidal zone. Constriction in stream at high tide mark.
ANCHORAGE Excellent anchorage behind Claude Point. Anchorage off W. side of Homesite, E. point in shallow water near stream also used.
TRAILS AND SURVEY ROUTES Game trails along both banks with the W. bank being best. Stream bed easily walked on normal water levels.
AERIAL SURVEY NOTES Visibility adequate during normal water levels at mid-day. Morning and afternoon shadows restrict visibility.

INTERTIDAL ZONE

LENGTH .2 miles AVERAGE WIDTH/DEPTH 30-60'/18"
GRADIENT AND VELOCITIES >3° at 2-3' per second
BOTTOM Sand, some gravel below mid-tide, boulders above.
LOW TIDE LOCATION Just inside bar extending from E. point.
HIGH TIDE LOCATION At the head of the constriction marked by a small knoll on the W. bank above short grassflat. A sand-bottomed pool is just above the constriction at the base of a long straight section of stream.
SCHOOLING AREAS Most schooling is at the mouth of the stream. Salmon ascending usually pass into the stream on high tide. Some schooling occurs in the boulder area just below high tide.
SPAWNING AREAS No important spawning areas in the intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE 1 mile AVERAGE WIDTH/DEPTH 50-100'/12-18"
GRADIENT AND VELOCITIES 1-2° at 2' per second
BOTTOM Sand, gravel, scattered boulders throughout.
MARKER DISTANCE .7 miles.
MARKER IDENTIFICATION Blazed tree on W. bank at sharp bend to W. above the E. falls tributary. Stream velocities increase above.
BARRIERS Impassable falls 1 mile on main stream. The lower drop is about 12' and the upper about 18'.
TRIBUTARIES Lake tributary enters stream .5 miles upstream from E. and is accessible to salmon for .05 miles to the base of cascade falls over 100' high. Warmer than the main stream, it has excellent gravel riffles.
SCHOOLING AREAS Salmon entering the stream school in the pool just above high tide. Small schools are found prior to the spawning peak scattered throughout the stream. A relatively large pool just above the tributary has been observed with the largest schools.
SPAWNING AREAS Spawning occurs throughout the stream, with the largest concentrations observed around the tributary and in the broad riffles just downstream.
GENERAL NOTES Additional information is available at the Fisheries Research Institute Library from special stream studies conducted by the Institute in 1948. Supplementary observations were also made in following years.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1935								
Sep 29		FWS						Fair indications. Few dead present
1938								
Sep 17	G .5	FWS						3,000 fish in creek
1943								
Sep 16	G .5	FWS	500		200			Poor. 5,000 off mouth
Sep 18	G .3	ASI	5,000		500			Good. 2,500 off mouth
1946								
Oct 4	G .3	ASI						Evidence of earlier fish in the stream
1947								
Sep 23	G 1.0	ASI						Poor showing. Some chum, pink. Had been an earlier run
Sep 25	G .6	FRI	1,200		500			Fair
1948								
July 9	G .5	FRI			400			
Aug 17	G .5	FRI	6,000		300			Poor
Aug 19	G .5	FRI	10,000					
1949								
Aug 9	G 1.0	FRI	6,000	300	4,000	200		
Aug 24	G .7	FRI	16,000	1,100	2,000	600		
Sep 5	G .7	FRI	25,500	4,700	5,000	1,000		
Sep 13	G 1.0	FRI	12,100	5,990	750			
Sep 28	G .7	FRI	1,900	2,400	500	1,000		
1950								
Aug 4	G .6	FRI	2,100		500			
Aug 12	G .7	FRI	15,000	50	1,500	150		
Aug 24	G .7	FRI	13,000	5,600	700	150		
Sep 4	G .7	FRI	6,500	200	300			Some dead chum
Sep 14	G .7	FRI	3,300	6,000	1,200	700		
Sep 21	G .7	FRI	600	400	1,000	400		
1951								
July 30	A	FWS	300					1 large school at mouth
Aug 3	G .7	FRI	2,300	0	190	0		Only chum digging. Poor vis. Fish moving up. Raining
Aug 14	G .7	FRI	2,700	80	64	60		
Aug 23	G .7	FRI	5,300	400	100	60	3 red	
Sep 4	G .7	FRI	11,500	1,650	450	90	2 red	
Sep 16	G .7	FRI	3,400	1,850	200	72	2 red	No fresh fish. None outside
1952								
July 26	G .3	FRI	1,000	0	200	0		Some off mouth
Aug 2	G .7	FRI	7,700	10	530	60		
Aug 12	G .7	FRI	9,900	470	285	520		Many spawning and spent
Aug 27	G .6	FRI	4,170	875	32	20	6 red	
Sep 4	G .6	FRI	1,500	500	88		5 king, 6 red	Few dead chum. Few fresh fish
Sep 17	G .6	FRI	51		3			Few dead chum, pink. Run over
1953								
July 26	G .6	FRI	10		170			
Aug 1	G .5	FWS						1,500 pink and chum
Aug 2	G .7	FRI	440	0	420	0		Some off mouth
Aug 13	G .7	FRI	920	2	125	26		Many off mouth
Aug 24	G .7	FRI	630	10	25	15		Very poor
Sep 2	G .7	FRI	552		173		4 coho	Some dead chum, pink. Peak of spawning
Sep 15	G .7	FRI	75		140			Some dead chum, few dead pink
1954								
Aug 3	G .0	FRI						Very few salmon

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1954								
Aug 12	A .7	FRI	3,000					Few chum. Small schools off mouth
Aug 23	A .7	FRI	6,000					Some chum. Few dead chum, some dead pink
Sep 4	G .3	FRI	3,000					Many chum. Many dead pink. Run well over peak
1955								
July 31	A .7	FRI	>200					
Aug 12	A .7	FRI	1,000					Some chum
Aug 23	A .7	FRI	1,000					Few dead pink. Sev. 100 at mouth
Sep 6	A .7	FRI	>200					
1956								
July 22	A .7	FRI	500					None observed at mouth
July 29	A .7	FRI	3,500		300			Some at mouth
Aug 6	G 1.0	FWS	2,500		200			
Aug 16		ADF,FWS	3,000					
Aug 17	A .7	FRI	11,000					Some chum. Few dead chum, pink. Fresh
Aug 24	A .7	FRI	>2,000					Some dead pink. Peak past
Sep 11	G .5	FWS	2,000		25			200 pink at mouth
1957								
July 31	A .7	FRI	500	0				All fresh
Aug 4		FWS	100		1,400			
Aug 6		FWS	200		1,350			
Aug 8		FWS	1,600					
Aug 10	A .7	FRI	400	0	100	0		None observed at mouth
Aug 11	A .7	FRI	600					1 jump
Aug 11		FWS	400		300			
Aug 19	A .7	FRI	700					Some live, dead chum. None at mouth
Aug 24		FWS	40		10			
Sep 1	A .7	FRI	300					Few chum. Few dead chum, pink. None at mouth
Sep 5		FWS	80		100			
Sep 8	A .7	FRI		0				Few pink
Sep 10	G .7	FRI	80		100			None observed at mouth

KETCHIKAN, BEHM NARROWS, S. shore in small bight 2 miles S. W. of Anchor Pass

MAJOR SPECIES Pink
OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Middle (estimated).
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES Normal range. Observed temperature: 53°F., 9/10/47.
VALLEY DESCRIPTION Main valley to the S. is blocked just above high tide by falls. Valley is of glacial origin, muskeg valley floor, timbered slopes. Lake (Long Lake) basin valley to the W. is of glacial origin at the foot of slope to mountain ridge S. of lake, wooded, some muskeg, also blocked by falls below outlet. Long Lake lies parallel to Behm Narrows.
DRAINAGE 21 square miles (Polar Planimeter). Lake basin is over 2 miles long, narrow and drains ridge nearly 3,000' in elevation. S. valley heads over 7 miles upstream behing ridge above lake, small lakes and ponds along valley floor and ridges.
STREAM MOUTH IDENTIFICATION Short grassflats with two stream mouths, the larger along the S. side of the grassflats.
ANCHORAGE Off the N. W. shore of the bight at the drop-off.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles
AVERAGE WIDTH/DEPTH 40-50'/12"
GRADIENT AND VELOCITIES 3° at 2-3' per second
BOTTOM Sand, some gravel, boulders.
HIGH TIDE LOCATION Head of grassflat at entry into woods.
SCHOOLING AREAS

SPAWNING AREAS Very limited area at high tide.
GENERAL NOTES

UPSTREAM

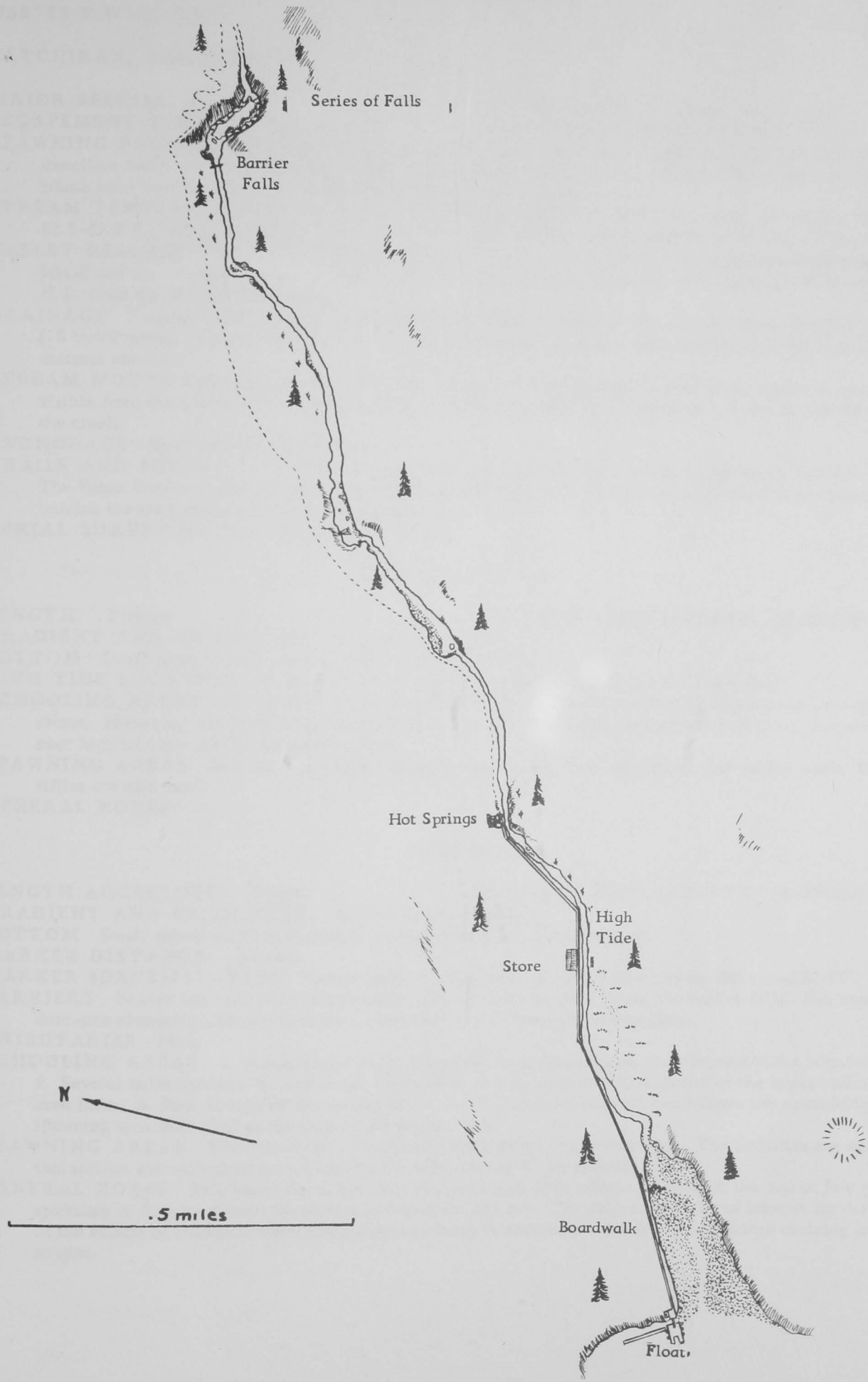
LENGTH ACCESSIBLE .6 miles
AVERAGE WIDTH/DEPTH 30-40'/10-18"
GRADIENT AND VELOCITIES 3-6° at 2-4' per second
BOTTOM Sand, limited gravel, rocks and boulders, bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Main valley to S. blocked by 15' falls at the head of cascades .15 miles upstream. Stream to lake blocked .6 miles upstream by falls over 25'.
TRIBUTARIES Main valley with larger discharge is considered as tributary since access is blocked so near the mouth.
SCHOOLING AREAS

SPAWNING AREAS Most gravel areas are at the lower end of the numerous pools. Most salmon probably spawn in the split sections in the first .1 miles of stream.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 10	G 1.0	FRI	7					
Sep 25	G .8	FRI	55					


Series of Falls
Barrier Falls
Hot Springs
High Tide
Store
N
.5 miles
Boardwalk
Float

BELL CREEK

KETCHIKAN, BEHM NARROWS

MAJOR SPECIES Pink
OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE 2,000

SPAWNING FACILITIES Good, though limited. Section below barrier falls has some short gravel areas that offer excellent facilities. Occasionally, access to the best spawning area has been blocked in the past by beaver dams which have been removed by the Fish and Wildlife Service each time.

STREAM TEMPERATURES Warm range. Observed temperatures: 49-67°F., 1948; 48-65°F., 1949; 52.5-69.5°F., 1950; 60-64°F., 1951; 57-66°F., 1952; 58°F., 9/2/53; 55°F., 9/17/53; 58°F., 9/16/54.

VALLEY DESCRIPTION A long, straight "V" valley with a chain of three lakes lies along the central axis of Bell Island and appears to have been of glacial origin. High, straight ridges lie along each side of the valley running N.E. from the W. end of the island.

DRAINAGE 7 square miles (polar planimeter). Precipitation fed through three small lakes, the first being the largest (.8 by .2 miles). Several hot springs are in the lower stream area and may contribute to the high stream temperatures observed.

STREAM MOUTH IDENTIFICATION Bell Island Hot Springs resort is next to the creek. A navigation light is visible from the channel. A Forest Service float and board-walk to the resort are on the N. side of the mouth of the creek.

ANCHORAGE Good moorage at the float.

TRAILS AND SURVEY ROUTES A good board-walk parallels the stream to just above the high tide mark. The Forest Service maintains an excellent trail to the first lake. The barrier falls termination point is reached by leaving the trail at the base of the steep section.

AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH 15-20'/12"

GRADIENT AND VELOCITIES 2° at 1-2' per second

BOTTOM Sand, gravel, scattered boulders and some bedrock.

HIGH TIDE LOCATION At the base of the first split in the stream above the resort store.

SCHOOLING AREAS The small cove at the mouth has been observed with schooling salmon throughout the season. However, the schooled salmon in July and Aug. are believed headed to other areas. Several small pools near high tide are used by schooling salmon.

SPAWNING AREAS Limited to the upper intertidal area, usually at the foot of each of the pools. Several short riffles are also used.

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .5 miles
AVERAGE WIDTH/DEPTH 15-30'/12-36"

GRADIENT AND VELOCITIES .5-2° at 1-3' per second

BOTTOM Sand, gravel to 8" in diameter, scattered boulders, some bedrock.

MARKER DISTANCE .5 miles.

MARKER IDENTIFICATION Barrier falls, a series of rapids and falls rising an estimated 50-70'.

BARRIERS Beaver dams are often obstructions in the flat stream area below the barrier falls. The most frequent dam-site obstructing salmon is at the constriction at the lower end of the flats.

TRIBUTARIES None.

SCHOOLING AREAS 1. A relatively large, deep hole by a stream gage near the end of the board-walk. 2. Several holes between the end of the board-walk and the first beaver dam-site at the lower end of the spawning area flats. 3. Pool formed by the beaver dam. 4. Wide pool at the first bend above the constriction of the spawning area flat. Pool at the base of the barrier falls.

SPAWNING AREAS Throughout the .1 miles of stream below the barrier falls. The facilities are excellent in this section with abundant gravel and stream velocities of 2' per second.

GENERAL NOTES Bell Island Creek has been observed with pink salmon entering at the end of July and some spawning in August, though the stream is definitely late run. The stream could be of interest for determination of the effects of unusually warm stream temperatures on incubation due to the hot springs draining into the stream.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1930								
Sep 5		FWS						9,000 pink at mouth. None in stream
1935								
Sep 29		FWS						Many pink. Stream overstocked
1936								
Sep 18		FWS						Many pink in stream and off mouth
1938								
Sep 22		FWS						Good showing of pink
1940								
Sep 18	G .5	FWS	4,000					Fair
Sep 19	G .5	ASI	5,000					Fair. Few chum
1941								
Aug 2	G .5	FWS	1,000					Poor. Believe fish came later
1942								
Aug 30	G .5	FWS	2,000					Poor
1943								
Sep 15	G .3	FWS	8,000		2,000			Excellent. 6,000 fish off mouth
1946								
Sep 28	A	FWS						Fair. Believed to be poorest in years
1948								
Sep 27	G .5	FRI	2,500		100			Good
Aug 4	G .5	FRI	331					
Aug 13	G .5	FRI	430					1,000 off mouth
Aug 19	G .5	FRI	227	38			1 red	175 at mouth
Aug 20	G .5	FRI	395					2,500 off mouth
Aug 29	G .5	FRI	870					1,750 off mouth
Sep 4	G .5	FRI	843					
Sep 5	G .5	FRI	1,091					
Sep 11	G .5	FRI	1,837					1,000 off mouth
Sep 18	G .5	FRI	2,382					1,250 off mouth
Sep 24	G .5	FRI	3,297					1,500 off mouth
Sep 28	G .5	FRI	144					
1949								
July 17	G .2	FRI						No fish in the stream
Aug 1	G .5	FRI	500					
Aug 9	G .5	FRI	1,200	33	14	5		
Aug 24	G .5	FRI	770	280				Few live, dead chum
Sep 5	G .5	FRI	2,370	232	12			
Sep 13	G .5	FRI	2,480	235	5		1 red	
Sep 18	G .5	FRI	3,050	268	200			Some dead chum
Sep 28	G .5	FRI	3,800	734	550	110	50 coho, 2 red	
Oct 4	G .5	FRI	2,300	1,144				
1950								
Aug 4	G .5	FRI	102	0	1	0		
Aug 13	G .5	FRI	150	1	0	0		>2,000 in cove
Aug 24	G .5	FRI	100	37				6-8,000 in cove
Sep 5	G .4	FRI	300					Flooding
Sep 14	G .5	FRI	900	150	100			Some dead chum
Sep 21	G .4	FRI	250	22				Some chum. Flooding
1951								
Aug 3	G .5	FRI	0	0	0	0		Few off mouth
Aug 14	G .5	FRI	25	0	0	0		>100 off mouth
Aug 23	G .5	FRI	50	2	0	0		
Sep 5	G .5	FRI	85	150	0	0		Water low. Few 100 off mouth

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1951								
Sep 16	G .2	FRI	550	40	10	0		1,500-2,000 off mouth
1952								
Aug 3	G .5	FRI	51	0	0	0		1,000 off mouth
Aug 16	G .3	FRI	165	20				Extremely low water
Sep 4	G .5	FRI	100					Few dead pink
1953								
July 28	G .3	FRI	8	0	0	0		Very high
Aug 24	G .5	FRI	8		0			No fish present
Sep 2	G .5	FRI	12	0	1	0		No fish
Sep 17	G .5	FRI	6	1	1			
Sep 27	G .3	FRI						Flooding. No fish off mouth
1954								
Sep 17	G .5	FRI	2,400	0	0	0		1,000 off mouth
1955								
Sep 15	G .5	FWS	2,500		50			

KETCHIKAN, BEHM CANAL, GEDNEY PASS, KLU BAY, E. head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 3,000
SPAWNING FACILITIES Very limited upstream spawning facilities. The upper intertidal zone is the primary spawning area and has good spawning gravels and stream velocities.
STREAM TEMPERATURES Warm range. Observed temperature: 50.5°F., 9/7/47.
VALLEY DESCRIPTION Stream cut valley which divides .6 miles upstream, the larger valley being to the N. Wooded valley floors with muskeg areas and small ponds.
DRAINAGE 6 square miles (Polar Planimeter). Precipitation fed through muskeg areas and small ponds.
STREAM MOUTH IDENTIFICATION Relatively long intertidal zone at the E. end of Klu Bay.
ANCHORAGE Good anchorage in the outer bay in 16 fathoms, soft bottom.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH >.3 miles AVERAGE WIDTH/DEPTH 20-30'/12"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Some sand, gravel, small rock, some boulders.
HIGH TIDE LOCATION Head of grassflats on N. bank at entry into woods.
SCHOOLING AREAS Long pool just below high tide mark.
SPAWNING AREAS Upper intertidal riffle areas above bend of intertidal zone to the S.
GENERAL NOTES The intertidal zone is the major spawning area for this stream.

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 15-25'/12"
GRADIENT AND VELOCITIES 1->3° at 1-3' per second
BOTTOM Small rock, boulders and bedrock.
MARKER DISTANCE .05 miles.
MARKER IDENTIFICATION Small tributary enters from N. side. Series of small falls above on main stream.
BARRIERS Series of small falls are difficult for salmon to pass.
TRIBUTARIES Small tributary at marker drains N. slope.
SCHOOLING AREAS Pool at marker has been observed with a few schooled salmon.
SPAWNING AREAS Limited to riffles in first .05 miles of stream.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1937								
Sep 22		FWS	1,000		1,000			
1940								
Sep 18	G .1	FWS	3,000		1,000			Excellent
1941								
Sep 20	G .5	FWS	10,000		3,000			Good. 10,000 fish off mouth
1942								
Sep 15	G 1.0	FWS	1,000					Poor
1947								
Sep 7	G .3	FRI	2,500					
1948								
Aug 13	G .3	FRI						No fish seen
1953								
Sep 10	G .5	FWS			11		1 coho	No fish above high tide mark

111-30 KLAM CREEK K 82A
N55°50.9 W131°28 Previous No. 81A

KETCHIKAN, BEHM CANAL, GEDNEY PASS, KLU BAY, N.W. corner

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 1,000
SPAWNING FACILITIES Limited primarily to the intertidal zone by lack of upstream gravels below the barrier falls.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut. Main valley forks 2 miles above saltwater into 2 short valleys.
DRAINAGE 5 square miles (Polar Planimeter). Precipitation fed through a chain of small lakes and scattered muskeg areas. Bare rock ridges.
STREAM MOUTH IDENTIFICATION Short intertidal inlet turns toward the N. at the low tide point around the point on the E. side of the stream.
ANCHORAGE In Klu Bay, 18 fathoms, soft bottom.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH >.1 miles AVERAGE WIDTH/DEPTH 10-20'/12"
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES Falls in intertidal zone passable on high tide.

UPSTREAM

LENGTH ACCESSIBLE <.2 miles AVERAGE WIDTH/DEPTH 15'/12"
GRADIENT AND VELOCITIES >3° at >3' per second
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS 30' falls reported less than .2 miles, impassable.
TRIBUTARIES Small tributary enters from E. about high tide, blocked by 15' cascade.
SCHOOLING AREAS

SPAWNING AREAS Very limited gravel in the boulder and bedrock stream bed offers poor facilities.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 7	G .1	FRI						1,600 pink at mouth
1948								
Aug 13	G .3	FRI						No fish seen
1953								
Sep 10	G .1	FWS						None observed

111-30 NEETS CREEK K 83
N55°47.2 W131°29 Previous No. 82

KETCHIKAN, BEHM CANAL, NEETS BAY, E. head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Poor. Limited to the intertidal zone.
STREAM TEMPERATURES Warm range (estimated). Observed temperature: 52.8°F., 9/8/47.
VALLEY DESCRIPTION Glacial origin, stream eroded. Two lower valley lake basins. Valley and slopes have been recently logged. Rocky ridges along S., hanging valleys.
DRAINAGE 16 square miles (Polar Planimeter). Precipitation fed through two small lakes, some muskeg.
STREAM MOUTH IDENTIFICATION Broad intertidal delta at head of Neets Bay. Grassflats along edge of woods.
ANCHORAGE At drop-off.
TRAILS AND SURVEY ROUTES Logging roads throughout valley.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .4 miles AVERAGE WIDTH/DEPTH 20'/12-18"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand, gravel and scattered rocks.
HIGH TIDE LOCATION At the base of the first split just above the head of the grassflats.
SCHOOLING AREAS Schools have been observed at tidal confluence only.
SPAWNING AREAS Upper intertidal zone facilities are limited, but considered good.
GENERAL NOTES The intertidal zone is the primary spawning area in the stream.

UPSTREAM

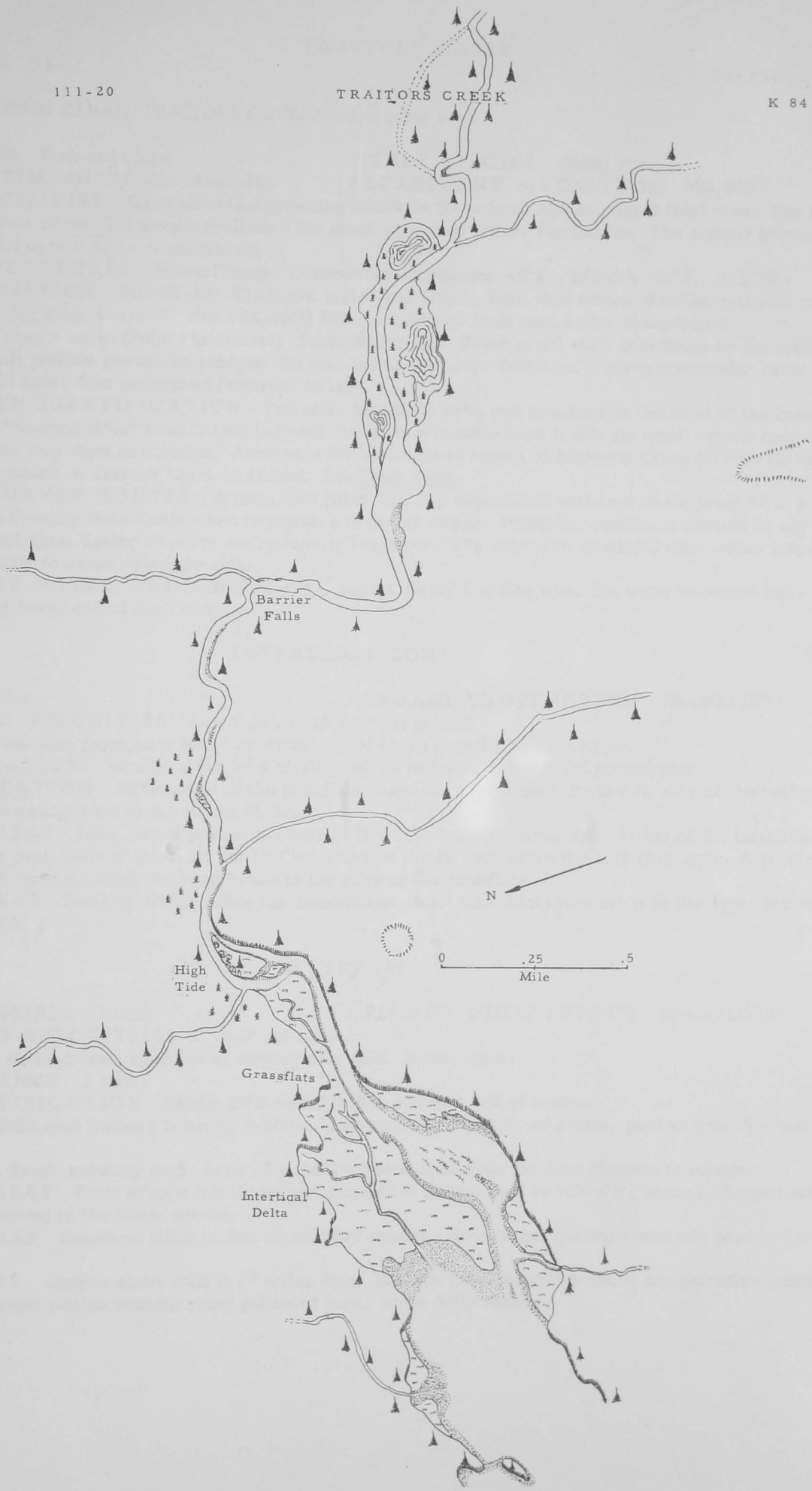
LENGTH ACCESSIBLE .1 miles AVERAGE WIDTH/DEPTH 10-20'/18"
GRADIENT AND VELOCITIES Less than 1° at 1' per second
BOTTOM Shale slabs, bedrock, moss covered.
MARKER DISTANCE .1 miles.
MARKER IDENTIFICATION Falls.
BARRIERS Each of the three splits have barrier falls, ranging from 10-15' in height. Pink and chum salmon are effectively blocked. However, coho and red salmon could pass under idead water conditions.
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS None.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1942 Sep 14	G .5	FWS			500			Poor. 1,000 fish off mouth
1947 Sep 8	G .2	FRI						None in stream. 30 salmon seen off mouth
1948 Aug 18	G .5	FWS						Poor
1953 Sep 10	G .1	FWS	0		0			No other fish. None in bay


Barrier
Falls
N
0
.25
.5
Mile
High
Tide
Grassflats
Intertidal
Delta

KETCHIKAN, BEHM CANAL, TRAITORS COVE, head of inner cove

MAJOR SPECIES Pink and chum OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE >20,000
SPAWNING FACILITIES Good intertidal spawning facilities throughout the long upper tidal area. The lower half of the accessible stream has some excellent riffle areas with good gravel distribution. The coarser gravels below the falls do not appear to be as satisfactory.
STREAM TEMPERATURES Normal range. Observed temperatures: 48°F., 8/2/50; 48°F., 8/5/50.
VALLEY DESCRIPTION Stream cut. Timbered valley and slopes, bare rock ridges. 8 miles to divide ridges. 8 miles to divide ridge above W. side of Carroll River. Scattered high pond basins along ridges.
DRAINAGE 34 square miles (Polar Planimeter). Precipitation fed. Some small early snowfields on the southern ridges. Scattered small pothole ponds along ridges. No lake in main valley. Scattered muskeg areas color water during rains. 150-200 cubic feet per second (estimate 8/16/47).
STREAM MOUTH IDENTIFICATION Extensive intertidal delta and grassflats at the head of the inner cove.
ANCHORAGE "Roaring Hole" constriction between the inner and outer cove is safe for small vessels only on slack tides which are very short in duration. Anchorage for overnight at mouth of Margaret Creek (K 85). Good anchorage available off mouth of Traitors Creek if desired. See Coast Pilot.
TRAILS AND SURVEY ROUTES A good skiff (over 15') and dependable outboard motor (over 12 h. p.) can be taken through Roaring Hole safely when impassable to larger vessels. However, caution is advised at any time other than slack tide. Spring tides are exceptionally hazardous. The extensive intertidal zone makes proper mooring of skiff necessary to avoid delays for tides.
AERIAL SURVEY NOTES Aerial visibility good, except during flooding when the water becomes dark. Terminal falls visible at lower end of short canyon.

INTERTIDAL ZONE

LENGTH 1.3 miles AVERAGE WIDTH/DEPTH 75-200'/18"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Sand and mud throughout lower intertidal, good small gravel (shale) in upper.
LOW TIDE LOCATION Near S. shore by a small point .6 miles from intertidal constriction.
HIGH TIDE LOCATION At the head of the grassflats where the stream contacts the N. side of the valley. A mark has been placed on a stump on the N. bank.
SCHOOLING AREAS Long, broad pool at the base of the steep hillside at the constriction of the intertidal zone. A second long pool, over 6' deep, at the 180° bend toward the N. just below the high tide mark. A pool at the high tide mark extends along the bend below to the edge of the grassflats.
SPAWNING AREAS Some spawning below the constriction. Most intertidal spawning is in the upper sections.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE 1 mile AVERAGE WIDTH/DEPTH 30-60'/12-18"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Sand, shale gravel, small rock, coarser near falls. Brown algae.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION Barrier falls over 10' high at lower end of canyon.
BARRIERS 10' falls over bedrock is nearly vertical. Maximum flow just S. of center, pool at base. Several falls above are higher.
TRIBUTARIES Small tributary on S. bank .3 miles upstream accessible for short distance to salmon.
SCHOOLING AREAS Pools at intervals throughout accessible stream used by schooling salmon. Largest schools have been observed in the lower stream.
SPAWNING AREAS Excellent riffle in first .5 miles of stream. More coarse gravels above are good and are used by chum.
GENERAL NOTES Canyon above falls is .7 miles long. The low gradient valley above has extensive grassflats. Ponds in the lower section contain many cutthroat trout, some dolly varden.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1930								
Sep 5		FWS	64,000		3,500			
1942								
Sep 9	G 1.0	FWS	5,000		10,000			Good. 5,000 fish off mouth
Sep 19	G .5	ASI	30,000		5,000			
1943								
Sep 14	G .5	FWS	20,000		10,000			Fair. 5,000 fish off mouth
1945								
Sep 20	G 1.0	FWS						40,000 est. at mouth and in creek
1946								
Oct 5	G .5	ASI						Poor. Few fish, some evidence of earlier fish
1947								
Aug 16	G 1.0	FRI			1,000			Few pink
1948								
Season	G 1.0	FWS						Chum, pink fair
1949								
Aug 24	G 1.0	FWS	50,000		75,000	10,000		Some dead pink
1950								
Aug 2	G .1	FRI						Chum, pink present. Run beginning
Aug 5	G 1.0	FRI	4,500	0	3,000	0		20,000 chum, pink off mouth
Aug 8	A 1.0	ASI,FWS						Many fish
Aug 10	A 1.5	FRI,FWS						Many fish
Aug 15	G .3	FRI	4,320		1,920			Many jumps in inner bay
1951								
Aug 28	A 1.0	FRI	5,000	5,000				Pink mostly spawning
1952								
July 26	G 1.0	FRI						None. 3 jumps in inner cove, 2 in outer
Aug 17	G 1.0	FRI	200	0	2,600			Few dead chum. 5-8,000 more chum. Visibility poor
Sep 7	G .0	FRI	0		0			No vis. Probably few if any fish
Oct 3	A 1.0	FRI			650			6-10,000 dead, mainly chum
1953								
Aug 17	A .3	FWS						Chums? Present in fair numbers. Visibility poor
Aug 19	A .3	FWS						Few fish present. Light poor
Aug 24	A .5	FWS						6 jumps at mouth, few chum in creek
Aug 26	G .8	FRI	240	6	1,240	15		
Aug 30	A .0	FWS						No jumps seen
Sep 10	G .8	FWS			450			Poor. All fish at tide head. Several jumps in salt water
1954								
Sep 4	A 1.0	FRI	3,500	0	500			Some dead chum. Pink schooled
1955								
Sep 14	G 1.0	FWS	8,000		5,000			500 at mouth
1957								
Aug 24		FWS	100		6,000			
Sep 5		FWS			4,000			1,000 dead
Sep 11	G 1.0	FRI	10		3,000			None observed at mouth
Sep 11	G 1.0	FWS	7		2,300			
Sep 19	G 1.0	FRI	5		1,100	8,000		
Sep 19	G 1.0	FWS			1,100			10,000 dead

KETCHIKAN, BEHM CANAL, TRAITORS COVE, S. shore 2 miles from entrance

MAJOR SPECIES Pink and chum OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Though there is little gravel less than 4-6" in diameter, the facilities are adequate for satisfactory spawning. Past observers have rated spawning facilities as "poor" while reporting escapements up to 20,000.
STREAM TEMPERATURES Warm range. Observed temperature: 59°F., 8/26/53.
VALLEY DESCRIPTION Stream cut. Muskeg areas along slopes on the S. side of the valley. Lake basin 1.3 miles upstream. Timber abundant.
DRAINAGE 26 square miles (Polar Planimeter). Precipitation fed through lake 1 mile long. Muskeg colored water very dark during rain and floods.
STREAM MOUTH IDENTIFICATION Extensive intertidal zone. Pilings present, used in past for mooring log rafts. Silt mud throughout lower intertidal zone. Cove off mouth well known crab area.
ANCHORAGE 8 fathoms off mouth of stream S.E. of island at entrance.
TRAILS AND SURVEY ROUTES Stream bottom slippery with brown algae. Easily walked during normal water levels.
AERIAL SURVEY NOTES Aerial visibility restricted upstream by trees along banks and shadows. Intertidal visibility adequate.

INTERTIDAL ZONE

LENGTH .4 miles AVERAGE WIDTH/DEPTH 40-60'/12"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Silt mud in lower area, sand, gravel, rocks and boulders above.
LOW TIDE LOCATION Opposite point on W. side of intertidal area.
HIGH TIDE LOCATION At the gravel bar mid-way between the head of the grassflats on the W. bank and the tributary on the W. bank at the 80° bend toward the S.
SCHOOLING AREAS Shallow pools in upper intertidal zone.
SPAWNING AREAS Riffles from 3/4 tide mark to high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .7 miles AVERAGE WIDTH/DEPTH 30-40'/12-18"
GRADIENT AND VELOCITIES 2->3° at 2-3' per second
BOTTOM Bedrock, small boulders, slate.
MARKER DISTANCE .7 miles.
MARKER IDENTIFICATION Impassable falls.
BARRIERS Falls are 30' high (estimated) in a chute and there are several smaller drops. Some small drops in the upper accessible stream are not barriers.
TRIBUTARIES Small tributary enters .1 miles upstream on W. bank. Low water discharge 3-4 cubic feet per second (estimated). Accessible for short distance to salmon on normal or higher water levels.
SCHOOLING AREAS A number of shallow (2-3' depth) pools throughout the stream hold small schools of salmon.
SPAWNING AREAS Very limited in the upstream. No major area.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1930								
Sep 5		FWS	64,000		3,500			
1942								
Sep 9	G 1.0	FWS	5,000		10,000			Good. 5,000 fish off mouth
Sep 19	G .5	ASI	30,000		5,000			
1943								
Sep 14	G .5	FWS	20,000		10,000			Fair. 5,000 fish off mouth
1945								
Sep 20	G 1.0	FWS						40,000 est. at mouth and in creek
1946								
Oct 5	G .5	ASI						Poor. Few fish, some evidence of earlier fish
1947								
Aug 16	G 1.0	FRI			1,000			Few pink
1948								
Season	G 1.0	FWS						Chum, pink fair
1949								
Aug 24	G 1.0	FWS	50,000		75,000	10,000		Some dead pink
1950								
Aug 2	G .1	FRI						Chum, pink present. Run beginning
Aug 5	G 1.0	FRI	4,500	0	3,000	0		20,000 chum, pink off mouth
Aug 8	A 1.0	ASI,FWS						Many fish
Aug 10	A 1.5	FRI,FWS						Many fish
Aug 15	G .3	FRI	4,320		1,920			Many jumps in inner bay
1951								
Aug 28	A 1.0	FRI	5,000	5,000				Pink mostly spawning
1952								
July 26	G 1.0	FRI						None. 3 jumps in inner cove, 2 in outer
Aug 17	G 1.0	FRI	200	0	2,600			Few dead chum. 5-8,000 more chum. Visibility poor
Sep 7	G .0	FRI	0		0			No vis. Probably few if any fish
Oct 3	A 1.0	FRI			650			6-10,000 dead, mainly chum
1953								
Aug 17	A .3	FWS						Chums? Present in fair numbers. Visibility poor
Aug 19	A .3	FWS						Few fish present. Light poor
Aug 24	A .5	FWS						6 jumps at mouth, few chum in creek
Aug 26	G .8	FRI	240	6	1,240	15		
Aug 30	A .0	FWS						No jumps seen
Sep 10	G .8	FWS			450			Poor. All fish at tide head. Several jumps in salt water
1954								
Sep 4	A 1.0	FRI	3,500	0	500			Some dead chum. Pink schooled
1955								
Sep 14	G 1.0	FWS	8,000		5,000			500 at mouth
1957								
Aug 24		FWS	100		6,000			
Sep 5		FWS			4,000			1,000 dead
Sep 11	G 1.0	FRI	10		3,000			None observed at mouth
Sep 11	G 1.0	FWS	7		2,300			
Sep 19	G 1.0	FRI	5		1,100	8,000		
Sep 19	G 1.0	FWS			1,100			10,000 dead

KETCHIKAN, BEHM CANAL, TRAITORS COVE, S. shore 2 miles from entrance

MAJOR SPECIES Pink and chum OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Though there is little gravel less than 4-6" in diameter, the facilities are adequate for satisfactory spawning. Past observers have rated spawning facilities as "poor" while reporting escapements up to 20,000.
STREAM TEMPERATURES Warm range. Observed temperature: 59°F., 8/26/53.
VALLEY DESCRIPTION Stream cut. Muskeg areas along slopes on the S. side of the valley. Lake basin 1.3 miles upstream. Timber abundant.
DRAINAGE 26 square miles (Polar Planimeter). Precipitation fed through lake 1 mile long. Muskeg colored water very dark during rain and floods.
STREAM MOUTH IDENTIFICATION Extensive intertidal zone. Pilings present, used in past for mooring log rafts. Silt mud throughout lower intertidal zone. Cove off mouth well known crab area.
ANCHORAGE 8 fathoms off mouth of stream S.E. of island at entrance.
TRAILS AND SURVEY ROUTES Stream bottom slippery with brown algae. Easily walked during normal water levels.
AERIAL SURVEY NOTES Aerial visibility restricted upstream by trees along banks and shadows. Intertidal visibility adequate.

INTERTIDAL ZONE

LENGTH .4 miles AVERAGE WIDTH/DEPTH 40-60'/12"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Silt mud in lower area, sand, gravel, rocks and boulders above.
LOW TIDE LOCATION Opposite point on W. side of intertidal area.
HIGH TIDE LOCATION At the gravel bar mid-way between the head of the grassflats on the W. bank and the tributary on the W. bank at the 80° bend toward the S.
SCHOOLING AREAS Shallow pools in upper intertidal zone.
SPAWNING AREAS Riffles from 3/4 tide mark to high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .7 miles AVERAGE WIDTH/DEPTH 30-40'/12-18"
GRADIENT AND VELOCITIES 2->3° at 2-3' per second
BOTTOM Bedrock, small boulders, slate.
MARKER DISTANCE .7 miles.
MARKER IDENTIFICATION Impassable falls.
BARRIERS Falls are 30' high (estimated) in a chute and there are several smaller drops. Some small drops in the upper accessible stream are not barriers.
TRIBUTARIES Small tributary enters .1 miles upstream on W. bank. Low water discharge 3-4 cubic feet per second (estimated). Accessible for short distance to salmon on normal or higher water levels.
SCHOOLING AREAS A number of shallow (2-3' depth) pools throughout the stream hold small schools of salmon.
SPAWNING AREAS Very limited in the upstream. No major area.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1930								
Sep 5		FWS			4,000			8,000 pink at mouth
1941								
Sep 20	G 1.5	FWS	15,000		16,000			Excellent. 4,000 fish off mouth
1942								
Sep 10	G 1.0	FWS	1,000		4,000			Good. 5,000 fish off mouth
Sep 18	G 1.0	FWS	11,000		12,000			Good. 2,500 pink off mouth
1946								
Oct 4	G .3	ASI						Fair. Fish present
1947								
Aug 15	G .7	FRI	1		10			
Sep 22	G 1.0	FWS						Good. Stream shows good escapement
1949								
Aug 24	G .3	FWS	75		75			
1951								
Aug 28 S	A .7	FRI						Some chum, many dead. Vis. Poor
1952								
Aug 4 S	G .7	FRI	0	0	0	0		Too early
Aug 17 S	G .3	FRI	0	0	8	0		High water
1953								
Aug 26 S	G .5	FRI	6	2	17	2		
Sep 10	G 1.3	FWS			6,500			Poor. 60% fresh fish in stream, few jumps outside
1955								
Sep 14	G 1.0	FWS	2,500		2,000			
1956								
July 24		FWS	100					
Aug 4		FWS						10-15,000 pink at mouth
Aug 8		FWS	45,000		5,000			
Aug 16	G .0	ADF,FWS	30,000					
Aug 16		FWS	80,000		20,000			
Aug 19		FWS	100,000					
Aug 19		FWS	87,500		37,500			
Aug 26		FWS			21,000			
Sep 15	G 1.0	FWS	45,600		30,400			Excellent. 20% dead

111-20 LORING CREEK K 86
N55°36.1 W131°37.5 Previous No. 85G

KETCHIKAN, BEHM CANAL, NAHA BAY, E. of Loring at old cannery ruins

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep. -Oct. ESCAPEMENT MAGNITUDE 1-2,000
SPAWNING FACILITIES Good, though limited by stream size and short distance accessible to salmon. The spawning areas are brushy, offering good concealment for salmon. Intertidal facilities are also good in the upper zone.
STREAM TEMPERATURES Warm range (estimated). Stream originates on S. slope of mountain behind Loring and receives full summer sunlight on drainage.
VALLEY DESCRIPTION Stream cut valley originating in the ridges of the mountain N. of Loring. Timbered lower valley, muskeg areas, rock ridges.
DRAINAGE 4 square miles (estimated). Precipitation fed. Some muskeg areas, clear water. Small lake estimated two miles upstream.
STREAM MOUTH IDENTIFICATION Broad intertidal delta, old Loring cannery ruins adjacent.
ANCHORAGE At Loring or at the drop-off of the delta.
TRAILS AND SURVEY ROUTES Short, brushy stream easily walked to falls.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 miles AVERAGE WIDTH/DEPTH 30-40'/8-12"
GRADIENT AND VELOCITIES 2° at 2-3' per second
BOTTOM Shale gravel, some granite and quartz.
HIGH TIDE LOCATION At the head of the grassflats. Gravel bars in split area with alder.
SCHOOLING AREAS
SPAWNING AREAS Upper intertidal area.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .1 miles AVERAGE WIDTH/DEPTH 40'/12"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Shale gravel mixed with granite and quartz, granite boulders.
MARKER DISTANCE .1 miles.
MARKER IDENTIFICATION Falls.
BARRIERS Falls over 50' high, nearly vertical.
TRIBUTARIES None below falls.
SCHOOLING AREAS

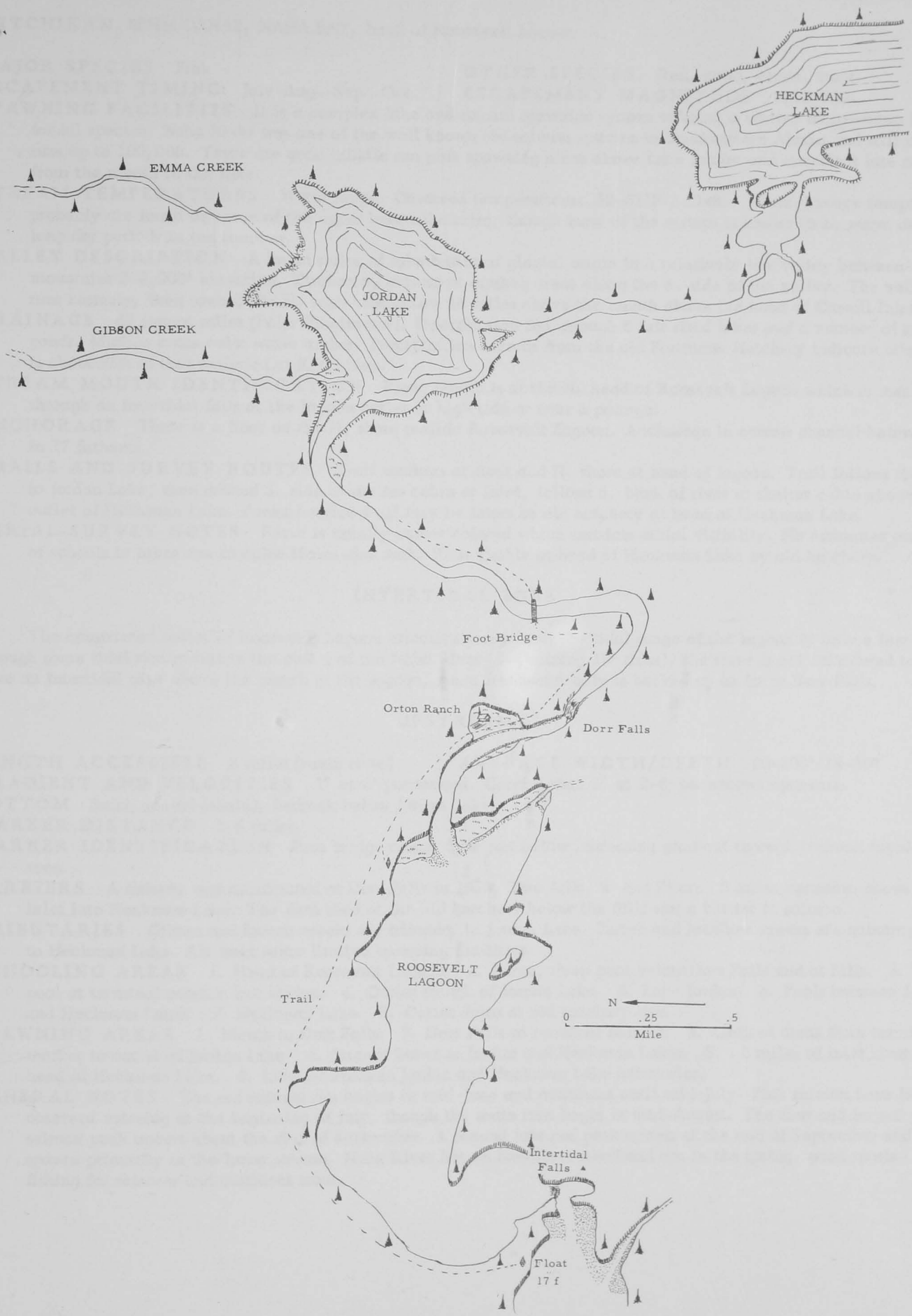
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Aug 15	G .2	FRI						No fish


HECKMAN LAKE
EMMA CREEK
JORDAN LAKE
GIBSON CREEK
Foot Bridge
Orton Ranch
Dorr Falls
ROOSEVELT LAGOON
Trail
N
0
.25
.5
Mile
Intertidal Falls
Float
17 f

NAHA RIVER

KETCHIKAN, BEHM CANAL, NAHA BAY, head of Roosevelt Lagoon

MAJOR SPECIES Pink
OTHER SPECIES Red, coho, chum, trout
ESCAPEMENT TIMING July-Aug.-Sep.-Oct.
ESCAPEMENT MAGNITUDE >200,000

SPAWNING FACILITIES It is a complex lake and stream spawning system offering a variety of spawning facilities for all species. Naha River was one of the well known red salmon systems in Southeastern Alaska and still supports runs up to 100,000. There are good middle run pink spawning areas above Lake Jordan and excellent late run areas from the mouth to the lake.

STREAM TEMPERATURES Warm range. Observed temperatures: 52-61°F., 1949. Normal range temperatures probably are found on some of the upper lake tributaries, though most of the system is known to be warm during long dry periods in the summer.

VALLEY DESCRIPTION A broad series of lake basins of glacial origin in a relatively low valley between mountains 3-4,000' elevation. Timbered, extensive muskeg areas along the S. side of the valley. The valley runs easterly, then toward the N. with headwaters 16 miles above the mouth above the head of Carroll Inlet.

DRAINAGE 48 square miles (Polar Planimeter). Precipitation fed through 6 fair sized lakes and a number of small ponds. Muskeg areas color water amber. Precipitation records from the old Fortmann Hatchery indicate rainfall is about 98% of that recorded at Ketchikan.

STREAM MOUTH IDENTIFICATION River mouth is at the N. head of Roosevelt Lagoon which is reached through an intertidal falls at the lagoon outlet at high tide or over a portage.

ANCHORAGE There is a float on the N. shore outside Roosevelt Lagoon. Anchorage in narrow channel below float in 17 fathoms.

TRAILS AND SURVEY ROUTES Trail markers at float and N. shore at head of lagoon. Trail follows river to Jordan Lake, then around S. side to shelter cabin at inlet, follows S. bank of river to shelter cabin above outlet of Heckman Lake. Forest Service skiff may be taken to old hatchery at head of Heckman Lake.

AERIAL SURVEY NOTES River is usually amber colored which restricts aerial visibility. No estimates possible of schools in lakes due to color. Holes also dark. Reds visible at head of Heckman Lake by old hatchery.

INTERTIDAL ZONE

The constricted outlet of Roosevelt Lagoon effectively regulates the tidal range of the lagoon to only a few feet. Though some tidal rise occurs in the outlet of the Naha River (3-4' during 18' tides), the river is not considered to have an intertidal zone above the mouth at the lagoon, since freshwater only is backed up as far as Dorr Falls.

UPSTREAM

LENGTH ACCESSIBLE 6 miles (main river)
AVERAGE WIDTH/DEPTH 60-100'/18-36"

GRADIENT AND VELOCITIES 1° at 2' per second. Greater than 3° at 2-4' per second upstream.

BOTTOM Sand, gravel (shale), bedrock below Jordan Lake.

MARKER DISTANCE 1.5 miles.

MARKER IDENTIFICATION Foot bridge across river just below increasing gradient through bedrock rapids area.

BARRIERS A fishway was constructed at Dorr Falls in 1950. Two falls, 5' and 7' are .2 miles upstream above the inlet into Heckman Lake. The dam used at the old hatchery below the falls was a barrier to salmon.

TRIBUTARIES Gibson and Emma creeks are tributary to Jordan Lake. Partee and McCune creeks are tributary to Heckman Lake. All have some limited spawning facilities.

SCHOOLING AREAS 1. Head of Roosevelt Lagoon. 2. Large, deep pool below Dorr Falls and at falls. 3. Deep pool at terminal marker foot bridge. 4. Outlet slough of Jordan Lake. 5. Lake Jordan. 6. Pools between Jordan and Heckman Lakes. 7. Heckman Lake. 8. Outlet delta at old hatchery site.

SPAWNING AREAS 1. Mouth to Dorr Falls. 2. Dorr Falls to terminal marker. 3. Limited areas from terminal marker to outlet of Jordan Lake. 4. Stream between Jordan and Heckman Lakes. 5. .2 miles of inlet river at head of Heckman Lake. 6. Limited areas in Jordan and Heckman Lake tributaries.

GENERAL NOTES The red salmon run begins in mid-June and continues until mid-July. Pink salmon have been observed entering at the beginning of July, though the main runs begin in mid-August. The first and largest pink salmon peak occurs about the first of September. A second late run peak occurs at the end of September and spawns primarily in the lower stream. Naha River has an excellent steelhead run in the spring, good sports fishing for rainbow and cutthroat trout.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1930								
Sep 4	G 5.6	FWS	200,000					
1940								
Sep 18	G 4.5	ASI,FWS	200,000		20,000			Good. 30,000 fish off mouth
1941								
Sep 20	G 4.0	FWS	200,000					Good. 5,000 fish off mouth
1942								
Sep 13	G 3.0	FWS	50,000		2,000			Fair. 2,000 off mouth. Smallest run in 26 years
1943								
Aug 31	G 3.0	FWS	25,000					Fair. 5,000 off mouth
Sep 20	G 3.0	FWS	75,000		5,000			Good. 15,000 off mouth
1947								
Aug 15	G 2.6	FRI	3,000					>200 off mouth
Aug 24	G 2.6	FRI	>5,000					>200 off mouth
Aug 26	G 2.6	FRI	>10,000					500-700 off mouth
Aug 30	G 2.6	FRI	15,000					1,000 off mouth
Sep 21	G 8.0	FRI	28,000		100		100 coho, 1,000 red	
1948								
Season	G 9.0	FWS	270,000		5,000		5,000 coho, 150,000 red.	Excellent
1949								
June 1		FWS						Fish arrived
July 18	G .1	FRI					2,000 red	Few pink
Aug 25	G 1.5	FRI	72,000	200			Some coho, red	
Sep 14	G 2.5	FRI	150,000					Few dead pink
Sep 30	G 1.5	FRI	90,000	2,000	5,000		2,000 coho	
1950								
June 20		FWS						100 red at mouth
June 28		FWS					10,000 red	5,000 red at mouth
July 5		FWS					20,000 red	5,500 red at mouth
July 11		FWS	200				35,000 red	2,500 pink, 2,500 red at mouth
July 18		FWS					2,000 red	None at mouth
July 23		FWS					45,000 red	5,000 red at mouth
July 30		FWS	15,000				60,000 red	5,000 pink, 5,000 red at mouth
Aug 7		FWS	60,000				5,000 red	8,000 pink, 2,000 red at mouth
Aug 14		FWS	125,000		500		110 red	100 chum, 10,000 pink, 5,000 red at mouth
Aug 15	A	FRI						Good showing
Aug 21		FWS						2,000 pink at mouth
1951								
Aug 28	A	FRI					Sev. 1,000 red	Pink present
Sep 17	G 2.6	FRI	20,000					No spawning yet
1952								
Aug 4	G 1.0	FRI	1,000	0			300 coho	Some chum. Pink run just starting
Aug 18	G 2.0	FRI	3,000	0			Sev. 100 coho	Some chum. Fish moving in fast
Sep 6	G	FRI						No visibility. Very high water
Sep 17	G 3.3	FRI	15,000					
Oct 2	G 3.3	FRI	1,100	1,000			150 coho	
Oct 3	A 2.5	FRI						Vis. 30%. Many in slough below Jordan Lake
1953								
June 11	A 7.3	FWS						No fish seen
June 11	G .1	FWS	0		0		Few red	
June 21	G 7.3	FWS						Red jumps at mouth of lagoon
July 17	A .1	FWS						Jumpers present

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1953								
July 22	G .1	FWS						First appearance of pink
Sep 9	G 1.5	FWS						Poor. Coho, pink below fall. Vis. poor
1954								
Aug 22	G 5.6	FRI	25,000					Few chum. Few dead chum, pink. Low water
Sep 17	G	ADF					1,850 red	Spawning past peak
1955								
Aug 18	G	FWS					8,000 red	15,000 chum, pink
Sep 11	G	FWS	60,000					
1956								
July 9		FWS					18,000 red	
Aug 16		FWS	8,000					
Sep 15	G 5.6	FWS	80,360		1,640			
1957								
June 28		FWS					1,500 red	
July 2		FWS					400 coho, 2,500 red	
July 18		FWS			8,200			
Sep 9		FWS	11,000					
Sep 12	G 5.6	FWS	20,000		1,000			
Sep 20	G 5.6	FRI	65,000		190			
Sep 20	G 5.6	FWS	65,000		200			

111-20 STEELHEAD CREEK K 87A
N55°35.1 W131°36.9 Previous No. 85J

KETCHIKAN, BEHM CANAL, NAHA BAY, S. shore opposite Naha River float

MAJOR SPECIES Pink OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Good. Clear water, gravel bottom and good spawning velocities.
STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION Stream cut through flat valley, grass meadows scattered along stream bed. Low gradient for first mile.
DRAINAGE 3-4 square miles (estimated). Precipitation fed through several small lakes.
STREAM MOUTH IDENTIFICATION Short, passable intertidal falls visible from the Naha River float and trail marker below the outlet of Roosevelt Lagoon.
ANCHORAGE At Naha River float or in the channel below the float.
TRAILS AND SURVEY ROUTES Easily walked stream, some brush and windfalls, to barrier falls.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH AVERAGE WIDTH/DEPTH 25'/10"
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .7 miles AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES 1-2° at 2' per second
BOTTOM Shale gravel.
MARKER DISTANCE .7 miles.
MARKER IDENTIFICATION Barrier falls.
BARRIERS 25' falls impassable to salmon.
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Aug 15		FRI						No fish seen
1953								
Aug 15	G .1	FWS						No fish seen
Sep 4	G .1	FWS						No fish seen

KETCHIKAN, BEHM CANAL, MOSER BAY, E. shore near entrance

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 2,000
SPAWNING FACILITIES Limited by accessible stream length and lack of spawning gravels.
STREAM TEMPERATURES Warm range. Observed temperature: 52°F., 9/24/50.
VALLEY DESCRIPTION Short stream cut valley through 2 small lake basins. Wooded and brushy. Steep.
DRAINAGE 5-6 square miles (estimated). Precipitation fed through two small lakes. Some muskeg areas.
STREAM MOUTH IDENTIFICATION Stream is just S. of homesite in small cove on the E. shore. A Forest Service trail marker on the S. bank of the steep, rocky intertidal zone.
ANCHORAGE In the small cove by the homesite.
TRAILS AND SURVEY ROUTES The Forest Service trail leads to both lakes.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH < .1 miles AVERAGE WIDTH/DEPTH 20'/12"
GRADIENT AND VELOCITIES 2° at 2-3' per second
BOTTOM Coarse broken rock, little gravel.
HIGH TIDE LOCATION Just above Forest Service trail marker.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .2 miles AVERAGE WIDTH/DEPTH 15-20'/14"
GRADIENT AND VELOCITIES 2-3° at 2-3' per second
BOTTOM Little gravel, coarse broken rock and bedrock.
MARKER DISTANCE .2 miles.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls over 20' high in three stages block all salmon migration. Small, passable falls a short distance above high tide.
TRIBUTARIES Tributary enters from S. about 100 yards above high tide, blocked by falls 6' high 50 yards upstream.
SCHOOLING AREAS

SPAWNING AREAS

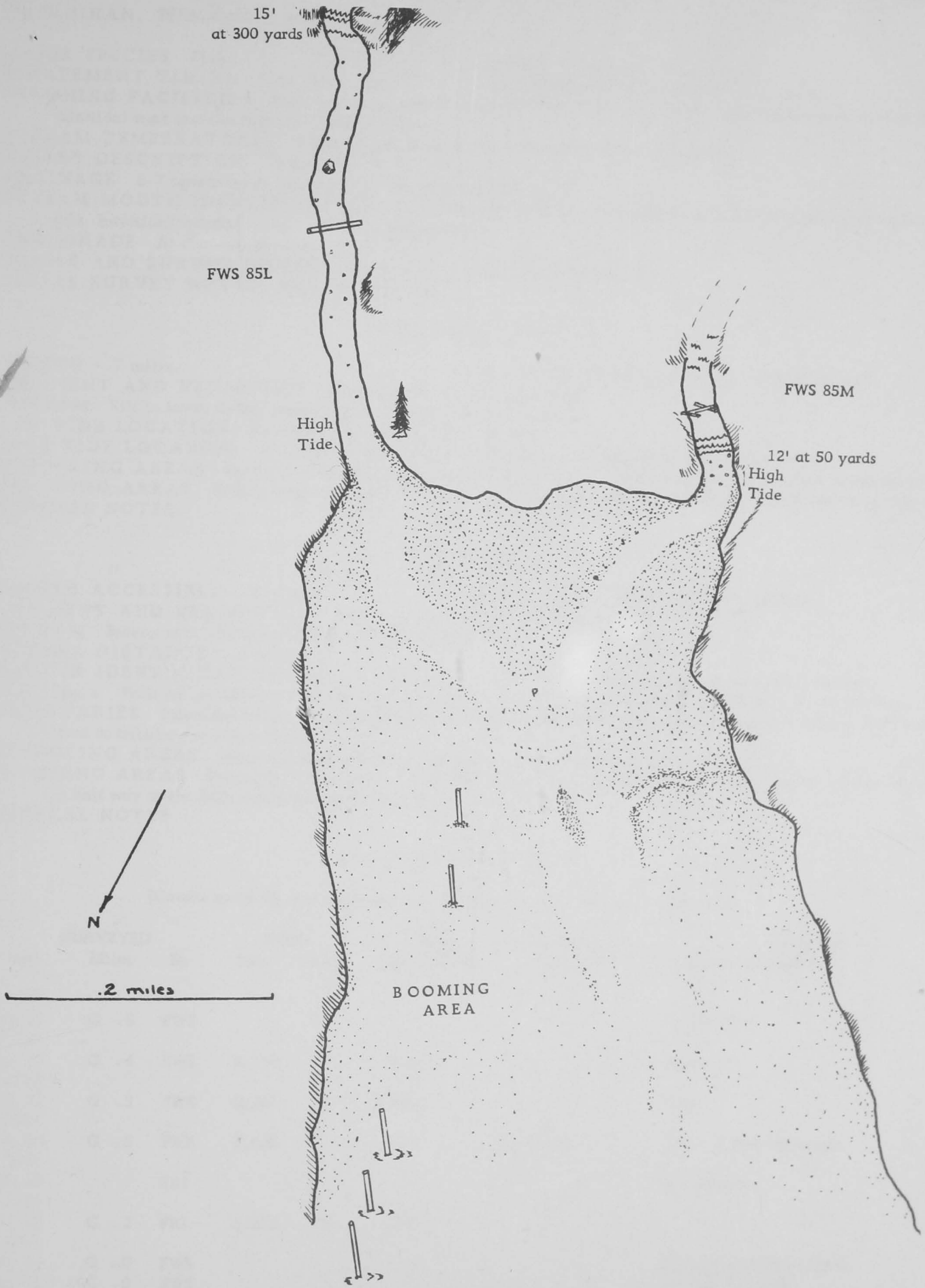
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940 Sep 17	G .3	FWS	8,000		1,000			Excellent
1942 Sep 18	G .8	ASI	800		2,000			Good
1943 Sep 14	G .3	FWS	500		200			Poor. 2,500 fish off mouth
1947 Aug 17	G .5	FRI						No fish seen
1949 Aug 30	A	FRI						No fish seen
1950 Sep 24	G .1	FRI	335	35	850	150		
1953 July 21	G .0	FWS						No fish present
July 22	G .0	FWS						Few pink
July 26	G .0	FWS						Few chum and pink
Aug 31	G .0	FWS						Few chum and pink

MOSER CREEK


15'
at 300 yards
FWS 85L
High
Tide
FWS 85M
12' at 50 yards
High
Tide
N
.2 miles
BOOMING
AREA

111-20
N55°31.8 W131°38.3

MOSER CREEK

K 89
Previous No. 85L&M

KETCHIKAN, BEHM CANAL, MOSER BAY, head

MAJOR SPECIES Pink
OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE 5,000
SPAWNING FACILITIES Fair. Upstream spawning facilities are very limited and most spawning occurs in the intertidal zone and the first 150 yards of stream.
STREAM TEMPERATURES Warm range. Observed temperatures: 50°F., 9/23/50.
VALLEY DESCRIPTION Stream cut.
DRAINAGE 6-7 square miles (estimated). Precipitation fed.
STREAM MOUTH IDENTIFICATION Long intertidal zone with mud delta. Log booming piling along the E. side. Intertidal tributary enters from W. near high tide.
ANCHORAGE At drop-off by outer piling.
TRAILS AND SURVEY ROUTES Easily walked during normal water levels.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .7 miles.
AVERAGE WIDTH/DEPTH 20-40'/12-18"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Silt in lower delta, sand, gravel, broken rocks and boulders.
LOW TIDE LOCATION By small point on W. shore, N. end.
HIGH TIDE LOCATION At entry into woods above confluence with intertidal tributary from W.
SCHOOLING AREAS Pool at intertidal confluence with W. tributary and scattered pools in upper intertidal zone.
SPAWNING AREAS Riffles below the confluence and above to lower sections of boulder riffles near high tide mark.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .2 miles
AVERAGE WIDTH/DEPTH 30'/15"
GRADIENT AND VELOCITIES Greater than 3° at 2-3' per second
BOTTOM Broken rock, boulders at intervals, some bedrock.
MARKER DISTANCE .2 miles.
MARKER IDENTIFICATION Falls on main stream and W. tributary stream (50 yards above high tide).
BARRIERS Falls on mainstream over 15' high (reported passable to steelhead) and 12' barrier falls on tributary.
TRIBUTARIES Intertidal tributary stream (Previous No. 85M) has only a short section of poor upstream facilities. Listed as tributary to Moser Creek.
SCHOOLING AREAS No major pool schooling reported. Salmon observed below falls.
SPAWNING AREAS Primarily in the lower, less coarse broken rock riffles of the first 150 yards of stream. A high log half way to the falls marks the upper boundary of this section.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1938								
Sep 21	G .5	FWS						2,500 fish
1940								
Sep 17	G .4	FWS	8,000		500			Excellent
1942								
Sep 11	G .5	FWS	2,500		2,500			Fair
1943								
Sep 14	G .5	FWS	1,000		500		Few chum	Poor. 5,000 off mouth
1947								
Aug 18		FRI						No fish seen
1950								
Sep 23	G .2	FRI	1,892	10	192			
1953								
July 21	G .0	FWS						First appearance of pink
Aug 31	G .0	FWS						Few chum, pink

111-20
N55°31.9 W131°42.4

K 89A
Previous No. 85N

KETCHIKAN, BEHM CANAL, CLOVER PASSAGE, E. shore opposite Joe Island

MAJOR SPECIES
ESCAPEMENT TIMING Late. Sep. -Oct.
SPAWNING FACILITIES

OTHER SPECIES
ESCAPEMENT MAGNITUDE <2,000

STREAM TEMPERATURES Warm range (estimated).
VALLEY DESCRIPTION
DRAINAGE
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
HIGH TIDE LOCATION
SCHOOLING AREAS

AVERAGE WIDTH/DEPTH

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

AVERAGE WIDTH/DEPTH

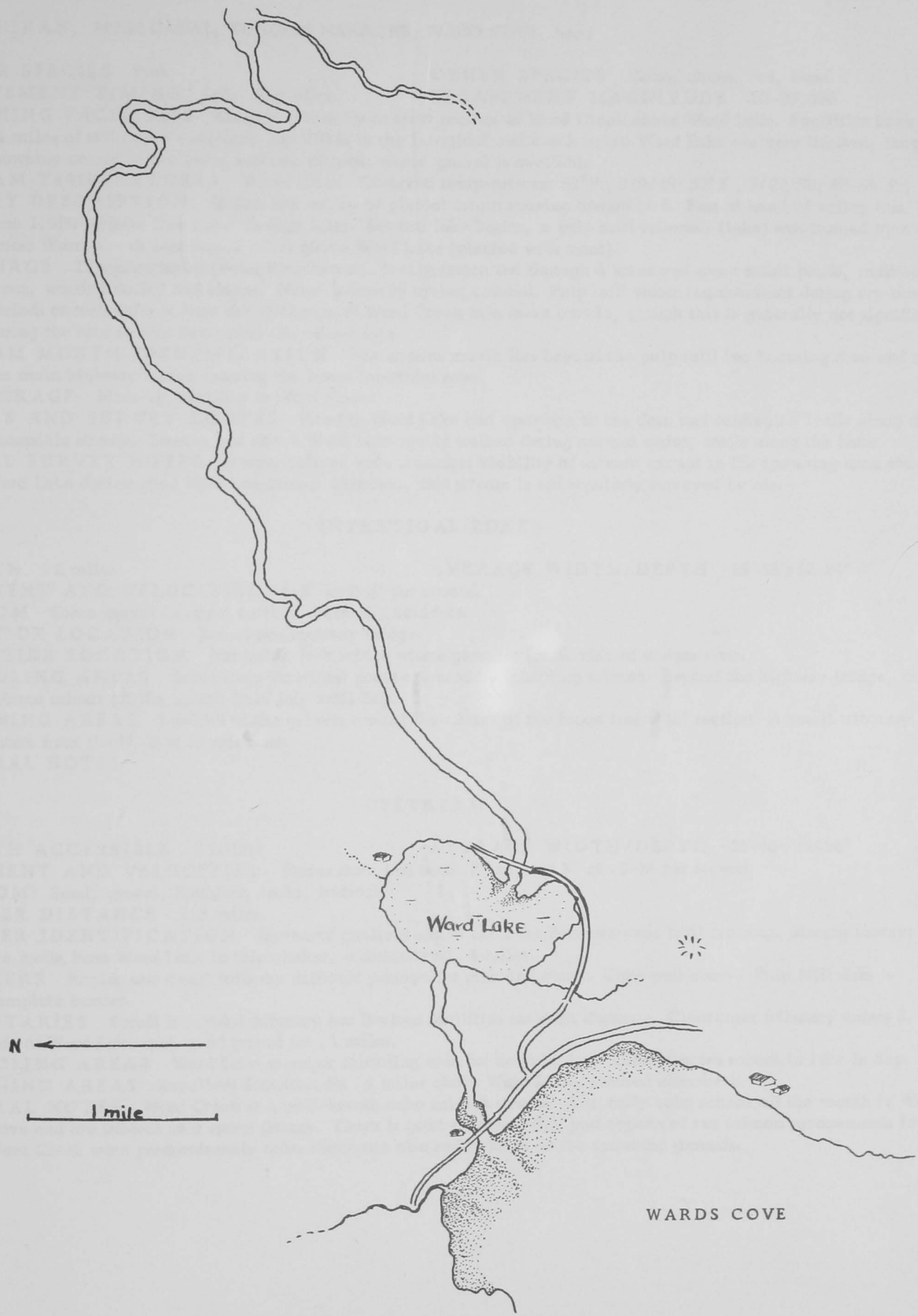
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1942								
Sep 11		FWS						2,000 fish


Ward Lake
N
1 mile
WARDS COVE

KETCHIKAN, BEHM CANAL, TONGASS NARROWS, WARD COVE, head

MAJOR SPECIES Pink
OTHER SPECIES Coho, chum, red, trout
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE 10-20,000
SPAWNING FACILITIES Limited primarily to short section of Ward Creek above Ward Lake. Facilities in the .4 miles of riffles are excellent. Facilities in the intertidal and creek below Ward Lake are very limited, though spawning occurs in the lower sections of pools where gravel is available.
STREAM TEMPERATURES Warm range. Observed temperatures: 59°F., 9/9/49; 52°F., 9/22/50; 49-55°F., 1951.
VALLEY DESCRIPTION Stream cut valley of glacial origin running toward N.E. Pass at head of valley less than 1,000' crosses into upper George Inlet. Several lake basins, a pulp mill reservoir (lake) was formed by a dam across Warm Creek less than 2 miles above Ward Lake (planted with trout).
DRAINAGE 17 square miles (Polar Planimeter). Precipitation fed through 4 lakes and some small ponds, muskeg areas, wooded valley and slopes. Water is usually amber colored. Pulp mill water requirements during dry summer periods occasionally reduce the discharge of Ward Creek to a mere trickle, though this is generally not significant during the runs in late Sep. after the rains begin.
STREAM MOUTH IDENTIFICATION The stream mouth lies beyond the pulp mill log booming area and has the main highway bridge crossing the lower intertidal zone.
ANCHORAGE Mooring facilities in Ward Cove.
TRAILS AND SURVEY ROUTES Road to Ward Lake and upstream to the dam and reservoir. Trails along the accessible stream. Stream bed above Ward Lake easily walked during normal water, trails along the bank.
AERIAL SURVEY NOTES Amber colored water restricts visibility of salmon except in the spawning area above Ward Lake during good light conditions. However, this stream is not regularly surveyed by air.

INTERTIDAL ZONE

LENGTH .2 miles
AVERAGE WIDTH/DEPTH 25-35'/12-24"
GRADIENT AND VELOCITIES 1-3° at 2-4' per second
BOTTOM Some gravel in upper section, bedrock, boulders.
LOW TIDE LOCATION Just above highway bridge.
HIGH TIDE LOCATION Just below foot bridge where grassflat on N. side of stream ends.
SCHOOLING AREAS Some deep intertidal pools are used by schooling salmon. Beyond the highway bridge, coho salmon school off the mouth from July until Sep.
SPAWNING AREAS Limited to the gravels around the center of the broad intertidal section. A small tributary enters from the N. side in this area.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE 2 miles
AVERAGE WIDTH/DEPTH 25-40'/12-24"
GRADIENT AND VELOCITIES Varies from less than .5° to over 3° at .5-3' per second
BOTTOM Sand, gravel, boulders, rocks, bedrock.
MARKER DISTANCE 1.3 miles.
MARKER IDENTIFICATION Increased gradient above the Lake Perserverance trail crossing. Stream surveys are made from Ward Lake to this marker, a distance of .4 miles.
BARRIERS Rapids and small falls are difficult passage for pink and chum. Coho pass above. Pulp Mill dam is complete barrier.
TRIBUTARIES Small intertidal tributary has limited facilities for short distance. Clearwater tributary enters S. side of Ward Lake with good gravel for .1 miles.
SCHOOLING AREAS Ward Lake is major schooling area for coho in Aug. Other species school in lake in Sep.
SPAWNING AREAS Excellent facilities for .4 miles above Ward Lake, limited elsewhere.
GENERAL NOTES Ward Creek is a well-known coho salmon stream. The early coho school off the mouth in Ward Cove and are subject to a sports fishery. There is good evidence that past reports of red salmon escapements in Ward Creek were predominantly coho which are also red colored on the spawning grounds.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1947								
Aug 31	G 3.0	FRI					1,500 coho	Few pink
1948								
Season		FWS						Poor
1949								
Aug 16	G 2.5	USFS	15					
Aug 23	G .5	USFS	4				24 coho	
Aug 31	G 2.0	USFS	73					
Sep 7	G 2.0	USFS	255					
Sep 9	G .3	FRI	110		31		6 red	
Sep 15	G 2.0	USFS	189					
Sep 28	G 2.0	USFS	5,940					
Oct 17		USFS	4,112					
1950								
Sep 22	G .3	FRI	152		3		322 red	Flooding
1951								
Sep 13	G .3	FRI	88	0	64	0	93 red	Many red at mouth in Ward Lake
Sep 27	G .3	FRI	7,800	650	1,200	100	600 red, 100 dead red.	Many fish spent and spawning
1956								
July 9		FWS					1,500 coho	
July 25		FWS					100 coho	750 coho at mouth
Aug 10		FWS					10,000 coho	

KETCHIKAN, BEHM CANAL, TONGASS NARROWS, E. shore just N. of Sunny Point

MAJOR SPECIES Pink
OTHER SPECIES Chum, trout
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE 1-2,000
SPAWNING FACILITIES Good, but very limited. Large gravel bars at the mouth have been used extensively for concrete work around Ketchikan. Recent concrete mixing operations deposited debris in the stream and probably further limited the spawning facilities to the short upstream section.
STREAM TEMPERATURES Warm range. Observed temperature: 55.5°F., 9/8/49.
VALLEY DESCRIPTION Stream cut mountain slope following strata in bedrock for sections of the lower stream.
DRAINAGE 4 square miles (Polar Planimeter). Precipitation fed through a small water reservoir. Wooded, brushy, some muskeg, water amber colored.
STREAM MOUTH IDENTIFICATION Concrete highway bridge crosses at high tide mark. City bus line turns at this point.
ANCHORAGE Piling at mouth may be used by smaller vessels. Sunny Point cannery (Nakat) float just S. of mouth.
TRAILS AND SURVEY ROUTES Easily walked.
AERIAL SURVEY NOTES Too small for aerial survey.

INTERTIDAL ZONE

LENGTH 100 yards
AVERAGE WIDTH/DEPTH 10-15'/6-12"
GRADIENT AND VELOCITIES 1-2° at 2' per second
BOTTOM Gravel, rock.
HIGH TIDE LOCATION Head of small pool just above the bridge.
SCHOOLING AREAS Shallow pool below bridge.
SPAWNING AREAS Riffles about the mid-tide point about 30 yards below the bridge.
GENERAL NOTES

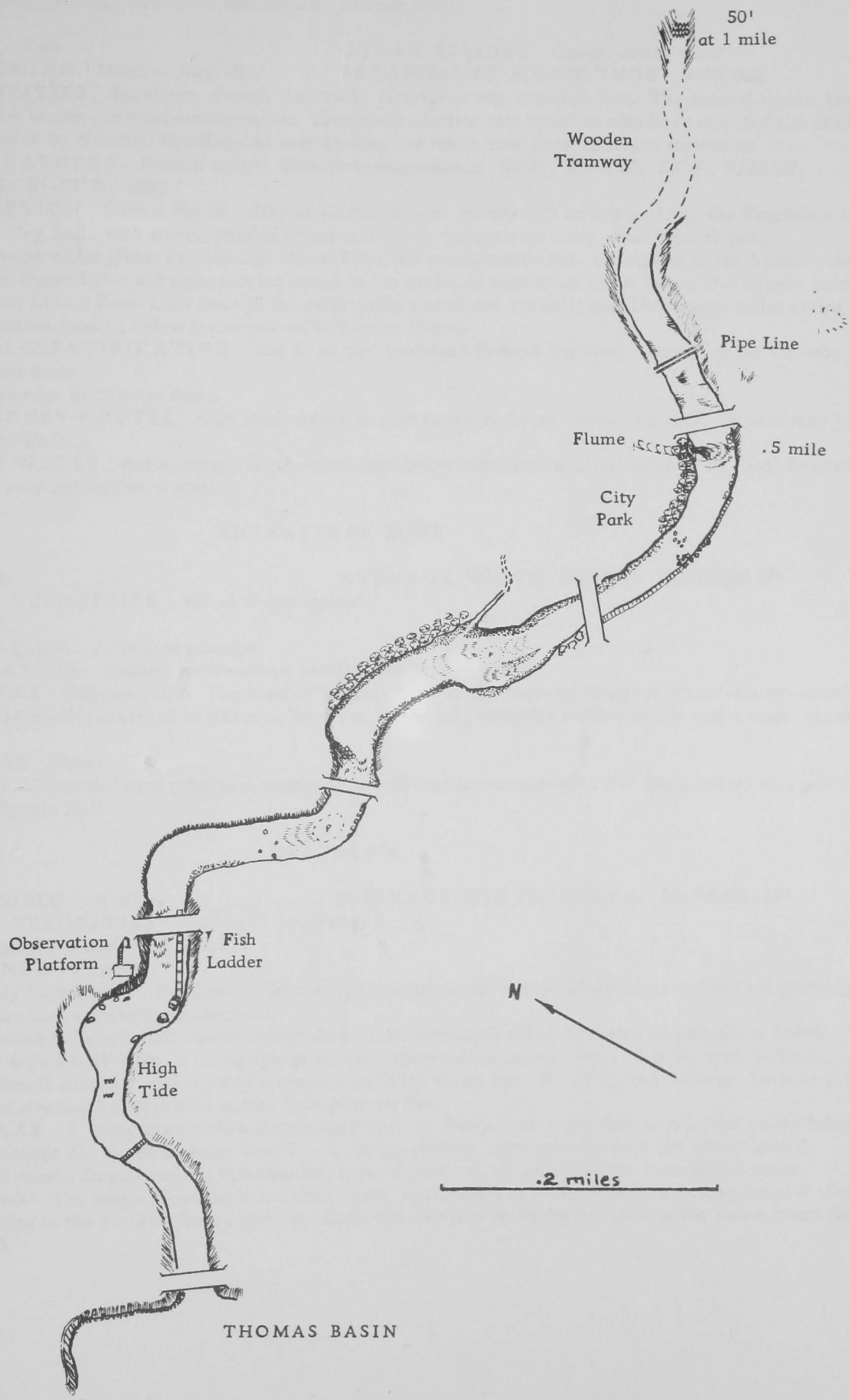
UPSTREAM

LENGTH ACCESSIBLE 50 yards
AVERAGE WIDTH/DEPTH 10-15'/6"
GRADIENT AND VELOCITIES >3° at 2' per second
BOTTOM Some gravel, rocks, boulders and bedrock.
MARKER DISTANCE 50 yards.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls drop vertically over bedrock, impassable.
TRIBUTARIES None.
SCHOOLING AREAS Pool at base of falls.
SPAWNING AREAS Gravel riffle at the outlet of the falls pool and around small gravel bar split.
GENERAL NOTES Carlana Creek can be considered to be very productive for the escapements that have been observed here are good for the available facilities. This stream is a typical example of the many small, unnumbered streams in Southeastern Alaska that collectively are an important source of salmon production.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 6	G .1	FRI	800		80			Excellent
1948								
Sep 10	G .1	FRI			150			
Sep 27	G .1	FRI						3,000 chum and pink
1949								
Sep 8	G .1	FRI	9		30			
1950								
Sep 20	G .1	FRI	100		16			
1951								
Sep 5	G .1	FRI	0	2	37	2		
Sep 14	G .1	FRI	8	1	258	16		Chum spawning. None at mouth
Sep 26	G .1	FRI	90	30	240	330		200 chum, 2,000 pink off mouth. Water low
1956								
Sep 30	G .1	FRI	>2,000					Some chum. Some dead pink. Most spawned



KETCHIKAN THOMAS BASIN

KETCHIKAN CREEK

KETCHIKAN, BEHM CANAL, TONGASS NARROWS, Thomas Basin

MAJOR SPECIES Pink
OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Middle. Aug.-Sep.
ESCAPEMENT MAGNITUDE 5-10,000
SPAWNING FACILITIES Excellent, though limited by Ketchikan city requirements. The natural stream bed has been confined by levees and road embankments. Ketchikan electric requirements also have affected the discharge of Ketchikan Creek by reducing flooding and maintaining low water flow from upstream reservoirs.
STREAM TEMPERATURES Normal range. Observed temperatures: 53°F., 9/16/47; 53°F., 9/21/47; 53°F., 9/12/49; 51-62°F., 1953.
VALLEY DESCRIPTION Stream cut in valley of glacial origin. Headwaters in two valleys, the Ketchikan lakes lie in the N. valley basin with steep, wooded slopes and the E. valley with steep, bare rock slopes.
DRAINAGE 14 square miles (Polar Planimeter). Snow field and precipitation fed. 6.8 square miles drains to the outlet of Ketchikan Upper Lake; 8.5 square miles drains to the outlet of Ketchikan Lower Lake; 11.5 square miles drains to the dam site on Fawn Lake through the connecting tunnel and conduit; and 13.5 square miles drains to the gaging station located below the mouth of Schoenbar Creek.
STREAM MOUTH IDENTIFICATION Just S. of the Ketchikan Federal Building, crossed by the highway bridge at Thomas Basin.
ANCHORAGE Moorage in Thomas Basin.
TRAILS AND SURVEY ROUTES City roads follow stream to power-house above city park. Stream may be surveyed without wading.
AERIAL SURVEY NOTES Aerial survey requirements are below minimum altitude allowed by Civil Aeronautics Administration over population centers.

INTERTIDAL ZONE

LENGTH 100 yards
AVERAGE WIDTH/DEPTH 50-60'/24-36"
GRADIENT AND VELOCITIES >3° at 3' per second
BOTTOM Bedrock.
LOW TIDE LOCATION At highway bridge.
HIGH TIDE LOCATION Bedrock rapids above wooden foot bridge.
SCHOOLING AREAS Thomas Basin. The head of Thomas Basin at the highway bridge is a well-known schooling area. Salmon are usually observed in this area from the end of July until the end of Sep. It was a major sports fishing spot.
SPAWNING AREAS None.
GENERAL NOTES Intertidal zone prior to dredging for small boat harbor extended 400 yards further to a point near the Ketchikan Spruce Mill.

UPSTREAM

LENGTH ACCESSIBLE .8 miles
AVERAGE WIDTH/DEPTH 30-70'/12-24"
GRADIENT AND VELOCITIES 1-2° at 2' per second
BOTTOM Sand, gravel, boulders, bedrock.
MARKER DISTANCE .5 miles.
MARKER IDENTIFICATION Road bridge across creek at the power house. Major source of stream discharge from power house flume entering at terminal.
BARRIERS Ketchikan Falls is a well-known tourist attraction. Passage is difficult during certain water levels. Bedrock barrier falls 40-50' high .8 miles upstream. Low water makes access above .5 mile mark difficult.
TRIBUTARIES Small tributary with limited spawning facilities enters from N. .3 miles upstream. Used by pink, chum, coho and steelhead during high water. Precipitation fed.
SCHOOLING AREAS 1. Deep pools below Ketchikan Falls. 2. Deep pool below first road bridge above bridge across falls. (Number 2). 3. Pool above area 2. 4. Long, shallow, low velocity pool just above area 3. 5. Long drift by Alaska Department of Fisheries hatchery at park. 6. At outlet flume from power house.
SPAWNING AREAS The major spawning area is the large, flat section of valley between bridges 3 and 4. Good spawning facilities in the section above bridge 4, along the city park to below bridge 5 at the power house flume.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1947								
Sep 21	G .6	FRI	6,000					Fair. Few chum
1949								
Aug 12	G .2	FRI						None in stream. School off mouth
Aug 22	G .2	FRI						None in stream. Many off mouth
Aug 28	G .3	FRI	1,500					
1950								
July 29	G .5	FRI	0	0	0	0		50 pink at mouth
Sep 1	G .5	FRI	1,500	0		0		Few chum
Sep 17	G .5	FRI	10,000					Chum present
1951								
July 16		FRI						No survey. Pink at mouth
Sep 6	G .5	FRI	1,400	20	6	0	100 red. 1 dead coho	
Sep 10	G .5	FRI	1,500	20			100 red	Some chum. Many pink at mouth
Sep 23	G .5	FRI	>2,200	30			Sev. coho. 80 red.	Some chum
Sep 26	G .5	FRI	3,500	50	30		80 red digging and spawning	
Sep 28	G .5	FRI	3,800	230	300		30 coho, 60 red	Some dead chum
1952								
Aug 31	G .6	FRI	1,300				4 red	Chum present. Dead pink. Several 100 off mouth
Sep 24	G .6	FRI	2,800				26 red	Few chum. Few dead pink
1953								
Aug 27	G .5	FRI	300	0		0		Some chum. Very few fish
Sep 9	G .5	FRI	445	0	75	0	Some coho	Vis. 65%. 250 off mouth. Fish fresh
Sep 21	G .5	FRI	330		10			Visibility 60%
1954								
Aug 8	G .5	FRI					25 red	
Aug 20	G .5	FRI	1,100				100 coho. 100 red	Numerous schools off mouth
Aug 31	G .5	FRI	5,800				Coho, red present	
1955								
Sep 14	G .5	FRI	1,500				>50 coho	Some chum
Sep 27	G	FRI	1,300		100			Some dead pink. Many spawning
1956								
Sep 1	G .5	FRI	5,600				Some coho, red	Some dead pink. >1,000 below falls
Sep 5	G .5	FWS	11,000		250		500 coho	
Sep 10	G .5	FRI	7,000				Some coho, red	>2,000 below falls
Sep 19	G .5	FRI	8,000				Some coho, red	Chum present. >1,000 below falls spawning
1957								
Aug 17		FWS	200					
Sep 14	G .5	FRI	400	>20			Few coho	Few chum. 2 tags observed, red? white?
Sep 23	G .5	FRI	300	>100			Few coho	Few chum. Many killed by snagging. None below falls

101-11 HERRING CREEK K 92
N55°19.6 W131°31.6 Previous No. 86C

KETCHIKAN, GEORGE INLET, HERRING COVE, Head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <5,000
SPAWNING FACILITIES Good.
STREAM TEMPERATURES Cold range. Observed temperatures: 49°F., 9/28/49; 52°F., 9/21/50.
VALLEY DESCRIPTION Stream cut. Short, steep, valley originating in ridge above Mountain Point.
DRAINAGE 5 square miles (Polar Planimeter). Powerhouse water discharge from lake above Herring Cove, empties into stream near high tide and provides controlled stream flow during low water periods.
STREAM MOUTH IDENTIFICATION New highway bridge crosses intertidal zone.
ANCHORAGE
TRAILS AND SURVEY ROUTES Intertidal zone easily walked at low tide. Short upstream section accessible to salmon is brush and has windfalls.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Sand and gravel, some scattered boulders.
HIGH TIDE LOCATION Small rock rapids above a pool at the head of the grassflats.
SCHOOLING AREAS Pool at powerhouse and pool at high tide mark.
SPAWNING AREAS From high tide mark to the bridge.
GENERAL NOTES

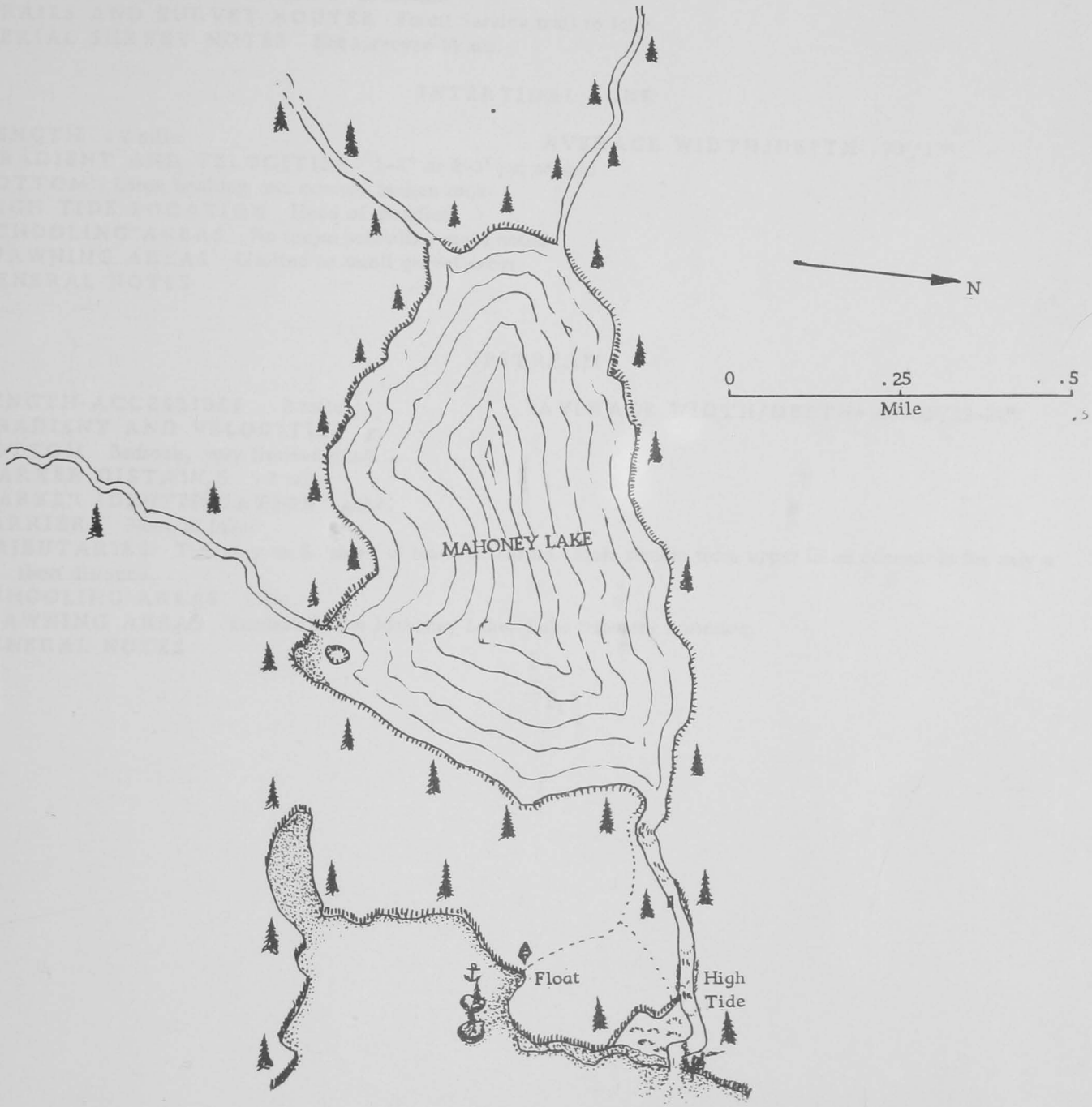
UPSTREAM

LENGTH ACCESSIBLE .2 mile AVERAGE WIDTH/DEPTH 20'/6"
GRADIENT AND VELOCITIES Greater than 3° at 2-3' per second
BOTTOM Sand, gravel, and boulders.
MARKER DISTANCE .2 mile.
MARKER IDENTIFICATION Small falls.
BARRIERS Small falls.
TRIBUTARIES Small intertidal tributary enters just above bridge.
SCHOOLING AREAS Small pools scattered throughout the short accessible distance.
SPAWNING AREAS Small gravel sections between pools.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 14	G .1	FRI	1,200		150			Good. Run mostly over. Many dead
1949								
Sep 8	G .1	FRI	312	26				
Sep 28	G .1	FRI	2,039	235	37			
1950								
Sep 21	G .1	FRI	2,167	143	6			Approaching peak
1951								
Sep 28	G .1	FRI	4,500	320	100	20		About peak. Many spawning


N
0
.25
.5
Mile
MAHONEY LAKE
Float
High
Tide

101-12 MAHONEY CREEK K 93
N55°25.7 W131°30.5 Previous No. 87

KETCHIKAN, GEORGE INLET, W. shore, 5 miles S. of Leask Cove

MAJOR SPECIES Pink, chum OTHER SPECIES Red, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Generally poor. Good in limited sections.
STREAM TEMPERATURES Warm range. Observed temperature: 53.5°F., 9/18/50.
VALLEY DESCRIPTION Lake basin lying at base of high ridge. Steep above lake.
DRAINAGE 5 square miles (Polar Planimeter). Precipitation fed. Early snow fields on ridge persist until July. Drainage includes 3 small lakes above Mahoney Lake between 1,700-2,000' elevation.
STREAM MOUTH IDENTIFICATION Small cove with forest service float lies .3 mile S. off mouth. A Forest Service trail marker is in the cove.
ANCHORAGE In cove .3 mile S. of mouth.
TRAILS AND SURVEY ROUTES Forest Service trail to lake.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 mile AVERAGE WIDTH/DEPTH 70'/10"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM Large boulders and coarse, broken rock.
HIGH TIDE LOCATION Head of grassflat.
SCHOOLING AREAS No major schooling areas noted.
SPAWNING AREAS Limited to small gravel areas.
GENERAL NOTES

UPSTREAM

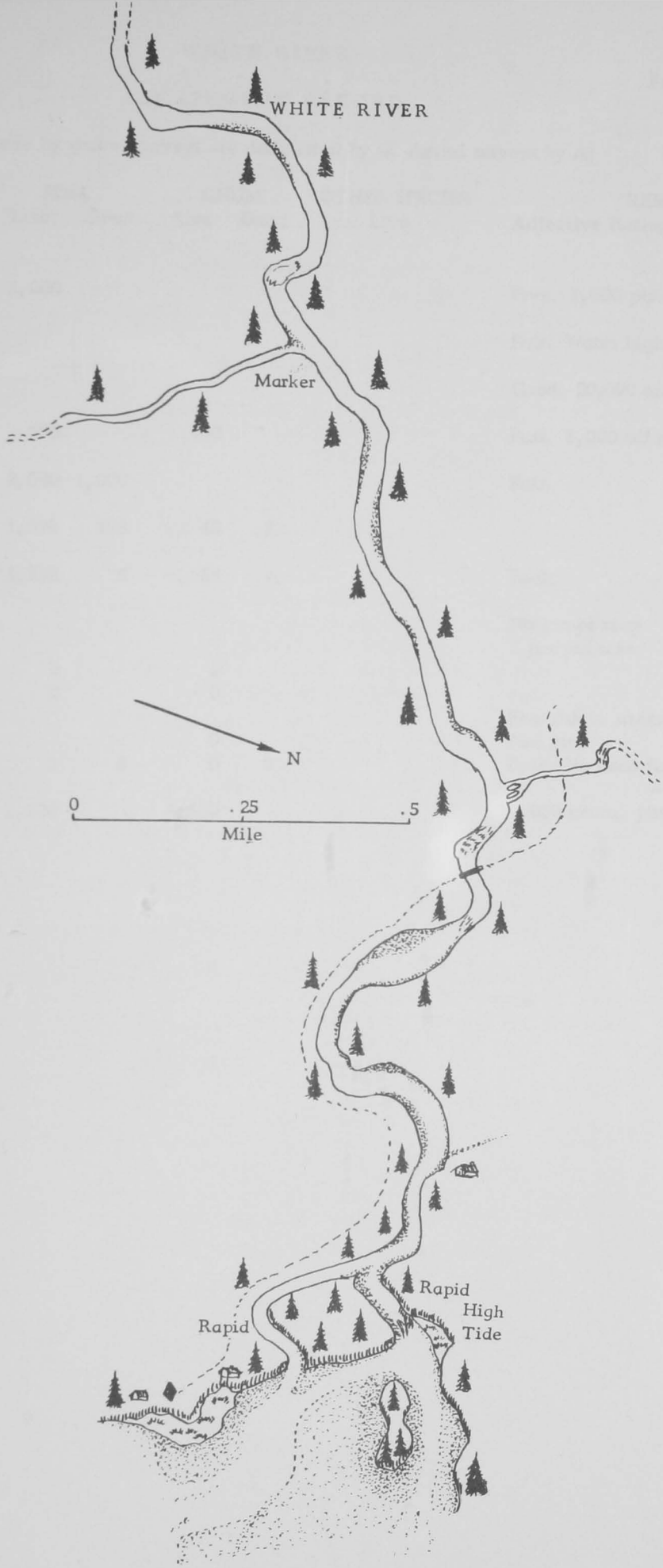
LENGTH ACCESSIBLE .2 mile AVERAGE WIDTH/DEPTH 40-60'/12-24"
GRADIENT AND VELOCITIES
BOTTOM Bedrock, very limited gravel.
MARKER DISTANCE .2 mile.
MARKER IDENTIFICATION Lake.
BARRIERS None to lake.
TRIBUTARIES Tributary on S. shore of lake accessible. Main stream from upper lakes accessible for only a short distance.
SCHOOLING AREAS Lake.
SPAWNING AREAS Limited below Mahoney Lake. Lake tributary spawning.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1943								
Oct 11	G .5	FWS	1,000		1,000			Poor
1945								
Sep 11	G .5	FWS						Few chum, pink. 3,000 off mouth
1950								
Sep 18	G .3	FRI	20		856	96	155 red	
1953								
July 31	G .9	ADF					270 red, 17 dead red	
Aug 8	G .0	FWS						25 red taken for personal use
Aug 17	A .0	FWS						No jumps seen
Aug 26	G .0	FWS					Few red	
Sep 1	G .0	FWS						Few pink
Sep 5	G .0	FWS						Few chum, pink
Oct 6	G .9	FWS	3		250	250		Poor. All live fish spawning at foot of falls
1956								
July 24		FWS					5,000 red	
Aug 8		FWS					10-15,000 red	
1957								
July 5		FWS					19 red	
July 6		FWS					17 red	
July 16		FWS					2,500-3,000 red	
July 22		FWS					2,000 red	
Aug 6		FWS					2,500 red	

WHITE RIVER



ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
ep 10	G 2.0	FWS	3,000					Poor. 7,000 pink off mouth
1941								
ep 28	G 2.0	FWS						Fair. Water high and discolored
1942								
ep 14	G 2.5	FWS						Good. 20,000 off mouth. Water high
1943								
ct 11	G .5	FWS	500		100			Fair. 1,000 off mouth
1947								
ct 5	G 2.0	FRI	2,000	1,000				Fair.
1949								
ep 17	G 2.0	FRI	1,599	173	45	7		
1950								
ep 17	G 2.0	FRI	1,238	8	86	4		Peak
1953								
ug 17	A .0	FWS						No jumps seen
ug 20	G .0	FWS						1 jumper seen
ug 26	G .0	FWS	0		0			
ep 3	G .0	FWS	0		0			
ep 6	G 1.5	FWS						Few fish in stream
ep 13	G .0	FWS			0			Few pink
ct 6	G .0	FWS	1	0	0	0		Poor. No dead fish present
1956								
ug 26		FWS	1,500		4,500			2,000 chum, pink at mouth

KETCHIKAN, GEORGE INLET, W. shore N.W. of Coon Island

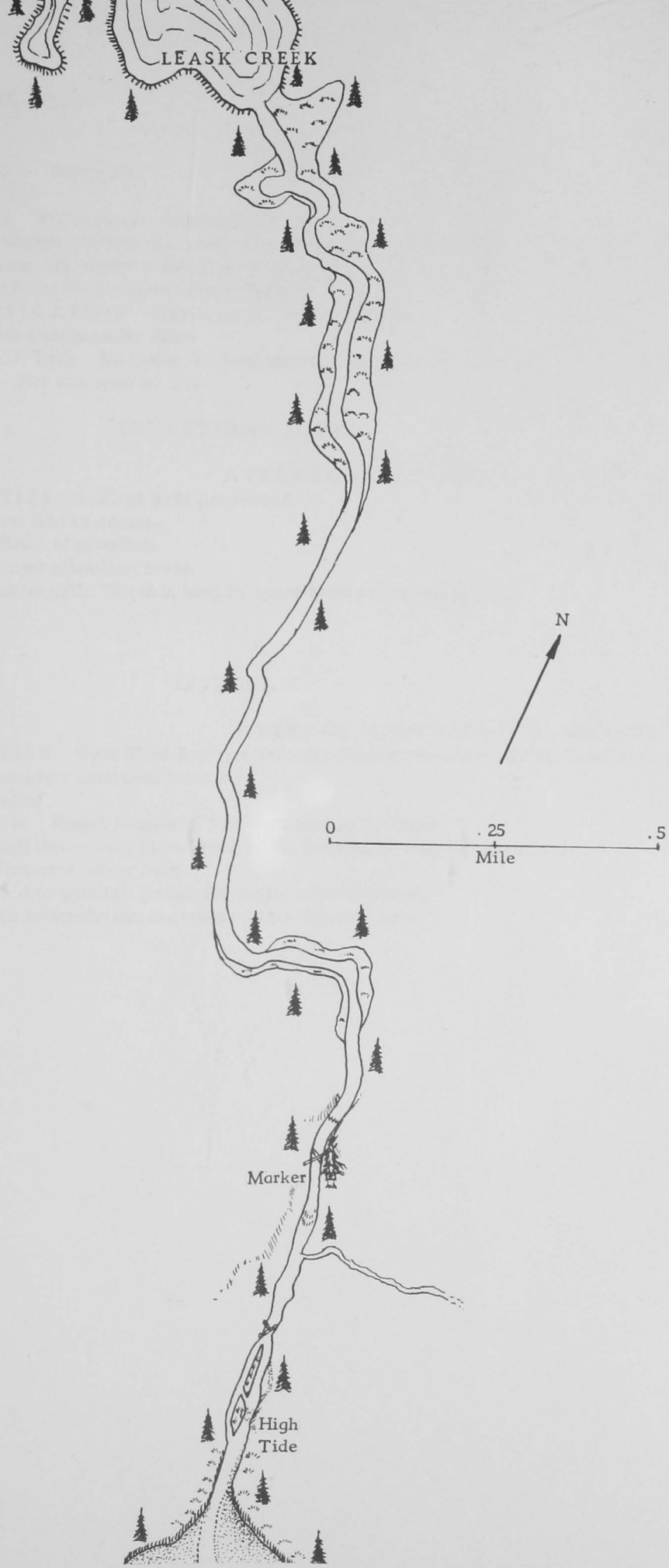
MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Generally fair throughout the stream. Sections of the stream have good spawning facilities.
STREAM TEMPERATURES Warm range. Observed temperatures: 53°F., 9/17/49; 49-52°F., 1950.
VALLEY DESCRIPTION Stream cut. Follows ridge base on N. side. Muskeg areas along S. side of stream.
DRAINAGE 13 square miles (Polar Planimeter). Precipitation fed. Drainage head in ridge at divide between White River and Ward Creek drainage.
STREAM MOUTH IDENTIFICATION Piling on N. side of stream mouth. Cabins on S. shore. Forest Service trail follows river on S. bank for about 1 mile.
ANCHORAGE In 11 fathoms just S. of the Forest Service trail marker.
TRAILS AND SURVEY ROUTES Forest Service trail along S. bank to footbridge, 1 mile upstream.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH 30-50'/18"
GRADIENT AND VELOCITIES .5-1° at 2-3' per second
BOTTOM Bedrock, shale slabs, sand and coarse gravel.
HIGH TIDE LOCATION At head of intertidal split in stream.
SCHOOLING AREAS Limited schooling only.
SPAWNING AREAS Limited. Some in the upper intertidal.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE Greater than 5 miles AVERAGE WIDTH/DEPTH 40-50'/12"
GRADIENT AND VELOCITIES Less than 1° at 1-2' per second
BOTTOM Mud with bedrock scattered throughout. Gravel to 2" in diameter.
MARKER DISTANCE 2 miles.
MARKER IDENTIFICATION Small tributary entering from S. bank .6 mile above footbridge.
BARRIERS None reported.
TRIBUTARIES N. bank tributary enters 1.6 miles upstream 20'/10" with barrier falls .1 mile up.
SCHOOLING AREAS Numerous deep pools and sloughs.
SPAWNING AREAS Between footbridge and N. tributary.
GENERAL NOTES


LEASK CREEK
N
0
.25
.5
Mile
Marker
High
Tide

KETCHIKAN, GEORGE INLET, Head

MAJOR SPECIES Pink OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Fair
STREAM TEMPERATURES Warm range. Observed temperature: 49°F., 10/3/49.
VALLEY DESCRIPTION Stream cut through relatively low hill area between two ridge systems. Wooded with scattered muskeg areas. Stream has eroded a fairly deep bed following low ridges.
DRAINAGE 15 square miles (Polar Planimeter). Precipitation fed through two lakes that are 2.3 miles upstream.
STREAM MOUTH IDENTIFICATION Cabins on N. shore at mouth.
ANCHORAGE Anchorage near cabins on N. shore.
TRAILS AND SURVEY ROUTES No trails. S. bank more easily traveled on foot.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .2 mile AVERAGE WIDTH/DEPTH 40'/10"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM Gravel, ranging from fine to coarse.
HIGH TIDE LOCATION Head of grassflats.
SCHOOLING AREAS No major schooling areas.
SPAWNING AREAS Limited to riffle 75 yards long in upper third of intertidal zone.
GENERAL NOTES

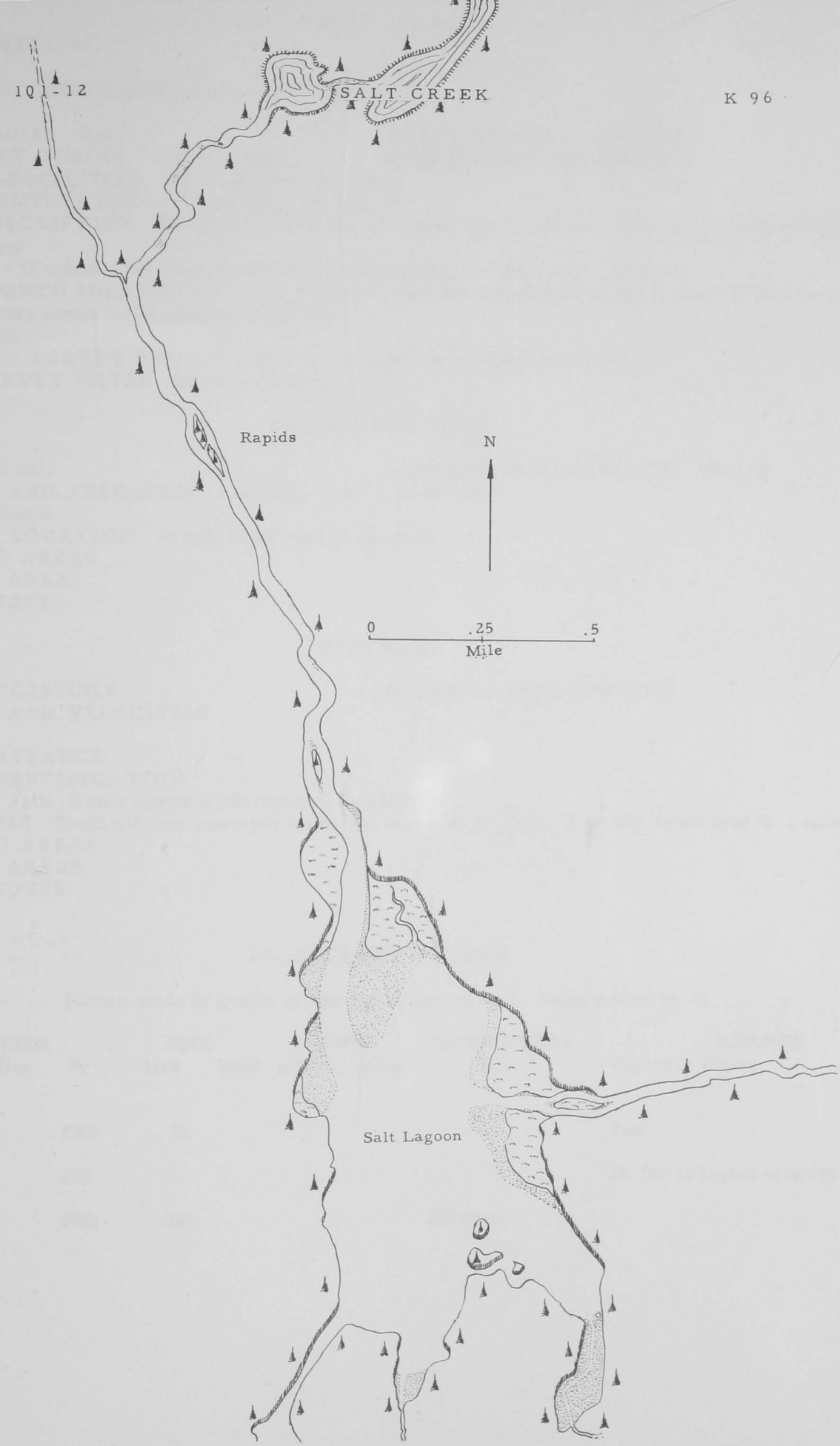
UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 40'/6-12"
GRADIENT AND VELOCITIES Over 3° at 2-4' per second (Greater velocities during flooding.)
BOTTOM Gravel 4-12" in diameter, scattered boulders
MARKER DISTANCE .3 mile.
MARKER IDENTIFICATION Blazed hemlock 7' in diameter on N. bank.
BARRIERS Cataracts and rapids throughout lower stream. No barriers to migration reported.
TRIBUTARIES No major tributaries below lake.
SCHOOLING AREAS Limited to windfall pools. No major schooling areas.
SPAWNING AREAS Splits in lower stream are major spawning areas used.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
Sep 10	G 1.0	FWS	2,000					Poor. 1,000 fish off mouth
1941								
Sep 28	G 1.0	FWS	15,000					Good. Stream high
1947								
Oct 5	G .3	FRI	375		8			Fair
1949								
Sep 16	G .3	FRI	417	11	6	1		
Oct 3	G .3	FRI	48	47				High water. More fish present than counted
1953								
July 6	A .0	FWS					Run of coho present	
July 12	G .0	FWS					Coho present	
July 23	G .0	FWS	0		0			Few in bay
July 31	G .0	FWS	0		0			
Aug 2	G .0	FWS						Few fish present
Aug 5	G .0	FWS			0		Red present	Pink present
Aug 17	A .0	FWS						No jumps seen
Aug 26	G .0	FWS	0		0			
Aug 28	G .0	FWS	0		0			Many chum in lagoon
Sep 6	G .3	FWS						Few fish in stream
Sep 13	G .0	FWS						Few pink
Oct 6	G .1	FWS						Poor. Remains of 3 dead fish
1955								
July 28	G	FWS					1,000 red	
1956								
Season		FWS	1,500		1,500			Season total by streamguard
1957								
July 5		FWS					400 red	


SALT CREEK
Rapids
N
0
.25
.5
Mile
Salt Lagoon

KETCHIKAN, GEORGE INLET, Head of Salt Lagoon

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Good. Intertidal facilities.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Stream cut. Lower valley between low ridges. Lake basin 2 miles upstream between high ridges.
DRAINAGE 15 square miles (Polar Planimeter). Precipitation fed. Lake .8 by .15 miles.
STREAM MOUTH IDENTIFICATION Extensive intertidal zone at head of Salt Lagoon. Lagoon entrance through very narrow outlet passable at slack tide.
ANCHORAGE
TRAILS AND SURVEY ROUTES Skiff may be taken up intertidal zone with ease.
AERIAL SURVEY NOTES Intertidal visibility good.

INTERTIDAL ZONE

LENGTH .6 mile AVERAGE WIDTH/DEPTH 150'/12"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Gravel.
HIGH TIDE LOCATION At split above head of grassflats.
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Falls .2 mile upstream (No report on passability).
TRIBUTARIES Small tributary enters just below high tide from W. bank. Tributary enters from N. 1 mile upstream
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1948								
Aug 7		FWS	75					Poor
1949								
Aug 30	A	FRI						No fish in lagoon or above
1955								
July 24		FWS	400				100 coho	

101-12 K 96A
N55°24.4 W131°26.9 Previous No. 91

KETCHIKAN, GEORGE INLET, East shore

MAJOR SPECIES
ESCAPEMENT TIMING
SPAWNING FACILITIES

OTHER SPECIES
ESCAPEMENT MAGNITUDE

STREAM TEMPERATURES Warm range.

VALLEY DESCRIPTION

DRAINAGE 7 square miles (Polar Planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

AVERAGE WIDTH/DEPTH

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES

AVERAGE WIDTH/DEPTH

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

KETCHIKAN, CARROLL INLET, W. shore 1.2 miles N. of Osten Island

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <5,000
SPAWNING FACILITIES Limited primarily to the upper intertidal zone.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Stream cut through relatively flat muskeg area lying at the base of a mountain ridge.
DRAINAGE 5 square miles (Polar Planimeter). Precipitation fed. Lake 1 mile long is 3 miles upstream.
STREAM MOUTH IDENTIFICATION Head of small cove opposite Shoal Cove.
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Restricted aerial visibility.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH 30-50'/8-12"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel.
HIGH TIDE LOCATION Head of grassflats at base of flume-like rapids.
SCHOOLING AREAS
SPAWNING AREAS Good spawning facilities for 300 yards below rapids at high tide.
GENERAL NOTES

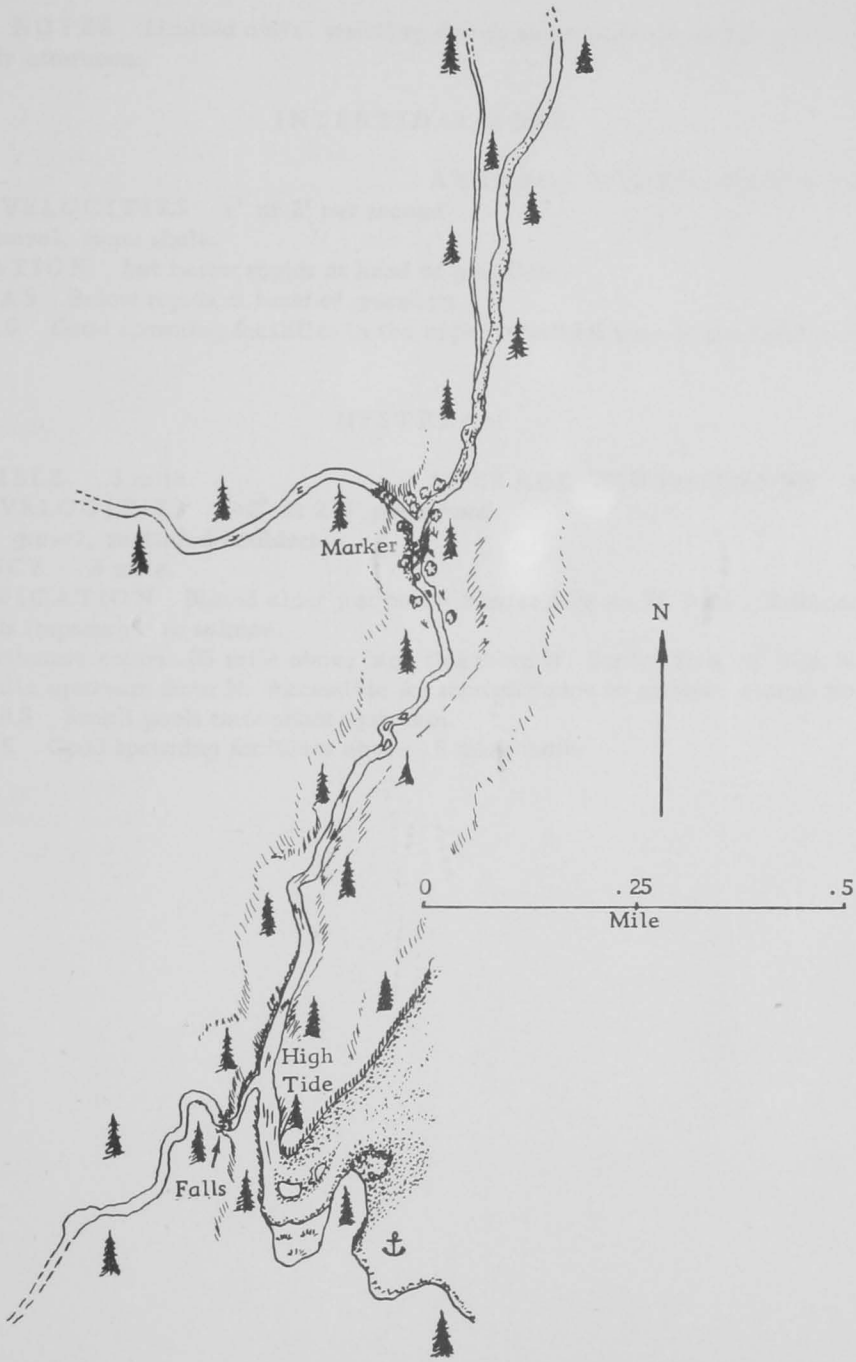
UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 25'/8"
GRADIENT AND VELOCITIES 3° at 2-4' per second
BOTTOM Bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Rapids above high tide (Passable).
TRIBUTARIES Tributary enters from N. 2 miles upstream.
SCHOOLING AREAS None reported.
SPAWNING AREAS None reported above rapids.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 4	G .5	FRI	237		130			Poor
1949								
Sep 16	G .5	FWS	500					
1950								
Sep 29	A	FRI						Fair showing in lower stream. No dead observed
1953								
Oct 5	G	FWS	3		23	>100		Poor
1956								
Sep 1		FWS	5		850			
Sep 2		FWS			850			


Marker
N
0
.25
.5
Mile
High
Tide
Falls

KETCHIKAN, CARROLL INLET, In Shelter Cove just S. of Nigelius Point

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 5-10,000
SPAWNING FACILITIES Good
STREAM TEMPERATURES Warm range. Observed temperatures: 50-55°F., 9/19/50, 45-52.5°F., 9/29/50; 55-57°F., 1951; 52°F. 9/11/52.
VALLEY DESCRIPTION Stream cut. Stream lies in a relatively deep cut in folded geologic structure running nearly paralled to Carroll Inlet.
DRAINAGE 5 square miles (Polar Planimeter). Precipitation fed. Drains several lakes.
STREAM MOUTH IDENTIFICATION Remnants of Indian stone fish trap on S. side of intertidal zone.
ANCHORAGE Small bight just S. of stream mouth.
TRAILS AND SURVEY ROUTES Easily walked during normal water, high ridge on E. bank offers high water route upstream.
AERIAL SURVEY NOTES Limited aerial visibility due to steep banks of stream and timber. Good light required, usually about early afternoon.

INTERTIDAL ZONE

LENGTH .2 mile AVERAGE WIDTH/DEPTH 40-50'/8-10"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Coarse gravel, some shale.
HIGH TIDE LOCATION Just below rapids at head of grassflats.
SCHOOLING AREAS Below rapids at head of grassflats.
SPAWNING AREAS Good spawning facilities in the upper intertidal zone at the bend to the N.
GENERAL NOTES

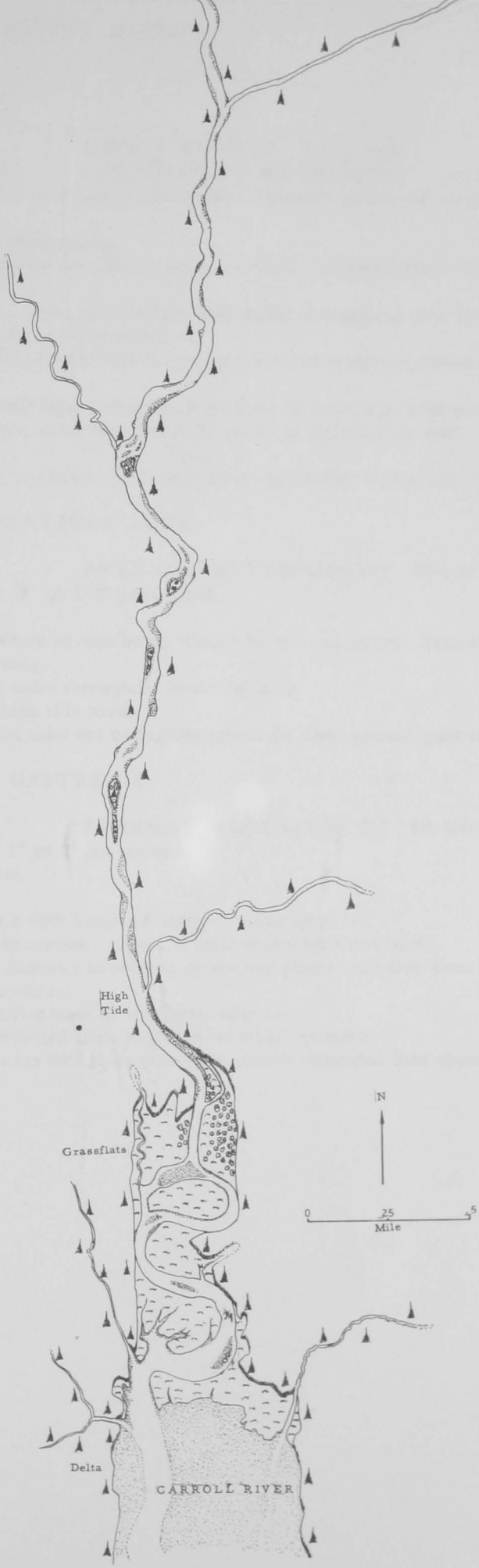
UPSTREAM

LENGTH ACCESSIBLE .8 mile AVERAGE WIDTH/DEPTH 10-20'/6-10"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM Bedrock, gravel, scattered boulders.
MARKER DISTANCE .8 mile.
MARKER IDENTIFICATION Blazed alder just below barrier falls on W. bank. Tributary enters from N.
BARRIERS 30' falls impassable to salmon.
TRIBUTARIES Tributary enters .05 mile above high tide from W. Barrier falls 30' high blocks salmon. Tributary enters .8 mile upstream from N. Accessible for short distance to salmon, though not used.
SCHOOLING AREAS Small pools throughout upstream.
SPAWNING AREAS Good spawning facilities above .3 mile mark.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 2	G 1.0	FRI	72		5			Poor. More dead fish than alive
1948								
Sep 29	G .5	FWS	5,000					Fair. Many dead fish
1949								
Sep 18	G 1.0	FRI	2,028	145	16	0		
Oct 4	G 1.0	FRI	6	1	2	0		
1950								
Sep 19	G 1.0	FRI	2,910	817		1		
Sep 29	G 1.0	FRI	1,530	260	2	1		Peak past
1951								
Aug 28	A 1.0	FRI						Poor vis. Sev. jumps at mouth
Aug 28	G 1.0	FRI	1,700	0	0	0	1 coho	2-3,000 fish off mouth
Sep 10	G 1.0	FRI	2,585		52	0	Some coho, sev. red.	Few dead pink
Sep 24	G 1.0	FRI	4,250	300	15	20	10 coho	Recent high water. None entering
1952								
Sep 11	G 1.0	FRI	560		38	1	8 coho, 6 red	Few dead pink. No sign off mouth
Sep 29		FRI						No count. Run over
1953								
Aug 14	G .5	ADF	16					
Oct 5	G .1	FWS						Remains of 3 fish at mouth, left fork
Oct 5	G .3	FWS						Poor. Right fork
1954								
Sep 13	G .0	ADF	1,000					Good showing of pink
Sep 19	G 1.0	FRI	5,220	700	4	20	8 coho	Run at peak
1956								
Sep 2		FWS	5		35			
Sep 6	A 1.0	FRI	>200					None observed at mouth
Sep 16	A 1.0	FRI	3,500					Chum present. Some dead pink. Sev. 1,000 fish at mouth
Sep 24	A 1.0	FRI	9,000					Some dead pink. None observed at mouth
Sep 30	A 1.0	FRI	>500					Many dead pink. None observed at mouth
1957								
Sep 16	A 1.0	FRI	1,000					Some chum, few dead pink. Sev. 100 at mouth
Sep 24	A 1.0	FRI	500	>200				Few chum. None off mouth


High
Tide
Grassflats
N
0
.25
.5
Mile
Delta
CARROLL RIVER

KETCHIKAN, CARROLL INLET, Head

MAJOR SPECIES Pink, chum OTHER SPECIES Coho, trout
ESCAPEMENT TIMING Middle. Aug.-Sep. ESCAPEMENT MAGNITUDE >20,000
SPAWNING FACILITIES Excellent. Limited intertidal riffle areas. Upstream riffles throughout accessible stream offer excellent facilities.
STREAM TEMPERATURES Normal range (Estimated).
VALLEY DESCRIPTION Glacial origin. Stream cut. Broad valley between two high ridges. Timbered areas throug out with scattered muskeg.
DRAINAGE 70 square miles (Polar Planimeter). Precipitation fed. Part of the drainage is from the W. slope of Mount Reid (4,560' elevation), the highest point on Revillagigedo Island.
STREAM MOUTH IDENTIFICATION Broad intertidal flats with meandering stream course identify Carroll River.
ANCHORAGE Shallow delta extends into Carroll Inlet two miles from head of grassflats, with anchorage at drop-off.
TRAILS AND SURVEY ROUTES Foot entry into river should be made at high tide by skiff. Foot travel easy during normal water levels.
AERIAL SURVEY NOTES Excellent aerial visibility. Terminal point and barrier falls easily seen from the air.

INTERTIDAL ZONE

LENGTH 1.6 miles AVERAGE WIDTH/DEPTH 80-120'/18-36"
GRADIENT AND VELOCITIES Less than .5° at 1-2' per second
BOTTOM Silt, sand, gravel.
HIGH TIDE LOCATION Above grassflats where stream bends toward W. side of valley. Extensive gravel bar on E. bank. Tributary enters just above from E. side.
SCHOOLING AREAS Numerous large, deep holes throughout intertidal zone.
SPAWNING AREAS Riffle areas just below high tide mark.
GENERAL NOTES Deep holes in the intertidal zone are collecting points for dead salmon prior to flooding.

UPSTREAM

LENGTH ACCESSIBLE 2.5 miles AVERAGE WIDTH/DEPTH 80-100'/18"
GRADIENT AND VELOCITIES Less than 1° at 2' per second.
BOTTOM Sand, gravel, some boulders upstream.
MARKER DISTANCE 2 miles.
MARKER IDENTIFICATION At confluence with large tributary entering from W.
BARRIERS Barrier falls impassable to salmon in narrow canyon .5 mile above terminal mark.
TRIBUTARIES Tributary accessible for short distance to salmon enters just above high tide from E. Terminal mark tributary accessible to salmon for unknown distance.
SCHOOLING AREAS Large pools between riffles used by schooling salmon.
SPAWNING AREAS Riffle areas equally distributed from high tide to terminal mark.
GENERAL NOTES An excellent spawning stream with a considerably greater potential than observed in recent years.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
Sep 15	G 4.0	FWS	15,000		8,000			Fair. 7,000 fish at mouth
1941								
Sep 28	G 3.0	FWS	20,000		2,000			Fair
1943								
Oct 12	G .5	FWS	8,000		2,000			Fair. 2,000 off mouth
1945								
Sep 12	G 1.5	FWS	35,000		15,000		Few coho	Very good
1947								
Oct 3	G 1.0	FRI	50		950			Survey too late, stream high
1948								
Sep 28	G 2.0	FWS	200		500			Good. Many dead fish
1949								
July 24	G 1.5	FWS	15		30			
Aug 30	A 2.5	FRI	10,000	4,000				Fish mostly in spent condition
Sep 15	G 1.0	FWS	1,000		50			
1950								
Aug 15	A 2.5	FRI						Good showing in lower stream. No dead observed
1951								
July 29	A 2.5	FRI						Jumps and school off mouth, 4,000
Aug 28	A 2.5	FRI	2,500	2,500				
1953								
July 24	G .0	FWS	0		0			No other species
July 27	G .0	FWS						First appearance of fish
Aug 2	G .1	FWS						About 1,000 pink and chum, mostly chum
Aug 4	G .0	FWS						More fish showing
Aug 12	G .5	FWS	500		1,000			Poor
Aug 14	G 2.0	ADF	1,580		2,560			
Aug 16	G .5	FWS						Few fish present
Aug 23	G .0	FWS						Good showing of chum
Aug 24	G	FWS						Fish went into the creek
Aug 25	G	FWS						Poor. A few fish in creek
Sep 2	G .3	FWS	0		0		0	Poor, season rating
Sep 22	G .3	FWS	0		200		0	Poor
Oct 5	G 1.0	FWS	2					No dead fish
1956								
Aug 17	A 2.0	FRI			8,000			Some pink. Some dead chum
Sep 2		FWS	6,500		5,221			
Sep 6	A 2.0	FRI	15,000		4,000			Some dead chum. Some fish at mouth
Sep 16	A 2.0	FRI	5,000		3,000			Many dead chum, some dead pink. Few at mouth. Peak past
1957								
Sep 2		FWS	6,500		5,221			Fair
Sep 16	A 2.0	FRI	1,300	>500	500	>500		None observed at mouth
Sep 24	A 2.0	FRI		>500	500	>1,000		Few pink. None observed off mouth

KETCHIKAN, CARROLL INLET, E. shore 2 miles from head of inlet

MAJOR SPECIES
OTHER SPECIES
ESCAPEMENT TIMING
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES A barrier falls at the mouth restricts any spawning to very limited intertidal zone facilities.
STREAM TEMPERATURES Warm range.
VALLEY DESCRIPTION
DRAINAGE 67 square miles (Polar Planimeter).
STREAM MOUTH IDENTIFICATION Barrier falls visible from the inlet.
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1953								
July 19	G .0	FWS						Good showing of pink
Oct 5	G .1	FWS						No fish seen
1956								
Aug 2		FWS						Poor

101-13 K 99B
N55°29.9 W131°18 Previous No. 97

KETCHIKAN, CARROLL INLET, E. shore 4 miles N. of Shoal Cove

MAJOR SPECIES OTHER SPECIES
ESCAPEMENT TIMING ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Limited to intertidal zone by barrier falls. Fair gravel facilities are limited.
STREAM TEMPERATURES Warm range.
VALLEY DESCRIPTION Stream cut. Stream course follows folded structure which parallels inlet, cutting across the bedding at intervals.
DRAINAGE 5 square miles (Polar Planimeter). Precipitation fed.
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH .2 mile AVERAGE WIDTH/DEPTH 25-35'/12-18"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Bedrock, some gravel.
HIGH TIDE LOCATION Base of lower falls.
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE 0 mile AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS 20' high falls at high tide. Second falls 50 yards above.
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 2	G .2	FRI						No fish seen
1953								
Oct 5	G .1	FWS						No fish seen
1956								
Sep 2		FWS						Poor

KETCHIKAN, CARROLL INLET, SHOAL COVE, Head

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Poor.
STREAM TEMPERATURES Warm range.
VALLEY DESCRIPTION Stream cut. Muskeg flats in lower stream area. Valley heads in ridge E. of mouth.
DRAINAGE 11 square miles (Polar Planimeter). Precipitation fed. Some small ponds in drainage.
STREAM MOUTH IDENTIFICATION
ANCHORAGE In outer cove.
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .5 mile
AVERAGE WIDTH/DEPTH 40-60/10"
GRADIENT AND VELOCITIES Less than 1° at 2' per second
BOTTOM Shale and barnacles throughout lower intertidal zone.
HIGH TIDE LOCATION At bend below first falls.
SCHOOLING AREAS None reported.
SPAWNING AREAS Limited area just below high tide.
GENERAL NOTES

UPSTREAM

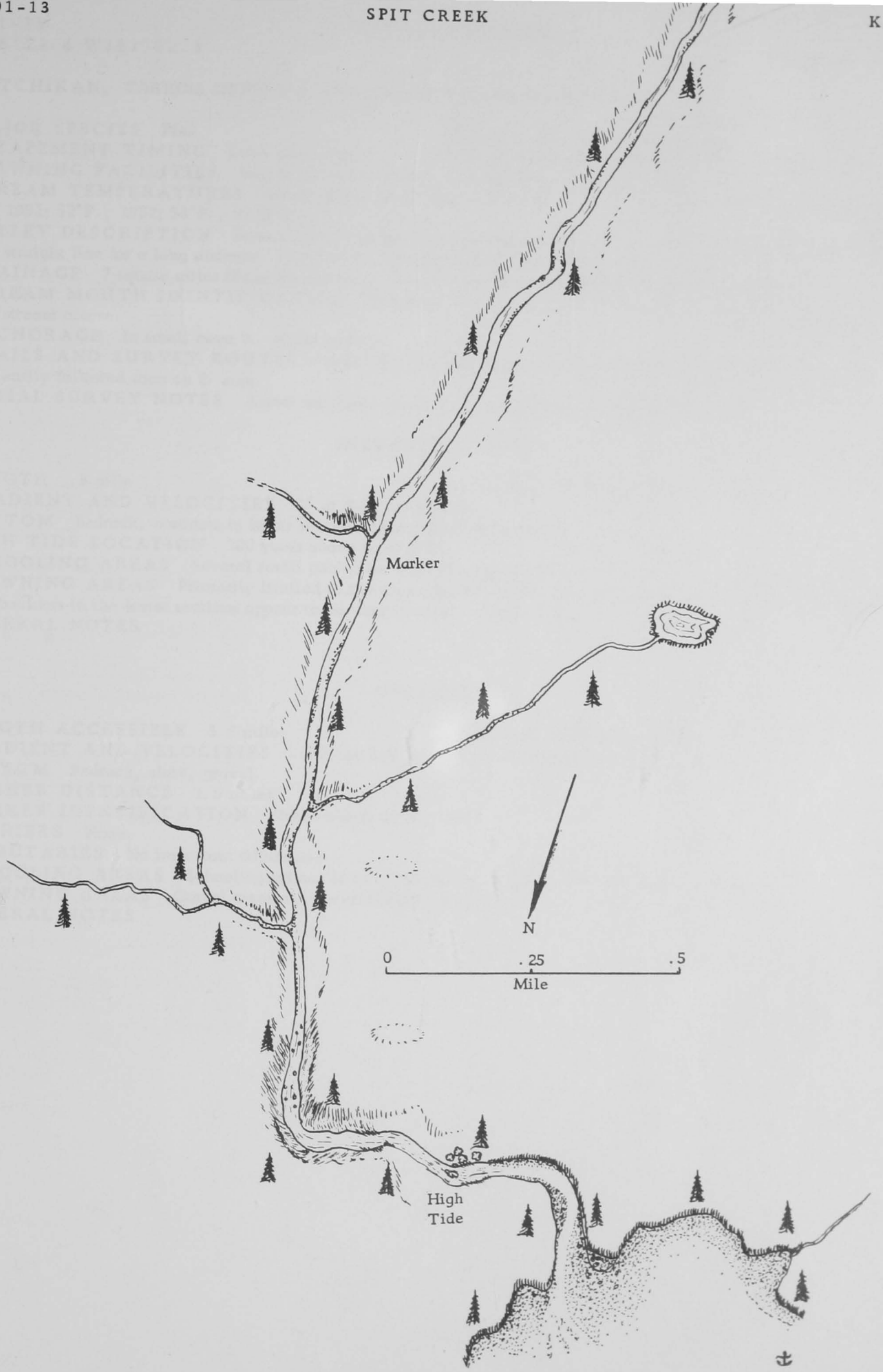
LENGTH ACCESSIBLE .05 mile
AVERAGE WIDTH/DEPTH 40'/10"
GRADIENT AND VELOCITIES Over 3° at 3' per second
BOTTOM Bedrock, shale.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Second falls 20' high is barrier to salmon.
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS None.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 4	G 1.0	FRI						Poor. 100 pink in intertidal zone
1953								
Oct 5	G .1	FWS	0	0	0	3		Poor
1956								
Sep 1	G .1	FWS						6 pink at mouth
1957								
July 24		FWS	6,000		400			
Aug 6		FWS					500 coho	

SPIT CREEK



KETCHIKAN, CARROLL INLET, S.E. shore between Brunn Point and Spit Point

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 10,000
SPAWNING FACILITIES Fair in the upper stream. Limited areas near the mouth.
STREAM TEMPERATURES Warm range. Observed temperatures: 52°F., 9/18/50, 47°F., 9/29/50; 43-60°F., 1951; 52°F., 1952; 58°F., 9/10/53.
VALLEY DESCRIPTION Stream cut. Stream bed is cut deeply in folded rock structure or fault and follows straight line for a long distance. Upper valley between two ridges with small lake basin.
DRAINAGE 7 square miles (Polar Planimeter). Precipitation fed. One small lake and several ponds, some muskeg.
STREAM MOUTH IDENTIFICATION Spit Point lies just N.E. of the mouth in line with the upper intertidal stream course.
ANCHORAGE In small cove W. of the mouth.
TRAILS AND SURVEY ROUTES Relatively difficult walking, especially during high water. W. ridge more easily followed than on E. side.
AERIAL SURVEY NOTES Aerial visibility adequate for enumeration during ideal conditions.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH 45'/10"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Bedrock, boulders in lower section, gravel 3-6" in diameter.
HIGH TIDE LOCATION 100 yards above bend to E.
SCHOOLING AREAS Several small pools near high tide and at bend.
SPAWNING AREAS Primarily limited to the upper sections where suitable gravel is found. Coarse rock and boulders in the lower sections appear to be unsatisfactory for spawning.
GENERAL NOTES

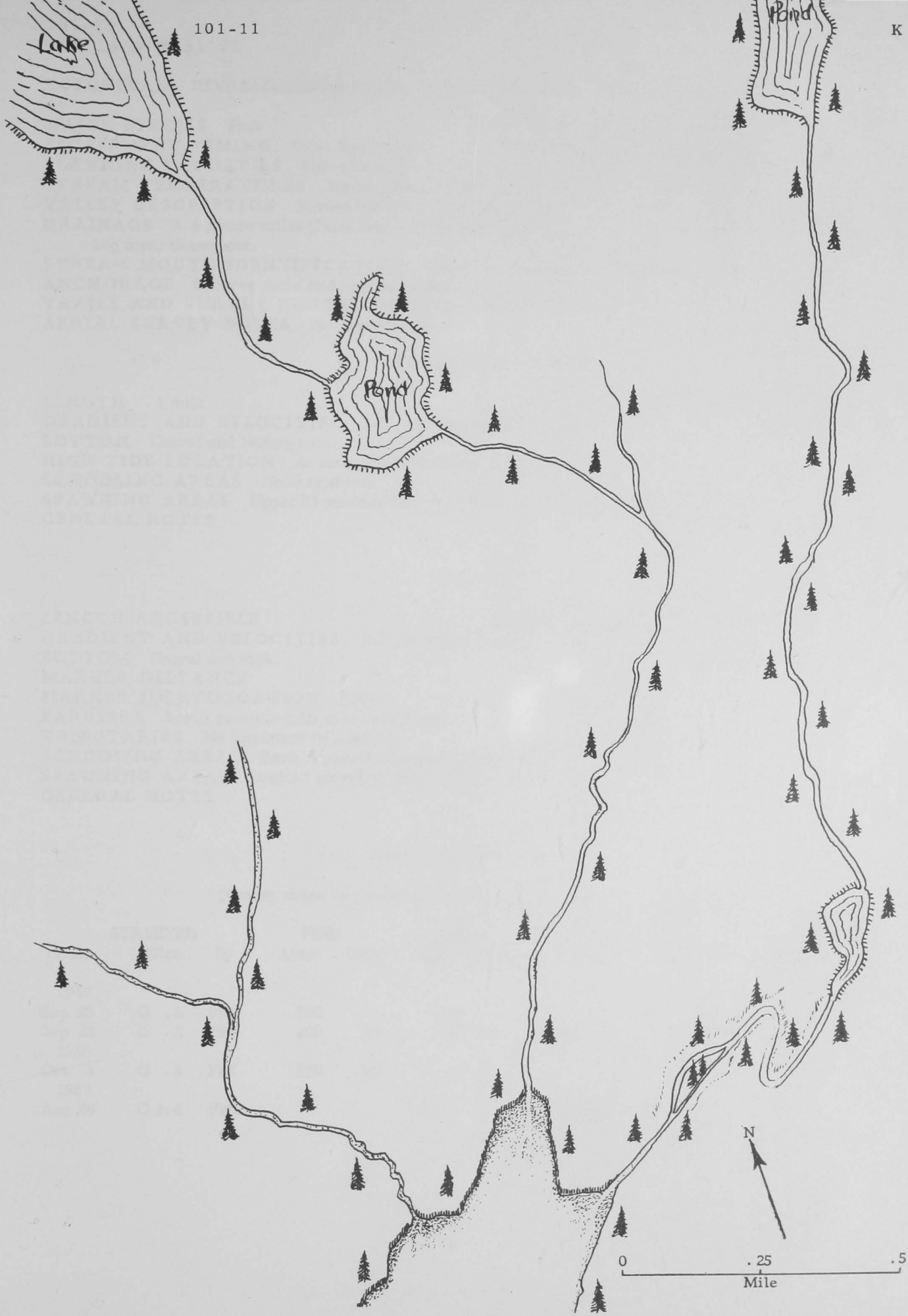
UPSTREAM

LENGTH ACCESSIBLE 3.6 miles AVERAGE WIDTH/DEPTH 20-25'/6-8"
GRADIENT AND VELOCITIES .5-1° at 1-2' per second. Occasional rapids.
BOTTOM Bedrock, slate, gravel.
MARKER DISTANCE 1.5 miles
MARKER IDENTIFICATION Blazed alders on W. bank.
BARRIERS None.
TRIBUTARIES No important tributaries.
SCHOOLING AREAS Schooling primarily in lower stream in pools below and above rapids.
SPAWNING AREAS Gravel areas at intervals above .3 mile.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1938								
Sep 5		FWS	150					10,000 fish at mouth
1947								
Oct 4	G 1.5	FRI	1,000					Fair. Spawning mostly over
1948								
Sep 29	G .8	FWS	35,000		400			Excellent
1949								
Sep 18	G 1.5	FRI	1,753	130	74	2		
Oct 4	G 1.5	FRI	440	38				
1950								
Sep 18	G 1.0	FRI	2,122	242	69	19		Fish off mouth
Sep 29	G 1.0	FRI	2,775	225	5	1		Peak past
1951								
Aug 27	G 1.0	FRI	58	0	0	0		2-300 off mouth. Streams low. Vis. fair
Aug 28	A 3.0	FRI						None observed. Visibility poor
Sep 10	G 1.0	FRI	150	0	100	0		
Sep 22		FRI	10		65			
Sep 25	G 1.0	FRI	2,500	60	130	15	Some coho	Peak not yet reached. Few off mouth
1952								
Sep 11	G 1.0	FRI	86	0	165	1		
Sep 28	G 1.0	FRI	49		41			Sev. dead chum and pink
1953								
Sep 10	G 1.0	FRI	130	1	120	0		Most on riffles spawning
Sep 22	G 1.0	FRI	12		65			Poor run, none off mouth. Vis. 60%
Oct 6	G .5	FWS	0	0	0	1		
1954								
Sep 13	G	ADF	4,000					Fish in mouth. Good showing coho
Sep 19	G 1.0	FRI	2,000	80	35	50		2,000 at mouth
1955								
Sep 10	A 1.0	FRI	250					>200 at mouth
Sep 19	A 1.0	FRI	1,500					
1956								
Sep 16	A 1.0	FRI	5,000					Some dead pink. 4,000 fish at mouth
Sep 24	A 1.0	FRI	5,000					Some dead pink. None at mouth. 20,000 above marker
Sep 30	A .0	FRI	>2,000					Many dead pink. None at mouth
1957								
Sep 16	A 1.0	FRI	>500					Few dead pink. None at mouth
Sep 24	A 1.0	FRI						Few chum, some dead chum. None off mouth. Few pink


Lake
Pond
Pond
N
0
.25
.5
Mile

KETCHIKAN, REVILLAGIGEDO CHANNEL, COHO COVE, Center head of cove

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep. -Oct. ESCAPEMENT MAGNITUDE 1,000
SPAWNING FACILITIES Fair spawning facilities though limited by the size of the stream.
STREAM TEMPERATURES Warm range. Observed temperature: 46°F., 10/3/50.
VALLEY DESCRIPTION Stream cut in valley of glacial origin. Small lake basin in small cirque at valley head.
DRAINAGE 3.4 square miles (Polar Planimeter). Precipitation fed. Lake .6 mile long with four small ponds. Muskeg areas throughout.
STREAM MOUTH IDENTIFICATION Blazed 2' spruce on N. side of stream at high tide.
ANCHORAGE Between shore and rock off stream on E. side of cove.
TRAILS AND SURVEY ROUTES Numerous windfalls make foot survey difficult.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 mile AVERAGE WIDTH/DEPTH 10'/8"
GRADIENT AND VELOCITIES 1-2° at 1-2' per second
BOTTOM Gravel and broken rock.
HIGH TIDE LOCATION At emergence of stream from woods.
SCHOOLING AREAS None reported.
SPAWNING AREAS Upper 75 yards of intertidal zone has fairly good spawning facilities.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 10'/8"
GRADIENT AND VELOCITIES 2-3° at 2' per second
BOTTOM Gravel and rock.
MARKER DISTANCE
MARKER IDENTIFICATION None.
BARRIERS Small passable falls over fallen logs.
TRIBUTARIES No important tributaries.
SCHOOLING AREAS Pools reported throughout surveyed distance (.2 mile).
SPAWNING AREAS Limited gravel areas between pools.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 25	G .3	FRI	500		10			Good
Sep 28	G .2	FRI	200	34	24	4	1 coho	Good
1950								
Oct 3	G .3	FRI	220	90	1	3		
1953								
Aug 26	G 1.4	FWS					150 coho	

KETCHIKAN, REVILLAGIGEDO CHANNEL, COHO COVE, Right head of cove

MAJOR SPECIES Pink
OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Poor. Very limited gravel areas.
STREAM TEMPERATURES Warm range. Observed temperature: 47°F., 10/3/50.
VALLEY DESCRIPTION Stream cut valley common with K 101 in lower stream. Valley lies between two ridges. Two lake basins in upper valley.
DRAINAGE 3.45 square miles (Polar Planimeter). Two lakes and numerous small ponds. Lower lake 2 miles upstream. Small pond .8 mile upstream. Precipitation fed.
STREAM MOUTH IDENTIFICATION Large rock lies off mouth.
ANCHORAGE See K 101.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH <.1 mile
AVERAGE WIDTH/DEPTH 8'/6"
GRADIENT AND VELOCITIES
BOTTOM Gravel.
HIGH TIDE LOCATION Edge of woods.
SCHOOLING AREAS Upper intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
AVERAGE WIDTH/DEPTH 8'/6"
GRADIENT AND VELOCITIES Greater than 3° at 3' per second
BOTTOM Bedrock and boulder.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES No important tributaries.
SCHOOLING AREAS Pools in lower section.
SPAWNING AREAS None reported.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Sep 27	G .2	FRI	200		24			Good
1950								
Oct 3	G .1	FRI	7	3	0	2		

KETCHIKAN, THORNE ARM, Head between Mop and Pop Points

MAJOR SPECIES Pink
OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep. -Oct.
ESCAPEMENT MAGNITUDE <1,000
SPAWNING FACILITIES Extremely limited.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Stream cut through muskeg areas, no true valley.
DRAINAGE 2 square miles (Polar Planimeter). Precipitation fed. Small lake 2 miles upstream, some small ponds. Wooded, scattered small muskegs.
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES None.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH Short
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM Rock and boulder
HIGH TIDE LOCATION At entry into woods.
SCHOOLING AREAS None reported.
SPAWNING AREAS None reported.
GENERAL NOTES

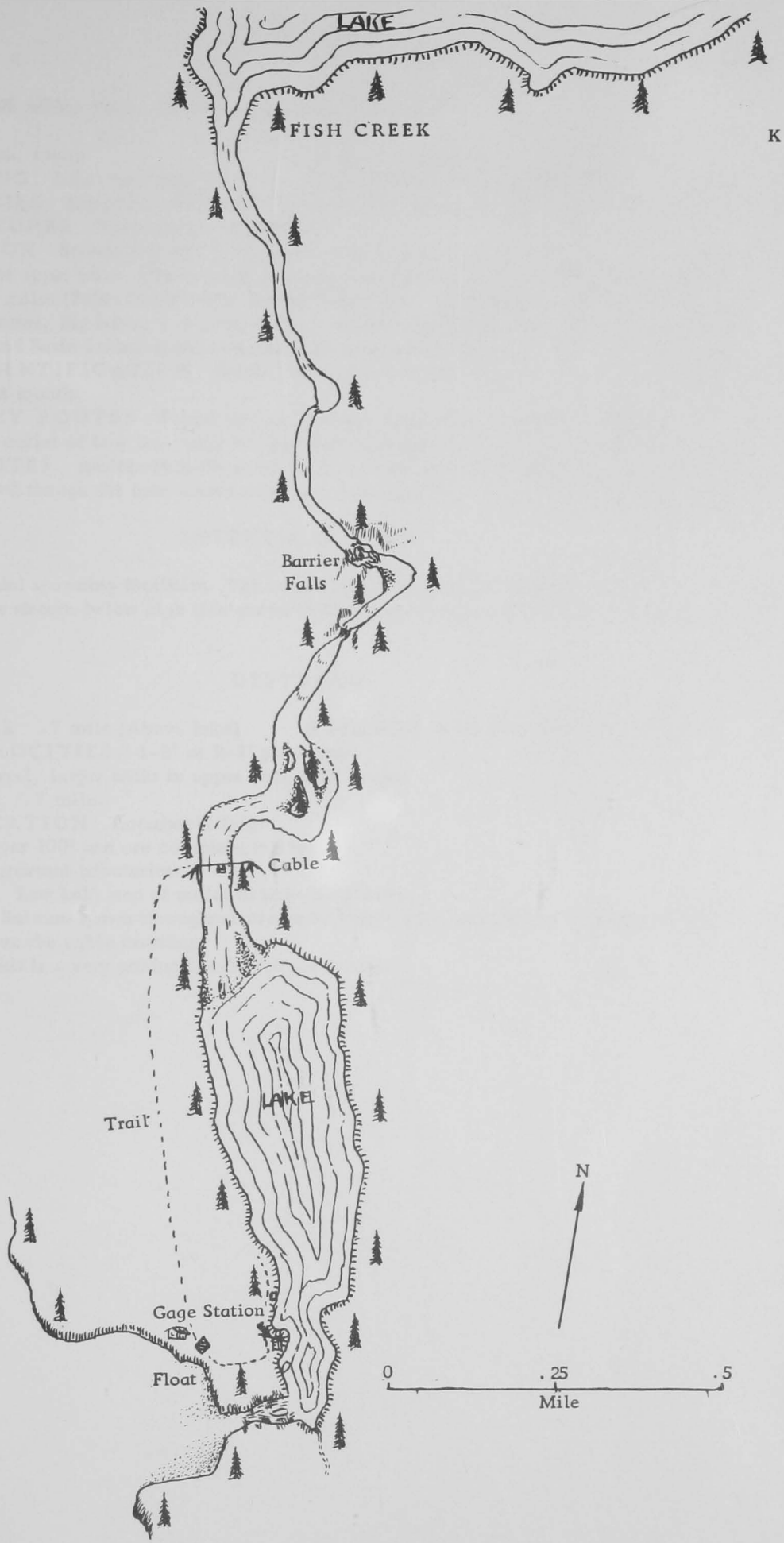
UPSTREAM

LENGTH ACCESSIBLE >.2 mile
AVERAGE WIDTH/DEPTH 8'/6"
GRADIENT AND VELOCITIES >3° at 3-4' per second
BOTTOM Rock and boulder.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS
SPAWNING AREAS
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1943								
Oct 13	G .5	FWS	10,000					Good
1947								
Sep 27	G .3	FRI	200		10			
1949								
Sep 17	G .5	FWS	200					
1953								
Oct 1	G .5	FWS	3		14	14		Poor


LAKE
FISH CREEK
Barrier Falls
Cable
LAKE
Trail
N
Gage Station
Float
0
.25
.5
Mile

KETCHIKAN, THORNE ARM, Head, E. of Mop Point and Pop Point

MAJOR SPECIES Pink, chum OTHER SPECIES Coho, red, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >40,000
SPAWNING FACILITIES Excellent. Entire accessible stream above lake to falls is utilized by spawning salmon.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Stream cut valley of glacial origin with chain of lakes basins. Valley heads in high mountain ridge N. of upper lake. Timbered areas throughout, scattered muskeg flats near lakes.
DRAINAGE 30 square miles (Polar Planimeter). Precipitation fed. Series of lakes beginning just above tide water with Low Lake, 55 acres, Big Lake, 1.4 miles above with an area of 355 acres, Third Lake, .7 mile above with 180 acres. Mirrow and Basin Lakes, further up, are also in the drainage area.
STREAM MOUTH IDENTIFICATION Forest Service trail marker and float on N. side of mouth.
ANCHORAGE Float at mouth.
TRAILS AND SURVEY ROUTES Forest Service trail to stream above Low Lake crosses at cable crossing. Skiff usually available at outlet of Low Lake may be used with outboard carried in over the trail.
AERIAL SURVEY NOTES Aerial visibility good during normal water levels in stream. Schooled salmon at stream mouth easily observed though the lake observations are unsatisfactory. Terminal falls easily visible.

INTERTIDAL ZONE

There are no intertidal spawning facilities. The outlet falls from Low Lake drops an estimated 25' in 50 yards to the high tide point. The stream below high tide enters tidal waters without a stream bed being exposed at low tide levels.

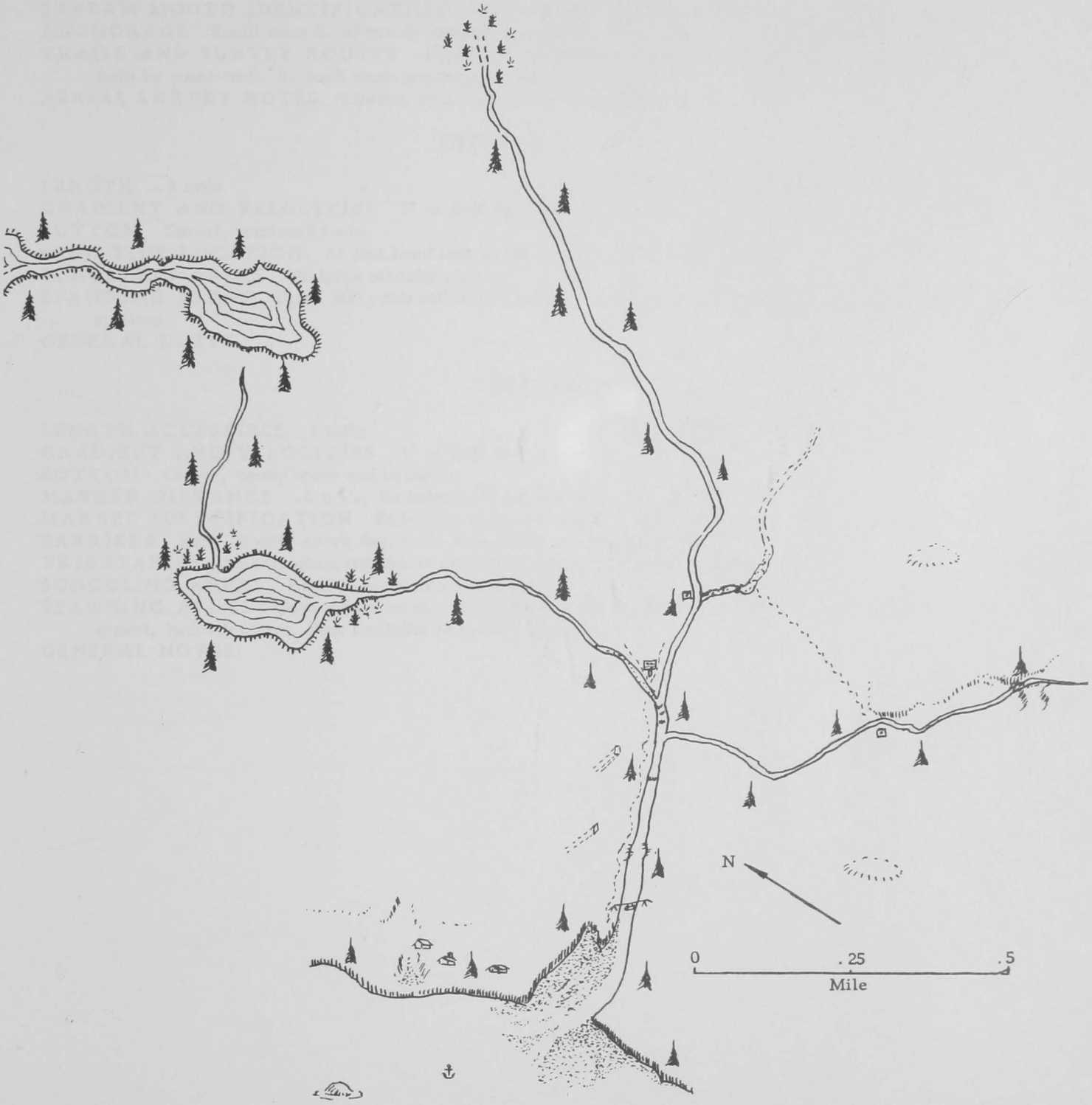
UPSTREAM

LENGTH ACCESSIBLE .7 mile (Above lake) AVERAGE WIDTH/DEPTH 150'/24"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM Sand and gravel, larger rocks in upper accessible stream.
MARKER DISTANCE .7 mile.
MARKER IDENTIFICATION Impassable falls.
BARRIERS Falls are over 100' and are complete barriers.
TRIBUTARIES No important tributaries.
SCHOOLING AREAS Low Lake and at outlet of stream into lake.
SPAWNING AREAS Salmon spawn throughout stream to below falls area. Major concentration have been observed at the split area above the cable crossing.
GENERAL NOTES This is a very productive stream for its size.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1943								
Oct 13	G .5	FWS						Poor. No signs of fish
1947								
Sep 27	G .1	FRI						Chum, coho, & pink seen in stream and lake
1948								
Aug 7	G 2.0	ASI	75		13			Visibility poor
1949								
Aug 30	A .7	FRI						1,000 salmon seen. Few off mouth
Sep 19	G .1	FRI	4,000		750		400 red	Some dead
1950								
Oct 2	G .5	FRI	3,400	250	650	1,200	70 red, 0 dead red	
1953								
Oct 9	G .7	FWS	150		275		30 coho	Fair. Sev. 1,000 dead in stream & lake
1954								
Sep 19	A .7	FRI	200		2,500	2,000	50 red	Poor vis. None seen at mouth
1955								
July 28		FWS	5,000					
Sep 19	A .7	FRI	8,000					
Sep 25	A .7	FRI	10,000		15,000			Some dead chum, few dead pink
1956								
Aug 26		FWS	1,500					
Sep 6	A .7	FRI	>200					Few chum. Some fish at mouth
Sep 24	A .7	FRI	30,000					Chum present. Some dead pink. Sev. 1,000 at mouth
Sep 30	A .7	FRI	>30,000	0				Chum present, some dead chum. Most spawning
1957								
July 26		FWS	50		5			
Sep 16	A .7	FRI	1,000	>200				Some chum. Sev. 1,000 pink at mouth
Sep 16		FWS	2,000		8,000			Fair
Sep 24	A .7	FRI	1,000		5,000	>500		Some dead pink. Some at mouth


N
0
.25
.5
Mile

KETCHIKAN, THORNE ARM, E. shore near head 1.5 miles S.E. of Pop Island

MAJOR SPECIES Pink OTHER SPECIES Chum, coho, trout
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Good spawning areas limited to only parts of the stream by bedrock and large rocky areas. Salmon production has been good in the past for the facilities.
STREAM TEMPERATURES Warm range. Observed temperatures: 49°F., 9/25/50; 45-55°F., 1951; 49°F., 9/12/52; 51°F., 9/11/53.
VALLEY DESCRIPTION Glacial origin. Stream follows geologic structure in relatively straight course for long sections. Broad valley, timbered with scattered muskeg patches, runs S.E. with head in ridge.
DRAINAGE 22 square miles (Polar Planimeter). Precipitation fed. Small lake in upper drainage, few small muskeg ponds. Relatively thin topsoil region with rapid precipitation run off.
STREAM MOUTH IDENTIFICATION Sea Level Mine remnants visible on N. side of creek mouth.
ANCHORAGE Small cove S. of mouth offers some shelter. Fair weather anchorage off mouth.
TRAILS AND SURVEY ROUTES A poor trail follows main stream to fork along N. bank. Easy route between forks by game trail. S. bank route preferred during high water.
AERIAL SURVEY NOTES Limited visibility except during good weather.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH 60-70'/18"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Gravel, scattered rocks.
HIGH TIDE LOCATION At first bend toward the E. above gravel bar on N. bank.
SCHOOLING AREAS No large schooling holes.
SPAWNING AREAS Upper 200 yards utilized by salmon. Good gravel and current similar to main stream sections.
GENERAL NOTES

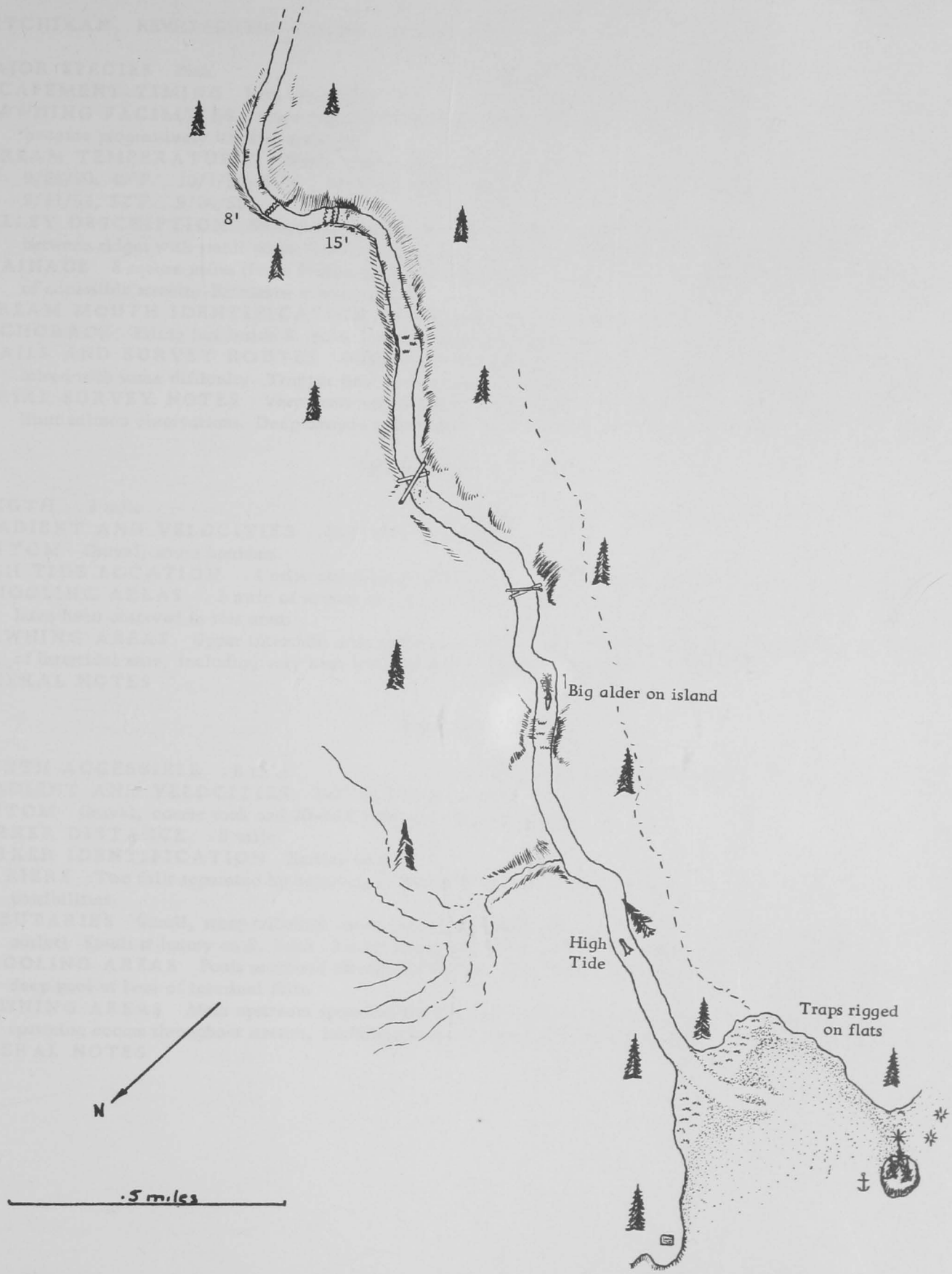
UPSTREAM

LENGTH ACCESSIBLE 1 mile AVERAGE WIDTH/DEPTH 50-60'/18"
GRADIENT AND VELOCITIES 1° at 2-3' per second
BOTTOM Gravel, heavy rocks and boulders.
MARKER DISTANCE .9 mile, includes short section of N. fork.
MARKER IDENTIFICATION End of good gravels. Bedrock areas above marker on S. fork.
BARRIERS Falls .6 mile above fork on S. fork. Falls .4 mile up N. fork.
TRIBUTARIES No important tributaries other than small trickles entering both forks.
SCHOOLING AREAS Pools in main stream and at forks.
SPAWNING AREAS Good gravel areas in main stream. First quarter mile of S. fork 15-20'/10" with good gravel, bedrock above. Poor facilities in steeper N. fork.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 21	G 1.5	FWS	95,000		5,000			Excellent. 2,000 off mouth
1941								
Sep 27	G 1.0	FWS	30,000					Good. Good indications of heavy early escapement
1943								
Oct 13	G .5	FWS	5,000		100			Fair
1945								
Sep 18	G 1.5	FWS	60,000		10,000			Excellent. 10,000 off mouth
1947								
Sep 27	G 2.0	FRI	10,750		2,850			Good
1949								
Oct 1	G 1.0	FRI	962	227	304	128		
1950								
Sep 25	G 1.0	FRI	1,680	120	170	105		
Oct 3	G 1.0	FRI	1,010	930	90	140		
1951								
Aug 28	G 1.0	FRI	160	0	9	0		All pink in intertidal zone. None at mouth
Sep 11	G 1.0	FRI	1,350	0	350	0	Coho present	Few fish at mouth
Sep 25	G 1.0	FRI	4,550	55	500	120	Some coho	500 or so fish off mouth
1952								
Sep 12	G 1.0	FRI	616		77		1 red	Sev. dead chum, pink. Few fish off mouth, mostly chum
1953								
Sep 11	G 1.0	FRI	340	0	170	0		Vis. poor, stream high. More present than seen
Sep 24	G .0	FRI						High flood
1954								
Sep 19	A .2	FRI						Poor vis. Only a few seen. None observed off mouth
1955								
Sep 15	A 1.0	FRI	2,500					1,000 at mouth
Sep 25	A 1.0	FRI	25,000					Few chum, many dead pink. 15,000 spawning in intertidal zone
1956								
Aug 26		FWS	500					
Sep 6	A 1.0	FRI	3,500					Few chum. Some fish at mouth
Sep 24	A 1.0	FRI	>10,000					Chum present. Sev. 1,000 at mouth
Sep 30	A 1.0	FRI	>20,000					Many dead pink. None at mouth
1957								
Sep 16	A 1.0	FRI	400					Few dead pink. None observed at mouth
Sep 16		FWS	1,200		6,300			Poor
Sep 24	A 1.0	FRI	1,000		1,000			Some dead chum, pink. None observed off mouth


8'
15'
Big alder on island
High Tide
Traps rigged on flats
N
.5 miles

KETCHIKAN, REVILLAGIGEDO CHANNEL, LUCKY COVE, Head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Good facilities found throughout the lower accessible stream. Spawning gravels become progressively limited upstream.
STREAM TEMPERATURES Warm range. Observed temperatures: 59°F., 9/8/49, 51°F., 9/25/49; 51°F., 9/26/50, 49°F., 10/1/50; 54°F., 8/29/51, 48°F. 9/25/51; 54°F., 9/12/52, 52°F., 10/8/52; 55°F., 9/11/53, 52°F., 9/24/53.
VALLEY DESCRIPTION Stream flows across low flat country at the base of Alava Ridge. Upper valley lies between ridges with small ponds throughout. Large lake basin 4 miles upstream between ridges.
DRAINAGE 8 square miles (Polar Planimeter). Precipitation fed through lake system. Two small lakes on N. side of accessible stream. Extensive muskeg areas.
STREAM MOUTH IDENTIFICATION Piling on N. side of S. point. Trap storage area.
ANCHORAGE Piling just inside S. point may be used by smaller vessels.
TRAILS AND SURVEY ROUTES Difficult to walk during high water. Game trails along S. bank can be followed with some difficulty. Trapper trail on S. ridge begins in S.E. corner of the cove.
AERIAL SURVEY NOTES Very restricted visibility under most light conditions. Amber water and dark bottom limit salmon observations. Deep canyon with high trees along banks requires near vertical course.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH 40-50'/12"
GRADIENT AND VELOCITIES .5-1° at 2' per second
BOTTOM Gravel, some boulders.
HIGH TIDE LOCATION .1 mile above head of grassflats. Blazed tree on S. bank, large log in midstream.
SCHOOLING AREAS .1 mile of stream above head of grassflats offers schooling conditions. Large concentrations have been observed in this area.
SPAWNING AREAS Upper intertidal area more coarse than mid-tide range. Spawning observed throughout most of intertidal zone, including very near low tide mark. (Double channel low tide outlet)
GENERAL NOTES

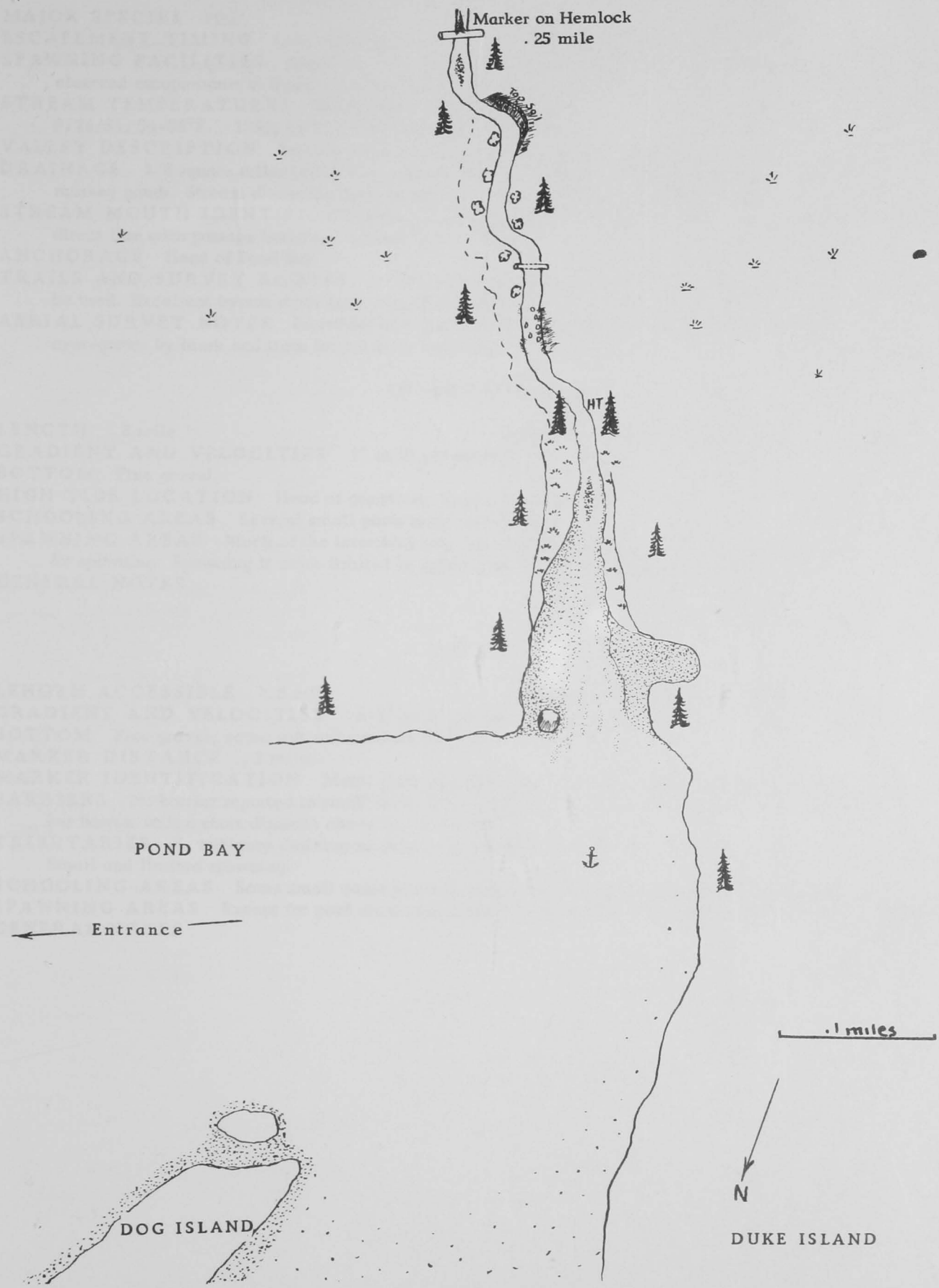
UPSTREAM

LENGTH ACCESSIBLE .8 mile AVERAGE WIDTH/DEPTH 35-45'/10-12"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM Gravel, coarse rock and 20-30% bedrock, increasing upstream.
MARKER DISTANCE .8 mile.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Two falls separated by cataracts (Three 4-5' falls). Lower falls 15', upper is 8'. May offer laddering possibilities.
TRIBUTARIES Small, steep tributary enters just above high tide from lake on N. side(Less than .1 mile from outlet). Small tributary on S. bank .3 mile above high tide accessible for short distance to salmon.
SCHOOLING AREAS Pools scattered throughout stream. Most schooling observed in lower stream pools and at deep pool at base of terminal falls.
SPAWNING AREAS Main upstream spawning has been observed in the first .3-.4 mile of stream. However, spawning occurs throughout stream, including sections that are generally not considered spawning areas.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1938								
Sep 11		FWS						18-20,000 fish. Extreme high water
1940								
Sep 14	G .8	FWS	2,000		500			Good. 10,000 off mouth
Sep 21	G .8	FWS	6,000		500			Excellent
1941								
Sep 27	G .5	FWS	50,000					Excellent
1942								
Sep 14	G .5	FWS	30,000		5,000			Excellent. 2,000 off mouth
1945								
Sep 18	G .5	FWS	40,000					Excellent. Few chum. 40,000 fish off mouth
1947								
Sep 25	G .1	FRI	2,500		5			Excellent
Sep 26	G .8	FRI	8,000		100			Excellent
1948								
Sep 28	G .3	FRI	5,000					Excellent. Est. 20,000 to the mile. Few at mouth
1949								
Sep 8	G .8	FRI	620	35			100 coho, 4 dead coho	
Sep 25	G .8	FRI	5,479	93	181	9	2 coho	Surveyed 200 yards above falls
Oct 5	G .8	FRI	3,972	333	48	36		
1950								
Sep 26	G .8	FRI	4,725	45	215	10	1 dead coho	
Oct 1	G .8	FRI	3,925	250	75	25		Peak past
1951								
Aug 29	G .2	FRI	21	0	0	0	1 red	Fish mostly in intertidal zone, none in mouth
Sep 11	G .4	FRI	3,600	0	3	0	Coho present	About 10,000 fish in cove
Sep 25	G .8	FRI	7,650	188	160	85	Few coho	5-8,000 fish off mouth
1952								
Sep 12	G .3	FRI	45	0	0	0		3-500 pink at mouth
Oct 8	G .4	FRI	380	600	4			Few dead chum
1953								
Sep 11	G .2	FRI	75	0	10	0		Vis. 5%. Stream high, more present than seen
Sep 24	G .0	FRI						300 at high tide. Full flood
Oct 1	G .3	FWS	238	78	0	1		
1954								
Sep 16	G .4	FRI	2,100					Few chum. 4,500 off mouth
Sep 27	G .8	FRI	15,600	460				Some live, dead chum. Some pink off mouth
1955								
July 28		FWS						500 coho at mouth
Sep 19	A .8	FRI	3,000					
Sep 25	A .8	FRI	10,000					
1956								
Sep 15	G .8	FWS	3,000		6		1 coho	800 pink at mouth
Sep 20	G .8	FWS	70,000		1,600			3,000 pink at mouth
Sep 24	A .8	FRI	>15,000					Many dead pink. Vis. poor. 3,000 at mouth
Sep 30	A .8	FRI	15,000					Many dead pink. Vis. poor. None at mouth
1957								
Sep 15	A .8	FRI	>200					Some chum, few dead pink. None at mouth


Marker on Hemlock
. 25 mile
HT
POND BAY
Entrance
.1 miles
N
DOG ISLAND
DUKE ISLAND

KETCHIKAN, FELICE STRAIT, POND BAY, S.W. corner at head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 5-10,000
SPAWNING FACILITIES Excellent. Limited only by the relatively small size of the stream The abundance of observed escapements in many years has been considerably greater than might be expected for this stream.
STREAM TEMPERATURES Warm range. Observed temperatures: 49°F., 10/10/50; 55°F., 9/12/51, 52°F., 9/26/51; 54-58°F., 1952; 56°F., 9/12/53, 52°F., 9/24/53.
VALLEY DESCRIPTION Stream cut canyon in flat muskeg area of N. Duke Island, wooded stream margins.
DRAINAGE 1.6 square miles (Polar Planimeter). Precipitation fed through three small lakes and some very small muskeg ponds. Stream discharge drops to very low level during prolonged dry periods.
STREAM MOUTH IDENTIFICATION Large rock on E. side of lower intertidal zone. Stream mouth in direct line with passage between Dog and Duke Islands.
ANCHORAGE Head of Pond Bay.
TRAILS AND SURVEY ROUTES Stream easily walked. Short sections of game trails along both banks may be used. Excellent bypass route back from creek on E. side.
AERIAL SURVEY NOTES Intertidal and mouth schooling visibility good from the air. Stream is too small and over-grown by brush and trees for accurate estimates.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH 30-40'/6-8"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Fine gravel.
HIGH TIDE LOCATION Head of grassflats, blazed hemlock on E. bank.
SCHOOLING AREAS Several small pools near high tide area.
SPAWNING AREAS Much of the intertidal zone has relatively constant gradient and gravel composition suitable for spawning. Spawning is more limited in upper zone because of sharp grassy banks.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.5 mile AVERAGE WIDTH/DEPTH 10-15'/6-8"
GRADIENT AND VELOCITIES .5-1° at 2' per second
BOTTOM Fine gravel, some soft sedimentary bedrock.
MARKER DISTANCE .3 mile.
MARKER IDENTIFICATION Metal plate placed on small hemlock growing on log in mid-stream.
BARRIERS No barrier reported to small lake .5 mile upstream. Tributary from E. just above terminal marker has barrier falls a short distance above its confluence.
TRIBUTARIES E. tributary draining muskeg area has only short distance from main stream accessible to salmon. Small and limited spawning.
SCHOOLING AREAS Some small pools between riffles are used by salmon prior to spawning.
SPAWNING AREAS Except for pool areas and limited bedrock, most of the stream is utilized during spawning.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
Sep 24	G .1	ASI	100					Poor
1948								
Oct 2	G .3	ASI	20,000					Tremendous number of dead pink
1950								
Oct 10	G .3	FRI	1,095	665	10	60		Peak past recently
1951								
Sep 12	G .3	FRI	5,000	0	109	0		5,000 off mouth. Many in vicinity
Sep 26	G .3	FRI	2,250	250	450	100		Extremely low water. Fish in danger of suffocation
1952								
Sep 12	G .3	FRI	518	0	80	11		Some in bay. Fish are fresh
Sep 22	G .3	FRI	1,400		360	300		Few dead pink
Oct 6	G .3	FRI	225	150	160	200		
1953								
Sep 12	G .3	FRI	230	2	280	0		Vis. 60%. Fish all spawning
Sep 24	G .3	FRI	2,400	350	1,550	200		Very high water
Sep 29	G .3	FWS	600	45	350	10		Fair
1954								
Sep 16	G .3	FRI	5,800	>100	>200	>35		Several hundred off mouth
Sep 27	G .3	FRI	4,900	325	>200	100		None off mouth
1955								
Sep 19	A .3	FRI	4,000		>1,000			Fish at mouth
Sep 26	A .3	FRI	8,000					Some chum, few dead pink. 2,000 at mouth
1956								
Sep 16	A .3	FRI						Few pink. 15,000 at mouth
Sep 24	A .3	FRI	10,000					Some chum, some dead pink. 2-3,000 at mouth. Spawning in progress
Sep 30	G .3	FRI	>9,000					Many dead pink. None at mouth spawning or spent
1957								
Sep 15	A .3	FRI	200					Few dead pink. >4,000 pink and chum at mouth. >5,000 chum off mouth
Sep 24	A .3	FRI			1,200	>200		Few pink

KETCHIKAN, DIXON ENTRANCE, HALL COVE

MAJOR SPECIES Coho OTHER SPECIES Pink, chum, trout
ESCAPEMENT TIMING Late. Sep.-Oct.-Nov. ESCAPEMENT MAGNITUDE Unknown
SPAWNING FACILITIES Spawning grounds in the streams tributary to Hall Cove are concealed by the amber colored water commonly found on Duke Island. Preliminary examination from the air indicates that conditions are most favorable for coho which have been observed in good numbers in most of the tributary streams.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Except for the relatively high mountain on the S. side of Duke Island, the entire island is flat, muskeg. Geologic reports show that most of the flat island areas contain large quantities of low grade iron ore.
DRAINAGE Flat muskeg area drainages with deep amber color, flowing through small lakes and many small ponds.
STREAM MOUTH IDENTIFICATION Hall Cove is entered from the S.W. side of the island over shallow bars.
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Presence of live salmon in amber colored water marked by disturbance of water visible from the air in ponds. Enumeration by air impossible.

INTERTIDAL ZONE

LENGTH AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS

TRIBUTARIES

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating

112-30 K 107A
N54°51.9 W131°19.7 Previous No. 106D

KETCHIKAN, DIXON ENTRANCE, S. Duke Island, 1 mile N.E. of Cape Northumberland

MAJOR SPECIES Pink
OTHER SPECIES
ESCAPEMENT TIMING Late. Sep. -Oct.
ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Reported to be fair.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION

DRAINAGE 2.5 square miles (Polar Planimeter). Precipitation fed. Part of drainage originates on E. slope of Mount Lazaro.
STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH
AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >1 mile (Report).
AVERAGE WIDTH/DEPTH 10'/6"
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS

TRIBUTARIES

SCHOOLING AREAS

SPAWNING AREAS Reported to be fair.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1940								
Sep 25	G 1.0	ASI	1,500					Fair

KETCHIKAN, TAMGAS HARBOR, E. shore opposite Civil Aeronautics Administration Station

MAJOR SPECIES Red OTHER SPECIES Trout
ESCAPEMENT TIMING ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES Stream facilities reported to be poor. Possible shore spawning areas observed for red salmon.
STREAM TEMPERATURES
VALLEY DESCRIPTION Glacial origin with lake basin. Steep mountain slopes surround upper and lower Tamgas Lakes.
DRAINAGE 9 square miles (Polar Planimeter). Precipitation fed through two lakes. Some early snowfields in upper drainage.
STREAM MOUTH IDENTIFICATION
ANCHORAGE At mouth.
TRAILS AND SURVEY ROUTES Trail to lake along N. side of outlet stream. There has been a skiff near the end of the trail, at the lake, in the past.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH Short AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .3 mile to lake AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES 3-5" at 2-4' per second
BOTTOM Coarse broken rock.
MARKER DISTANCE .3 mile.
MARKER IDENTIFICATION Lake outlet.
BARRIERS Three falls. Second and third falls are difficult passages for reds.
TRIBUTARIES None in outlet stream.
SCHOOLING AREAS Below falls in stream and in lake.
SPAWNING AREAS Very limited facilities in stream.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1947								
July 25	G .3	FRI					Few red	Poor
1955								
Season	G	FWS					3,500 red	
1956								
July 2		FWS					1,600 red	800 red at mouth
July 4		FWS					1,800 red	3,000 red at mouth
July 7		FWS					6,400 red	600 red at mouth
July 8		FWS					22,000 red	
1957								
June 26		FWS						800 red at mouth
June 27		FWS					1,300 red	400 red at mouth
June 28		FWS					1,700 red	
July 1		FWS						100 red at mouth
July 2		FWS						200 red at mouth
July 3		FWS						1,400 red at mouth
July 4		FWS					900 red	3,000 red at mouth
July 5		FWS					1,600 red	600 red at mouth
July 6		FWS						300 red at mouth
July 7		FWS						800 red at mouth
July 8		FWS					400 red	
July 9		FWS					700 red	800 red at mouth

KETCHIKAN, FELICE STRAIT, N. W. Head of cove 2.3 miles W. of Annette Point.

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 5,000
SPAWNING FACILITIES Rating from fair to good for both of the intertidal branches. The N. W. branch is considered as the main spawning stream with the N. E. branch as tributary, because of limited spawning facilities found primarily in the intertidal zone.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Stream's course through muskeg flats at the base of Davison Mountain. Wooded upper slopes and along lower stream courses.
DRAINAGE Total drainage area 5 square miles (2 square miles, 108A; 3 square miles, 108B as computed from Polar Planimeter). Precipitation fed, no lakes or ponds.
STREAM MOUTH IDENTIFICATION Red channel buoy visible from intertidal zone.
ANCHORAGE
TRAILS AND SURVEY ROUTES Main spawning stream at N. W. corner is easily walked. Tributary spawning stream easily walked in the intertidal area.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .9 mile (Combined streams). AVERAGE WIDTH/DEPTH 7-15'/7-8"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Sand, gravel.
HIGH TIDE LOCATION Head of grassflats.
SCHOOLING AREAS

SPAWNING AREAS Spawning occurs throughout the upper half of the intertidal zone.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.3 mile AVERAGE WIDTH/DEPTH 10'/8"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel, small rock, shale, boulders and bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS N.E. spawning tributary has series of falls .2 mile upstream with bedrock areas below, limiting spawning to intertidal. No barriers reported on primary spawning stream.
TRIBUTARIES N.E. corner of intertidal zone. Stream is considered as tributary to primary spawning stream in N. W. corner, though slightly larger in size, due to spawning area limitations.
SCHOOLING AREAS

SPAWNING AREAS Shallow gravel riffles in lower stream. Stream bed becomes coarse upstream with frequent bedrock rapids and shale sections.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 6	G .3	FRI	2,900	870	250			Good. Stream filled. Spawning activity in progress
1953								
Sep 29	G .1	FWS	520	10	140	130		Fair. No other species

KETCHIKAN, FELICE STRAIT, .4 mile W. of Annette Point

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late Sep.-Oct. ESCAPEMENT MAGNITUDE <10,000
SPAWNING FACILITIES Excellent facilities limited only by small size of stream.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Stream cut valley heading in connecting ridge between Davison and Tamgass Mountains. Lower stream course across flat muskeg areas at base of mountains. Timbered along stream and upper valley slopes.
DRAINAGE 6 square miles (Polar Planimeter). Precipitation fed from steep S.W. slopes of Tamgass Mountain, no lakes.
STREAM MOUTH IDENTIFICATION Snipe Island visible from high tide mark.
ANCHORAGE At mouth.
TRAILS AND SURVEY ROUTES Stream bed easily walked at normal water levels.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 mile AVERAGE WIDTH/DEPTH 10-15'/6"
GRADIENT AND VELOCITIES 2° at 2' per second
BOTTOM Sand and gravel.
HIGH TIDE LOCATION At stream emergence from woods.
SCHOOLING AREAS None reported.
SPAWNING AREAS Limited to area at high tide.
GENERAL NOTES

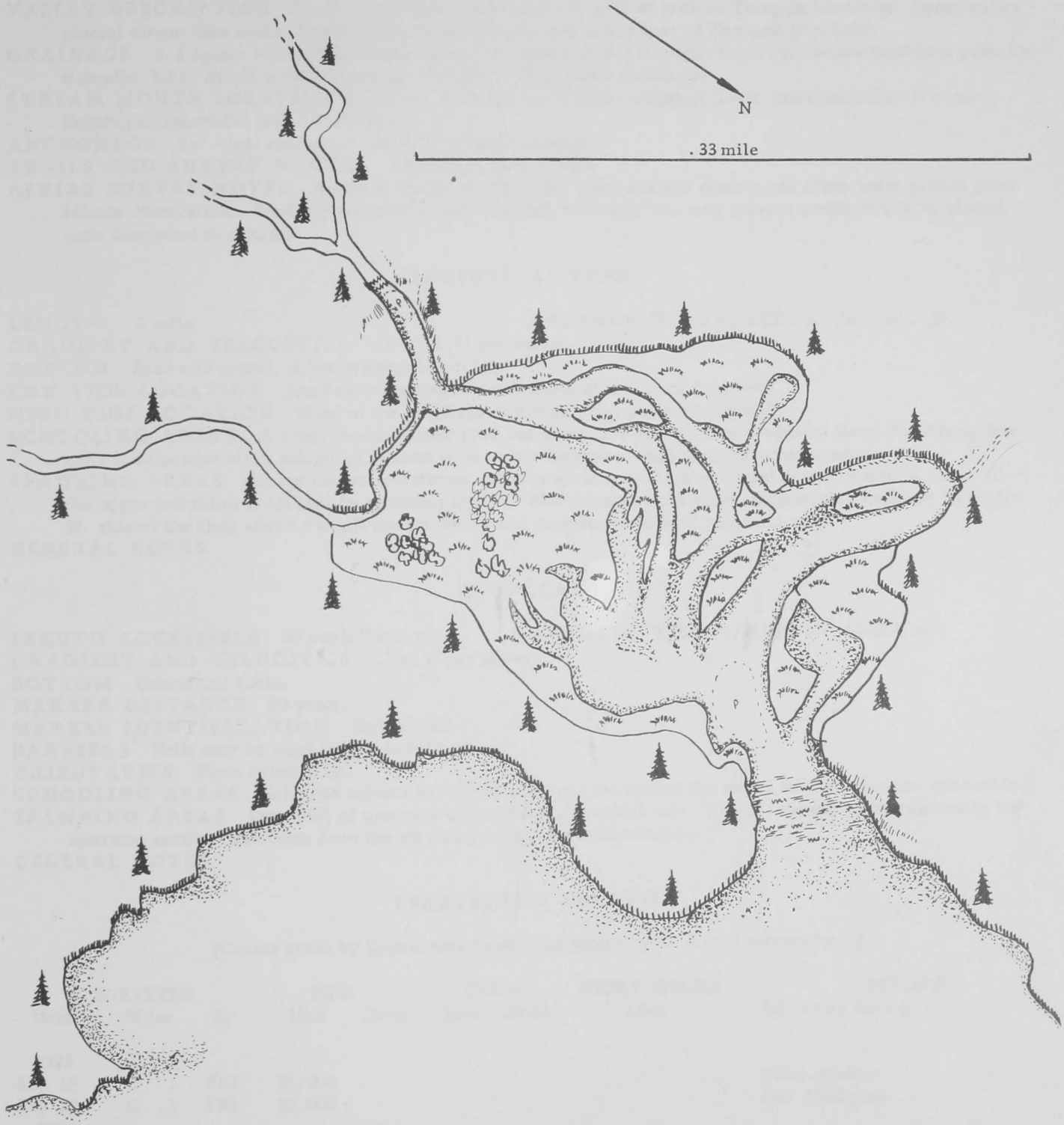
UPSTREAM

LENGTH ACCESSIBLE >1 mile AVERAGE WIDTH/DEPTH 10'/6"
GRADIENT AND VELOCITIES .5-1° at 1-2' per second
BOTTOM Sand, gravel, small rock, bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in 1 mile.
TRIBUTARIES Small tributary enters on W. side .2 mile upstream and is accessible to salmon for .2 mile. A bedrock falls is a barrier to salmon.
SCHOOLING AREAS Shallow pools in lower stream serve as schooling areas.
SPAWNING AREAS Good gravel riffles found throughout distance surveyed.
GENERAL NOTES Evidence noted of rapid flooding and return to normal level during rains.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 6	G 1.0	FRI	4,000	5,000	200			Excellent
1949								
Sep 7	G .5	FWS	10,000					


N
.33 mile

KETCHIKAN, REVILLAGIGEDO CHANNEL, KWAIN BAY, S. W. corner

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep. -Oct. ESCAPEMENT MAGNITUDE 25-50,000
SPAWNING FACILITIES Excellent intertidal spawning facilities. Upstream spawning limited to very short section above broad intertidal gravel flats by barrier falls. Past escapements observed indicate that stream accessible to salmon has unusually good spawning environment.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Short, steep valley heading on E. side of peak of Tamgass Mountain. Upper valley glacial cirque lake basin. Lower valley broad muskeg area along base of Tamgass Mountain.
DRAINAGE 3.4 square miles (Polar Planimeter). Precipitation fed through cirque lake below mountain peak and a smaller lake. Small snowfield persists into July. Clear water discharge.
STREAM MOUTH IDENTIFICATION Falls (series of minor drops) at lower intertidal outlet is narrow, forming an intertidal gravel basin above.
ANCHORAGE Excellent anchorage just S.E. of stream mouth.
TRAILS AND SURVEY ROUTES Easily surveyed on foot.
AERIAL SURVEY NOTES Aerial visibility is excellent. Light colored gravels and clear water permit good salmon observations. Westerly winds drop over Tamgass Mountain and may prevent aerial survey by violent gusts dangerous to aircraft.

INTERTIDAL ZONE

LENGTH .5 mile AVERAGE WIDTH/DEPTH 50-100'/12"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Sand and gravel, a few scattered boulders.
LOW TIDE LOCATION Just below a series of small drops at the lower intertidal.
HIGH TIDE LOCATION Head of the grassflats at stream emergence from woods.
SCHOOLING AREAS A long, broad shallow pool just above the outlet of the intertidal flats. Relatively low current velocities allow schooling in most of the intertidal zone, including spawning areas.
SPAWNING AREAS Except for the low stream velocity section in the lower third of the intertidal zone, all of the upper two thirds is utilized by spawning salmon. The stream course winds considerably half way up on the W. side of the flats where a small stream enters and provides additional spawning area.
GENERAL NOTES

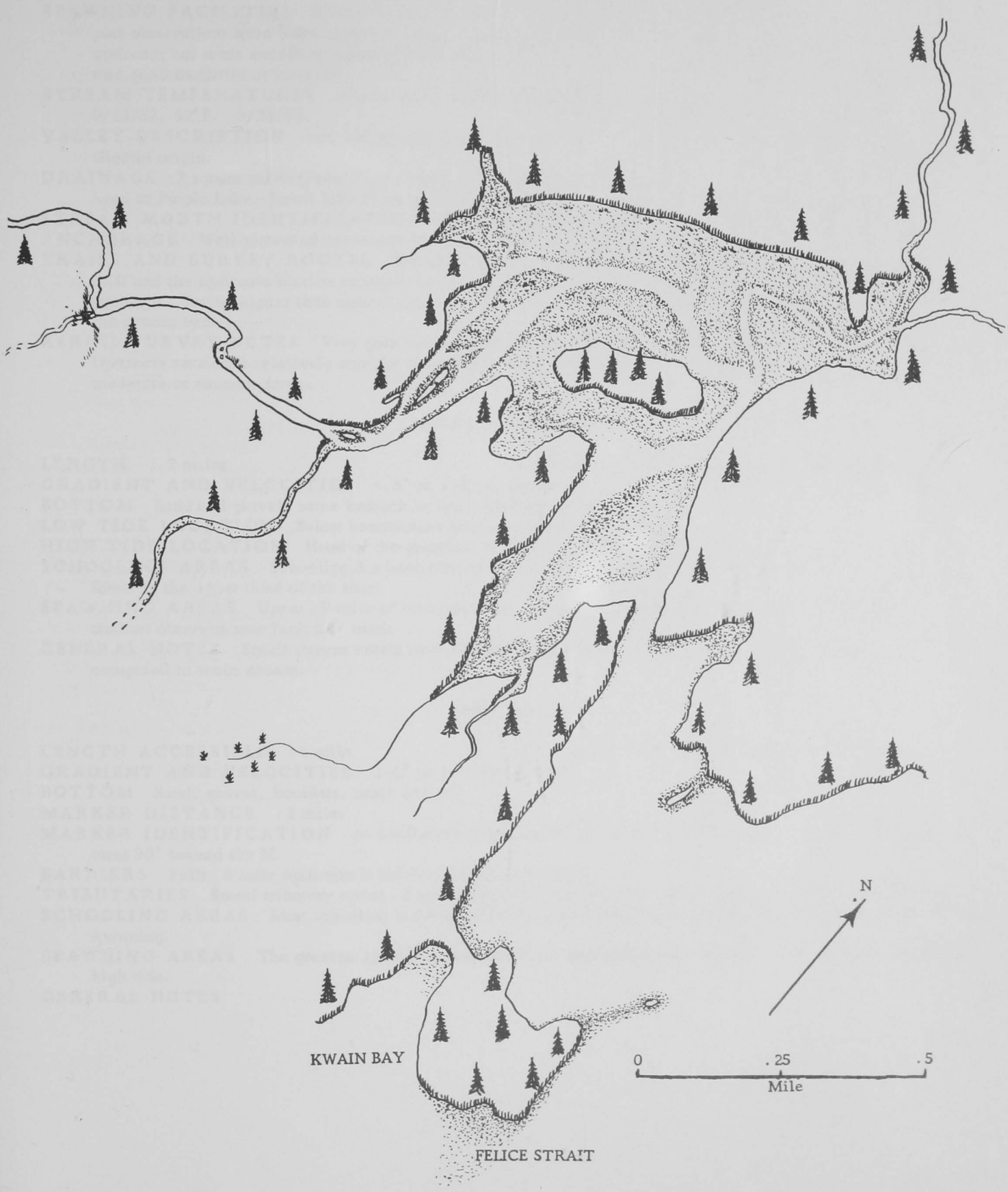
UPSTREAM

LENGTH ACCESSIBLE 50 yards (Estimated). AVERAGE WIDTH/DEPTH 40-50'/24"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel and rocks.
MARKER DISTANCE 50 yards.
MARKER IDENTIFICATION Barrier falls.
BARRIERS Falls may be total barrier to salmon.
TRIBUTARIES None below falls.
SCHOOLING AREAS Schooled salmon have been observed throughout the entire 50 yards that are accessible.
SPAWNING AREAS Over 90% of spawning occurs in the intertidal zone. Though spawning observations in the upstream section have been from the air only, it appears to be suitable.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1955								
Sep 19	G .1	FRI	25,000					Chum present
Sep 25	G .1	FRI	25,000					Few dead pink
1956								
Sep 15	G .1	FWS	1,700		1,000			
Sep 16	G .1	FRI						Few pink. 12,000 at mouth
Sep 24	G .1	FRI	50,000					Few dead pink. Some fish at mouth
1957								
Sep 15	A .1	FRI	1,200					Schooled, fresh
Sep 24	A .1	FRI	1,000		500			Some dead chum. No fish observed off mouth


N
KWAIN BAY
0
.25
.5
Mile
FELICE STRAIT

KETCHIKAN, REVILLAGIGEDO CHANNEL, CRAB BAY, Head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 25-50,000
SPAWNING FACILITIES Extensive upper intertidal zone stream sections offer very good facilities. However, past observations have found spawning to be equally divided between the intertidal and upstream areas. The upstream has some excellent spawning facilities in the lower part. Though more coarse upstream, there are also good facilities at intervals.
STREAM TEMPERATURES Warm range. Observed temperatures: 53°F., 9/12/52, 52°F., 10/7/52; 54°F. 9/11/53, 52°F. 9/24/53.
VALLEY DESCRIPTION Low valley with head at divide above Purple Lake. Bare granite areas are extensive. Glacial origin.
DRAINAGE 7 square miles (Polar Planimeter). Main discharge from precipitation fed chain of small lakes E. of head of Purple Lake. Small lake feeds small stream entering main stream .2 mile above high tide.
STREAM MOUTH IDENTIFICATION Entrance to extensive intertidal grassflats through constriction.
ANCHORAGE Well protected anchorage in bay S. of stream mouth.
TRAILS AND SURVEY ROUTES Extensive intertidal zone requires that stream be reached at high tide by skiff and the upstream section surveyed quickly in order that return to the skiff be before the tide drops and strands it. During higher than normal water levels, skiff can be floated out in the stream. Upstream route in the stream bed.
AERIAL SURVEY NOTES Very good aerial observation conditions in intertidal zone on most water levels. Upstream section is relatively straight and easily followed by plane. Very rough air during westerly winds of moderate or stronger force.

INTERTIDAL ZONE

LENGTH 1.5 miles AVERAGE WIDTH/DEPTH 100'/12-24"
GRADIENT AND VELOCITIES <.5° at 1-2' per second
BOTTOM Sand and gravel, some bedrock in lower intertidal zone.
LOW TIDE LOCATION Below constriction near anchorage.
HIGH TIDE LOCATION Head of the grassflats at stream emergence from woods.
SCHOOLING AREAS Schooling has been observed throughout intertidal zone. Large concentrations usually found in the upper third of the zone.
SPAWNING AREAS Upper .5 mile of intertidal zone has good spawning facilities. Largest spawning concentrations observed near high tide mark.
GENERAL NOTES Small stream enters from N. side at the high tide mark. Negligible spawning populations compared to main stream.

UPSTREAM

LENGTH ACCESSIBLE .4 mile AVERAGE WIDTH/DEPTH 50-60'/12-24"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM Sand, gravel, boulders, some bedrock.
MARKER DISTANCE .3 mile.
MARKER IDENTIFICATION At confluence with small stream entering from the W. where main stream turns 90° toward the N.
BARRIERS Falls .4 mile upstream is barrier to salmon migration.
TRIBUTARIES Small tributary enters .3 mile upstream from W. at terminal mark. Not accessible to salmon.
SCHOOLING AREAS Most schooling is found in the intertidal zone. Most salmon observed upstream have been spawning.
SPAWNING AREAS The greatest spawning concentrations have been observed in the first .3 mile, densest near high tide.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1930								
Sep 19	G 1.3	FWS						Well seeded. At least 50,000 fish
1952								
Sep 12	G .4	FRI	505	0	171	20		
Sep 22	G .3	FRI	1,250	>50	900	>50	Several coho	Some off mouth
Oct 7	G .3	FRI	500	600	457	900	13 coho	
1953								
Sep 11	G .3	FRI	230	0	560	0		Vis. 80%. Fish all spawning. Few off mouth
Sep 24	G .3	FRI	1,300		400		50 coho	Few dead pink. Very high water
1954								
Sep 19	A .3	FRI	5,500					Some dead pink, many dead chum
Sep 24	G .3	FWS	19,000					Good. Few chum
Sep 27	A .1	FRI	8,000	1,000				Few at mouth
1955								
Sep 19	A .3	FRI	30,000					Chum present
Sep 25	A .3	FRI	30,000					Few dead pink. 5,000 at mouth
1956								
Sep 14	G 2.0	FWS	4,000		600			4,000 pink at mouth
Sep 16	A .3	FRI	>200			>200		Some chum. 50,000 at mouth
Sep 24	A .3	FRI	45,000					Chum present. Some dead chum, pink
Sep 30	A .3	FRI	35,000	>2,000				All spawning
1957								
Aug 7		FWS						110 chum, pink
Aug 9		FWS	150					
Aug 13		FWS	300		300			
Aug 16		FWS	150		150		100 red	
Sep 15	A .3	FRI	500					Some chum, some dead pink. None at mouth
Sep 24	A .3	FRI	1,000	>200		>200		Some chum. Some at mouth

101-41 K 111A
N55°11.9 W131°23.9 Previous No. 111

KETCHIKAN, REVILLAGIGEDO CHANNEL, CASCADE INLET, Head

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >2,000
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Short, stream cut low gradient slope. Timbered along stream, muskeg areas back from stream.
DRAINAGE .8 square mile (Polar Planimeter). Precipitation fed. Small muskeg pond in upper drainage.
STREAM MOUTH IDENTIFICATION
ANCHORAGE Small inlet N.W. of N. end of Ham Island.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION At stream emergence from woods.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .3 mile AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE .3 mile.
MARKER IDENTIFICATION Falls
BARRIERS Falls appears to be barrier to salmon migration (Aerial observation).
TRIBUTARIES Small stream enters intertidal zone from W.
SCHOOLING AREAS

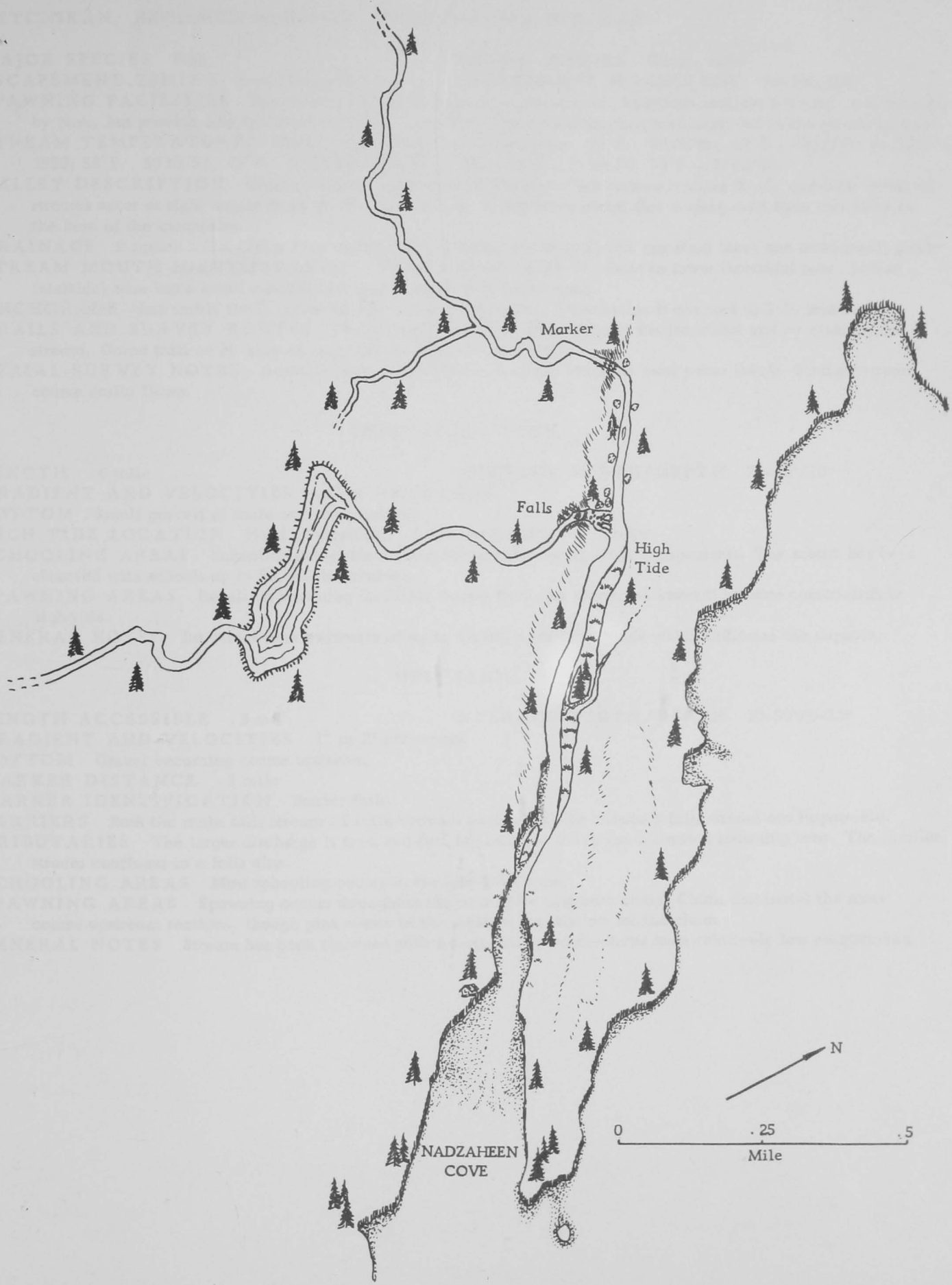
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Mile	By	Live	Dead	Live	Dead	Live	Adjective Rating


Marker
Falls
High
Tide
NADZAHEEN
COVE
N
0
.25
.5
Mile

KETCHIKAN, REVILLAGIGEDO CHANNEL, NADZAHEEN COVE, N.W. Head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 50-100,000
SPAWNING FACILITIES Excellent facilities throughout entire stream. Upstream sections not used as intensively by pink, but provide fine facilities for chum. Over 60% of the spawning has been observed in the intertidal zone.
STREAM TEMPERATURES Warm range. Observed temperatures: 55°F., 9/19/49, 49°F., 10/6/49; 45.5-53°F. 1950; 58°F., 9/10/51, 49°F. 9/25/51; 52-55°F., 1952; 59°F., 9/10/53, 54°F., 9/22/53.
VALLEY DESCRIPTION Glacial origin. Lower stream lies in shallow canyon running N.-S. and both tributary streams enter at right angles from the W. Main stream valley flows across flat muskeg area from two lakes at the base of the mountains.
DRAINAGE 9 square miles (Polar Planimeter). Precipitation fed through two fair sized lakes and some small ponds.
STREAM MOUTH IDENTIFICATION There is a cabin on the W. shore in lower intertidal zone. Lower intertidal zone has a small constriction, just above the low tide mark.
ANCHORAGE Just inside the E. point off the mouth of the stream. Anchorage is exposed to S.E. winds.
TRAILS AND SURVEY ROUTES Stream easily surveyed from banks in the intertidal and by wadding the stream. Game trail on N. side of main stream from the first falls.
AERIAL SURVEY NOTES Aerial salmon observations are easily made on most water levels. Straight stream course easily flown.

INTERTIDAL ZONE

LENGTH .6 mile AVERAGE WIDTH/DEPTH 70-80'/10"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Small gravels of shale and some quartz.
HIGH TIDE LOCATION Head of grassflats, .1 mile below first falls stream.
SCHOOLING AREAS Schooling occurs throughout all sections during large escapements. The mouth has been observed with schools up to 50,000 in number.
SPAWNING AREAS Excellent spawning facilities extend from just above the lower tidal zone constriction to high tide.
GENERAL NOTES Intertidal zone estimates of up to 40,000 have been made which indicates the capacity.

UPSTREAM

LENGTH ACCESSIBLE .3 mile AVERAGE WIDTH/DEPTH 10-50'/6-12"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel becoming coarse upstream.
MARKER DISTANCE .3 mile
MARKER IDENTIFICATION Barrier falls.
BARRIERS Both the main falls stream .1 mile above high tide and the tributary falls stream are impassable.
TRIBUTARIES The larger discharge is from the first falls stream which has a limited spawning area. The smaller stream continues to a falls also.
SCHOOLING AREAS Most schooling occurs in the intertidal zone.
SPAWNING AREAS Spawning occurs throughout the accessible upstream areas. Chum dominates the more coarse upstream sections, though pink spawn in the sections too shallow for the chum.
GENERAL NOTES Stream has been observed with exceptionally good returns from relatively low escapements.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By		Live	Dead	Live	Dead	Live	Adjective Rating
1949									
Sep 19	G	.3	FRI	3,020	275	1,046	71		
Oct 6	G	.3	FRI	12,000	>1,000	2,500	>1,000		Excellent showing
1950									
Sep 20	G	.3	FRI	2,300	44	2,600	142		
Oct 1	G	.3	FRI	3,800	140	3,500	1,200		Approaching peak
Oct 11	G	.3	FRI	2,900	>1,000	2,300	4,000		Peak has passed
1951									
Sep 10	G	.3	FRI	5,400	0	1,050	0		5-8,000 off mouth are 60% chum
Sep 25	G	.3	FRI	4,900	240	5,700	1,000	Few coho	10,000 pink at mouth
1952									
Sep 11	G	.3	FRI	500	0	200	0		2-3,000 mixed off mouth
Sep 28	G	.3	FRI	5,000	>50	4,600	>800		Sev. 100 chum, few pink off mouth
Oct 8	G	.3	FRI	1,000	1,000	1,450	7,500		
1953									
Sep 10	G	.3	FRI	1,050	4	1,100	3	2 coho	Vis. 80%. Fish on riffles mostly spawnin
Sep 22	G	.3	FRI	2,800	2	7,600	750		4-500 pink off mouth. Chum spawning. Vis. 100%
1954									
Sep 16	G	.3	FRI	>4,000		>1,200			9,000 off mouth. Many dead chum
Sep 27	A	.3	FRI	14,000	800				Chum, pink spawning above marker
1955									
Sep 19	A	.3	FRI	27,000					Chum present. Fish at mouth
Sep 25	A	.3	FRI	60,000					Some dead pink. >10,000 at mouth
1956									
Sep 16	A	.3	FRI	>700					>100,000 at mouth
Sep 24	A	.3	FRI	40,000					>150,000 pink in cove at mouth
Sep 30	G	.3	FRI	>120,000	>5,000				>30,000 at mouth
1957									
Sep 15	A	.3	FRI	1,000					Some chum. Dead pink. 2,000 chum, 1,000 pink at mouth
Sep 24	A	.3	FRI	7,000		7,000	>2,000		15,000 chum at mouth. 15,000 chum off mouth

112-20 TROUT CREEK K 113
N55°08.9 W131°31.9 Previous No. 114

KETCHIKAN, NICHOLS PASSAGE, PORT CHESTER, N.E. corner

MAJOR SPECIES
ESCAPEMENT TIMING Late. Sep.-Oct.
SPAWNING FACILITIES

OTHER SPECIES
ESCAPEMENT MAGNITUDE

STREAM TEMPERATURES

VALLEY DESCRIPTION

DRAINAGE 7 square miles (Polar Planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION

AVERAGE WIDTH/DEPTH

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION

AVERAGE WIDTH/DEPTH

BARRIERS

TRIBUTARIES

SCHOOLING AREAS

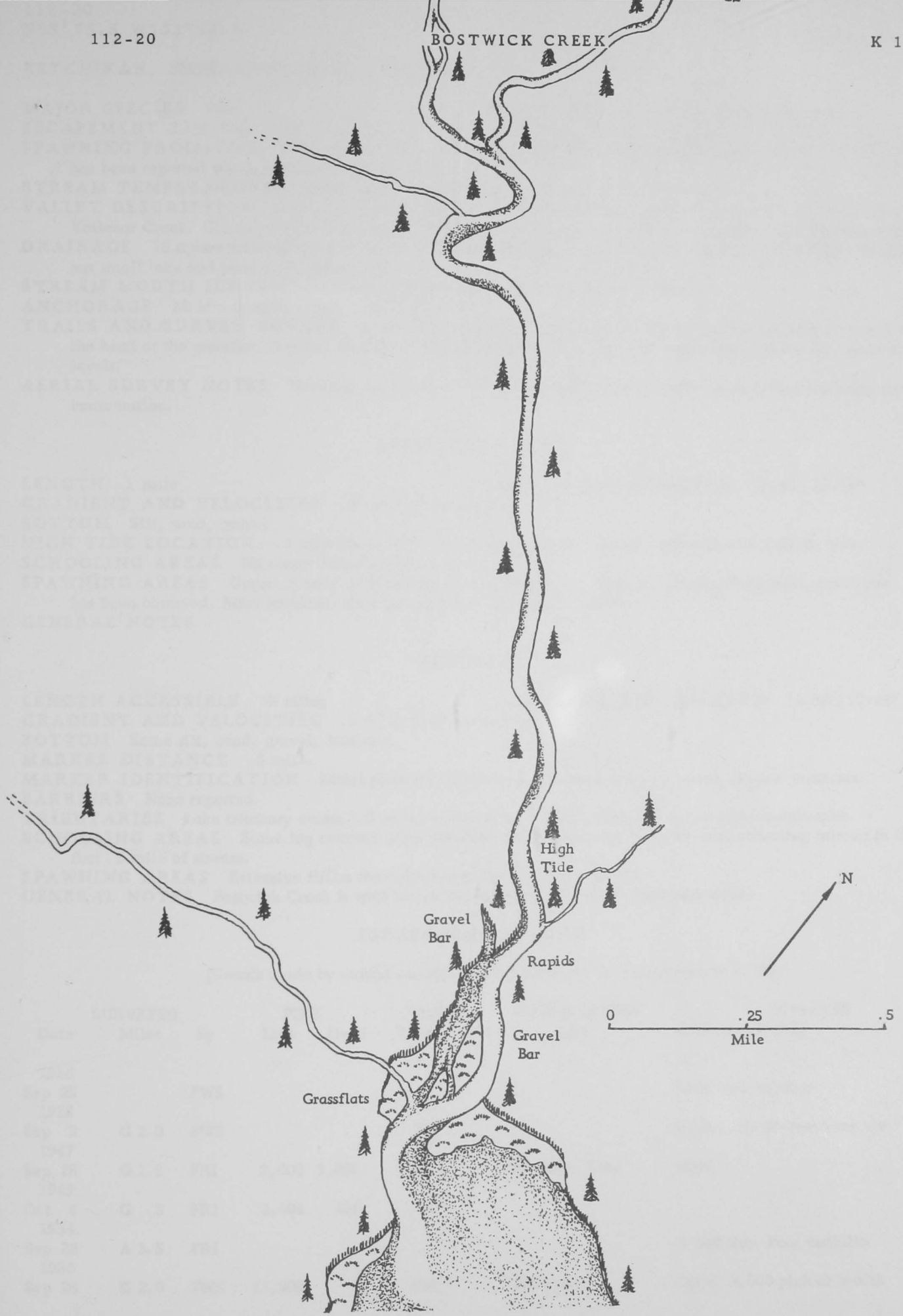
SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating


High
Tide
N
Gravel
Bar
Rapids
0
.25
.5
Mile
Gravel
Bar
Grassflats

KETCHIKAN, NICHOLS PASSAGE, BOSTWICK INLET, Head

MAJOR SPECIES Pink
OTHER SPECIES Chum, coho, red, trout
ESCAPEMENT TIMING Late. Sep.-Oct.
ESCAPEMENT MAGNITUDE >10,000
SPAWNING FACILITIES Rated as excellent, the stream contains extensive gravel riffle areas. A small lake has been reported which supports a red population.
STREAM TEMPERATURES Warm range. Observed temperature: 47°F., 10/6/49.
VALLEY DESCRIPTION A long, low valley running N.-N.W. and continuing through Gravina Island down Vallenar Creek. Glacial origin. Timbered on slopes and along stream. Most of the valley has extensive muskeg.
DRAINAGE 16 square miles (Polar Planimeter). Precipitation fed from E. and W. slopes of the valley. Tributary has small lake and pond on E. side of valley.
STREAM MOUTH IDENTIFICATION Cabins on S. side of inlet near stream.
ANCHORAGE Middle of inlet 1 mile from head.
TRAILS AND SURVEY ROUTES Most easily approached at near high tide by skiff which may be taken above the head of the grassflat .3 mile. Stream bed easily walked. W. bank more easily traveled during higher water levels.
AERIAL SURVEY NOTES Not surveyed by air. Dark bottom and amber-colored water reduce visibility for enumeration.

INTERTIDAL ZONE

LENGTH 1 mile
AVERAGE WIDTH/DEPTH 35-45'/12-18"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Silt, sand, gravel
HIGH TIDE LOCATION .1 mile above large grass island. Small tributary enters stream from E. side.
SCHOOLING AREAS No major schooling pools notes.
SPAWNING AREAS Upper .5 mile of intertidal zone is utilized by spawning salmon where good gravel size has been observed. Most intertidal spawning occurs in the upper .2 mile.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >5 miles
AVERAGE WIDTH/DEPTH 20-50'/10-24"
GRADIENT AND VELOCITIES .5-1° at 1-2' per second
BOTTOM Some silt, sand, gravel, boulders.
MARKER DISTANCE .5 mile.
MARKER IDENTIFICATION Metal plate on 12" alder on W. bank above a narrow section in stream.
BARRIERS None reported.
TRIBUTARIES Lake tributary enters 1.5 miles upstream on E. side. Lake is 4 miles above confluence.
SCHOOLING AREAS Some log covered holes and deep pools have been observed with schooling salmon in the first .5 mile of stream.
SPAWNING AREAS Extensive riffles throughout the first .5 mile observed.
GENERAL NOTES Bostwick Creek is well known for its sea run cutthroat trout population.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1936								
Sep 25		FWS						Light-fair seeding
1938								
Sep 3	G 2.0	FWS			100			Chum old. Stream very low
1947								
Sep 28	G 1.5	FRI	5,000	1,000	500		50 coho, 1 red	Good
1949								
Oct 6	G .5	FRI	2,404	216	24			
1954								
Sep 28	A 3.5	FRI						4,000 fish. Poor visibility
1956								
Sep 26	G 2.0	FWS	11,500		500		500 coho	Good. 9,000 pink at mouth

112-20 K 114A
N55°18.9 W131°41.5 Previous No. 115

KETCHIKAN, NICHOLS PASSAGE, BLANK INLET, Head

MAJOR SPECIES OTHER SPECIES
ESCAPEMENT TIMING Late. Sep. -Oct. ESCAPEMENT MAGNITUDE
SPAWNING FACILITIES 200' of the upper intertidal zone reported to have good spawning facilities. A small lake may be accessible to salmon, though no information available on upstream facilities or accessibility.
STREAM TEMPERATURES Warm range(Estimated).
VALLEY DESCRIPTION Stream cut across flat muskeg area heading on mountain slope.
DRAINAGE 3 square miles (Polar Planimeter). Precipitation fed through a small lake and small pot hole lakes and ponds. Amber-colored water.
STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .3 mile AVERAGE WIDTH/DEPTH 10-15'/6-8"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Bedrock and gravel.
HIGH TIDE LOCATION At stream emergence from woods.
SCHOOLING AREAS

SPAWNING AREAS Upper 200' of intertidal zone reported to contain good spawning gravels.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS Series of bedrock falls 50' above high tide are reported to be passable to salmon.
TRIBUTARIES

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1954								
Sep 28	A .0	FRI	3,500					

112-20 K 115
N55°23 W131°45.5 No Previous No.

KETCHIKAN, TONGASS NARROWS, E. shore opposite Wards Cove

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <5,000
SPAWNING FACILITIES Good. Limited only by the size of the stream.
STREAM TEMPERATURES Warm range (Estimated).
VALLEY DESCRIPTION Glacial origin. Valley heads in high rige with steep slope above flats at base of mountains. Timbered. Sedimentary cross-bedding throughout stream. Flat valley section extends from mouth for about 1.5 miles to the base of mountain.
DRAINAGE 2 square miles (Polar Planimeter). Precipitation fed. Early snow field on high mountain persists into July. No lakes or ponds. Steep head slope and thin overburden cause rapid run-off. Cross-bedding in stream makes stream bottom relatively stable.
STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES Stream bed easily walked at normal water levels.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 mile (Estimated) AVERAGE WIDTH/DEPTH 10-15'/6" (Estimated)
GRADIENT AND VELOCITIES 1° at 1-2' per second (Estimated).
BOTTOM Gravel, some bedrock.
HIGH TIDE LOCATION At stream emergence from woods.
SCHOOLING AREAS No major schooling areas observed.
SPAWNING AREAS Some limited spawning near high tide mark.
GENERAL NOTES

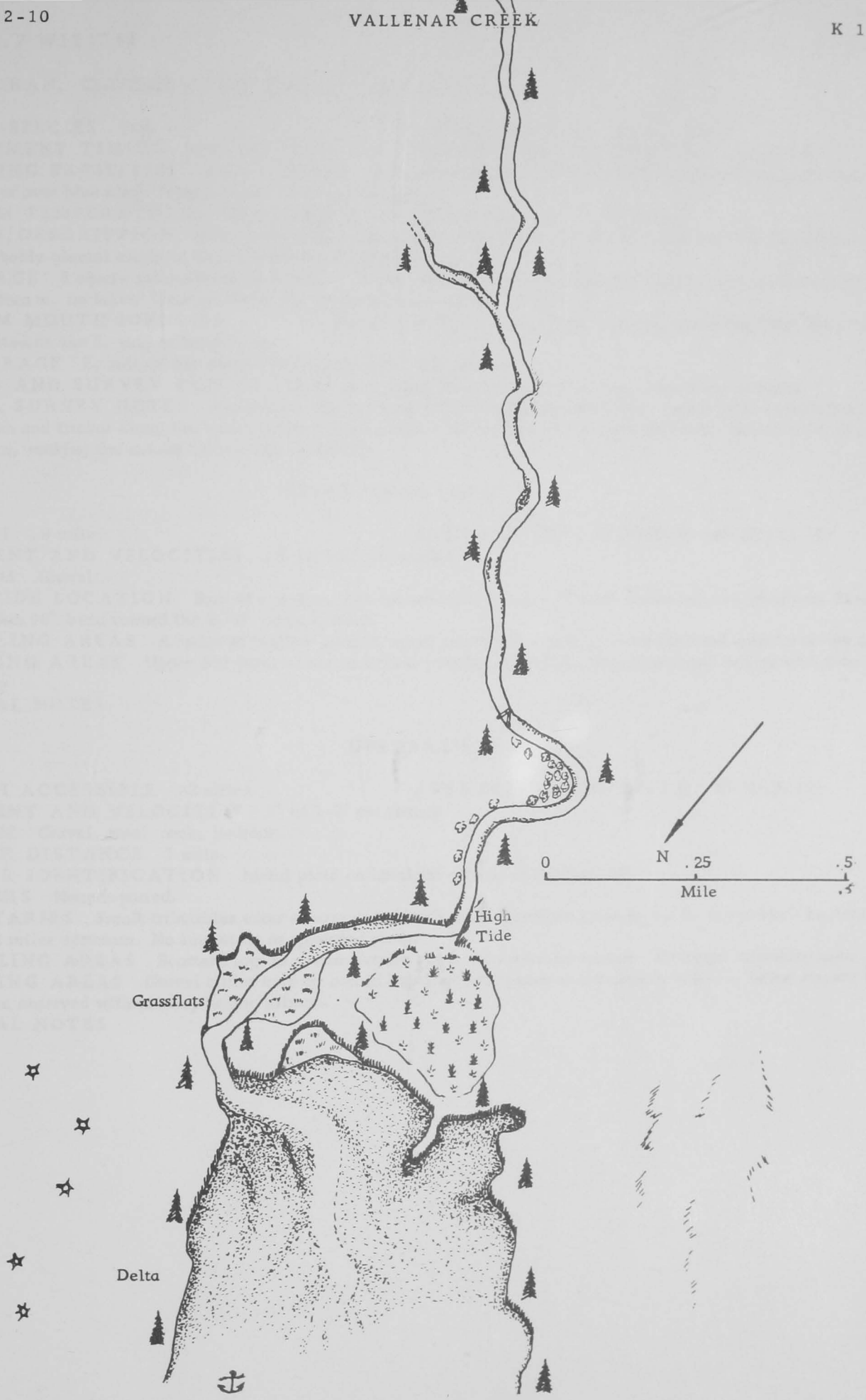
UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 10-20'/6-12"
GRADIENT AND VELOCITIES .5-1° at 1-2' per second
BOTTOM Shale gravel, some rocks, bedrock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in .5 mile.
TRIBUTARIES
SCHOOLING AREAS Some shallow pools suitable for schooling scattered through lower stream.
SPAWNING AREAS Gravel riffle areas between shallow pools and the tail riffles of pools.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adejctive Rating


N
0
.25
.5
Mile
High
Tide
Grassflats
Delta

KETCHIKAN, CLARENCE STRAIT, VALLENAR BAY, Head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 10-20,000
SPAWNING FACILITIES Good. Gravel areas in lower stream are restricted in places by thinness of the gravel layer over blue clay. Upstream facilities are very good.
STREAM TEMPERATURES Warm range. Observed temperature: 51°F., 9/24/50.
VALLEY DESCRIPTION Long broad valley continues over very low divide on into Bostwick Creek and inlet. Probably glacial origin in folded sedimentary structure.
DRAINAGE 8 square miles (Polar Planimeter). Precipitation fed. Some very small muskeg ponds about 4 miles upstream, no lakes. Wooded slopes and muskeg areas on valley floor.
STREAM MOUTH IDENTIFICATION Broad delta across head of bay. Logging operations have been conducted on the E. side at head of bay.
ANCHORAGE E. side of bay about 1 mile from head in 6 fathoms.
TRAILS AND SURVEY ROUTES Game trails along the creek. Brush is less dense close to banks.
AERIAL SURVEY NOTES Aerial observation of salmon is confined to the lower stream by the restrictions of brush and timber along the banks. Amber colored water further reduces salmon visibility. Valley is broad and open, making the stream course easy to follow.

INTERTIDAL ZONE

LENGTH .8 mile AVERAGE WIDTH/DEPTH 30-45'/12-18"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Gravel.
HIGH TIDE LOCATION Base of a broken falls (passable) 3-4' high, '1 mile above head of grassflats. Stream makes 90° bend toward the S. W. bank is steep.
SCHOOLING AREAS A series of shallow pools in upper intertidal zone have been observed with schooling salmon.
SPAWNING AREAS Upper 300 yards of the intertidal zone has spawning riffles over small broken rock over blue clay.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >2 miles AVERAGE WIDTH/DEPTH 30-35'/8-12"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Gravel, smal rock, bedrock.
MARKER DISTANCE 1 mile.
MARKER IDENTIFICATION Metal plate on hemlock at base of second split.
BARRIERS None reported.
TRIBUTARIES Small tributaries enter stream at intervals from mountain slope to the E. at intervals beginning 1.2 miles upstream. No important as spawning areas.
SCHOOLING AREAS Scatterd logs in stream furnish cover for schooling salmon. No major schooling area.
SPAWNING AREAS Gravel riffles held by buried logs scatterd upstream are used by salmon. Lower stream has been observed with most spawning salmon.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

Date	SURVEYED Miles	By	PINK Live	PINK Dead	CHUM Live	CHUM Dead	OTHER SPECIES Live	REMARKS Adjective Rating
1940								
Sep 17	G 1.5	ASI, FWS	10,000		2,000			Good. 10,000 at mouth
1941								
Oct 5	G 1.5	FWS	15,000					Fair
1947								
Oct 8	G 1.3	FRI	15,000		500		1 coho	Good
1950								
Sep 24	G .5	FRI	1,674		46		7 coho	Few dead pink
1952								
Sep 21	G .7	FWS	0		250	0		Few jumpers in bay
1953								
Oct 9	G 1.0	FWS	370	62	360	180	15 coho, few trout	30 live, 20 dead pink; 20 dead chum intertidal. Water low
1954								
Sep 25	A 1.0	FRI	3,000		1,000			Sev. 100 at mouth

112-10 K 116A
N55°21.2 W131°51.2 Previous No. 116D

KETCHIKAN, CLARENCE STRAIT, GRANT COVE, S. corner

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Good. Limited by size of stream.
STREAM TEMPERATURES Warm range. Observed temperature: 48°F., 10/7/47.
VALLEY DESCRIPTION Short, stream cut valley heading in low ridge 3 miles upstream. Timbered stream banks, muskeg areas scattered. Valley with relatively low gradient in lower sections.
DRAINAGE 2 square miles (Polar Planimeter). Precipitation fed. No lakes or ponds.
STREAM MOUTH IDENTIFICATION

ANCHORAGE In Grant Cove.
TRAILS AND SURVEY ROUTES Stream bed easily walked. No trails.
AERIAL SURVEY NOTES No surveyed by air.

INTERTIDAL ZONE

LENGTH .1 mile AVERAGE WIDTH/DEPTH 10-15'/6"
GRADIENT AND VELOCITIES 1° at 1-2' per second
BOTTOM Small rock.
HIGH TIDE LOCATION Head of the grass bank section at point of stream emergence from woods.
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.5 mile AVERAGE WIDTH/DEPTH 10-12'/6"
GRADIENT AND VELOCITIES .5° at 1-2' per second
BOTTOM Small rock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in .5 mile.
TRIBUTARIES No important tributaries.
SCHOOLING AREAS Shallow pools at intervals in first .3 mile.
SPAWNING AREAS Riffle areas at bases of most of the shallow pools and in gentle rapids where small rock bottom is suitable.
GENERAL NOTES Beaver have dammed creek occasionally. Frequent windfalls.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 7	G .4	FWS	2,000		250			Good

KETCHIKAN, CLARENCE STRAIT, 4.5 miles N. of Nelson Cove on W. Gravina Island

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE <2,000
SPAWNING FACILITIES Very limited. Stream is a series of rapids and pools with limited patches of gravel. Three falls occur in the first .5 mile. The third is reported to be a barrier for most salmon.
STREAM TEMPERATURES Warm range. Observed temperature: 46.9°F. 10/7/47.
VALLEY DESCRIPTION Relatively steep stream cut valley originating in the ridge along the W. side of Gravina Island. Timbered slopes. Valley heads on W. side of mountain. Two lake basins of glacial origin.
DRAINAGE 8 square miles (Polar Planimeter). Precipitation fed. Two lakes at head of stream. One small lake E. side near mouth.
STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES No trails, stream bed easily walked.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 mile AVERAGE WIDTH/DEPTH 15-20'/10"
GRADIENT AND VELOCITIES 1-2° at 2-3' per second
BOTTOM Shale gravel, bedrock.
HIGH TIDE LOCATION At stream emergence from woods.
SCHOOLING AREAS None reported.
SPAWNING AREAS Limited area near high tide.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE .5 mile AVERAGE WIDTH/DEPTH 15'/10"
GRADIENT AND VELOCITIES >3° at 2-4' per second
BOTTOM Shale and bedrock.
MARKER DISTANCE .5 mile.
MARKER IDENTIFICATION 8' falls in two steps with pool between.
BARRIERS Marker falls is difficult passage for salmon and none have been reported above. Two smaller falls downstream are passable.
TRIBUTARIES None reported in first .5 mile.
SCHOOLING AREAS Series of pools between rapids in first .5 mile.
SPAWNING AREAS Small patches of shale gravel.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 7	G .5	FRI	2,200		100			Good

112-10 K 117A
N55°12.1 W131°49.3 Previous No. 116B

KETCHIKAN, CLARENCE STRAIT, W. shore Gravina Island, .5 mile N. of Dall Head

MAJOR SPECIES Pink OTHER SPECIES Chum, coho
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE 3-5,000
SPAWNING FACILITIES Excellent. Limited by size of stream. Numerous windfalls restrict gravel movement.
STREAM TEMPERATURES Warm range. Observed temperature: 48.5°F., 10/7/47.
VALLEY DESCRIPTION Stream cut valley running parallel to the shore for about .7 mile before turning toward the W. slope of Gravina Ridge. Relatively short valley only a little over 3 miles from the mouth to the head.
DRAINAGE 4 square miles (Polar Planimeter). Precipitation fed. Timbered slopes.
STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES No trails. Stream bed easily walked during normal water levels.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH AVERAGE WIDTH/DEPTH 15-20'/6"
GRADIENT AND VELOCITIES
BOTTOM Gravel, small rock.
HIGH TIDE LOCATION Stream emergence from woods.
SCHOOLING AREAS None reported.
SPAWNING AREAS Limited to upper intertidal area.
GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.5 mile AVERAGE WIDTH/DEPTH 15'/6"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel, small rock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported.
TRIBUTARIES No important tributaries.
SCHOOLING AREAS Windfall pools offer limited schooling shelter.
SPAWNING AREAS Gravel areas throughout lower stream area are used by spawning salmon.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 7	G .3	FRI	5,000		500		2 coho	Good

KETCHIKAN, NICHOLS PASSAGE, DALL BAY, N.E. shore

MAJOR SPECIES Pink OTHER SPECIES Chum
ESCAPEMENT TIMING Late. Sep.-Oct. ESCAPEMENT MAGNITUDE >5,000
SPAWNING FACILITIES Excellent, though limited by the size of the stream.
STREAM TEMPERATURES Warm range. Observed temperature: 47°F., 10/7/47.
VALLEY DESCRIPTION Stream cut. Originates on S. side of Punch Hill at 1800', drops steeply to the gentle slope at the base of the mountain. Timbered areas limited in the muskeg areas of the lower valley.
DRAINAGE 3 square miles (Polar Planimeter). Precipitation fed.
STREAM MOUTH IDENTIFICATION
ANCHORAGE Good anchorage available W. of stream mouth.
TRAILS AND SURVEY ROUTES No trails. Easily walked stream bed. Woods along stream are fairly open and easily walked.
AERIAL SURVEY NOTES Not surveyed by air.

INTERTIDAL ZONE

LENGTH .1 mile AVERAGE WIDTH/DEPTH 15-20'/6-12"
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE >.5 mile AVERAGE WIDTH/DEPTH 15'/6"
GRADIENT AND VELOCITIES 1° at 2' per second
BOTTOM Gravel, small rock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS None reported in .5 mile.
TRIBUTARIES No important tributaries.
SCHOOLING AREAS A few deep pools in the lower stream are used for schooling.
SPAWNING AREAS Good gravel riffles throughout the first .5 mile observed.
GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G. Aerial surveys by A]

	SURVEYED		PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	Adjective Rating
1947								
Oct 7	G .4	FRI	8,500		1,500			Excellent. Many dead fish