

**Record of Decision
for the
Special Use Authorization for the
Estes to Flatiron Transmission Lines Rebuild Project
U.S. Forest Service, Arapaho & Roosevelt National Forests
Larimer County, Colorado
August 2019**

Cooperating Agency: USDA Forest Service (USFS)

Lead Agency: Western Area Power Administration (WAPA)

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Abstract of decision

The USFS has decided to issue a special use permit authorizing Western Area Power Administration (WAPA) to rebuild an existing transmission line system where it crosses National Forest System (NFS) lands between Flatiron Substation in Loveland, CO and the Estes Park Substation in Estes Park, CO. The authorization includes installation, occupation, operation, and maintenance of the transmission line on a right-of-way (ROW) across NFS lands. The rebuild combines two existing single-circuit 115-kV transmission lines and wood structures by replacing them with one new double-circuit 115-KV transmission line on a galvanized steel single-pole within a single ROW in a new alignment. The agency preferred alternative (APA) for both USFS and WAPA is a combination of Alternative C on the west end and Alternative B on the east end as identified in the final Environmental Impact Statement (EIS).

Western Area Power Administration (WAPA) is the lead agency for the project and EIS. The U.S. Forest Service (USFS) is a cooperating agency because a portion of the project is proposed across NFS lands within the Arapaho & Roosevelt National Forests and Pawnee National Grassland unit. A separate decision is published by WAPA.

This record of decision (ROD) documents the USFS decision and rationale based on an Environmental Impact Statement prepared for the proposed Estes to Flatiron Transmission Lines Rebuild Project in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code §4321 et seq.), the Council on Environmental Quality regulations implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and the U.S. Forest Service (USFS) NEPA implementing regulations (36 CFR Part 220). This record of decision documents compliance with the 1997 Revision of the Land and Resource Management Plan of the Arapaho and Roosevelt National Forests and Pawnee National Grassland as well as resolution of issues that arose during scoping and analysis of the project.

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USDA FOREST SERVICE
ARAPAHO & ROOSEVELT NATIONAL FORESTS
LARIMER COUNTY, COLORADO

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Acronyms and Abbreviations

4WD	4-wheel drive
APA	Agency Preferred Alternative
BOR	Bureau of Reclamation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DOE	Department of Energy
DOI	Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
kV	kilovolt
NEPA	National Environmental Policy Act
NFS	National Forest System
NOI	Notice of Intent
ROD	Record of Decision
ROW	right-of-way
SCP	Standard Construction Practice
SIO	Scenic Integrity Objective
USACE	U.S. Army Corps of Engineers
USFS	U.S. Forest Service
WAPA	Western Area Power Administration

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1.0 Project Overview

1.1 Introduction and background

Western Area Power Administration (WAPA) currently owns, operates, and maintains two single-circuit transmission lines between the Flatiron and Estes Park Substations. Prior to the formation of the Department of Energy (DOE), the Department of the Interior's (DOI's) Bureau of Reclamation (BOR) constructed and maintained the two existing transmission lines as part of the Colorado-Big Thompson project. The lines were constructed to transmit electricity from hydropower generation sources within the Colorado-Big Thompson project. After the formation of the DOE and WAPA in 1977, ownership of the transmission lines transferred from the BOR to WAPA.

The Estes-Lyons Tap is the more northern of the two lines and will be referred to in the remainder of this document as the North Line. The second, more southerly line consists of the Estes-Pole Hill and Flatiron-Pole Hill lines that connect the Pole Hill Substation to Estes Park and the Flatiron Substation, respectively (Figure 1). The two south segments will be referred to in this document as the South Line. Both existing transmission lines are single-circuit 115-kilovolt (kV) lines constructed on wood pole H-frame structures. The South Line is 14.5 miles in length and the North Line is 14.1 miles long. WAPA's proposal only encompasses the single-circuit transmission lines from the east side of the Estes causeway and does not involve the portions of the double-circuit transmission lines located on steel lattice structures along the Estes causeway.

The North Line was built in 1938 and the South Line in 1953. Most of the wood pole H-frame structures on the two lines are original and date from the time of construction. A single mode fiber optic communication cable used by BOR, WAPA, and the Platte River Power Authority is part of the two lines. Although the majority of the existing rights-of-way (ROWs) are located on privately owned land, portions of both are located on public lands administered by the U.S. Forest Service (USFS), State Land Board, Larimer County Natural Resources Department, and BOR. Both of the existing lines are located within a designated utility corridor as defined in the 1984 Forest Plan for Arapaho and Roosevelt National Forests and Pawnee National Grassland and the 1997 Revision.

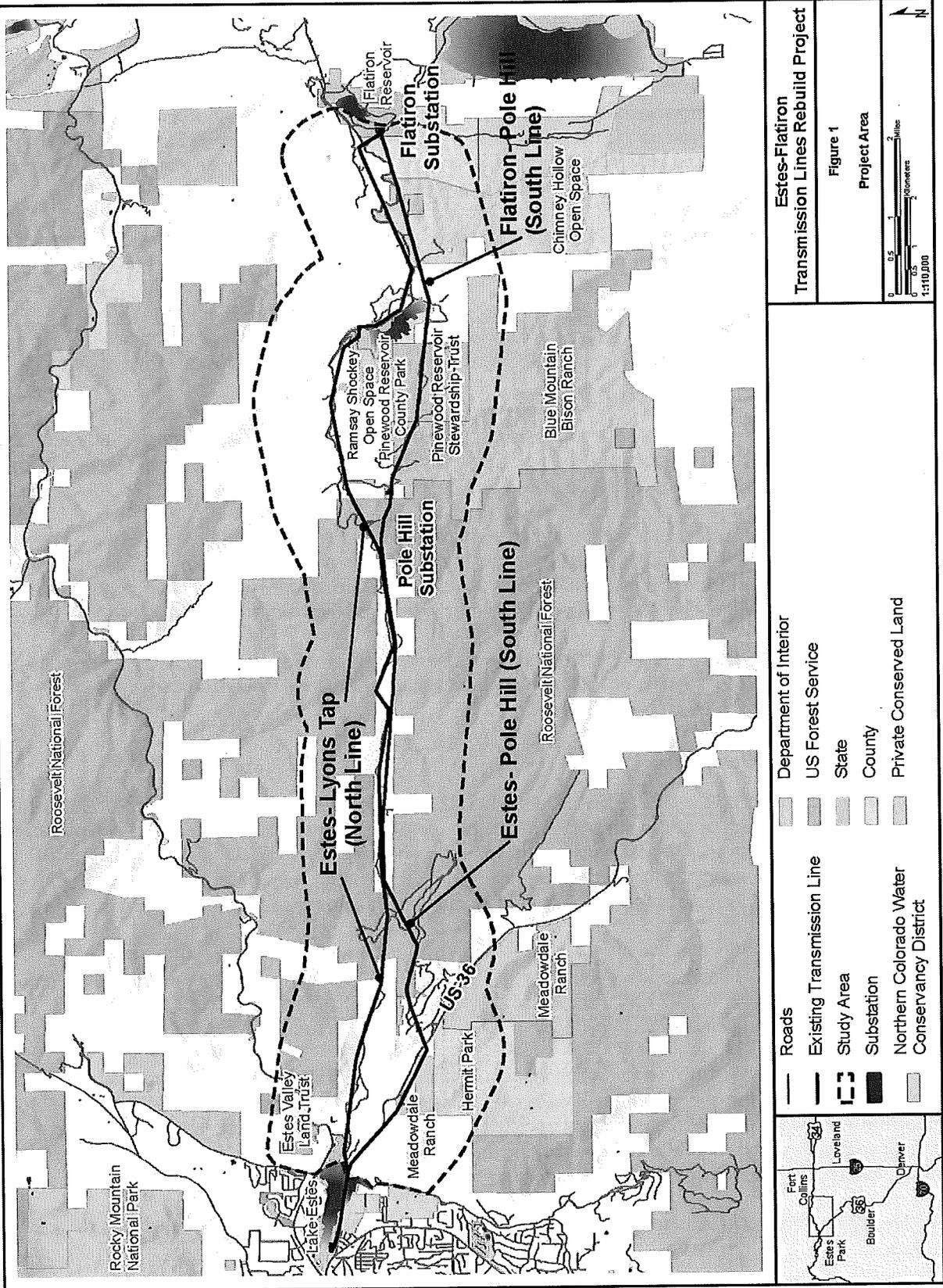
WAPA is proposing to rebuild the existing 115-kV system between Flatiron Substation in Loveland, CO and the Estes Park substation near the intersection of Mall Road and U.S. Highway 36 in Estes Park, CO. The proposed project would remove both of the existing single-circuit 115-kV transmission lines and wood structures and replace those with a new double-circuit 115-kV transmission line on galvanized steel monopoles within a single ROW while abandoning any unused ROW. The proposed project would improve access to the transmission lines for maintenance and increase the ability to restore outages more quickly, widen the ROWs where existing ROW is inadequate, and implement an integrated vegetation management approach within the ROWs to ensure electrical clearance requirements are met and maintained for the life of the project.

WAPA's proposal is under a class of actions in the DOE National Environmental Policy Act (NEPA) Implementing Procedures (10 Code of Federal Regulations [CFR] Part 1021) that normally requires the preparation of an environmental assessment (EA). WAPA initially began preparation of an EA for the proposed project. Subsequent to the EA determination, WAPA held public meetings and received numerous written and oral comments from the public and agencies on the proposal during the scoping period. The public expressed concerns regarding the impacts of the proposal and some of the stakeholders requested evaluation of additional alternatives. In response to input received during the initial EA scoping, WAPA determined that an environmental impact statement (EIS) would be the more appropriate level of NEPA review.

1.2 USFS Purpose and Need and Proposed Action

The USFS purpose and need is to determine whether to issue a special use permit for use of USFS lands for the proposed transmission lines upgrade and rebuild. In conjunction with the issuance, the USFS would bring WAPA's facilities under a current authorization with a defined ROW and an Operation and Maintenance Plan.

The USFS has met its purpose and need by determining to issue a special use permit authorizing the proposed transmission lines upgrade and rebuild with a defined ROW and an Operation & Maintenance Plan.



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Figure 1 - Project Area

2.0 Decision and Rationale for Decision

2.1 Decision

The USFS has decided to issue a special use permit authorizing Western Area Power Administration (WAPA) to rebuild an existing transmission line system where it crosses National Forest System (NFS) lands between Flatiron Substation in Loveland, CO and the Estes Park Substation in Estes Park, CO. The authorization includes installation, occupation, operation, and maintenance of the transmission line on right-of-way (ROW) across NFS lands. The rebuild combines two existing single-circuit 115-kV transmission lines and wood structures by replacing them with one new double-circuit 115-KV transmission line on galvanized steel monopoles within a single ROW in a new alignment. The remaining ROW would be abandoned to return to its native state.

The range of reasonable alternatives was developed in response to issues raised during two scoping processes. The agency preferred alternative (APA) for both USFS and WAPA is a combination of Alternative C on the west end and Alternative B on the east end as identified in the final Environmental Impact Statement (EIS).

By determining whether to issue a special use permit for the proposed transmission lines upgrade and rebuild and bring WAPA facilities under a current authorization with a defined ROW and an Operation & Maintenance Plan, the USFS has met its purpose and need.

A total of approximately 0.6 mile of permanent access road surfaced with native material on USFS system lands will be used for monthly operations and maintenance visits. The access roads will be 10 feet wide and added to the National Forest Road System as administrative roads. The USFS will consult with WAPA on the potential use of gates or other means to prevent unauthorized access.

Approval of the project was made with assurance that standard construction practices, project-specific design criteria, and project-specific environmental protection measures will be utilized to manage and protect resources and values on NFS lands.

2.2 Rationale overview

The rationale for selecting the USFS APA (Alternative C on the west region and Alternative B on the east region) is made after participation with WAPA in planning and environmental analysis and after reviewing multiple project alternatives. This decision results in overall and long-term reduction of impacts on most resources, including resources identified as key issues during the scoping process as compared to the other action alternatives, while achieving the purposes and needs of both agencies.

The decision to use portions of two alternatives presented in the Draft EIS allows for further reduction in expected environmental impacts, thus also making the USFS APA the USFS Environmentally Preferred Alternative. As shown in Figure 2 and discussed further in Section 5, seven action alternatives were evaluated in detail in the Final EIS.

The selection of the USFS APA would result in the reduction from two transmission lines to one transmission line and the abandonment of one ROW, thus causing less disturbance overall and impacting fewer acres of national forest lands while allowing the long-term re-establishment of a natural state of vegetation, soils, and wildlife habitat along the abandoned ROW. Under Alternative D and the No Action, two ROWs would be maintained and the benefits wouldn't be achieved.

The No Action Alternative was not selected because it did not meet WAPA's Purpose and Need for this project.

The USFS decision to issue a special use permit authorizing WAPA to build a new double-circuit 115-kV transmission line on galvanized steel monopoles within a single ROW on NFS lands was made in consideration of activities and mitigation measures detailed in the EIS and summarized below.

2.3 Management and Environment Protection Measures contributing to decision

Part of the rationale of this decision is that the project includes several practices, criteria, and measures intended to avoid or reduce environmental effects. WAPA's standard construction practices, project-specific design criteria, and project-specific environmental protection measures are requirements for the construction, maintenance, operation, and decommissioning activities for this project. They were included in the project description and analysis in the EIS. These actions all were developed or mandated to avoid or reduce impacts to resources, and they are required for implementation of the project on USFS lands. Detailed lists of these criteria, measures and practices are included as appendices and can be found in the EIS.

2.3.1 Standard construction practices to be implemented

WAPA has standard construction practices (SCPs), including standard operation and maintenance practices that avoid or minimize impacts to the environment to the greatest extent practicable. For the Estes-Flatiron transmission lines rebuild, WAPA's SCPs identified in Appendix A would be implemented. These measures are part of WAPA's Project and are incorporated into all impact assessments in the final EIS. These practices should minimize impacts to surface water, ground water, water quality, soils, noxious weeds, naturalness of terrain, and air quality. These practices also avoid nuisances like dust, noise, artificial lighting, and visual intrusions.

2.3.2 Project-Specific Design Criteria

Design criteria are actions or measures integrated into the Project design to avoid, minimize, reduce, or eliminate adverse effects as a result of implementing the project activities. These design criteria are to be applied to the project in order to minimize or avoid impacts to avian species, special status wildlife, and special status plants, as well as to minimize visual effects of vegetation management. These specific design criteria are listed in Appendix B.

For avian wildlife, this project should conform with "Suggested Practices for Avian Protection on Power Lines" which delineates mitigation measures designed to protect avian wildlife. Other criteria include buffer zones, seasonal restrictions, and nesting surveys.

Pre-construction surveys will also be conducted for special status wildlife and plants. If any are discovered, effects will be minimized through mitigation measures developed in consultation with USFS and other appropriate agencies.

Design criteria developed to protect visual resources are intended to reduce the visual impacts of development. Visual impact should be reduced by leaving adequate clumps of trees along linear clearings, limiting use of herbicide to foliage, screening views along roadways with vegetation, treating unnatural-appearing soil disturbances, and using shorter structures with shorter line span length when appropriate. A portion of the existing ROW will be abandoned and left to return to its natural state which will reduce the existing visual impact in that area.

2.3.3 Project-Specific Environmental Protection Measures

In addition to the design criteria, the project includes management measures intended to protect natural, cultural, physical, and social resources through avoidance or mitigation. These measures will be carried out during implementation phases – staging, construction, inspection, monitoring, and maintenance.

Specific measures are listed in Appendix C.

They include measures to:

- reduce the spread of noxious weeds
- retain top soil and reduce erosion or soil compaction
- avoid spills or contamination
- avoid or mitigate work in or near wetlands or fens
- reduce visual impacts by avoiding reflective materials and through paint selection
- rehabilitate sites to a more natural state after construction
- preserve human artifacts or remains, if encountered.

2.4 Rationale by Issue

2.4.1 Avian Wildlife

Powerlines can harm avian wildlife through collision, electrocution, nesting disruption, and habitat removal. Evidence of collisions and electrocutions for raptors has been well documented since the 1970s and has expanded to other species in recent decades. In order to address these issues, the Avian Powerline Interaction Committee developed Suggested Practices for Avian Protection on Power Lines in 2006. This project incorporates these suggestions in order to avoid or minimize this kind of impact. Avian wildlife would further be protected through nesting management and seasonal surveys to determine presence.

2.4.2 Visual Resources/ Scenery

Visual resources were identified as an issue because of the potential for vegetation removal along a new ROW and because of concerns over galvanized steel monopoles intended to replace wooden H-frame structures. Visual impacts are expected to occur in some portions of the project area due to new structures and disturbances; while in other areas, scenic quality should be improved when older lines are removed and areas reclaimed.

The Arapaho and Roosevelt NFs and Pawnee NG refer to visual resources and visual management as scenery management. Scenery is measured along an integrity scale including integrity levels of Very High, High, Moderate, Low, and Very Low. The existing Scenic Integrity Objective (SIO) in this area currently is considered Moderate; the final EIS reports the expected resultant SIO to be Very Low. The USFS acknowledges that in some areas scenery will be negatively affected but that other areas will be beneficially affected. This project area where the scenery is currently considered Moderate includes existing highways, transmission lines, other utilities, residences, businesses, and other structures as part of the visual scene. Because of the existing conditions of scenery near where the project intersects with USFS lands, the mitigation measures included in the project, and the opportunity for some areas to be restored visually, the change to Very Low integrity is not warranted as a result of this project.

Impacts from vegetation removal are expected to be mitigated through standard construction practices (Appendix A) and site-specific design criteria (Appendix B.) To reduce the impacts to scenery from large linear development, the design criteria recommends leaving adequate clumps of trees along linear clearings and limiting use of herbicide to foliage. Scenic intrusions due to ground disturbances will be reduced by treating unnatural-appearing soil disturbances.

Views and scenery along some roadways will be improved or maintained because native vegetation will be retained when practical and because some powerlines will be removed from along or over highways. In some areas, the project will utilize shorter structures with shorter line span length in order to avoid vertical intrusions to the horizon. The project will also utilize non-reflective materials and paints that blend into the landscape in order to reduce effect of new man-made features. In addition to mitigation measures along the new transmission line ROW, the USFS APA would result in the removal of one

existing transmission line and the abandonment of the ROW which return to a more natural state over time, thus improving the naturalness, scenery, and visual quality of the area.

In the west region there will be fewer scenic impacts of the alternatives analyzed because it will avoid crossing U.S. Highway 36 twice. In addition, placement of the USFS APA north and below U.S. Highway 36 will remove the transmission line ROW from immediately adjacent to the highway therefore reducing visual impacts.

The implementation of design criteria, reduction of two ROWs to one, revegetation over time, and removal of powerlines along existing scenic corridors is expected to maintain or reduce overall impact to scenery from the project.

2.4.3 Special Status Wildlife and Plants

The USFS is directed to provide special management importance for sensitive plant and wildlife species to ensure their sustainability and preclude trends toward federal listing under the Endangered Species Act. USFS also manages wildlife and plants in line with the Migratory Bird Treaty Act, other federal regulations, USFS directives, and state law.

As stated in the final EIS, this project is likely to affect wildlife, plants, fisheries, threatened, endangered and USFS sensitive species, management indicator species, and general species of wildlife, plants (vegetation), and fish. The anticipated affects vary by species, by region within the project area, and over time. A summary of potential effects include:

Special status and sensitive plant species - Due to limited distribution of federally listed species and low quality of habitat, no impacts to these species would be expected. Potential impacts to sensitive plant species and species of concern would be minor and short-term due to limited surface disturbance in the ROW, and reclamation of disturbed areas.

Wildlife habitat - Elk and mule deer winter range, and moose winter range habitat would be affected by this alternative. The USFS APA in the east region will disturb fewer elk and mule deer winter range acres among the alternatives analyzed.

Raptors and birds - Implementation of environmental protection measures (Appendix C), as well as seasonal restrictions to prevent impacts to raptors and migratory birds potentially would minimize direct impacts. Additionally, based on conductor placement and orientation, electrocution would not pose a hazard to bird species. Remaining impacts like loss of habitat are anticipated to be minor.

Special status and sensitive wildlife species - Vegetation communities in the ROW that support special status and sensitive wildlife species would be affected.

Because the project includes many practices, criteria, and measures (Appendices A, B, C) intended to avoid or minimize impacts, effects are not expected to be significant to populations or overall ecology over time. The protective measures include surveys and monitoring opportunities that will help project managers adapt during the course of the project and seasonally. Particular protections are laid out in Appendix B, part 3, Project-specific design criteria for Special Status Wildlife and Plants.

2.4.4 Recreation Opportunities

An issue that arose from scoping was how construction and maintenance would affect current recreational use of the area near Pole Hill, south of Estes Park. Popular recreational uses on USFS Road 122 (Pole Hill Road) include four-wheel drive use and hunting. If the road was improved to accommodate service and maintenance vehicles, its level of use would have changed. Using alternative construction means will result in fewer impacts to 4-wheel drive (4WD) drive opportunities and dispersed recreation. For the USFS APA in the west region, the 4WD section of Road 122/West Pole Hill Road will not be reconstructed, which is consistent with the established Recreation Opportunity Spectrum classes.

There is potential conflict between project requirements to reduce the height of monopoles in some places to mitigate scenery impacts with other requirements to ensure that monopole placement is done in consideration of recreational opportunities on Pole Hill Road. The review of pole placement will occur through the implementation of the Operations and Maintenance Plan and through regular involvement in the specific development plans

2.5 Rationale by region

2.5.1 East Region of the USFS APA

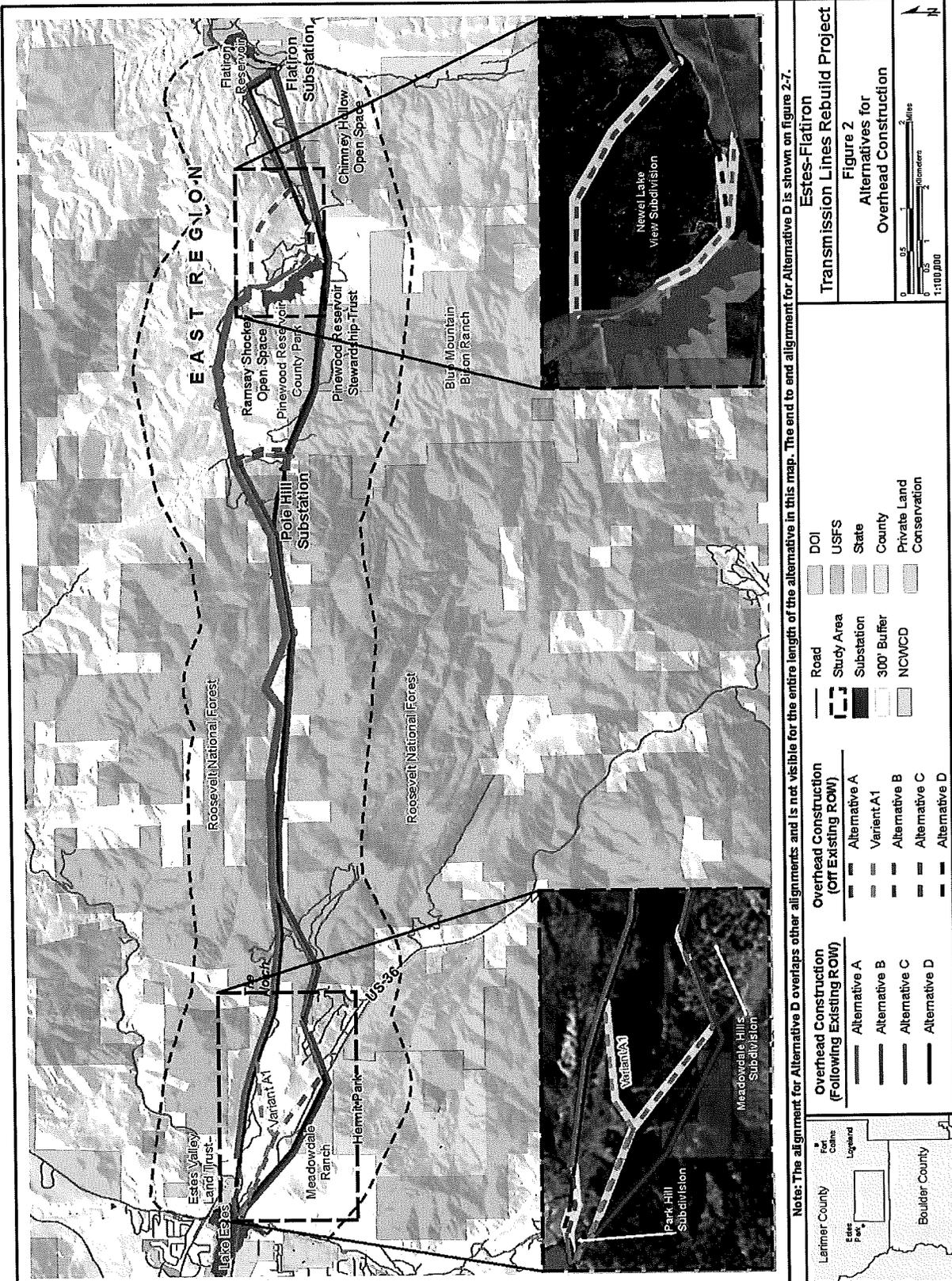
Soils. The USFS APA in the east region will disturb fewer acres of soils with shallow bedrock, as well as compaction prone and water erodible soils.

Elk and Mule Deer. The USFS APA in the east region will disturb fewer elk and mule deer winter range acres among the alternatives analyzed.

2.5.2 West Region of the USFS APA

Visual Resources. The USFS APA in the west region will result in less visual impact of the alternatives analyzed because it will avoid crossing U.S. Highway 36 twice. In addition, placement of the USFS APA north and below U.S. Highway 36 will remove the transmission line ROW from immediately adjacent to the highway therefore reducing visual impacts.

Recreation. For the USFS APA in the west region, the 4-wheel drive (4WD) section of West Pole Hill Road will not be improved. Popular recreational uses on Pole Hill Road include four-wheel drive use and hunting. Using alternative construction means would have resulted in fewer impacts to 4WD drive opportunities and dispersed recreation. All alternatives would be consistent with established Recreation Opportunity Spectrum classes and thus maintain recreational opportunities in the area.



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Note: The alignment for Alternative D overlaps other alignments and is not visible for the entire length of the alternative in this map. The end to end alignment for Alternative D is shown on figure 2-7.

Transmission Lines Rebuild Project Figure 2 Alternatives for Overhead Construction	
Overhead Construction (Following Existing ROW) Alternative A Alternative B Alternative C Alternative D	Overhead Construction (Off Existing ROW) Alternative A Variant A1 Alternative B Alternative C Alternative D
Larimer County Fort Collins Loveland	DOI USFS State County Private Land Conservation
Boulder County	Road Study Area Substation 300' Buffer NCWCD
Scale: 1:100,000 0 0.5 1 2 Miles 0 0.5 1 2 Kilometers North Arrow	

Figure 2 - Alternatives for Overhead Construction

3.0 Public Involvement

Public involvement during the EIS scoping period included publication of the Notice of Intent (NOI), public outreach through a project website, hard copy or email distribution of a scoping letter to the project mailing list, distribution of a press release, and public open house scoping meetings. Each of these is described below. The complete scoping summary report is available for download from the project website located at:

<https://www.wapa.gov/transmission/EnvironmentalReviewNEPA/Documents/EFEISScopingReport.pdf>.

3.1 Notice of Intent

A Notice of Intent (NOI) was issued on April 17, 2012 (77 Federal Register 22774). The NOI invited public participation in the EIS scoping process and solicited public comments on the scope of the EIS during a 90-day scoping period initially set to expire on July 16, 2012. An extension of the scoping period to August 31, 2012, was subsequently announced on the project website, through a press release, email notification, and direct mailing of a project newsletter. EIS scoping meetings were held on August 6, 2012, in Loveland, Colorado, and August 7, 2012, in Estes Park, Colorado. Both meetings utilized an open house format with exhibits and opportunities for interaction with WAPA and USFS representatives. In response to public requests to extend the scoping period beyond the August 31, 2012, deadline, WAPA further extended the scoping period to October 19, 2012.

3.2 Project Website

The USFS maintains a NEPA projects website at:

http://data.ecosystem-management.org/nepaweb/project_list.php?forest=110210

WAPA maintains a project website at:

<https://www.wapa.gov/transmission/EnvironmentalReviewNEPA/Pages/estes-flatiron.aspx>

Various public announcements, project updates, project documents, background, and contact information are posted as appropriate to these two project websites. The websites are updated as new information becomes available.

3.3 Scoping Letter

A scoping letter describing the proposed action, how to comment, and dates and locations for public meetings was distributed to the project mailing list by mail or email. The scoping letter included an informal site prospectus and call for interest from potential site users.

3.4 Press Release

A press release announcing the dates and locations of public scoping meetings was distributed to media outlets on April 17, 2012 via the NOI, and posted to the project website. An extension of the scoping period to August 31, 2012, was subsequently announced on the project website, through a press release, email notification, and direct mailing of a project newsletter.

3.5 Public Scoping Meetings

Potential issues were identified through an expanded public involvement process that included agency discussions, two sets of public scoping meetings, and scoping comments compiled during two formal scoping periods. The first round of public meetings was held in Estes Park and Loveland, Colorado, on

November 29 and 30, 2011. At that time, WAPA anticipated preparing an environmental assessment (EA) for the Project. The scoping period for the EA extended from November 29 through January 31, 2012. Additional comments were received through May 2012.

Subsequent to the initial EA scoping period, WAPA determined that an EIS was the appropriate level of analysis for this Project. WAPA held EIS scoping meetings were held on August 6, 2012, in Loveland, Colorado, and August 7, 2012, in Estes Park, Colorado. Both meetings utilized an open house format with exhibits and opportunities for interaction with WAPA and USFS representatives. In response to public requests to extend the scoping period beyond the August 31, 2012, deadline, WAPA further extended the scoping period to October 19, 2012.

3.6 Public Alternative Development Workshops

An expanded public involvement process included three public alternatives workshops held in Estes Park and Loveland during the public scoping period. The purpose of alternatives workshops was to solicit public input on route options and design features to be considered during the alternatives development process for the EIS. Workshops were held on October 2, 2012, in Loveland, and on October 3 and October 4, 2012, in Estes Park.

3.7 Scoping Comments

In total, more than 660 comment letters, forms, and emails were received during the two scoping periods for the EA and the EIS. Both the EA and EIS Scoping Summary Reports are available for download from the project website located at:

<https://www.wapa.gov/transmission/EnvironmentalReviewNEPA/Pages/estes-flatiron.aspx>.

3.8 Comments on Draft EIS

The Draft EIS was released in September 2014. Public hearings were held in Loveland and Estes Park to release the document, collect comments, discuss public questions, and provide technical experts for conversations. The public comment period generated approximately 450 substantive comments. Comments received ranged from support of the project, to concerns that some types of impacts had not been adequately analyzed, specifically potential effects on visual resources, recreation, socioeconomics, and human health. Comments received and responses to those comments are presented in Chapter 9 of the Final EIS.

4.0 Issue Identification

Both public and internal scoping comments (generated by the USFS interdisciplinary review team) were considered during issue identification. Issues determined to be within the scope of the EIS and warranting detailed analysis are summarized in Section 4.1 below.

4.1 Issues Identified for Analysis

Issues warranting detailed analysis in the EIS include:

- Effects of new ROW acquisition on land uses, property owners, and WAPA's customers.
- Effects of the proposed project on scenic travel corridors (e.g., U.S. Highway 36), residential, and recreational viewsheds in the vicinity of Estes Park, residential developments, such as Meadowdale Hills and Newell Lake View subdivisions, and on NFS lands.
- Effects of new road construction in inaccessible areas with steep topography.

- Effects of the proposed project on recreational uses and experiences in the vicinity of Estes Park and Pinewood Reservoir, and on NFS lands accessed by USFS Road 122 (Pole Hill Road).
- Effects of the proposed project on protected areas, including county open space, lands protected by conservation easement, lands within the Stewardship Trust Program, and State Wildlife Areas. No protected areas have been identified on NFS lands.
- Effects of ROW expansion or new ROW acquisition on existing infrastructure (e.g., Upper Thompson Sanitation District's treatment plant) and other structures.
- Effects of the proposed project on property values, as well as sources of revenue from tourism and outdoor recreation that Front Range communities and the regional economy rely upon.
- Effects of the proposed project (ground disturbance for access, pole removal, and new structure installation) on cultural resources.
- Effects of ROW clearing and road construction, road reconstruction, road reconditioning and ongoing maintenance on wetlands, soils, and water quality.
- Potential effects of electric and magnetic fields from high-voltage power lines on human health.
- Effects of the proposed project on wildlife; plant; fisheries; threatened, endangered and USFS sensitive species; management indicator species; and general species of wildlife, plant (vegetation) and fish species

5.0 Summary of Alternatives Analyzed in Detail

The development of a reasonable range of alternatives is an essential element of an EIS. As stated in the Council on Environmental Quality (CEQ) regulations for implementing NEPA, an EIS must rigorously explore and objectively evaluate all reasonable alternatives (40 CFR 1502.14a). NEPA also requires that a no action alternative be evaluated, in addition to the action alternatives, to establish a baseline for analysis and to analyze the consequences of not implementing the proposed project.

5.1 No Action Alternative

Under the No Action alternative, the USFS would not issue a special use permit to WAPA to rebuild the existing 115-kV system between Flatiron Substation and the intersection of Mall Road and U.S. Highway 36 in Estes Park where it crosses NFS lands. WAPA would continue to keep the existing transmission lines in service through continuing structure replacement and maintenance. The existing ROWs would be expanded, as needed, and minor adjustments made to the alignments where necessary in order to comply with North American Electric Reliability Corporation and National Electrical Safety Code requirements

This Alternative was identified as the environmentally preferable Alternative for the USFS.

5.2 Action Alternatives

The USFS conducted a comprehensive review of potential alternatives. The range of reasonable alternatives was developed through the scoping processes, which highlighted specific issues. In response to these issues, a range of alternatives was considered (**Figure 2** shows the location of the action alternatives).

- **Alternative A** – Rebuild and consolidate the transmission lines primarily on the existing North transmission line ROW. This alternative includes a reroute to the north and northeast of Newell Lake View subdivision and along Mall Road in Estes Park.

- **Variant A1** – Variant A1 is identical to Alternative A for all but the westernmost segment. At a point in the valley between Mount Olympus and Mount Pisgah, this routing variation would depart from the alignment of the existing North Line and traverse along the base of Mount Pisgah before turning to the northwest and generally following an alignment parallel to U.S. Highway 36 for the remaining distance to the existing steel lattice double-circuit structure at the intersection of U.S. Highway 36 and Mall Road.
- **Variant A2** – Variant A2 follows an alignment similar to Variant A1; however, the westernmost 2.7 miles of the transmission line would be constructed underground.
- **Alternative B** – Rebuild and consolidate the transmission line, primarily on the existing South transmission line ROW. This alternative includes a 0.25-mile reroute along Pole Hill Road on NFS lands, and a 0.75-mile reroute to the North Line on new ROW in the vicinity of Pole Hill Substation.
- **Alternative C** – Rebuild and consolidate the transmission lines along an alignment that utilizes a combination of the existing North and South transmission line ROWs. This alternative includes reroutes off existing transmission line ROW east of Pinewood Reservoir, along Pole Hill Road on NFS lands, and on privately held land on the west end of the project area.
 - **Variant C1** – Rebuild and consolidate the transmission lines along an alignment that utilizes a combination of the existing North and South transmission line ROWs. This alternative follows an alignment similar to Alternative C; however, the westernmost 2.7 miles of the transmission line would be constructed underground.
- **Alternative D** – Rebuild the two existing transmission lines in-kind as single-circuit lines located on separate ROWs. This alternative would utilize structures very similar to those currently in use, although structure height may increase by 5 to 10 feet. The existing ROWs would be expanded as needed and minor adjustments made to the alignments where necessary to comply with North American Electric Reliability Corporation and National Electrical Safety Code requirements. This alignment includes a reroute to Pole Hill Road where there is inadequate ROW through Newell Lake View subdivision and relocation of one structure on the north side of the Upper Thompson Sanitation District parcel in Estes Park, to accommodate expansion of their facility.

5.3 USFS APA: Combination of Alternatives B and C

As depicted in **Figure 3**, the USFS APA is a new double-circuit line between Flatiron Substation and U.S. Highway 36 at the intersection of Mall Road using Alternative C alignment in the west and primarily in the center, combined with the Alternative B alignment in the east. For discussion purposes, the west, central, and east regions of the USFS APA are depicted in **Figure 3**.

From the east, after leaving the Flatiron Substation, the USFS APA follows the Alternative B alignment along the existing South Line to the Pole Hill Substation. Just east of the Pole Hill Substation, the USFS Preferred Alternative would continue to follow the alignment of Alternative B, which would turn north and partially parallel Lone Elk Road for 0.75 mile until intersecting the alignment of the existing North Line. A new ROW along existing roads would be required for this short segment, as well as new access spur roads to new structures. Shifting to the North Line at this point and entering USFS lands would avoid crossing the Pole Hill Penstock and the steep and rocky terrain west of the Pole Hill Substation.

In the central region on private lands, the USFS APA primarily would follow the North Line, but may shift to the South Line and back again to stay close to Pole Hill Road, thus minimizing the need for access roads and ROW maintenance disturbance.

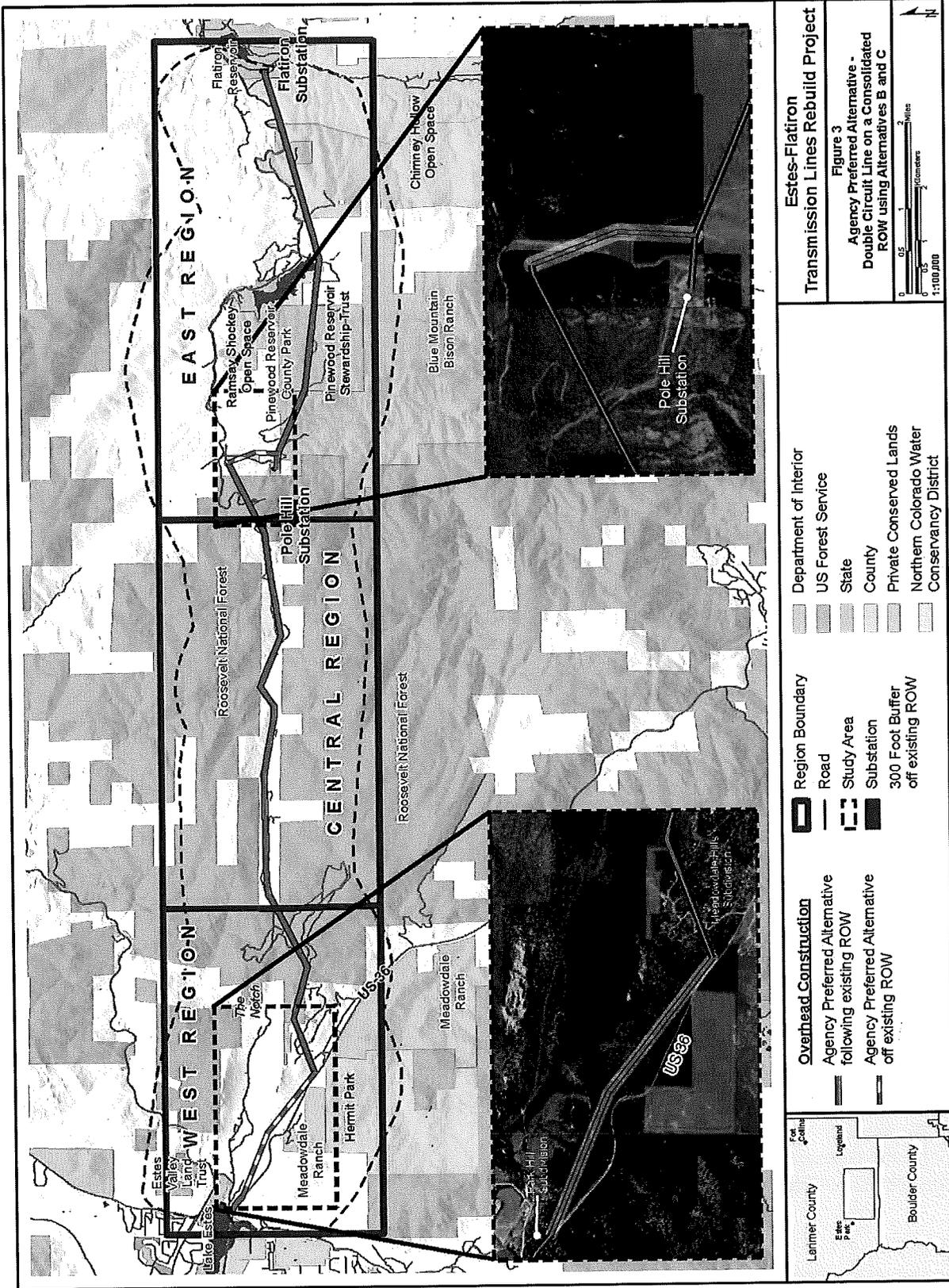
Heading west from the central region, the USFS Preferred Alternative would transect USFS lands and follow the Alternative C alignment along Pole Hill Road through the Meadowdale Hills subdivision to U.S. Highway 36 along the western end (inset, **Figure 3**). In adapting part of Alternative C for the USFS

Preferred Alternative, the 4WD portion of West Pole Hill Road would not be reconstructed or improved on NFS land, retaining the challenge for off-highway vehicle use in response to scoping comments. In addition, instead of crossing over U.S. Highway 36, the USFS APA would follow the Alternative C alignment for 1.7 miles, generally parallel to and north of U.S. Highway 36 down the valley for the remaining distance to the intersection of Mall Road and U.S. Highway 36.

At locations where the USFS APA alignment would follow the existing transmission line routes, the existing structures would be replaced with new double-circuit galvanized steel monopole structures. Individual structure locations could vary depending on final design. If galvanized steel monopole structures were placed in the same locations as previous structures adjacent to NFS roads, a change to Recreation Opportunity Spectrum classification would not occur nor require a USFS Plan Amendment.

On abandoned ROW, existing structures would be removed and the ROW allowed to return to natural vegetation patterns.

Under this alternative action the USFS will issue a special use permit to WAPA to rebuild the existing 115-kV system between Flatiron Substation and the intersection of Mall Road and U.S. Highway 36 in Estes Park where it crosses NFS lands. As previously noted, Alternative C on the west end and Alternative B on the east end were identified as the USFS Preferred Alternative in the Final Environmental Impact Statement. This decision includes the authorization to construct and occupy a new double-circuit 115-kV transmission line on galvanized steel monopoles within a single ROW on NFS lands.



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Figure 3 - Agency Preferred Alternative

6.0 Findings required by other laws

This decision is consistent with all laws, regulations and agency policy relevant to this project and as described in the Final EIS Chapter 1, Section 1.8. This includes federal statutes, regulations, and executive orders, as well as DOE orders and guidance, USFS directives, and state and local regulations.

7.0 Implementation Date

Implementation of this project will not occur for a minimum of 50 days (45-day objection process and 5-day stay if no objection is received) following publication of the legal notice of this decision in the Estes Park Trail-Gazette Fort Collins Coloradoan, and Loveland Reporter-Herald. If an objection is filed, the Objections Processing Officer has up to 45 days (which may be extended an additional 30 days if needed) to resolve the objection and provide a written response to the objection to the Responsible Official. The Responsible Official can then finalize the Decision, which can be implemented immediately.

8.0 Objection Opportunity

The USFS decision on the selected action was subject to the objection process in accordance with regulations listed in Title 36 Part 218 subparts A and B of the CFRs. Objections were accepted for 45 days following the date the legal notice was published in the Estes Park Trail-Gazette, Fort Collins Coloradoan, and Loveland Reporter-Herald. No objections were received during the objection-filing period.

9.0 Contact

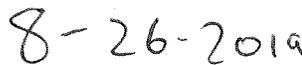
For additional information concerning this decision, contact: Leslie McFadden, Arapaho and Roosevelt National Forests and Pawnee National Grassland, 2150 Centre Ave, Building E, Fort Collins, CO 80526.

Responsible Official



MONTE WILLIAMS

Forest Supervisor
Arapaho and Roosevelt National Forests
Pawnee National Grassland



DATE

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10.0 Appendixes

10.1 Appendix A – Standard Construction Practices

The USFS decision includes the following Standard Construction Practices (SCPs) that would be employed to minimize potential adverse effects during construction activities:

Ref. #	Standard Construction Practices
SCP 1	The contractor shall limit the movement of its crews and equipment to the ROW, including access routes. The contractor shall limit movement on the ROW to minimize damage to grazing land, crops, or property, and shall avoid unnecessary land disturbance.
SCP 2	When weather and ground conditions permit, the contractor shall obliterate contractor-caused deep ruts that are hazardous to farming operations and to movement of equipment. Such ruts shall be leveled, filled, and graded, or otherwise eliminated in an approved manner. In hay meadows, alfalfa fields, pastures, and cultivated productive lands, ruts, scars, and compacted soils shall have the soil loosened and leveled by scarifying, harrowing, disking, or other approved methods. Damage to ditches, tile drains, terraces, roads, and other features of the land shall be corrected. Before final acceptance of the work in these agricultural areas, ruts shall be obliterated, and trails and areas that are hard-packed as a result of contractor operations shall be loosened, leveled, and reseeded. The land and facilities shall be restored as nearly as practicable to their original conditions.
SCP 3	Water bars or small terraces shall be constructed across ROW and access roads when needed to prevent water erosion and to facilitate natural revegetation.
SCP 4	The contractor shall comply with applicable Federal, state, and local environmental laws, orders, and regulations. Prior to construction, supervisory construction personnel and heavy equipment operators will be instructed on the protection of cultural and ecological resources.
SCP 5	The contractor shall exercise care to preserve the natural landscape, and shall conduct its construction operations to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, construction roads, or excavation operations, trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the contractor's construction operations and equipment. To the extent practicable considering the need to protect transmission lines from encroaching vegetation and vegetation hazards (especially trees) edges of clearings and cuts through tree, shrubbery, or other vegetation would be irregularly shaped to soften the visual impact of straight lines within the ROW.
SCP 6	On completion of the work, work areas shall be scarified or left in a condition that would facilitate natural revegetation, provide for proper drainage, and prevent erosion. The contractor would repair damages resulting from the contractor's operations. Newly created access roads will be left to revegetate to height that still allows vehicle passage.
SCP 7	Construction staging areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. Staging areas will not be placed within wetlands, including fen wetlands, riparian communities, or in proximity to surface waters. On abandonment, storage and construction buildings, including concrete footings and slabs, and construction materials and debris shall be removed from the site. The area shall be re-graded as required so that surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.
SCP 8	Borrow pits shall be excavated so that water will not collect and stand. Before being abandoned, the sides of borrow pits shall be brought to stable slopes, with slope intersections shaped to carry the natural contour of adjacent undisturbed terrain into the pit or borrow area, giving a natural appearance. Waste piles shall be shaped to provide a natural appearance. No waste piles will occur on NFS lands.

Ref. #	Standard Construction Practices
SCP 9	Construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter contaminants, debris, other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Pollutants and waste include, but are not restricted to refuse, garbage, cement, concrete, sanitary waste, industrial waste, oil and other petroleum products, aggregate processing tailing, mineral salts, and thermal pollution.
SCP 10	Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses, shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means. Dewatering shall comply with applicable state requirements.
SCP 11	Excavated material or other construction materials shall not be stockpiled or deposited near or on stream banks, lake shorelines, or other watercourse perimeters where they can be washed away by high water or storm runoff, or can encroach upon the actual watercourse itself.
SCP 12	Waste waters from construction operations shall not enter streams, watercourses, or other surface waters without the appropriate permits and proper implementation of applicable permit conditions, including but not limited to use of turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes, or other approved methods. Waste waters discharged into surface waters shall be essentially free of settleable material. For the purpose of these practices, settleable material is defined as material that will settle from the water by gravity during a 1-hour quiescent detention period.
SCP 13	The contractor shall use practicable methods and devices that are reasonably available to control, prevent, and otherwise minimize discharges of air contaminants.
SCP 14	The emission of dust into the air will not be permitted during the handling and storage of concrete aggregate, and the contractor shall use methods and equipment as necessary for the collection and disposal, or prevention, of dust. The contractor's methods of storing and handling cement and pozzolans shall include means of controlling air discharges of dust.
SCP 15	Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or inefficient operating conditions, shall not be operated until repairs or adjustments are made.
SCP 16	The contractor shall prevent nuisance to persons or damage to crops, cultivated fields, and dwellings from dust originating from his operations. Oil and other petroleum derivatives shall not be used for dust control. Speed limits shall be enforced, based on road conditions, to reduce dust problems.
SCP 17	To avoid nuisance conditions due to construction noise, internal combustion engines shall be fitted with an approved muffler and spark arrester.
SCP 18	Burning or burying waste materials on the ROW or at the construction site will be permitted if allowed by local regulations. The contractor shall remove all other waste materials from the construction area. All materials resulting from the contractor's clearing operations shall be removed from the ROW. No waste materials can be buried on NFS lands.
SCP 19	The contractor shall make necessary provisions in conformance with safety requirements for maintaining the flow of public traffic, and shall conduct its construction operations to offer the least possible obstruction and inconvenience to public traffic.
SCP 20	WAPA will apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing a ROW, to the mutual satisfaction of the parties involved.
SCP 21	Structures will be carefully located to avoid sensitive vegetative conditions, including wetlands. If roads would cross wetlands, crossings occur at a feasible location for the construction contractor and in an area where the least amount of damage would occur to the wetland community. If necessary, WAPA would obtain the appropriate permits from the U.S. Army Corps of Engineers (USACE).
SCP 22	No disturbance of vegetation will occur within 100 feet of a stream, except for hazard trees. No fueling, staging or storage areas would be placed within 100 feet of wetlands, streams or riparian areas. Where possible, vehicles should avoid crossing hydric soils.
SCP 25*	Disturbed areas not needed for maintenance access will be reseeded using mixes approved by the land management agency.

Ref. #	Standard Construction Practices
SCP 26	Erosion control measures will be implemented on disturbed areas, including areas that must be used for maintenance operations (access ways and areas around structures).
SCP 27	The minimum area will be used for access ways (generally 12 to 16 feet wide, except where roadless construction is used).
SCP 28	Leveling and benching of structure sites will be the minimum necessary to allow structure assembly, erection, and maintenance.
SCP 29	ROW will be located to use the least steep terrain.
SCP 30	Careful structure location will ensure spanning of narrow flood prone areas.
SCP 31	Structures will not be sited on potentially active faults.
SCP 32	Structure sites and other disturbed areas will be located at least 100 feet, where practical, from rivers, streams (including ephemeral streams), ponds, lakes, and reservoirs.
SCP 33	New access ways will be located at least 100 feet, where practical, from rivers, ponds, lakes, and reservoirs.
SCP 34	At crossings of perennial streams by new access ways, culverts of adequate size to accommodate the estimated peak flow of the stream will be installed. Construction areas will minimize disturbance of the stream banks and beds during construction. The mitigation measures listed for soil/vegetation resources will be performed on areas disturbed during culvert construction.
SCP 35	If the banks of ephemeral stream crossings are sufficiently high and steep that breaking them down for a crossing would cause excessive disturbance, culverts will be installed using the same measures as for culverts on perennial streams, and the applicable USACE permits would be obtained.
SCP 37*	Power line structures will be located, where practical, to span small occurrences of sensitive land uses, such as cultivated areas. Where practicable, construction access ways will be located to avoid sensitive conditions.
SCP 38	ROW will be purchased at fair market value and payment will be made of full value for crop damages or other property damage during construction or maintenance.
SCP 39	The power line will be designed to minimize noise and other effects from energized conductors.
SCP 42*	Before construction, WAPA will perform a Class III (pedestrian) cultural survey on areas to be disturbed, including structure sites and new access ways. These surveys will be coordinated with the appropriate landowner or land management agency, the State Historic Preservation Office and Indian tribe if on tribal lands. The survey reports and recommendations will be reviewed with the State Historic Preservation Offices and other appropriate agencies. WAPA's Standard Operating Procedure is to avoid all culturally sensitive sites. If not possible, specific mitigation measures necessary for each site or resource will be determined. Mitigation may include careful relocation of access ways, structure sites, and other disturbed areas to avoid cultural sites that should not be disturbed, or data recovery.
SCP 43	The contractor will be informed of the need to cease work in the location if cultural resource items are discovered.
SCP 44	Construction activities will be monitored or sites flagged to prevent inadvertent destruction of cultural resource for which the agreed mitigation was avoidance.
SCP 45	Construction crews will be monitored to the extent possible to prevent vandalism or unauthorized removal or disturbance of cultural artifacts or materials from sites where the agreed mitigation was avoidance.
SCP 46	If cultural resources that were not discovered during the Class III survey are encountered during construction, ground disturbance activities at that location will be suspended until the provisions of the NHPA have been carried out.
SCP 47	Construction activities will be monitored or significant locations flagged to prevent inadvertent destruction of paleontological resource for which the agreed mitigation was avoidance.
SCP 48	Clearing for the access road will be limited to that necessary to permit the passage of equipment, and the safe construction, operation and maintenance of the line.

Ref. #	Standard Construction Practices
SCP 49	The access road will follow the lay of the land rather than a straight line along the ROW where steep topography would result in a higher disturbance.

* WAPA's SCPs 23, 24, 36, 40, and 41 are not applicable to this project and are not included in this table.

10.2 Appendix B – Project-Specific Design Criteria

The design criteria below were developed to minimize or avoid impacts to avian species, special status wildlife and plants, and minimize visual effects of vegetation management. The following project-specific design criteria apply to the design and layout of all action alternatives:

10.2.1 Avian Wildlife

- WAPA will design and construct the transmission line in conformance with the Suggested Practices for Avian Protection on Power Lines (Avian Power Line Interaction Committee 2006).¹
- The siting of structure locations and/or timing of construction related activities will adhere to Colorado Parks and Wildlife 2008 *Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors*. When distance buffers are not possible because of project proximity, seasonal restrictions will be implemented.
- Avian nesting surveys will be conducted prior to construction to ensure ground-disturbing activities do not result in the “take” of an active nest or migratory bird protected under the Migratory Bird Treaty Act. If construction occurs during the avian breeding season (roughly between March 15 and September 1), surveys will be conducted no earlier than 72 hours prior to any ground disturbing activities to ensure the proposed project complies with the Migratory Bird Treaty Act.

10.2.2 Special Status Wildlife and Plants

- WAPA will conduct pre-construction surveys along portions of the preferred alternative, including access roads not previously surveyed, to identify sensitive species habitat or populations, and occurrences of noxious weeds. If special status individuals or populations are discovered, WAPA will develop mitigation to minimize effects in consultation with the USFS and appropriate natural resource agencies.

10.2.3 Visual Resources

- Clumps or islands of trees will be left in openings created by danger tree removal (where sagging lines and ground clearance are not a concern) to break sight distance and to maintain natural-appearing landscape mosaic pattern.
- WAPA will limit the use of foliar application of herbicide to reduce creation of large areas of browned vegetation.
- At road crossings, highway or visual overlooks, WAPA will leave sufficient vegetation, where possible, to screen views of the ROW.
- Additional detailed vegetation management information is located in the Final EIS, Appendix B.
- WAPA will treat unnatural-appearing soil disturbances by smoothing piles of soil created by machinery or any other soil disturbance from machine piling within 100 feet of areas requiring Partial Retention Visual Quality Objective/Moderate Scenic Integrity Objective or higher. Areas may include scenic byways, hiking or multi-use trails, camping areas, other areas of moderate to high use recreation, or any other areas of visual significance.
- At locations where visibility from sensitive viewpoints is a major concern, structures with a shorter average height (85-foot) and shorter span length could be utilized. The shorter design would result in roughly twice the number of structures in a given length of ROW in order to meet required conductor clearances.

¹ Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, California.

10.3 Appendix C – Project-specific Environmental Measures

The following environmental protection measures are integrated into the implementation of the project:

- During construction, a construction inspector (WAPA employee or hired independent contractor) will be present in the field to ensure implementation of standard construction practices (SCPs) (Appendix C) and Project-specific design criteria (Appendix A).
- Noxious weed surveys will be conducted prior to Project implementation on new proposed alignments along the USFS APA that were not surveyed in 2011. Survey information collected during pre-construction surveys per the specific design criteria will include species name, Global Positioning System location of weed infestations, percent cover, and approximate size of weed infestations.
- A noxious weed management plan will be developed to specify general weed prevention and control methods to be implemented pre-, during, and post-construction. Techniques will include education of construction and operation personnel, and post-construction monitoring. Control of noxious and invasive species will include, as needed, selective herbicide spraying or other chemical, physical, and biological methods consistent with the State of Colorado, Larimer County, and USFS regulations and guidance.
- Where permanent facilities or structures will be located, the entire topsoil horizon (layer) will be salvaged for use in reclamation, prior to greater surface disturbance. Additionally, prior to any trenching, the topsoil will be salvaged and stockpiled separately from subsoil, for later use in reclamation.
- Construction, excavation, or re-spreading with frozen or saturated soils will be prohibited or minimized to the greatest extent practicable. Implementation of this measure will avoid or reduce impacts to soils due from uneven settling, compacted surfaces, and physical crusts that would reduce water infiltration.
- Roads will be inspected as part of routine line inspections and remediation/restoration conducted as needed based on those inspections.
- During reclamation and decommissioning, compacted areas (typically any area that received repeated traffic or three or more passes by heavy equipment) will be decompacted by subsoiling, paraplowing, or ripping along the contour to the depth of compaction. Soils will be decompacted only where needed, and where decompaction would result in greater net benefits to helping seedbed preparation, encouraging infiltration, and reducing accelerated erosion than would occur without it. Scarification will only be used on shallow soils.
- To protect stored or stockpiled soils from losses to wind and water erosion, soil piles left in place for more than one week will be protected using the appropriate best management practices (mulch, tackifier, cover crop, etc.).
- As site-specific planning and design proceed, WAPA will locate foundations to avoid domestic water supply and septic systems. WAPA will ascertain the need for blasting to construct foundations in areas where hard, near-surface bedrock occurs alongside domestic water supply and septic systems. Where blasting will be required under such conditions, project structure foundations will be located as far from domestic infrastructure as possible, and a blasting control plan will be developed and implemented to minimize adverse effects on underground water systems. WAPA will address any damage claims appropriately, verifying damages and restoring the function of individual or local water supply or septic systems, as needed.
- As part of final design and engineering, wetland surveys will be conducted along the selected alternative ROW to identify any potential wetlands and fens located on site. Where potential wetland features are identified within the ROW, survey information collected will include wetland type, type and cover of hydrophytic and riparian vegetation species present, site hydrology, Global Positioning System location of the wetland boundaries and adjacent ROW footprint, and

associated information required to determine jurisdictional status through consultation with the USACE. If wetlands or fens are identified on NFS lands, in addition to the consultation with the USACE as described in SCP 21, appropriate USFS wetlands staff will be consulted.

- If wetlands are identified within the selected alternative ROW, boundaries of avoidable features will be staked in the field to guide construction activities. Where wetland features cannot be avoided through site design, wetland construction techniques will be applied for any construction within wetlands. Wetland construction techniques could include: not removing existing structures in wetlands and riparian areas, cutting off existing structures at the base; or the use of timber mats, erosion controls, and the placement of equipment outside of the wetland and waters of the U.S. boundaries. Wetland construction techniques and best management practices will be reviewed and approved by the USACE.
- WAPA proposes to conduct additional plant surveys as described in the Project-specific design criteria (Sections 2.5.1.3, Special Status Wildlife and Plants) above. If known federally listed plant species or USFS-identified sensitive plant species are encountered, an avoidance plan will be created and implemented in consultation with a USFS Botany Representative to avoid or minimize impacts, as appropriate.
- Rocks, brush, and woody debris will be salvaged to the extent practicable and replaced to approximate pre-Project visual conditions on graded structure pads, staging areas, and temporary access routes that are decommissioned post-construction. This will re-establish the pre-disturbance surface character following construction and accelerate long-term reclamation of graded pads, staging areas, and temporary access routes.
- To the extent possible, WAPA will utilize non-specular conductors and non-reflective coatings on insulators. This will reduce glare from transmission conductors and insulators.
- Appropriate color treatments will be used for galvanized steel monopole transmission towers to the extent practicable. Similarly, surface treatments for transmission structures will repeat and/or blend with the existing colors of the surrounding landscape to the extent practicable. This measure describes two such examples: 1) grey galvanized steel will be utilized east of Bald Mountain to Flatiron substation where they will be seen against an olive-colored sagebrush and mountain mahogany backdrop and 2) where transmission structures will be silhouetted against the sky from most viewpoints (such as above The Notch), galvanized structures will be selected to minimize color contrasts. Such galvanized steel monopoles poles and davit arms will receive a non-specular treatment to dull their reflectivity and reduce glare.
- If at any time during this Project, possible human remains are discovered, WAPA's Archaeologist and the USFS Arapaho-Roosevelt National Forest Archaeologist will be notified immediately (no later than 24 hours after the discovery) by telephone and email. Work of all types will halt immediately within 300 feet of the remains and reasonable protective measures will be employed until appropriate agency personnel, the Colorado State Archaeologist, the Larimer County Sheriff, and/or the Larimer County Coroner can be notified and are able to determine the nature and significance of the remains.