

## Aquatic Habitat Remote Line Mapping 2012-2014

**Data format:** Shapefile

**File or table name:** SCR\_9\_9\_AQHAB\_RemoteLineMapping\_2012-2014

**Coordinate system:** State Plane Coordinate System 1983

**Theme keywords:** Fish and Aquatics, Instream Flow, Aquatic Habitat Mapping, Macrohabitat, Mesohabitat

**Abstract:** ESRI line shapefile of the 2012-2104 remote line mapping aquatic macrohabitat and mesohabitat types within the Upper and Middle Susitna River Segments.

### FGDC and ESRI Metadata:

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- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
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Metadata elements shown with blue text are defined in the Federal Geographic Data Committee's (FGDC) [Content Standard for Digital Geospatial Metadata \(CSDGM\)](#). Elements shown with green text are defined in the [ESRI Profile of the CSDGM](#). Elements shown with a green asterisk (\*) will be automatically updated by ArcCatalog. ArcCatalog adds hints indicating which FGDC elements are mandatory; these are shown with gray text.

### Identification Information:

**Citation:**

**Citation information:**

**Originators:** R2 Resource Consultants, Inc. (R2), HDR, Inc.

**Title:**

Aquatic Habitat Remote Line Mapping 2012-2014

\***File or table name:** SCR\_9\_9\_AQHAB\_RemoteLineMapping\_2012-2014

**Publication date:** 2016-03-21

\***Geospatial data presentation form:** vector digital data

**Online linkage:** [http://gis.suhydro.org/SIR/09-Fish\\_and\\_Aquatics/9.9-Mapping\\_of\\_Aquatic\\_Habitats/](http://gis.suhydro.org/SIR/09-Fish_and_Aquatics/9.9-Mapping_of_Aquatic_Habitats/)

**Online linkage:** [http://www.susitna-watanahydro.org/wp-content/uploads/2015/10/09.09\\_AQHAB\\_SIR\\_SCR.pdf](http://www.susitna-watanahydro.org/wp-content/uploads/2015/10/09.09_AQHAB_SIR_SCR.pdf)

**Description:**

**Abstract:**

ESRI line shapefile of the 2012-2104 remote line mapping aquatic macrohabitat and mesohabitat types within the Upper and Middle Susitna River Segments.

**Purpose:**

The goal of this effort was to map all aquatic habitats with the potential to be altered and/or lost as the result of construction and operation of the proposed Susitna-Watana Hydroelectric facility in Alaska.

**Supplemental information:**

Since ground-based mapping of the entire Susitna River basin was impractical, remote mapping was developed to provide a base layer for habitat characterization of the river (ISR 9.8.4.1). For the original 2012 remote line mapping, all main channel habitats were identified to both Level 3 (macrohabitat) and Level 4 (mesohabitat) where possible, although remote imagery was challenging for distinguishing run and glides as well as pools. Tributaries were documented but tributary habitats were not delineated. Off-channel habitat was classified to Level 3 (macrohabitat) only.

The 2012 data were subsequently updated with 2013 and 2014 ground-based field survey data as described in the study completion report 9.9 Characterization and Mapping of Aquatic Habitats, October 2015. This linework represents river habitat from project river mile 102.4 to 234.5 of the Susitna River, Alaska.

**\*Language of dataset:** en

**Time period of content:****Time period information:****Single date/time:**

**Calendar date:** 2016-03-21

**Currentness reference:**

publication date

**Status:**

**Progress:** Complete

**Maintenance and update frequency:** None planned

**Spatial domain:****Bounding coordinates:**

**\*West bounding coordinate:** -150.175111

**\*East bounding coordinate:** -147.108726

**\*North bounding coordinate:** 62.868657

**\*South bounding coordinate:** 62.313662

**Local bounding coordinates:**

**\*Left bounding coordinate:** 1611176.759415

**\*Right bounding coordinate:** 2123565.893553

**\*Top bounding coordinate:** 3240578.232745

**\*Bottom bounding coordinate:** 3048264.439122

**Keywords:****Theme:**

**Theme keywords:** Fish and Aquatics, Instream Flow, Aquatic Habitat Mapping, Macrohabitat, Mesohabitat

**Access constraints:** None

**Use constraints:**

QAQC is complete; locations are final.

**\*Native dataset format:** Shapefile

**\*Native data set environment:**

Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.3.1.3000

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## Data Quality Information:

**Lineage:**

**Process step:**

**Process description:**

The original 2012 line feature class was created by HDR to show riverine habitat for a portion of the Susitna River in Alaska. Channels and tributaries were derived from a variety of sources. In most cases, aeriels were digitized at 1:8000 view scale from 1 foot resolution orthophotos from the 2011 Matanuska-Susitna Borough LiDAR & Imagery Project. In the easternmost portion of data, the 2011 orthophotos were not available and instead 10-30 meter imagery from Alaska Mapped Best Data Layer (BDL) were used. In some cases it was not possible with the available aerial imagery to discern the tributary channel due to vegetation, shadowing, or other issues, instead a line feature from a 2008 Matanuska-Susitna Borough ArcGIS line shapefile was used. Imagery from 2012 aerial videography in both Upper River tributaries and mainstem river segments was used, as necessary, to confirm identification and delineation of habitat type.

Ground surveys were conducted in 2013 and 2014 to confirm remote habitat typing at a sub-sample of locations and to collect more detailed information to characterize these habitats. A data quality control exercise was conducted to review each potential habitat typing discrepancy that occurred based on the different methods. The review also considered flow conditions and precise GIS location. Based on an apriori decision, ground survey calls were deemed the most accurate as long as suitable flow conditions occurred during the time of the ground surveys.

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## Spatial Data Organization Information:

**\*Direct spatial reference method:** Vector

**Point and vector object information:**

**SDTS terms description:**

**\*Name:** SCR\_9\_9\_AQHAB\_RemoteLineMapping\_2012-2014

**\*SDTS point and vector object type:** String

**\*Point and vector object count:** 2320

**ESRI terms description:**

- \***Name:** SCR\_9\_9\_AQHAB\_RemoteLineMapping\_2012-2014
- \***ESRI feature type:** Simple
- \***ESRI feature geometry:** Polyline
- \***ESRI topology:** FALSE
- \***ESRI feature count:** 2320
- \***Spatial index:** FALSE
- \***Linear referencing:** FALSE

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## Spatial Reference Information:

### Horizontal coordinate system definition:

#### Coordinate system name:

##### \*Projected coordinate system name:

NAD\_1983\_StatePlane\_Alaska\_4\_FIPS\_5004\_Feet

##### \*Geographic coordinate system name: GCS\_North\_American\_1983

### Planar:

#### Grid coordinate system:

\***Grid coordinate system name:** State Plane Coordinate System 1983

#### State Plane Coordinate System:

\***SPCS zone identifier:** 5004

#### Transverse mercator:

\***Scale factor at central meridian:** 0.999900

\***Longitude of central meridian:** -150.000000

\***Latitude of projection origin:** 54.000000

\***False easting:** 1640416.666667

\***False northing:** 0.000000

### Planar coordinate information:

\***Planar coordinate encoding method:** coordinate pair

#### Coordinate representation:

\***Abscissa resolution:** 0.000000

\***Ordinate resolution:** 0.000000

\***Planar distance units:** survey feet

### Geodetic model:

\***Horizontal datum name:** North American Datum of 1983

\***Ellipsoid name:** Geodetic Reference System 80

\***Semi-major axis:** 6378137.000000

\***Denominator of flattening ratio:** 298.257222

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## Entity and Attribute Information:

### Detailed description:

\***Name:** SCR\_9\_9\_AQHAB\_RemoteLineMapping\_2012-2014

### Entity type:

\***Entity type label:** SCR\_9\_9\_AQHAB\_RemoteLineMapping\_2012-2014

\***Entity type type:** Feature Class

**\*Entity type count:** 2320

**Attribute:**

**\*Attribute label:** FID  
**\*Attribute alias:** FID  
**\*Attribute definition:**  
 Internal feature number.  
**\*Attribute definition source:**  
 ESRI

**\*Attribute type:** OID  
**\*Attribute width:** 4  
**\*Attribute precision:** 0  
**\*Attribute scale:** 0

**Attribute domain values:**

**\*Unrepresentable domain:**  
 Sequential unique whole numbers that are automatically generated.

**Attribute:**

**\*Attribute label:** Shape  
**\*Attribute alias:** Shape  
**\*Attribute definition:**  
 Feature geometry.  
**\*Attribute definition source:**  
 ESRI

**\*Attribute type:** Geometry  
**\*Attribute width:** 0  
**\*Attribute precision:** 0  
**\*Attribute scale:** 0

**Attribute domain values:**

**\*Unrepresentable domain:**  
 Coordinates defining the features.

**Attribute:**

**\*Attribute label:** OBJECTID  
**\*Attribute alias:** OBJECTID  
**Attribute definition:**  
 Identifier for sorting and linking back to original 2012 line mapping arcs.  
**Attribute definition source:**  
 HDR

**\*Attribute type:** Number  
**\*Attribute width:** 9

**Attribute:**

**\*Attribute label:** GeomReach  
**\*Attribute alias:** GeomReach  
**Attribute definition:**  
 Geomorphic Reach (UR-1 to UR-6, MR-1 to MR-8, LR-1 to LR-6).  
**Attribute definition source:**  
 R2

**\*Attribute type:** String

**\*Attribute width:** 5

**Attribute:**

**\*Attribute label:** FocusArea

**\*Attribute alias:** FocusArea

**Attribute definition:**

Focus Area (FA-184, FA-173, FA-151, FA-144, FA-141, FA-138, FA-128, FA-115, FA-113, FA-104, NFA=Non-Focus Area).

**Attribute definition source:**

R2

**\*Attribute type:** String

**\*Attribute width:** 6

**Attribute:**

**\*Attribute label:** RiverSeg

**\*Attribute alias:** RiverSeg

**Attribute definition:**

Susitna River Segment (Upper, Middle, Lower).

**Attribute definition source:**

R2

**\*Attribute type:** String

**\*Attribute width:** 10

**Attribute:**

**\*Attribute label:** HabType

**\*Attribute alias:** HabType

**Attribute definition:**

Mainstem and tributary categories for attribute MacroHabUP (MC=Main Channel, OCH=Off-Channel, TRIB=Tributary, LAKE=Lake).

**Attribute definition source:**

R2

**\*Attribute type:** String

**\*Attribute width:** 5

**Attribute:**

**\*Attribute label:** MacroHab

**\*Attribute alias:** MacroHab

**Attribute definition:**

2012 line mapping macrohabitat type (pre-FERC Study Plan Determination April 1, 2013).

**Attribute definition source:**

HDR

**\*Attribute type:** String

**\*Attribute width:** 30

**Attribute:**

**\*Attribute label:** MesoHab

**\*Attribute alias:** MesoHab

**Attribute definition:**

2012 line mapping mesohabitat type (pre-FERC Study Plan Determination April 1, 2013).

**Attribute definition source:**

HDR

- \***Attribute type:** String
- \***Attribute width:** 30

**Attribute:**

- \***Attribute label:** WettedStat
- \***Attribute alias:** WettedStat
- Attribute definition:**  
2012 line mapping descriptive flow level of base imagery.
- Attribute definition source:**  
HDR

- \***Attribute type:** String
- \***Attribute width:** 10

**Attribute:**

- \***Attribute label:** ArcLenFt
- \***Attribute alias:** ArcLenFt
- Attribute definition:**  
GIS line length in feet.
- Attribute definition source:**  
R2

- \***Attribute type:** Number
- \***Attribute width:** 13
- \***Attribute number of decimals:** 2

**Attribute:**

- \***Attribute label:** SortID
- \***Attribute alias:** SortID
- Attribute definition:**  
Unique identifier for each line for sorting and linking back to GIS (FID+1).
- Attribute definition source:**  
R2

- \***Attribute type:** Number
- \***Attribute width:** 4

**Attribute:**

- \***Attribute label:** DataSource
- \***Attribute alias:** DataSource
- Attribute definition:**  
Data source used to digitize the line geometry.
- Attribute definition source:**  
R2, HDR

- \***Attribute type:** String
- \***Attribute width:** 200

**Attribute:**

- \***Attribute label:** Comment
- \***Attribute alias:** Comment
- Attribute definition:**  
Description of line geometry updates.
- Attribute definition source:**

R2

- \***Attribute type:** String
- \***Attribute width:** 50

**Attribute:**

- \***Attribute label:** RecID
- \***Attribute alias:** RecID

**Attribute definition:**

Link to AQHAB and other database (M\*\*=AQHAB mainstem database, T\*\*\*\*=AQHAB tributary database, RLM=Remote Line Mapping 2012, OTH=Other).

**Attribute definition source:**

R2

- \***Attribute type:** String
- \***Attribute width:** 254

**Attribute:**

- \***Attribute label:** HabSource
- \***Attribute alias:** HabSource

**Attribute definition:**

Data source for attributes MacroHabUP, MesoHabUP, and PoolSubUP

**Attribute definition source:**

R2

- \***Attribute type:** String
- \***Attribute width:** 50

**Attribute:**

- \***Attribute label:** MacroHabUP
- \***Attribute alias:** MacroHabUP

**Attribute definition:**

2012-2014 updated macrohabitat type.

**Attribute definition source:**

R2

- \***Attribute type:** String
- \***Attribute width:** 30

**Attribute:**

- \***Attribute label:** MesoHabUP
- \***Attribute alias:** MesoHabUP

**Attribute definition:**

2012-2014 updated mesohabitat type.

**Attribute definition source:**

R2

- \***Attribute type:** String
- \***Attribute width:** 30

**Attribute:**

- \***Attribute label:** PoolSubUP
- \***Attribute alias:** PoolSubUP

**Attribute definition:**

2012-2014 updated pool subtype.

**Attribute definition source:**

R2

**\*Attribute type:** String**\*Attribute width:** 30**Overview description:****Entity and attribute overview:**

For all records,  
NAP=Not Applicable  
NDT=Not Determined  
NRD=Not Recorded

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**Distribution Information:****Distributor:****Contact information:****Contact organization primary:****Contact organization:** Alaska Energy Authority**Contact address:****Address:**

813 West Northern Light Blvd.

**City:** Anchorage**State or province:** AK**Postal code:** 99503**Country:** USA**Resource description:** Downloadable Data**Standard order process:****Digital form:****Digital transfer information:****\*Transfer size:** 0.392**\*Dataset size:** 0.392[Back to Top](#)

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**Metadata Reference Information:****\*Metadata date:** 20160321**\*Language of metadata:** en**Metadata contact:****Contact information:****Contact person primary:****Contact person:** Joetta Zabloutney**Contact organization:** R2 Resource Consultants**Contact position:** GIS Manager

**Contact address:**

**Address type:** mailing and physical address

**Address:**

15250 NE 95th Street

**City:** Redmond

**State or province:** Washington

**Postal code:** 98052

**Contact voice telephone:** 425-556-1288

\***Metadata standard name:** FGDC Content Standards for Digital Geospatial Metadata

\***Metadata standard version:** FGDC-STD-001-1998

\***Metadata time convention:** local time

**Metadata extensions:**

\***Online linkage:** <http://www.esri.com/metadata/esriprof80.html>

\***Profile name:** ESRI Metadata Profile

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**Geoprocessing History:**

**Process:**

\***Date:** 20120406

\***Time:** 152735

\***Tool location:** C:\ArcGIS\ArcToolbox\Toolboxes\Data Management Tools.tbx\Project

\***Command issued:**

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