

AFSC/ABL: Movements of Yukon River Chinook salmon

Metadata also available as - [[Questions & Answers](#)] - [[Parseable text](#)] - [[XML](#)]

Metadata:

- [Identification Information](#)
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 - [Distribution Information](#)
 - [Metadata Reference Information](#)
-

Identification Information:

Citation:

Citation Information:

Originator: John Eiler

Originator: AFSC

Publication Date: Unknown

Title: AFSC/ABL: Movements of Yukon River Chinook salmon

Geospatial Data Presentation Form: maps and data

Series Information:

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Other Citation Details:

Eiler, J. H., T. R. Spencer, J. J. Pella, and M. M. Masuda, and H. H. Holder. 2004. Distribution and movement patterns of chinook salmon returning to the Yukon River basin in 2000-2002. U. S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-148, 99 p.

Eiler, J. H., T. R. Spencer, J. J. Pella, and M. M. Masuda. 2006. Stock composition, run timing and movement patterns of Chinook salmon returning to the Yukon River basin in 2003. U. S. Dep. Commer., NOAA Tech. Memo.

NMFS-AFSC-163, 104 p.

Eiler, J. H., T. R. Spencer, J. J. Pella, and M. M. Masuda. 2006. Stock composition, run timing and movement patterns of Chinook salmon returning to the Yukon River basin in 2004. U. S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-165, 107 p.

Description:

Abstract:

A radio telemetry study was conducted on Yukon River Chinook salmon (*Oncorhynchus tshawytscha*) during 2002-2004 to provide information on migration patterns. During 2002, 768 adult Chinook salmon returning to the basin to spawn were radio tagged in the lower Yukon River near the villages of Marshall and Russian Mission. Most (751, 97.8%) resumed upriver movements, with 270 fish harvested in fisheries and 481 fish tracked to upriver areas using remote tracking stations and aerial surveys. Movement rates for radio-tagged fish averaged 51 km/day. Middle and upper basin stocks traveling through reaches of the Yukon River main stem averaged 54-61 km/day, although slower swimming speeds were recorded as the fish approached their natal streams. Movement rates for lower basin stocks were substantially less, averaging from 31 km/day to 37 km/day, possibly due to the shorter distances traveled to reach their spawning areas. During 2003, 1,097 fish were radio tagged in the lower Yukon River near the village of Russian Mission during 2003. After tagging, most (1,081; 98.5%) fish resumed upriver movements, with 271 fish harvested in fisheries and 810 fish tracked to upriver areas using remote tracking stations and aerial surveys. Movement rates for radio-tagged fish averaged 50.9 km/day, although regional differences were observed. Middle and upper basin fish traveled an average of 48.0 km/day and 54.7 km/day, respectively. However, these stocks exhibited comparable movement rates in reaches of the Yukon River main stem, while slower swimming speeds were recorded as the fish approached their natal streams. Movement rates for lower basin stocks were substantially less, averaging 31.2 km/day, possibly due to the shorter distances traveled to reach their spawning areas.

During 2004, 995 fish were radio tagged in the lower Yukon River near the village of Russian Mission during 2004. After tagging, most (958, 96.3%) fish resumed upriver movements, with 329 fish harvested in fisheries and 629 fish tracked to upriver areas using remote tracking stations and aerial surveys. Movement rates for radio-tagged fish averaged 51.8 km/day. Middle and upper basin stocks averaged 46.4 km/day and 55.1 km/day, respectively. However, these stocks exhibited comparable movement rates in reaches of the Yukon River main stem, while slower swimming speeds were recorded as the fish approached their natal streams. Movement rates for lower basin stocks were substantially less, averaging from 34.6 km/day, possibly due to the shorter distances traveled to reach their spawning areas. Understanding the movement patterns exhibited by Chinook salmon during their upriver migration can provide valuable insight into the biology, run dynamics, and management of Chinook salmon returns and their associated fisheries. The data collected during the 2002-2004 study is being analyzed to determine if the observed movements and associated factors within different reaches of the basin can be used to better understand and predict Chinook salmon migratory behavior.

Purpose:

This dataset contains radio telemetry data on migration patterns of Yukon River Chinook salmon (*Oncorhynchus*

tshawytscha) during 2002-2004.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2002

Ending_Date: 2004

Currentness_Reference: ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None planned

Spatial_Domain:

Description_of_Geographic_Extent: Yukon River Basin

Bounding_Coordinates:

West_Bounding_Coordinate: -164

East_Bounding_Coordinate: -133

North_Bounding_Coordinate: 68

South_Bounding_Coordinate: 59

Keywords:

Theme:

Theme_Keyword_Thesaurus: ISO 19115 Topic Categories

Theme_Keyword: Biota

Theme_Keyword: 002

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: Chinook salmon

Theme_Keyword: migration

Theme_Keyword: spawning

Place:

Place_Keyword_Thesaurus: Geographic Names Information System

Place_Keyword: Alaska

Place_Keyword: Yukon River

Taxonomy:

Keywords/Taxon:

Taxonomic_Keyword_Thesaurus: None

Taxonomic_Keywords: collection

Taxonomic_Keywords: multiple species

Taxonomic_Keywords: invertebrates

Taxonomic_Classification:

Taxon_Rank_Name: Empire

Taxon_Rank_Value: Biovitae

Applicable_Common_Name: Carbon-based lifeforms

Taxonomic_Classification:

Taxon_Rank_Name: Kingdom

Taxon_Rank_Value: Animalia

Taxonomic_Classification:

Taxon_Rank_Name: Phylum

Taxon_Rank_Value: Chordata

Taxonomic_Classification:

Taxon_Rank_Name: Subphylum

Taxon_Rank_Value: Vertebrata

Taxonomic_Classification:

Taxon_Rank_Name: Superclass

Taxon_Rank_Value: Osteichthyes

*Taxonomic_Classification:**Taxon_Rank_Name:* Class*Taxon_Rank_Value:* Actinopterygii*Taxonomic_Classification:**Taxon_Rank_Name:* Subclass*Taxon_Rank_Value:* Neopterygii*Taxonomic_Classification:**Taxon_Rank_Name:* Infraclass*Taxon_Rank_Value:* Teleostei*Taxonomic_Classification:**Taxon_Rank_Name:* Superorder*Taxon_Rank_Value:* Protacanthopterygii*Taxonomic_Classification:**Taxon_Rank_Name:* Order*Taxon_Rank_Value:* Salmoniformes*Taxonomic_Classification:**Taxon_Rank_Name:* Family*Taxon_Rank_Value:* Salmonidae*Taxonomic_Classification:**Taxon_Rank_Name:* Subfamily*Taxon_Rank_Value:* Salmoninae*Taxonomic_Classification:**Taxon_Rank_Name:* Genus*Taxon_Rank_Value:* Oncorhynchus*Applicable_Common_Name:* Salmon*Taxonomic_Classification:**Taxon_Rank_Name:* Species*Taxon_Rank_Value:* tshawytscha*Applicable_Common_Name:* Chinook
salmon

Access_Constraints: Contact the Point of Contact for data request form.

Use_Constraints:

User must read and fully comprehend the metadata prior to use. Data should not be used beyond the limits of the source scale. Acknowledgement of NOAA, as the source from which these data were obtained, in any publications and/or other representations of these data is suggested.

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: John Eiler

Contact_Organization:

National Oceanic and Atmospheric Administration (NOAA) Alaska Fisheries Science Center (AFSC) Auke Bay Laboratories (ABL)

Contact_Address:

Address_Type: mailing and physical

Address: 17109 Point Lena Loop Road

City: Juneau

State_or_Province: AK

Postal_Code: 99801

Country: USA

Contact_Voice_Telephone: 907-789-6000

Contact_Facsimile_Telephone: 907-789-6094

Contact_Electronic_Mail_Address: john.eiler@noaa.gov

Contact_Instructions:

The e-mail address directs you to the person most knowledgeable about this data. If an alternative contact person becomes necessary, use the voice phone number for referral.

Data_Set_Credit:

Alaska Department of Fish and Game Department of Fisheries and Oceans Canada U.S.-Canada Yukon River Panel Bering Sea Fishermen's Association Yukon River Drainage Fishers Association

Native_Data_Set_Environment: Microsoft Excel spreadsheets

Data_Quality_Information:

Logical_Consistency_Report: No logical consistency test were run.

Completeness_Report:

Tagging data were double entered to check for errors. Fish distribution data were reviewed post season to ensure accuracy and identify entry and interpretation errors.

Lineage:

Methodology:

Methodology_Type: Field

Methodology_Description:

See methodology in following papers: Eiler, J. H., T. R. Spencer, J. J. Pella, and M. M. Masuda. 2006. Stock composition, run timing and movement patterns of Chinook salmon returning to the Yukon River basin in 2004. U. S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-165, 107 p. Eiler, J. H. and M. A. Masters. 2000. A database-GIS mapping program for summarizing salmon telemetry data from the Yukon River basin, Alaska and Yukon Territory. Pages 138-144 in J. H. Eiler, D. Alcorn, and M. R. Neuman, editors. Proceedings of the 15th International Symposium on Biotelemetry. Juneau, Alaska. International Society on Biotelemetry. Wageningen, The Netherlands. 733 p.
Eiler, J. H. 1995. A remote satellite-linked tracking system for studying Pacific salmon with radio telemetry. Transactions of the American Fisheries Society 124:184-193.

Process_Step:

Process_Description:

See Source Information for cites of papers containing methodology.

Process_Date: Unknown

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: Tagging period

Entity_Type_Definition: Table containing timing information on tagging

Entity_Type_Definition_Source: Database developer

Attribute:

Attribute_Label: CWEEK

Attribute_Definition: Week of capture (Week 19=5/4-10, Week 20=5/11-17, etc.)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: Starting Date

Attribute_Definition: Date tagging was started for year 2002, 2003, or 2004

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: Ending Date

Attribute_Definition: Date tagging was completed for year 2002, 2003, or 2004

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Detailed_Description:

Entity_Type:

Entity_Type_Label: Tagging Data

Entity_Type_Definition: Table describing fish information for tagged fish

Entity_Type_Definition_Source: Database developer

Attribute:

Attribute_Label: Unique_ID

Attribute_Definition:

Identification number for fish that is unique for all years of the study; serves as a reference number for all samples, capture information, movement data, etc.

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: Year

Attribute_Definition: Year of study (2002, 2003, and 2004)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FishNO

Attribute_Definition: Identification number for specific year of the study

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CATEGORY

Attribute_Definition:

Final status of the fish based on tracking data, fishery recoveries, and spawning ground surveys

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: AREA

Attribute_Definition: Final destination of the fish based on tracking data

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CDATE_RM

Attribute_Definition:

Capture date at Russian Mission (estimated for fish tagged at Marshall during 2002 based on tracking data)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CDATE_ACTUAL

Attribute_Definition: Capture date

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: T_FREQ

Attribute_Definition: Transmitter frequency (e.g. 150.863= 863, 151.420=1420)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: T_CODE

Attribute_Definition: Transmitter code ranging from 00 to 99

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

*Attribute:**Attribute_Label:* E_TAG*Attribute_Definition:* Fish tagged with external tag (Y or N)*Attribute_Definition_Source:* Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:**Attribute_Label:* E_TAG_TYPE*Attribute_Definition:* External tag type: 1=stag, 2=anchor tag*Attribute_Definition_Source:* Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:**Attribute_Label:* E_TAGNUM*Attribute_Definition:* External tag ID number*Attribute_Definition_Source:* Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:**Attribute_Label:* CHOUR*Attribute_Definition:* Capture hour (military time)*Attribute_Definition_Source:* Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:**Attribute_Label:* CWEEK

Attribute_Definition: Week of capture (Week 19=5/4-10, Week 20=5/11-17, etc.)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CSITE

Attribute_Definition:

Capture site: 4=Marshal, 6=Russian Mission, 1=Rapids fish wheel (north bank), 2=Rapids fish wheel (south bank), 10=Kashunuk River, 11=Innoko River

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CMETH

Attribute_Definition:

Capture method: 1= fish wheel, 2 = set gill net, 3 = drift gill net

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: SPP

Attribute_Definition: Species: 1=chinook, 4=chum, 10=sheefish, 11=broad whitefish

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: GENDER

Attribute_Definition: M=male, F=female, U=not determined

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LENGTH

Attribute_Definition: Mid-eye to fork of tail to nearest 5 mm (e.g. 655)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: COLOR

Attribute_Definition:

Fish coloration: 1=silver (no reddish tinge), 2=intermediate phases, 3=dark red/black, spawning coloration

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: SEA_LICE

Attribute_Definition: Presence of sea lice (Y or N)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: AGE

Attribute_Definition: Age of fish

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: COMMENTS

Attribute_Definition:

General comments and capture injuries (fish with severe injuries or lethargic behavior not tagged). Injuries:
0=none, 1=tail splits, 2=dorsal splits, 3=other fin splits, 4=operculum cut, 5=descaled, 6=severed dorsal fin ray,
7=cut in front of dorsal, 8=lethargic, 9=old wound not healed

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CAP_LAT

Attribute_Definition: Latitude of release location

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CAP_LON

Attribute_Definition: Longitude of release location

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Detailed_Description:

Entity_Type:

Entity_Type_Label: Tracking Data

Entity_Type_Definition: Table describing fish tracking information for tagged fish

Entity_Type_Definition_Source: Database developer

Attribute:

Attribute_Label: Unique_ID

Attribute_Definition:

Identification number for fish that is unique for all years of the study; serves as a reference number for all samples, capture information, movement data, etc.

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FishNO

Attribute_Definition:

Identification number for fish within a particular year of the study; serves as a reference number for all samples, capture information, movement data, etc.

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: Year

Attribute_Definition: Year of study (2002, 2003, and 2004)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CDATE

Attribute_Definition:

Capture date: day-month-year military time (e.g. 03-Jul-02 23:34)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: RM_PASSAGE

Attribute_Definition:

Passage of fish through Russian Mission vicinity. Same as CDATE for fish tagged at Russian Mission. For fish tagged at Marshall in 2002, is 1.88 days after CDATE.

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CDAY

Attribute_Definition:

Numerical value for CDATE with June 1 = 1, June 2 = 2, etc. (see below). NOTE: Based on RM_Passage for 2002 fish tagged at Marshall

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: CWEEK

Attribute_Definition:

Week of capture; weeks numbered sequentially with first week of January = CWeek 1 (see below)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LENGTH

Attribute_Definition: Mid-eye to fork of tail to nearest 5 mm (e.g. 655)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: AGE

Attribute_Definition: Years of life based on scale analysis

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: SEX

Attribute_Definition: M=male, F=female

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M

Enumerated_Domain_Value_Definition: MALE

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: F

Enumerated_Domain_Value_Definition: FEMALE

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute:

Attribute_Label: COLOR

Attribute_Definition:

Fish coloration: 1=iridescent silver, 2=dull silver, 3=blush (initial spawning coloration, dull silver with reddish tinges to pronounced reddish, black)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition: IRRIDESCENT SILVER

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 2

Enumerated_Domain_Value_Definition: DULL SILVER

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 3

Enumerated_Domain_Value_Definition:

3=blush (initial spawning coloration, dull silver with reddish tinges to pronounced reddish, black)

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute:

Attribute_Label: CLASS

Attribute_Definition: Classification based on final location and status

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition:

Terminal - Cat 1 fish, Cat 13 fish, Cat 11 or 21 fish when located in terminal tributary

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 2

Enumerated_Domain_Value_Definition:

Regional - Cat 11 or Cat 21 fish when located in terminal region (i.e., Koyukuk, Tanana, and Can Yukon), but not in terminal reach

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 4

Enumerated_Domain_Value_Definition:

Non-terminal - Cat 4 fish, Cat 11 fish in non-terminal reach of Yukon River main stem

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute:

Attribute_Label: CATEGORY

Attribute_Definition:

Final status of fish based on tracking data, fishery recoveries, and spawning ground surveys

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition:

Distribution (located in terminal tributary or recovered in fishery within terminal tributary)

Enumerated_Domain_Value_Definition_Source: AFSC

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* 2*Enumerated_Domain_Value_Definition:* Lost (did not move upriver past gateway stations)*Enumerated_Domain_Value_Definition_Source:* AFSC*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* 3*Enumerated_Domain_Value_Definition:* Died/regurgitated (did not move upriver past gateway stations)*Enumerated_Domain_Value_Definition_Source:* AFSC*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* 4*Enumerated_Domain_Value_Definition:*

In-transit Includes: non-terminal spawners, fish last located in non-terminal area but spawning in un-monitored tributary, unreported fishery recovery that could not be verified (e.g. not in vicinity of village), fish that died while migrating to area further upriver

Enumerated_Domain_Value_Definition_Source: AFSC*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* 11*Enumerated_Domain_Value_Definition:* US Fishery*Enumerated_Domain_Value_Definition_Source:* AFSC*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* 13

Enumerated_Domain_Value_Definition:

U.S. Sport Fishery (included with Cat 1 if caught in terminal area)

Enumerated_Domain_Value_Definition_Source: AFSC

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: 21

Enumerated_Domain_Value_Definition: Can Fishery

Enumerated_Domain_Value_Definition_Source: AFSC

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: 23

Enumerated_Domain_Value_Definition: Can Sport Fishery

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute:

Attribute_Label: AREA

Attribute_Definition:

Discrete spawning tributary denoted by sequential number related to spatial distance upriver; see Region Area spreadsheet (NOTE: synonymous with Stock)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FISHERY

Attribute_Definition: General location of fishery recovery

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

*Attribute:**Attribute_Label:* MS_LOCATION*Attribute_Definition:*

General location of fish last detected in non-terminal main stem areas (Cat 4) or main stem areas in terminal region (Cat 1)

Attribute_Definition_Source: Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:**Attribute_Label:* REGION*Attribute_Definition:*

Section of Yukon River basin, based on general location and area type

Attribute_Definition_Source: Database developer*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Lower Yukon*Enumerated_Domain_Value_Definition:*

MS areas and tributaries below MS-Anvik RTS; low gradient rivers

Enumerated_Domain_Value_Definition_Source: AFSC*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Middle Yukon*Enumerated_Domain_Value_Definition:*

MS areas and tributaries with above MS-Anvik RTS and below Upper Koyukuk RTS and Yukon-Tanana confluence

Enumerated_Domain_Value_Definition_Source: AFSC*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: Upper Koyukuk

Enumerated_Domain_Value_Definition: Areas above Upper Koyukuk RTS

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Tanana

Enumerated_Domain_Value_Definition: Areas and tributaries within Tanana River drainage

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Yukon Flats

Enumerated_Domain_Value_Definition:

Yukon River upriver from Yukon-Tanana confluence and lower Porcupine River downstream from Middle Porcupine RTS; low gradient

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Upper Porcupine

Enumerated_Domain_Value_Definition: Areas upriver from Porcupine Border RTS

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Upper Yukon

Enumerated_Domain_Value_Definition: Area upriver from Circle RTS

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute:

Attribute_Label: STOCK

Attribute_Definition: Discrete spawning population (NOTE: synonymous with Area)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FDISTANCE

Attribute_Definition:

Total distance traveled from tagging area based on aerial surveys of spawning areas (vs. distance to final tracking station)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: XDIST

Attribute_Definition:

Distance traveled by fish after reaching terminal tributary (i.e., from FSTATION to final location on the spawning grounds)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: MOVE_TYPE

Attribute_Definition: MOVEMENT TYPE EXHIBITED DURING UPRIVER MIGRATION.

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 0

Enumerated_Domain_Value_Definition:

fish exhibited regular movements (i.e., recorded at successive stations) during upriver migration

Enumerated_Domain_Value_Definition_Source: AFSC

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition: fish exhibited atypical movements

Enumerated_Domain_Value_Definition_Source: AFSC

Attribute:

Attribute_Label: FSTATION

Attribute_Definition:

Last remote tracking station (RTS) located on migratory route of the fish

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FELEVATION

Attribute_Definition: Elevation at FSTATION

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FPASSAGE

Attribute_Definition:

Date and time (day-month-year military time) that radio-tagged fish passed FSTATION

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FDAY

Attribute_Definition:

Time (days) taken by radio-tagged fish to travel from Paimiut (first tracking station upriver from Russian Mission) to FSTATION

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FTIME

Attribute_Definition:

Distance (km) traveled by radio-tagged fish from Paimiut to FSTATION

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FSTATIONDIST

Attribute_Definition:

Movement rate (km/day) of radio-tagged fish from Paimiut to FSTATION

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FRATE

Attribute_Definition: Elevational change from Paimiut to FSTATION

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: FECHANGE

Attribute_Definition:

Elevational change from Paimiut to FSTATION standardized by distance (elevation change/distance traveled)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: SEQUENCE

Attribute_Definition: Sequence of passage by fish past RTS sites

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: STATION

Attribute_Definition: Remote tracking station located at site along migratory route

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: RIVER_TYPE

Attribute_Definition: 0 = primarily single channel, 1 = extensively braided

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

*Attribute:**Attribute_Label:* ELEVATION*Attribute_Definition:* Elevation at river level at station site*Attribute_Definition_Source:* Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:**Attribute_Label:* REMAIN_DISTANCE*Attribute_Definition:* Distance from current station site to FSTATION*Attribute_Definition_Source:* Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:**Attribute_Label:* PASSAGE*Attribute_Definition:*

Date and time (day-month-year military time) that radio-tagged fish passed remote tracking station

Attribute_Definition_Source: Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:**Attribute_Label:* PTIME*Attribute_Definition:*

Time (days) taken by radio-tagged fish to travel from Paimiut to current station

Attribute_Definition_Source: Database developer*Attribute_Domain_Values:**Unrepresentable_Domain:* None*Attribute:*

Attribute_Label: PDISTANCE

Attribute_Definition:

Distance (km) traveled by radio-tagged fish from Paimiut to current station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: PRATE

Attribute_Definition:

Movement rate (km/day) of radio-tagged fish from Paimiut to current station.

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: PECHANGE

Attribute_Definition: Elevational change from Paimiut to current station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: PECRATE

Attribute_Definition:

Elevational change from Paimiut to current station standardized by distance (elevation change/distance traveled)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LTIME

Attribute_Definition:

Time (days) taken by radio-tagged fish to travel from previous station to current station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LDISTANCE

Attribute_Definition:

Distance (km) traveled by radio-tagged fish from previous station to current station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LRATE

Attribute_Definition:

Movement rate (km/day) of radio-tagged fish from initial (Paimiut) or previous station to current station.

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LECHANGE

Attribute_Definition: Elevational change from previous station to current station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LECRATE

Attribute_Definition:

Elevational change from previous station to current station standardized by distance (elevation change/distance traveled)

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Detailed_Description:

Entity_Type:

Entity_Type_Label: RTS Information

Entity_Type_Definition: Remote tracking station information

Entity_Type_Definition_Source: Database developer

Attribute:

Attribute_Label: STATION

Attribute_Definition: Station number

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: ID

Attribute_Definition: 2 digit alpha-numeric code for station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: NAME

Attribute_Definition: Name of station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: RIVER SYSTEM

Attribute_Definition: Area of the river

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: REGION

Attribute_Definition: numeric code for river region

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: AREA

Attribute_Definition: numeric code for river area

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LAT

Attribute_Definition: Latitude of station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: LONG

Attribute_Definition: Longitude of station

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: ELEVATION (M)

Attribute_Definition: Elevation of station in meters

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Detailed_Description:

Entity_Type:

Entity_Type_Label: River Distances

Entity_Type_Definition: Distances of stations in River

Entity_Type_Definition_Source: Database developer

Attribute:

Attribute_Label: MS

Attribute_Definition: Yukon River main stem

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: Reach

Attribute_Definition: Specific section of river

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Attribute:

Attribute_Label: Paimiut

Attribute_Definition:

Location of first tracking station upriver from the villiage of Russian Mission

Attribute_Definition_Source: Database developer

Attribute_Domain_Values:

Unrepresentable_Domain: None

Distribution_Information:

Distributor:

Contact_Information:

Contact_Person_Primary:

Contact_Person: John Eiler

Contact_Organization:

National Oceanic and Atmospheric Administration (NOAA) Alaska Fisheries Science Center (AFSC) Auke Bay Laboratories (ABL)

Contact_Address:

Address_Type: mailing and physical

Address: 17109 Point Lena Loop Road

City: Juneau

State_or_Province: AK

Postal_Code: 99801

Country: USA

Contact_Voice_Telephone: 907-789-6000

Contact_Facsimile_Telephone: 907-789-6094

Contact_Electronic_Mail_Address: john.eiler@noaa.gov

Contact_Instructions:

The e-mail address directs you to the person most knowledgeable about this data. If an alternative contact person becomes necessary, use the voice phone number for referral.

Resource_Description: Online data

Distribution_Liability:

The user is responsible for the results of any application of this data for other than its intended purpose.

Metadata_Reference_Information:

Metadata_Date: 20081014

Metadata_Review_Date: 20100309

Metadata_Review_Date: 20150227

Metadata_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Emily Fergusson

Contact_Organization:

National Oceanic and Atmospheric Administration (NOAA) Alaska Fisheries Science Center (AFSC) Auke Bay Laboratories (ABL)

Contact_Position: Metadata coordinator

Contact_Address:

Address_Type: mailing and physical

Address: 17109 Point Lena Loop Road

City: Juneau

State_or_Province: AK

Postal_Code: 99801

Country: USA

Contact_Voice_Telephone: Use e-mail to contact the metadata coordinator.

Contact_Facsimile_Telephone: 907-789-6094

Contact_Electronic_Mail_Address: AFSC.metadata@noaa.gov

Metadata_Standard_Name:

FGDC Biological Data Profile of the Content Standard for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001.1-1999

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