

Exhibit P3 Elk Winter Range and Summer Range

Boardman to Hemingway Transmission Line Project



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Application for Site Certificate

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ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
EFR	Experimental Forest and Range
EFSC or Council	Energy Facility Siting Council
GIS	geographic information systems
HD	habitat disturbance
HMP	Habitat Mitigation Plan
IPC	Idaho Power Company
kV	kilovolt
OAR	Oregon Administrative Rule
ODFW	Oregon Department of Fish and Wildlife
Project	Boardman to Hemingway Transmission Line Project
ROW	right-of-way
Second Amended Project Order	Second Amended Project Order, Regarding Statutes, Administrative Rules, and Other Requirements Applicable to the Proposed BOARDMAN TO HEMINGWAY TRANSMISSION LINE (July 26, 2018)
WAGS	Washington ground squirrel

Exhibit P3 Elk Winter Range and Summer Range

1.0 INTRODUCTION

Exhibit P3 describes the potential impacts of the Boardman to Hemingway Transmission Line Project (Project) on elk (*Cervus Canadensis*) and elk winter range and summer range, as well as the steps Idaho Power Company (IPC) will take to avoid, minimize, and mitigate those impacts. Further, Exhibit P3 shows the Project will be consistent with the Oregon Department of Fish and Wildlife's (ODFW) fish and wildlife habitat mitigation goals and standards.

2.0 APPLICABLE RULES AND SECOND AMENDED PROJECT ORDER PROVISIONS

2.1 General Standards for Siting Facilities

The Fish and Wildlife Habitat Standard at Oregon Administrative Rule (OAR) 345-022-0060 states:

For the Council to issue a site certificate, it must find that the design, construction, and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.

2.2 Fish and Wildlife Habitat Mitigation Goals and Standards

ODFW's Habitat Mitigation Goals and Standards of OAR 635-415-0025 provide, in relevant part:

(2) "Habitat Category 2" is essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.

(a) The mitigation goal if impacts are unavoidable, is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality.

(b) The Department shall act to achieve the mitigation goal for Category 2 habitat by recommending or requiring:

(A) Avoidance of impacts through alternatives to the proposed development action; or

(B) Mitigation of impacts, if unavoidable, through reliable in-kind, in-proximity habitat mitigation to achieve no net loss of either pre-development habitat quantity or quality. In addition, a net benefit of habitat quantity or quality must be provided. Progress towards achieving the mitigation goals and standards shall be reported on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development action.

(c) If neither 635-415-0025(2)(b)(A) or (B) can be achieved, the Department shall recommend against or shall not authorize the proposed development action.

(3) "Habitat Category 3" is essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population.

(a) The mitigation goal is no net loss of either habitat quantity or quality.

(b) The Department shall act to achieve the mitigation goal for Category 3 habitat by recommending or requiring:

(A) Avoidance of impacts through alternatives to the proposed development action; or

(B) Mitigation of impacts, if unavoidable, through reliable in-kind, in-proximity habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality. Progress towards achieving the mitigation goals and standards shall be reported on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development action.

c) If neither 635-415-0025(3)(b)(A) or (B) can be achieved, the Department shall recommend against or shall not authorize the proposed development action.

2.3 Site Certificate Application Requirements

OAR 345-021-0010(1)(p) requires that Exhibit P include the following information about the fish and wildlife habitat and species, other than the species addressed in Exhibit Q, that could be affected by the Project:

(A) A description of biological and botanical surveys performed that support the information in this exhibit, including a discussion of the timing and scope of each survey.

(B) Identification of all fish and wildlife habitat in the analysis area, classified by the habitat categories as set forth in OAR 635-415-0025 and a description of the characteristics and condition of that habitat in the analysis area, including a table of the areas of permanent disturbance and temporary disturbance (in acres) in each habitat category and subtype.

(C) A map showing the locations of the habitat identified in (B).

(D) Based on consultation with the Oregon Department of Fish and Wildlife (ODFW) and appropriate field study and literature review, identification of all State Sensitive Species that might be present in the analysis area and a discussion of any site-specific issues of concern to ODFW.

(E) A baseline survey of the use of habitat in the analysis area by species identified in (D) performed according to a protocol approved by the Department and ODFW.

(F) A description of the nature, extent and duration of potential adverse impacts on the habitat identified in (B) and species identified in (D) that could result from construction, operation and retirement of the proposed facility.

(G) A description of any measures proposed by the applicant to avoid, reduce or mitigate the potential adverse impacts described in (F) in accordance with the ODFW mitigation goals described in OAR 635-415-0025 and a discussion of how the proposed measures would achieve those goals.

(H) A description of the applicant's proposed monitoring plans to evaluate the success of the measures described in (G).

2.4 Amended Project Order Provisions

The Second Amended Project Order requires Exhibit P3 to include, as applicable, the following specific information:

The applicant has proposed a "phased survey" approach for data collection during the site certificate review process. The Department understands that the entirety of the site boundary for the proposed facility may not yet have been field-surveyed due to limited site access. On April 24, 2018 the Department issued a memo titled; "Energy Facility Siting Council Decisions for Linear Facilities with Restricted Access within a Site Boundary: Boardman to Hemingway Transmission Line". This memo outlines how the Department will review applications and make recommendations to Council for fish and wildlife habitat and species that have been evaluated in the pASC and ASC. For linear facilities, such as transmission lines, there may be situations where the applicant is able to conduct field surveys on several parcels within the site boundary but may not have access on adjacent parcels. In such circumstances, it may be possible that the combination of on-site field surveys plus a desktop evaluation of existing data, aerial photography, and "over the fence" surveys may meet the information requirements of Exhibits P. If the field survey coverage is sufficient for ODOE and Oregon Department of Fish and Wildlife (ODFW) to consider that the information provided is representative of the fish and wildlife habitat, and sensitive species occurrence or habitat, it is possible that this information could be sufficient to be evaluated for compliance with the applicable Council fish and wildlife habitat standard. Exhibit P shall include as much information as possible about the results of the field surveys conducted to date for biological resources and the schedule for future surveys.

Exhibit P shall include an analysis of how the evidence provided supports a finding by the Council that the proposed facility meets the Council's fish and wildlife habitat standard. Exhibit P must include the results of all surveys for fish and wildlife habitat in the analysis area. Exhibit P must also identify all state sensitive species that may be present in the analysis area and include the results of surveys for state sensitive species. Also include the survey methodology, including scope and timing of each survey. Surveys must be performed by qualified survey personnel during the season or seasons appropriate to the detection of the species in question. The applicant must also include in Exhibit P its habitat categorization and tables depicting the estimated temporary and permanent impacts, broken down by habitat categories.

If particular fish and/or wildlife habitat or state sensitive species are identified within the analysis area that could be adversely affected as a result of the proposed facility, the applicant shall include description of the nature, extent and duration of potential adverse impacts and a description of any proposed mitigation measures. Fish and Wildlife Habitat Mitigation Policy (OAR Chapter 635, Division 415) classifies six habitat categories and establishes a mitigation goal for each category. The applicant for a site certificate must identify the appropriate habitat category for all areas affected by the proposed facility and provide the basis for each category designation, subject to ODFW review. The applicant must show how it would comply with the habitat mitigation goals and standards by appropriate monitoring and mitigation. ODFW rules OAR 635-140-0000 through 635-140-0025 are applicable to EFSC's review process in Oregon Sage-grouse habitat. The applicant shall apply ODFW identified sage-grouse core, low density, and general habitat. Development actions must be mitigated by the applicant for

both direct and indirect adverse impacts to sage-grouse and their habitats. Pursuant to OAR 635-415-0025(7), the applicant is exempt from fulfilling the avoidance test contained in OAR 635-140-0025 Policy 2, subsections (a), (b), (c) and (d)(A).

As a result of the access timing issues for this proposed facility, it is recommended the applicant provide proposed site certificate conditions for the Council's consideration related to requirements for the applicant to complete all unfinished surveys within the project's site boundary prior to construction. The proposed site certificate conditions shall also address submittal requirements for reporting future survey results, adjustment of previously calculated impact areas (if necessary), and the applicant's proposed approach to document approval of final results by agencies or the Council prior to commencing construction activities.

(Second Amended Project Order, Section III(p)).

3.0 ANALYSIS

3.1 Analysis Area

The analysis area for Exhibit P3 includes all areas within the Site Boundary, which is defined as “the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micrositing corridors proposed by the applicant” (OAR 345-001-0010(55)). The site boundary encompasses the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kilovolt (kV) electric transmission line, removal of 13.3 miles of existing 69-kV transmission line, relocation of 0.9 mile of a 230-kV transmission line, and relocation of 1.1 miles of an existing 138-kV transmission line;
- Four alternative routes and their related and supporting facilities, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles). Each alternative route could replace a portion of the Proposed Route;
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼-acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

The Project features are fully described in Exhibit B and the Site Boundary for each Project feature is described in Exhibit C, Table C-24. The location of the Project features and the Site Boundary is outlined in Exhibit C.

3.2 Surveys

OAR 345-021-0010(1)(p)(A): A description of biological and botanical surveys performed that support the information in this exhibit, including a discussion of the timing and scope of each survey.

A full description of the biological and botanical surveys performed by IPC are described in Exhibit P1. With respect to elk winter range and summer range, as discussed below in Section 3.3, IPC identified the location of elk winter range and summer range using existing geographic information systems (GIS) datasets. IPC did not use field survey data to identify elk winter range and summer range.

3.3 Identification of Elk Winter Range and Summer Range

OAR 345-021-0010(1)(p)(B): Identification of all fish and wildlife habitat in the analysis area, classified by the habitat categories as set forth in OAR 635-415-0025 and a description of the characteristics and condition of that habitat in the analysis area.

3.3.1 Elk Winter Range and Summer Range

IPC used GIS datasets developed by ODFW (winter range; ODFW 2013) and the Rocky Mountain Elk Foundation Measure and Prioritize Elk Habitat Project (summer range; RMEF 1999) to identify elk winter range and summer range in the Analysis Area. As set forth in ODFW's Elk Mitigation Framework guidance document (ODFW 2015), IPC then removed any elk winter range or summer range identified in the GIS datasets that occurred within developed areas, cultivated fields, and elk de-emphasis areas in the Analysis Area (see Elk Mitigation Framework, p. 2). Habitat not identified in the GIS datasets were not included as elk winter range or summer range, even if vegetation communities were present that could support elk.

3.3.2 ODFW Habitat Categorization

Consistent with the Elk Mitigation Framework, IPC considered elk winter range to be Habitat Category 2 and elk summer range to be Habitat Category 3 (see Elk Mitigation Framework, p.2). Table P3-1 shows the mitigation goals for those habitat categories.

Table P3-1. Habitat Categorization Types

Category Type	Definition ¹	Mitigation Goal
2	Essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.	The mitigation goal if impacts are unavoidable is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality.
3	Essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population.	The mitigation goal is no net loss of either habitat quantity or quality.

¹ Source: OAR 635-415-0025.

3.3.3 Habitat Category Maps

OAR 345-021-0010(1)(p)(C): A map showing the locations of the habitat identified in (B).

Figure P3-1 shows the location of elk winter range and summer range. Attachment P3-1 contains a map-book that displays the location of elk winter range and summer range along the Project at a finer scale than Figure P3-1.

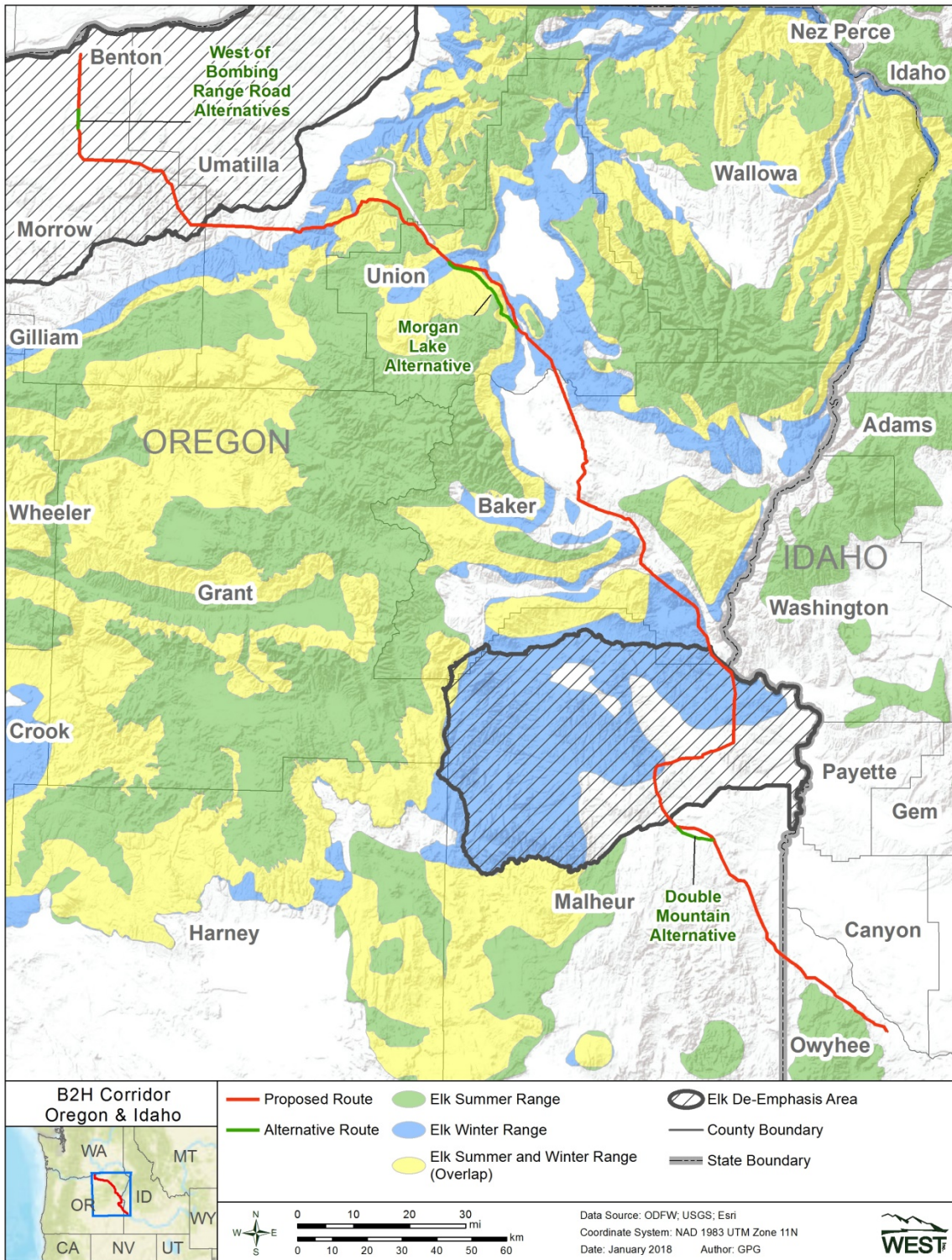


Figure P3-1. Elk Winter Range and Summer Range

3.4 State Sensitive Species Rules

OAD 345-021-0010(1)(p)(D): Based on consultation with the Oregon Department of Fish and Wildlife (ODFW) and appropriate field study and literature review, identification of all State Sensitive Species that might be present in the analysis area and a discussion of any site-specific issues of concern to ODFW.

OAD 345-021-0010(1)(p)(E): A baseline survey of the use of habitat in the analysis area by species identified in (D) performed according to a protocol approved by the Department and ODFW.

Elk has not been classified as a “state sensitive species” under Oregon’s sensitive species rule, OAD 635-100-040. Accordingly, OAD 345-021-0010(1)(p)(D) and (E) do not apply to elk.

3.5 Potential Impacts to Elk Winter Range and Summer Range

OAD 345-021-0010(1)(p)(F): A description of the nature, extent and duration of potential adverse impacts on the habitat identified in (B) and species identified in (D) that could result from construction, operation and retirement of the proposed facility.

3.5.1 Project Features within Elk Winter Range and Summer Range

3.5.1.1 Elk Winter Range

For the Proposed Route, the following Project features will occur in elk winter range: the transmission line (69.17 line miles), new access roads (42.47 miles), substantially modified existing roads (63.04 miles), six multi-use areas (MU UM-05, MU UM-06, MU UM-07, MU UN-02, MU UN-03, and MU BA-05)¹, and three communication stations (CS UN-01, CS UN-02, and CS BA-02). No light-duty fly yards will be located in elk winter range for the Proposed Route.

The Morgan Lake Alternative will include the following Project features in elk winter range: the transmission line (16.54 line miles), new access roads (14.69 miles), substantially modified existing roads (12.14 miles), and one communication station (CS UN-02 ALT). No multi-use areas or light-duty fly yards will be located in elk winter range with the Morgan Lake Alternative.

The Double Mountain Alternative will not include any Project features in elk winter range.²

Neither of the Bombing Range Road alternatives will include any Project features in elk winter range.

3.5.1.2 Elk Summer Range

For the Proposed Route, the following Project features will occur in elk summer range: the transmission line (28.89 line miles), new access roads (11.31 miles), substantially modified existing roads (24.88 miles), and one multi-use area (MU UM-07). There will be no communication stations or light-duty fly yards in elk summer range for the Proposed Route.

¹ Multi-use area MU MA-01 occurs in elk winter range that is considered an elk de-emphasis area. Consistent with the Elk Mitigation Framework, IPC did not include the de-emphasis area or MU MA-01 within the area considered elk winter range for purposes of this exhibit.

² Communication station CS MA-01 ALT, which is associated with the Double Mountain Alternative, occurs in an area identified in the relevant GIS datasets as elk winter range. However, that portion of elk winter range is considered an elk de-emphasis area. And, as discussed above in Section 3.3.1, elk de-emphasis areas are not considered elk winter range for purposes of this application. Therefore, communication station CS MA-01 ALT is not considered to occur in elk winter range.

The Morgan Lake Alternative will include the following Project features in elk summer range: the transmission line (15.61 line miles), new access roads (12.56 miles), substantially modified existing roads (14.52 miles), and one communication station (CS UN-02 ALT). There will be no multi-use areas or light-duty fly yards in elk summer range for the Morgan Lake Alternative.

The Double Mountain Alternative will not include any Project features in elk summer range.

Neither of the Bombing Range Road alternatives will include any Project features in elk summer range.

3.5.2 Duration of Impacts

Impacts may be permanent or temporary. Permanent impacts are defined as those impacts that will exist for the entire life of the Project. Temporary impacts are those impacts that will last for a time less than the life of the Project. Within elk winter range and summer range, the duration of temporary impacts to habitat will vary by vegetation type. For example: the recovery period for agricultural areas that were directly disturbed could be as short as 1 to 3 years; grasslands and herbaceous wetlands generally recover within 3 to 7 years; shrublands may require 30 to 100 years to recover (with the longer recovery periods associated with disturbances in mature sagebrush habitats located in arid regions or for specific sagebrush species; e.g., *Artemisia tridentata* ssp. *wyomingensis*); and forested and woodland areas could take anywhere from 50 to many hundreds of years to reach preconstruction conditions (depending on the condition of the area prior to construction). Arid sites with naturally sparse vegetation, as well as those with saline or alkaline soils, shallow soils, compacted soils, or areas that have a high erosion potential may be difficult to restore and could require special techniques or repeated revegetation efforts by IPC. IPC will restore temporary impacts consistent with the Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3). To the extent compensatory mitigation is required for temporary impacts, IPC will address the recovery periods associated with the lost habitat functionality as set for in the Fish and Wildlife Habitat Mitigation Plan (HMP; Exhibit P1, Attachment P1-6).

3.5.3 Direct Impacts

Direct impacts are defined as the impacts that will have an adverse effect upon elk habitat or elk individuals, and that will occur at the same, or in close proximity in, time and place. Direct impacts may be permanent or temporary.

3.5.3.1 Permanent Direct Impacts

Table P3-2 summarizes the type, timing, duration, quantification metric, and mitigation measures related to the Project's potential permanent direct impacts in elk winter range and summer range.

Table P3-2. Type, Timing, Duration, Quantification Metrics, and Mitigation Measures Related to Permanent Direct Impacts to Elk and Elk Habitat

Type of Disturbance	Type of Impact	Timing of Impact	Duration of Impact	Metric to Quantify Effects on Habitat Functionality	Mitigation Measures
Permanent direct impacts from vegetation clearing (transmission line, communication stations, and access roads)	Permanent direct	Construction, Operation	Life of the Project	Quantified based on construction dimensions	Permanent direct impacts from vegetation clearing will be mitigated as set forth in the Fish and Wildlife Habitat Mitigation Plan (Attachment P1-6); permanent direct impacts from vegetation clearing in forest lands in particular will be minimized as set forth in the Vegetation Management Plan (Attachment P1-4).
Direct mortality	Permanent direct	Construction, Operation	Life of the Project	Not quantified – no or de minimis impacts expected; there is no reasonable and accepted methodology for quantifying these impacts	Mortality related to Project access roads will be mitigated by implementing speed limits and controlling access on Project roads within elk habitat, subject to approval by the relevant land management agency or landowner.

Permanent Direct Impacts from Vegetation Clearing

Vegetation clearing to accommodate Project features required for operation will result in permanent direct impacts to fish and wildlife habitat through habitat loss. Permanent loss of habitat will occur within the operations disturbance areas for transmission structures, the Longhorn Station, communication stations, and access roads; the dimensions of these areas are summarized in Exhibit C, Section 3.4.

With respect to the permanent direct impacts from access road construction and modification, details on road construction activities and methods, including types of improvements to existing roads and projected traffic volumes, are provided in Exhibit B, Attachment B-5 (Road

Classification Guide and Access Management Plan), Exhibit U, and Attachment U-2 (Traffic and Transportation Management Plan). Access to construction sites will require both improvements to existing unpaved roads, as well as construction of new access roads. For existing roads that require substantial modification, proposed repair and/or construction activities will increase the width of the existing road prism, change the existing road alignment, use materials inconsistent with the existing road surface, and/or change the existing road profile, as well as meet additional criteria detailed in Exhibit B, Attachment B-5. New roads proposed to be constructed include both primitive and bladed roads. Primitive roads, commonly called a “two track” or “overland travel” roads, will be created by direct vehicle use with little or no grading. Bladed roads will be constructed using heavy equipment and designed to support vehicular traffic; bladed road features typically include cuts and/or fills to construct a smooth travel surface and manage surface water drainage.

IPC will provide mitigation for permanent direct impacts resulting from construction and installation of Project features as set forth in the draft Fish and Wildlife HMP (Exhibit P1, Attachment P1-6). IPC proposes the following conditions in the site certificate providing that IPC will finalize the draft Fish and Wildlife HMP and provide mitigation commensurate with the same:

Fish and Wildlife Condition 7: *Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Fish and Wildlife Habitat Mitigation Plan.*

- a. The final Fish and Wildlife Habitat Mitigation Plan shall include the following, unless otherwise approved by the department:*
 - i. The areas that were surveyed for biological resources;*
 - ii. The location of all facility components and related and supporting facilities;*
 - iii. The areas that will be permanently and temporarily disturbed during construction;*
 - iv. The protective measures described in the draft Fish and Wildlife Habitat Mitigation Plan in ASC Exhibit P, Attachment P-6; and*
 - v. The results of the biological surveys referenced in Fish and Wildlife Condition 1 and Fish and Wildlife Condition 2.*
- b. The final Fish and Wildlife Habitat Mitigation Plan shall address the potential habitat impacts through mitigation banking, an in-lieu fee program, development of mitigation projects by the certificate holder, or a combination of the same.*
 - i. To the extent the certificate holder shall develop its own mitigation projects, the final Habitat Mitigation Plan shall:*
 - 1. Identify the location of each mitigation site, including a map of the same;*
 - 2. Identify the number of credit-acres that each mitigation site will provide for the certificate holder;*
 - 3. Include a site-specific mitigation management plan for each mitigation site that provides for:*
 - A. A baseline ecological assessment;*
 - B. Conservation actions to be implemented at the site;*
 - C. An implementation schedule for the baseline ecological assessment and conservation actions;*
 - D. Performance measures;*
 - E. A reporting plan; and*
 - F. A monitoring plan.*
 - ii. To the extent the certificate holder shall utilize a mitigation bank or in-lieu fee program, the final Habitat Mitigation Plan shall:*

1. Describe the nature, extent, and history of the mitigation bank or in-lieu fee program; and
 2. Identify the number of credit-acres that each mitigation site will provide for the certificate holder.
- c. Oregon's Elk Mitigation Framework shall be used to calculate the amount of elk habitat compensatory mitigation required for the facility.
- d. The final Fish and Wildlife Habitat Mitigation Plan may be amended from time to time by agreement of the certificate holder and the Department. Such amendments may be made without amendment to the site certificate. The Council authorizes the department to agree to amendments of the plan and to mitigation actions that may be required under the plan; however, the Council retains the authority to approve, reject, or modify any amendment of the plan agreed to by the department.

Fish and Wildlife Condition 20: During construction, the certificate holder shall commence implementation of the conservation actions set forth in the final Fish and Wildlife Habitat Mitigation Plan referenced in Fish and Wildlife Condition 7.

Fish and Wildlife Condition 24: During the third year of operation, the certificate holder shall provide to the Department a report demonstrating that fish and wildlife habitat mitigation shall be commensurate with the final compensatory mitigation calculations.

- a. The final calculations shall be based on the as-constructed facility.
- b. Oregon's Elk Mitigation Framework shall be used to calculate the amount of elk habitat compensatory mitigation required for the facility, and the information from the pre- and post-construction traffic studies shall be used in the calculation.

Regarding forest lands in particular, permanent clearing will occur along the transmission line right-of-way (ROW) where necessary to meet reliability standards to protect the line from vegetation encroachments and hazards. A wire-border zone method will be used during maintenance of the ROW to control vegetation and to ensure adequate ground-to-conductor clearances (see Exhibit P1, Attachment P1-4, Vegetation Management Plan). This method results in two zones of clearing and revegetation. The wire zone includes the linear area along the ROW located under the wires as well as the area extending 10 feet outside of the outermost phase-conductor. After initial clearing, vegetation in the wire zone would be maintained to consist of native grasses, legumes, herbs, ferns, and other low-growing vegetation that remain under 5 feet tall at maturity. The border zone is the linear area along each side of the ROW extending from the edge of the wire zone to the edge of the ROW. Vegetation in the border zone would be maintained to consist of tall shrubs or short trees (up to 20 feet high at maturity), grasses, and forbs. These cover plants along the border zone benefit the ROW by competing with and excluding undesirable plants. During operations, vegetation growth will be monitored and managed on a routine cyclical clearing schedule (i.e., every 3 to 6 years) to maintain the wire-border zone objectives. In addition, hazard trees (i.e., trees that pose a risk of falling onto conductors, structures, or Project personnel) would be removed as needed. Maintenance efforts will be conducted around project structures and communication sites. ROW clearing for construction in forested/woodland habitats will remove thermal and hiding cover for elk; however, this clearing of vegetation has the potential to benefit elk in some situations by providing clearings for use in foraging or traveling (Rowland et al. 1983; Stewart et al. 2000).

To ensure the protective measures set forth in the draft Vegetation Management Plan in Exhibit P1, Attachment P1-4 are incorporated into the final plan (unless otherwise approved by ODOE) and to ensure compliance with the final Vegetation Management Plan, IPC proposes that the

Energy Facility Siting Council (EFSC or Council) include the following conditions in the site certificate:

Fish and Wildlife Condition 5: Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Vegetation Management Plan. The protective measures described in the draft Vegetation Management Plan in ASC Exhibit P1, Attachment P1-4, shall be included as part of the final Vegetation Management Plan, unless otherwise approved by the department.

Fish and Wildlife Condition 18: During construction, the certificate holder shall conduct all work in compliance with the final Vegetation Management Plan referenced in Fish and Wildlife Condition 5.

Fish and Wildlife Condition 28: During operation, the certificate holder shall conduct all work in compliance with the final Vegetation Management Plan referenced in Fish and Wildlife Condition 5.

Direct Mortality

Direct mortality to individual elk may occur as a result of collisions with Project-related vehicles during construction or operation of the Project. IPC expects this risk to be very low. Moreover, the risk can be avoided or minimized by having Project vehicles reduce their speed to a level sufficient to anticipate and avoid striking individual elk. Accordingly, to avoid or minimize direct mortality to elk, IPC proposes the following conditions in the site certificate establishing speed limits on access roads where possible:

Fish and Wildlife Condition 16: During construction, the certificate holder shall employ a speed limit of 25 miles per hour on facility access roads, unless the applicable land-management agency or landowner has designated an alternative speed limit.

Fish and Wildlife Condition 26: During operation, the certificate holder shall employ a speed limit of 25 miles per hour on facility access roads, unless the applicable land-management agency or landowner has designated an alternative speed limit.

Additionally, vehicle-wildlife collisions on Project access roads can be substantially reduced through controlling use of such roads. IPC will implement access control as set forth in the draft Road Classification Guide and Access Control Plan (Exhibit B, Attachment B-5). Access control may involve fencing, gates, barriers, and/or signage as preferred by the landowner while maintaining effectiveness. To avoid or minimize indirect impacts related to access roads, consistent with the Road Classification Guide and Access Control Plan, IPC proposes that the Council include the following condition in the site certificate providing that access control will be pursued where possible:

Fish and Wildlife Condition 27: During operation, the certificate holder shall employ access control on facility access roads within elk habitat (i.e., elk summer range and elk winter range) and sage-grouse habitat (i.e., areas of high population richness, core area habitat, low density habitat, or general habitat), subject to approval by the applicable land-management agency or landowner.

3.5.3.2 Temporary Direct Impacts

Table P3-3 summarizes the type, timing, duration, quantification metric, and mitigation measures related to the Project's potential temporary direct impacts in elk winter range and summer range.

Table P3-3. Type, Timing, Duration, Quantification Metrics, and Mitigation Measures Related to Temporary Direct Impacts to Elk and Elk Habitat

Type of Disturbance	Type of Impact	Timing of Impact	Duration of Impact	Metric to Quantify Effects on Habitat Functionality	Mitigation Measures
Temporary direct impacts from vegetation clearing (construction areas)	Temporary direct	Construction	Construction through re-vegetation	Construction area dimensions	Temporary direct impacts from vegetation clearing will be mitigated as set forth in the Reclamation and Revegetation Plan (Attachment P1-3) and the Fish and Wildlife Habitat Mitigation Plan (Attachment P1-6).
Retirement	Temporary direct	Retirement	Retirement	Similar to construction-related impacts	Similar to construction-related impacts

Temporary Direct Impacts from Vegetation Clearing

To provide for construction-related activities and installation of certain Project features, vegetation providing habitat for elk may be cleared within the Project's right-of-way. In most areas, IPC will have a 250-foot-wide ROW in which to construct the 500-kV portions of the transmission line and a 100-foot-wide ROW to construct the 138-kV portions of the line. Temporary vegetation clearing activities encompass the entire footprint of pulling and tensioning sites, multi-use areas, and light-duty fly yards. Temporary clearing activities will also occur around the perimeter of permanent Project features including transmission structures, the Longhorn station, communication stations, and access roads. Areas cleared for construction activities, and not encompassed by permanent Project features or not needed for normal transmission line operation and maintenance will be reclaimed through measures described in IPC's Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3). To ensure the protective measures set forth in the draft Reclamation and Revegetation Plan are incorporated into the final Reclamation and Revegetation Plan (unless otherwise approved by ODOE) and to ensure compliance with the final Reclamation and Revegetation Plan, IPC proposes that the Council include the following conditions in the site certificate providing for the same:

Fish and Wildlife Condition 4: *Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Reclamation and Revegetation Plan. The protective measures described in the draft Reclamation and Revegetation Plan in ASC Exhibit P1, Attachment P1-3, shall be included*

and implemented as part of the final Reclamation and Revegetation Plan, unless otherwise approved by the department.

Fish and Wildlife Condition 17: *During construction, the certificate holder shall conduct all work in compliance with the final Reclamation and Revegetation Plan referenced in Fish and Wildlife Condition 4.*

Elk habitat that is cleared for construction will be restored and the duration of the impact will not exceed the life of the Project; thus, clearing vegetation followed by restoration constitutes a temporary impact to elk habitat. While restoration of certain elk habitat (e.g., forestlands) can take decades and restoration could span generations of elk, those impacts are considered temporary because they will last less than the life of the Project which is expected to be in place indefinitely. Regardless of the duration of the impact, temporary vegetation clearing will be quantified and mitigated pursuant to the Fish and Wildlife HMP (Exhibit P1, Attachment P1-6).

Retirement

Retirement of the Project would involve activities and equipment similar to those that would be used during construction. Therefore, potential impacts on elk during retirement of the Project would be similar to the temporary impacts described for construction.

3.5.3.3 Quantifying Direct Impacts

Direct impacts were calculated for winter range and summer range using disturbance limits for construction (temporary impacts) and operation (permanent impacts) in Exhibit C, Table C-24. Temporary impacts are calculated from the edge of the permanent disturbance; thus, there is no overlap of temporary and permanent impacts. Areas of feature overlap were dissolved so that overlapping impacts were not double counted.

The indirect impacts analysis described below in Section 3.5.4.3 follows ODFW's Elk Mitigation Framework, which provides that areas up to 0.20 mile from a medium or high traffic road and 0.25 mile from a low traffic road have a 1.0 habitat disturbance (HD) value. In other words, the Framework assigns a complete loss of functional habitat value to elk within this distance band. Thus, as all functional value is assumed to be lost (and is accounted for in the indirect impacts analysis), IPC first identified areas where the 1.0 HD indirect impact buffer from existing roads or new Project roads overlapped completely the direct impact acres from Project features other than roads. The overlapping direct impact acres were summed by ODFW habitat category and subtracted from the total direct impacts calculated here. Using this method, direct impacts from Project features other than roads that occur in areas determined by the Framework to have no functional habitat value for elk are not included in the direct impacts presented below.

Direct impacts are presented for winter range and summer range separately. However, there is extensive overlap of winter range and summer range, and impacts are calculated for the overlapping ranges. The total impacts are equal to the sum of winter range and summer range minus overlapping ranges. Thus, the total impact acres does not double count overlapping ranges.

Table P3-4 sets out the direct impacts to elk winter range and summer range for the Proposed Route and Morgan Lake Alternative.³ Table P3-5 breaks down those impacts by Project feature category—i.e., work areas, access roads, and transmission line ROW.

³ The Double Mountain, West of Bombing Range Road 1, or West of Bombing Range Road 2 alternatives will each have no direct impacts to elk winter range or summer range.

Table P3-4. Direct Impacts to Elk Winter Range and Summer Range

Route	ODFW Habitat Categories (Acres)				Overlap of Winter Range and Summer Range ³		Total ⁴	
	2 Winter Range ¹		3 Summer Range ²		Temp	Perm	Temp	Perm
	Temp	Perm	Temp	Perm				
Proposed Route	237.6	178.7	43.0	89.1	43.0	68.1	237.6	199.7
Morgan Lake Alternative	76.5	13.1	51.8	9.5	51.8	9.5	76.5	13.1

¹ Winter range includes those areas normally occupied by elk from December through April (ODFW 2013).

Portions of elk winter range within elk de-emphasis areas (East Beulah and Columbia Basin management units) were removed from this analysis per guidance from ODFW.

² Summer range as defined by the M.A.P. (Measure and Prioritize) Elk Habitat Project (RMEF 1999). Portions of elk summer range within elk de-emphasis areas (East Beulah and Columbia Basin management units) were removed from this analysis per guidance from ODFW.

³ Overlap of Winter Range and Summer Range is where the area of impact occurs within both types habitat. Summer Range and Winter Range are not discrete areas.

⁴ Total = [(Winter Range + Summer Range) – (Overlap of Winter Range and Summer Range)]. Total does not double count acres.

Table P3-5. Direct Impacts to Elk Winter Range and Summer Range by Project Feature Category, after Reducing by Areas that had Existing or New Indirect Impact Habitat Disturbance Values of 1.0

ODFW Habitat Category	Project Feature	Acres Disturbed			
		Proposed Route		Morgan Lake Alternative	
		Temp	Perm	Temp	Perm
2: Winter Range ¹	Work Areas	104.6	3.7	22.1	0.5
	Access Roads	13.9	18.5	3.6	3.6
	Transmission Line	–	20.7	–	–
	<i>Category 2 Subtotal</i>	<i>118.5</i>	<i>42.9</i>	<i>25.7</i>	<i>4.1</i>
3: Summer Range ²	Work Areas	22.8	0.4	19.7	0.4
	Access Roads	1.6	2.7	3.2	3.2
	Transmission Line	–	0.1	–	–
	<i>Category 3 Subtotal</i>	<i>24.4</i>	<i>3.2</i>	<i>22.9</i>	<i>3.6</i>
Overlap of Winter Range and Summer Range ³	Work Areas	22.8	0.4	19.7	0.4
	Access Roads	1.6	2.7	3.2	3.2
	Transmission Line	–	0.1	–	–
	<i>Overlap Subtotal</i>	<i>24.4</i>	<i>3.2</i>	<i>22.9</i>	<i>3.6</i>
Total⁴	Category 2 + Category 3 – Overlap	118.5	42.9	25.7	4.1

¹ Winter range includes those areas normally occupied by elk from December through April (ODFW 2013).

Portions of elk winter range within elk de-emphasis areas (East Beulah and Columbia Basin management units) were removed from this analysis per guidance from ODFW.

² Summer range as defined by the M.A.P. (Measure and Prioritize) Elk Habitat Project (RMEF 1999). Portions of elk summer range within elk de-emphasis areas (East Beulah and Columbia Basin management units) were removed from this analysis per guidance from ODFW.

³ Overlap of Winter Range and Summer Range is where the area of impact occurs within both types habitat. Summer Range and Winter Range are not discrete areas.

⁴ Total = [(Winter Range + Summer Range) – (Overlap of Winter Range and Summer Range)]. Total does not double count acres.

Elk Winter Range

For the Proposed Route, direct impacts to elk winter range include 178.7 acres of permanent direct impacts and 237.6 acres of temporary direct impacts (Table P3-4).

The Morgan Lake Alternative will include 13.1 acres of permanent direct impacts and 76.5 acres of temporary direct impacts (Table P3-4).

Elk Summer Range

For the Proposed Route, direct impacts to elk summer range include 89.1 acres of permanent direct impacts and 43.0 acres of temporary direct impacts (Table P3-4).

The Morgan Lake Alternative will include 9.5 acres of permanent direct impacts and 51.8 acres of temporary direct impacts (Table P3-4).

3.5.4 Indirect Impacts

Indirect impacts are defined as the impacts that will have an adverse effect upon elk habitat or elk individuals, and that will occur later in time or in a different place than the Project activities. Indirect impacts may be permanent or temporary. Permanent impacts will exist for the entire life of the Project. Temporary impacts are those impacts that will last for a time less than the life of the Project.

3.5.4.1 Permanent Indirect Impacts

Table P3-6 summarizes the type, timing, duration, quantification metric, and mitigation measures related to the Project's potential permanent indirect impacts in elk winter range and summer range.

Table P3-6. Type, Timing, Duration, Quantification Metrics, and Mitigation Measures Related to Permanent Indirect Impacts to Elk and Elk Habitat

Type of Disturbance	Type of Impact	Timing of Impact	Duration of Impact	Metric to Quantify Effects on Habitat Functionality	Mitigation Measures
Permanent indirect impacts from the transmission line	Permanent indirect	Operation	Life of the Project	Not quantified – no or de minimis impacts expected; there is no reasonable and accepted methodology for quantifying these impacts	None.
Permanent indirect impacts from the access roads	Permanent indirect	Operation	Life of the Project	As calculated using the approach set forth in Oregon's Elk Mitigation Framework	Permanent indirect impacts from the access roads will be mitigated by implementing speed limits; controlling access on Project roads within elk habitat, subject to approval by the relevant land management agency or landowner; and implementing the Fish and Wildlife Habitat Mitigation Plan (Attachment P1-6).

Permanent Indirect Impacts from the Transmission Line

Once constructed, the transmission line is not expected to limit the movement or distribution of elk. Elk are expected to readily pass under transmission lines and associated structures. Therefore, there will be no permanent indirect impacts related to the transmission line itself and no mitigation is required.

Permanent Indirect Impacts from the Access Roads

New and substantially modified existing access roads are not expected to act as a barrier to elk movement. However, the introduction of traffic (i.e., motorized on- or off-road vehicles) and the presence of human activity on roads used for the Project potentially will have negative indirect impacts on elk (see ODFW 2015). The indirect impacts may include reduced utilization of habitat, fragmentation of migration corridors, and the associated disruption of important elk life processes. These potential impacts can be substantially reduced through the implementation of a traffic management plan and spatial and temporal restrictions (ODFW 2015). Accordingly, as discussed above, IPC will implement speed limits and access control to minimize the effects that roads have on elk habitat.

Furthermore, IPC will provide mitigation for permanent indirect impacts resulting from the access roads as set forth in the Fish and Wildlife HMP (Exhibit P1, Attachment P1-6). As discussed in the plan, Oregon has developed a methodology in its Elk Mitigation Framework for quantifying indirect impacts to elk habitat resulting from roads (see below Section 3.5.4.3). To quantify the indirect impacts from the access roads, IPC will use the methods set forth in the Elk Mitigation Framework, as discussed in in the Fish and Wildlife HMP.

3.5.4.2 Temporary Indirect Impacts

Table P3-7 summarizes the type, timing, duration, quantification metric, and mitigation measures related to the Project's potential temporary indirect impacts in elk winter range and summer range.

Table P3-7. Type, Timing, Duration, Quantification Metrics, and Mitigation Measures Related to Temporary Indirect Impacts to Elk and Elk Habitat

Type of Disturbance	Type of Impact	Timing of Impact	Duration of Impact	Metric to Quantify Effects on Habitat Functionality	Mitigation Measures
Temporary indirect impacts from access roads	Temporary indirect	Construction	Construction	Not quantified – no or de minimis impacts expected; there is no reasonable and accepted methodology for quantifying these impacts.	Temporary indirect impacts from access roads will be mitigated by implementing speed limits and controlling access on Project roads within elk habitat, subject to approval by the relevant land management agency or landowner; and implementing certain seasonal and spatial restrictions, subject to ODOE-approved variances.
Temporary indirect impacts from invasive species	Temporary direct	Construction	Construction through re-vegetation	Not quantified – no or de minimis impacts expected; there is no reasonable and accepted methodology for quantifying these impacts.	Temporary indirect impacts from invasive species will be avoided, minimized or mitigated as set forth in the Noxious Weed Plan (Attachment P1-5) and Reclamation and Revegetation Plan (Attachment P1-3).

Temporary Indirect Impacts from the Access Roads

Construction activities will result in noise, visual disturbance from heavy equipment, traffic and people, fugitive dust dispersing from the immediate construction area, and small amounts of air pollution from construction equipment's exhaust. Indirect construction impacts may also include an increased risk for the spread or establishment of invasive-plant species (which can degrade habitats and exclude native species from areas), and increased access to areas previously inaccessible to the public due to the construction of project-related roads (which can further degrade habitats as a result of increased human presence). These activities can impact elk behavior in areas beyond the Project construction areas. For example, the habitat near the construction areas may temporarily be unsuitable during the construction period. Noise would likely have the farthest-reaching effect (i.e., the effect of noise would extend farther from construction sites than dust or other disturbances). Some construction activities would likely result in sound levels beyond baseline ambient levels, with a maximum instantaneous predicted noise level of 80 to 90 A-weighted decibels at 50 feet from the work site. Increases in noise would be concurrent with any disturbance associated with the presence of humans and their activities (e.g., dust, visual disturbances, etc.). Research conducted in northeast Oregon at the Starkey Experimental Forest and Range (EFR) station found that elk avoid habitats close to roads during times of probable human use (Wisdom 1998; Millsbaugh 1999; Ager et al. 2003) and where traffic rates are higher than areas with low traffic (Wisdom 1998; Johnson et al. 2000; Ager et al. 2003). Additional research conducted at the Starkey EFR station suggests that elk avoidance of habitat adjacent to roads varies with the amount of daily traffic (Wisdom et al. 2004). Thus, Project construction activities may affect elk and reduce the functionality of habitat at varying distances from the construction areas. These disturbances could render habitats unsuitable for a limited period of time, with disturbances ceasing once construction or maintenance activities have ceased. IPC expects these impacts to be low. Even so, to avoid or minimize these impacts, IPC will implement speed limits and access control on Project roads in elk habitat, where possible.

Further, IPC will comply with certain spatial and timing restrictions near sensitive elk habitat, which would limit the construction window to time periods when elk are less sensitive to disturbances. IPC may seek exceptions to said timing restrictions if site conditions allow and subject to ODOE approval. For example, if elk are not using the sensitive habitat, IPC may request permission to start work in the area sooner than what would normally be allowed. IPC proposes the following site certificate conditions providing for the same:

Fish and Wildlife Condition 10: *During construction, the certificate holder shall not conduct ground-disturbing activities within elk or mule deer winter range between December 1 to March 31. Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder's request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to elk and mule deer in the relevant area.*

Fish and Wildlife Condition 15: *During construction, the certificate holder shall flag the following environmentally sensitive areas as restricted work zones:*

- a. State protected plant species;*
- b. Wetlands and waterways that are not authorized for construction impacts;*
- c. Areas with active spatial and seasonal restrictions; and*
- d. Category 1 habitat.*

The certificate holder shall submit a mapset showing the location of environmentally sensitive areas and restricted work zones to the department for

its approval. The certificate holder shall make the mapset available to all construction personnel.

IPC will develop a set of maps that depict the extent of spatial and temporal restriction areas within the analysis area. These maps will be maintained at the Project site to ensure construction workers are aware if and when their activities will occur within sensitive elk habitat and that the spatial and temporal restrictions discussed above would apply.

Temporary Invasive Species Impacts

The initial clearing of vegetation and resulting soil disturbance during construction could create optimal conditions for the establishment of invasive-plant species. The establishment of invasive-plant species can affect the quality of wildlife habitat through competition with, and the eventual replacement of desirable native plant species (Westbrook 1998). The replacement of native plant species with invasive species can have various environmental effects on wildlife habitat, including changes in fire regime (e.g., increasing the frequency and severity of fires), changes in the nutrient regime of soils (thereby reducing the quality of forage species), increased soil erosion (resulting in additional loss of vegetated areas, as well as sedimentation to aquatic habitats), or reductions in the abundance of important forage species (due to invasive species excluding them from the area). These alterations to habitat quality can extend beyond the area of initial impacts (e.g., fires and/or invasive-plant species can spread to areas far beyond the initial disturbance/ignition). To avoid or minimize the risk of invasive-plant species spread or establishment, IPC will implement the Noxious Weed Plan (Exhibit P1, Attachment P1-5) and Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3). IPC proposes that the Council include the following conditions in the site certificate regarding the Noxious Weed Plan:

Fish and Wildlife Condition 6: *Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Noxious Weed Plan. The protective measures as described in the draft Noxious Weed Plan in ASC Exhibit P1, Attachment P1-5, shall be included and implemented as part of the final Noxious Weed Plan, unless otherwise approved by the department.*

Fish and Wildlife Condition 19: *During construction, the certificate holder shall conduct all work in compliance with the final Noxious Weed Plan referenced in Fish and Wildlife Condition 6.*

Fish and Wildlife Condition 29: *During operation, the certificate holder shall conduct all work in compliance with the final Noxious Weed Plan referenced in Fish and Wildlife Condition 6.*

3.5.4.3 Quantifying Indirect Impacts

IPC calculated the quantity of indirect impacts related to the Project access roads using the methods set forth in the Elk Mitigation Framework. The Framework provides that the area of indirect impact depends on the increase in traffic volume compared to the baseline traffic volume of an existing road. Table P3-8 comes from the Elk Mitigation Framework and it provides that the higher the increase in traffic volume during operation, the larger the disturbance buffer, which is applied from the road centerline.

Table P3-8. Disturbance Buffers Based on Traffic Rate

Road Type and Status (Daily Rate Averaged over Any 30-day Period)	Disturbance Buffer (miles)
Very Low – 0 - 1 vehicle increase	None
Low Traffic – 2 - <4 vehicle increase	0.25
Moderate Traffic – 4 - <10 vehicle increase	0.5
High Traffic – >10 vehicle increase	1.0

Source: Elk Mitigation Framework, p.4.

The disturbance buffer is then broken down into disturbance bands that have a corresponding HD weight (specified as percent habitat disturbance). The habitat disturbance weightings are multipliers used to calculate the number of acres that will be required for mitigation. Table P3-9 presents the HD values associated with low, moderate, and high traffic volume.

Table P3-9. Habitat Disturbance Value for Roads

High Traffic Roads Distance (mi)	Moderate Traffic Roads Distance (mi)	Low Traffic Roads Distance (mi)	Percent Habitat Disturbance (HD)
0.00 – 0.25	0.00 – 0.20	0.00 – 0.25	1.00
0.25 – 0.50	0.20 – 0.30		0.80
0.50 – 0.75	0.30 – 0.40		0.40
0.75 – 1.00	0.40 – 0.50		0.20

Source: Elk Mitigation Framework, p.4.

To best evaluate the potential for traffic volume, U.S. Department of Agriculture National Agriculture Imagery Program imagery was examined and all roads within 2 miles of Project features were reviewed, resulting in a review of roads over 830 square miles. As traffic data are unavailable for roads in the analysis area, the following assumptions were used to classify roads for impacts analysis:

1. Paved roads = High traffic (10+ vehicles per day)
2. Unpaved gravel/dirt roads = Moderate traffic (4-9 vehicles per day)
3. Two tracks/unpaved roads with clear substrate difference between wheel tracks = Low traffic (2-3 vehicles per day)
4. Gated unpaved roads = Very Low traffic (0-1 vehicles per day)
5. No road evidence from aerial imagery = removed from dataset

Roads clearly within a town or city environment will be identified as High traffic roads, regardless of substrate. On November 8, 2017, ODOE informed IPC that ODOE and ODFW concurred with the above proposed road classification.

IPC will conduct a traffic study to evaluate pre- and post-construction traffic on public roads used for the Project. The traffic study will be conducted for one year in the year prior to construction, and for one year during the second year the Project is in operation to most accurately characterize traffic patterns. IPC's approach to identifying which Project road segments are included in the Site Boundary, and accordingly in the impact analysis, is set forth in Attachment B-5 of Exhibit B. Road segments where access control currently exists or can be successfully implemented will not have indirect impacts on elk habitat. Absent traffic rate data, IPC assumed that the traffic volume for new Project roads was in the low category. For existing roads that are used for the Project, IPC assumed that the traffic volume from the Project would not increase the traffic volume to the next category. To ensure compliance with the traffic

monitoring program, IPC proposes that the Council include the following conditions in the site certificate providing that IPC will monitor traffic volumes in elk habitat:

Fish and Wildlife Condition 3: *Prior to construction, the certificate holder shall conduct a one-year traffic study in elk habitat (i.e., elk summer range and elk winter range) and sage-grouse habitat (i.e., areas of high population richness, core area habitat, low density habitat, or general habitat). The certificate holder shall submit the traffic study to the Department for its approval.*

Fish and Wildlife Condition 23: *During the second year of operation, the certificate holder shall conduct a one-year traffic study in elk habitat (i.e., elk summer range and elk winter range) and sage-grouse habitat (i.e., areas of high population richness, core area habitat, low density habitat, or general habitat).*

Fish and Wildlife Condition 24: *During the third year of operation, the certificate holder shall provide to the Department a report demonstrating that fish and wildlife habitat mitigation shall be commensurate with the final compensatory mitigation calculations.*

a. The final calculations shall be based on the as-constructed facility.

b. Oregon's Elk Mitigation Framework shall be used to calculate the amount of elk habitat compensatory mitigation required for the facility, and the information from the pre- and post-construction traffic studies shall be used in the calculation.

To quantify the acres of indirect impacts to elk winter range and summer range, the assumed baseline traffic volume was evaluated against assumed traffic volume during operation. To calculate indirect impacts from new Project roads, the increase in traffic volume was compared to a baseline of zero. Thus, new Project roads with a low traffic volume increased the baseline from zero vehicles per day to two to less than four vehicles per day. Disturbance impacts from existing roads are considered realized and no new indirect impacts are calculated where the HD of the existing road exceed the HD of the new road. To calculate indirect impacts to existing roads used for the Project, the increase in traffic volume is evaluated against the existing traffic volume and new impacts are calculated only where the HD of the new volume exceeds the HD of the existing volume.

Further, direct impact areas are treated as resulting in a complete loss of functional value, or having an impact akin to an HD value of 1.00. In order not to double count direct and indirect impacts above a complete loss of functional value HD greater than 1.0, IPC did not include indirect impact acres within an HD band less than 1.0 if those acres were already accounted for by a direct impact acre.

Figure P3-2 provides an example of how IPC applied the distance bands and calculated the indirect impacts for Project roads. Attachment P3-1 shows the same analysis as Figure P3-2 but for the entire length of the Proposed Route in elk winter range and summer range.

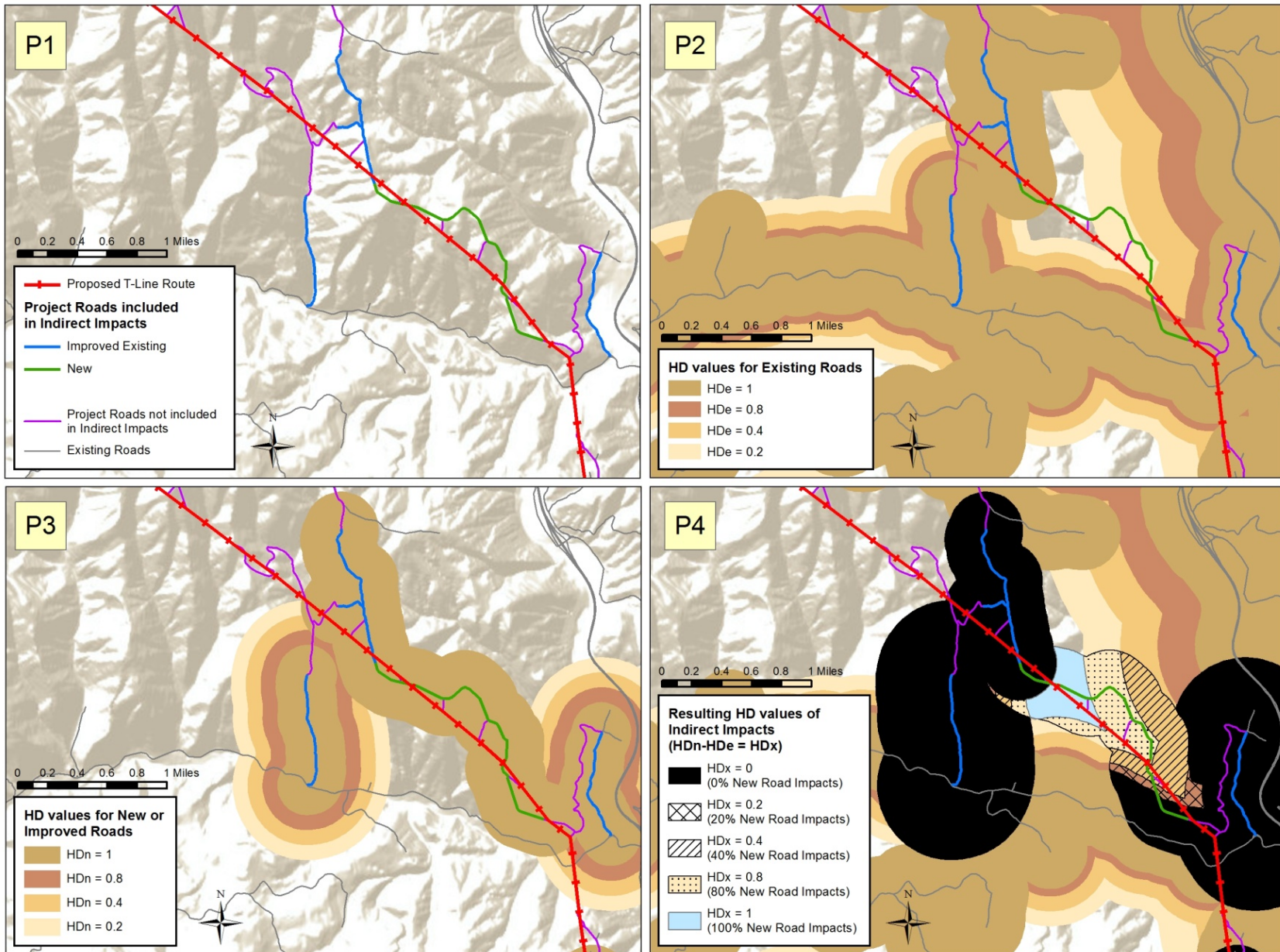


Figure P3-2. Indirect Impacts Calculation Example

With the Proposed Route, 119.27 miles out of a total of 751 miles of new and existing roads are within elk winter range or summer range. A total of 27.88 miles of those roads do not have proposed access control and therefore are included in the indirect impact calculation. The roads with access control are not included.

For the Morgan Lake Alternative, 31.06 of 59 miles of new and existing roads are within elk winter range or summer range, of which 8.5 miles of new and existing roads do not have proposed access control and therefore are included in the indirect impact calculation. The roads with access control are not included.

Table P3-10 identifies the number of miles of Project roads within elk winter range and summer range. Table P3-11 sets forth the indirect impact calculations based on the Elk Mitigation Framework methodology.

Table P3-10. Miles of Project Roads within Elk Winter Range and Summer Range

Route or Segment	Road Type	ODFW Habitat Categories		Overlap of Winter Range and Summer Range ³ (Miles)	Total ⁴ Miles
		2 - Winter Range ¹ (Miles)	3 - Summer Range ² (Miles)		
Proposed Route	New Roads, included in indirect impacts	2.63	1.69	0.00	4.32
	Substantially Modified Roads, included in indirect impacts	15.28	10.18	1.89	23.57
	New and Substantially Modified Roads, not included in indirect impacts	87.61	24.33	20.54	91.39
Morgan Lake Alternative	New Roads, included in indirect impacts	2.42	2.42	2.42	2.42
	Substantially Modified Roads, included in indirect impacts	4.43	6.05	4.43	6.05
	New and Substantially Modified Roads, not included in indirect impacts	19.97	18.61	15.99	22.59

¹ Source: ODFW 2013. Portions of elk winter range within elk de-emphasis areas (East Beulah and Columbia Basin management units) were removed from this analysis per guidance from ODFW.

² Source: RMEF 1999. Portions of elk summer range within elk de-emphasis areas (East Beulah and Columbia Basin management units) were removed from this analysis per guidance from ODFW.

³ Overlap of Winter Range and Summer Range is where the area of impact occurs within both types habitat. Summer Range and Winter Range are not discrete areas.

⁴ Total = [(Winter Range + Summer Range) – (Overlap of Winter Range and Summer Range)]. Total does not double count acres or miles.

Table P3-11. Indirect Impacts Calculations for Elk Winter Range and Summer Range

Route	Habitat	Disturbance Band	Habitat Distance Value (HD)	Weighted Indirect Impacts of the Project (acres)	Weighted Indirect Impacts of Existing Roads that Overlap the Project's Indirect Impacts (acres)	Indirect Impacts of the Project, Taking into Account Existing Road Impacts (acres)
Proposed Route, New Roads	Winter Range ¹	0-0.25	1	1,287.43	887.18	400.25
	Summer Range ²	0-0.25	1	1,015.32	1,015.32	0.00
	Overlap of Winter and Summer Range ³	0-0.25	1	7.17	7.17	0.00
	Total⁴			2,295.58	1,895.33	400.25
Proposed Route, Substantially Modified Roads	Winter Range ¹	0-0.25	1	5,699.94	5,699.94	0.00
	Summer Range ²	0-0.25	1	3,094.49	3,094.49	0.00
	Overlap of Winter and Summer Range ³	0-0.25	1	556.17	556.17	0.00
	Total⁴			8,372.80	8,372.80	0.00
Morgan Lake Alternative, New Roads	Winter Range ¹	0-0.25	1	1,367.24	1,349.98	17.26
	Summer Range ²	0-0.25	1	1,319.90	1,304.13	15.77

Route	Habitat	Disturbance Band	Habitat Distance Value (HD)	Weighted Indirect Impacts of the Project (acres)	Weighted Indirect Impacts of Existing Roads that Overlap the Project's Indirect Impacts (acres)	Indirect Impacts of the Project, Taking into Account Existing Road Impacts (acres)
	Overlap of Winter and Summer Range ³	0-0.25	1	1,268.43	1,252.66	15.77
	Total⁴			1,418.71	1,401.45	17.26
Morgan Lake Alternative, Substantially Modified Roads	Winter Range ¹	0-0.25	1	1,400.25	1,400.25	0.00
	Summer Range ²	0-0.25	1	1,848.06	1,848.06	0.00
	Overlap of Winter and Summer Range ³	0-0.25	1	1,400.08	1,400.08	0.00
	Total⁴			1,848.22	1,848.22	0.00

¹ Source: ODFW 2013. Portions of elk winter range within elk de-emphasis areas (East Beulah and Columbia Basin management units) were removed from this analysis per guidance from ODFW.

² Source: RMEF 1999. Portions of elk summer range within elk de-emphasis areas (East Beulah and Columbia Basin management units) were removed from this analysis per guidance from ODFW.

³ Overlap of Winter Range and Summer Range is where the area of impact occurs within both types habitat. Summer Range and Winter Range are not discrete areas.

⁴ Total = [(Winter Range + Summer Range) – (Overlap of Winter Range and Summer Range)]. Total does not double count acres or miles.

Elk Winter Range

For the Proposed Route, 2.63 miles of new access roads and 15.28 miles of substantially modified existing roads are included in the elk winter range indirect impact analysis (Table P3-10). Indirect impacts related to new roads will be 400.25 acres. There are no indirect impacts resulting from substantially modified existing roads (Table P3-11).

For the Morgan Lake Alternative, 2.42 miles of new access roads and 4.43 miles of substantially modified existing roads are included in the elk winter range indirect impact analysis (Table P3-10). Indirect impacts related to new roads will be 17.26 acres. There are no indirect impacts resulting from substantially modified existing roads (Table P3-11).

Elk Summer Range

For the Proposed Route, 1.69 miles of new access roads and 10.18 miles of substantially modified existing roads without access control (Table P3-10). There are no indirect impacts resulting from new roads or substantially modified existing roads (Table P3-11).

For the Morgan Lake Alternative, indirect impacts to elk summer range include 2.42 miles of new access roads and 6.05 miles of substantially modified existing roads are included in the elk winter range indirect impact analysis (Table P3-10). Indirect impacts related to new roads will be 15.77 acres. There are no indirect impacts resulting from substantially modified existing roads (Table P3-11).

3.5.5 Measures to Avoid, Reduce, or Mitigate Adverse Effects

OAR 345-021-0010(1)(p)(G): A description of any measures proposed by the applicant to avoid, reduce or mitigate the potential adverse impacts described in (F) in accordance with the ODFW mitigation goals described in OAR 635-415-0025 and a discussion of how the proposed measures would achieve those goals.

This section describes the avoidance, minimization, and mitigation measures that have been and will be implemented to avoid, reduce, or mitigate potential adverse impacts to fish and wildlife habitat and State Sensitive species, and discusses how the proposed measures achieve ODFW habitat mitigation goals. Mitigation is further discussed in the Fish and Wildlife Habitat Management Plan (Attachment P1-6).

3.5.5.1 Avoidance and Minimization Measures Common to All Fish and Wildlife Habitats and State Sensitive Species

Project Design

During initial routing of the Project, avoidance of sensitive resources related to fish and wildlife habitat and State Sensitive species was taken into consideration by IPC. Applicable sensitive resource areas that were avoided to the extent practical during the initial siting process included, but were not limited to:

- BLM-designated areas of critical environmental concern;
- BLM-designated wilderness study areas;
- Waterbodies and wetlands, including wild and scenic rivers and streams with special status species;
- U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration Fisheries Division critical habitats for federal Endangered Species Act-listed species;

- Areas with sensitive wildlife resources, such as Washington ground squirrel (WAGS) colonies and raptor nests;
- United States Forest Service–designated inventoried roadless areas; and
- Category 1 WAGS and State Sensitive wildlife habitat on the Naval Weapons Systems Training Facility Boardman.

To minimize impacts, the Project was designed to follow existing developments and utility corridors, such as existing roads and power lines, to the extent practical in order to consolidate impacts of the proposed line in areas that have already been disturbed, as opposed to impacting undisturbed areas.

IPC also conducted extensive public outreach, in the form of the Community Advisory Process, as well as consulting with land-managing agencies regarding possible route locations for the Project. A route that completely avoided impacts to all sensitive resources was not possible due to the distribution of sensitive resources across the landscape, and as avoidance of one sensitive resource can often result in the route becoming located within range of another sensitive resource (e.g., avoiding forested habitats can result in the route passing through more shrubland habitats) input from the public and land-managing agencies resulted in alternative routes that weight avoidance of one resource against another. Documentation of the siting process is available in Exhibit B. Details regarding the siting process and the constraints considered during the development of the proposed and alternative routes are presented in the Project Siting Studies (IPC 2010, 2012, 2015 [Attachments B-1, B-2, and B-4 in Exhibit B]).

Environmental Training

Construction personnel will attend mandatory training on protection of environmental resources, as well as the need to adhere to all applicable restrictions and permit requirements. The training will ensure that all Project personnel understand and are aware of the environmental requirements, protection measures, and compliance. To ensure compliance with the environmental training program, IPC proposes that the Council include the following condition in the site certificate providing that IPC will ensure all Project personnel are trained on environmental matters:

Fish and Wildlife Condition 9: *Prior to construction, the certificate holder shall train all construction personnel on the protection of cultural, paleontological, ecological, and other natural resources such as (a) federal and state laws regarding antiquities, paleontological resources, and plants and wildlife, including collection and removal; (b) the importance of these resources; (c) the purpose and necessity of protecting them; and (d) reporting and procedures for stop work.*

Access Control

As discussed above, IPC is proposing a site certificate condition intended to minimize disturbance to elk habitat by implementing access control on Project access roads in elk summer and winter range where possible.

3.5.5.2 Elk-Specific Avoidance and Minimization Measures

Project Design

In addition to the avoidance and minimization measures described above common to fish and wildlife species, IPC has implemented or will implement several measures specific to State Sensitive wildlife species and Category 1 and 2 wildlife habitats. During initial siting, IPC considered Category 2 elk winter range, among other things, as a siting constraints. IPC

attempted to avoid such habitat to the extent feasible. However, due to siting constraints imposed by other sensitive resources (discussed in detail in Exhibit B), avoidance of elk winter range has required balancing various sensitive resources.

Seasonal Restrictions

As discussed above, IPC is proposing a site certificate condition to incorporate by reference certain seasonal and spatial restrictions to protect to elk winter range.

3.5.6 Monitoring Plan

OAR 345-021-0010(1)(p)(H): A description of the applicant's proposed monitoring plans to evaluate the success of the measures described in (G).

IPC will conduct reclamation monitoring surveys for a 3-year period following the conclusion of ground-disturbing activities; if pre-designated success criteria are not met after 3 years, any necessary re-vegetation efforts (as applicable) will be conducted and monitoring will continue for up to an additional 2 years. Successful revegetation will be determined by monitoring reclaimed areas and comparing them to preconstruction conditions. The Reclamation and Revegetation Plan (Attachment P1-3) contains a description of monitoring and reclamation success standards that will be implemented to determine whether post-construction revegetation efforts have been successful.

IPC will also monitor mitigation actions to determine if mitigation performance measures have been met at habitat mitigation areas. The Fish and Wildlife HMP (Attachment P1-6) discusses habitat mitigation actions, and will identify monitoring of those actions. In addition, as described in Exhibit BB, Attachment BB-3, any stream crossing structure put in place for the Project will be inspected for status within a week of any high-flow event during Project construction.

Finally, IPC will monitor traffic volumes within elk winter range and summer range for one year prior to construction and for one year during the second year of operation.

4.0 IDAHO POWER'S PROPOSED SITE CERTIFICATE CONDITIONS

IPC proposes the following site certificate conditions to ensure compliance with the Fish and Wildlife Habitat Standard as it applies to elk habitat.

Prior to Construction

Fish and Wildlife Condition 3: Prior to construction, the certificate holder shall conduct a one-year traffic study in elk habitat (i.e., elk summer range and elk winter range) and sage-grouse habitat (i.e., areas of high population richness, core area habitat, low density habitat, or general habitat). The certificate holder shall submit the traffic study to the Department for its approval.

Fish and Wildlife Condition 4: Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Reclamation and Revegetation Plan. The protective measures described in the draft Reclamation and Revegetation Plan in ASC Exhibit P1, Attachment P1-3, shall be included and implemented as part of the final Reclamation and Revegetation Plan, unless otherwise approved by the department.

Fish and Wildlife Condition 5: Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Vegetation Management Plan. The protective measures described in the draft Vegetation

Management Plan in ASC Exhibit P1, Attachment P1-4, shall be included as part of the final Vegetation Management Plan, unless otherwise approved by the department.

Fish and Wildlife Condition 6: Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Noxious Weed Plan. The protective measures as described in the draft Noxious Weed Plan in ASC Exhibit P1, Attachment P1-5, shall be included and implemented as part of the final Noxious Weed Plan, unless otherwise approved by the department.

Fish and Wildlife Condition 7: Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Fish and Wildlife Habitat Mitigation Plan.

- a. The final Fish and Wildlife Habitat Mitigation Plan shall include the following, unless otherwise approved by the department:
- i. The areas that were surveyed for biological resources;
 - ii. The location of all facility components and related and supporting facilities;
 - iii. The areas that will be permanently and temporarily disturbed during construction;
 - iv. The protective measures described in the draft Fish and Wildlife Habitat Mitigation Plan in ASC Exhibit P, Attachment P-6; and
 - v. The results of the biological surveys referenced in Fish and Wildlife Condition 1 and Fish and Wildlife Condition 2.
- b. The final Fish and Wildlife Habitat Mitigation Plan shall address the potential habitat impacts through mitigation banking, an in-lieu fee program, development of mitigation projects by the certificate holder, or a combination of the same.
- i. To the extent the certificate holder shall develop its own mitigation projects, the final Habitat Mitigation Plan shall:
 1. Identify the location of each mitigation site, including a map of the same;
 2. Identify the number of credit-acres that each mitigation site will provide for the certificate holder;
 3. Include a site-specific mitigation management plan for each mitigation site that provides for:
 - A. A baseline ecological assessment;
 - B. Conservation actions to be implemented at the site;
 - C. An implementation schedule for the baseline ecological assessment and conservation actions;
 - D. Performance measures;
 - E. A reporting plan; and
 - F. A monitoring plan.
 - ii. To the extent the certificate holder shall utilize a mitigation bank or in-lieu fee program, the final Habitat Mitigation Plan shall:
 1. Describe the nature, extent, and history of the mitigation bank or in-lieu fee program; and
 2. Identify the number of credit-acres that each mitigation site will provide for the certificate holder.
- c. Oregon's Elk Mitigation Framework shall be used to calculate the amount of elk habitat compensatory mitigation required for the facility.
- d. The final Fish and Wildlife Habitat Mitigation Plan may be amended from time to time by agreement of the certificate holder and the Department. Such

amendments may be made without amendment to the site certificate. The Council authorizes the department to agree to amendments of the plan and to mitigation actions that may be required under the plan; however, the Council retains the authority to approve, reject, or modify any amendment of the plan agreed to by the department.

Fish and Wildlife Condition 9: Prior to construction, the certificate holder shall train all construction personnel on the protection of cultural, paleontological, ecological, and other natural resources such as (a) federal and state laws regarding antiquities, paleontological resources, and plants and wildlife, including collection and removal; (b) the importance of these resources; (c) the purpose and necessity of protecting them; and (d) reporting and procedures for stop work.

During Construction

Fish and Wildlife Condition 10: During construction, the certificate holder shall not conduct ground-disturbing activities within elk or mule deer winter range between December 1 to March 31. Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder's request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to elk and mule deer in the relevant area.

Fish and Wildlife Condition 15: During construction, the certificate holder shall flag the following environmentally sensitive areas as restricted work zones:

- a. State protected plant species;
- b. Wetlands and waterways that are not authorized for construction impacts;
- c. Areas with active spatial and seasonal restrictions; and
- d. Category 1 habitat.

The certificate holder shall submit a mapset showing the location of environmentally sensitive areas and restricted work zones to the department for its approval. The certificate holder shall make the mapset available to all construction personnel.

Fish and Wildlife Condition 16: During construction, the certificate holder shall employ a speed limit of 25 miles per hour on facility access roads, unless the applicable land-management agency or landowner has designated an alternative speed limit.

Fish and Wildlife Condition 17: During construction, the certificate holder shall conduct all work in compliance with the final Reclamation and Revegetation Plan referenced in Fish and Wildlife Condition 4.

Fish and Wildlife Condition 18: During construction, the certificate holder shall conduct all work in compliance with the final Vegetation Management Plan referenced in Fish and Wildlife Condition 5.

Fish and Wildlife Condition 19: During construction, the certificate holder shall conduct all work in compliance with the final Noxious Weed Plan referenced in Fish and Wildlife Condition 6.

Fish and Wildlife Condition 20: During construction, the certificate holder shall commence implementation of the conservation actions set forth in the final Fish and Wildlife Habitat Mitigation Plan referenced in Fish and Wildlife Condition 7.

During the Second Year of Operation

Fish and Wildlife Condition 23: During the second year of operation, the certificate holder shall conduct a one-year traffic study in elk habitat (i.e., elk summer range and elk winter range) and sage-grouse habitat (i.e., areas of high population richness, core area habitat, low density habitat, or general habitat).

During the Third Year of Operation

Fish and Wildlife Condition 24: During the third year of operation, the certificate holder shall provide to the Department a report demonstrating that fish and wildlife habitat mitigation shall be commensurate with the final compensatory mitigation calculations.

- a. The final calculations shall be based on the as-constructed facility.
- b. Oregon's Elk Mitigation Framework shall be used to calculate the amount of elk habitat compensatory mitigation required for the facility, and the information from the pre- and post-construction traffic studies shall be used in the calculation.

During Operation

Fish and Wildlife Condition 26: During operation, the certificate holder shall employ a speed limit of 25 miles per hour on facility access roads, unless the applicable land-management agency or landowner has designated an alternative speed limit.

Fish and Wildlife Condition 27: During operation, site certificate holder shall employ access control on facility access roads within elk habitat (i.e., elk summer range and elk winter range) and sage-grouse habitat (i.e., areas of high population richness, core area habitat, low density habitat, or general habitat), subject to approval by the applicable land-management agency or landowner.

Fish and Wildlife Condition 28: During operation, the certificate holder shall conduct all work in compliance with the final Vegetation Management Plan referenced in Fish and Wildlife Condition 5.

Fish and Wildlife Condition 29: During operation, the certificate holder shall conduct all work in compliance with the final Noxious Weed Plan referenced in Fish and Wildlife Condition 6.

5.0 CONCLUSION

Exhibit P3—together with Exhibit P1—includes the application information provided for in OAR 345-021-0010(1)(p). Additionally, Exhibits P3 and P1 demonstrate that the design, construction, and operations of the Project, taking into account mitigation, will be consistent with ODFW's Habitat Mitigation Goals and Standards contained in OAR 635-415-0025.

6.0 COMPLIANCE CROSS-REFERENCES

Table P3-12 identifies the location within the application for site certificate of the information responsive to the application submittal requirements in OAR 345-021-0010(1)(p), the Fish and Wildlife Standard at OAR 345-022-0060, and the relevant Second Amended Project Order provisions, as those requirements apply to species other than greater sage-grouse, which is addressed in Exhibit P2.

Table P3-12. Compliance Requirements and Relevant Cross-References

Requirement	Location
OAR 345-021-0010(1)(p)	
Exhibit P. Information about the fish and wildlife habitat and the fish and wildlife species, other than the species addressed in subsection (q) that could be affected by the proposed facility, providing evidence to support a finding by the Council as required by OAR 345-022-0060. The applicant shall include:	
(A) A description of biological and botanical surveys performed that support the information in this exhibit, including a discussion of the timing and scope of each survey.	Exhibit P3, Section 3.2; Exhibit P1, Section 3.2, Attachments P1-2 and P1-7A, and P1-7B
(B) Identification of all fish and wildlife habitat in the analysis area, classified by the habitat categories as set forth in OAR 635-415-0025 and a description of the characteristics and condition of that habitat in the analysis area.	Exhibit P3, Section 3.3; Exhibit P1, Section 3.3.1 and 3.2.2 and Attachment P1-1
(C) A map showing the locations of the habitat identified in (B).	Exhibit P3, Section 3.3.3; Exhibit P1, Section 3.3.3 and Attachment P1-8
(D) Based on consultation with the Oregon Department of Fish and Wildlife (ODFW) and appropriate field study and literature review, identification of all State Sensitive Species that might be present in the analysis area and a discussion of any site-specific issues of concern to ODFW.	Exhibit P3, Section 3.4; Exhibit P1, Section 3.4 and Attachments P1-7A and P1-7B
(E) A baseline survey of the use of habitat in the analysis area by species identified in (D) performed according to a protocol approved by the Department and ODFW.	Exhibit P3, Section 3.2; Exhibit P1, Section 3.2, Attachments P1-2 and P1-7A and P1-7B
(F) A description of the nature, extent and duration of potential adverse impacts on the habitat identified in (B) and species identified in (D) that could result from construction, operation and retirement of the proposed facility.	Exhibit P3, Section 3.5; Exhibit P1, Sections 3.5.1, 3.5.2, 3.5.3, 3.5.4, and 3.5.5

Requirement	Location
(G) A description of any measures proposed by the applicant to avoid, reduce or mitigate the potential adverse impacts described in (F) in accordance with the ODFW mitigation goals described in OAR 635-415-0025 and a discussion of how the proposed measures would achieve those goals.	Exhibit P3, Section 3.5.5; Exhibit P1, Sections 3.5.6, Section 4, , Attachments P1-3, P1-4, P1-5, P1-6, and P1-9
(H) A description of the applicant's proposed monitoring plans to evaluate the success of the measures described in (G).	Exhibit P3, Section 3.5.6; Exhibit P1, Section 3.5.7, Attachments P1-3, P1-4, P1-5, P1-6, and P1-9
OAR 345-022-0060	
To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025(1) through (6) in effect as of February 24, 2017.	Exhibit P1, Section 3.3 and 3.5
Second Amended Project Order Provisions, Section III(p)	
The applicant has proposed a "phased survey" approach for data collection during the site certificate review process. The Department understands that the entirety of the site boundary for the proposed facility may not yet have been field-surveyed due to limited site access. On April 24, 2018 the Department issued a memo titled; "Energy Facility Siting Council Decisions for Linear Facilities with Restricted Access within a Site Boundary: Boardman to Hemingway Transmission Line". This memo outlines how the Department will review applications and make recommendations to Council for fish and wildlife habitat and species that have been evaluated in the pASC and ASC. For linear facilities, such as transmission lines, there may be situations where the applicant is able to conduct field surveys on several parcels within the site boundary but may not have access on adjacent parcels. In such circumstances, it may be possible that the combination of on-site field surveys plus a desktop evaluation of existing data, aerial photography, and "over the fence" surveys may meet the information requirements of Exhibits P. If the field survey coverage is sufficient for ODOE and Oregon Department of Fish and Wildlife (ODFW) to consider that the information provided is representative of the fish and wildlife habitat, and sensitive species occurrence or habitat, it is possible that this information could be sufficient to be evaluated for compliance with the applicable Council fish and wildlife habitat standard. Exhibit P shall include as much information as possible about the results of the field surveys conducted to date for biological resources and the schedule for future surveys.	Exhibit P3, Section 3.2; Exhibit P1, Section 3.2, 3.3, and 3.4 and Attachments P1-7A, P1-7B, and P1-8

Requirement	Location
Exhibit P shall include an analysis of how the evidence provided supports a finding by the Council that the proposed facility meets the Council's fish and wildlife habitat standard.	Exhibit P3; Section 4.0; Exhibit P1, Section 3.0 and Attachment P1-6
Exhibit P must include the results of all surveys for fish and wildlife habitat in the analysis area.	Exhibit P3, Section 3.2; Exhibit P1, Section 3.2.4 and Attachments P1-7A, P1-7B, and P1-8
Exhibit P must also identify all state sensitive species that may be present in the analysis area and include the results of surveys for state sensitive species.	Exhibit P3, Section 3.4; Exhibit P1, Section 3.4, Attachments P1-7A and P1-7B
Also include the survey methodology, including scope and timing of each survey. Surveys must be performed by qualified survey personnel during the season or seasons appropriate to the detection of the species in question.	Exhibit P3, Section 3.4; Exhibit P1, Section 3.2.4, and Attachments P1-7A and P1-7B
The applicant must also include in Exhibit P its habitat categorization and tables depicting the estimated temporary and permanent impacts, broken down by habitat categories.	Exhibit P3, Section 3.3.2; Exhibit P1, Section 3.5.3.3
If particular fish and/or wildlife habitat or state sensitive species are identified within the analysis area that could be adversely affected as a result of the proposed facility, the applicant shall include description of the nature, extent and duration of potential adverse impacts and a description of any proposed mitigation measures. Fish and Wildlife Habitat Mitigation Policy (OAR Chapter 635, Division 415) classifies six habitat categories and establishes a mitigation goal for each category. The applicant for a site certificate must identify the appropriate habitat category for all areas affected by the proposed facility and provide the basis for each category designation, subject to ODFW review. The applicant must show how it would comply with the habitat mitigation goals and standards by appropriate monitoring and mitigation. ODFW rules OAR 635-140-0000 through 635-140-0025 are applicable to EFSC's review process in Oregon Sage-grouse habitat. The applicant shall apply ODFW identified sage-grouse core, low density, and general habitat. Development actions must be mitigated by the applicant for both direct and indirect adverse impacts to sage-grouse and their habitats. Pursuant to OAR 635-415-0025(7), the applicant is exempt from fulfilling the avoidance test contained in OAR 635-140-0025 Policy 2, subsections (a), (b), (c) and (d)(A).	Exhibit P3, Section 3.5; Exhibit P1, Section 3.5, and Attachment P1-6

Requirement	Location
As a result of the access timing issues for this proposed facility, it is recommended the applicant provide proposed site certificate conditions for the Council's consideration related to requirements for the applicant to complete all unfinished surveys within the project's site boundary prior to construction. The proposed site certificate conditions shall also address submittal requirements for reporting future survey results, adjustment of previously calculated impact areas (if necessary), and the applicant's proposed approach to document approval of final results by agencies or the Council prior to commencing construction activities.	Exhibit P3, Section 4.0; Exhibit P1, Section 4.0

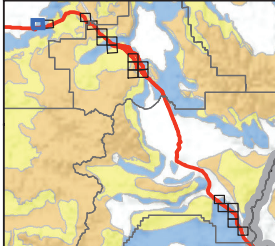
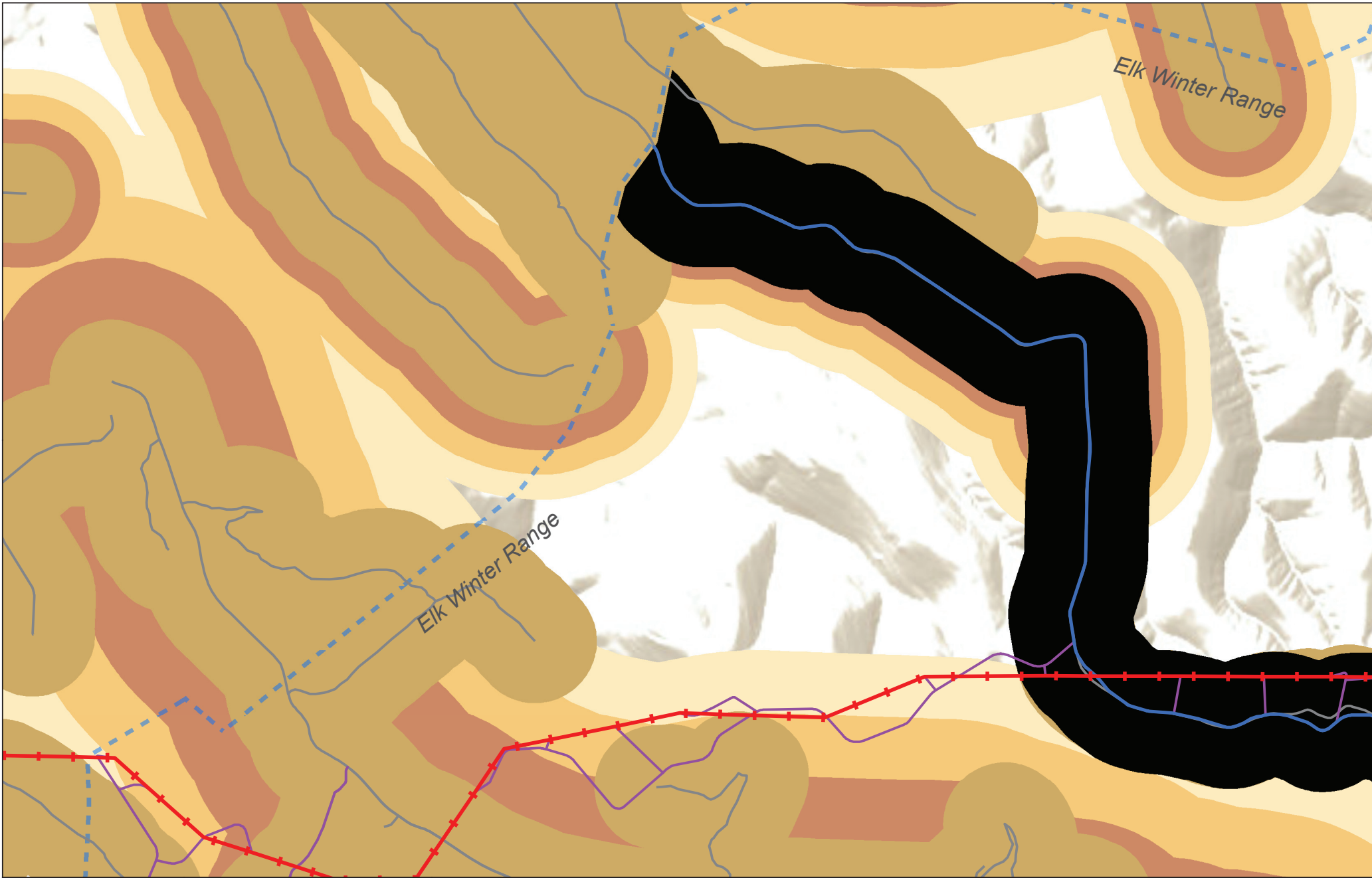
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**ATTACHMENT P3-1
MAPBOOK OF INDIRECT IMPACTS TO ELK WINTER RANGE AND
SUMMER RANGE**



**B2H Corridor
Oregon & Idaho**

Data Source: ODFW, USGS, ESRI
 Coordinate System: NAD 1983 UTM Zone 11N
 Date: January 2018 Author: GPG

0 0.25 0.5 0.75 mi
 0 0.5 1 km

Project Road

- +— Proposed T-Line Route
- +— Alternate T-Line Route
- +— Improved Existing
- New
- Not included in Indirect Impacts

Existing Road

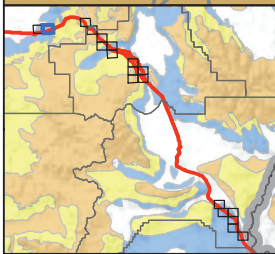
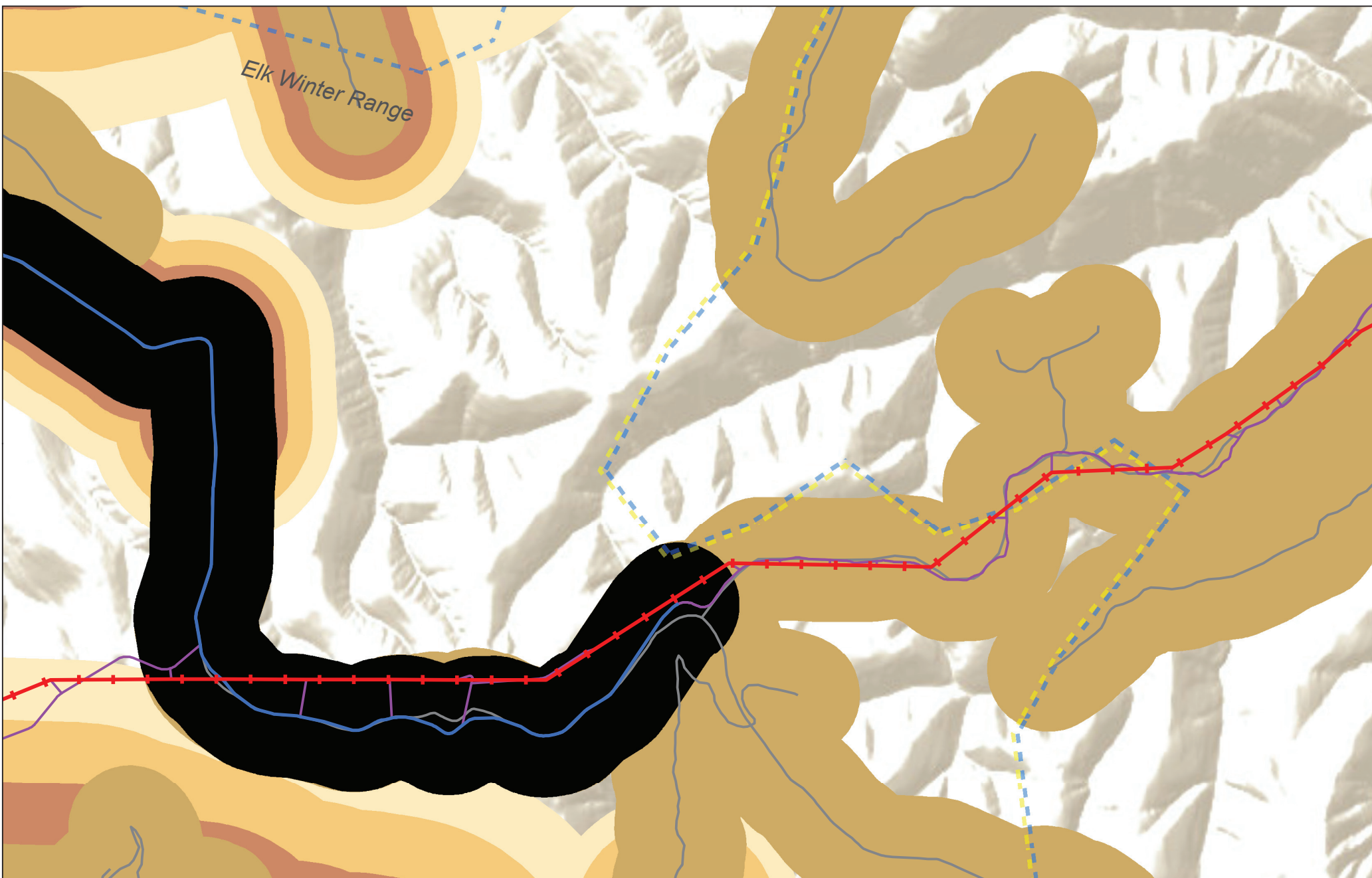
— Existing Road

HD values for Existing Roads

- HDe = 1
- HDe = 0.8
- HDe = 0.4
- HDe = 0.2

Resulting HD values of Indirect Impacts (HDn-HDe = HDx)

- HDx = 0 (0% New Road Impacts)
- HDx = 0.2 (20% New Road Impacts)
- HDx = 0.4 (40% New Road Impacts)
- HDx = 0.8 (80% New Road Impacts)
- HDx = 1 (100% New Road Impacts)



**B2H Corridor
Oregon & Idaho**

Data Source: ODFW, USGS, ESRI
 Coordinate System: NAD 1983 UTM Zone 11N
 Date: January 2018 Author: GPG

0 0.25 0.5 0.75 mi
 0 0.5 1 km

Project Road

- Proposed T-Line Route
- Alternate T-Line Route
- Improved Existing
- New
- Not included in Indirect Impacts

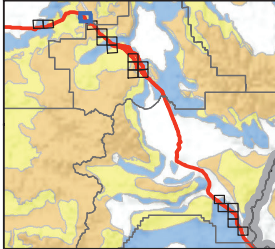
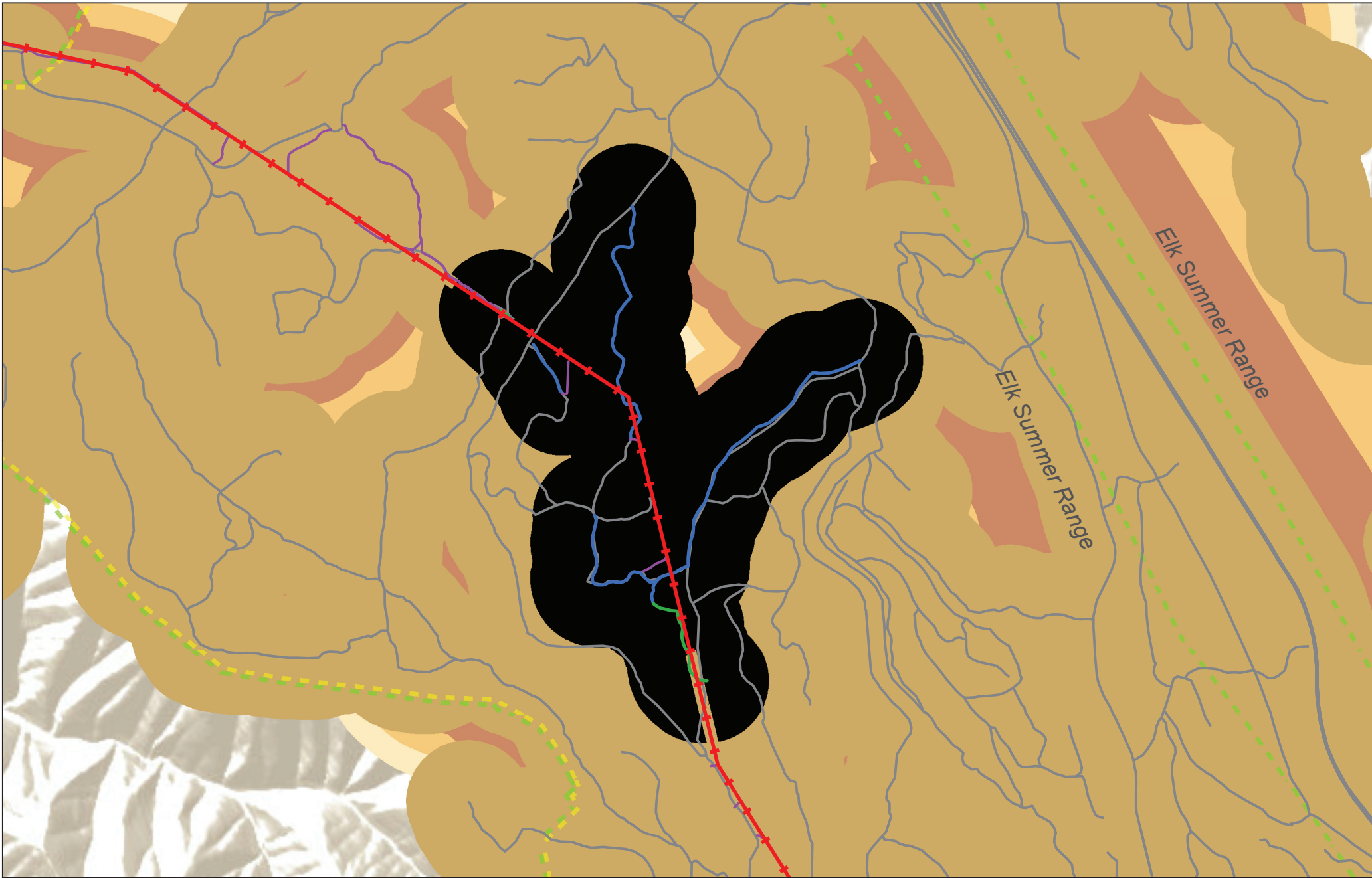
Existing Road

HD values for Existing Roads

- HDe = 1
- HDe = 0.8
- HDe = 0.4
- HDe = 0.2

Resulting HD values of Indirect Impacts (HDn-HDe = HDx)

- HDx = 0 (0% New Road Impacts)
- HDx = 0.2 (20% New Road Impacts)
- HDx = 0.4 (40% New Road Impacts)
- HDx = 0.8 (80% New Road Impacts)
- HDx = 1 (100% New Road Impacts)



**B2H Corridor
Oregon & Idaho**

Data Source: ODFW, USGS, ESRI
 Coordinate System: NAD 1983 UTM Zone 11N
 Date: January 2018 Author: GPG

0 0.25 0.5 0.75 mi
 0 0.5 1 km

Project Road

- +— Proposed T-Line Route
- +— Alternate T-Line Route
- Improved Existing
- New
- Not included in Indirect Impacts

Existing Road

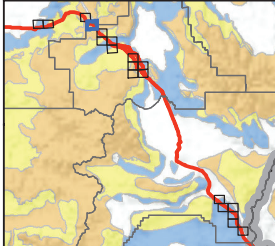
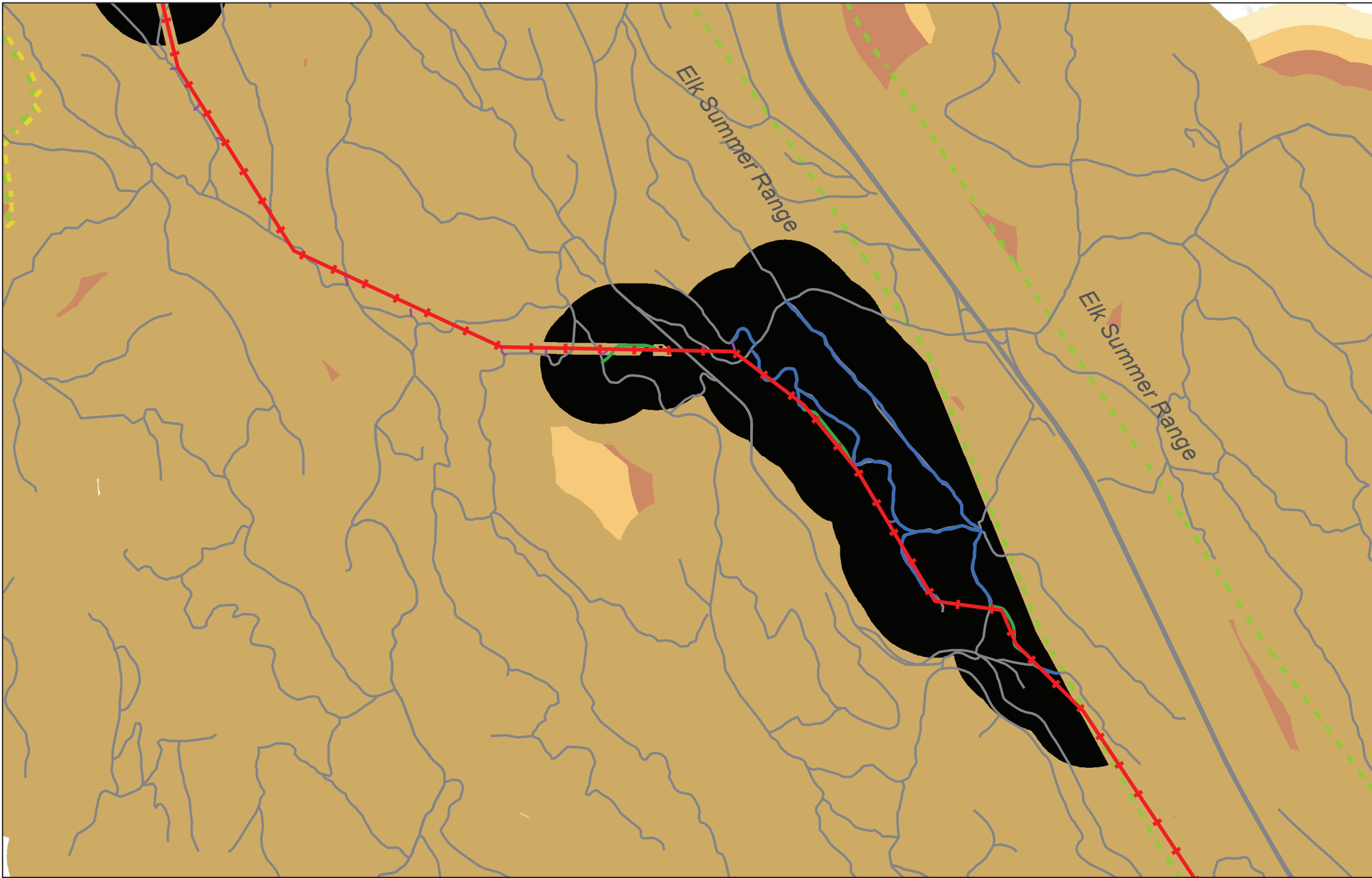
— Existing Road

HD values for Existing Roads

- HDe = 1
- HDe = 0.8
- HDe = 0.4
- HDe = 0.2

Resulting HD values of Indirect Impacts (HDn-HDe = HDx)

- HDx = 0 (0% New Road Impacts)
- HDx = 0.2 (20% New Road Impacts)
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- HDx = 0.8 (80% New Road Impacts)
- HDx = 1 (100% New Road Impacts)



**B2H Corridor
Oregon & Idaho**

Data Source: ODFW, USGS, ESRI
 Coordinate System: NAD 1983 UTM Zone 11N
 Date: January 2018 Author: GPG

0 0.25 0.5 0.75 mi
 0 0.5 1 km

Project Road

- +— Proposed T-Line Route
- +— Alternate T-Line Route
- Improved Existing
- New
- Not included in Indirect Impacts

Existing Road

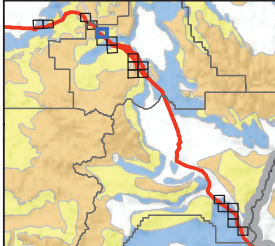
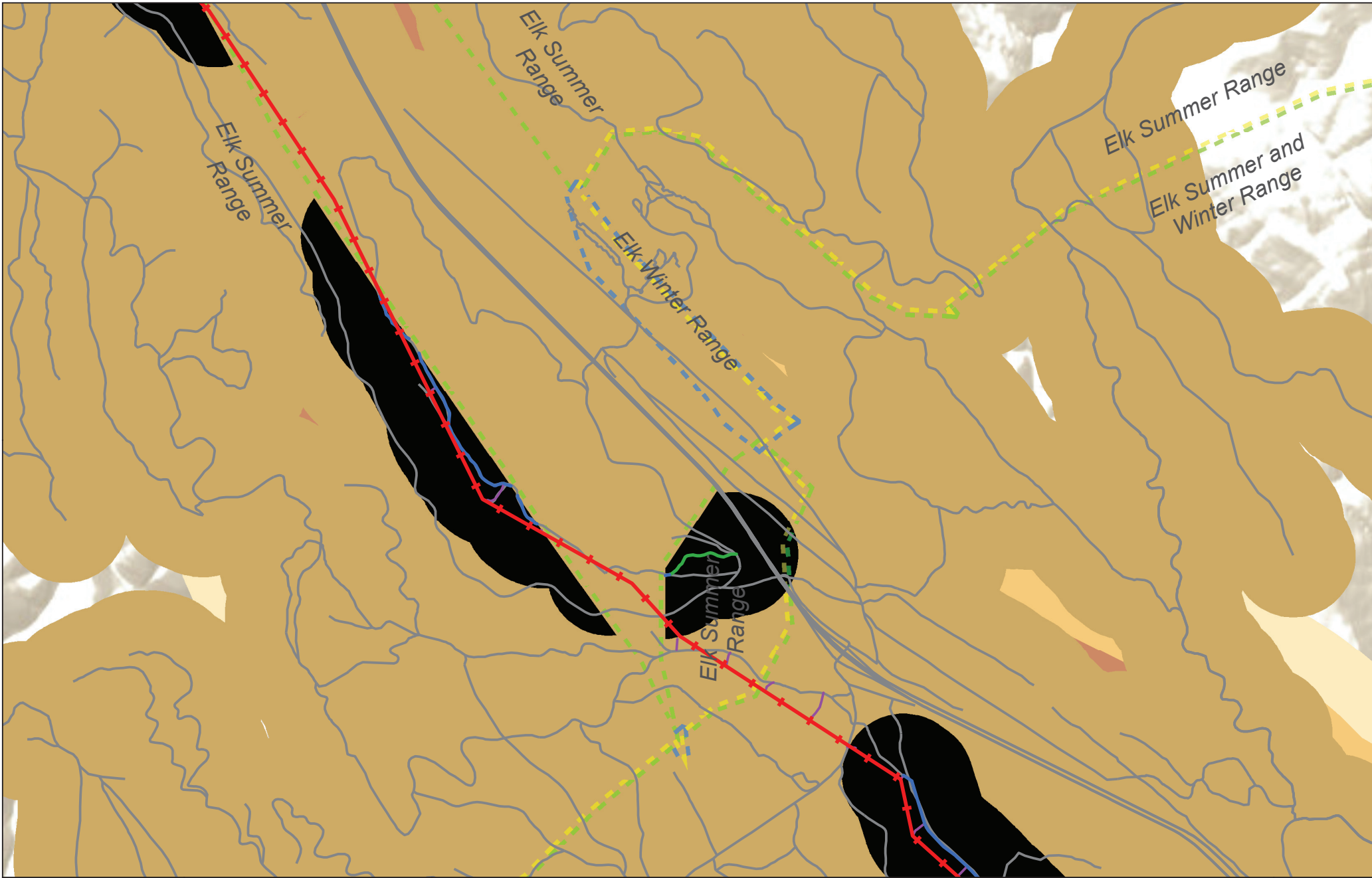
— Existing Road

HD values for Existing Roads

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Existing Road

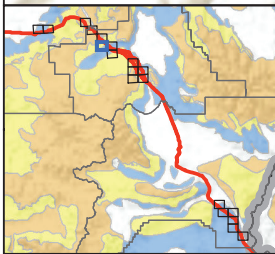
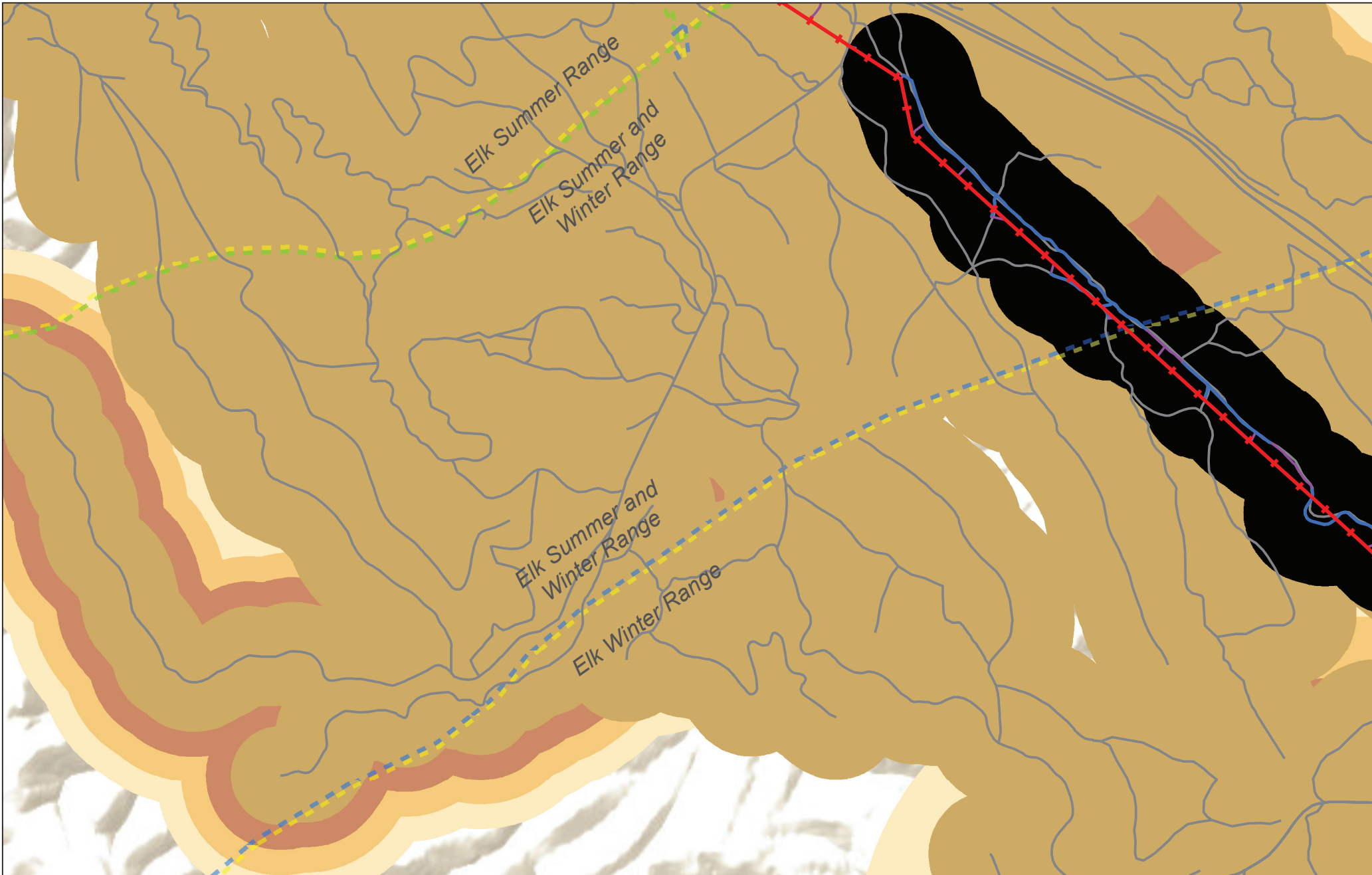
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Existing Road

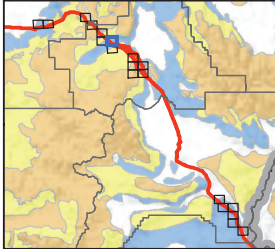
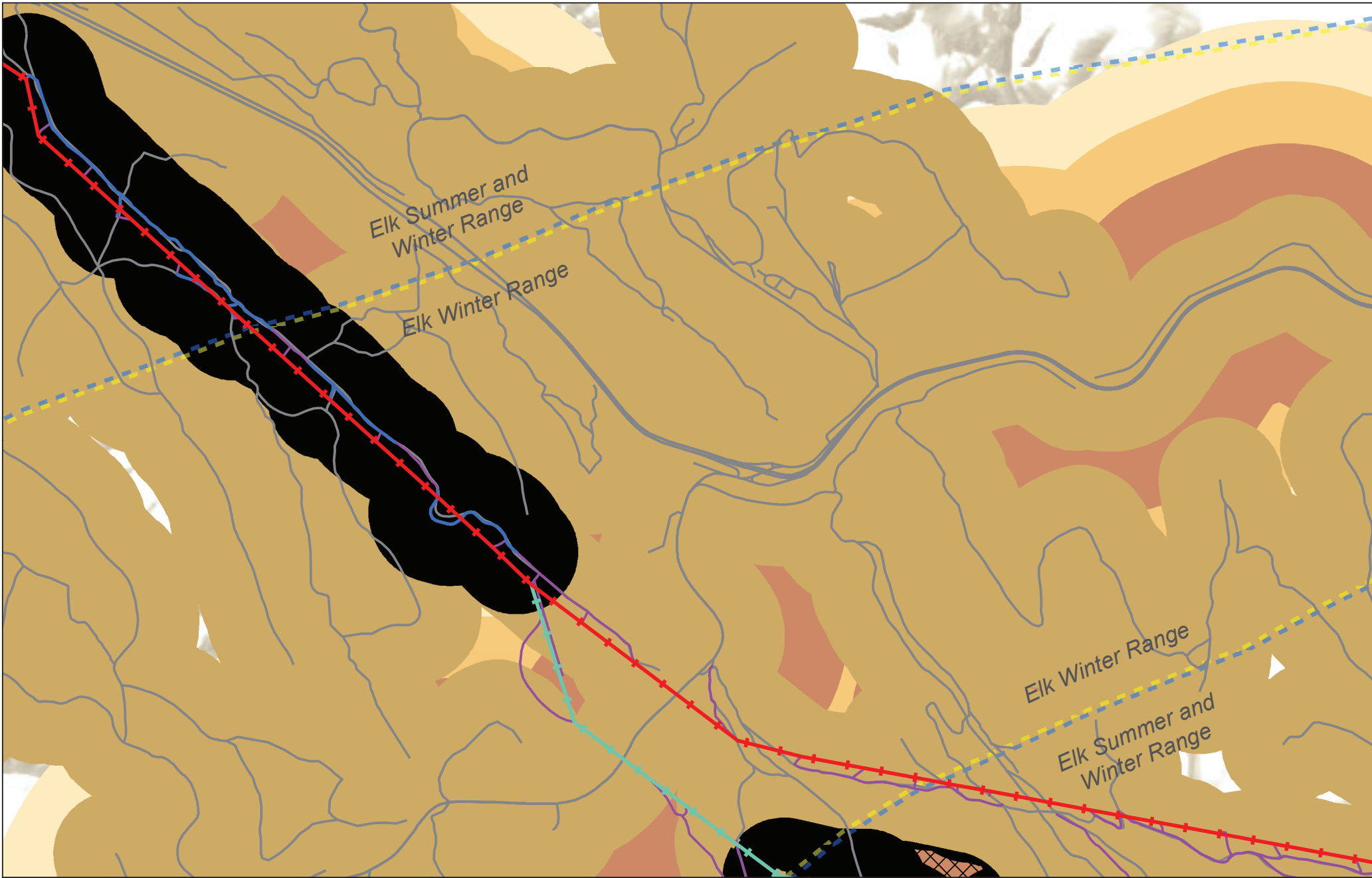
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Existing Road

— Existing Road

HD values for Existing Roads

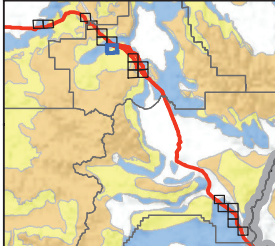
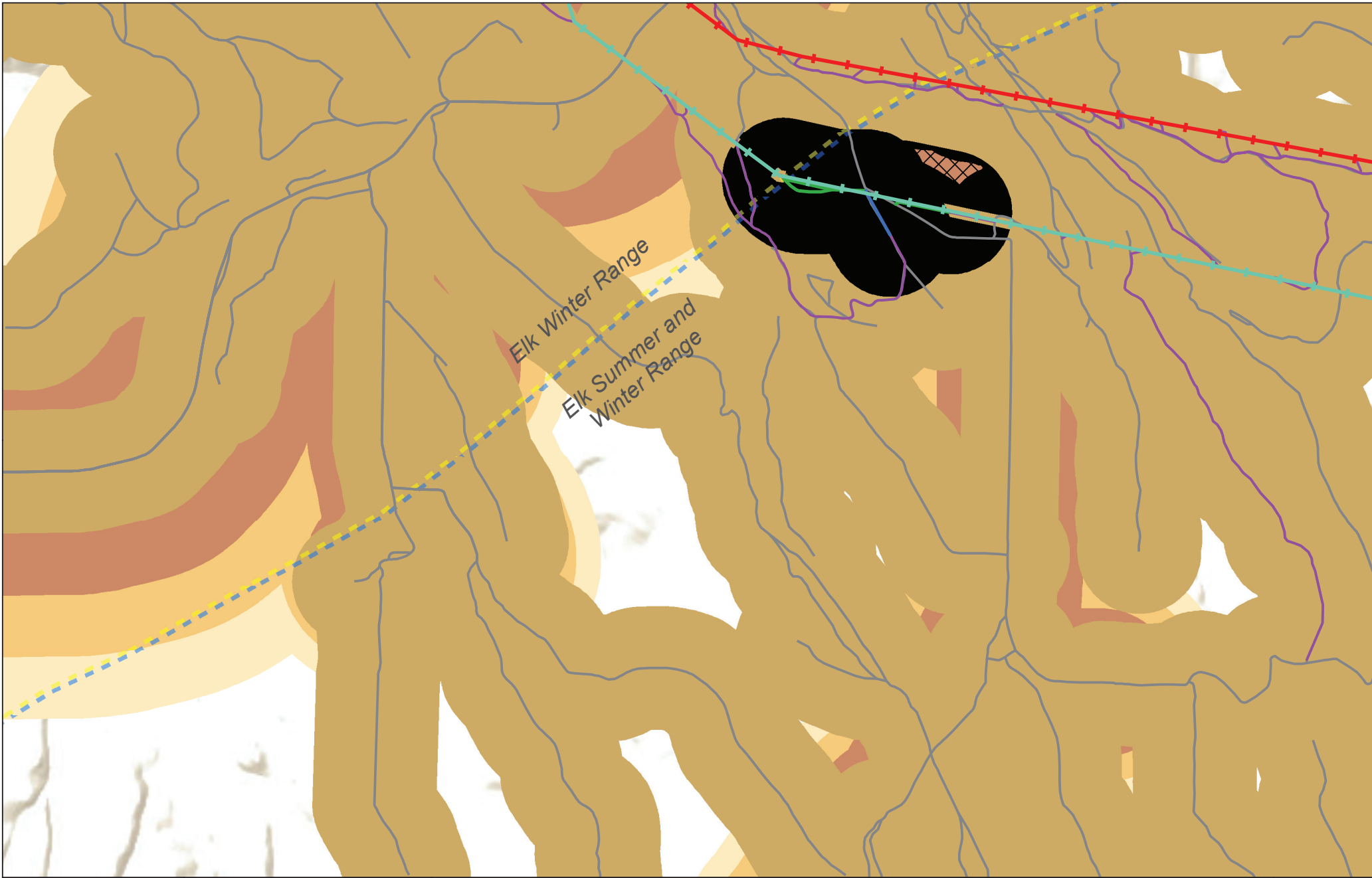
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**B2H Corridor
Oregon & Idaho**

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0 0.25 0.5 0.75 mi
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Project Road

- +— Proposed T-Line Route
- +— Alternate T-Line Route
- Improved Existing
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Existing Road

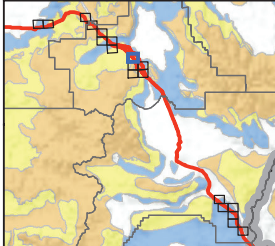
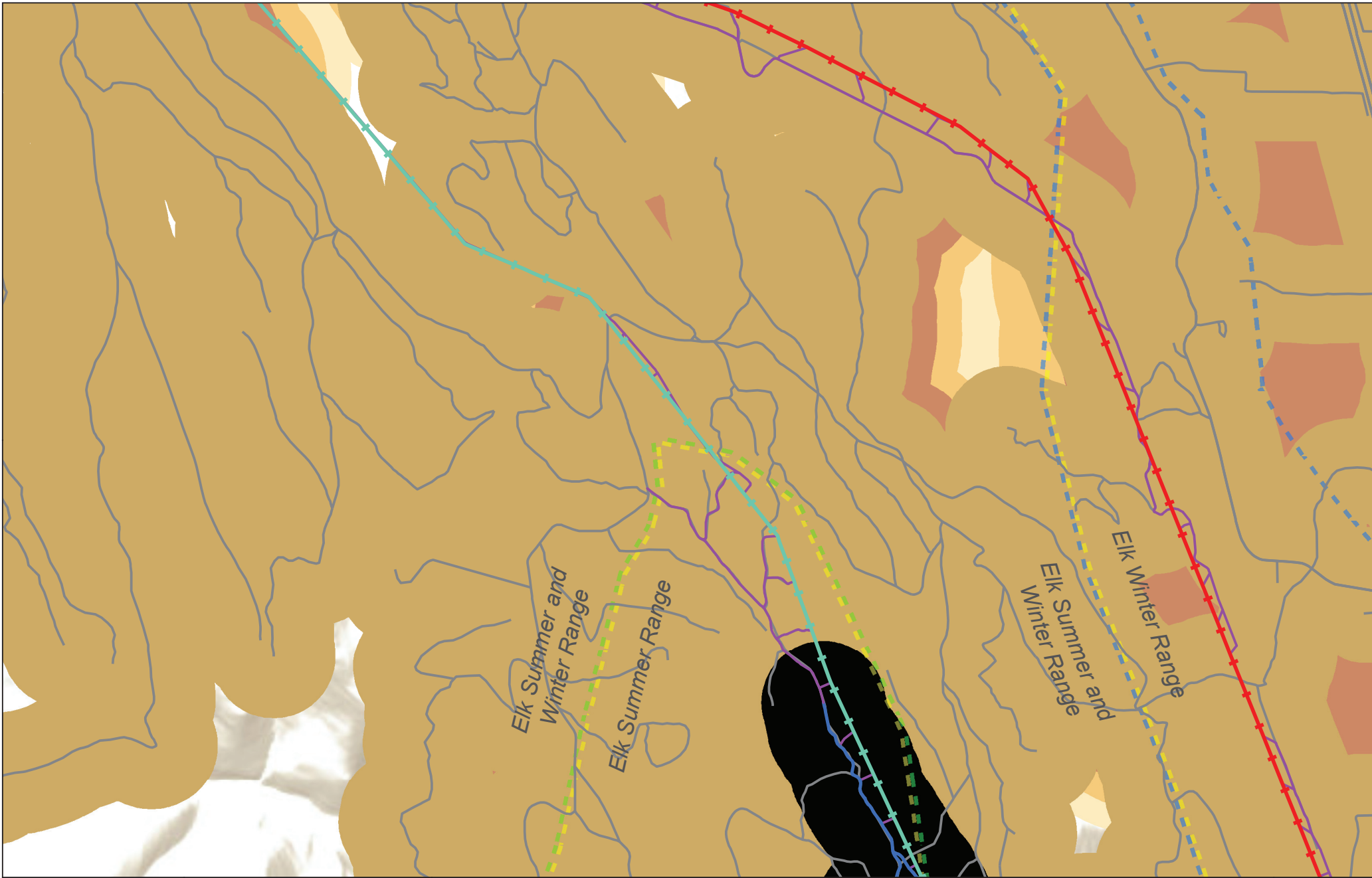
— Existing Road

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 0 0.5 1 km

Project Road

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- +— Alternate T-Line Route
- Improved Existing
- New
- Not included in Indirect Impacts

Existing Road

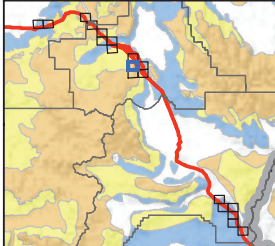
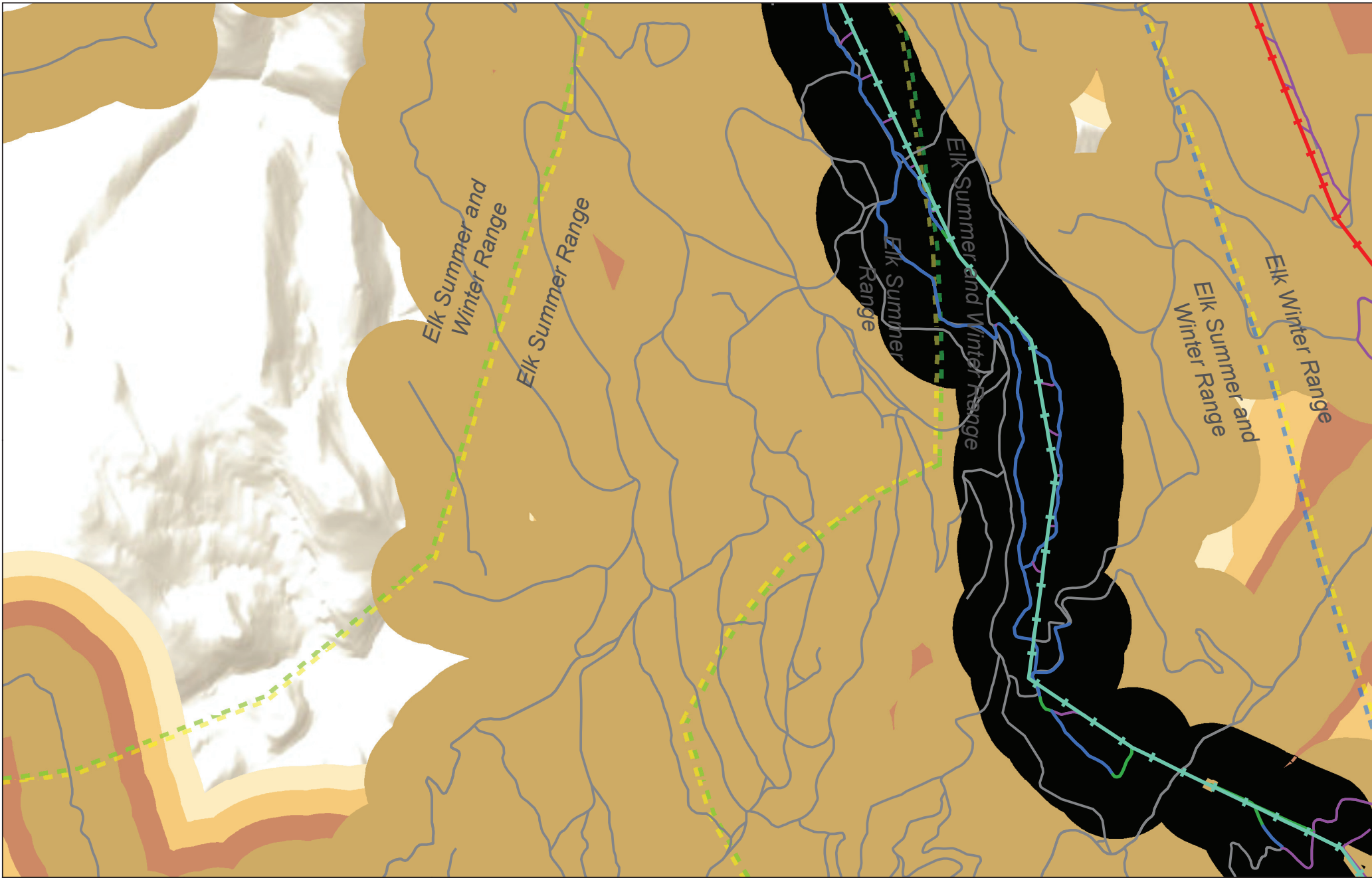
— Existing Road

HD values for Existing Roads

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**B2H Corridor
Oregon & Idaho**

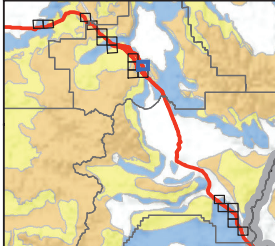
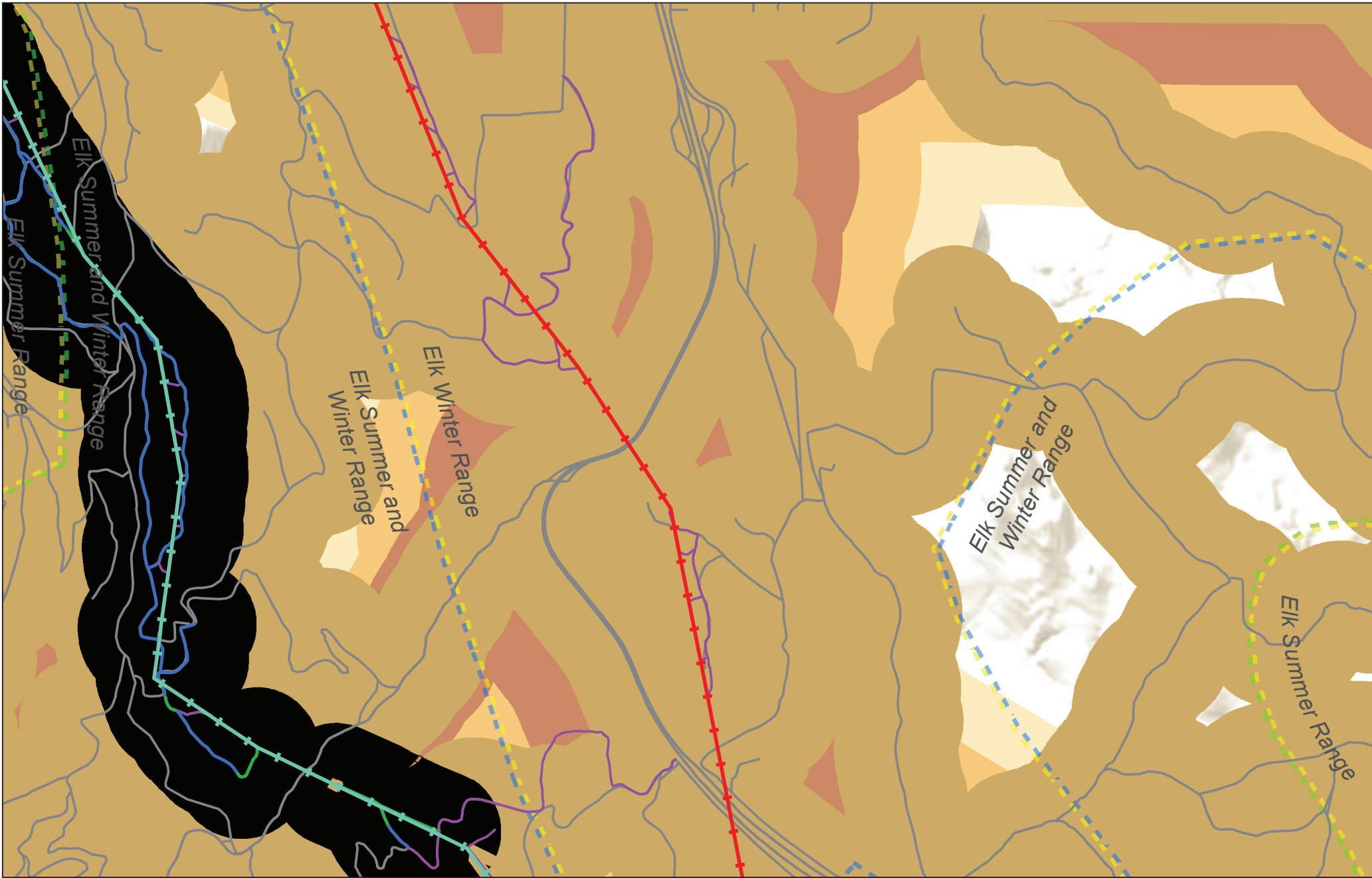
Data Source: ODFW, USGS, ESRI
 Coordinate System: NAD 1983 UTM Zone 11N
 Date: January 2018 Author: GPG

0 0.25 0.5 0.75
 mi
 0 0.5 1
 km

- +— Proposed T-Line Route
 - +— Alternate T-Line Route
 - Improved Existing
 - New
 - Not included in Indirect Impacts
- Project Road**

- Existing Road
- HD values for Existing Roads**
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0 0.25 0.5 0.75 mi
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Project Road

- +— Proposed T-Line Route
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- Improved Existing
- New
- Not included in Indirect Impacts

Existing Road

— Existing Road

HD values for Existing Roads

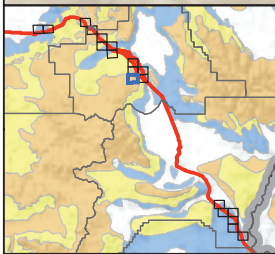
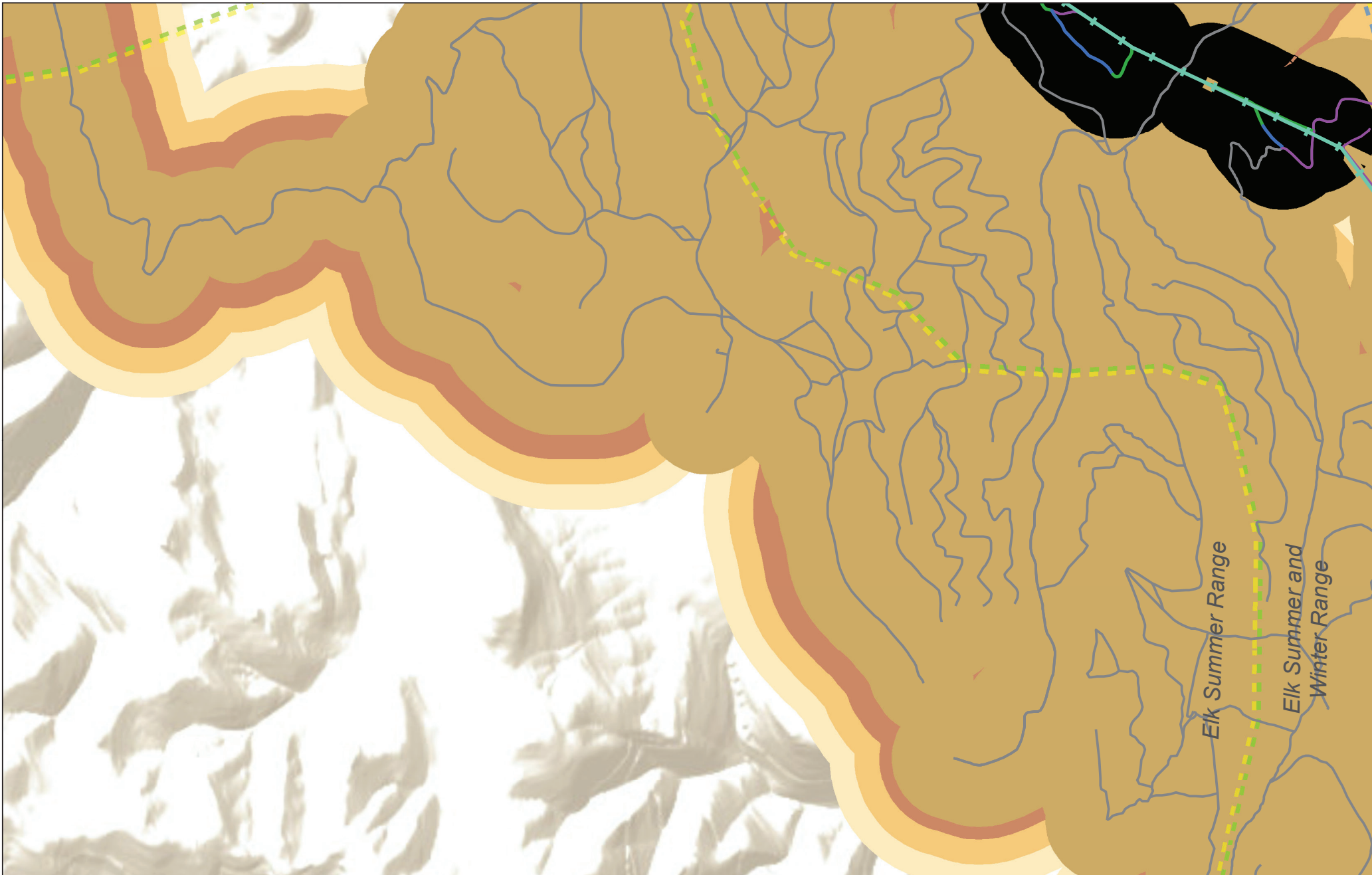
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Oregon & Idaho**

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0 0.25 0.5 0.75 mi
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Project Road

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Existing Road

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HD values for Existing Roads

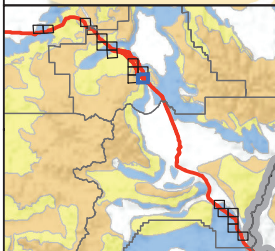
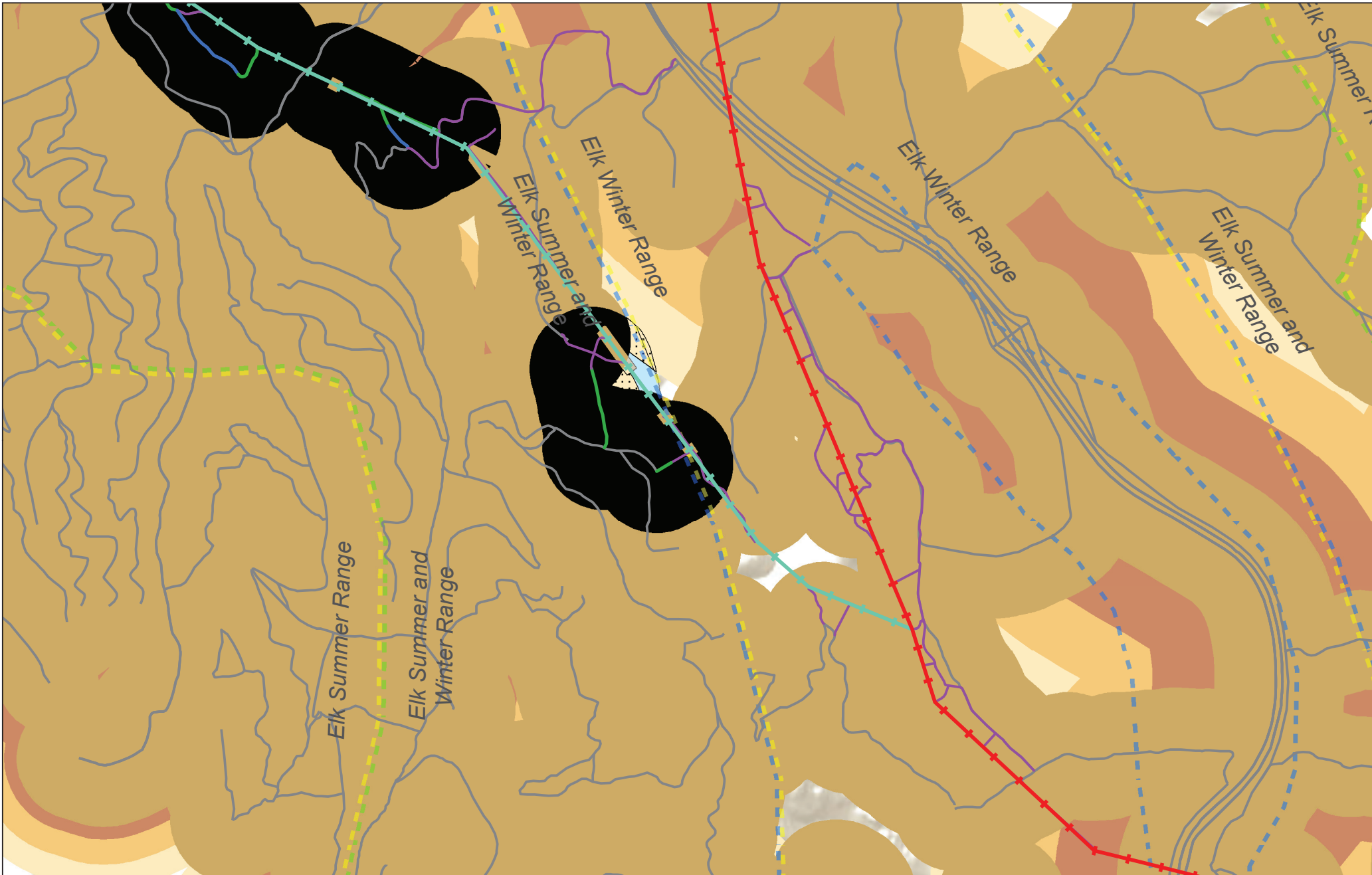
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 W —+— E
 S

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**B2H Corridor
Oregon & Idaho**

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0 0.25 0.5 0.75 mi
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Project Road

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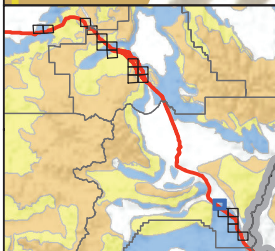
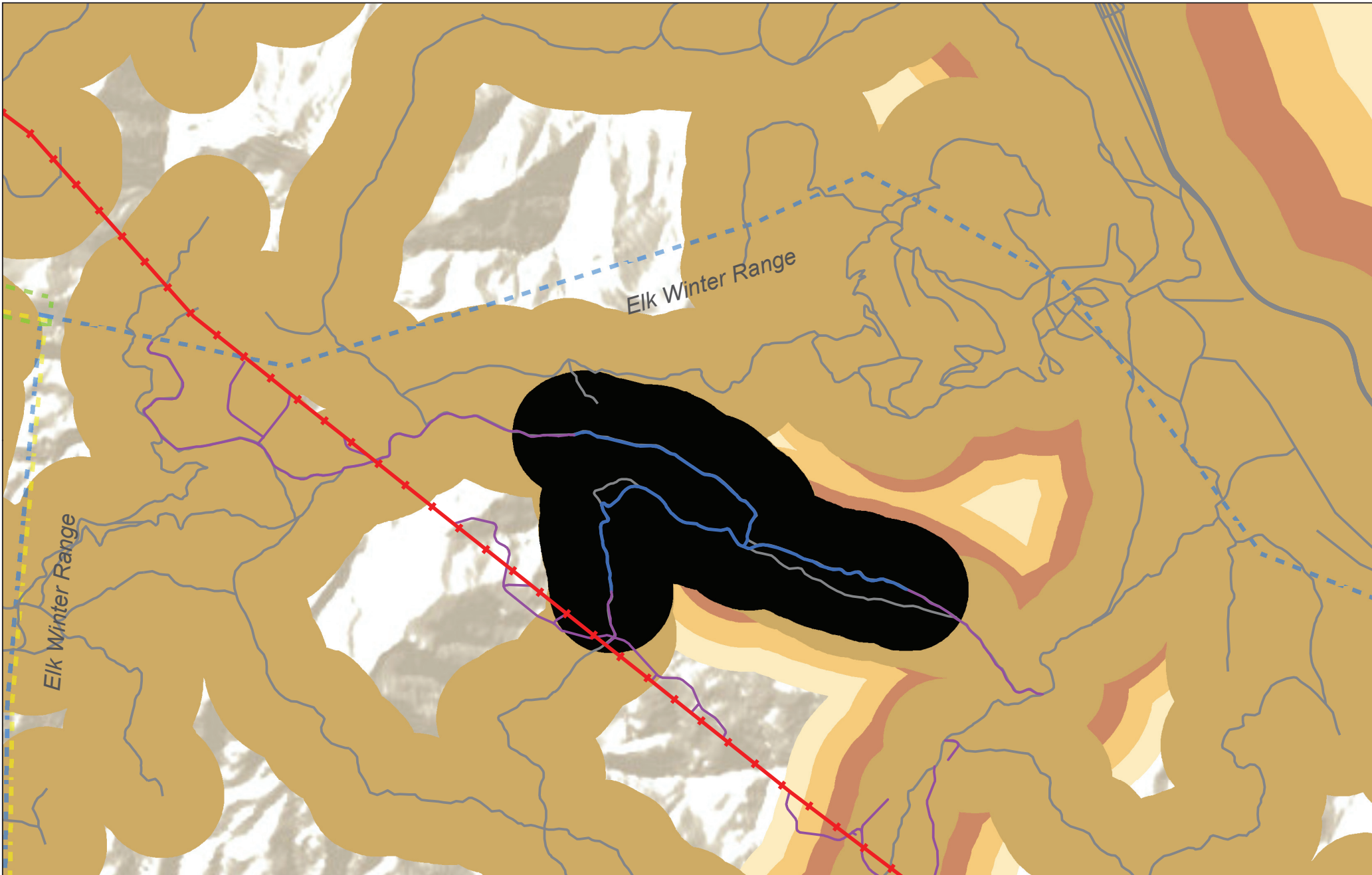
Existing Road

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Existing Road

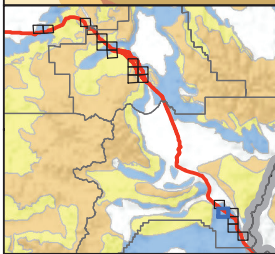
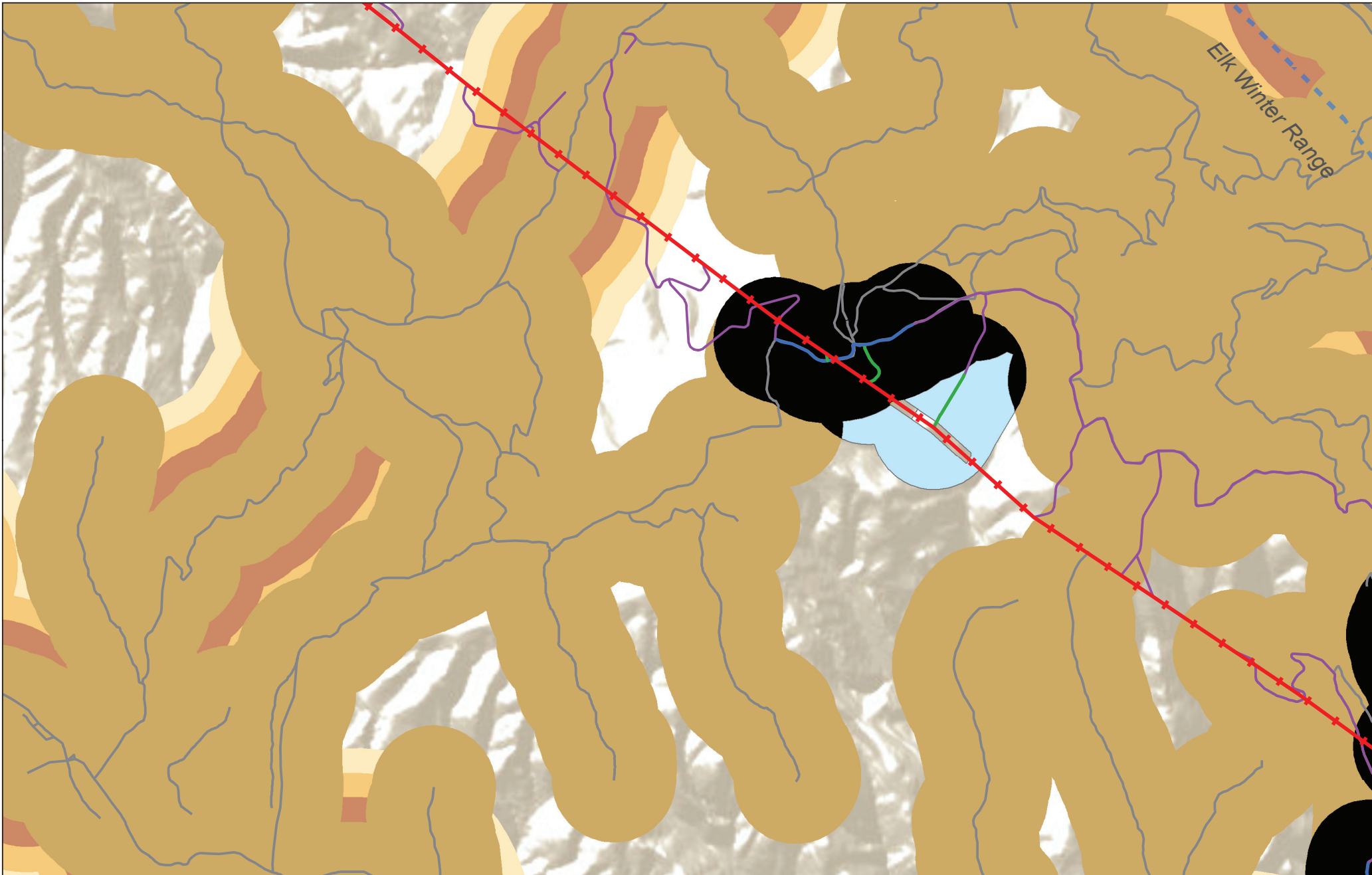
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Existing Road

Existing Road

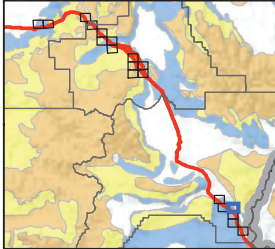
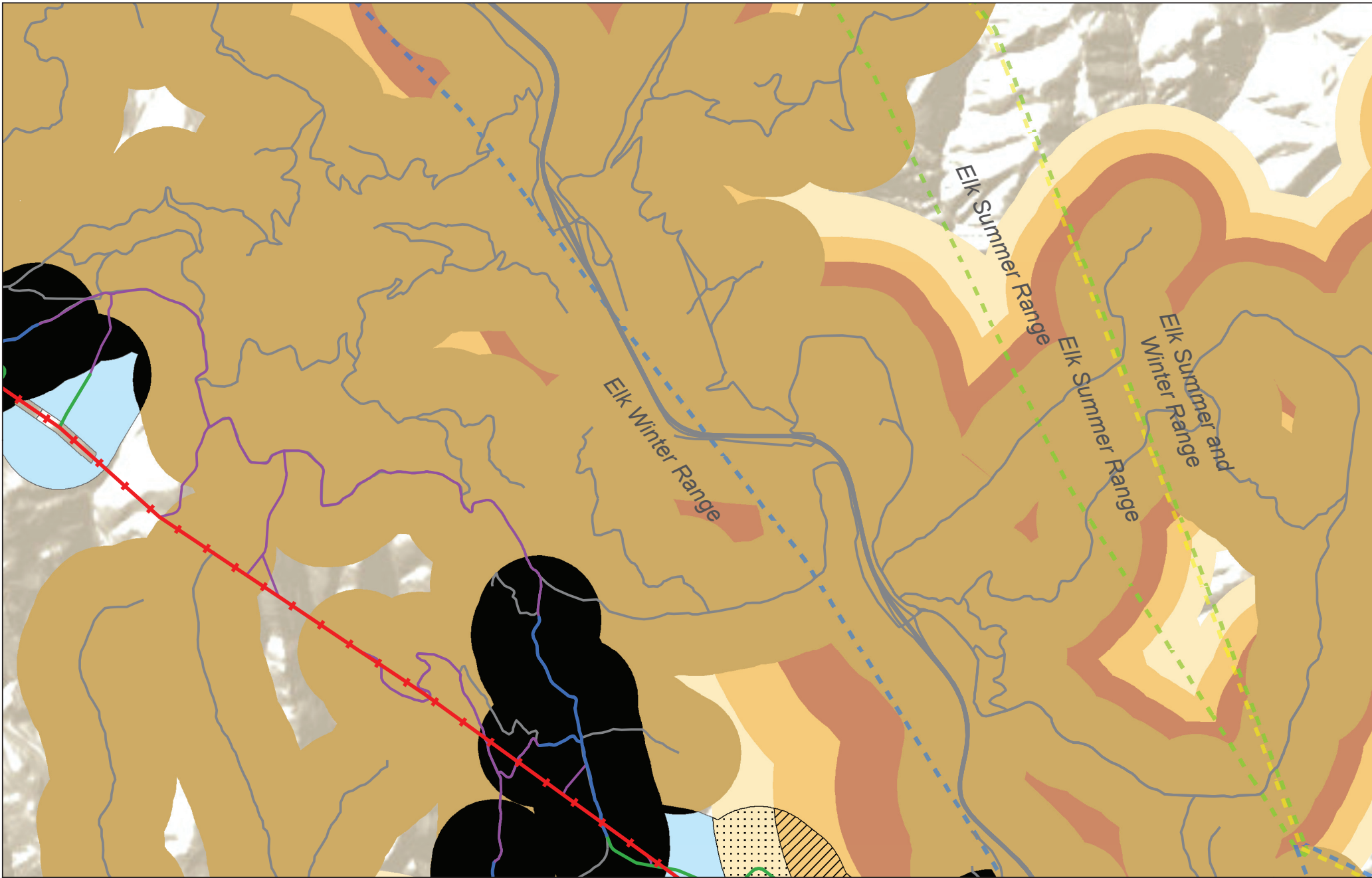
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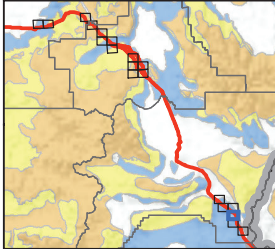
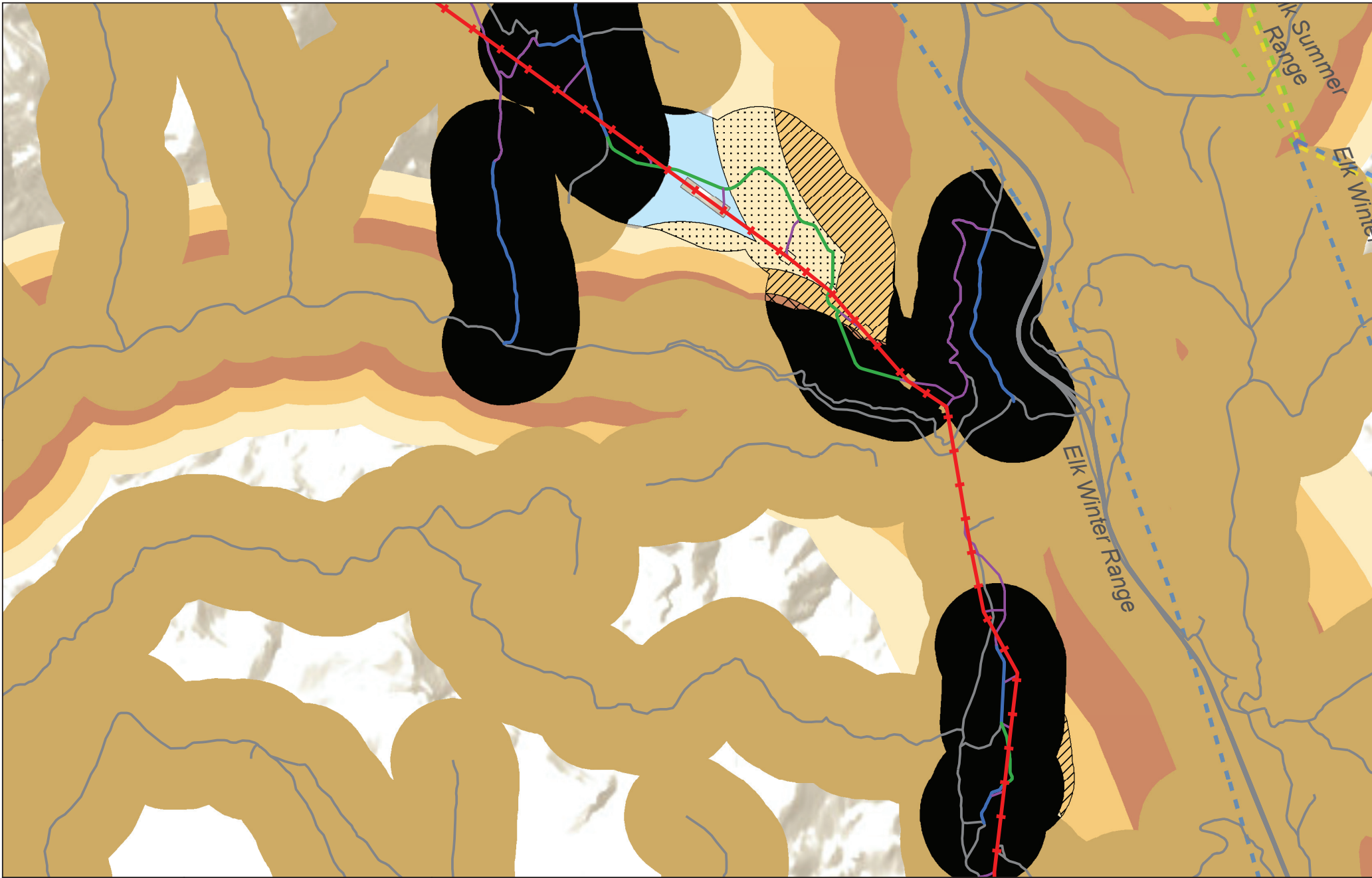
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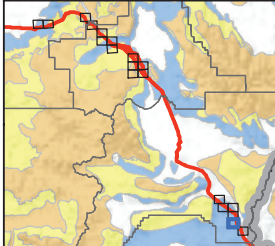
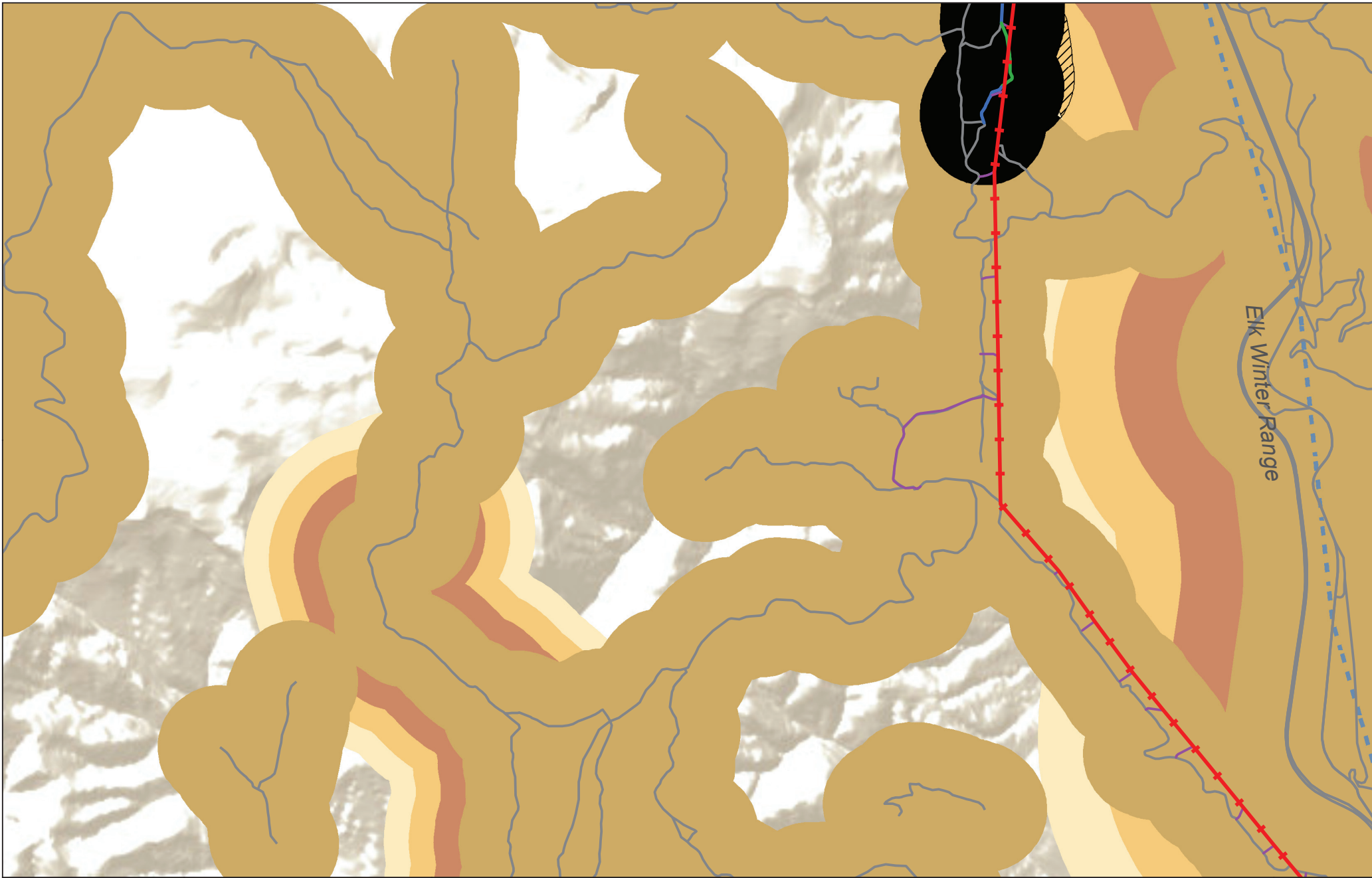
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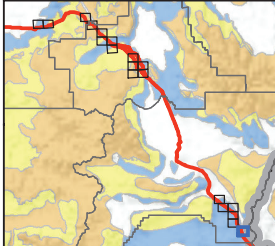
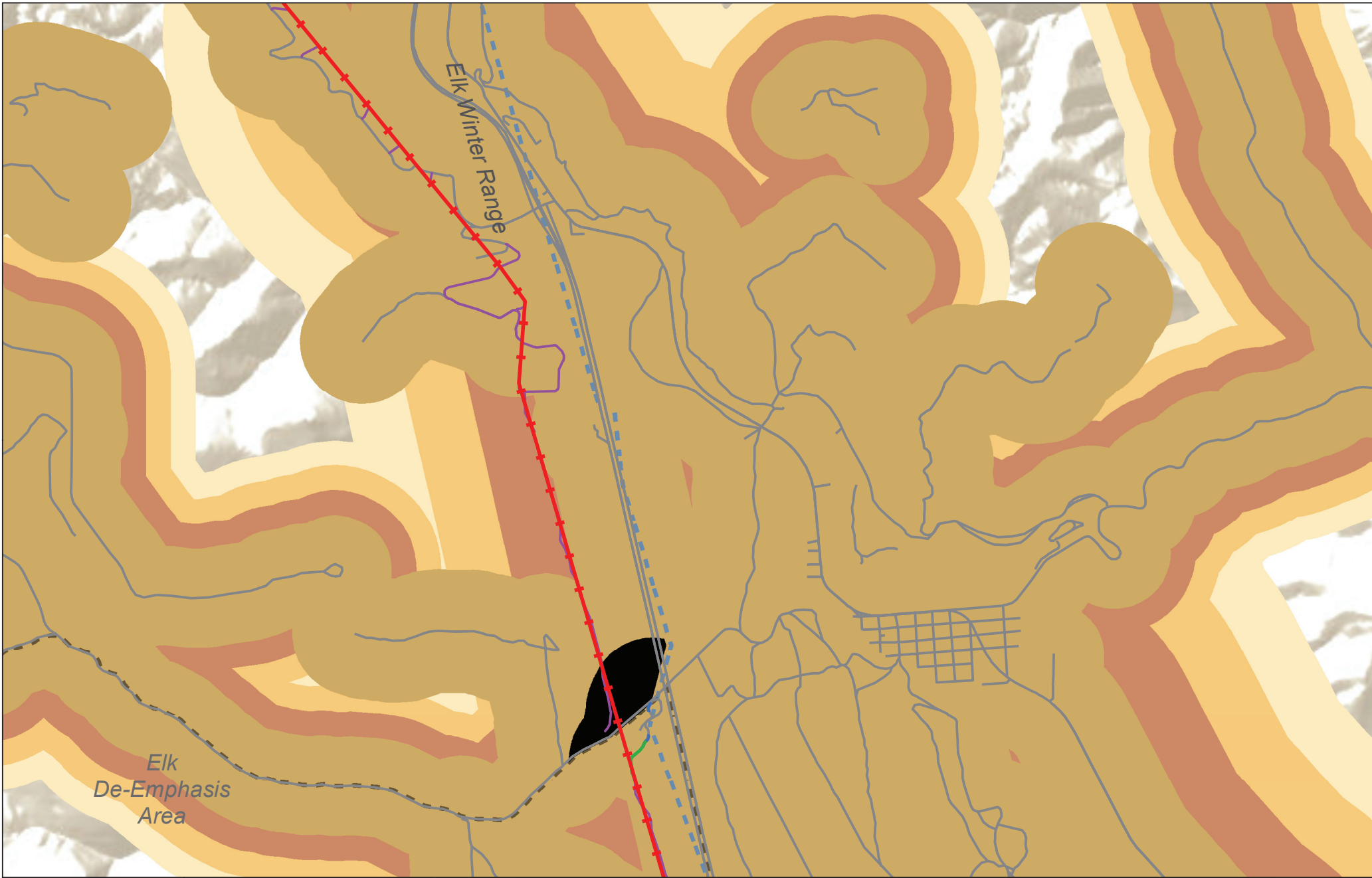
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