

# Susitna-Watana Hydroelectric Project Document

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## ATTACHMENT 1: TECHNICAL MEMORANDUM – TRAILS ASSESSMENT AND CLASSIFICATION

**Susitna-Watana Hydroelectric Project  
(FERC No. 14241)**

**Recreation Resources Study  
Study Plan Section 12.5**

**Technical Memorandum  
Trails Assessment and Classification**

Prepared for

Alaska Energy Authority



Prepared by

AECOM Corporation

October 2015

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## LIST OF ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

Abbreviation	Definition
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
AEA	Alaska Energy Authority
ANCSA	Alaska Native Claims Settlement Act
ATV	all-terrain vehicle
BLM	Bureau of Land Management
FERC	Federal Energy Regulatory Commission
GIS	geographic information system
ISR	Initial Study Report
OHV	off-highway vehicle
PRM	Project River Mile
Project	Susitna-Watana Hydroelectric Project
RS	Revised Statute
RSP	Revised Study Plan
RST	revised statute trail
SPD	Study Plan Determination
USFS	United States Forest Service

## 1. INTRODUCTION

On December 14, 2012, Alaska Energy Authority (AEA) filed with the Federal Energy Regulatory Commission (FERC or Commission) its Revised Study Plan (RSP) for the Susitna-Watana Hydroelectric Project No. 14241 (Project). The RSP comprised 58 individual study plans (AEA 2012), including the Recreation Resources Study, Section 12.5. RSP Section 12.5 focused on identifying recreation resources and activities (by both visitors to Alaska and Alaska residents) that may be affected by the construction and operation of the proposed Project, and helping assess the potential impacts of Project construction and operation on those resources and activities. RSP Section 12.5 provided goals, objectives, and proposed methods for the collection and analysis of recreation resources data.

On February 1, 2013, FERC staff issued its study plan determination (February 1 SPD) for 44 of the 58 studies, approving 31 studies as filed and 13 with modifications. RSP Section 12.5 was one of the 13 studies approved with modifications. In accordance with the February 1 SPD and the supplemental filing on April 15, 2013, AEA included these modifications in its 2013 implementation of the FERC-approved study plan as reported in Section 4 of the Initial Study Report (ISR).

This Technical Memorandum presents the complete results of the trail inventory and mapping effort and the current but partial results of the trail classification efforts. Data collection efforts were completed following the methods described in Section 12.5.4 of the RSP.

## 2. STUDY OBJECTIVES

The Recreation Resources Study was designed to identify recreation resources and activities (by both visitors to Alaska and Alaska residents) that may be affected by the construction and operation of the proposed Project, and to help assess the potential impacts of Project construction and operation on those recreation resources and activities.

As set forth in Section 12.5.1 of the RSP, the specific goals of the Recreation Resources Study are to:

- Identify and document recreation resources and facilities that support commercial and non-commercial recreation in the Project area.
- Identify the types and levels of current recreational uses and future reasonably foreseeable future uses based on surveys and interviews, consultation with licensing participants, regional and statewide plans, and other data.
- Evaluate the potential impacts of Project construction and operation on recreation resources, needs, and uses in the Project area.
- Develop data to inform AEA's future development of a Recreation Management Plan for the Project.

Summer and winter trails are a fundamental part of recreational activities and infrastructure in the Recreation Use Study Area. As such, trails were identified and, when possible, classified as a part of the Recreation Resources Study.

### 3. STUDY AREA

The study areas for the Recreation Resources Study are described in RSP Section 12.5.3. Three geographic areas are defined and used in this study, as defined below.

First, the **Recreation Effects Analysis Area** is defined as the area proposed to be occupied by Project facilities, as well as the Susitna River upstream to the Denali Highway Bridge and downstream to Sunshine, the proposed Project reservoir, and some nearby shore lands and trails surrounding the reservoir location (see Figure 3.0-1). This area includes the proposed Watana Dam, located on the Susitna River at Project River Mile (PRM) 187 (measured from the mouth of the river), and the resulting 39-mile long Watana Reservoir. Indirect effects of the proposed Project could affect trails in the vicinity as they would likely receive more use, or induced use, as a result of Project development. The Recreation Effects Analysis Area also includes proposed access road and transmission line corridors, and other Project facility locations.

Second, the **Recreation Use Study Area**, which includes but is broader than the Recreation Effects Analysis Area, is defined generally as the area encompassed by the following features: the Parks Highway corridor, from the “Y” at the Talkeetna Spur Road intersection to Cantwell; the Denali Highway corridor from Cantwell east to Paxson; west from Paxson along a 2-mile buffer south of the Denali Highway to the Matanuska-Susitna Borough boundary; areas west of the Matanuska-Susitna Borough boundary between the Denali and Glenn highways (including the Lake Louise area); and extending west in a line from the Matanuska-Susitna Borough boundary, following the Chickaloon River, and connecting to the “Y” at the Talkeetna Spur Road (see Figure 3.0-1). This includes areas ¼ mile west and ¼ mile north of the Denali Highway and ¼ mile west of the Parks Highway, respectively. The boundaries of the Recreation Use Study Area are the same as those used for the demand assessment, also referred to as the Recreation Supply and Demand Analysis Area.

Third, the **Recreation Facilities Study Area** (see Figure 3.0-1) encompasses a broader area than the Recreation Use Study Area. The western and northern boundaries (the Parks and Denali highways, including areas ¼ mile west and ¼ mile north of the highways, respectively) are the same as the Recreation Use Study Area. The eastern and southern boundaries of the Recreation Facilities Study Area are defined as: the Richardson Highway corridor and areas west, from Paxson to the Glenn Highway intersection; the Glenn Highway corridor and areas north, from Glennallen west to Chickaloon; and joining the Recreation Use Study Area along the line running north from Chickaloon, following the Chickaloon River to its headwaters at the Chickaloon Glacier, and then connect at the Y Junction on the Parks Highway.

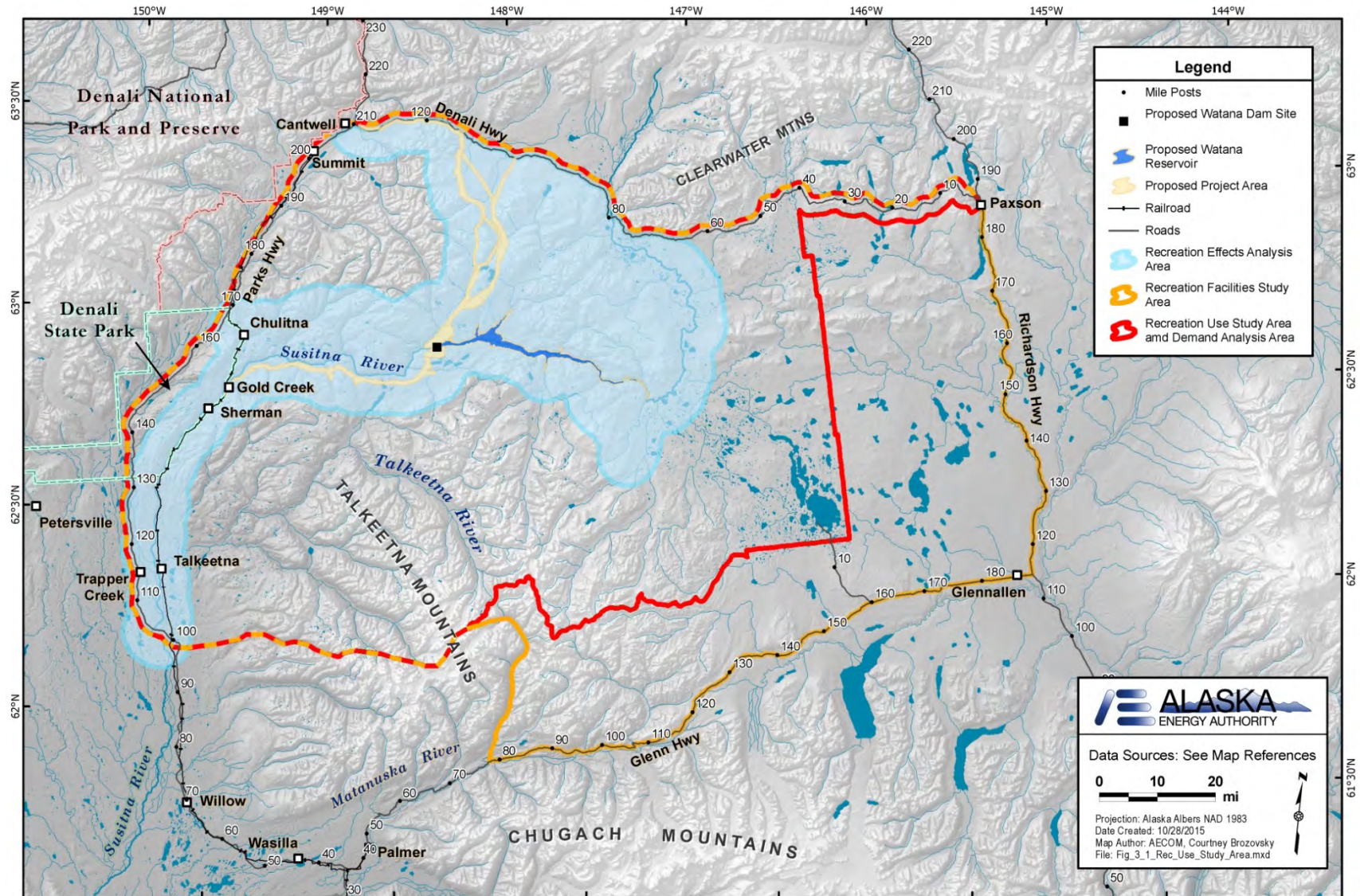


Figure 3.0-1. Study Areas for the Recreation Resources Study

## 4. METHODS AND VARIANCES

The Recreation Resources Study analyzed recreational trails and routes in the Recreation Use Study Area for both summer and winter uses. Winter use of river corridors as recreation routes was also included in the analysis. The analysis included three primary components: trail identification, categorization by class, and mapping in geographic information system (GIS), as described below.

### 4.1. Trail Identification

Trails in the Recreation Use Study Area were inventoried and mapped following the methods described in Section 12.5.4 of the RSP. Information collected through existing datasets and executive interviews was the basis for trail identification. Summer trails in the Recreation Use Study Area were verified via helicopter in September 2015.

In 2013, high resolution aerial imagery (50 centimeter resolution) was available for selected portions of the Recreation Use Study Area. Using this aerial imagery, segments of summer trails were mapped at a scale greater than 1:24,000 with a United States National Map Accuracy Standards of +/- 40 feet, as set forth in Section 12.5.4 of the RSP.

With the addition of the Denali East Option road and transmission corridor, as outlined in Part C of Section 12.5 of the ISR, the Recreation Effects Analysis Area was modified to include a 5-mile buffer around the proposed Denali East Option. High quality imagery was acquired in 2014 for those areas not covered by existing imagery that fell within the expanded Recreation Effects Analysis Area. The imagery was assessed, and trails within the expanded area were mapped to a scale greater than 1:24,000. New trails with a nexus to the Project were mapped, notably the Butte Lake Trail.

#### 4.1.1. Trail Definitions

Trails and trail easements identified within the Recreation Use Study Area included: summer trails and routes, winter trails and routes, Revised Statute (RS) 2477 easements, and Alaska Native Claims Settlement Act (ANCSA) Section 17(b) easements. The types of trail and easements are defined below.

##### 4.1.1.1. Winter Trails and Routes

Winter trails and routes occur throughout the Recreation Use Study Area. For the purposes of this study, a winter trail was defined as being actively managed, maintained, and groomed throughout the season of snow cover. Winter routes were considered as other informal trails that were not actively managed and were not groomed, but were still used by snowmachinists, dog sledders, skiers, or other winter recreationists. Winter routes tended to be user-created and varied in location from year to year depending on snow conditions.



#### 4.1.1.2. *Summer Trails and Routes*

Summer trails and routes occur throughout the study area. For the purposes of this study, a formal summer trail was defined as being designated by an agency with a trailhead facility (included signage and/or other amenities). Informal summer trails were primarily user-generated trails, formed through repetitive unmanaged use, and had not been designated by an agency. Informal summer trails in the Recreation Use Study Area were often well defined, but unmanaged trails used by off-highway vehicle (OHV) and all-terrain vehicle (ATV) recreation users. Routes were defined as common courses taken by recreation users through the Recreation Use Study Area that lacked a defined trail.

#### 4.1.1.3. *RS 2477 Trails*

Revised Statute 2477 is found in Section 8 of the Mining Law of 1866. The statute granted Alaska and other states and territories rights-of-way for the construction of highways over public lands not reserved for public uses. The word “highway” was historically used to reference foot trails, pack trails, sled dog trails, wagon roads, and other corridors for transportation. The definition of a highway under Alaska Statute 19.45.001(9) “... includes a highway, road, street, trail, walk, bridge, tunnel, drainage structure and other similar or related structure or facility, and right-of-way thereof ...” (ADNR 2000). RS 2477 trails designate a historic access route and may or may not be associated with a current trail or route. As result, existing trails and routes were identified separately from RS 2477 trails within the Recreation Use Study Area.

#### 4.1.1.4. *17(b) Easements*

The 1971 ANCSA Section 17(b) required the Bureau of Land Management (BLM) to convey 40 million acres of public land to Alaska Native corporations in Alaska. Congress intended that the public should have certain access rights across these lands to public lands and waters. Thousands of public access easements, called 17(b) easements, were reserved through this process. Trails do not have to exist or be constructed on the easements (ADNR 2000). These easements have specific dimensions and certain allowable uses that are stated in the conveyance document that established the easement. Any other uses are prohibited. Allowed uses depend on the width of the 17(b) easement, and are as follows:

- **25-Foot Trail** – Allowed uses include travel by foot, dogsleds, animals, snowmachines, two- and three-wheeled vehicles, and small ATVs (less than 3,000 lbs. gross vehicle weight).
- **50-Foot Trail** – Allowed uses include large ATVs (more than 3,000 lbs. gross vehicle weight), tracked vehicles, and four-wheel-drive vehicles.
- **60-Foot Road** – Allowed uses include those for 25- and 50-foot trails plus automobiles and trucks (ADNR 2013a).

Hunting, fishing, or trapping on or from the easement is not allowed unless a permit from the landowner is obtained. 17(b) easements designate a legal right-of-way and may or may not be associated with an existing trail or route. As result, existing trails and routes were identified separately from 17(b) easements within the Recreation Use Study Area.

## 4.2. Trail Classification

As specified in Section 12.5 of the FERC-approved Study Plan, trail classification was conducted for trails identified with a nexus to the Project. A trail was considered to have a Project nexus if it intersected with or was in close proximity to the Susitna River or proposed Project corridors. As specified in Section 12.5 of the Study Plan, trails were classified using the United States Forest Service (USFS) Trail Classification System.

Trails with a Project nexus were classified into one of five Trail Classes, ranging from least developed (Trail Class 1) to most developed (Trail Class 5). Descriptors were refined to reflect typical attributes of trails in each class. These attributes included:

- Tread and traffic flow
- Obstacles
- Constructed features and trail elements
- Signs
- Typical recreation environment and experience (using the USFS Recreation Opportunity Spectrum classifications)
- Level of trail management (what type/level of use the trail is managed to accommodate)

Field observations, secondary data sources, and executive interviews (URS 2014a) were reviewed for each winter and summer trail/route to identify winter and summer trail attributes defined in the USFS Trail Class Matrix. Secondary sources of trail information included management plans (AEA 2014) and internet research (BBS 2013, DNSC 2014, ADNR 2014).

For each winter and summer trail classification attribute, the corresponding USFS Class (1–5) that most directly represented the trail’s characteristics was assigned to that attribute. For example, if a winter trail tread characteristics most closely matched those characteristics identified in a USFS Class 3 winter trail, then a “3” was assigned to the “tread” attribute. Once the attributes for each winter and summer trail were classified, an overall classification was assigned to each trail based on the trail’s predominant attribute classification. Effort was made to classify the overall trail based on the class that best fit the nature of the trail.

### 4.2.1. Winter Trail Classification

As specified in Section 12.5 of the FERC-approved Study Plan, winter trails and routes with a nexus to the Project were classified using the USFS Trail Classification System as outlined in the Trail Class Matrix and the Design Parameters for snowmachine trails detailed in the USFS Trails Fundamentals Handbook (USFS 2011). For purposes of trail classification, groomed (formal) trails are those trails identified from the Alaska Department of Natural Resources (ADNR) Department of Parks and Outdoor Recreation SnowTRAC grooming pool (ADNR 2014), with updated information on their condition and trail maps. Ungroomed (informal) routes were defined as those trails not actively managed for winter use by an agency or group and therefore



do not have route markers, maps, or recreation structures. When the USFS Trail Class Matrix did not identify criteria for winter trail attributes, specific class parameters for each attribute were identified using the design parameters for snowmachine use matrix (USFS 2011).

#### **4.2.2. Summer Trail Classification**

As specified in Section 12.5 of the FERC-approved Study Plan, summer trails with a nexus to the Project were classified using the USFS Trail Classification System as outlined in the Trail Class Matrix presented in the USFS Trails Fundamentals Handbook (USFS 2011). In September 2013, the field team surveyed summer trails with a Project nexus from the air via helicopter. At regular intervals along each surveyed summer trail, the field team landed and collected field observations to verify information collected through the use of remote imagery. Photographs of trails and trail attributes were collected and are shown in Appendix E. Access point data were also collected during the 2013 field season and are presented in Section 12.5.5 of the ISR. Trails within Denali State Park were considered managed, as they have trail maps, signage at junctions, minimal obstacles, and sufficient recreation structures.

##### **4.2.2.1. Trail Braiding Classification, Summer Trails and Routes**

As specified in Section 12.5 of the FERC-approved Study Plan, the study team identified sub-classes of Class 1 trails. The sub-classification was based on trail braiding information that was collected by the study team for those trails digitized from aerial imagery within the Recreation Use Study Area. OHVs that travel around an obstacle may create a separate, parallel path that serves to widen the overall trail and increase its impact on the surrounding environment. Trail braiding typically occurred on wet segments of unmanaged informal summer trails frequently used by OHVs. The degree of trail braiding is particularly important to the management of OHV trails. Braided segments were identified using aerial imagery, and each trail segment was assigned a braiding category for the average number of braids observed (2 to 4, 5 to 10, 11 to 30, and greater than 30).

#### **4.3. GIS Maps and Figures**

Recreation trails, routes, and easements, including RS 2477 rights-of-way, 17(b) easements, summer trails and routes, and winter trails and routes, were identified and digitized in a geographic information system (GIS) from existing agency licensing participant datasets and aerial photography. All trails were georeferenced. Group interviews, discussions with licensing participants, coordination with other resource study disciplines, and user intercept surveys augmented trails mapping. Trails were entered in the GIS with their classification attributes where appropriate.

#### **4.4. Variances**

As specified in Part C of Section 12.5 of the ISR, AEA has added the Denali East Option road and transmission corridor to the study area. With regard to this study, the proposed modification includes an expansion of the Recreation Effects Analysis Area by including a 5-mile buffer on

the proposed Denali East Option and on new trails identified 2013 that were found to have a nexus to the Project, notably the Butte Lake Trail and the Goose Lake Trail.

## 5. RESULTS

### 5.1. Trail Identification

This section summarizes the recreation data from the 2013 and 2014 study seasons collected pursuant to Section 12.5.4 of the RSP. Data developed in support of this study are available for download at <http://gis.suhydro.org/reports/isr>.

In 2013, the study team used aerial imagery to digitize 1,151.5 miles of trails (excludes routes) at a scale of approximately 1:2,000. In 2015, an additional 165.3 miles of trails were digitized to a scale of approximately 1:5,000 using imagery acquired in 2014. Trail digitization efforts utilized existing trail inventories and information collected during executive interviews. In addition, the study team conducted a systematic review of the imagery to identify trails that were previously unidentified, but could be mapped using the imagery. To ensure the trail inventory and mapping efforts were comprehensive, the study team field-verified a portion of identified trails.

The Recreation Use Study Area has a variety of trails, ranging from informal, unmaintained routes to formal, regularly maintained or groomed trails. Identified trails and routes are described in Appendix A. Appendix A includes tables summarizing trails within the Recreation Use Study Area; Table A-3 shows formal (groomed) winter trails, Table A-4 shows informal winter routes, Table A-5 shows managed summer trails, and Table A-6 displays unmanaged summer trails and routes. Trail settings and characteristics differ across the Recreation Use Study Area according to geographic region. RS 2477 rights-of-way and 17(b) easements were mapped and are shown in Appendices B and C. The study team mapped trail segments at a scale greater than 1:24,000, and these segments are shown in Appendix C.

#### 5.1.1. Winter Trails and Routes

A total of 961.4 miles of winter trails and routes were identified within or intersecting with the Recreation Use Study Area. Of these, approximately 651.8 miles were documented by the study team during the study seasons. Twenty-five formal winter trails were identified in the Recreation Use Study Area: 15 in the Talkeetna region, one in Denali State Park, three along the Denali Highway, and six in the Lake Louise region. Twenty-one informal winter routes were identified in the Recreation Use Study Area: six in the Talkeetna region, four in Denali State Park or along the northern Parks Highway, six along the Denali Highway, and five in Lake Louise. All inventoried winter trails and routes are described and profiled in Appendix A. The figures in Appendix B show the geographic location of winter trails and routes that were mapped within the Recreation Use Study Area.

Some map features may be located on private lands; the reporting of these locations in this study report is not intended to suggest that the public is authorized to access these lands for recreation purposes.

### 5.1.2. Summer Trails and Routes

A total of 2,150.2 miles of summer trails and routes were identified within or intersecting with the Recreation Use Study Area during the 2013 and 2014 study years. Of these, 1,236.8 miles were documented by the study team during the study seasons. Twenty-eight formal summer trails were identified in the Recreation Use Study Area: six in the Talkeetna region, eight in the Denali State Park and Northern Parks Highway region, and 14 along the Denali Highway. The study team identified 71 informal summer trails in the Recreation Use Study Area: seven in the Talkeetna region, four in Denali State Park or along the northern Parks Highway, 59 along the Denali Highway, and one trail from the Glenn Highway that extended into the Recreation Use Study Area. All inventoried summer trails and routes are described and profiled in Appendix A. The figures in Appendix C show the geographic location of the summer trails and routes that were mapped in the study area.

Some map features may be located on private lands; the reporting of these locations in this study report is not intended to suggest that the public is authorized to access these lands for recreation purposes.

### 5.1.3. RS 2477 Trails

Twenty RS 2477 trails (i.e., Revised Statute Trails, or RSTs) intersect or occur within the Recreation Use Study Area, and include the following:

- RST 52: Chulitna Trail
- RST 80: Murder Lake North to Ridge Line
- RST 82: Meiers Lodge-Dickey Lake Trail
- RST 100: Indian River-Portage Creek Trail
- RST 294: Gulkana-Denali Winter Trail
- RST 295: Gulkana-Valdez Creek Trail
- RST 318: Paxson-Denali Trail (Valdez Creek)
- RST 331: Talkeetna-Iron Creek Trail
- RST 377: Stephan, Murder, and Daneka Lake Connector Trail
- RST 427: Chickaloon River Trail
- RST 469: McWilliams-Gold Creek Trail
- RST 517: Windy Creek Access Road
- RST 625: Cantwell Small Tracts Road (Lovers' Lane)
- RST 1509: Curry Landing Strip-Lookout Tower Trail
- RST 1522: Lake Louise Trail
- RST 1620: Talkeetna River Trail
- RST 1691: Herning Trail-Question Creek
- RST 1694: Iron Creek-North Fork Kashwitna River Trail
- RST 1809: Glacier Gap (Lavery) Lake Trail
- RST 1814: Sevenmile Lake Trail

Many of these RS 2477 trails were and still are used to access mining claims, fishing and hunting areas, or remote cabins from communities such as Chase, Curry, and Hurricane that exist along the rail corridor. Use of RS 2477 trails is governed by the generally allowed uses defined by the State of Alaska. RS 2477 rights-of-way within the Recreation Use Study Area are shown in relation to winter and summer trails on figures in Appendix B and Appendix C, respectively. There were 103.6 miles of trails identified that were associated with RS 2477 easements.

A brief description of each RS 2477 easement trail is provided in Appendix A and summarized in Table A-1.

#### 5.1.4. 17(b) Easements

Several 17(b) trail easements are located within the Recreation Use Study Area and are described below. Information on 17(b) campsite easements is described under Section 12.5.1.2 of the ISR. Appendix A, Table A-2 provides detailed information on 17(b) trail easements within the Recreation Use Study Area.

Existing and proposed 17(b) trail easements for general public access in the Recreation Use Study Area are listed and identified in Table 5.1-1.

**Table 5.1-1. Existing and Proposed 17(b) Trail Easements for General Public Access in the Recreation Use Study Area**

Easement Designation	Existing or Proposed/Trail Name/Location	Management Responsibility
3a	Existing for Middle Fork Chulitna Trail	Managed by the BLM
3c	Existing for Jack River Trail	Managed by the BLM
5h	Existing for Pass Creek Trail	Managed by the BLM
6b	Existing for BLM-managed lands west of Summit	
7a	Existing for access to Windy Creek, southwest of Cantwell	Managed by the BLM
18	Existing from Chulitna to lands north of Devils Canyon	Managed by the State of Alaska and the Alaska Department of Fish and Game (ADF&G)
22	Proposed for access to Reindeer Hills	Sponsored by State of Alaska
22e	Proposed for access to lands south of Fog Lakes	Sponsored by ADF&G
23	Proposed for Edmonds Creek Trail	Sponsored by State of Alaska
26	Existing for access to lands west of Stephan Lake	Managed by ADF&G
28	Existing for access to lands southeast of Stephan Lake	Managed by ADF&G
38	Proposed for access to lands north of the Talkeetna River	Sponsored by State of Alaska and ADF&G
40	Proposed for access to lands west of 17(b) easement number 38	
46	Existing for access from Susitna River to Stephan Lake	Managed by the BLM and State of Alaska

Easement Designation	Existing or Proposed/Trail Name/Location	Management Responsibility
48	Existing for McWilliams-Gold Creek Trail	Managed by State of Alaska
72	Proposed for access to lands north of Susitna River	Sponsored by the BLM District Office
87	Existing for Middle Fork Chulitna Trail	Managed by the BLM
100	Existing for access between the George Parks Highway and the Alaska Railroad	Managed by State of Alaska and the BLM

## 5.2. Trail Classification

As specified in Section 12.5 of the FERC-approved Study Plan, the USFS National Trail Classification System was used to classify winter and summer trails identified during the trails inventory (Section 5.1). Each trail with a Project nexus was classified into one of five Trail Classes, ranging from least developed (Trail Class 1) to most developed (Trail Class 5). Trail Classes were based on the trail attributes, as defined in the USFS Trail Classification System.

### 5.2.1. Classification of Winter Trails and Routes

Table 5.2-1 shows the USFS trail classification for each winter trail and route with a Project nexus (subset of identified winter trails and routes). Trails were assigned an overall class based on the predominant classes of the associated attributes. The trail class attributes used to develop the overall trail class are shown for each trail. Figure 5.2-1 shows a map of classified winter trails and routes.

**Table 5.2-1. USFS Trail Classification, Winter Trails and Routes**

Trail Name	Tread & Traffic Flow Class	Obstacles Class	Constructed Features & Trail Elements Class	Signs Class	Typical Recreation Environs & Experience Class	Overall Trail Class
Amber Lake/Amber Creek Trail <sup>1</sup>	3	4	2	3	3	3
Butte Lake Route <sup>2</sup>	1	2	1	1	1	1
Chase Trail <sup>1</sup>	3	4	2	3	3	3
Chulitna Bluff Trail <sup>1</sup>	3	4	2	3	3	3
Chulitna East Route <sup>2</sup>	1	2	1	1	1	1
Clear Creek Route <sup>2</sup>	1	2	1	1	1	1
Deadman Lake Route <sup>2</sup>	1	2	1	1	1	1
Denali Highway Trail <sup>1</sup>	4	4	4	4	4	4
McWilliams-Gold Creek Route <sup>2</sup>	1	2	1	1	1	1
Nodwell Route <sup>2</sup>	1	2	1	1	1	1

Trail Name	Tread & Traffic Flow Class	Obstacles Class	Constructed Features & Trail Elements Class	Signs Class	Typical Recreation Environs & Experience Class	Overall Trail Class
Oosik Classic Race Route <sup>1</sup>	4	4	4	3	4	4
Pass Creek Route <sup>2</sup>	1	2	1	1	1	1
Rabideaux Trail <sup>1</sup>	3	4	2	3	3	3
Raptor Valley Route <sup>2</sup>	1	2	1	1	1	1
Sheep River Route <sup>2</sup>	1	2	1	1	1	1
Stephan Lake Route <sup>2</sup>	1	2	1	1	1	1
Talkeetna River Route <sup>2</sup>	1	2	1	1	1	1
Trio Fat Bike Race Route <sup>1</sup>	4	4	4	4	4	4
Tyone Creek Route <sup>1</sup>	1	2	1	1	1	1

Notes:

<sup>1</sup> Information collected from secondary sources.

<sup>2</sup> Information collected from executive interviews.

Sources: (AEA 2014, ADNR 2014, BBS 2013, DNSC 2014, URS 2014a).

### 5.2.2. Classification of Summer Trails and Routes

Table 5.2-2 shows USFS trail classifications for each summer trail and route with a Project nexus (subset of identified summer trails and routes). Trails were assigned an overall class based on the predominant classes of the associated attributes. As specified in the USFS trail classification, informal and unmanaged summer trails were assigned Class 1. The trail class attributes used to develop the overall trail class are shown for each trail. Figure 5.2-2. shows a map of classified summer trails and routes.

**Table 5.2-2. USFS Trail Classification, Summer Trails and Routes**

Trail Name	Tread & Traffic Flow Class	Obstacles Class	Constructed Features & Trail Elements Class	Signs Class	Typical Recreation Environs & Experience Class	Overall Class
Butte Lake Trail <sup>1,3</sup>	3	2	1	1	1	1
Butte Creek Trail <sup>1,3</sup>	3	2	1	1	1	1
Cascade Trail <sup>1</sup>	3	2	2	2	2	2
Chase Trail <sup>2</sup>	4	4	3	2	4	4
Curry Landing Strip South Trail <sup>1</sup>	2	2	1	1	1	1
Ermine Hill Trail <sup>1</sup>	3	2	2	2	2	2
Hatchet Lake Trail <sup>2</sup>	3	2	1	1	1	1
Indian River Portage Creek Trail <sup>2</sup>	3	2	1	1	1	1
Jay Creek Trail <sup>1,3</sup>	3	2	1	1	1	1
Kesugi Ridge Trail <sup>1</sup>	3	2	2	2	2	2
Little Coal Creek Trail <sup>1</sup>	3	2	2	2	2	2
McWilliams-Gold Creek Route <sup>3</sup>	3	3	1	1	1	1
Nodwell Route <sup>2</sup>	3	2	1	1	1	1
North Fork Butte Creek Trail <sup>1,3</sup>	3	2	1	1	1	1
Old Man Creek/Goose Lake Trail <sup>3</sup>	3	2	1	1	1	1
Raptor Trail-Watana Creek <sup>1,3</sup>	3	2	1	1	1	1
Seattle Creek Trail <sup>1,2</sup>	3	2	1	1	1	1
South Butte Trail/Susitna South Trail <sup>1,3</sup>	3	2	1	1	1	1
Tsusena Creek Trail/ West Tsusena Butte Trail <sup>3</sup>	2	2	1	1	1	1
Upper Brushkana Creek Trail <sup>1,3</sup>	3	2	1	1	1	1
Upper Troublesome Creek Trail <sup>1</sup>	3	2	2	2	2	2
Wickersham Creek Trail <sup>1,3</sup>	3	2	1	1	1	1

Notes:

<sup>1</sup> Information collected from secondary sources

<sup>2</sup> Information collected from executive interviews

<sup>3</sup> Information collected from field observations

Sources: (ADNR 2013b, AEA 2014, URS 2014a, URS 2014b).

### 5.2.2.1. Trail Braiding Classification, Summer Trails and Routes

As specified in Section 12.5 of the FERC-approved Study Plan, the study team identified sub-classes of Trail Class 1 trails within the Recreation Use Study Area. Appendix D provides trail

braiding information and identifies trail conditions for digitized summer trails. Each classified trail segment was assigned a braiding category for the average number of braids observed (2 to 4, 5 to 10, 11 to 30, and greater than 30).

### **5.3. Trails Summary by Region**

A summary of all known trails is provided below by four subregions of the Recreation Use Study Area that represent different geographic regions within the Recreation Use Study Area: Talkeetna and the Southern George Parks Highway, Denali State Park and the Northern George Parks Highway, the Denali Highway, and Lake Louise and the Glenn Highway.

#### **5.3.1. Talkeetna and Southern George Parks Highway**

There are approximately 20 miles of hiking and cross-country ski trails around Talkeetna. These trails were constructed by the Talkeetna Chamber of Commerce, and are maintained by the Denali Nordic Ski Club and volunteers from the surrounding communities. The maintained trails provide open shelters and foot bridges for safety and convenience. In addition, the region includes numerous trails accessed from Talkeetna or the Parks Highway that are used for hiking, snowmachining, dog mushing, and hunting. Trails in the region extend to both the east and west of the George Parks Highways and occur from Petersville to the Talkeetna Mountains; providing access to hunting areas, mining claims, and remote sites (MSB 2008). Talkeetna area winter trails are Class 4 to reflect their grooming and formal adoption by a group. The Chulitna Bluff Trail is a class three winter trail to reflect the lower levels of trail maintenance.



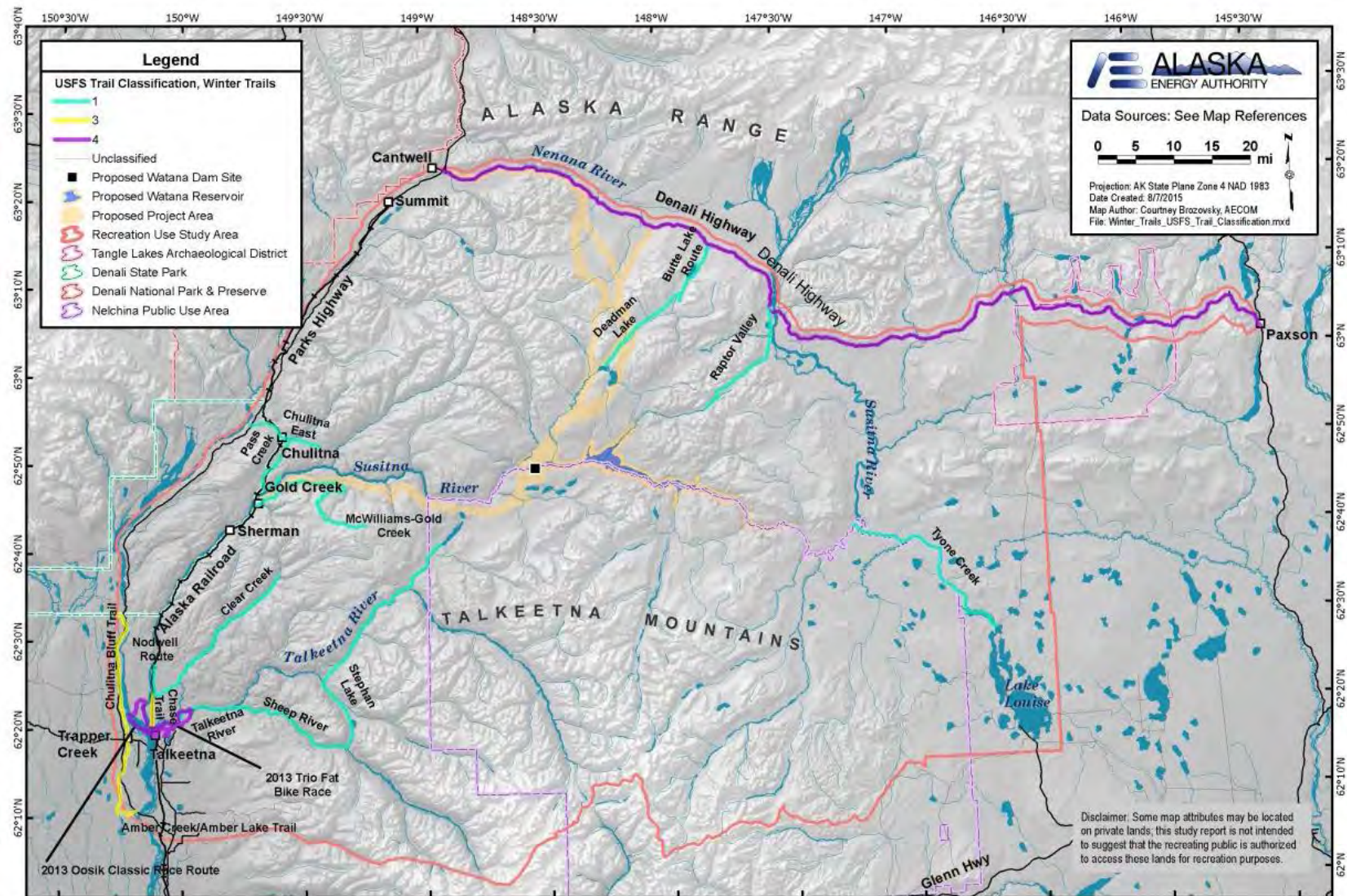


Figure 5.2-1. Classified (USFS) Winter Trails and Routes



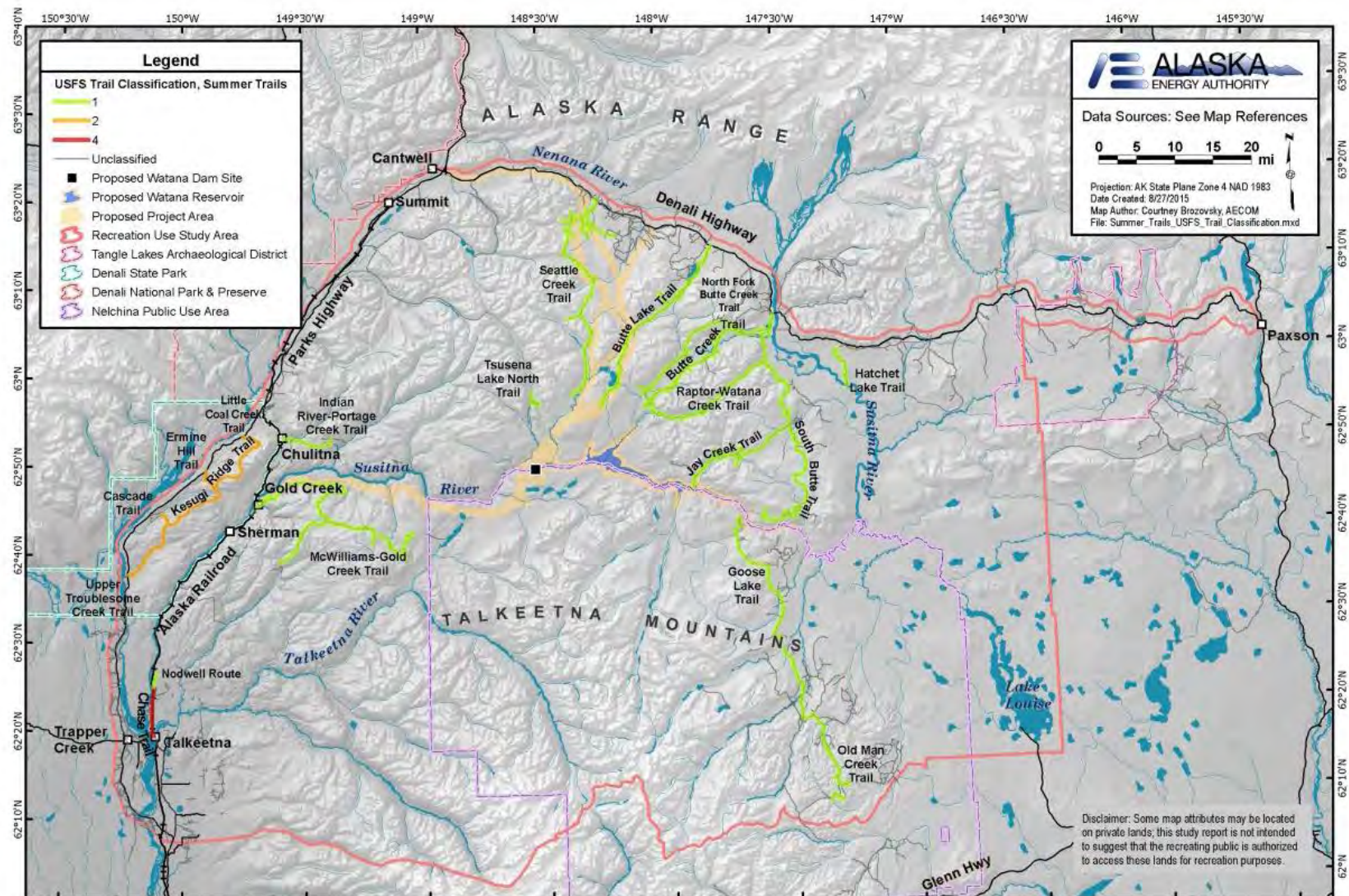


Figure 5.2-2. Classified (USFS) Summer Trails and Routes

The community of Chase lies along the railroad corridor and has no connected road access; residents access the area primarily by trail or railroad from Talkeetna. Due to the lack of road access, many of the trails in this region are used by local residents for access to residences, recreational cabins, hunting, and wood gathering as well as recreational purposes. The Chase Trail is a Class 4 summer trail and a Class 3 winter trail. The trails leading north away from Chase and Talkeetna are Class 1 winter trails as they are mostly user-generated routes that follow the railroad corridor or frozen rivers, creeks, and lakes.

### **5.3.2. Denali State Park and Northern George Parks Highway**

The Denali State Park trail system offers highway-accessible hiking as well as scenic and wildlife viewing opportunities. Use of motorized vehicles is restricted to maintained roads and parking areas within Denali State Park. Park land use designations and trail management also restrict the use of bicycles and pack animals on most trails within the park. The North Loop (Tokositna Flats) is the only groomed winter trail in the Park. Denali State Park summer trails are Class 2 trails. All other trails and park areas are managed as a winter controlled use area (Appendix B), and snowmachines may be used when snow depth is over 16 inches (ADNR 2006). North of Denali State Park, along the Parks Highway to Cantwell, are informal winter and summer trails used for recreation and cabin access.

### **5.3.3. Denali Highway**

The Denali Highway stretches from Cantwell at the Parks Highway junction east to Paxson at the Richardson Highway junction. In addition to providing a scenic driving experience, the Denali Highway provides access to remote trail experiences (both motorized and non-motorized).

The majority of the summer trails stemming from the Denali Highway are informal ATV trails, primarily used to access hunting areas. Motorized use along these trail systems has led to trail problems such as braiding, erosion, and vegetation disturbance. State of Alaska lands are currently managed to limit recreational uses to existing trails with provisions allowed for off-trail travel if conditions of the State of Alaska Generally Allowed Uses are met (ADNR 2011). On the eastern portion of the Denali Highway, there are eight trails within the Tangle Lakes Archeological District that are actively managed and maintained by the BLM or ADNR (ADNR and BLM n.d.).

In the winter, the Denali Highway is unplowed and therefore closed to vehicle traffic. However, the entire length is part of the Alaska State Parks SnowTRAC grooming pool and open for snowmachine use. Lodge owners along the highway provide labor for the grooming effort, in part to allow winter business and in part for public safety.

The Denali Highway is a Class 4 winter trail because it is regularly groomed. Winter trails leading off the Denali Highway are considered Class 1 trails as they are not actively managed or groomed by an agency or group. During summer months, when the Denali Highway is open to vehicle traffic, the road is not considered a trail. Summer trails leading off the Denali Highway, however, are considered Class 1 trails because they are not formally maintained.

### 5.3.4. Lake Louise and Glenn Highway

Lake Louise is connected to the road system; however, the Lake Louise Road ends at the south end of the lake, and many residents live in cabins or homes off of the road network. Access to these residences is by boat along the lake, or by the extensive network of winter trails. Many of the winter trails in the area are maintained by The Wolf Pack, a non-profit snowmachine club that uses volunteer hours and state grants to groom nearly 200 miles of winter trails (Appendix B) (LLCNC 2013). The Tyone Creek winter trail leading north from Lake Louise is a Class 1 winter trail as it is an informal route that follows the frozen creek. The region is used for hunting and trapping, and lodges at Lake Louise promote snowmachine and dogsled trails to boost business. In the summer, trail use is limited due to the wet and boggy conditions in the area.

Farther south along the Glenn Highway, at milepost 130.5 near Eureka, is access to the Chickaloon-Knik-Nelchina trail system, which extends west to Palmer. The trails are heavily used by hunters, ATV users, and hikers. The network lies primarily outside the Recreation Use Study Area; however, the Old Man Creek-Goose Lake Trail network extends north into the Recreation Use Study Area and ends near the Susitna River (PRM 220) (Appendix C). The Old Man Creek-Goose Lake Trail is a Class 1 summer trail.

## 6. DISCUSSION

For trail resources, the summer and winter trail inventory, mapping, and classification data presented in Section 5 and in Appendix A through E completely fulfill Study Plan objectives and requirements, as outlined in Sections 12.5.1 and 12.5.4. The trail data establish an adequate baseline to assess potential impacts on trails from the proposed Project within the Recreation Use Study Area.

Per Section 12.5.4 of the FERC-approved Study Plan, the study team conducted an inventory of trails currently found in the Recreation Use Study Area that support commercial and non-commercial recreation. Trail data were collected from existing data sources, agency interviews with ADNR and BLM, as well as through executive interviews with key recreation user groups. To provide a more detailed inventory of trails and routes within the immediate Recreation Use Study Area, the study team utilized high-resolution aerial imagery to map summer trails at a scale of 1:24,000, including areas added to accommodate the addition of the Denali East Option road and transmission corridor. As outlined in Section 4, the field team surveyed summer trails with a Project nexus from the air via helicopter and collected field observations to verify trail data.

Per Section 12.5.4 of the FERC-approved Study Plan, formally managed snow-covered winter trails were identified and mapped by the study team. When common and repetitive use patterns could be discerned or were identified through executive interviews, informal winter trails and routes were inventoried and mapped. RS 2477 right-of-way and 17(b) easements were inventoried and mapped.

Per Section 12.5.4 of the Study Plan, winter and summer trails with a nexus to the Project were classified using the USFS Trail Classification System. In addition, the study team identified sub-

classes of Class 1 trails based on trail braiding information identified during the trail mapping and inventory process (Appendix D).

## 7. LITERATURE CITED

### 7.1. Documents and Source Material

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URS Corporation (URS). 2014a. Executive Interview Database.

URS. 2014b. Field-Collected Trail Data.

## 7.2. Figure (Maps) References

Data Source	Date	File Name and Description
URS Corporation	11/18/2013	REC_Facilities: Recreation facilities including campgrounds, trailheads, boat launches, and day use areas.
URS Corporation	11/19/2013	REC_RS2477: Easements with a State of Alaska RS 2477 designation.
URS Corporation	11/20/2013	REC_Summer_Trails: Trail compilation for the Study Area. From URS digitized trails, ADNRS USGS 63,360 Trailset, BLM trails, MSB trails, and executive interviews.
URS Corporation	6/4/2013	REC_StudyArea_Use: The spatial extent of the study area for both Recreation Use Studies and the Recreation Supply and Demand Studies
URS Corporation	11/22/2013	REC_Dispersed_Recreation: Class 3 dispersed recreation sites along the Denali Highway.
URS Corporation	11/22/2013	REC_Dispersed_Rec_Tallies: The Denali Highway divided into 5-mile segments containing counts of dispersed recreation sites.
URS Corporation	11/13/2013	REC_Intercept_PTS: Locations of intercept surveys.
ADF&G	11/2013	REC_ADFG_Angling_Locations: ADFG geographic locations used to represent areas where angling occurs.
ADF&G	11/2013	REC_ADFG_0EST_30_Sums: Table containing sums and averages of estimated days of effort spent angling.
ADF&G	11/2013	REC_ADFG_0EST: Table containing number of responses for angling survey (i.e. sample size).
ADF&G	11/22/2013	REC_Hunting_Effort_All_Res: Raster displaying average days of effort for all residents in the Recreation Use Study Area.
ADF&G	11/22/2013	REC_Hunting_Effort_Non_Res: Raster displaying average days of effort for non-residents in the Recreation Use Study Area.
ADF&G	4/5/2012	Game_Management_Units: Alaska Department of Fish and Game game management units.
BLM	10/28/2013	BLM_TLAD: Boundary of the Tangle Lakes Archaeological District.



**Susitna-Watana Hydroelectric Project  
(FERC No. 14241)**

**Recreation Resources Study  
Study Plan Section 12.5**

**Technical Memorandum - 2014 Year-End Report  
Trails Assessment and Classification**

**Appendix A - Trails Inventory**

Prepared for  
Alaska Energy Authority



Prepared by  
AECOM Inc.

October 2015

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## 1. RS 2477 EASEMENT TRAILS

A brief description of each RS 2477 easement trail is provided below (ADNR 2013) and summarized in Table A.1-1:

### *Chulitna Trail (RST 52)*

The route begins at Honolulu Station, mile 287 of the Alaska Railroad, and runs southwest to the Chulitna River, crosses the river by means of a 360-foot suspension span, then continues one-half mile to the top of a bench. The trail is approximately 3 miles long.

### *Murder Lake North to Ridge Line (RST 80)*

The Murder Lake North to Ridge Line Trail heads north from Murder Lake to a ridge. The trail is approximately 2 miles long.

### *Meiers Lodge-Dickey Lake Trail (RST 82)*

The trail begins about a quarter mile north of Meier's Lake Roadhouse on the Richardson Highway. It travels northwest between Gillespie Creek and Paxson Lake before crossing the Gulkana River. From there, the trail parallels the Middle Fork of the Gulkana River to Dickey Lake. The trail goes west from Dickey Lake to its endpoint on the Maclaren River. This route covers approximately 40 miles. In the early 20th century, this trail was investigated as an alternative route into the Valdez Creek Mining District.

### *Indian River-Portage Creek Trail (RST 100)*

The Indian River-Portage Creek Trail starts from the Chulitna Station, mile 274 of the Alaska Railroad, and heads east, crosses the Indian River, and continues east to cabins on Portage Creek. The route is approximately 8 miles long.

### *Gulkana-Denali Winter Trail (RST 294)*

Originally created as an access route for the Valdez Mine, this Alaska Range winter trail follows the west fork of the Gulkana River. It then parallels the Maclaren and Susitna rivers for a total trail length of about 120 miles.

### *Gulkana-Valdez Creek Trail (RST 295)*

This summer trail starts in Gulkana and travels northwest along Ewan, Dog, and Fish lakes. It then follows the Gulkana River along its west fork before meeting with Keg Creek. The trail heads north to cross Moose Creek and the Maclaren River before meeting with the Paxson-Denali Trail (RST 318). The trail was a historic access route to Alaska Range gold mines on Valdez Creek.

*Paxson-Denali Trail (Valdez Creek) (RST 318)*

The trail begins at milepost 94 of the Denali Highway and travels north along the Maclaren River. After about 7 miles, the trail crosses the Maclaren River. From there, the trail goes south and east to cross the West Fork of the Maclaren River and Clearwater Creek. The trail continues along Pass, Roosevelt, and Valdez creeks. The trail forks at mines at the base of Valdez Creek. One fork goes south about 5 miles to the Denali Highway east of the Susitna River bridge. The other fork leads west about 2 miles to the Denali Highway after crossing the Susitna River. The trail is approximately 40 miles in total length. The route was used historically to reach gold mines in the Valdez Creek area.

*Talkeetna-Iron Creek Trail (RST 331)*

The trail parallels the Talkeetna River north from the town of Talkeetna to the mouth of Iron Creek. From there, the route turns southwest to follow Iron Creek for about 14 miles. The total trail length is about 41 miles. Historically, the path was used to reach mines near Iron Creek.

*Stephan, Murder, and Daneka Lake Connector Trail (RST 377)*

From the western end of Stephan Lake, the route heads southwest to Murder Lake. From the other side of Murder Lake, the trail continues south, crosses Prairie Creek, and terminates at Daneka Lake. The trail is used to access Murder and Daneka lakes from Stephan Lake. The route is approximately 2 miles long.

*Chickaloon River Trail (RST 427)*

This trail travels about 33 miles north along the Chickaloon River through the Talkeetna Mountains. The trail starts in the town of Chickaloon at milepost 77.7 of the Glenn Highway. Historically, the trail was a way to access Nelchina-Susitna District placer mining.

*McWilliams-Gold Creek Trail (RST 469)*

The McWilliams-Gold Creek Trails starts at mile 263 of the Alaska Railroad at the community of Gold Creek. The trail heads east along the base of the hills, turns southward and climbs onto a plateau south of the Susitna River. The route continues in a general south-southeast direction to mining claims on John Creek, a tributary of Chumilna Creek.

*Windy Creek Access Road (RST 517)*

The Windy Creek Access Road starts from milepost 78 on the Denali Highway and heads east along Windy Creek to the Caribou Dome Mine in Wedding Pass. The trail is approximately 16 miles long.

*Cantwell Small Tracts Road (Lovers' Lane) (RST 625)*

The trail originates 1.5 miles from Cantwell, on the south side of the Denali Highway. The trail travels southeast approximately one-half mile, crosses the Parks Highway, skirts the north bank

of the Jack River and continues east, crossing the highway to Summit and terminating on the south side of the Denali Highway. The trail is approximately 1.25 miles long.

*Curry Landing Strip-Lookout Tower Trail (RST 1509)*

The trail is an approximately 3-mile route from Curry Station west to Lookout Point. Historically, the Alaska Railroad maintained a shelter at Lookout Point.

*Lake Louise Trail (RST 1522)*

Starting at milepost 12 of Lake Louise Road, this trail heads north for approximately 7 miles. The route passes along Lake George and Lake Dinty. The trail continues to a cabin on Lake Louise and the end of Lake Louise Road.

*Talkeetna River Trail (RST 1620)*

The Talkeetna River Trail starts on Willow Creek Road across the ending point of the Wet Gulch Trail (RST 1710). It travels north to cross Purches and Willow creeks before skirting the western edge of the Talkeetna Mountains. Continuing, it crosses the Kashwitna River, Montana Creek, and the Talkeetna River. The route turns east to parallel Disappointment Creek and cross the Talkeetna River at Prairie Creek and continues along the south side of the Talkeetna River to its headwaters before gaining elevation to reach the headwaters of the Chickaloon River. From there, the trail intersects with the Chickaloon River Trail (RST 427). This route is about 105 miles in length. The trail was an early route to explore the Talkeetna Mountains, and had some use by trappers and miners.

*Herning Trail-Question Creek (RST 1691)*

This trail travels about 50 miles. It starts at the Little Susitna River and winds north at the base of Bald Mountain Ridge before following Deception Creek and the Kashwitna River. It continues farther north to cross Caswell Lake, Sheep Creek, Goose Creek, Montana Creek, and the Talkeetna Cutoff before ending at Question Creek. This trail was historically a wagon and sled path into the Talkeetna Area.

*Iron Creek-North Fork Kashwitna River Trail (RST 1694)*

The trail starts from an intersection with the Talkeetna-Iron Creek Trail (RST 331) near Rainbow Lake and travels south to Sheep River before heading uphill to an elevation of 3,500 feet. It then descends along a tributary of Sheep Creek before paralleling Sheep Creek west and climbing another mountain pass to the south. The trail traverses the western edge of a small lake before meeting with the North Fork of the Kashwitna River. The trail is about 25 miles, and was historically used to reach the Talkeetna Mountains.

*Glacier Gap (Lavery) Lake Trail (RST 1809)*

This trail was nominated as a potential RS 2477 right-of-way; however, there is insufficient documentation available to make any determination at this time (ADNR 2013).

*Sevenmile Lake Trail (RST 1814)*

Starting from milepost 7.3 of the Denali Highway, the trail leads north to Sevenmile Lake. Past uses of the trail were to access fishing spots and other hiking trails.

## **2. WINTER TRAILS AND ROUTES**

Some trails may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

### **2.1. Groomed (Formal) Winter Trails**

#### **Talkeetna and Southern Parks Highway**

##### *Amber Lake Trail*

The Amber Lake multi-use winter trail is approximately 0.5 mile and provides access to the Rabideux and Chulitna Bluff trails. It is located east of the Parks Highway at milepost 105. The Amber Lake Trail is part of the Alaska State Parks SnowTRAC grooming pool. Snowmachiners are the primary trail users, but skiers, dog mushers, and skijorers also use the trail. Snowmachiners must yield to dog teams by pulling over, shutting off their machines, and waiting for dog teams to pass.

##### *Bartlett Trail*

The Bartlett Trail is a non-motorized winter trail located southeast of Talkeetna that is a connecting trail heading north from Talkeetna Lakes Park to Comsat Road and the Old RCA Trail (MSB 2008). The trail skirts the western edge of the Bartlett Hills and is approximately 1.8 miles long.

##### *Chase Trail*

Chase Trail is a multi-use trail adjacent to the Alaska Railroad line north of Talkeetna that provides an access route for Chase residents and is also used by recreationists. The trailhead for the Chase Trail begins from a parking lot in Talkeetna. In the winter, this trail is groomed by volunteers from the Chase community. The Chase Trail is funded by a service district and lies within the railroad right-of-way (MSB 2008). The bridge over the Talkeetna River limits the width of any equipment on the trail to 45 inches. The trail is primarily used by snowmachiners, but skiers, skijorers, and dog sledders also utilize the Chase Trail. It is approximately 5 miles long.

##### *Chulitna Bluff Trail*

This multi-use winter trail is approximately 19 miles long and starts east of the Parks Highway at milepost 122. It runs parallel to the west bank of the Chulitna River. Traveling north, the trail intersects the East-West Express and North Loop Trails. Traveling south on the Chulitna Bluff Trail leads to the Rabideux Trail. The Chulitna Bluff Trail has a right-of-way reserved with the State of Alaska as ADL 230118. The trail is part of the Alaska State Parks SnowTRAC grooming pool. It is groomed for travel by snowmachines, dog sleds, skiers, and skijorers. Snowmachiners must yield to dog teams by pulling over, shutting off their machines, and waiting for dog teams to pass.

### *East-West Express Trail*

The East-West Express multi-use winter trail (see photograph in Appendix E) departs from milepost 121.5 of the Parks Highway, and heads west toward the Petersville area to connect with the Trapper Creek-Petersville Winter Trail system. It passes through a mixed spruce-hardwood forest and wetlands. The East-West Express offers views of the Alaska Range on clear days. The trail intersects with several creeks and winter trails, including the Tokositna River Trail and Deep Creek trail, before ending at the Petersville Road trail, approximately 11 miles in total. The East-West Express has public recreation trail easement 228839 reserved with the Alaska Division of Mining, Land, and Water. The trail is part of the Alaska State Parks SnowTRAC grooming pool. The East-West Express is groomed by local volunteers for travel by snowmachines, dog sleds, skiers, and skijorers. Snowmachinists must yield to dog teams by pulling over, shutting off their machines, and waiting for dog teams to pass.

### *Fish Lake Trail*

Fish Lake is located at milepost 9 to the east of the Talkeetna Spur Road. In summer, the lake is popular for float plane takeoffs and landings. In winter, 2.5 miles of groomed classic and skate ski trails run along the southern edge of the lake.

### *Rabideux Trail*

The Rabideux Trail is east of the Parks Highway at milepost 105, and is a multi-use winter trail. The north-south trail follows the Rabideux Creek drainage through Black Spruce forests and swamps to connect with other trails in the Trapper Creek-Petersville area, about 7 miles. The Rabideux Trail is part of the Alaska State Parks SnowTRAC grooming pool. It is groomed primarily for snowmachine users, but dog mushers, skiers, and skijorers also use the trail. Snowmachinists must yield to dog teams by pulling over, shutting off their machines, and waiting for dog teams to pass.

### *Ski Hill Trail*

Ski Hill is a popular Nordic ski trail system in Talkeetna 1.5 miles long. It is located west of the Talkeetna Spur Road at milepost 12, and is about 100 yards south of a paved overlook of the Alaska Range. Denali Nordic Ski Club volunteers manage and maintain the trail system.

### *South Fork Loop Trail*

South Fork Loop Trail detours in an oval fashion from South Fork Montana Creek Trail. This trail is part of the Alaska State Parks SnowTRAC grooming pool and is about 11 miles long. It receives primary use from travel via snowmachine, but non-motorized winter recreationists also use the trail.

### *South Fork Montana Creek Trail*

South Fork Montana Creek is a multi-use winter trail that follows the South Fork of Montana Creek from Yoder Road to the small lake near the headwaters of the creek. This trail is part of the Alaska State Parks SnowTRAC grooming pool and is approximately 20 miles long. It

receives primary use from travel via snowmachine, but non-motorized winter recreationists also use the trail.

#### *Talkeetna Lakes Trail*

This trail is within the Talkeetna Lakes Park trail system accessed from Comsat Road (milepost 12 of the Talkeetna Spur Road). It is groomed for skiing in winter. The trail forms a loop around X Lake, and passes through old-growth forest, approximately 4.65 miles. On clear days, there are views of the Alaska Range.

#### *Twister Creek Trail*

A multi-use winter trail south of the Talkeetna Airport about 3 miles long that connects the Old Lake Trail to the Ski Hill area. The trail has been surveyed and traverses lands owned by a Native corporation and the University of Alaska (MSB 2008).

#### *Upper South Fork Montana Creek Trail*

Upper South Fork Montana Creek is a multi-use winter trail that heads northeast from the South Fork Montana Creek Trail up the smaller drainage of the Upper South Fork (MSB 2008). This trail is part of the Alaska State Parks SnowTRAC grooming pool and is approximately 7 miles long. It receives primary use from travel via snowmachine, but non-motorized winter recreationists also use the trail.

#### Winter Race Routes

##### *Oosik Classic Race Route*

The Oosik Classic is a cross-country ski race organized by the Denali Nordic Ski Club each March. A different race route is groomed by race organizers each year, but the route begins and ends in Talkeetna and is approximately 50 km long, with a 25 km race option.

##### *Trio Fat Bike Race Route*

The Trio Fat Bike Race is an annual race held in Talkeetna for winter bikers. In 2013, the race began in Talkeetna and followed local winter trails around Talkeetna. The race route is either 20 miles or 60 miles long and is for bikes only.

#### **Denali State Park and Northern George Parks Highway**

##### *North Loop (Tokositna Flats) Trail*

The North Loop (Tokositna Flats) Trail is east of the Parks Highway at milepost 131, and is a multi-use winter trail. The trail is the only one groomed for winter travel in Denali State Park. The trail travels east to meet with the Tokositna River Trail, over 11 miles. The North Loop is part of the Alaska State Parks SnowTRAC grooming pool. It is groomed primarily for snowmachine users, but dog mushers, skiers, and skijorers also use the trail.

## **Denali Highway**

### *Denali Highway Trail*

The Denali Highway travels through the Alaska Range for 134 miles. The town of Cantwell at the junction with the Parks Highway at milepost 210 marks the eastern end, and the town of Paxson at the junction with the Richardson Highway at milepost 185.5 marks the western end. In winter, the Denali Highway is maintained for multi-use travel as part of the Alaska State Parks SnowTRAC grooming pool.

### *Maclaren River Road Trail*

The trail heads north from the Denali Highway to form a loop around the Maclaren River. In winter, Maclaren River Road is maintained for multi-use travel as part of the Alaska State Parks SnowTRAC grooming pool, and is approximately 8 miles long.

### *Sevenmile Lake Trail*

The trail heads north from milepost 39.7 of the Denali Highway to Sevenmile Lake, about 7 miles. In winter, Sevenmile Trail is maintained for multi-use travel as part of the Alaska State Parks SnowTRAC grooming pool.

## **Lake Louise and the Glenn Highway**

### *Crosswind Lake Trail*

Crosswind Lake is a multi-use, winter trail that is part of a large system of trails that start in Lake Louise and connect to a system of winter trails to the east toward Glennallen. It is groomed and marked by volunteers from the Lake Louise Snowmachine Club (MSB 2008). Crosswind Lake is part of the Alaska State Parks SnowTRAC grooming pool and is approximately 13 miles long.

### *Eureka East Trail*

Eureka East is a multi-use, winter trail that is part of a large system of trails connecting Eureka with Lake Louise. The trail crosses many lakes and lowlands. It is groomed by volunteers from Lake Louise and Eureka. The trail has been surveyed and an easement reserved for public use (MSB 2008). Eureka East is part of the Alaska State Parks SnowTRAC grooming pool and is approximately 28 miles long.

### *Eureka West Trail*

Eureka West is a multi-use, winter trail that is part of a large system of trails connecting Eureka with Lake Louise. Eureka West facilitates travel in a north-south direction, and ascend to higher elevations. It is groomed by volunteers from Lake Louise and Eureka and well marked for winter travel. The trail has been surveyed and a public recreation trail easement reserved (MSB 2008). Eureka West is part of the Alaska State Parks SnowTRAC grooming pool and is approximately 25 miles long.



### *Moore Lake Trail*

The Moore Lake Trail is a multi-use, winter trail that is part of a large system of trails connecting Eureka with Lake Louise. It is groomed by volunteers from Lake Louise and Eureka, and is well marked for winter travel. The trail has been surveyed and a public recreation trail easement reserved (MSB 2008). The Moore Lake Trail is part of the Alaska State Parks SnowTRAC grooming pool and is approximately 22 miles long.

### *Tolsona Trail*

The Tolsona Trail starts at about mile 16 of the Lake Louise Road and travels across Tolsona Creek and on to Tolsona Lodge, about 26 miles. The trail is maintained by the Lake Louise Snowmachine Club but is not part of the Alaska State Parks SnowTRAC grooming pool and is approximately 26 miles.

### *Winter Lakes Trail*

Winter Lakes Trail is a multi-use, winter trail of about 33 miles that departs from the end of Lake Louise Road, and forms loops around Lake Louise and Susitna Lake. The trail connects to the large system of Lake Louise and Eureka trails. Winter Lakes Trail is part of the Alaska State Parks SnowTRAC grooming pool and is maintained by volunteers from Lake Louise.

## **2.2. Informal Winter Trails**

### **Talkeetna and Southern Parks Highway**

#### *Clear Creek Route*

The Clear Creek Route leads from the Chase Trail northeast to the Talkeetna Mountains. The trail is partially groomed by volunteers from the Chase Community and is about 26 miles in length.

#### *McWilliams-Gold Creek Route*

The McWilliams-Gold Creek Route is a multi-use trail that starts at mile 263 of the Alaska Railroad at the community of Gold Creek. The trail heads east along the base of the hills, turns south, and climbs onto a plateau south of the Susitna River. The route continues in a general south-southeastward direction to mining claims on John Creek, a tributary of Chunilna Creek and is approximately 16 miles long. This trail is designated as an RS 2477 right-of-way (RST 469).

#### *Nodwell Route*

This route continues north from the terminus of the groomed portion of Chase Trail, and ends at the Chase community. In winter, it is ungroomed. Nodwell Route passes through a thick spruce-birch forest for about 10 miles.

### *Sheep River Route*

Sheep River is an ungroomed winter route about 18 miles long. It is an eastern extension of the Talkeetna River Route that follows the Sheep River into the Talkeetna Mountains for several miles before a junction with the Stephan Lake Route.

### *Stephan Lake Route*

This route begins at a junction with the Sheep River Route and traverses valleys in the Talkeetna Mountains to reach Stephan Lake, about 28 miles.

### *Talkeetna River Route*

The Talkeetna River Route is a multi-use winter route that heads east from Talkeetna. It travels along the Talkeetna River, following RST 1620 for several miles before leaving the easement and becoming the Sheep River Route, about 10 miles total.

## **Denali State Park and Northern George Parks Highway**

### *Indian River Portage Creek*

This trail is accessed from the Parks Highway around milepost 165, or the Chulitna stop of the Alaska Railroad. The route travels east to lands north of Devils Canyon for 5.7 miles. It is 17(b) easement number 18.

### *East Fork Chulitna Route*

This winter route travels east from the Parks Highway up the East Fork of the Chulitna River toward the Talkeetna Mountains. A branch of this route heads north along the Alaska Railroad to connect with the Middle Fork Chulitna Route. The trail is 8.2 miles in total length.

### *Middle Fork Chulitna Route*

This winter route travels east from the Parks Highway up the Middle Fork of the Chulitna River toward the Talkeetna Mountains and Caribou Pass, approximately 18.5 miles. The route follows 17(b) easements 3a and 87.

### *Pass Creek Route*

This winter route departs from the Parks Highway at milepost 170 and travels east through Chulitna Pass to access cabins north of Gold Creek. It is about 7 miles long and is not groomed (see photograph in Appendix E).

## **Denali Highway**

### *Butte Lake Route*

This multi-use, year-round trail leads south from milepost 94 of the Denali Highway to Butte Lake, and becomes Deadman Lake Route for about 5 miles. During winter, it is not groomed.

### *Deadman Lake Route*

This ungroomed winter route continues south from the Butte Lake Route along Deadman Creek. The route skirts Deadman Mountain before ending at Deadman Lake, approximately 17 miles.

### *East Fork Susitna Glacier Route*

This winter route departs north from the Denali Highway and follows the Susitna River to Susitna Glacier. The East Fork Susitna Glacier Route is 31.4 miles long and is not groomed.

### *Raptor Valley Route*

This route travels south from the Denali Highway. It travels past the Susitna River and Snodgrass Lake before heading into Raptor Valley. The Raptor Valley Route is about 18 miles long and is not groomed.

### *Valdez Creek Route*

This multi-use route begins at the end of Valdez Creek mining road heading east toward Clearwater Creek Trail and Clearwater Mountains, about 16 miles (MSB 2008). The trail and area are managed by the Bureau of Land Management (BLM), but this route is not groomed in the winter. The route is designated as an RS 2477 right-of-way under RST 318.

### *Windy Creek Route*

This multi-use route starts just east of the Susitna River crossing on the Denali Highway and runs east along the Windy Creek drainage, eventually connecting to Valdez Creek Trail, about 11 miles (MSB 2008). The trail and area are managed by the BLM, but this route is not groomed in winter. The route is designated as an RS 2477 right-of-way under RST 517.

## **Lake Louise and the Glenn Highway**

### *John Lake Route*

John Lake is a multi-use winter route that is part of a large system of trails and routes starting at Lake Louise. It heads south from Lake Louise to John Lake and onto Eureka and the Glenn Highway (MSB 2008). The trail receives some grooming attention from volunteers in Lake Louise, but is not part of the Alaska State Park SnowTRAC grooming pool, and is approximately 20 miles long.

### *Moose Creek Route*

This multi-use winter route travels north from the Lake Louise trail system to eventually meet with the Maclaren River and the Denali Highway, about 47 miles. The Moose Creek Route is partially groomed by members of the Lake Louise Snowmachine Club.

### *Old Man Creek Trail/Eureka Trail West*

The major trailhead for the Old Man Creek Trail (see photograph in Appendix E) is at milepost 130.5 of the Glenn Highway. The trail is part of the Chickaloon-Knik-Nelchina trail system that connects to the Lake Louise trails. The trail goes north until it becomes the Eureka Trail West. It is part of the Alaska State Parks SnowTRAC grooming pool.

### *Slide Mountain Route*

Slide Mountain is a multi-use, winter route used primarily by snowmachine riders to access the John Lake area. It connects to the Lake Louise Winter Trails and Eureka Winter Trails, approximately 4 miles. The trail has been surveyed, and request for public easement has been submitted to the state (MSB 2008).

### *Tyone Creek Route*

This multi-use winter route travels north from the Lake Louise trail system following Tyone Creek to its headwaters and the Susitna River. The route skirts the border of the Nelchina Public Use Area, and passes the site of the old Tyone Village, about 28 miles (MSB 2008). The Tyone Creek Route is partially groomed by members of a snowmachine club in Lake Louise.

### 3. SUMMER TRAILS AND ROUTES

Some trails may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

#### 3.1. Formal Summer Trails

##### **Talkeetna and Southern Parks Highway**

###### *Chase Trail*

The Chase Trail is a multi-use trail located adjacent to the Alaska Railroad line north of Talkeetna that provides an access route for Chase community residents. It is also used by recreationists. The trailhead for the Chase Trail begins from a parking lot in Talkeetna. The Chase Trail is funded by a service district, and lies within the railroad right-of-way (MSB 2008). The bridge over the Talkeetna River limits the width of any equipment on the trail to 45 inches. The trail is traveled primarily by all-terrain vehicle (ATV) riders, but bicyclists and hikers also use the Chase trail. It is a mostly flat, gravel trail, about 5 miles long.

###### *Luthman Trail*

This scenic trail leads to 80-foot Montana Creek Falls. Luthman Trail is accessed by following Yoder Road over the Montana Creek Bridge east from milepost 3.1 of the Talkeetna Spur Road. The trail is about 4 miles long and is steep for the last half mile.

###### *Talkeetna Lakes Trail*

This trail system is within Talkeetna Lakes Park accessed from Comsat Road east of the Talkeetna Spur Road at milepost 12. It is used for hiking and mountain biking in summer. The trail forms a loop around X Lake and passes through old-growth forest, about 4.6 miles. Log benches are present along parts of the Talkeetna Lakes Trail. On clear days, there are views of the Alaska Range. The adjacent lakes are good for fishing, paddling, and viewing wildlife. In fall, blueberries grow along the trail.

###### *Talkeetna Pathway*

The Talkeetna Pathway is a paved bike path that traverses the length of the Talkeetna Spur Road from the Parks Highway turnoff into the town of Talkeetna, about 14 miles. It is mostly level and used for biking, jogging, and hiking.

###### *Tigger Lake*

The trail to Tigger Lake is about 0.25 mile long and is located at milepost 11 along the Talkeetna Spur Road. The trail leads to Tigger Lake, a popular destination for fishing in the summer.

### *Talkeetna River Trail*

The Talkeetna River Trail follows the Talkeetna River along the southern bank up river (MSB 2008). The trail is about 1.5 miles long and is accessed from Talkeetna. It heads east from the Talkeetna River to intersect with Beaver Road, Old Lake Trail, and Ridge Trail.

## **Denali State Park and Northern Parks Highway**

### *Byers Lake Trail*

This trail forms a loop around Byers Lake and has flat terrain (see photograph in Appendix E). Three bridges traverse streams connecting to the lake. Good views of Denali and spawning salmon can be seen from this trail. In summer, mostly hikers and bikers use the trail. The trail is accessed from Byers Lake Campground and is about 5 miles long. Byers Lake is good for paddling. The Alaska Department of Natural Resources (ADNR) manages this trail.

### *Cascade Trail*

The trail leads from the eastern end of the Byers Lake Trail uphill to connect with the Kesugi Ridge Trail at its southern end, approximately 2 miles. The trail passes a scenic waterfall. It is steep and has a series of switchbacks, but hikers are rewarded with stunning views of the Alaska Range on clear days. This trail is managed by ADNR.

### *Denali View North Trail*

The Denali View North viewpoint offers a paved short trail that is 750 feet long and has interpretive signs about native plants. The trail is wheelchair accessible. ADNR manages this trail.

### *Ermine Hill Trail*

This trail winds through forest before connecting to the Kesugi Ridge Trail by a series of switchbacks, approximately 4 miles. It is steep, but hikers are rewarded with stunning views of the Alaska Range on clear days. It is accessed from the Ermine Hill Trailhead east of the Parks Highway at milepost 156.5. This trail is managed by ADNR.

### *Kesugi Ridge Trail*

Kesugi Ridge forms the heart of the Denali State Park hiking system. The trail follows an alpine ridge for 22.3 miles and is a popular backpacking route. Views from the trail include Denali, the Alaska Range, and the Chulitna River Basin. It is accessed from Little Coal Creek Trail at its northern end, Cascade Trail at its southern end, and Ermine Hill Trail in the middle. This trail is managed by ADNR.

### *Little Coal Creek Trail*

The trail parallels Little Coal Creek uphill to connect with the Kesugi Ridge Trail at its northern end, about 3.2 miles. It is steep, but hikers are rewarded with stunning views of the Alaska

Range on clear days. It is accessed from the Little Coal Creek Trailhead east of the Parks Highway at milepost 163.8. ADNR manages this trail.

#### *Lower Troublesome Creek Trail*

This trail is a short 0.6 mile path to the Chulitna River from the parking lot at the Lower Troublesome Creek Trailhead west of the Parks Highway at milepost 137.2. This trail is managed by ADNR.

#### *Upper Troublesome Creek Trail*

This trail has severe flood damage and is being rerouted and repaired by ADNR. It leads north to alpine landscapes to connect with Kesugi Ridge Trail. It is accessed from the Upper Troublesome Creek Trailhead east of the Parks Highway at milepost 137.7. This trail is approximately 11 miles long and is managed by ADNR.

### **Denali Highway**

#### *Alphabet Hills Trail*

An approximately 27-mile extension of the Swede Lake Trail, this trail provides access to the Alphabet Hills. It begins in the Tangle Lakes Archaeological District (TLAD) and is managed by the BLM.

#### *Brushkana Creek Trail*

The Brushkana Creek Trail begins at the Brushkana Creek Campground at milepost 105 of the Denali Highway and travels west along Brushkana Creek, about 4 miles. It is managed by the BLM.

#### *Clearwater Creek South Trail*

Clearwater Creek South is approximately 11.4 miles long and is a multi-use, year-round trail that connects the Denali Highway with Maclaren River Road Trail. The area and trails are managed by the BLM (MSB 2008).

#### *Dickey Lake Trail*

Accessed by the Swede Lake Trail, this trail parallels the Middle Fork of the Gulkana River and is about 8 miles long. It lies in the TLAD and is managed by the BLM.

#### *Glacier Gap to Sevenmile Lake Trail*

This trail lies in the TLAD and begins at milepost 30.5 of the Denali Highway. It goes north to the east side of Glacier Gap Lake, and continues north to Sevenmile Lake, approximately 7.2 miles. The trail is designated as an RS 2477 right-of-way under RST 1809; however, the trail has been rerouted off the easement to protect archaeological resources. The trail is managed by ADNR (see photograph in Appendix E).

### *Jack River Trail*

The Jack River Trail (see photograph in Appendix E) provides access through lands owned by Ahtna, Inc., the State of Alaska, and state-selected lands to reach the Jack River drainage. It is about 8 miles long and reserved under 17(b) easement 3c.

### *Landmark Gap Lake Trail*

This trail is a designated motorized trail that leads north from milepost 24.6 of the Denali Highway to Landmark Gap Lake, approximately 2.3 miles. Several known archaeological sites are nearby, and staying on the designated trail is highly encouraged.

### *Landmark Gap South Trail*

The Landmark Gap South Trail leads south from the Denali Highway. The Landmark Gap South Trail is about 9 miles long. For the first 6 miles, the trail is designated for ATV use; however, after 6 miles the trail comes to an unnamed creek and motorized use is prohibited beyond this point. Some parts of the trail are wet and muddy. This trail is managed by the BLM.

### *Maclaren River Road Trail*

The Maclaren River Trail is a multi-use, year-round trail. It travels north-south along the west bank of Maclaren River, and then on to the Clearwater Mountains, approximately 20.4 miles. This trail is managed by the BLM.

### *Maclaren Summit Trail*

This trail lies within the TLAD. The trail leads north from the Denali Highway to Maclaren Summit, elevation 4,086 feet. Black currant berries and blueberries grow along the trail. The Maclaren Summit Trail is managed by ADNRC and is about 3 miles long.

### *Osar Lake Trail*

This trail is approximately 8 miles long, heads south to Osar Lake, and has views of the river basin. This trail is usually dry and attracts hunters during August and September. The trail is managed by the BLM Field Office in Glennallen.

### *Rusty Lake Trail*

This trail is a non-motorized trail approximately 1 mile long that leads to the southern shore of Rusty Lake. It begins at milepost 17.2 of the Denali Highway.

### *Swede Lake Trail*

This trail heads south from the Denali Highway for about 11 miles. It travels through the TLAD toward the Middle Fork of the Gulkana River. From there, travelers can access the Alphabet Hills and Dickey Lake. Motorized use is the primary mode of travel on this trail. The trail is managed by the BLM Field Office in Glennallen.



### *Tangle Ridge Trail*

This trail starts from Tangle Lakes Campground and is for non-motorized use only. It leads about 3,000 feet to views of Tangle Lakes and the Alaska Range. Hikers can continue on unmaintained footpaths toward Landmark Gap Creek. The trail is managed by the BLM Field Office in Glennallen.

## **3.2. Noteworthy Informal Summer Trails**

Due to the large number of informal summer trails in the Recreation Use Study Area, particularly along the Denali Highway, not all are profiled below. Descriptions are given for trails that extend more than a few miles into the Recreation Use Study Area, are heavily used, or have a connection to the Susitna River or the Recreation Effects Analysis Area. Informal trails are listed in Table A-6.

### **Talkeetna and Southern Parks Highway**

#### *Curry Landing Strip South Trail/Curry-Quarry Route*

The Curry Landing Strip South Trail is accessed from the Curry landing strip and follows Deadhorse Creek to Lane Creek for about 4 miles, where it becomes the Curry-Quarry Route and leads over a bench to the east to Chunilna Creek.

#### *Indian River Portage Creek Trail*

This trail is accessed from the Parks Highway around milepost 165, or the Chulitna stop of the Alaska Railroad. The route travels east to lands north of Devils Canyon, approximately 7 miles. It is 17(b) easement number 18 and RST 100.

#### *McWilliams-Gold Creek Route*

The McWilliams-Gold Creek Route is a multi-use trail that starts at mile 263 of the Alaska Railroad at the community of Gold Creek. The trail heads east along the base of the hills, turns south and climbs onto a plateau south of the Susitna River. The route continues in a general south-southeastward direction to mining claims on John Creek, a tributary of Chunilna Creek, and is approximately 65 miles long. This trail is designated as an RS 2477 right-of-way (RST 469).

#### *Nodwell Route*

This route continues north from the terminus of the Chase Trail and ends at the Chase community. The Nodwell Route passes through a thick spruce-birch forest and is approximately 4 miles long.

#### *Old Lake Road Trail*

The Old Lake Road Trail is accessed from Christiansen Lake Road via Comsat Road, an east turn from milepost 12 of the Talkeetna Spur Road. Old Lake Road Trail travels north to meet

with the Talkeetna River Trail and Beaver Road, approximately 5 miles. It is used for hiking, biking, ATV riding, and horseback riding. Motorized users must yield to non-motorized users.

#### *Old RCA Trail*

The Old RCA Trail is accessed from the end of Comsat Road, an east turn from milepost 12 of the Talkeetna Spur Road. The trail connects to the Ridge Trail and Old Lake Trail creating a loop, about 1.2 miles (MSB 2008). It is used for hiking, biking, ATV riding, and horseback riding. Motorized users must yield to non-motorized users.

#### *Ridge Trail*

The Ridge Trail is accessed from the end of Comsat Road. Comsat Road is an east turn from milepost 12 of the Talkeetna Spur Road. The Ridge Trail travels north and then west to connect with Beaver Road and the Talkeetna River Trail, approximately 2 miles. It is used for hiking, biking, ATV riding, and horseback riding. Motorized users must yield to non-motorized users.

### **Denali State Park and Northern Parks Highway**

#### *East Fork Chulitna Route*

This route travels east from the Parks Highway up the East Fork of the Chulitna River toward the Talkeetna Mountains and Tsusena Creek and is approximately 29 miles long.

#### *Middle Fork Chulitna Trail*

This trail travels east from the Parks Highway up the Middle Fork of the Chulitna River toward the Talkeetna Mountains and Caribou Pass, about 19 miles. The route follows 17(b) easements 3a and 87.

#### *Pass Creek Trail*

This trail departs from the Parks Highway at milepost 206 and travels east to the headwaters of an unnamed creek, approximately 7 miles. It is 17(b) easement 5h.

### **Denali Highway**

#### *Butte Creek Trail*

Butte Creek is a multi-use, year-round trail that starts approximately at milepost 80.7 of the Denali Highway, and heads southwest toward the headwaters of Butte Creek (MSB 2008). The first section of the trail travels along the western bank of Susitna River, and is a former mining trail. The trail continues past Snodgrass Lake and ends in alpine forest, about 19 miles total. The BLM manages this trail (see photograph in Appendix E).

### *Butte Lake Trail*

The Butte Lake Trail heads south from the Denali Highway at milepost 94. After about 5 miles, the trail reaches Butte Lake, which has good fishing for lake trout. The first part of the trail features views of tundra and small lakes. The Butte Lake Trail continues south past Butte Lake toward Deadman Mountain, eventually meeting with Big Lake. It is approximately 35 miles in total.

### *Hatchet Lake Trail*

The Hatchet Lake Trail is a multi-use year-round trail accessible from the Denali Highway and goes south to the Susitna River, about 8 miles. The trail is managed by the BLM (MSB 2008).

### *Jay Creek Trail*

The Jay Creek Trail (see photograph in Appendix E) is accessed from a junction along the South Butte Trail. From the junction, it goes south and eventually follows the Jay Creek drainage and terminates at the Susitna River. It is approximately 18 miles long.

### *Parallel Trail*

True to its name, this trail runs parallel to the Denali Highway at its southern edge. The trail connects to the Hatchet Lake Trail to the west, and with several trails around Clearwater Creek to the east. The trail runs about 16 miles.

### *Raptor Trail-Watana Creek*

This trail begins at a junction along the South Butte Trail and follows Watana Creek, ending in a small network of hunting trails.

### *Round Top Trail*

The Round Top Trail leads south from the Denali Highway over the land formation known as “Round Top” before meeting with the Maclaren River. This trail is approximately 16 miles long and is managed by the BLM.

### *Seattle Creek Trail*

This trail leads from the Denali Highway at milepost 111.3. Seattle Creek has good fishing for grayling and Dolly Varden. This trail is approximately 24 miles long and is managed by the BLM.

### *Sevenmile Lake Trail*

The trail heads north from milepost 7.3 of the Denali Highway to Sevenmile Lake, about 0.5 mile. This trail is designated as an RS 2477 right-of-way under RST 1814.

### *South Butte Trail/Susitna South Trail*

The South Butte Trail begins at milepost 80.7 of the Denali Highway and goes south until it becomes the Susitna South Trail and ends overlooking the Susitna River, approximately 25 miles.

### *South Fork Butte Creek Trail*

This route travels south from the Denali Highway at milepost 80.7, or can be reached from the Wickersham Creek Trail. It is about 2 miles long.

### *Valdez Creek Trail*

This multi-use trail begins at the end of Valdez Creek mining road heading east toward Clearwater Creek Trail and Clearwater Mountains, approximately 8 miles (MSB 2008). The trail and area are managed by the BLM. The trail is designated as an RS 2477 right-of-way under RST 318.

### *Windy Creek Trail*

This multi-use route starts just east of the Susitna River crossing on the Denali Highway and runs east along the Windy Creek drainage, eventually connecting to the Valdez Creek Trail, approximately 17 miles (MSB 2008). The trail and area are managed by the BLM. The route is designated as an RS 2477 right-of-way under RST 517.

## **Lake Louise and Glenn Highway**

### *Old Man Creek Trail/Goose Lake Trail*

The main trailhead for the Old Man Creek Trail is at milepost 130.5 of the Glenn Highway. The trail is part of the Chickaloon-Knik-Nelchina trail system that extends west to Palmer. The trail goes northwest through the Horn Mountains and crosses the Little Nelchina River and Tyone Creek, and follows Yacko Creek until it becomes the Goose Lake Trail. The Goose Lake Trail goes north, forking once. Both forks end overlooking the Susitna River.

## 4. TABLES

**Table A-1. RS2477 Easements**

Number	Trail Name	Length (mi)	Primary Access
RST 52	Chulitna Trail	3.0	Honolulu Station, AKRR, MP 287
RST 80	Murder Lake North to Ridgeline Trail	2.0	Murder Lake
RST 82	Meiers Lodge-Dickey Lake Trail	40.0	Richardson Highway, MP 170
RST 100	Indian River-Portage Creek Trail	8.0	Chulitna Station, AKRR MP 274
RST 294	Gulkana-Denali Winter Trail	119.22	Denali Highway, MP 94
RST 295	Gulkana-Valdez Creek	105.00	Richardson Highway, Gulkana
RST 318	Paxson-Denali Trail (Valdez Creek)	40.0	Denali Highway, MP 94
RST 331	Talkeetna-Iron Creek Trail	40.68	Town of Talkeetna
RST 377	Stephan-Daneka Lake Trail	2.0	Stephan Lake
RST 427	Chickaloon River Trail	32.9	Glenn Highway, MP 77.7, Chickaloon
RST 469	McWilliams-Gold Creek Trail	36.0	Gold Creek, AKRR MP 263
RST 517	Windy Creek Access Road	16.0	Denali Highway, MP 78
RST 625	Cantwell Small Tracts Road (Lovers' Lane)	1.25	Junction of Parks Highway and Denali Highway
RST 1509	Curry Landing Strip-Lookout Tower	2.81	AKRR, MP 248.3, Curry Station
RST 1522	Lake Louise Trail	7.0	Lake Louise Road, MP 12
RST 1620	Talkeetna River Trail	102.42	Intersection with RST 311
RST 1691	Herning Trail-Question Creek	50.0	Little Susitna River North of Palmer
RST 1694	Iron Creek-North Fork Kashwitna River Trail	25.0	Intersection with Talkeetna-Iron Creek RST 311
RST 1809	Glacier Gap (Lavery) Lake Trail	U	U
RST 1814	Sevenmile Lake Trail	0.5	Denali Highway, MP 7.3

AKRR = Alaska Railroad; MP = Milepost; U=Unknown.

**Table A-2. 17(b) Easements**

Number	Width (ft)	Length (mi)	Region	Quadrant(s)	Allowable Uses	Managing Agency	Status	Primary Access
3a	25	6.27	Ahtna	Healy B-5	Multi-use; vehicles must be less than 3,000 lbs.	BLM, General public	Existing	Parks Highway, MP 195
3c	25	3.75	Ahtna	Healy B-4	Multi-use; vehicles must be less than 3,000 lbs.	BLM, General public	Existing	Denali Highway, MP 131
5h	U	4.63	Ahtna	Healy B-4	Multi-use	AK Div. of Lands, General public	Existing	Parks Highway, MP 206
6b	50	1.11	Ahtna	Healy B-5	Multi-use; trucks/cars prohibited	BLM, General public	Existing	Parks Highway, MP 196
7a	25	2.68	Ahtna	Healy B-4	Multi-use; vehicles must be less than 3,000 lbs	BLM, AK Div. of Lands, General public	Existing	Cantwell
18	50	14.82	CIRI	Talkeetna Mountains D-5, D-6	Multi-use; trucks/cars prohibited	AK Div. of Lands, ADF&G, General public	Existing	Alaska Railroad, Chulitna
22	25	1.88	Ahtna	Healy B-4	Multi-use; vehicles must be less than 3,000 lbs	AK Div. of Lands	Proposed	Denali Highway, MP 127
22e	25	0.99	CIRI	Talkeetna Mountains D-3	Multi-use; vehicles must be less than 3,000 lbs	ADF&G	Proposed	Fog Lakes
23	25	1.91	Ahtna	Healy B-4	Multi-use; vehicles must be less than 3,000 lbs	AK Div. of Lands	Proposed	Denali Highway, MP 122.4
26	50	2.81	CIRI	Talkeetna Mountains C-4	Multi-use; trucks/cars prohibited	ADF&G, General public	Existing	Stephan Lake
28	25	1.73	CIRI	Talkeetna Mountains C-4	Multi-use; vehicles must be less than 3,000 lbs	ADF&G	Existing	Stephan Lake
38	25	12.01	CIRI	Talkeetna Mountains C-4, C-5	Multi-use; vehicles must be less than 3,000 lbs	AK Div. of Lands, ADF&G	Proposed extension of Existing	Talkeetna River, North and south of Prairie Creek
40	25	3.76	CIRI	Talkeetna Mountains C-5	Multi-use; vehicles must be less than 3,000 lbs	AK Div. of Lands	Proposed	Talkeetna River at Cache Creek
46	25	2.84	CIRI	Talkeetna Mountains C-4, D-4	Multi-use; vehicles must be less than 3,000 lbs	BLM, AK Div. of Lands	Existing	Stephan Lake
48	50	18.71	CIRI	Talkeetna Mountains D-5, D-6	Multi-use; trucks/cars prohibited	General public	Existing	Alaska Railroad, Gold Creek

Number	Width (ft)	Length (mi)	Region	Quadrant(s)	Allowable Uses	Managing Agency	Status	Primary Access
72	25	1.00	CIRI	Talkeetna Mountains D-4	Multi-use; vehicles must be less than 3,000 lbs	BLM, ADF&G	Proposed	Susitna River, northeast of Stephan Lake
87	25	8.27	Ahtna	Healy B-4	Multi-use; vehicles must be less than 3,000 lbs	AK Div. of Lands	Existing	Parks Highway, MP 195
100	60	0.11	Ahtna	Healy A-5	Multi-use; trucks/cars allowed	BLM-State	Existing	Parks Highway, MP 192

CIRI = Cook Inlet Region Inc.; U=Unknown.

**Table A-3. Groomed (Formal) Winter Trails**

Trail Name	Length (Miles)	Allowable Uses	Primary Access	Destination (if Known)	Managing Agency
<b>Talkeetna and Southern Parks Highway</b>					
Amber Lake Trail	0.5	Multi-use	Parks Highway, MP 105	Rabideux Trail	ADNR
Bartlett Trail	1.8	Non-motorized use	Comsat Road, MP 12 of Talkeetna Spur	Bartlett Hills	MSB
Chase Trail	5	Multi-use	Talkeetna	Chase Community	MSB
Chulitna Bluff Trail	18.9	Multi-use	Parks Highway, MP 121.5	Chulitna River	ADNR
East-West Express Trail	11.2	Multi-use	Parks Highway, MP 121.5	Petersville area	ADNR
Fish Lake Trail	2.5	Multi-use	Talkeetna Spur, MP 9	Fish Lake	MSB
Rabideux Trail	6.8	Multi-use	Parks Highway, MP 105	Rabideux Creek drainage, Trapper Creek-Petersville area	ADNR
Ski Hill Trail	1.5	Skiing	Talkeetna Spur, MP 12	Ski Hill	MSB
South Fork Loop Trail	11.1	Multi-use	Yoder Road, MP 3.1 of Talkeetna Spur	South Fork Montana Creek Trail	ADNR
South Fork Montana Creek Trail	19.3	Multi-use	Yoder Road, MP 3.1 of Talkeetna Spur	Lake near headwaters of South Fork of Montana Creek	ADNR
Talkeetna Lakes Trail	4.6	Non-motorized use	Comsat Road, MP 12 of Talkeetna Spur	X Lake, Z Lake	MSB
Twister Creek Trail	2.7	Multi-use	South of Talkeetna Airport	Twister Creek	MSB
Upper South Fork Montana Creek Trail	7.1	Multi-use	Yoder Road, MP 3.1 of Talkeetna Spur	Upper South Fork Montana Creek drainage	ADNR
2013 Oosik Classic Race Route	31.1	Skiing	Talkeetna	Talkeetna	N/A
2013 Trio Fat Bike Race route	60	Biking	Talkeetna	Talkeetna	N/A
<b>Denali State Park</b>					
North Loop Trail (Tokositna Flats)	11.0	Multi-use	Parks Highway, MP 131	Tokositna River Trail	ADNR
<b>Denali Highway</b>					
Denali Highway Trail	134.2	Multi-use	Parks Highway, MP 210	Cantwell to Paxson	ADNR
Maclaren River Road Trail	8	Multi-use	Denali Highway, MP 43.3	Maclaren River	ADNR
Sevenmile Lake Trail	7.3	Multi-use	Denali Highway, MP 39.7	Sevenmile Lake	ADNR
<b>Lake Louise and Glenn Highway</b>					
Crosswind Lake Trail	12.8	Multi-use	Lake Louise Trail, Crosswind Trail West	Crosswind Lake	ADNR



Trail Name	Length (Miles)	Allowable Uses	Primary Access	Destination (if Known)	Managing Agency
Eureka East Trail	28.3	Multi-use	Lake Louise Road end at MP 19.3	Lowlands west of Lake Louise	ADNR
Eureka West Trail	25.3	Multi-use	Eureka East Trail, Glenn Highway at Eureka	Highlands west of Lake Louise	ADNR
Moore Lake Trail	22.1	Multi-use	Eureka Trails, Winter Lakes Trail	Moore Lake, Susitna Lake	ADNR
Tolsona Trail	26	Multi-use	Lake Louise Road MP 16	Tolsona Lodge	ADNR
Winter Lakes Trail	33.3	Multi-use	Lake Louise Road end at MP 19.3	Lake Louise, Susitna Lake	ADNR

Note: Some trails may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

**Table A-4. Informal Winter Trails**

Route Name	Length (Miles)	Uses	Access Point	Destination (if Known)
<b>Talkeetna and Southern Parks Highway</b>				
Clear Creek Route	25.6	Multi-use	Chase Trail	Talkeetna Mountains
McWilliams-Gold Creek Route (RST 469)	16	Multi-use	Alaska Railroad, MP 263 (Gold Creek)	Talkeetna Mountains, John Creek, Stephan Lake
Nodwell Route	10	Multi-use	Chase Trail	Chase community
Sheep River Route	18.1	Multi-use	Talkeetna River Route	Sheep River, Talkeetna Mountains
Stephan Lake Route (17b 38)	28.2	Multi-use	Stephan Lake	Talkeetna Mountains, Stephan Lake
Talkeetna River Route (RST 1620)	10	Multi-use	Talkeetna	Talkeetna River, Talkeetna Mountains
<b>Denali State Park and Northern Parks Highway</b>				
Indian River Portage Creek Trail (RST 100, 17b 18)	5.7	Multi-use	Chulitna	East from Chulitna to land north of Devils Canyon
East Fork Chulitna Route	8.2	Multi-use	Parks Highway, MP 195	East Fork Chulitna River
Middle Fork Chulitna Route (17b 3a and 87)	23.1	Multi-use	Parks Highway, MP 195	Middle Fork Chulitna River, Caribou Pass
Pass Creek Route	7.1	Multi-use	Parks Highway, MP 170	Chulitna
<b>Denali Highway</b>				
Butte Lake Route	5	Multi-use	Denali Highway, MP 94	Butte Lake
Deadman Lake Route	16.7	Multi-use	Denali Highway, MP 94	Deadman Lake
East Fork Susitna Glacier Route	31.4	Multi-use	Denali Highway, MP 80	Susitna Glacier
Raptor Valley Route	17.9	Multi-use	Denali Highway MP 80	Raptor Valley
Valdez Creek Route (RST 318)	16.2	Multi-use	Denali Highway MP 79	Valdez Creek, Clearwater Mountains
Windy Creek Route (RST 707)	11.1	Multi-use	Denali Highway MP 80	Windy Creek, Clearwater Mountains
<b>Lake Louise</b>				
John Lake Route	19.3	Multi-use	Eureka East Trail; Glenn Highway, MP 133	John Lake Area
Moose Creek Route	46.6	Multi-use	Lake Louise Trail system	SnowTRAC River
Old Man Creek/Goose Lake Trail	56.1	Multi-use	Glenn Highway, MP 130	Chickaloon-Knik-Nelchina trail system
Slide Mountain Route	3.9	Multi-use	Lake Louise Trail system	John Lake area
Tyone Creek Route	28	Multi-use	Lake Louise Trail system	Tyone Creek headwaters

Note: Some trails may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

**Table A-5. Formal Summer Trails**

Trail Name	Miles of Trail	Allowable Uses	Access Location	Access ID <sup>1</sup>	Destination (if Known)	Managing Agency
<b>Talkeetna and Southern Parks Highway</b>						
Chase Trail	5	Multi-use	Talkeetna	A14	Chase Community	MSB
Luthman Trail	3.7	Multi-use	Yoder Road, MP 3.1 on Talkeetna Spur	A22	Montana Falls	MSB
Talkeetna Lakes Trail	4.6	Non-motorized	Comsat Road, MP 12 on Talkeetna Spur	—	X Lake, Z Lake	MSB
Talkeetna Pathway	14	Multi-use	Talkeetna	—	Parks Highway	MSB
Tigger Lake	0.2	Multi-use	Talkeetna Spur, MP 11	A19	Tigger Lake	MSB
Talkeetna River Trail (RST 1620)	1.5	Multi-use	Talkeetna	—	Beaver Lake Road, Ridge Trail	MSB
<b>Denali State Park and Northern Parks Highway</b>						
Byers Lake Trail	4.7	Hiking, biking, skiing	Byers Lake Campground, Parks Highway, MP 147.0	A10	Byers Lake	ADNR
Cascade Trail	2.0	Hiking	Byers Lake Trail	A10	Kesugi Ridge Trail junction	ADNR
Denali View North Trail	0.1	Hiking	Parks Highway, MP 162.7	—	Denali View North	ADNR
Ermine Hill Trail	3.7	Hiking	Parks Highway, MP 156.5	A9	Kesugi Ridge Trail junction	ADNR
Kesugi Ridge Trail	22.3	Hiking	Little Coal Creek Trail, Cascade Trail, Troublesome Creek Trail	A9, A10, A23	Curry, Kesugi Ridges	ADNR
Little Coal Creek Trail	3.2	Hiking	Parks Highway, MP 163.9	A8	Kesugi Ridge Trail junction	ADNR
Lower Troublesome Creek Trail	0.6	Hiking	Parks Highway, MP 137.2	—	Chulitna River	ADNR
Upper Troublesome Creek Trail	10.6	Hiking, skiing	Parks Highway, MP 137.6	A23	Kesugi Ridge	ADNR
<b>Denali Highway</b>						
Alphabet Hills Trail	27	Multi-use	Swede Lake Trail	A76	Alphabet Hills	BLM
Brushkana Creek Trail	3.9	Multi-use	Brushkana Campground	A38	Brushkana Creek	BLM
Clearwater Creek South Trail	11.4	Multi-use	Denali Highway, MP 55.7	A64	Clearwater Creek	BLM
Dickey Lake Trail	7.7	Multi-use	Swede Lake Trail	A76	Dickey Lake	BLM
Glacier Gap to Sevenmile	7.2	Multi-use	Denali Highway, MP 39.7	A95	Sevenmile Lake	ADNR

Trail Name	Miles of Trail	Allowable Uses	Access Location	Access ID <sup>1</sup>	Destination (if Known)	Managing Agency
Lake Trail						
Jack River Trail (17b 3c)	8.1	Multi-use	Denali Highway, MP 131	A28	Jack River Drainage	BLM
Landmark Gap Lake Trail	2.3	Multi-use	Denali Highway, MP 24.7	A73	Landmark Gap Lake	ADNR
Landmark Gap South Trail	8.6	Motorized use	Denali Highway, MP 24.9	A72	Tangle Lakes, Osar Lake	BLM
Maclaren River Road	20.4	Multi-use	Denali Highway, MP 44	A67	Maclaren River	ADNR
Maclaren Summit Trail	3	Multi-use	Denali Highway, MP 37	A70	Maclaren Summit	ADNR
Osar Lake Trail	7.6	Multi-use	Denali Highway, MP 37	A69	Osar Lake	BLM
Rusty Lake Trail	1	Non-motorized	Denali Highway, MP 17.2	A75	Rusty Lake	ADNR
Swede Lake Trail	11.1	Multi-use	Denali Highway, MP 16.2	A76	Middle Fork of Gulkana River	BLM
Tangle Ridge Trail	1	Non-motorized	Tangle Lakes Campground	—	Tangle Ridge	BLM

Note: Some trails may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

<sup>1</sup> Access Identification (ID) numbers reference the access point inventory presented in the Initial Study Report (Section 12.5.5).

**Table A-6. Informal Summer Trails**

Trail Name	Miles of Trail	Access Location	Access ID <sup>1</sup>	Destination (if Known)
<b>Talkeetna and Southern Parks Highway</b>				
Curry Landing Strip South Trail/Curry-Quarry Route	4.1	Curry Landing Strip	A104	Lane Creek, Chunitna Creek
Indian River Portage Creek Trail (RST 100, 17b 18)	7.3	Chulitna	A95	East from Chulitna to land north of Devils Canyon
McWilliams-Gold Creek Route (RST 469)	65.3	Alaska Railroad, MP 263 (Gold Creek)	A103	Talkeetna Mountains, John Creek, Stephan Lake
Nodwell Route	4.1	End of Chase Trail	A92	Chase Community
Old Lake Road Trail	4.5	Comsat Road, MP 12 on Talkeetna Spur	—	Hills east of Talkeetna
Old RCA	1.25	Comsat Road, MP 12 on Talkeetna Spur	—	Old RCA Trail to River and Ridge Trails
Ridge Trail	2.0	Comsat Road, MP 12 on Talkeetna Spur	—	Hills east of Talkeetna
<b>Denali State Park and Northern Parks Highway</b>				
East Fork Chulitna Trail	29.3	Parks Highway, MP 195	—	East Fork Chulitna River
Honolulu Creek Trail	1.9	Parks Highway MP 178	—	Honolulu Creek
Middle Fork Chulitna Route (17b 3a and 87)	18.5	Parks Highway, MP 195	—	Middle Fork Chulitna River, Caribou Pass
Pass Creek Trail (17b 5h)	7	Parks Highway, MP 206	A1	Creek headwaters
<b>Denali Highway</b>				
Big Lake North Trail	6.1	Denali Highway, MP 94.8	A46, A47	Big Lake, Butte Lake
Big Lake South	6.8	Denali Highway, MP 94.8	A46, A47	Big Lake, Butte Lake
Brushkana Campground Trail	0.32	Denali Highway, MP 105.2	A40	—
Butte Creek Trail	18.7	Denali Highway, MP 80.45	A55	Butte Lake, Big Lake
Butte Lake Trail	35.3	Denali Highway, MP 94.8	A46, A47	Butte Lake
Clearwater Creek North Trail	.64	Denali Highway, MP 56	—	—
Clearwater Creek Route	9.1	Denali Highway, MP 60.2	A62	Maclaren River
Corkscrew Creek Trail	1.3	Denali Highway, MP 60.2	A62	Corkscrew Creek
Crazy Notch Trail	1.9	Denali Highway, MP 46	—	—
Edmonds Creek Trail (17b 23)	1.9	Denali Highway, MP 122.4	A31	Edmonds Creek
Grogg Lake Trail	3.9	Valdez Creek Road	A59	Grogg Lake
Hatchet Lake Trail	7.9	Denali Highway, MP 68.2	A60	Susitna River

Trail Name	Miles of Trail	Access Location	Access ID <sup>1</sup>	Destination (if Known)
Hungry Hollow Trail	6.1	Denali Highway, MP 16.2, Richardson Highway 169.5	A76, A77	—
Jay Creek Trail	18	Denali Highway, MP 80.45	A55	Susitna River
Little Gorge Trail	2.3	Denali Highway, MP 83.2	A52	—
Lucky Gulch Trail	3.6	Valdez Creek Road	A59	—
Maclaren River Lodge Trail	0.5	Denali Highway, MP 42.1	—	—
Middle Fork Trail	7.4	Richardson Highway 169.5	A76, A77	Swede Lake Trail
Monohan Flat Trail	1.4	Denali Highway, MP 94.5	A45	—
Nenana Overlook Trail	0.9		—	Nenana Overlook
Octopus Lake Trail	0.6	Denali Highway, MP 10.6	—	Octopus Lake
Old Dump Road Trail	1.3		—	—
Parallel Trail	15.8	Denali Highway, MP 68.2	A60, A61, A63	—
Raptor Trail-Watana Creek	24	Denali Highway, MP 80.45	A55	Butte Creek Drainage
Round Top Trail	16.1		—	Maclaren River
Roosevelt Lake Trail	3.7	Valdez Creek Road	A59	Roosevelt Lake
Seattle Creek Trail	23.8	Denali Highway, MP 112.6	A36, A37	Soule Creek
Sevenmile Lake Trail (RST 1814)	0.5	Denali Highway, MP 7	—	Sevenmile Lake
South Butte / Susitna South Trail	25.0	Denali Highway, MP 80.5	A55	Susitna River
South Fork Butte Creek Trail	2.0	Denali Highway, MP 80.5	A55	—
Susitna River Overlook Trail	.44	Denali Highway, MP 85.8	A51	View of Susitna River
Tangle Lake Trail	0.7	Denali Highway, MP 21.7	—	—
Tangle River Overlook Trail	1.5	Denali Highway, MP 21.7	—	—
Twelve-Mile Creek Trail	17.8	Denali Highway, MP 16.2	A76, A77	Alphabet Hills
Upper Brushkana Creek Trail	4.8	Denali Highway, MP 106.7	A39	—
Valdez Creek Road	11.1	Denali Highway, MP 79.5	A59	Valdez Creek
Valdez Creek Trail	7.8	Denali Highway, MP 79.5	A51	Valdez Creek
Whistle Ridge Route	6.4	Denali Highway, MP 36.8	A69	Whistle Ridge
Wickersham Creek Trail	6.8	Denali Highway, MP 80.45	A55	Butte Creek Drainage

Trail Name	Miles of Trail	Access Location	Access ID <sup>1</sup>	Destination (if Known)
Windy Creek Trail (RST 517)	16.6	Denali Highway, MP 79.8, MP 78.6	A57, A58	Windy Creek, Clearwater Mountains
48 South Route	3.0	Denali Highway, MP 48	—	—
48.8 South Route	9.1	Denali Highway, MP 48.8	A66	—
60 Mile Trail	5.6	Denali Highway, MP 60.2	A61, A62	Maclaren River
80.7 South Route	1.8	Denali Highway, MP 80.7	—	Butte Creek Trail
82 South Route	0.7	Denali Highway, MP 82	—	Butte Creek Trail
87.6 South Route	12.1	Denali Highway, MP 88.1	A50	Wickersham Creek
87.8 South Route	8.3	Denali Highway, MP 88.3	A49	Wickersham Creek
91.7 South Route	2.9	Denali Highway, MP 92.3	A48	—
95.8 South Route	1.1	Denali Highway, MP 95.8	—	—
96.3 South Route	0.7	Denali Highway, MP 96.3	—	—
99 Mile Route	6.1	Denali Highway, MP 99.55	A44	—
100 North Route	4.5	Denali Highway, MP 100	A43	Monahan Flats
100 South	3.3	Denali Highway, MP 100.2	A42	—
102.5 South Route	1.0	Denali Highway, MP 102.5	—	—
103.6 South Route	4.2	Denali Highway, MP 104.4	A41	Long Peak
108.5 South Route	1.25	Denali Highway, MP 108.5	—	—
109 North Route	3.4	Denali Highway, MP 109	—	—
109 South Route	0.7	Denali Highway, MP 109	—	—
112 Mile Route	0.3	Denali Highway, MP 112	—	—
113.7 South Route	2.3	Denali Highway, MP 115.6	A34, A35	—
129.3 Trail	0.4	Denali Highway, MP 129.4	A71	Whistle Ridge
<b>Lake Louise and Glenn Highway</b>				
Old Man Creek Trail/Goose Lake Trail	56.1	Richardson Highway, MP 130	A84	Susitna River

<sup>1</sup> Access Identification (ID) numbers reference the access point inventory presented in the Initial Study Report (Section 12.5.5).

Note: Some trails may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

## 5. REFERENCES

- Alaska Department of Natural Resources (ADNR). 2013. ANSCA 17(b) Easements Information. Accessed November 5, 2013. <http://dnr.alaska.gov/mlw/trails/17b/index.cfm>.
- Matanuska-Susitna Borough (MSB). 2008. Matanuska-Susitna Borough Recreational Trails Plan. Adopted March 2000, Updated August 2008. Matanuska-Susitna Borough Planning and Land Use Department, Palmer.



**Susitna-Watana Hydroelectric Project  
(FERC No. 14241)**

**Recreation Resources Study  
Study Plan Section 12.5**

**Technical Memorandum - 2014 Year-End Report  
Trails Assessment and Classification**

**Appendix B – Winter Trails**

Prepared for

Alaska Energy Authority



Prepared by

AECOM Inc.

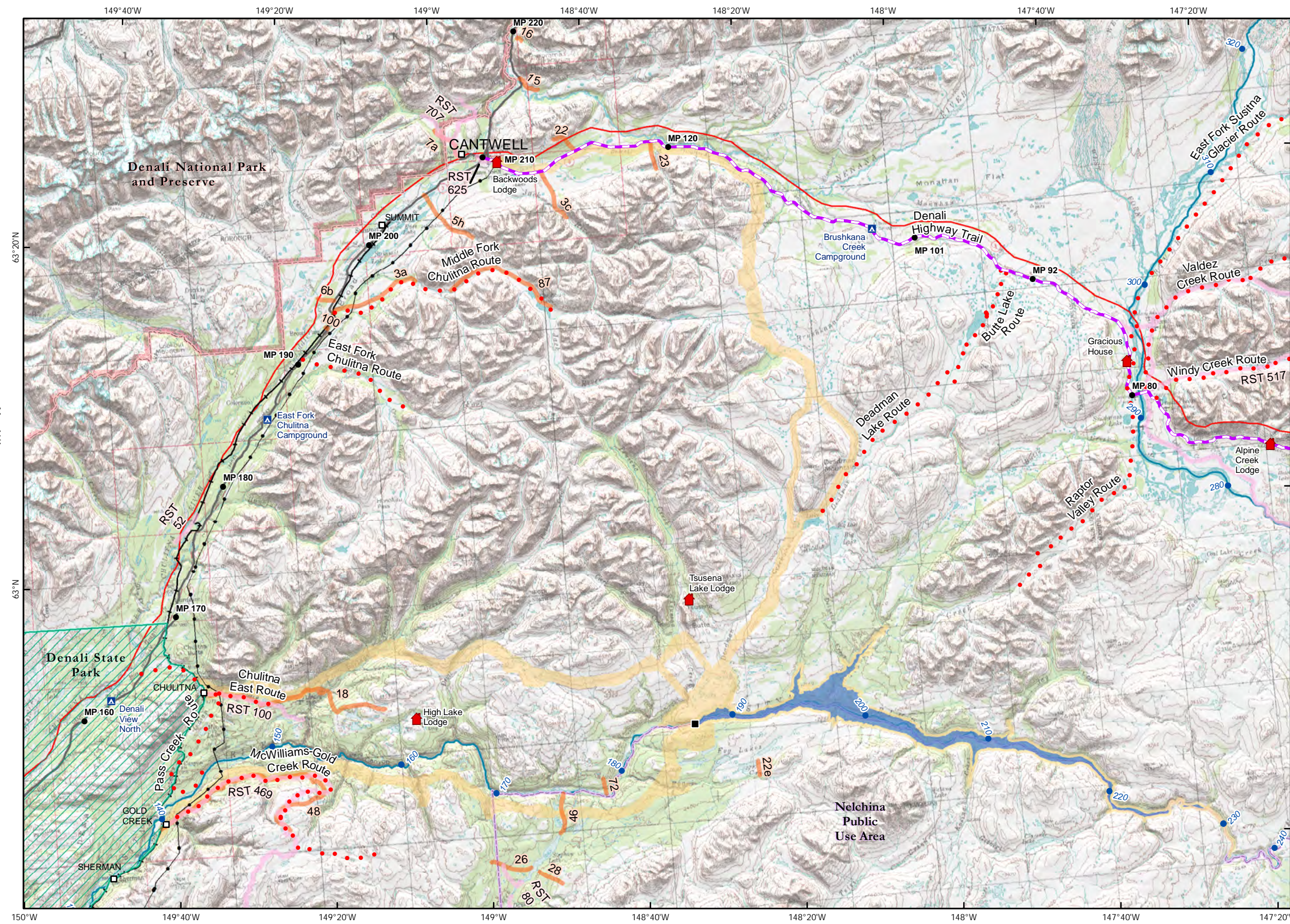
October 2015



Map N/A

Map N/A

Map N/A



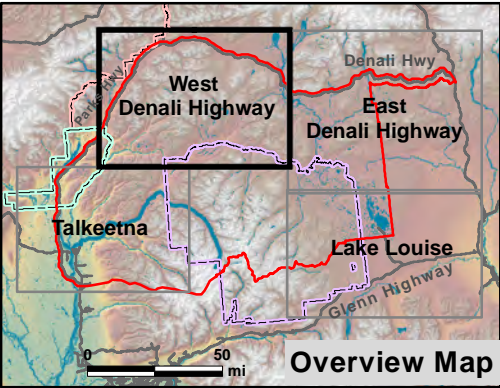
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| ● Road Milepost                 | — Alaska Railroad                      |
| ● Project River Miles           | — Roads                                |
| ■ Lodge                         | — Existing Intertie                    |
| ■ Campground                    | — Proposed Watana Reservoir            |
| ■ Proposed Watana Dam Site      | — Proposed Project Area                |
| — 2013 Oosik Classic Race Route | — Denali State Park                    |
| — 2013 Trio Fat Bike Race       | — Denali National Park & Preserve      |
| — Winter Trail                  | — Nelchina Public Use Area             |
| ● Route                         | — Tangle Lakes Archaeological District |
| — RS 2477                       | — Recreation Use Study Area            |
| — 17b Easements                 |  |
| — Winter Controlled Use Area    |  |

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

## West Denali Highway



Projection: Alaska Albers NAD 1983  
Date Created: 1/30/2014  
Map Author: URS Alaska, Courtney Smith  
File: URS\_ISR\_REC\_12.5\_Appendix\_C\_Pg1-2.mxd

Map Talkeetna SW

Map Talkeetna S

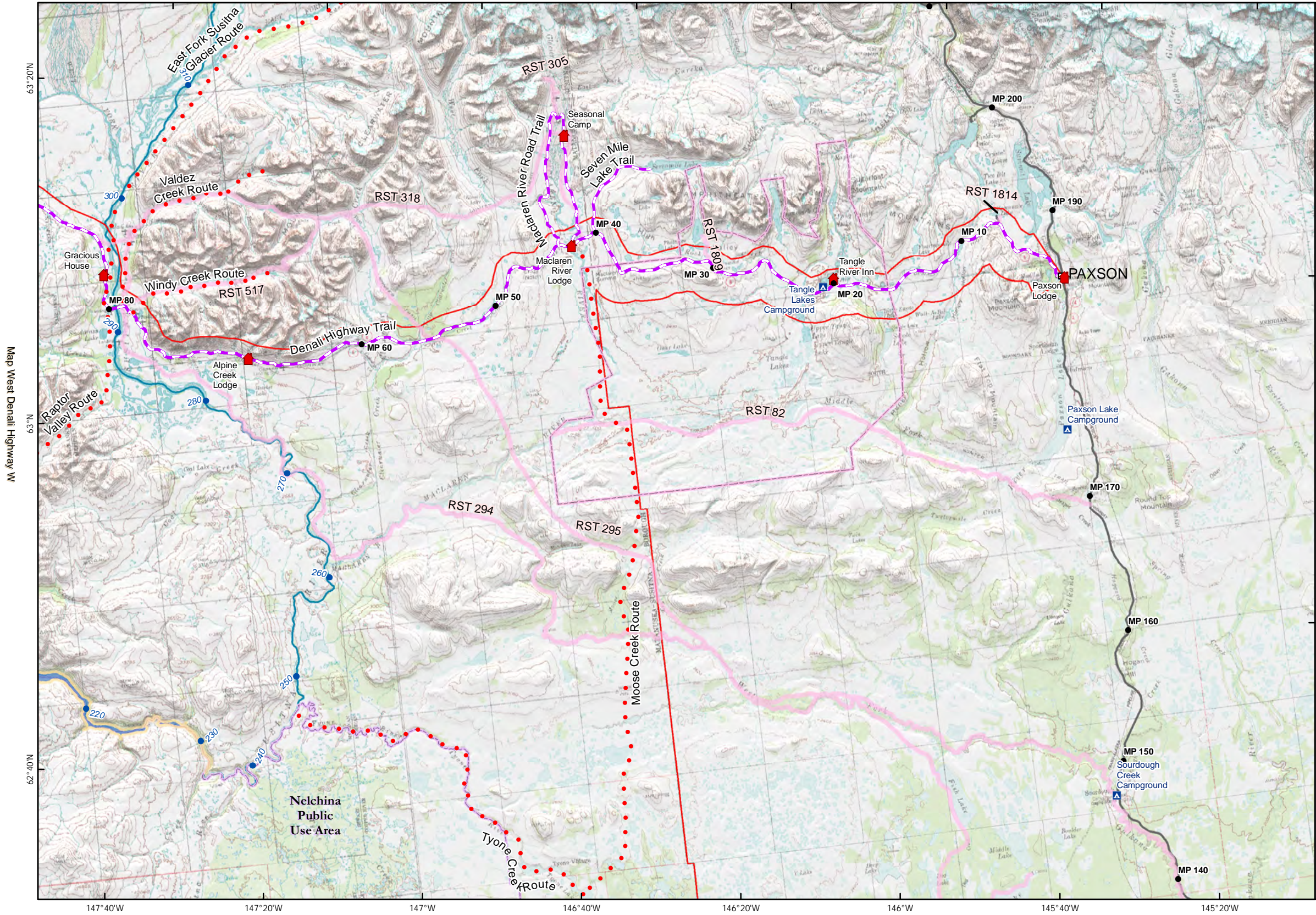
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Map N/A



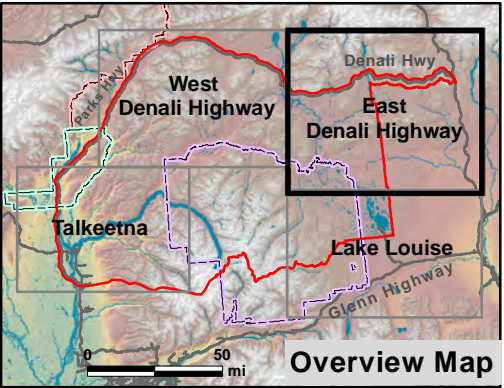
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- Project River Miles
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- 🏕 Campground
- Proposed Watana Dam Site
- 🏞 2013 Oosik Classic Race Route
- 🏞 2013 Trio Fat Bike Race
- 🏞 Winter Trail
- 🔴 Route
- 🔴 RS 2477
- 🔴 17b Easements
- 🌿 Winter Controlled Use Area
- Alaska Railroad
- Roads
- 📏 Existing Intertie
- 🌊 Proposed Watana Reservoir
- 🏞 Proposed Project Area
- 🌿 Denali State Park
- 🌿 Denali National Park & Preserve
- 🌿 Nelchina Public Use Area
- 🌿 Tangle Lakes Archaeological District
- 🌿 Recreation Use Study Area

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

### East Denali Highway



Projection: Alaska Albers NAD 1983  
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Map Author: URS Alaska, Courtney Smith  
File: URS\_ISR\_REC\_12.5\_Appendix\_C\_Pg1-2.mxd

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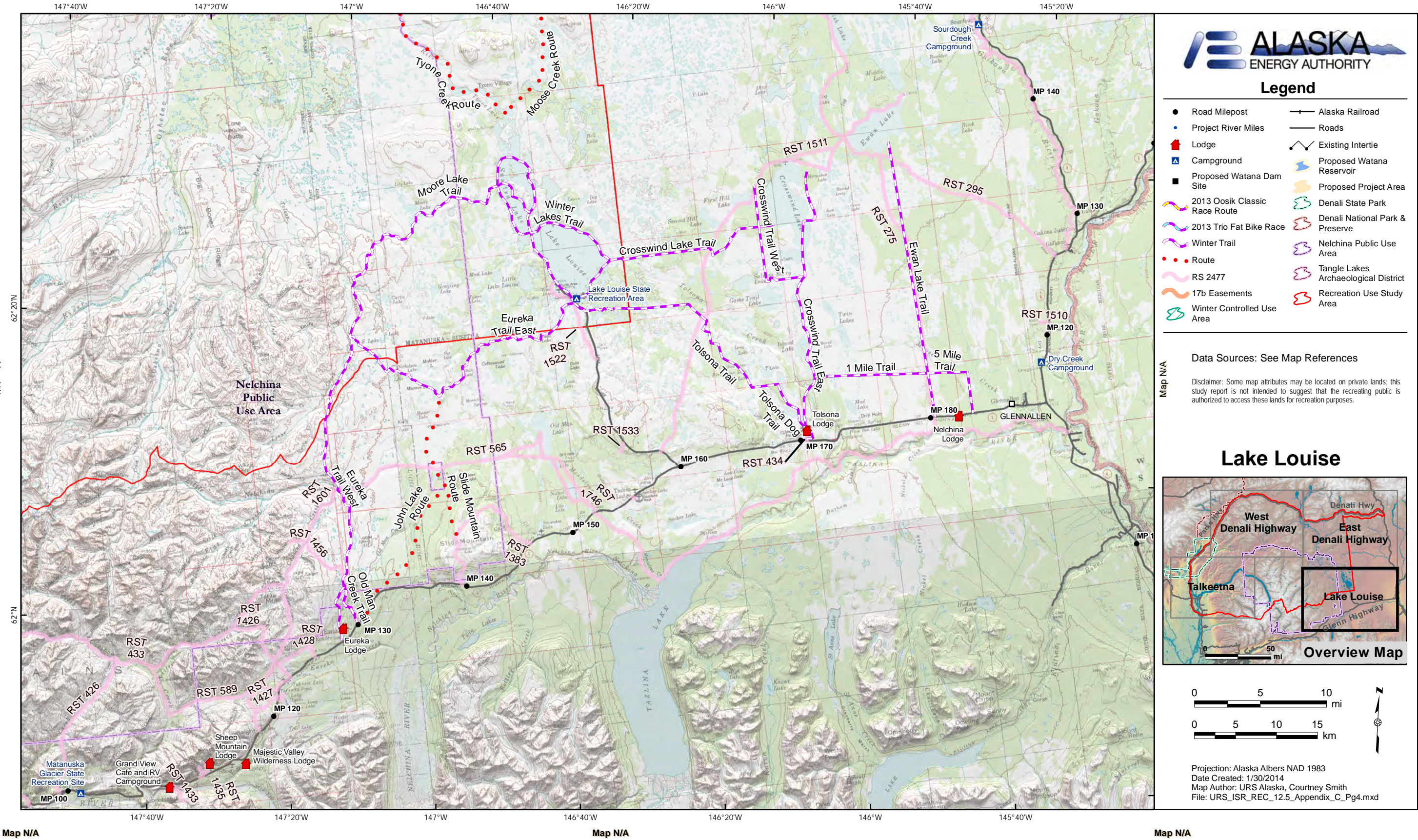
Map Lake Louise S

Map N/A











**Susitna-Watana Hydroelectric Project  
(FERC No. 14241)**

**Recreation Resources Study  
Study Plan Section 12.5**

**Technical Memorandum - 2014 Year-End Report  
Trails Assessment and Classification**

**Appendix C - Summer Trails**

Prepared for

Alaska Energy Authority

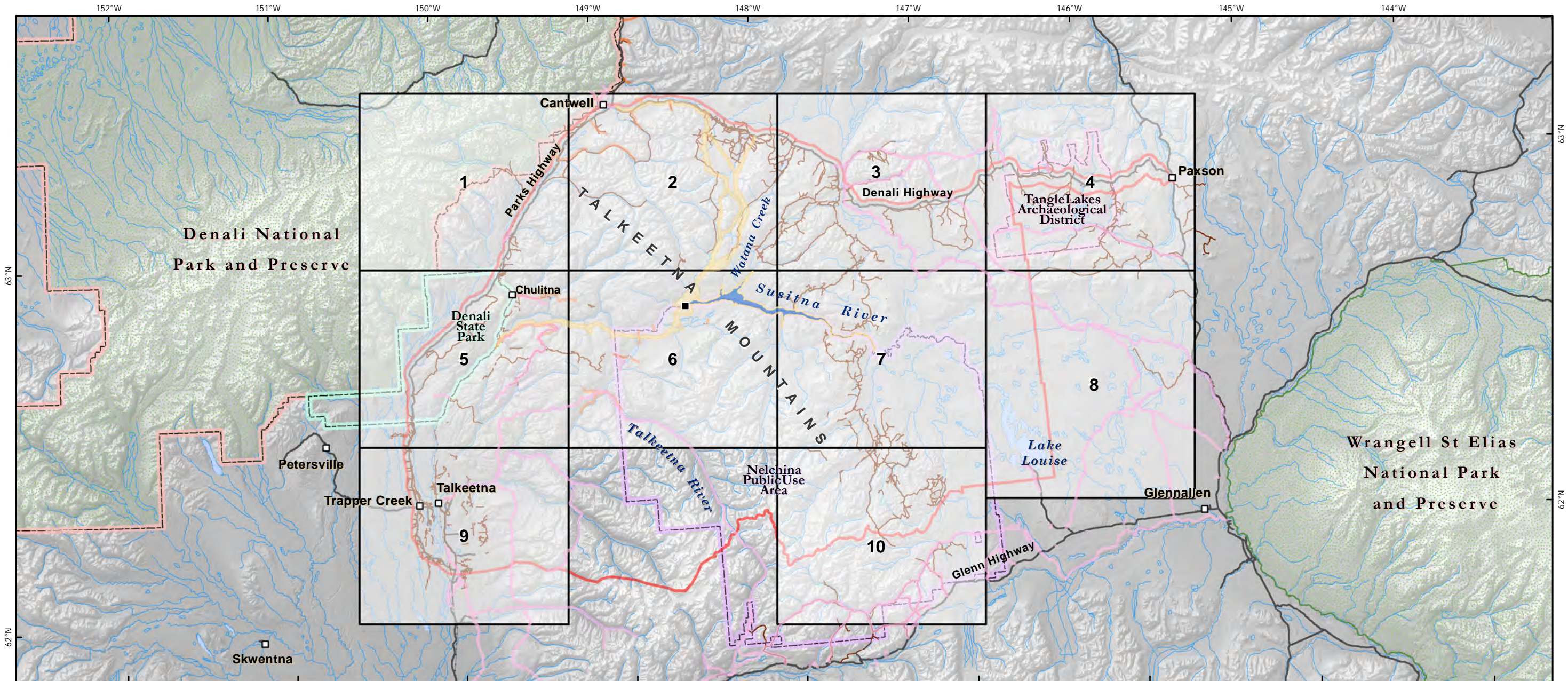


Prepared by

AECOM Inc.

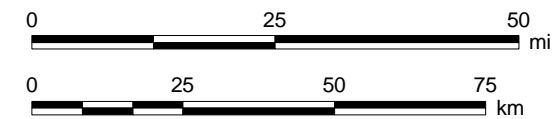
October 2015





## Legend

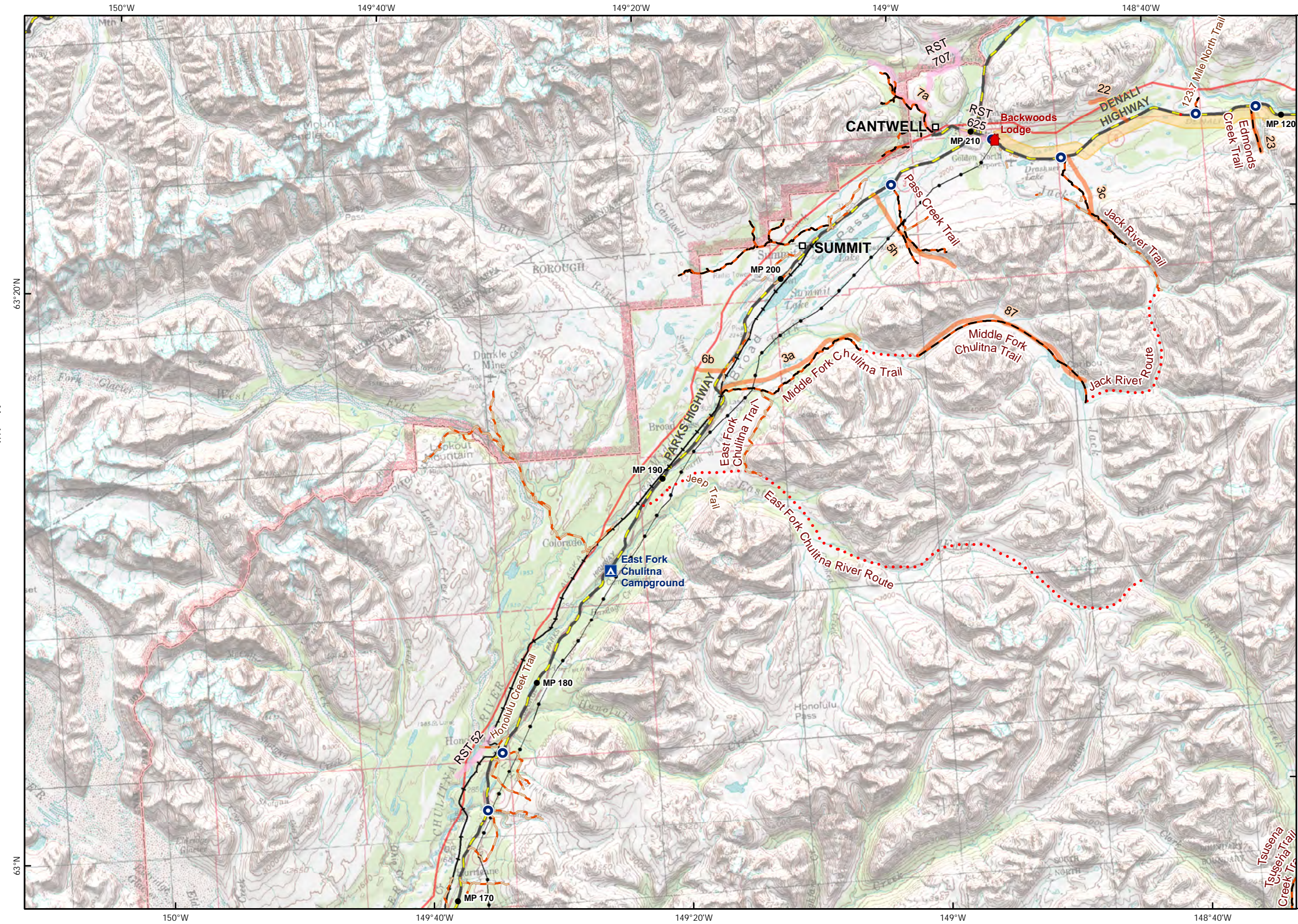
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| Summer Trails Map Index    | Rivers/Streams | Proposed Watana Reservoir  | Denali National Park & Preserve      |
| Summer Trails              | Major Road     | Proposed Project Area      | Nelchina Public Use Area             |
| RS 2477                    | Railroad       | National Park and Preserve | Tangle Lakes Archaeological District |



Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Overview.mxd  
Data Sources: See Map References





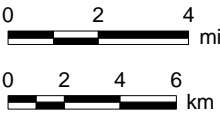
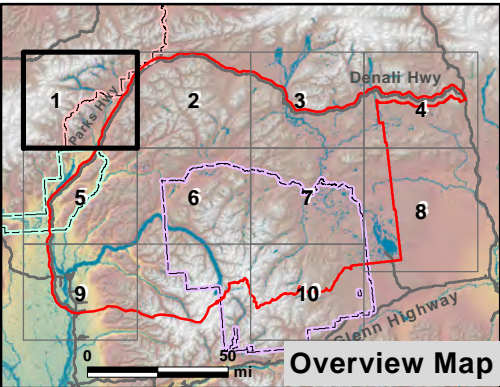
Legend

- Project River Miles
- Road Milepost
- Lodge
- Trailhead
- Campground
- Proposed Watana Dam Site
- Existing Intertie
- Alaska Railroad
- Roads
- Summer Trail (<= 1:24,000)
- Summer Trail (> 1:24,000)
- Summer Route
- RS 2477
- 17b Easements
- Proposed Watana Reservoir
- Proposed Project Area
- Denali State Park
- Denali National Park & Preserve
- Nelchina Public Use Area
- Tangle Lakes Archaeological District
- Delta National Wild Scenic and Recreational River
- Gulkana National Wild River
- Recreation Use Study Area

Data Sources: See Map References

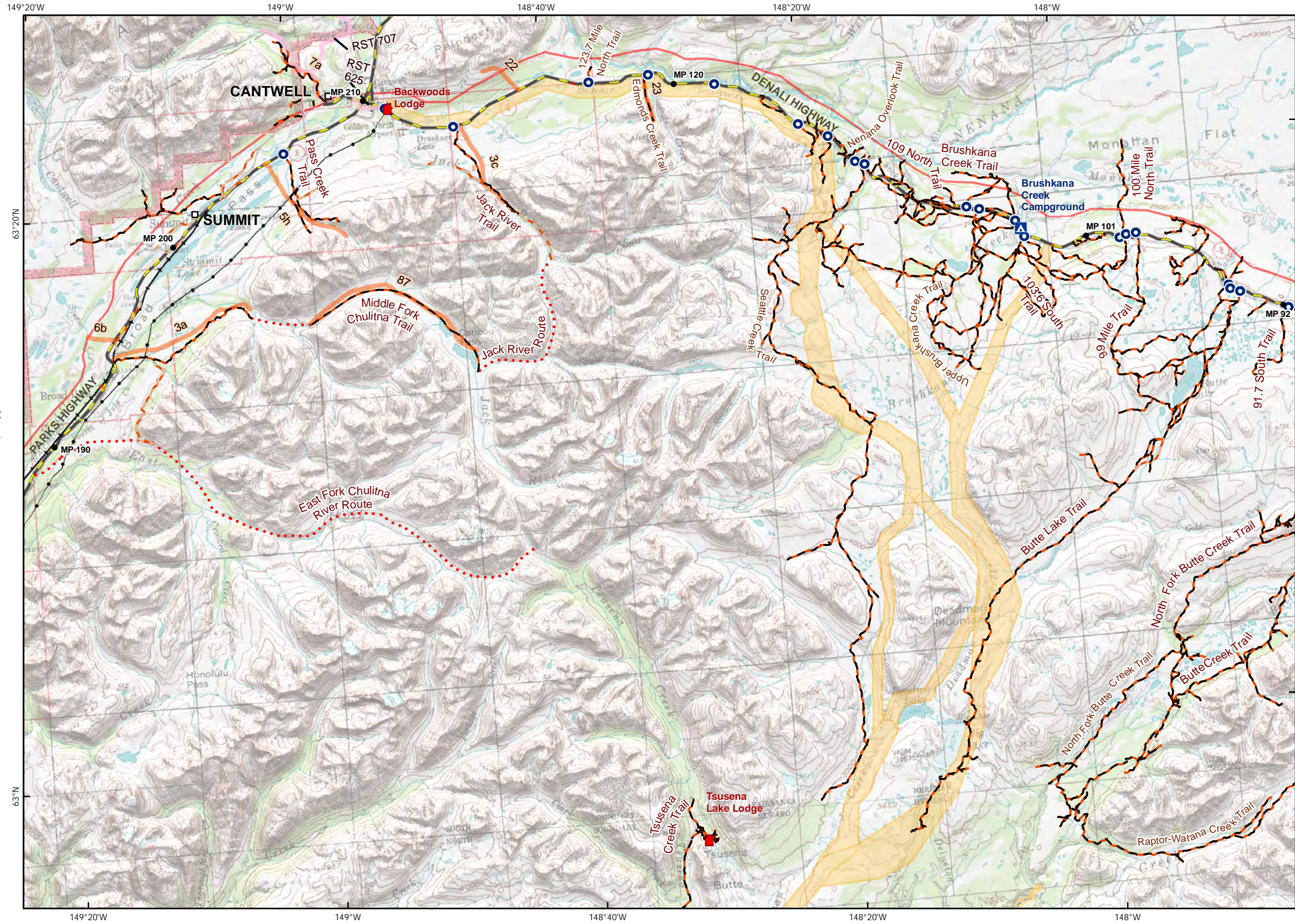
Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Map 1



Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg1.mxd





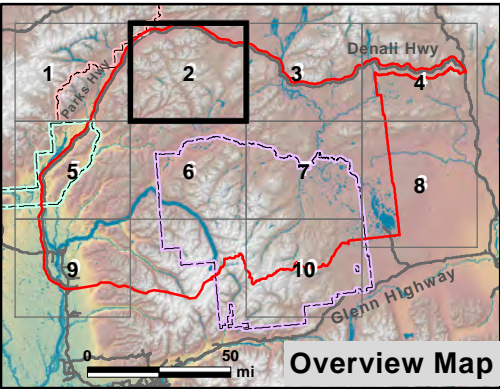
Legend

- Road Milepost
- Project River Miles
- Lodge
- Trailhead
- ▲ Campground
- Proposed Watana Dam Site
- Existing Intertie
- Alaska Railroad
- Roads
- Summer Trail (<= 1:24,000)
- Summer Trail (> 1:24,000)
- ... Summer Route
- RS 2477
- 17b Easements
- Proposed Watana Reservoir
- Proposed Project Area
- Denali State Park
- Denali National Park & Preserve
- Nelchina Public Use Area
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- Delta National Wild Scenic and Recreational River
- Gulkana National Wild River
- Recreation Use Study Area

Data Sources: See Map References

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Map 2



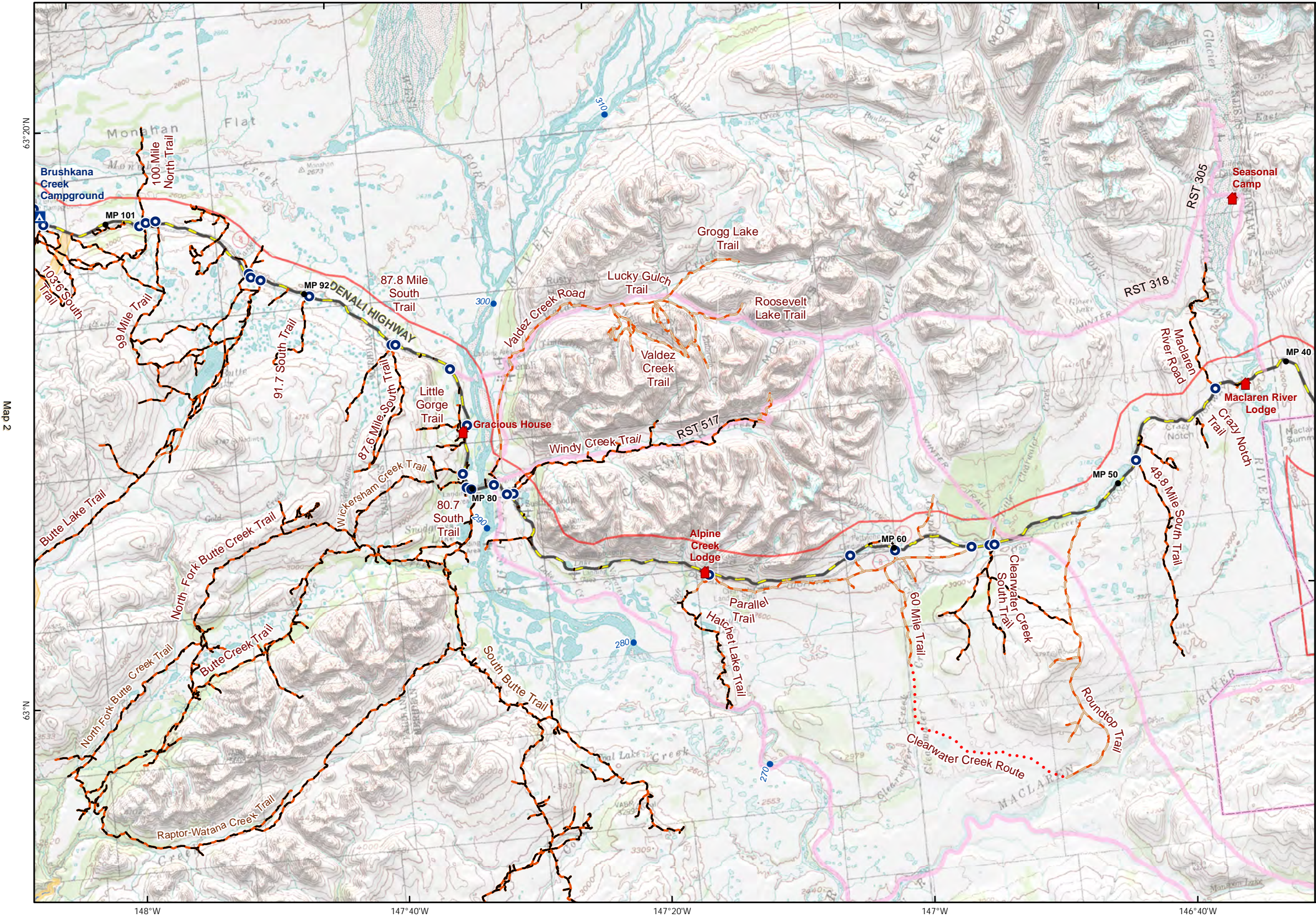
Overview Map

0 2 4 mi

0 2 4 6 km

Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg2-8\_10.mxd





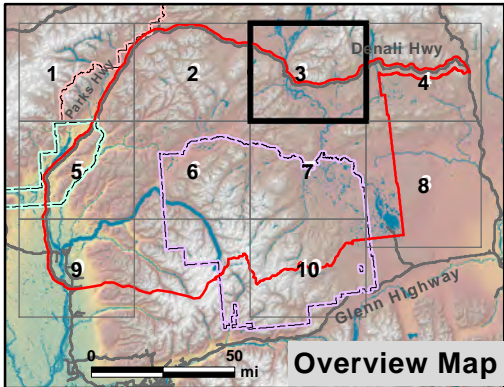
Legend

- Road Milepost
- Project River Miles
- 🏠 Lodge
- 📍 Trailhead
- 🏕 Campground
- Proposed Watana Dam Site
- 🔄 Existing Intertie
- 🚂 Alaska Railroad
- 🛣 Roads
- 👤 Summer Trail (<= 1:24,000)
- 👤 Summer Trail (> 1:24,000)
- 👤 Summer Route
- 👤 RS 2477
- 👤 17b Easements
- 🌊 Proposed Watana Reservoir
- 👤 Proposed Project Area
- 🌿 Denali State Park
- 🌿 Denali National Park & Preserve
- 🌿 Nelchina Public Use Area
- 🌿 Tangle Lakes Archaeological District
- 🌿 Delta National Wild Scenic and Recreational River
- 🌿 Gulkana National Wild River
- 🌿 Recreation Use Study Area

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Map 3

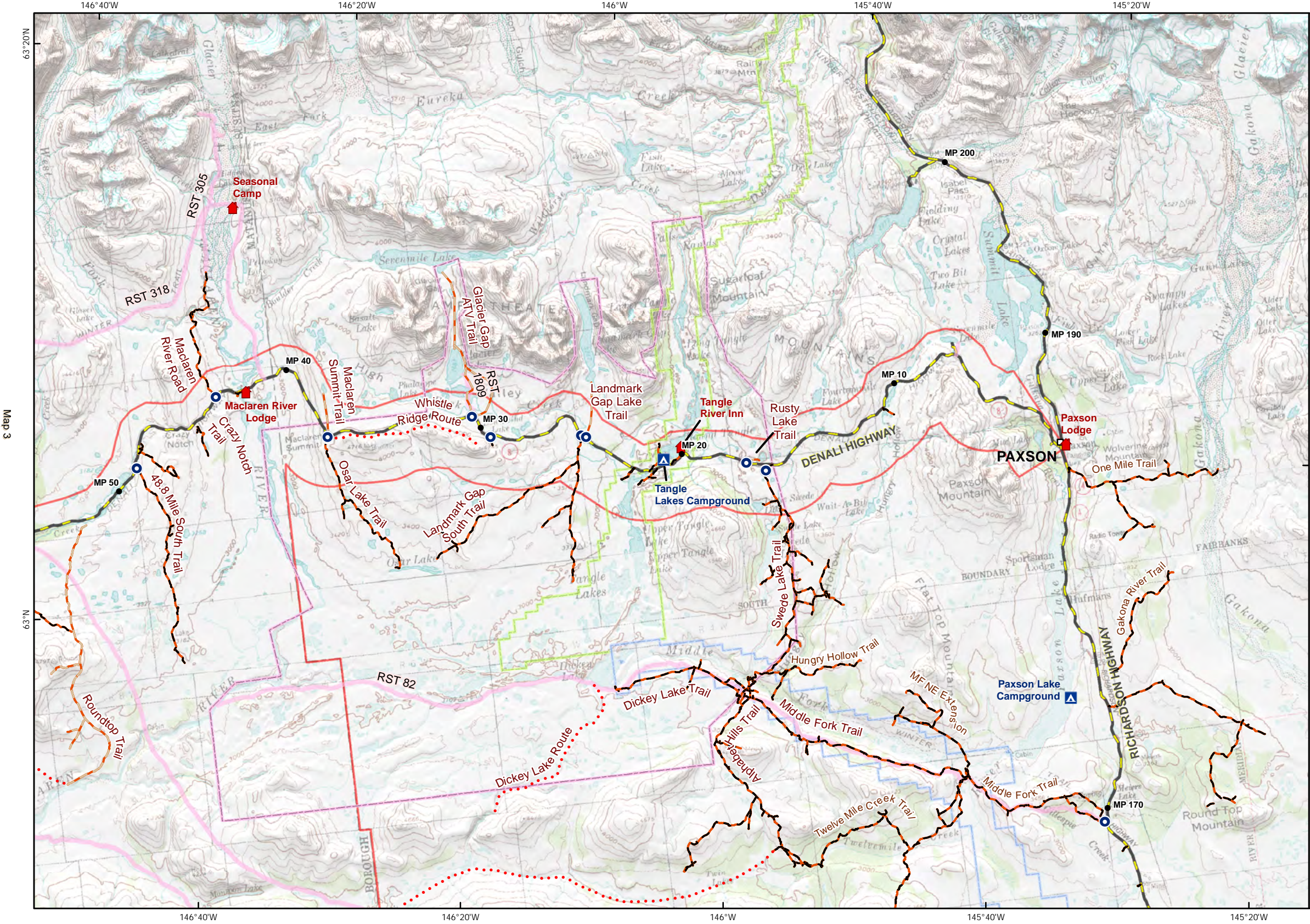


0 2 4 mi

0 2 4 6 km

Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg2-8\_10.mxd





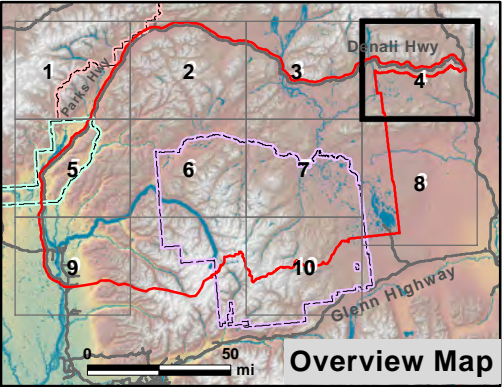
Legend

- Road Milepost
- Project River Miles
- Lodge
- Trailhead
- ▲ Campground
- Proposed Watana Dam Site
- Existing Intertie
- Alaska Railroad
- Roads
- Summer Trail (<= 1:24,000)
- Summer Trail (> 1:24,000)
- Summer Route
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- Proposed Project Area
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- Gulkana National Wild River
- Recreation Use Study Area

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Map 4

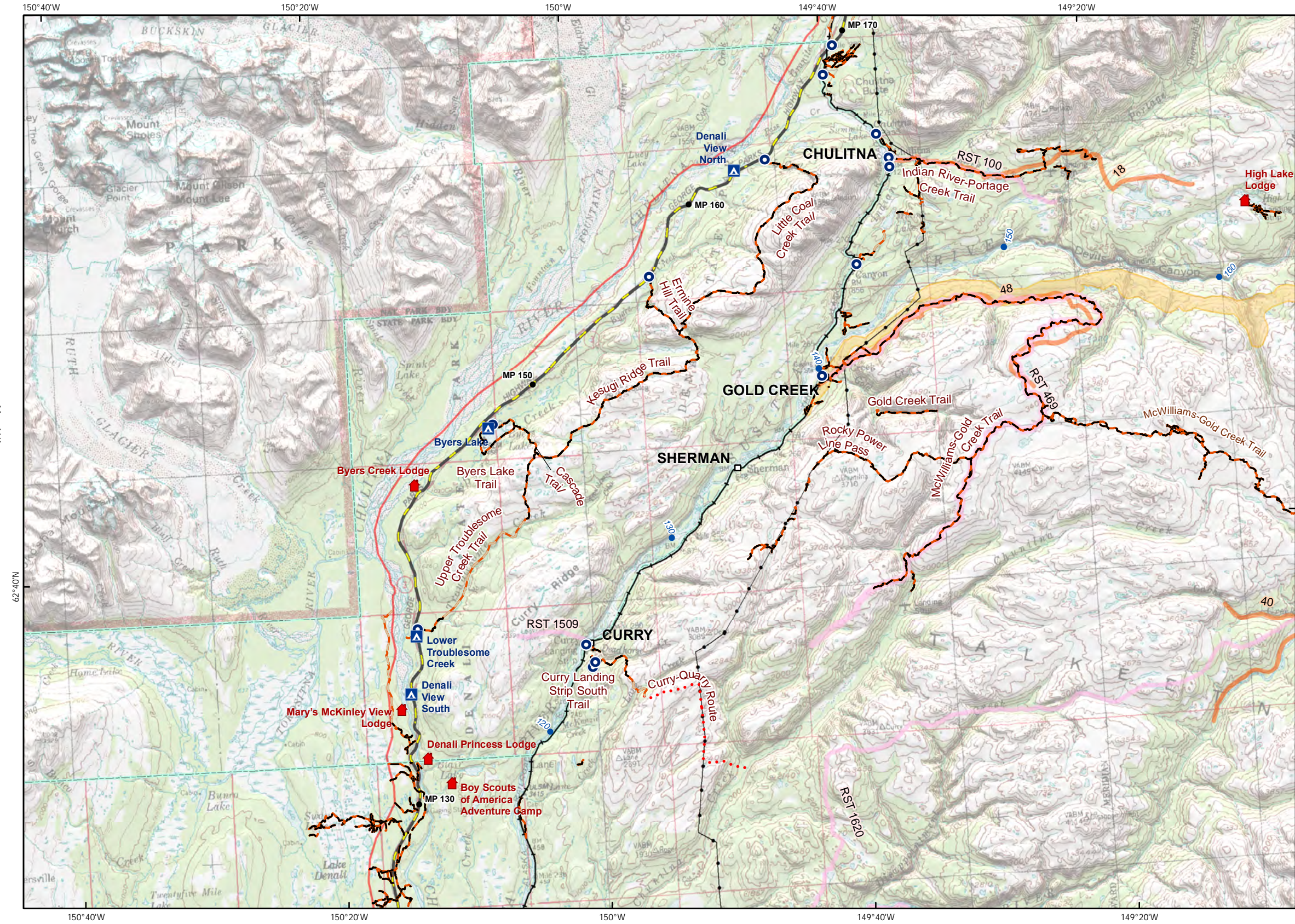


0 2 4 mi

0 2 4 6 km

Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg2-8\_10.mxd





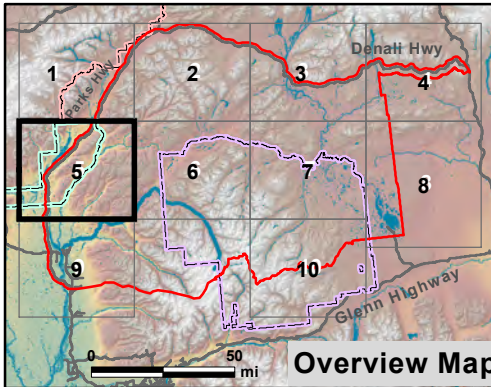
Legend

- Road Milepost
- Project River Miles
- Lodge
- Trailhead
- Campground
- Proposed Watana Dam Site
- Existing Intertie
- Alaska Railroad
- Roads
- Summer Trail (<= 1:24,000)
- Summer Trail (> 1:24,000)
- Summer Route
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- Delta National Wild Scenic and Recreational River
- Gulkana National Wild River
- Recreation Use Study Area

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Map 5



0 2 4 mi

0 2 4 6 km

Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg2-8\_10.mxd

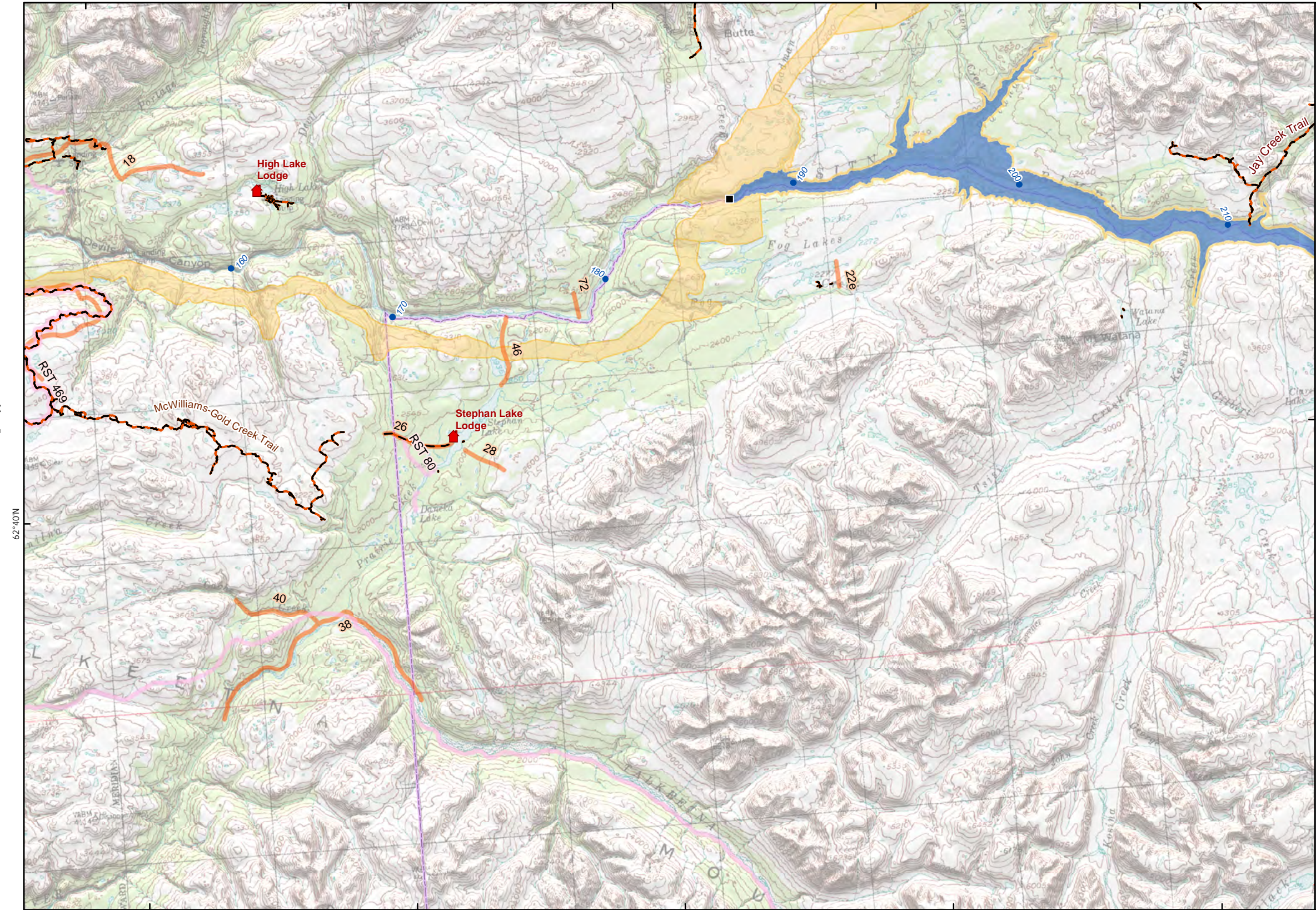


Map 1

Map 2

Map 3

Map 5



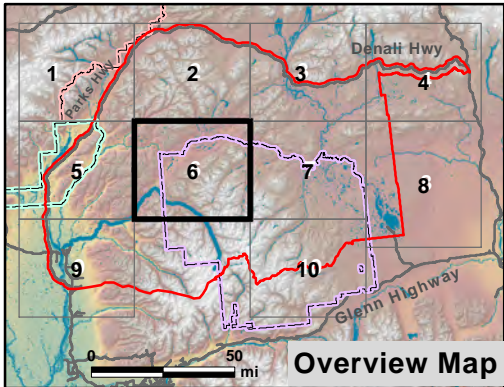
Legend

- Road Milepost
- Project River Miles
- Lodge
- Trailhead
- ▲ Campground
- Proposed Watana Dam Site
- Existing Intertie
- Alaska Railroad
- Roads
- Summer Trail (<= 1:24,000)
- Summer Trail (> 1:24,000)
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- Gulkana National Wild River
- Recreation Use Study Area

Data Sources: See Map References

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Map 6



0 2 4 mi

0 2 4 6 km

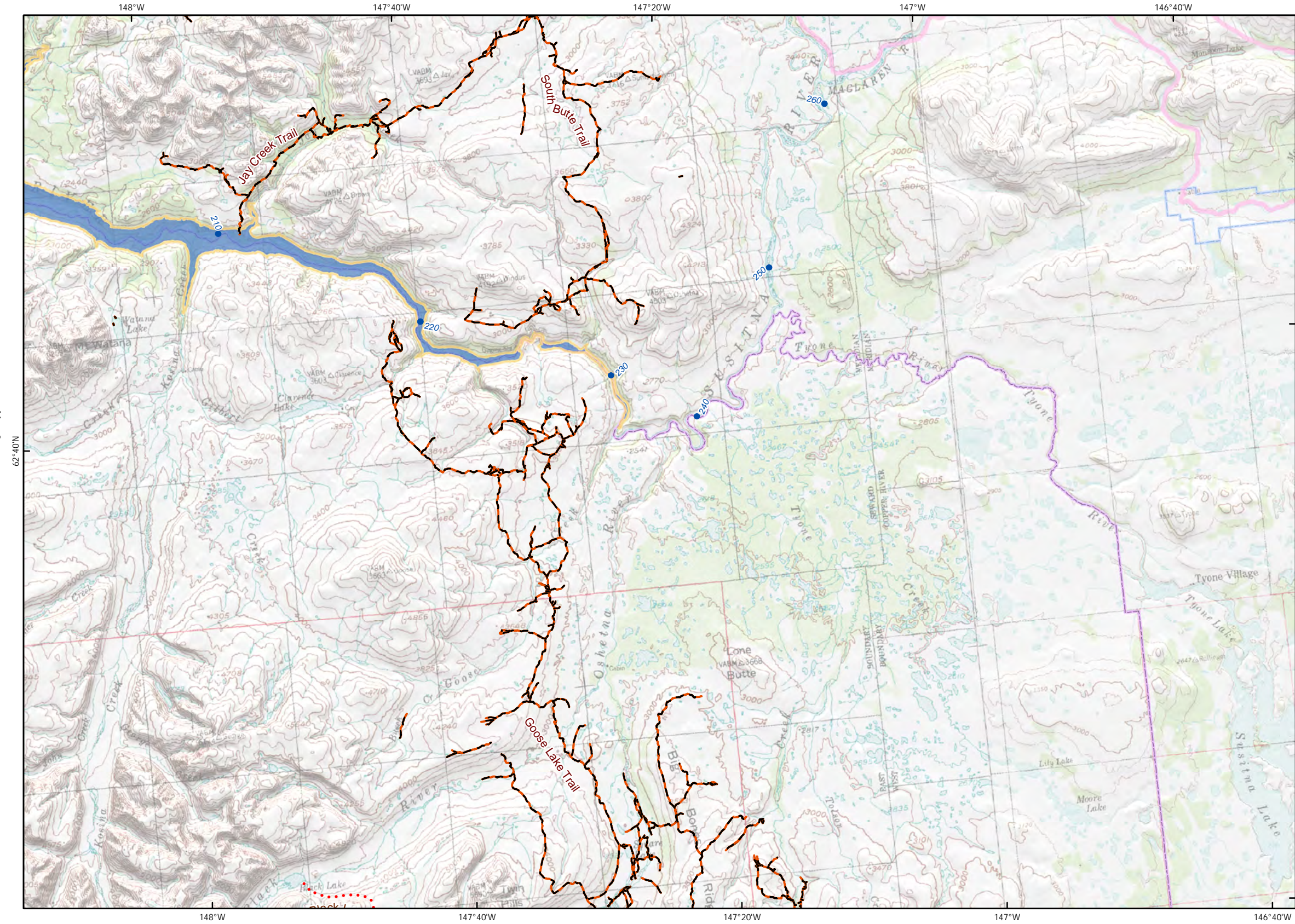
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Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg2-8\_10.mxd

Map 9

Map N/A

Map 10



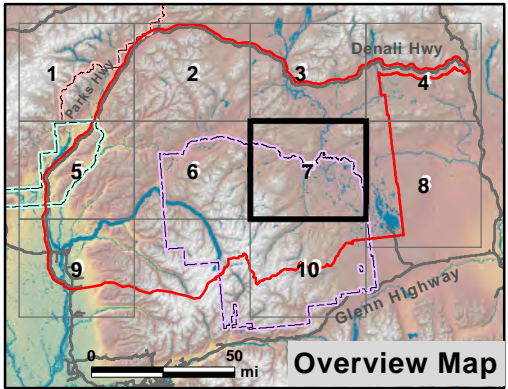


Legend

- Road Milepost
- Project River Miles
- Lodge
- Trailhead
- ▲ Campground
- Proposed Watana Dam Site
- Existing Intertie
- Alaska Railroad
- Roads
- Summer Trail (<= 1:24,000)
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- Recreation Use Study Area

Data Sources: See Map References  
Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Map 7



0 2 4 mi

0 2 4 6 km

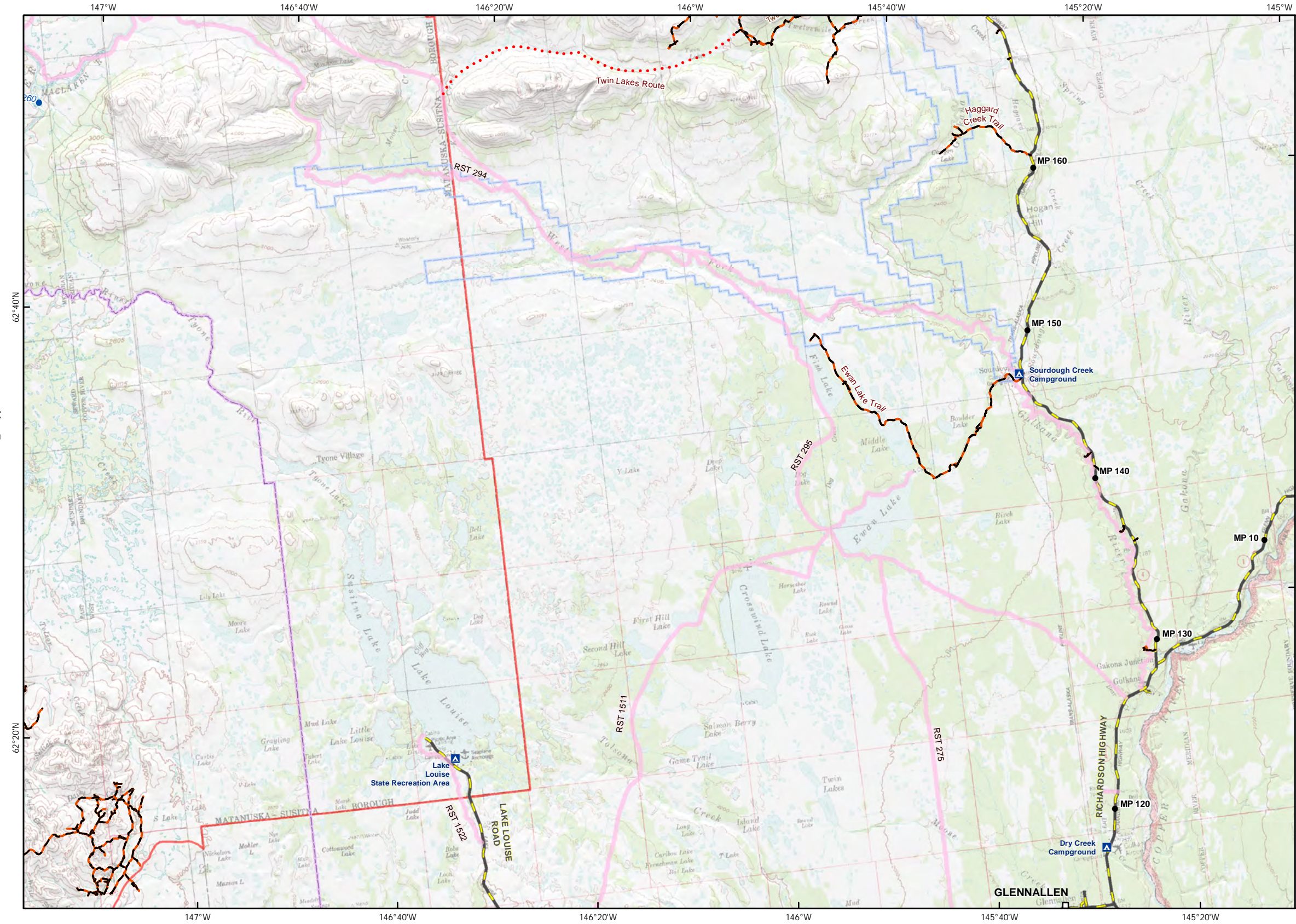
Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg2-8\_10.mxd



Map 3

Map 4

Map N/A



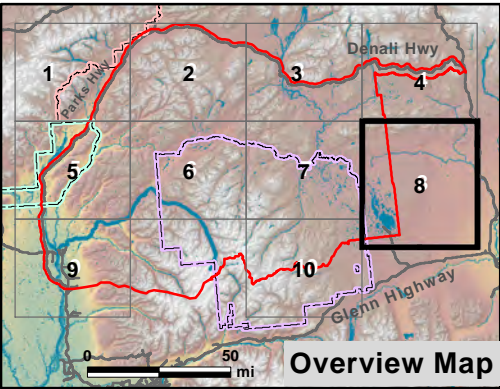
Legend

- Road Milepost
- Project River Miles
- Lodge
- Trailhead
- ▲ Campground
- Proposed Watana Dam Site
- Existing Intertie
- Alaska Railroad
- Roads
- Summer Trail (<= 1:24,000)
- Summer Trail (> 1:24,000)
- Summer Route
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- Denali National Park & Preserve
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- Tangle Lakes Archaeological District
- Delta National Wild Scenic and Recreational River
- Gulkana National Wild River
- Recreation Use Study Area

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Map 8



Overview Map

0 2 4 mi

0 2 4 6 km

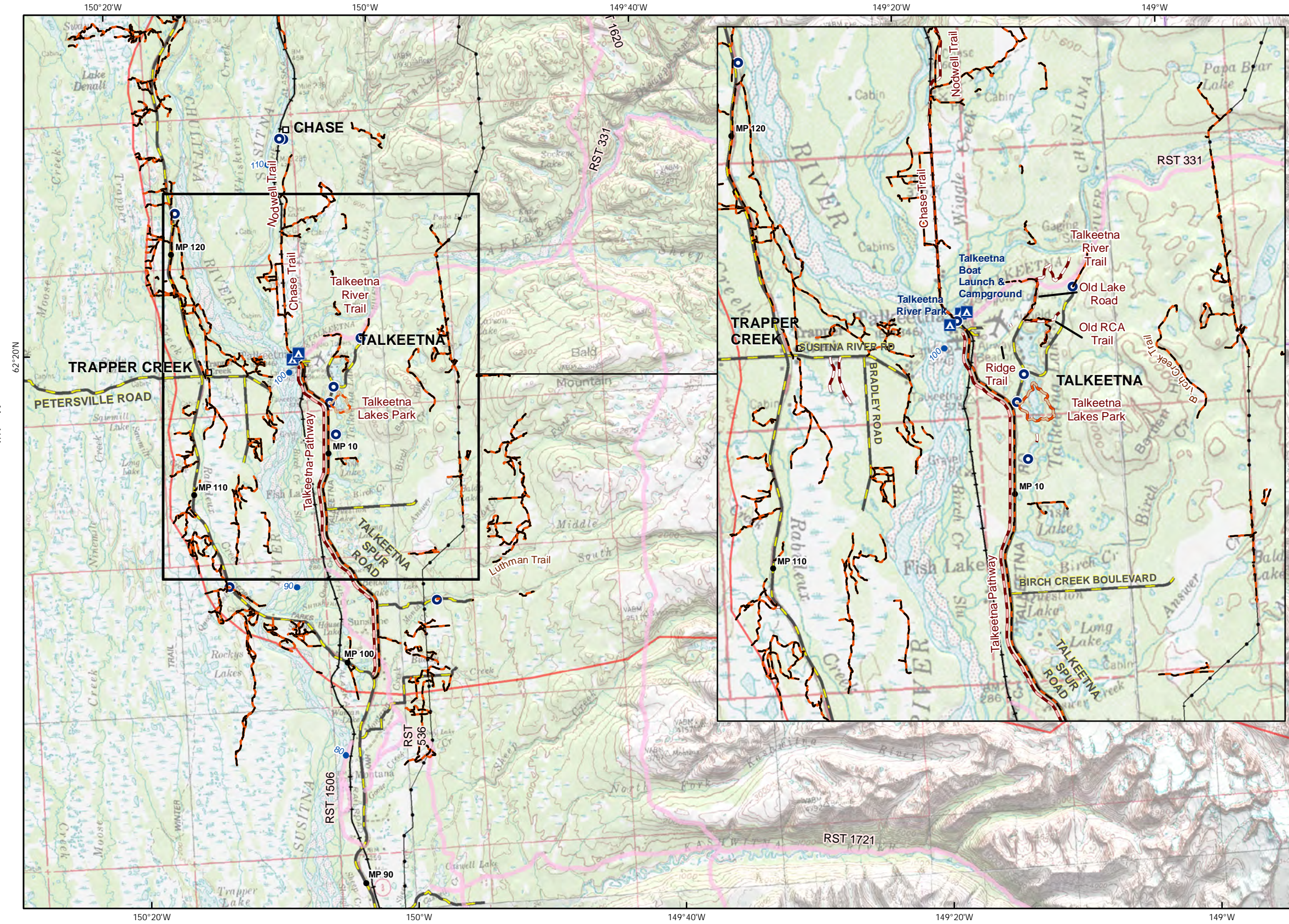
Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg2-8\_10.mxd

Map 10

Map N/A

Map N/A





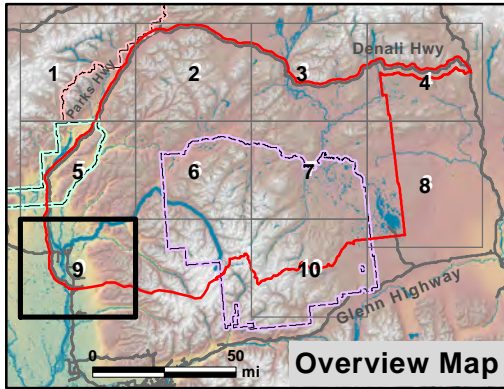
### Legend

- Road Milepost
- Project River Miles
- 🏠 Lodge
- 📍 Trailhead
- 🏕️ Campground
- Proposed Watana Dam Site
- 🔄 Existing Intertie
- 🚂 Alaska Railroad
- 🛣️ Roads
- 👤 Summer Trail (<= 1:24,000)
- 👤 Summer Trail (> 1:24,000)
- 👤 Summer Route
- 👤 RS 2477
- 👤 17b Easements
- 🌊 Proposed Watana Reservoir
- 👤 Proposed Project Area
- 🌲 Denali State Park
- 🌲 Denali National Park & Preserve
- 👤 Nelchina Public Use Area
- 👤 Tangle Lakes Archaeological District
- 🌲 Delta National Wild Scenic and Recreational River
- 🌲 Gulkana National Wild River
- 👤 Recreation Use Study Area

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

### Map 9



Overview Map

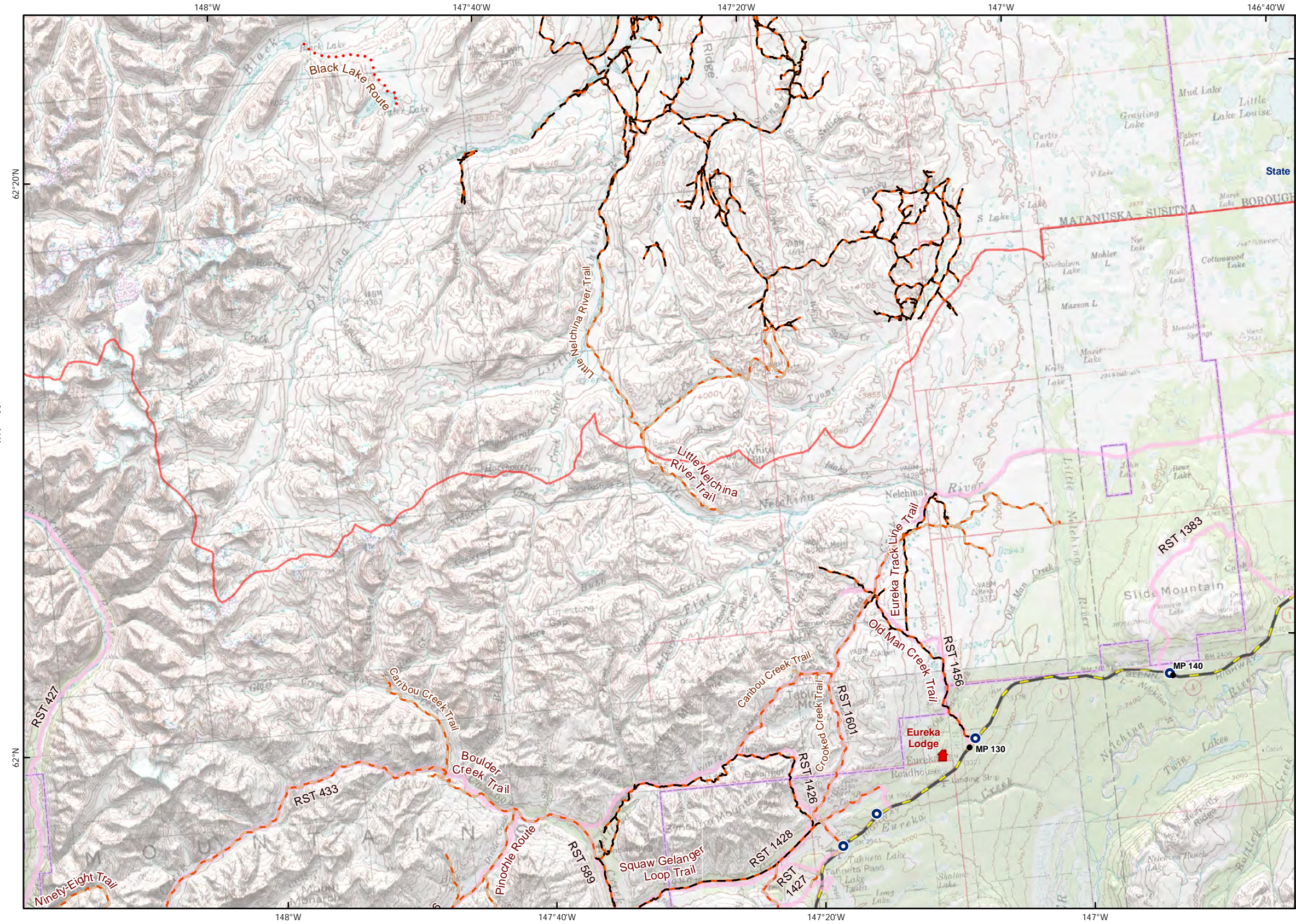
0 2 4 mi

0 2 4 6 km

Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg9\_.mxd







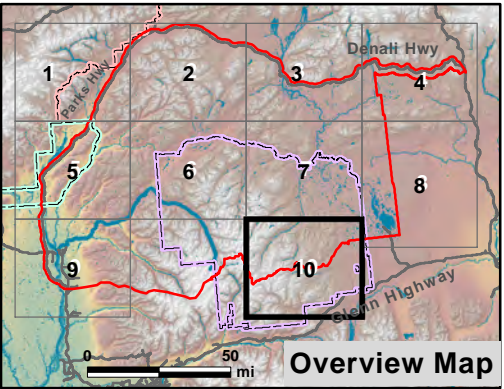
Legend

- Road Milepost
- Project River Miles
- Lodge
- Trailhead
- ▲ Campground
- Proposed Watana Dam Site
- Existing Intertie
- Alaska Railroad
- Roads
- Summer Trail (<= 1:24,000)
- Summer Trail (> 1:24,000)
- Summer Route
- RS 2477
- 17b Easements
- Proposed Watana Reservoir
- Proposed Project Area
- Denali State Park
- Denali National Park & Preserve
- Nelchina Public Use Area
- Tangle Lakes Archaeological District
- Delta National Wild Scenic and Recreational River
- Gulkana National Wild River
- Recreation Use Study Area

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Map 10



0 2 4 mi

0 2 4 6 km

Projection: Alaska Albers NAD 1983  
Date Created: 8/21/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Appendix\_D\_Pg2-8\_10.mxd



**Susitna-Watana Hydroelectric Project  
(FERC No. 14241)**

**Recreation Resources Study  
Study Plan Section 12.5**

**Technical Memorandum - 2014 Year-End Report  
Trails Assessment and Classification**

**Appendix D - Summer Trails Braiding Classification**

Prepared for

Alaska Energy Authority

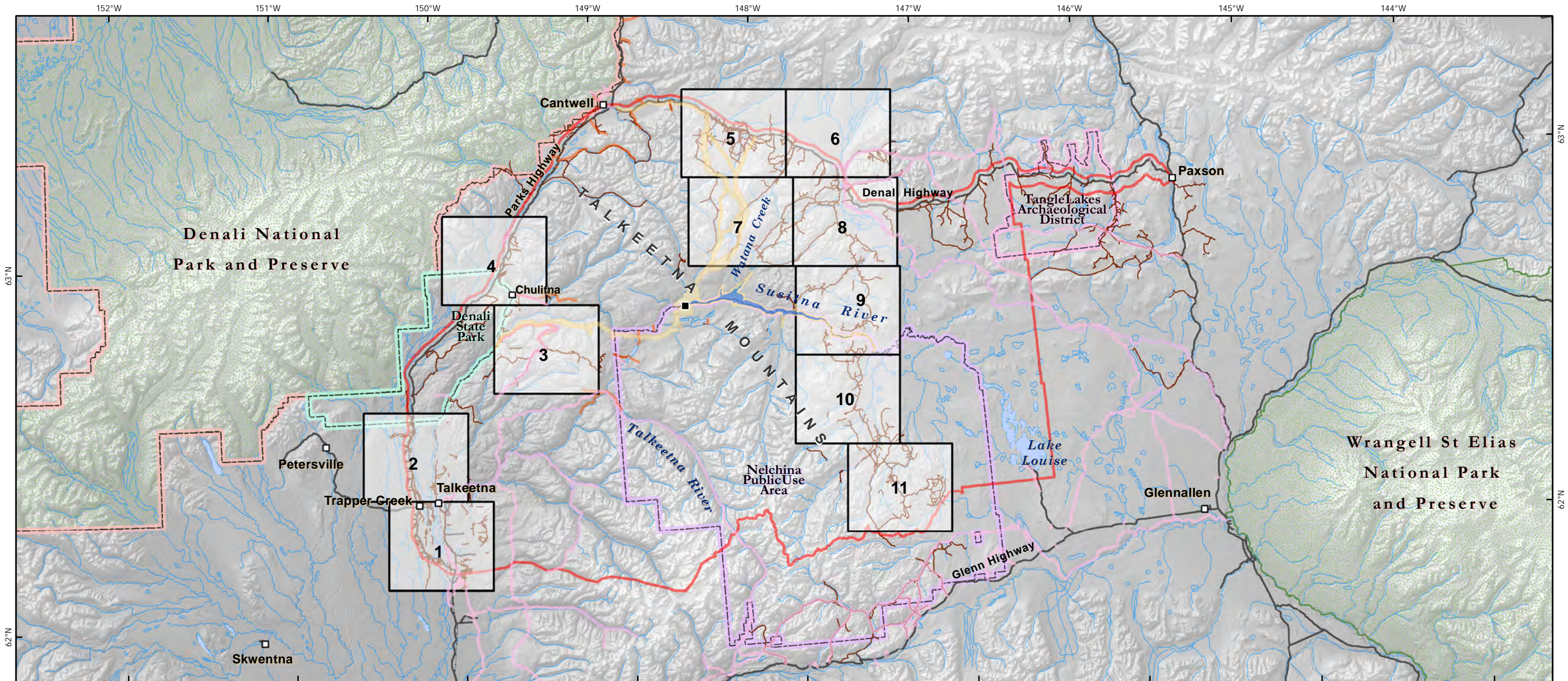


Prepared by

AECOM Inc.

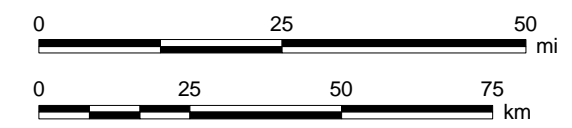
October 2015





### Legend

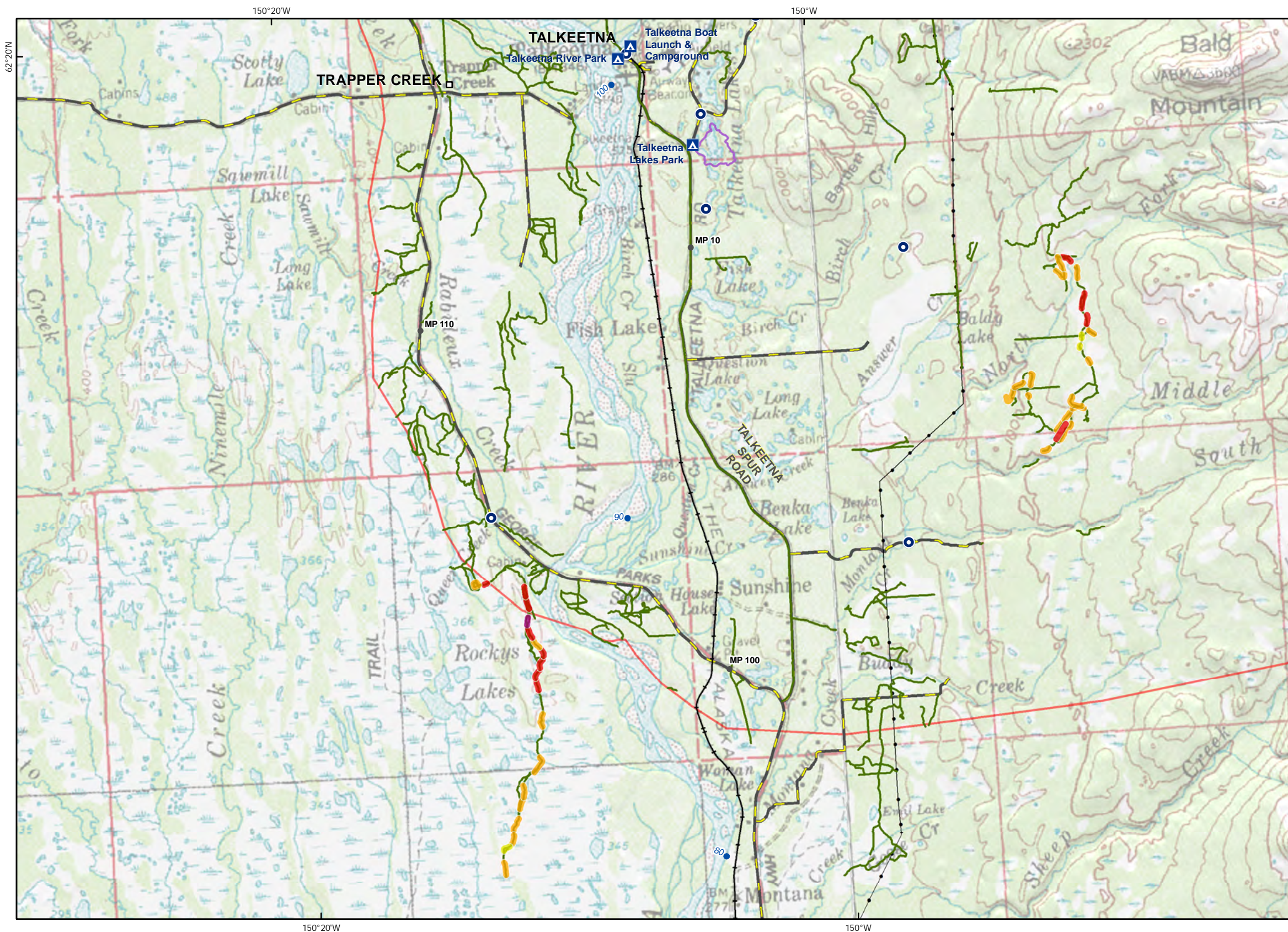
- |                            |                |                            |                                      |
|----------------------------|----------------|----------------------------|--------------------------------------|
| ■ Proposed Watana Dam Site | 17b Easements  | Recreation Use Study Area  | Denali State Park                    |
| □ Braided Trails Map Index | Rivers/Streams | Proposed Watana Reservoir  | Denali National Park & Preserve      |
| Summer Trails              | Major Road     | Proposed Project Area      | Nelchina Public Use Area             |
| RS 2477                    | Railroad       | National Park and Preserve | Tangle Lakes Archaeological District |



Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes.

Projection: Alaska Albers NAD 1983  
Date Created: 8/27/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Overview.mxd  
Data Sources: See Map References





Legend

- Trail Braiding (Count of Braids)**

  - 1 Braid
  - 2 - 4
  - > 4
  - > 10
  - > 30

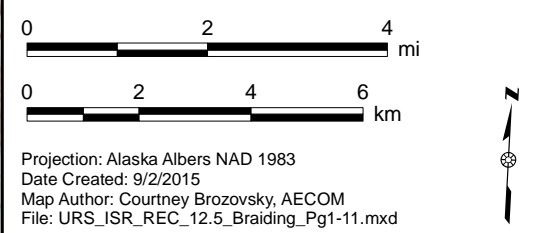
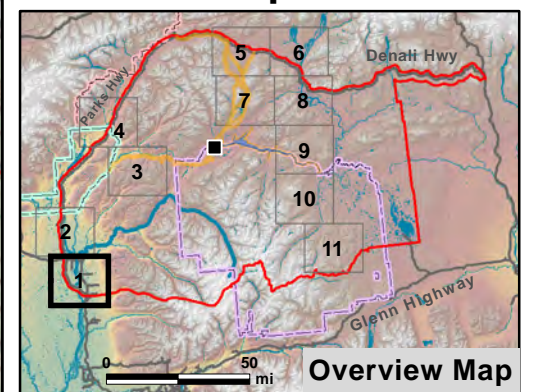
Inventoried Trails not Reviewed for Braiding

  - Project River Miles
  - Road Milepost
  - Lodge
  - Trailhead
  - Campground
- Proposed Watana Dam Site
  - Existing Intertie
  - Alaska Railroad
  - Roads
  - Proposed Watana Reservoir
  - Proposed Project Area
  - Denali State Park
  - Denali National Park & Preserve
  - Nelchina Public Use Area
  - Recreation Use Study Area

Data Sources: See Map References

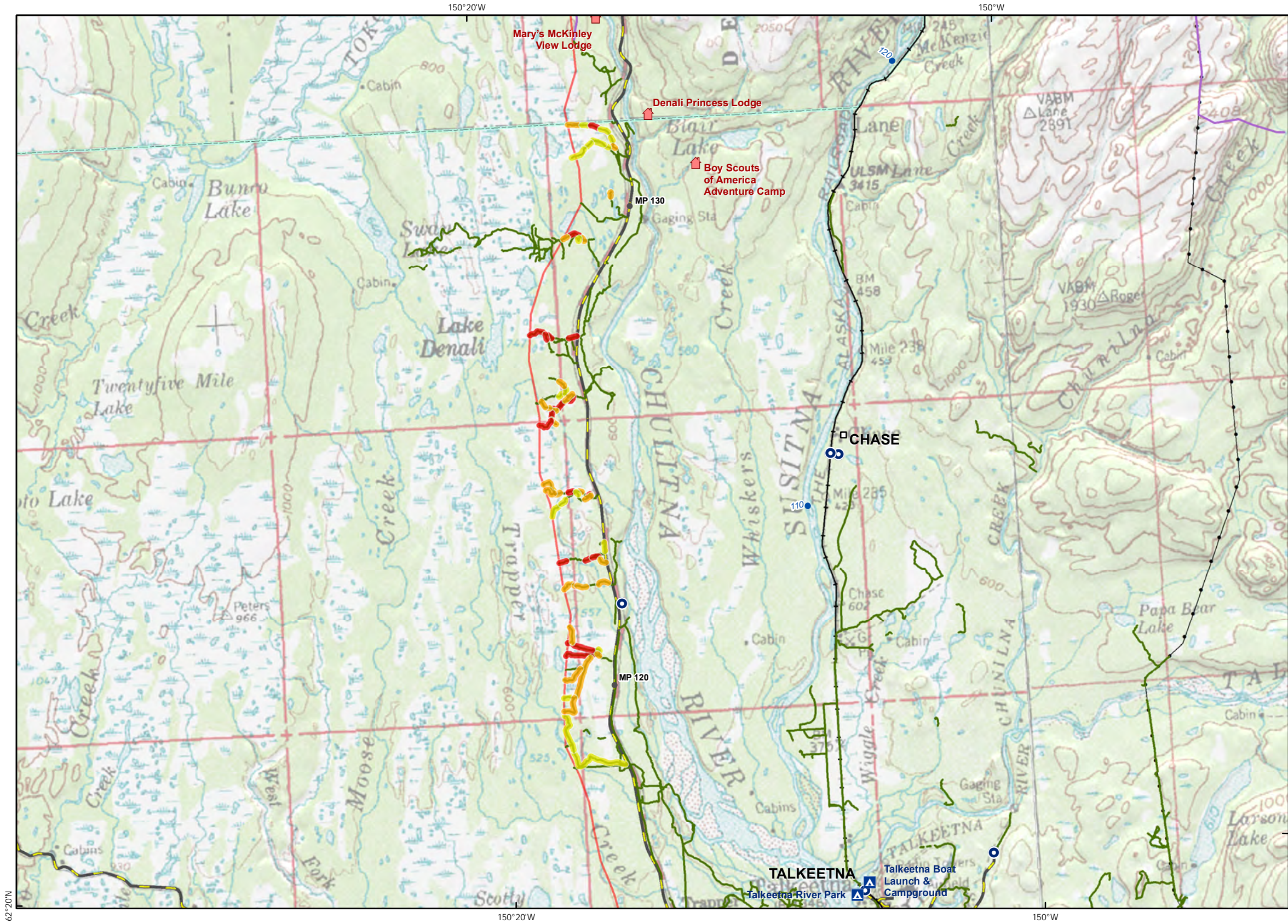
Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes. Trail braiding was determined by counting trail braids on high resolution imagery, and is only available in areas it could be interpreted.

Map 1



Projection: Alaska Albers NAD 1983  
Date Created: 9/2/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Pg1-11.mxd





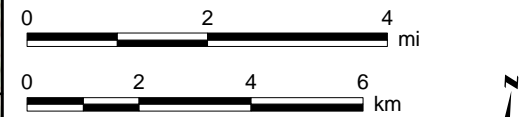
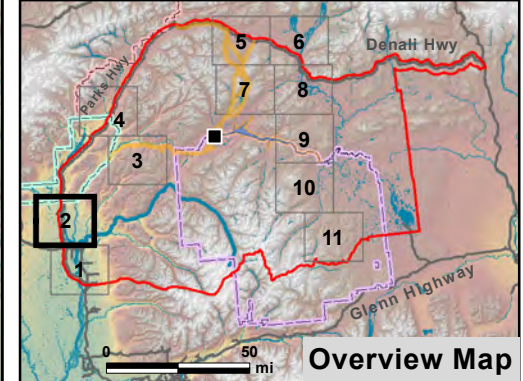
### Legend

- |  |                                   |
|--|-----------------------------------|
| <b>Trail Braiding (Count of Braids)</b>        | ■ Proposed Watana Dam Site        |
| ~ 1 Braid                                      | ~ Existing Intertie               |
| ~ 2 - 4  | ~ Alaska Railroad                 |
| ~ > 4  | ~ Roads                           |
| ~ > 10   | ~ Proposed Watana Reservoir       |
| ~ > 30   | ~ Proposed Project Area           |
| ~ Inventoried Trails not Reviewed for Braiding | ~ Denali State Park               |
| • Project River Miles                          | ~ Denali National Park & Preserve |
| • Road Milepost                                | ~ Nelchina Public Use Area        |
| 🏠 Lodge  | ~ Recreation Use Study Area       |
| 📍 Trailhead                                    |                                   |
| 🏕️ Campground                                  |                                   |

Data Sources: See Map References

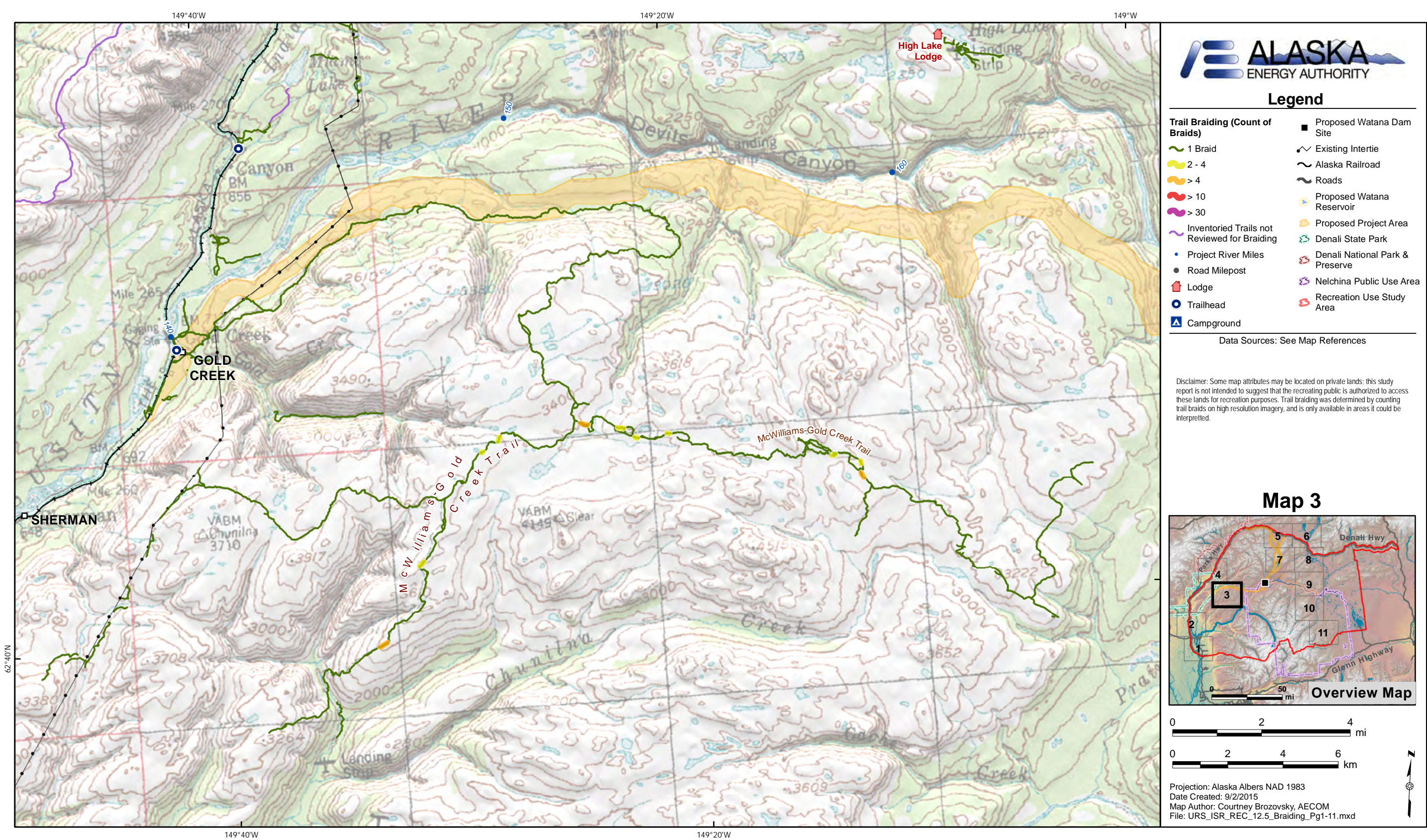
Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes. Trail braiding was determined by counting trail braids on high resolution imagery, and is only available in areas it could be interpreted.

### Map 2

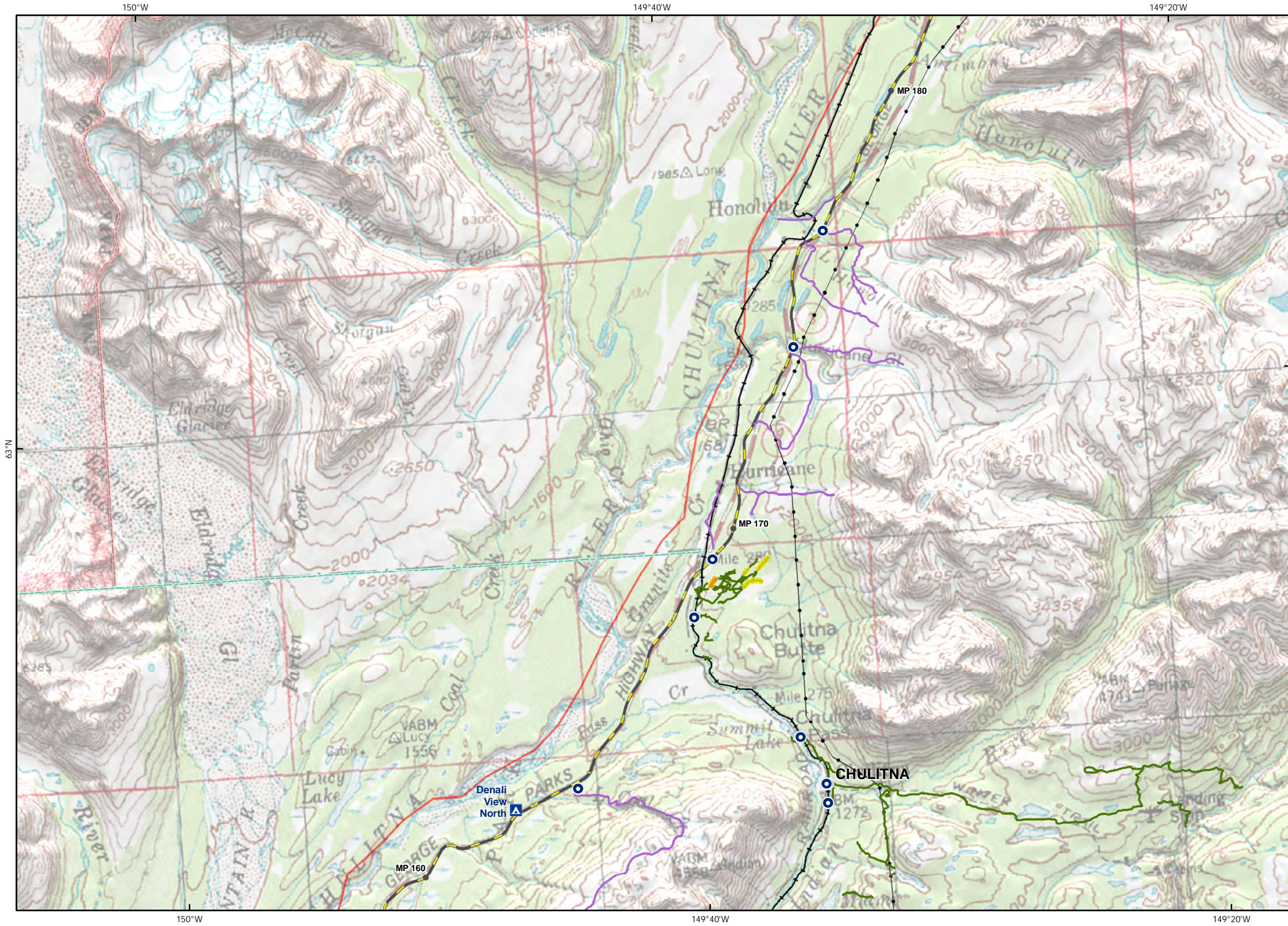


Projection: Alaska Albers NAD 1983  
Date Created: 9/2/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Pg1-11.mxd









Legend

- Trail Braiding (Count of Braids)**

  - 1 Braid
  - 2 - 4
  - > 4
  - > 10
  - > 30

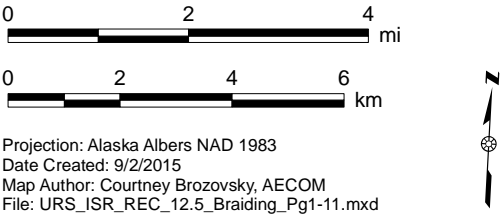
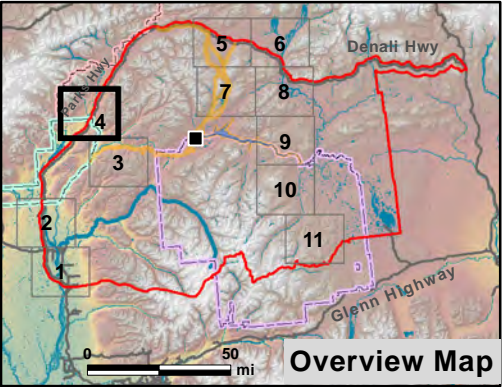
Inventoried Trails not Reviewed for Braiding

  - Project River Miles
  - Road Milepost
  - Lodge
  - Trailhead
  - Campground
- Proposed Watana Dam Site
  - Existing Intertie
  - Alaska Railroad
  - Roads
  - Proposed Watana Reservoir
  - Proposed Project Area
  - Denali State Park
  - Denali National Park & Preserve
  - Nelchina Public Use Area
  - Recreation Use Study Area

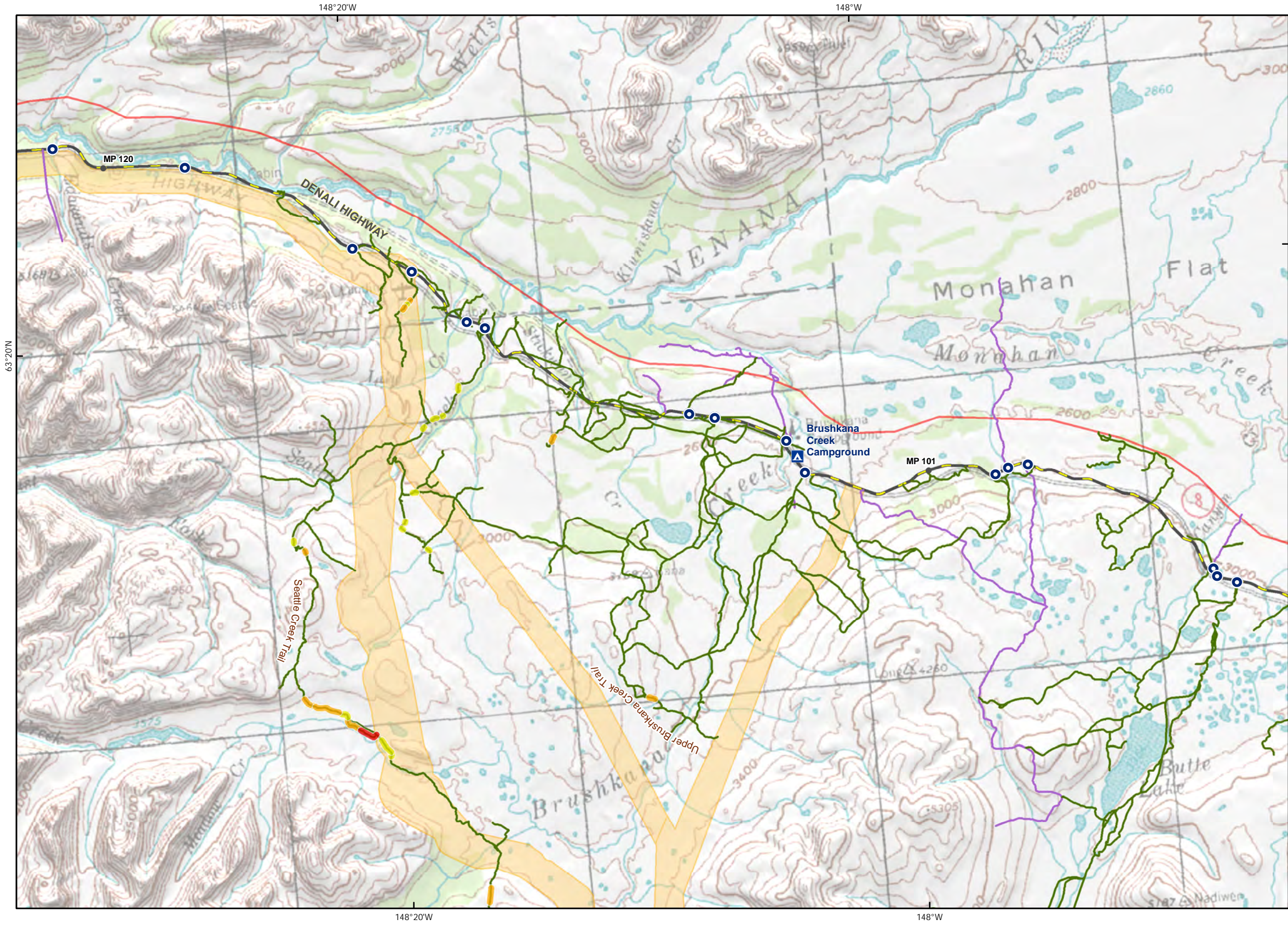
Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes. Trail braiding was determined by counting trail braids on high resolution imagery, and is only available in areas it could be interpreted.

Map 4







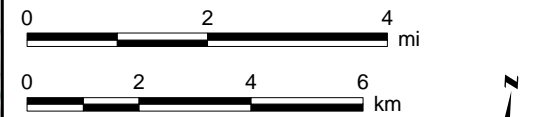
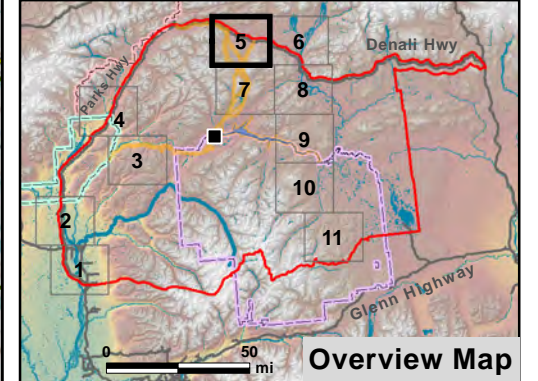
Legend

- |  |                                 |
|--|---------------------------------|
| <b>Trail Braiding (Count of Braids)</b>      | ■ Proposed Watana Dam Site      |
| 1 Braid                                      | Existing Intertie               |
| 2 - 4  | Alaska Railroad                 |
| > 4  | Roads                           |
| > 10   | Proposed Watana Reservoir       |
| > 30   | Proposed Project Area           |
| Inventoried Trails not Reviewed for Braiding | Denali State Park               |
| Project River Miles                          | Denali National Park & Preserve |
| Road Milepost                                | Nelchina Public Use Area        |
| Lodge  | Recreation Use Study Area       |
| Trailhead                                    |                                 |
| Campground                                   |                                 |

Data Sources: See Map References

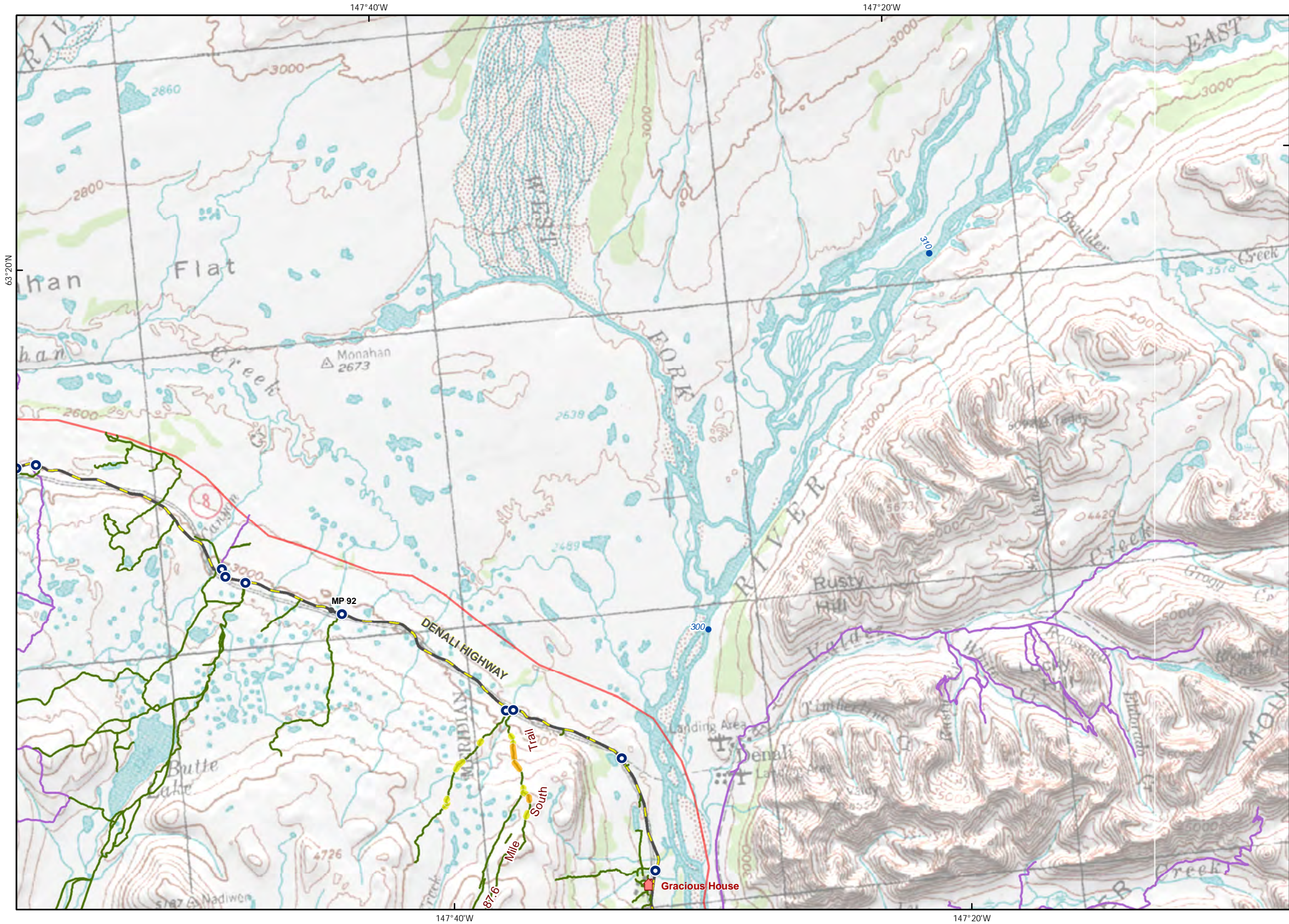
Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes. Trail braiding was determined by counting trail braids on high resolution imagery, and is only available in areas it could be interpreted.

Map 5



Projection: Alaska Albers NAD 1983  
Date Created: 9/2/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Pg1-11.mxd





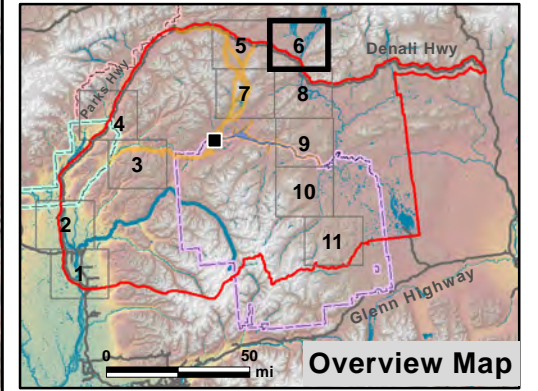
### Legend

- |  |                                   |
|--|-----------------------------------|
| <b>Trail Braiding (Count of Braids)</b>        | ■ Proposed Watana Dam Site        |
| ~ 1 Braid                                      | ~ Existing Intertie               |
| ~ 2 - 4  | ~ Alaska Railroad                 |
| ~ > 4  | ~ Roads                           |
| ~ > 10   | ~ Proposed Watana Reservoir       |
| ~ > 30   | ~ Proposed Project Area           |
| ~ Inventoried Trails not Reviewed for Braiding | ~ Denali State Park               |
| • Project River Miles                          | ~ Denali National Park & Preserve |
| • Road Milepost                                | ~ Nelchina Public Use Area        |
| 🏠 Lodge  | ~ Recreation Use Study Area       |
| 👤 Trailhead                                    |                                   |
| 🏕️ Campground                                  |                                   |

Data Sources: See Map References

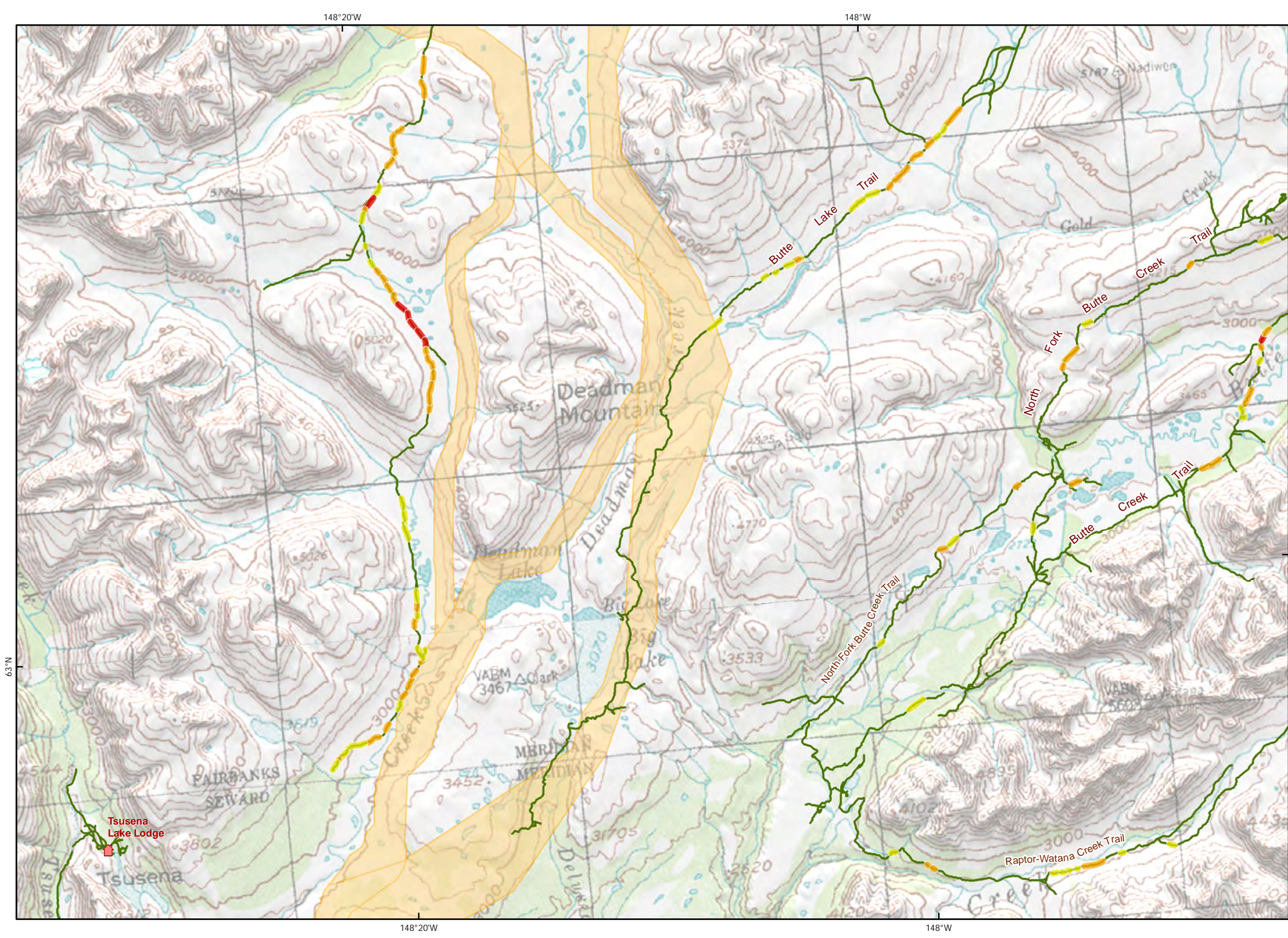
Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes. Trail braiding was determined by counting trail braids on high resolution imagery, and is only available in areas it could be interpreted.

### Map 6



Projection: Alaska Albers NAD 1983  
Date Created: 9/2/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Pg1-11.mxd





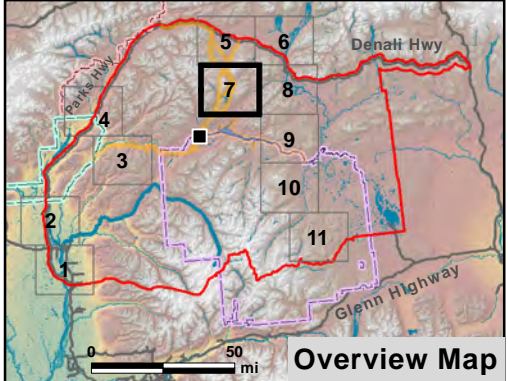
Legend

- |  |                                 |
|--|---------------------------------|
| <b>Trail Braiding (Count of Braids)</b>      | ■ Proposed Watana Dam Site      |
| 1 Braid                                      | Existing Intertie               |
| 2 - 4  | Alaska Railroad                 |
| > 4  | Roads                           |
| > 10   | Proposed Watana Reservoir       |
| > 30   | Proposed Project Area           |
| Inventoried Trails not Reviewed for Braiding | Denali State Park               |
| Project River Miles                          | Denali National Park & Preserve |
| Road Milepost                                | Nelchina Public Use Area        |
| Lodge  | Recreation Use Study Area       |
| Trailhead                                    |                                 |
| Campground                                   |                                 |

Data Sources: See Map References

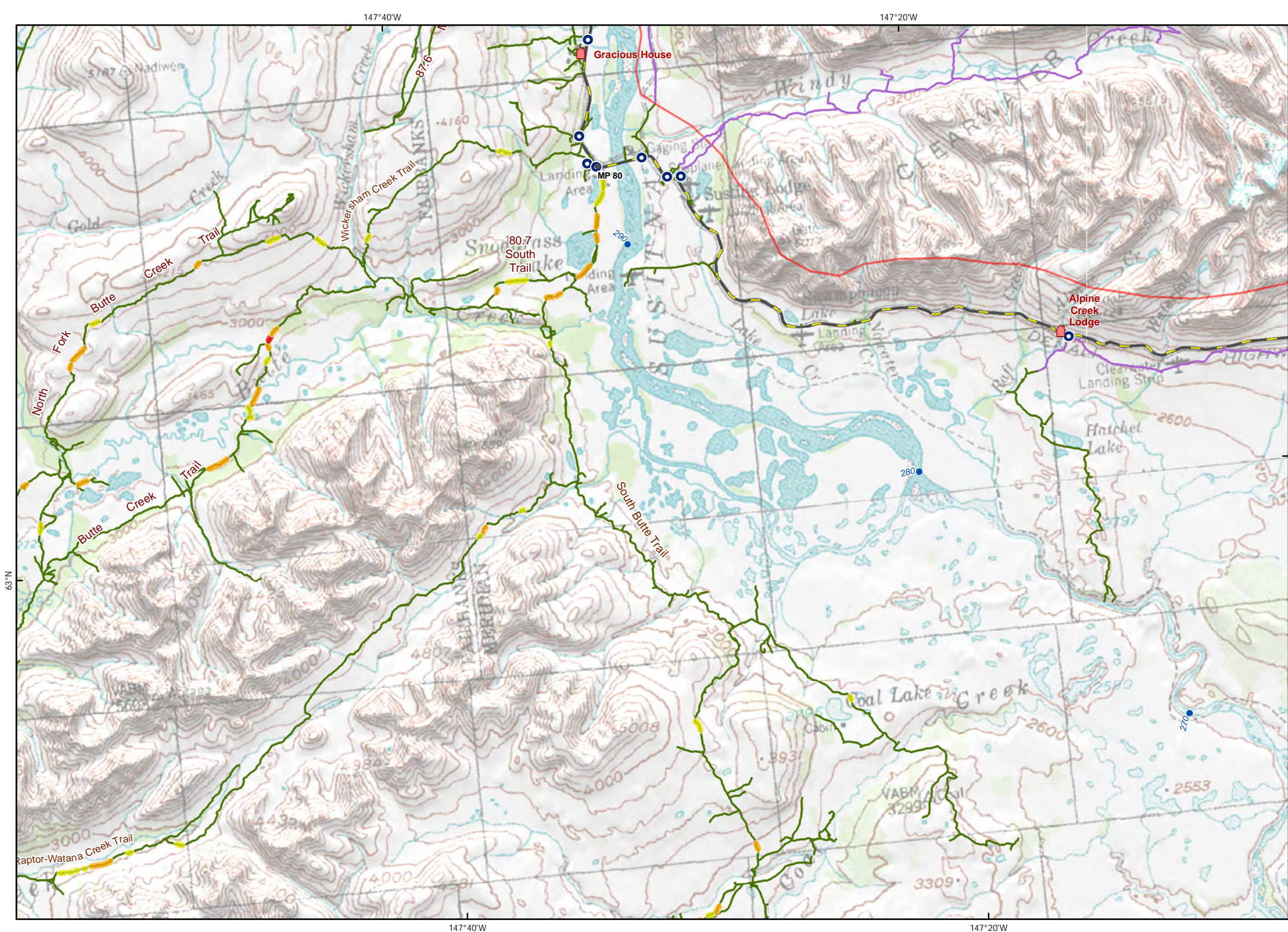
Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes. Trail braiding was determined by counting trail braids on high resolution imagery, and is only available in areas it could be interpreted.

Map 7



Projection: Alaska Albers NAD 1983  
Date Created: 9/2/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Pg1-11.mxd





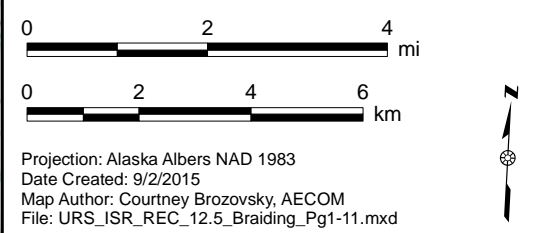
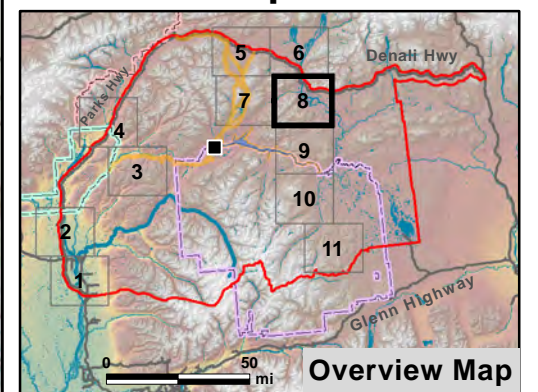
### Legend

- |  |                                 |
|--|---------------------------------|
| <b>Trail Braiding (Count of Braids)</b>      | ■ Proposed Watana Dam Site      |
| 1 Braid                                      | Existing Intertie               |
| 2 - 4  | Alaska Railroad                 |
| > 4  | Roads                           |
| > 10   | Proposed Watana Reservoir       |
| > 30   | Proposed Project Area           |
| Inventoried Trails not Reviewed for Braiding | Denali State Park               |
| Project River Miles                          | Denali National Park & Preserve |
| Road Milepost                                | Nelchina Public Use Area        |
| Lodge  | Recreation Use Study Area       |
| Trailhead                                    |                                 |
| Campground                                   |                                 |

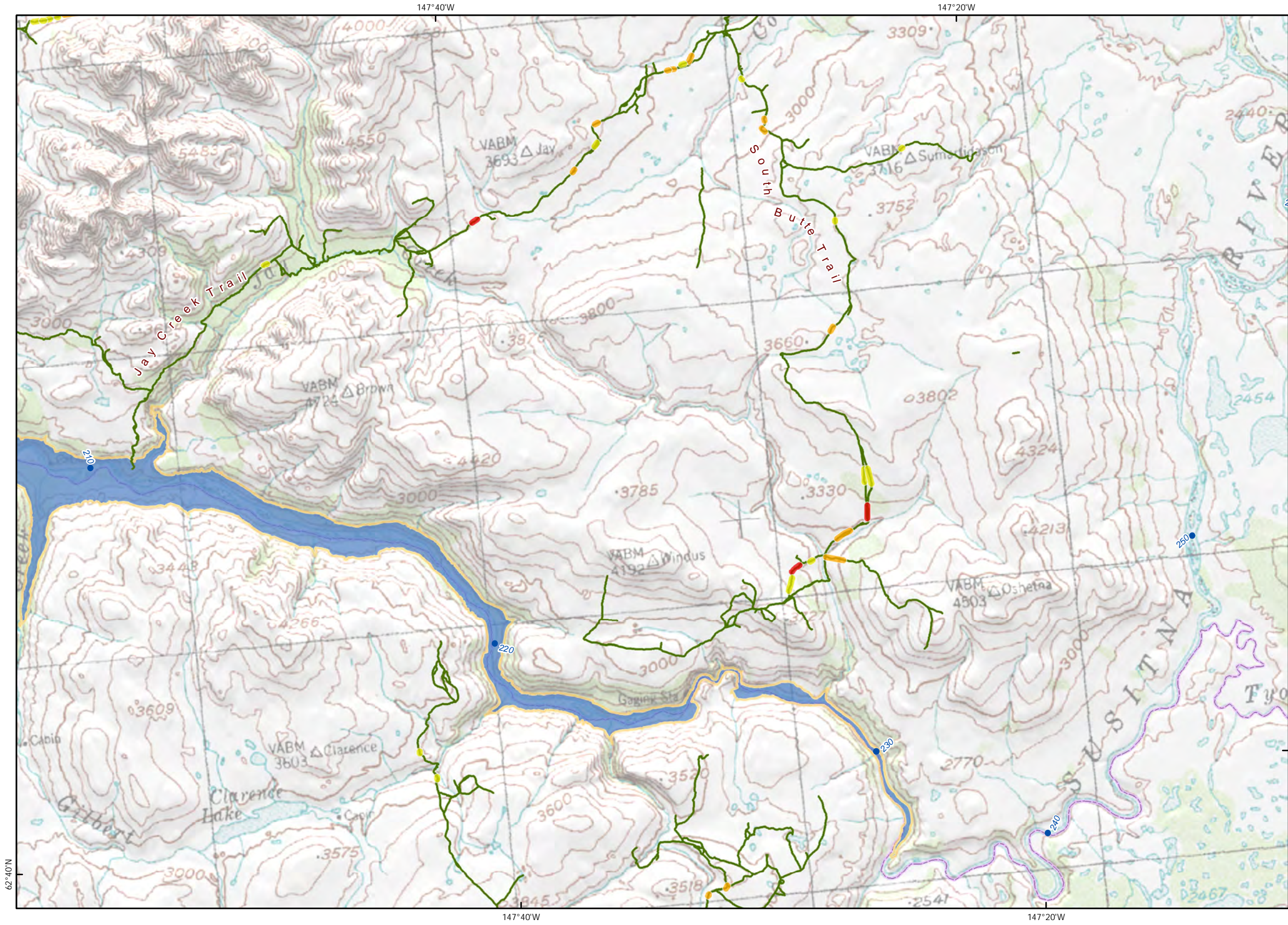
Data Sources: See Map References

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### Map 8







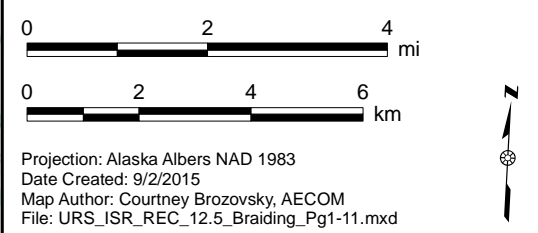
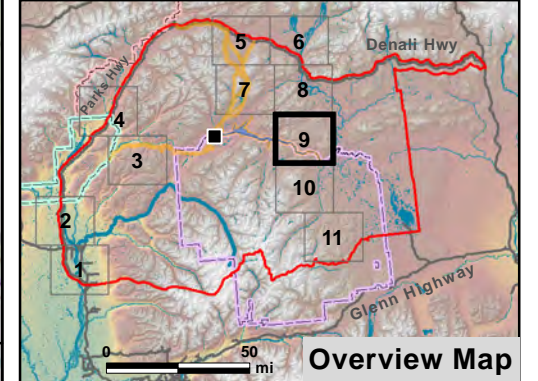
### Legend

- |  |                                 |
|--|---------------------------------|
| <b>Trail Braiding (Count of Braids)</b>      | ■ Proposed Watana Dam Site      |
| 1 Braid                                      | Existing Intertie               |
| 2 - 4  | Alaska Railroad                 |
| > 4  | Roads                           |
| > 10   | Proposed Watana Reservoir       |
| > 30   | Proposed Project Area           |
| Inventoried Trails not Reviewed for Braiding | Denali State Park               |
| Project River Miles                          | Denali National Park & Preserve |
| Road Milepost                                | Nelchina Public Use Area        |
| Lodge  | Recreation Use Study Area       |
| Trailhead                                    |                                 |
| Campground                                   |                                 |

Data Sources: See Map References

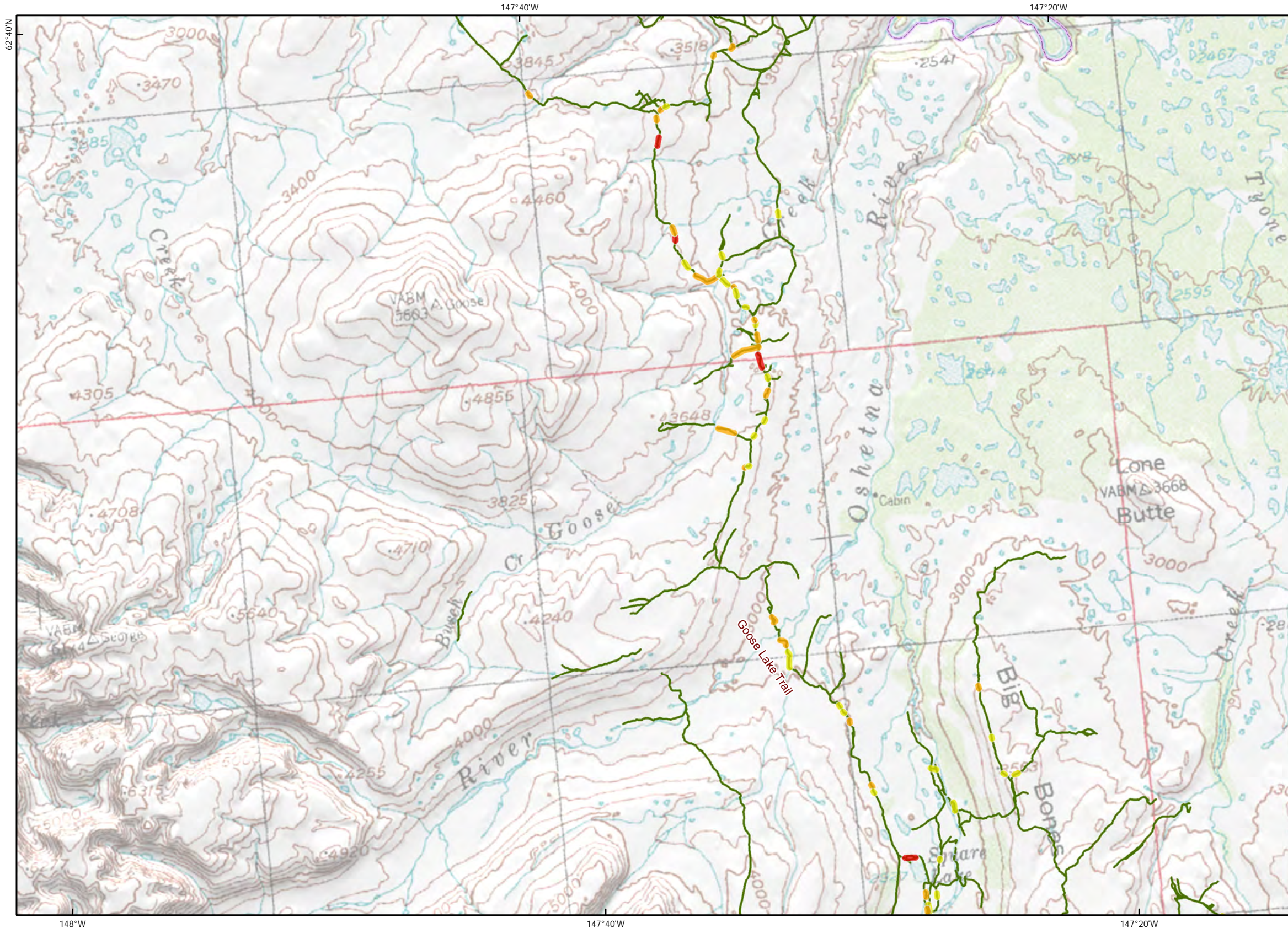
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### Map 9



Projection: Alaska Albers NAD 1983  
Date Created: 9/2/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Pg1-11.mxd





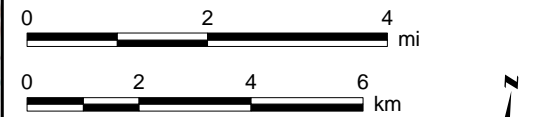
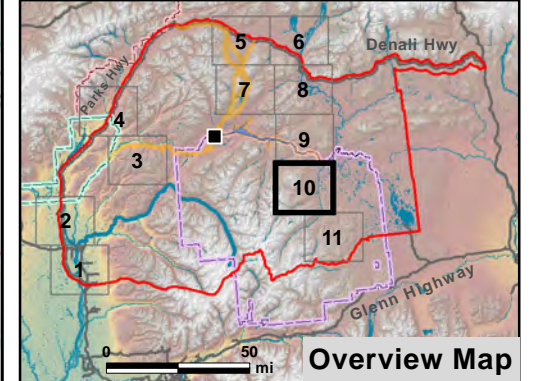
### Legend

- |  |                                 |
|--|---------------------------------|
| <b>Trail Braiding (Count of Braids)</b>      | ■ Proposed Watana Dam Site      |
| 1 Braid                                      | Existing Intertie               |
| 2 - 4  | Alaska Railroad                 |
| > 4  | Roads                           |
| > 10   | Proposed Watana Reservoir       |
| > 30   | Proposed Project Area           |
| Inventoried Trails not Reviewed for Braiding | Denali State Park               |
| Project River Miles                          | Denali National Park & Preserve |
| Road Milepost                                | Nelchina Public Use Area        |
| Lodge  | Recreation Use Study Area       |
| Trailhead                                    |                                 |
| Campground                                   |                                 |

Data Sources: See Map References

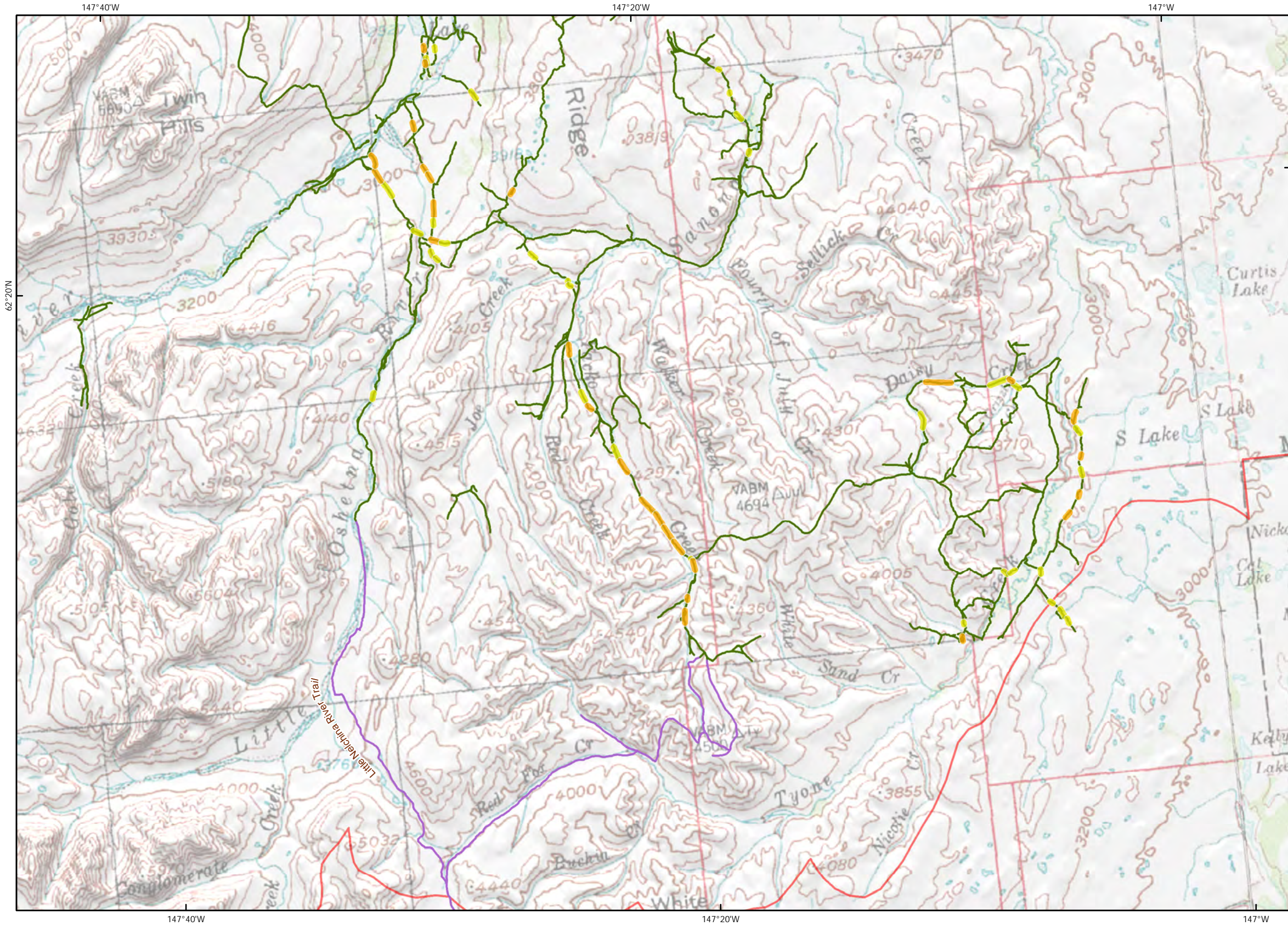
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### Map 10



Projection: Alaska Albers NAD 1983  
Date Created: 9/2/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Pg1-11.mxd





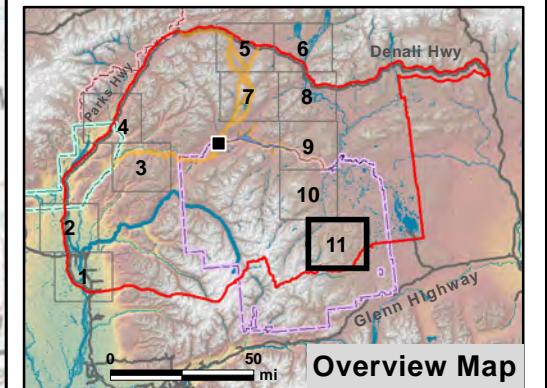
### Legend

- |  |                                   |
|--|-----------------------------------|
| <b>Trail Braiding (Count of Braids)</b>        | ■ Proposed Watana Dam Site        |
| — 1 Braid                                      | ~ Existing Intertie               |
| — 2 - 4  | ~ Alaska Railroad                 |
| — > 4  | ~ Roads                           |
| — > 10   | ■ Proposed Watana Reservoir       |
| — > 30   | ■ Proposed Project Area           |
| — Inventoried Trails not Reviewed for Braiding | ■ Denali State Park               |
| • Project River Miles                          | ■ Denali National Park & Preserve |
| • Road Milepost                                | ■ Nelchina Public Use Area        |
| ■ Lodge  | ■ Recreation Use Study Area       |
| ● Trailhead                                    |                                   |
| ■ Campground                                   |                                   |

Data Sources: See Map References

Disclaimer: Some map attributes may be located on private lands; this study report is not intended to suggest that the recreating public is authorized to access these lands for recreation purposes. Trail braiding was determined by counting trail braids on high resolution imagery, and is only available in areas it could be interpreted.

### Map 11



Projection: Alaska Albers NAD 1983  
Date Created: 9/2/2015  
Map Author: Courtney Brozovsky, AECOM  
File: URS\_ISR\_REC\_12.5\_Braiding\_Pg1-11.mxd



**Susitna-Watana Hydroelectric Project  
(FERC No. 14241)**

**Recreation Resources Study  
Study Plan Section 12.5**

**Technical Memorandum - 2014 Year-End Report  
Trails Assessment and Classification**

**Appendix E - Photographs**

Prepared for  
Alaska Energy Authority



Prepared by  
AECOM Inc.

September 2015



Photograph E-1. Jack River Trail, with 17(b) easement marker



Photograph E-2. East-West Express Trail: Groomed (Formal) Winter Trail





Photograph E-3. Pass Creek Route: Informal Winter Trail



Photograph E-4. Old Man Creek/Goose Lake Route: Formal Winter Trail with Dispersed Informal Use





Photograph E-5. Byers Lake Trail: Formal Summer Trail; Trailhead Facility



Photograph E-6: Glacier Gap Lake to Sevenmile Lake Trailhead: Formal Summer Trail; Trailhead Facility





Photograph E-7. Butte Creek Trail: Informal Summer Trail



Photograph E-8. Jay Creek Trail: Informal Summer Trail