DOE/EA-1440-S-II-SA-1

SUPPLEMENT ANALYSIS TO THE FINAL SUPPLEMENT-II TO THE FINAL SITE-WIDE ENVIRONMENTAL ASSESSMENT OF THE NATIONAL RENEWABLE ENERGY LABORATORY'S SOUTH TABLE MOUNTAIN COMPLEX

July 2011

U.S. Department of Energy
Golden Field Office
National Renewable Energy Laboratory
1617 Cole Boulevard
Golden, Colorado 80401

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Acronyms

ACHP	Advisory Council on Historic Preservation
ASTM	American Society for Testing and Materials
CLOMR	Conditional Letter of Map Revision
DOE	U.S. Department of Energy
EA	environmental assessment
ESIF	Energy Systems Integration Facility
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FONSI	Finding of No Significant Impact
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NREL	National Renewable Energy Laboratory
NRHP	National Register of Historic Places
NWP	Nationwide Permit
REC	Recognized Environmental Condition(s)
ROW	right-of-way
SA	Supplement Analysis
SHPO	State Historic Preservation Officer
SOW	Scope of Work
STM	South Table Mountain
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WHF	Waste Handling Facility

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Proposed Action: Establishment of a Route for the Second Access Road to the National Renewable Energy Laboratory's South Table Mountain Complex

In November 2009, in the Finding of No Significant Impact (FONSI) for the *Final Supplement-II to the Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain Complex (*DOE/EA-1440-S-II) U.S. Department of Energy (DOE) selected a corridor for a second access road to provide additional access to the National Renewable Energy Laboratory's (NREL) South Table Mountain (STM) Complex located in Golden, Colorado. Since that time DOE and NREL have been evaluating routing alternatives within the selected corridor leading to the identification of a route within the corridor that meets all engineering and environmental considerations. Due to expansions in staffing levels at NREL, this additional access is necessary to alleviate traffic congestion on existing access roads.

This Supplement Analysis (SA) has been prepared to assist DOE in determining whether additional National Environmental Policy Act (NEPA) analyses are required.

NEPA Background

In the *Final Supplement-II to the Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain Complex* (DOE/EA-1440-S-II) DOE assessed the impacts of the construction and operation of the following five site development projects at NREL's STM site at Golden, Colorado:

- The Energy Systems Integration Facility (ESIF), a new research facility;
- Phase 2 of planned site infrastructure improvements (Phase 2 of Full Site Development);
- **A new second full service access road;**
- Expansion of the Waste Handling Facility (WHF); and
- Expansion of the Visitors Center.

After evaluating several alternative corridors in DOE/EA-1440-S-II, DOE determined that utilization of the preferred corridor, Alternative B/C, for a new access route that would connect the STM site with South Golden Road could be accomplished without significant impacts, Figure 1. Additionally in the FONSI, DOE noted that further agency consultations would occur to select a specific route within this corridor that can be developed without significant impacts to wetlands, floodplains, or historic resources.

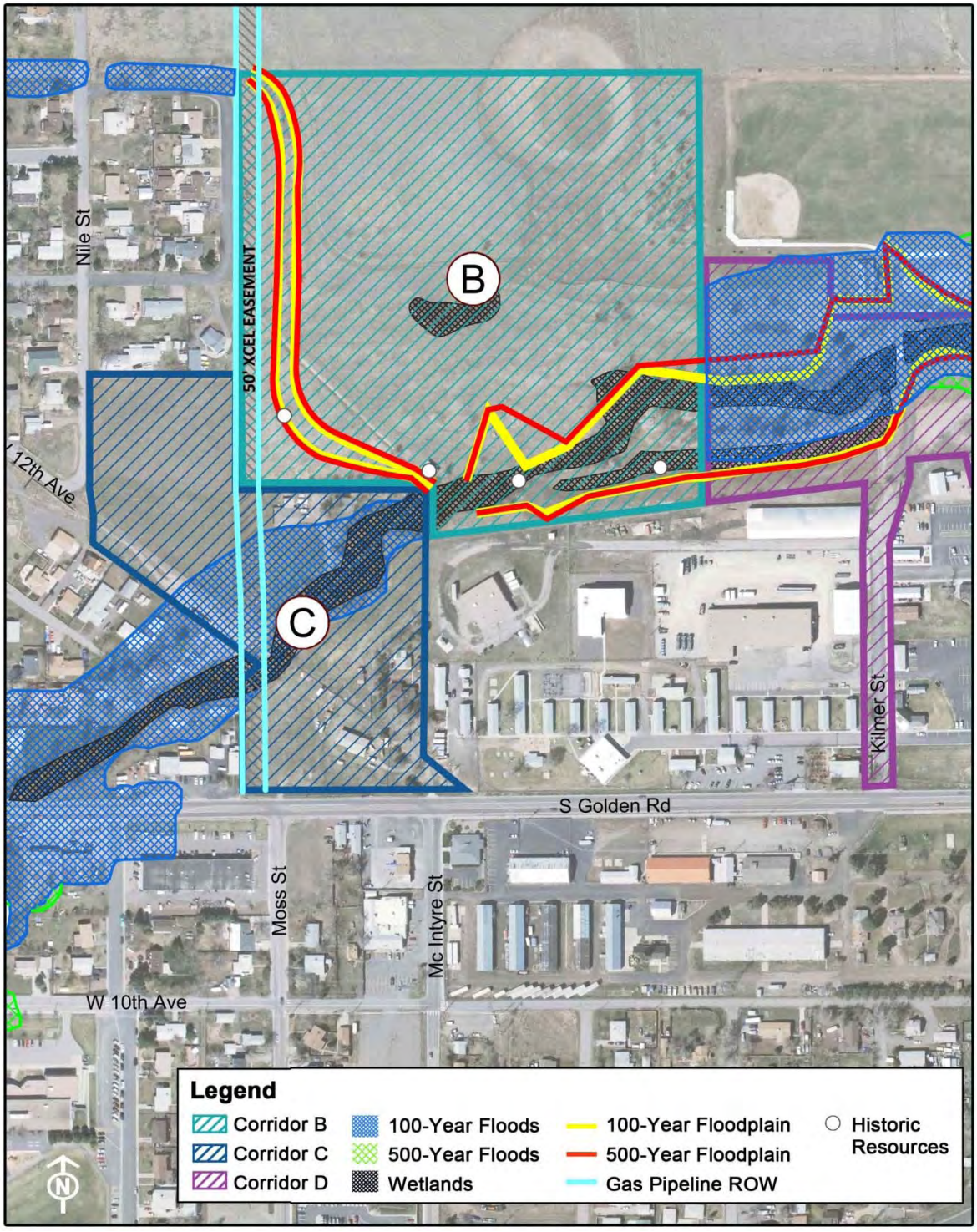

Figure 1. Corridor B/C MAP from DOE/EA-1440-S-II

Additionally, because the action of constructing a second access road would involve impact to floodplains and wetlands, in accordance with DOE regulations contained at 10 CFR 1022, *Compliance with Floodplain and Wetlands Environmental Review Requirements*, DOE has conducted a Floodplain and Wetland Assessment that analyzed the potential impacts to these features associated with the construction of a second access road from the STM Complex. The Floodplain and Wetland Assessment is included in this SA as Appendix A.

This SA summarizes the additional analyses that have been conducted to select a route within the B/C corridor assessed in the environmental assessment (EA), which included: the Floodplain and Wetland Assessment; additional surveys for species protected under the Endangered Species Act; and additional surveys for cultural and historic resources. After consideration of engineering requirements, land ownership, traffic management and environmental impacts, the specific route for which these more detailed reviews were conducted was determined and is shown on Figure 2.

DOE Floodplain and Wetland Assessment

Because the proposed project would cross the 100-year floodplain of Lena Gulch and has the potential to affect wetlands in this same area, (see Figure 2), in accordance with 10 CFR 1022, DOE prepared a Floodplain and Wetland Assessment for this proposed action and notified the public and Federal and State Agencies of the availability of the Assessment on May 20, 2011 via letter and newspaper advertisement. The Floodplain and Wetland Assessment, Public and Agency Notices, Consultations and Statement of Findings are found in Appendix A to this SA.

DOE has determined that this project would not result in adverse impacts to the 100-year floodplain. Temporary disturbance within the floodplain would cease following completion of construction activities associated with this proposed action. Proper erosion and sediment control measures would be utilized and site restoration would occur upon completion of the construction activity. This proposed action would not result in any increase in the Base Flood Elevations from the project conditions to post-project conditions or other long-term impacts to the floodplain and its functionality. No effects to lives and property associated with floodplain disturbance are anticipated.

Wetland Nationwide Permit and Mitigation

As a part of its consultations with the U.S. Army Corps of Engineers (USACE) regarding actions affecting floodplains or wetlands, on February 9, 2011, DOE requested that USACE authorize the use of Nationwide Permit (NWP) No. 14 for Linear Transportation Crossings. On February 15, 2011 the USACE confirmed that the proposed roadway crossing of Lena Gulch is authorized by NWP No. 14 and required the purchase of 0.25

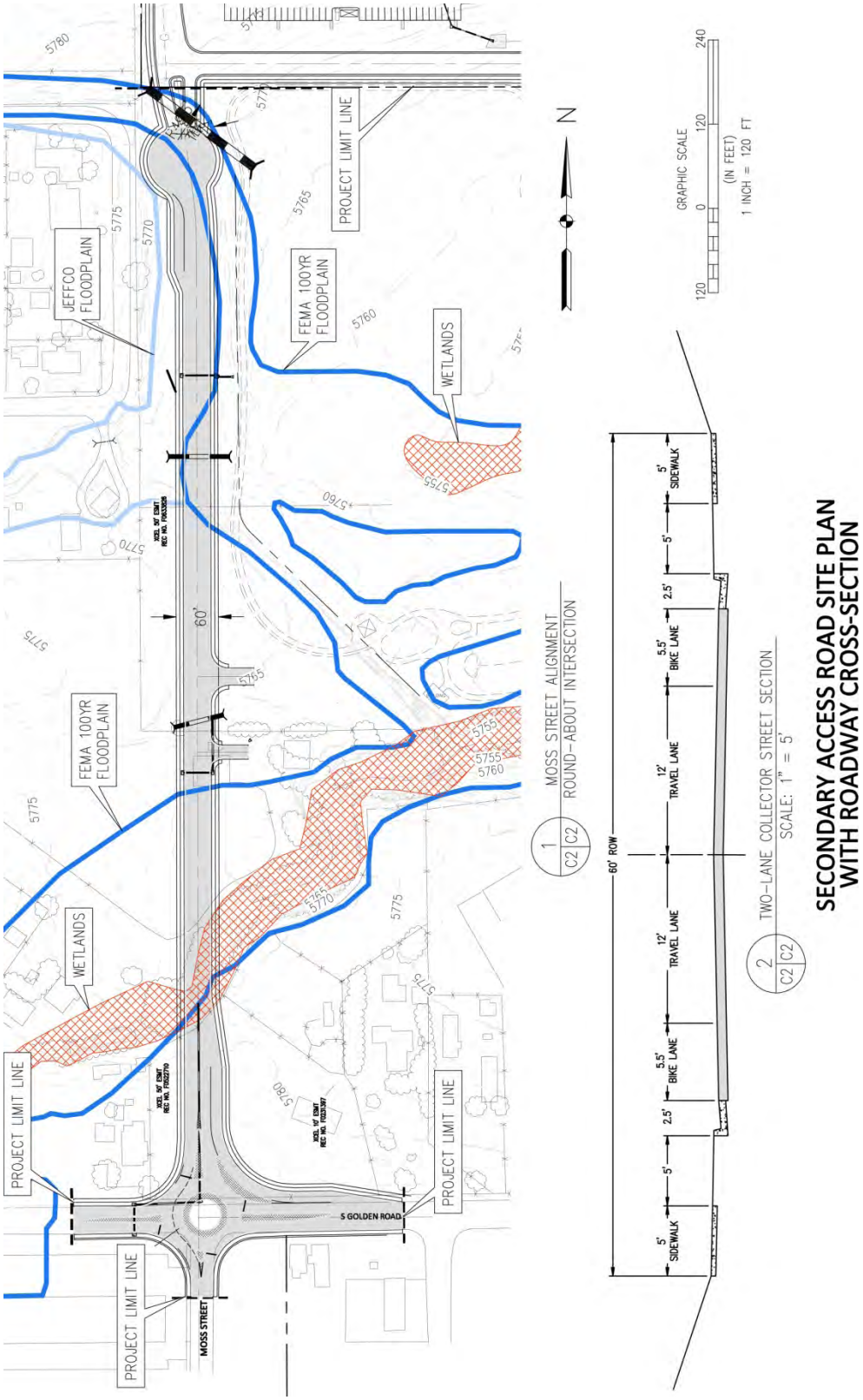

Figure 2. Second Access Road Site Plan with Roadway Cross-Section

acres of wetland mitigation credits to offset the wetland impacts of the proposed action. DOE concurred with the USACE Wetland Preliminary Jurisdictional Determination on March 1, 2011. DOE provided evidence of the purchase of the wetland mitigation credits on May 4, 2011 and the USACE confirmed on May 6, 2011 that DOE has met the wetland mitigation requirements for this project. Documentation of this consultation process is included in Appendix A to this SA.

Conditional Letter of Map Revision (CLOMR)

In accordance with Part 65 of the National Flood Insurance Program (NFIP) regulations, acting for DOE in letters dated July 26 and September 1, 2010, Baseline Engineering Corporation, requested that Denver Metro Urban Flood and Drainage Control District and the Department of Homeland Security's Federal Emergency Management Agency (FEMA) evaluate the effects that proposed channel modifications associated with the Moss Street Crossing project along Lena Gulch, would have on the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report.

The CLOMR prepared for this action was approved by FEMA on February 25, 2011 and is included in this SA as Appendix B. In accordance with the terms of FEMA's approval, upon completion of this project, an application for floodplain map revision will be submitted to Urban Drainage and Flood Control District and FEMA. FEMA would issue a Letter of Map Revision (LOMR) upon concurrence with the findings of the map revision application, thus completing the floodplain action mitigation process. Therefore, this action conforms to applicable floodplain protection standards.

Threatened or Endangered Species Assessment

As identified in DOE/EA-1440-S-II, the affected area was potential habitat for one mammal and two plant species protected under the Endangered Species Act.

On August 3, 2009, NREL submitted a July 20, 2009 habitat assessment for the Preble's meadow jumping mouse, *Zapus hudsonius preblei*, to the U.S. Fish and Wildlife Service (USFWS) concluding that no suitable habitat existed in the project area for the Preble's meadow jumping mouse. On August 7, 2009 DOE formally asked the USFWS to concur with the conclusions of the habitat assessment. The USFWS confirmed that the Preble's meadow jumping mouse "…is not likely to be present in the subject area..." and as a result on August 20, 2009 disqualified the site as potential habitat for Preble's. On May 6, 2010 Urban Drainage and Flood Control District sent a letter to USFWS proposing renewal and additions to the Preble's meadow jumping mouse Block Clearance. On June 15, 2010, the USFWS renewed the additions to the Preble's jumping mouse Block Clearance for the Denver Metropolitan area. Documentation of these communications is included in Appendix C to this SA.

In accordance with the Endangered Species Act, NREL (for DOE) conducted a survey for the federally listed Ute ladies' tresses Orchid (*Spiranthes diluvialis*) and the Colorado butterfly plant (*Gaura neomexicana coloradensis*). This survey was conducted over the entire reach of interest (from South Golden Road to Isabell Street) on August 19th, 2010 when local populations of orchids (Wheat Ridge and Boulder, Colorado) were known to be blooming. The results of this survey revealed no orchids or Colorado butterfly plant within the study area along Lena Gulch and adjoining tributaries. DOE sent the Rare Plant Survey Report and its conclusions to the USFWS on November 24, 2010 and the USFWS stamped its conclusion of "Concur No Effect" on December 1, 2010, confirming that these species are not present in the study area. Documentation of these communications is included in Appendix C to this SA.

Cultural, Historical, and Archaeological Assessment

Due to property access issues, the cultural resource surveys for the Secondary Access Road right-of-way (ROW) were done in two phases. The first phase, completed in June 2010, addressed all of the federal and county held properties (about 80% of the ROW) and left the private parcels for the second phase. The second phase was completed in May 2011. Figure 3 presents the portions of the ROW done in the two phases (yellow – first phase; red-second phase). In addition, during the second phase, the construction easements were established (Figure 4) and expanded the area of interest at the intersection round-a-bout. Therefore, these new areas were surveyed in May 2011, and the resulting cultural resource survey reports were provided to the State Historic Preservation Officer (SHPO).

NREL contracted with RMC Consultants, Inc. to conduct a Class III cultural resource inventory of approximately .2 miles of the proposed ROW. The Scope of Work (SOW) specified that the inventory consist of a 100 ft (30 m) ROW along the proposed access route. The first phase inventory resulted in the documentation of one new linear site and two previously recorded historic features related to the Camp George West Historic District. The original report titled, *Class III Cultural Resource Inventory of the Proposed South Access Road, National Renewable Energy Laboratory, and Jefferson County, Colorado,* was submitted to the SHPO in December 16, 2010 by DOE with a determination of adverse effect on historic properties. All eligibility determinations were accepted by SHPO in a January 18, 2011 response and the SHPO also concurred that an adverse effect would result from the proposed project because a linear resource and a contributing feature of the Camp George West Historical District, a firing line, would be impacted by a new roadway. During subsequent consultations, it was agreed that mitigation for the removal of a portion of a contributing feature (e.g. firing line) to the Camp George West Historic District would be the construction of an interpretive feature, such as a sign or kiosk, with period photographs and text that explain the use of the

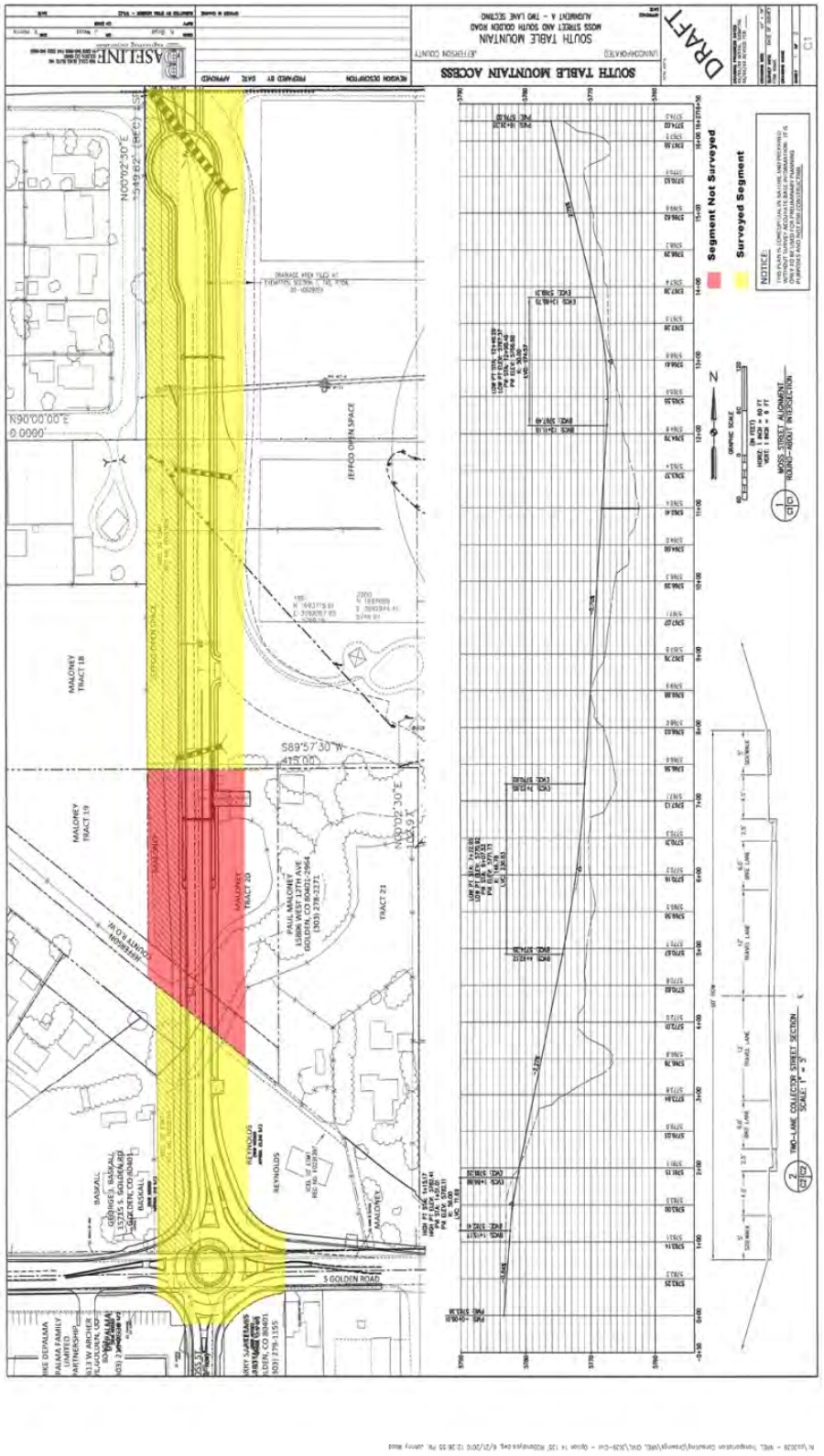

Figure 3. Secondary Access Right-of-Way

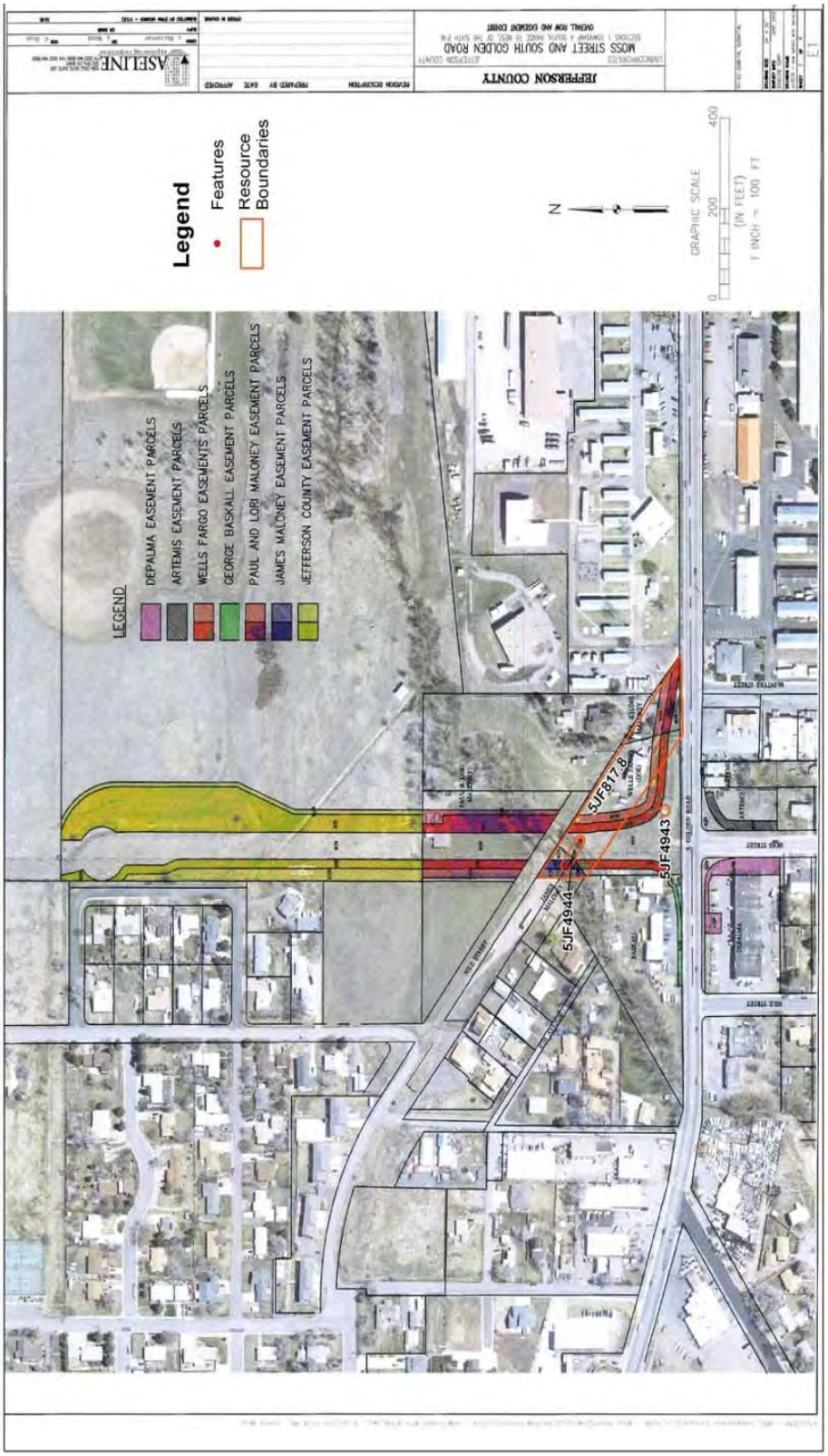

Figure 4. Construction Easements

firing lines at Camp George West. A Memorandum of Agreement (MOA) documenting these mitigation measures was signed by the Department of Energy – Golden Field Office; the Colorado State Historic Office; and Pleasant View Metropolitan District and is included in Appendix D. In accordance with Section 106 of the National Historic Preservation Act, DOE also notified the Advisory Council on Historic Preservation (ACHP) regarding the determination of adverse effects on the Camp George West Historic District. The ACHP confirmed that the execution of an MOA with the SHPO would meet the requirements of Section 106. These communications are also included in Appendix D. Three additional historic resources were located in the remaining segment (second phase) and in the established construction easement adjacent to the round-a-bout. All three resources are recommended Not Eligible for the National Register of Historic Places (NRHP); due to the removal and obliteration of the railroad grade, they lack the ability to convey any association with the historic railroad. No further work was recommended for these resources. The addendum report titled, *Addendum to Class III Cultural Resource Inventory of the Proposed South Access Road, National Renewable Energy Laboratory, Jefferson County, Colorado,* was submitted to the SHPO in May, 2011 by DOE with a determination of no historic properties affected for this segment of the proposed action. The DOE eligibility and affect determinations were accepted by the SHPO on June 6, 2011.

One other structure occurs within the survey ROW. This structure is a modern garage and shop, located in an active horse pasture, and is constructed of milled lumber and plywood on a concrete slab foundation. There is no evidence that any part of this structure is historic in age.

During construction, especially during excavation activities, the following procedure will be followed: should historic or prehistoric materials or remains be encountered during construction activities, work must cease at the location of the discovery until it can be documented and evaluated by a professional archaeologist. Consultation with SHPO may be necessary before any construction can resume.

Phase I Environmental Site Assessments

Seven parcels adjoining the STM site, in Golden, Colorado in Jefferson County, were reviewed for potential environmental issues according to American Society for Testing and Materials (ASTM) Standard E 1527-05. These environmental investigations were performed at the request of Jefferson County and NREL to determine if any Recognized Environmental Conditions (RECs) exist at the subject properties or adjoining properties as part of due diligence prior to attaining property access through land in Jefferson County. Jefferson County is acquiring the easements and road ROW for this project.

The Phase I investigation included a government database search, a site visit, interviews with site personnel, a review of historical topographic maps and aerial photos.

One REC was discovered and is listed as "Southland 7-11 No. 25581, 16400 S. Golden Road, Golden Colorado". This site is undergoing further investigation for a petrochemical release from former underground storage tanks. The property is about 0.4 miles west of the subject properties. Review of topographic maps of the area indicates groundwater flow direction at the site is from east to west, generally toward the subject properties. However, recent groundwater data from November 2010 indicates that the local groundwater flow in the vicinity of the Southland 7-11 is actually to the north-northeast; that groundwater contamination has only migrated to the immediate downgradient property; and the hydraulic gradient exhibited onsite is relatively flat; meaning that groundwater is not flowing quickly offsite. Additionally, DOE discussed this contaminated site with the state agency conducting the oversight of the release investigation in May 2011 and learned that a remediation system to treat or remove the groundwater contamination will be installed soon. Based upon these factors, it is unlikely that the contamination plume from the site has migrated to any of the subject properties along Lena Gulch. No additional investigations on these subject properties are warranted.

Conclusions

Based upon the detailed surveys of the Lena Gulch floodplain and wetlands, habitat surveys for protected species, and cultural and historical surveys, it has been determined through consultations with the regulating agencies that either the resources are not present to be impacted or that the effects of the proposed action can be adequately mitigated and thus result in no unacceptable adverse impacts.

Determination

Based on the information provided in this SA, I have determined that no further NEPA documentation is required for the proposed development of a second access road to the STM site and that the conclusions of the *Finding of No Significant Impact* signed on November 10, 2009 for the *Final Supplement-II to the Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain* Complex (DOE/EA 1440 S-II) remain valid for this action.

Issued in Golden this 3rd day of August 2011.

Manager, Golden Field Office

APPENDIX A

DOE FLOODPLAIN AND WETLAND ASSESSMENT

Floodplain & Wetland Notice, May 20, 2011, Letter

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

May 20, 2011

DISTRIBUTION LIST

SUBJECT: REQUEST FOR PUBLIC AND AGENCY COMMENTS ON FLOODPLAIN AND WETLAND ASSESSMENT FOR THE SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY'S SOUTH TABLE MOUNTAIN COMPLEX ACROSS LENA GULCH

The U.S. Department of Energy (DOE) has prepared a floodplain and wetland assessment to describe the potential floodplain and wetland impacts associated with the construction of an access road leading from South Golden Road to the National Renewable Energy Laboratory (NREL) South Table Mountain Complex in Golden, Colorado. The floodplain and wetland assessment was prepared in accordance with federal regulation 10 CFR Part 1022, *Compliance with Floodplain and Wetlands Environmental Review Requirements*.

The floodplain and wetland assessment for this project is available for review on DOE's electronic information kiosk in the NREL Visitors Center and the DOE Golden Field Office public reading room website at: http://www.eere.energy.gov/golden/Reading_Room.aspx.

Additional information on the proposed second full service access road is contained in the *Supplement II to Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain Complex* (DOE/EA 1440-S-II) and the associated Finding of No Significant Impact (FONSI). These documents are also posted on the public reading room website at: http://www.eere.energy.gov/golden/Reading_Room.aspx.

Public comments on the proposed floodplain and wetland action will be accepted until June 6, 2011 via post, facsimile or e-mail. Please submit your comments to:

NREL NEPA Comments
National Renewable Energy Laboratory,
EHS Office, M.S. RSF 103
1617 Cole Boulevard,
Golden, Colorado 80401-3393
Fax #: (303) 275-4002
E-mail: NREL_NEPA_Comments@nrel.gov

Please provide your input on or before June 6, 2011. We look forward to hearing from you.

Sincerely,

Lori Plummer

Lori Plummer, NEPA Compliance Officer
U.S. Department of Energy, Golden Field Office

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Floodplain & Wetland Notice, May 26, 2011, Newspaper Legal Notice

PAGE C4 > MAY 26, 2011 > GOLDEN TRANSCRIPT LEGAL NOTICES

The U.S. Department of Energy (DOE) has prepared a floodplain and wetland assessment to describe the potential floodplain and wetland impacts associated with the construction of an access road leading from South Golden Road, crossing Lena Gulch, to the National Renewable Energy Laboratory (NREL) South Table Mountain Complex in Golden, Colorado. The floodplain and wetland assessment was prepared in accordance with federal regulation 10 CFR Part 1022, *Compliance with Floodplain and Wetlands Environmental Review Requirements*. NREL is a government-owned, contractor-operated research facility that supports renewable energy and energy efficiency technologies. DOE is requesting public input on the floodplain and wetland assessment.

The floodplain and wetland assessment for this project is available for review on DOE's electronic information kiosk in the NREL Visitors Center and the DOE Golden Field Office public reading room website at: http://www.eere.energy.gov/golden/Reading Room.aspx. Public comments on the proposed floodplain and wetland action will be accepted until **June 6, 2011** via post, facsimile or e-mail. **Please submit your comments on or before June 6, 2011** to:

NREL NEPA Comments
National Renewable Energy Laboratory,
EHS Office, M.S. RSF 103
1617 Cole Boulevard,
Golden, Colorado 80401-3393
Fax #: (303) 275-4002
E-mail: NREL.NEPA.Comments@nrel.gov
First Published May 19, 2011
Last Published May 26, 2011
Golden Transcript 06534614

Floodplain & Wetland Assessment and Statement of Findings, June 2011

U.S. DEPARTMENT OF ENERGY

GOLDEN FIELD OFFICE

Floodplain and Wetlands Assessment and Statement of Findings for

Construction of a Second Full Service Access Road over Lena Gulch from

South Golden Road to the National Renewable Energy Laboratory's South Table Mountain Complex

Golden, Colorado

June 2011

1. INTRODUCTION

The U.S. Department of Energy (DOE) Golden Field Office (GO) is proposing to construct a second full service access road to the National Renewable Energy Laboratory's (NREL) South Table Mountain (STM) complex that would span Lena Gulch and the associated 100-year floodplain. This Floodplain and Wetland Assessment and Statement of Findings has been prepared in accordance with Title 10 Code of Federal Regulations (CFR) Part 1022, *Compliance with Floodplain and Wetland Environmental Review Requirements* which were promulgated to implement the requirements of the DOE's responsibilities under Executive Order 11988, *Floodplain Management* and Executive Order 11990, *Wetlands Protection*. These regulations and Executive Orders encourage measures to preserve and enhance the natural and beneficial functions of floodplains and wetlands. These regulations and Executive Orders also require federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and the occupancy and modification of floodplains.

According to 10 CFR 1022, a floodplain is defined as the lowlands adjoining inland and coastal waters and relatively flat areas and flood prone areas of offshore islands, including the base floodplain that is the area inundated by a 1% or greater chance flood in any given year. Per 10 CFR 1022.4, a wetland is defined as an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas. A Floodplain Action is any DOE action that takes place in a floodplain including actions in a wetland contained in a floodplain.

The project area is south of the STM site (Figure 1) and shown in greater detail in Figures 2 and 3. As reflected in Figure 3, this assessment evaluates the potential effects to floodplains and wetlands associated with the construction of a second full service access road to the NREL STM Site. DOE distributed the Notice of Proposed Floodplain and Wetland Action and made available the May 2011 Floodplain and Wetland Assessment report to appropriate government agencies and other interested parties for review and comment as discussed in Section 6. There were no substantive comments received during the public comment period. DOE has prepared and issued this Floodplain and Wetlands Statement of Findings and is distributing it to appropriate government agencies and to others who submitted comments on the proposed floodplain/wetlands action.

Alternative corridors for a second full service access road were considered and analyzed in the *Supplement- II to Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain Complex* (DOE/EA 1440-S-II), which concluded with a Finding of No Significant Impact (FONSI). Corridor B/C (Figure 2) was selected by DOE as the preferred alternative and the FONSI to the DOE/EA 1440-S-II concluded that a route connecting the STM to South Golden Road could be accomplished without significant impacts. This conclusion was based upon the analyses in DOE/EA-1440-S-II as well as consultations with federal, state, and local agencies. These documents are available at http://www.eere.energy.gov/golden/Reading_Room.aspx. All descriptions of affected

environment, overall project narrative, and overall environmental effects of this project with corridor alternatives are incorporated here by reference (DOE/EA 1440-S-II).

2. PROJECT DESCRIPTION

2.1. Description of the Project

The proposed second full service access road would allow access to the south end of the NREL STM site (Figure 1). This access road would extend from South (Old) Golden Road to the southern end of the recently expanded NREL property (Figures 2 and 3). The access road would consist of two-way traffic in two lanes, plus bicycle lanes, within an approximate 60 foot-wide right-of-way (Figure 3). The new access road would extend north along the property line between Jefferson County Open Space and private property to the west, connecting to South Golden Road by means of a roundabout, instead of a conventional intersection (Figure 3). The intersection currently extends south from South Golden Road via Moss Street, with an existing stop sign on Moss Street and no traffic control on South Golden Road. This project would extend Moss Street (Moss Street Extension) north to the STM site parking lots.

As stated in DOE/EA 1440-S-II, the B/C alternative was chosen (Figure 2), and a FONSI was issued for the project on November 6, 2009. Therefore, a discussion of the alternatives will not be included here. Because all routing options would have the potential to affect wetlands and/or floodplains, DOE is providing a single route (Moss Street Extension) to address in this floodplain and wetlands assessment.

2.2. Description of Floodplain

In the vicinity of the proposed project, the 100-year floodplain on Lena Gulch is approximately 300 feet wide at the bridge crossing (Figure 3) and much narrower (approximately 60 feet wide) at the north end turn-around point along a Lena Gulch tributary. The south bank at the bridge crossing is roughly 8 feet higher than the north bank, with the stream channel situated closer to the south bank. The banks support herbaceous vegetation, trees and shrubs, creating a relatively thick vegetative cover.

2.3. Description of Wetlands

Wetlands were delineated using the U.S. Army Corps of Engineers (USACE) Manual for Wetland Delineations in the Great Plains Region (USACE 2008). This delineation was sent to the USACE resulting in concurrence of jurisdictional Waters of the U.S. including wetlands (riparian fringe association comprised of riverine unconsolidated shore – vegetated or riverine streambed - sand). These areas are depicted on Figure 3. The wetlands along the banks of Lena Gulch have an understory of sedges and grasses with an overstory of willow and cottonwood. Downstream of the project area, in Pleasant View Park, constructed wetlands exist in a side-channel area that receives floodwater. This area currently consists of palustrine emergent wetlands. The lower portion of the constructed wetland is dominated by cattails while the upper portion contains rushes, sedges, and grasses.

3. ANTICIPATED IMPACTS OF THE PROPOSED PROJECT TO FLOODPLAINS AND WETLANDS

Changes to floodplains or wetlands, such as the activities involved in constructing a road, must be assessed and the results of those assessments must be reviewed and approved by government agencies. Changes in the floodplain (e.g., the installation of culverts, wingwalls, etc.) may change the flood regime of the local floodway. The affects of these changes need to be addressed so that the possibility of flooding in new areas, especially where structures exist, is avoided. This is done by modeling and providing a Conditional Letter of Map Revision (CLOMR) to both the Urban Drainage and Flood Control District in Denver, and the Federal Emergency Management Agency (FEMA).

Impacts to wetlands must be addressed under Section 404 of the Clean Water Act. Waters of the U.S., including wetlands, are administered under the U.S. Army Corps of Engineers (USACE). Wetlands provide flood control, aid in water quality, and provide wildlife habitat. Impacts to wetlands must be minimized and mitigated.

A CLOMR is required as part of the Moss Street Extension project, because road and bridge construction activities would occur in the floodplain. The affected Flood Insurance Rate Map is number 08059C0281E with an effective date of June 17, 2003. The affected water bodies are Lena Gulch and Lena Gulch Tributary (also known as Pleasant View Tributary). The proposed improvements for the Moss Street crossing of Lena Gulch would include a clear span bridge with concrete abutments, minor channel modifications, and riprap channel protection. The proposed Moss Street crossing of Lena Gulch Tributary would include two 10' span by 4' rise concrete box culverts with concrete headwalls and wingwalls and riprap channel protection. Approximately 300 linear feet of the Lena Gulch Tributary channel on the east side of the proposed Moss Street Extension would be shifted 40 feet to the east to allow for construction of the roadway. The proposed improvements associated with the Moss Street Extension Project would result in changes, such as improvements to 1% of the annual chance (100-year) and 0.2% of the annual chance (500-year) floodplain delineations for Lena Gulch and the Lena Gulch Tributary. Although these structures would be placed in the floodplain, there would be no increase in the Base Flood Elevations from pre-project conditions to post-project conditions. The conditions within Lena Gulch, Lena Gulch Tributary, and a CLOMR were confirmed by FEMA on February 25, 2011.

No long-term negative direct or indirect impacts to the beneficial values of the 100-year floodplain of Lena Gulch would be expected under the proposed action. No effects to lives and property associated with floodplain disturbance are anticipated. This is based on results of the CLOMR modeling. Short-term direct impacts to the floodplain would result from the temporary disturbance of the area during excavation and construction activities associated with the bridge and road construction. Additionally, the possibility of sediment run-off or erosion could occur as a result of a storm during the construction period. The erosion has the potential to result in a temporary localized reduction in the water quality of Lena Gulch. However, this action would abide by the requirements of the Colorado Water Quality Control Act as well as Colorado

Department of Public Health and Environment (CDPHE) Water Quality Control Commission Regulation No. 61 – Colorado Discharge Permit System (CDPS)(5 CCR 1002-61). Sediment and erosion controls such as silt fencing, rock socks, rip rap, silt dikes, etc. would prevent disturbance to adjacent areas of the floodplain and would protect Lena Gulch from the influx of silt containing runoff. Spill control measures would be utilized when necessary and spill control kits would be readily available for use at the project areas where heavy equipment would be utilized. After excavation and installation activities are completed, the remaining affected floodplain areas would be graded, seeded and restored to their previous. Permit coverage under the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (COR-030000) would be obtained. A stormwater management plan would be developed and implemented prior to construction and NREL staff would oversee project activities.

Lena Gulch and associated tributaries were reviewed by a wetland biologist in summer of 2009 (DOE 2009). Wetlands were mapped along Lena Gulch and areas of impact were derived by overlaying construction drawings on top of the wetland map (Figure 3). The installation of the concrete abutments, minor channel modifications, and riprap channel protection will result in the permanent loss of 0.25 acres of wetlands along Lena Gulch. In addition to the permanent wetland impacts, there will be 0.035 acres of temporary wetland loss due to minor channel modifications and construction access. The project area within Lena Gulch Tributary has no jurisdictional wetlands (see north end of project area in Figure 3).

The survival, quality and function of wetlands would be changed due to the permanent loss of wetlands and these permanent impacts would be mitigated. Construction of short duration, with implementation of sediment and erosion controls, would ensure the survivability of wetlands located downstream along the banks and the constructed wetlands. Temporarily impacted Waters of the U.S., although small in area, would be graded, seeded and restored to their previous conditions. The area of temporarily impacted waters would be minimized due to project design considerations at the stream crossing that avoided and minimized temporary impacts to the gulch.

4. ALTERNATIVES EVALUATED

Alternative corridors were discussed and addressed in the DOE/EA 1440-S-II, and the B/C corridor was selected as the preferred alternative. A route within the B/C corridor has been selected for the Moss Street Extension, and additional required consultations with regulatory agencies have been or are being completed. Documentation of these consultations and the floodplain/wetland Statement of Findings will be consolidated into a Supplement Analysis document that will be posted on the DOE public reading room webpage at: http://www.eere.energy.gov/golden/Reading_Room.aspx. Any route within the B/C corridor requires a bridge across Lena Gulch; therefore, the analysis of the impacts from the Moss Street Extension (Figures 2 and 3) to the Lena Gulch floodplain and wetlands is provided as the preferred alternative.

5. MITIGATION

A CLOMR was submitted for review, first to Jefferson County, then Urban Drainage and Flood Control District, and subsequently to FEMA. A letter of concurrence regarding the CLOMR was received from FEMA on February 25, 2011. Once the Moss Street Extension project is completed, an application for floodplain map revision would be submitted to Urban Drainage and Flood Control District and FEMA. FEMA would issue a Letter of Map Revision (LOMR) upon concurrence with the findings of the map revision application.

The activities in Waters of the U.S. including wetlands would be conducted under a USACE Nationwide Permit No. 14 (NWP 14) for Linear Transportation Projects. DOE received approval to use the NWP 14 on February 15, 2011. The USACE requested wetland mitigation of 0.25 acres for this project; this request was met via the purchase of 0.25 acres of wetland banking credits through coordination with the South Platte Wetlands Bank in Brighton, Colorado. As stated in Section 2, the impact to Waters of the U.S., including wetlands, has been minimized by project design. Temporary impacts would be mitigated by grading to original contours and reseeding.

Overall, impacts to floodplain and wetlands would be mitigated through the establishment of stormwater erosion controls and oversight by NREL staff during construction.

6. NOTICE OF FLOODPLAIN AND WETLAND ACTION AND PUBLIC COMMENT PERIOD

In accordance with 10 CFR 1022.12, DOE GO sent notice of the proposed floodplain and wetland action to appropriate government agencies, to persons or groups of interest, and the public. This was accomplished electronically via email and by mail correspondence dated May 20, 2011 to 72 government agencies and groups of interest. DOE also published the notice in the May 19, 2011 and May 26, 2011 editions of the weekly local newspaper, The Golden Transcript. Additionally, the Notice of the Proposed Floodplain and Wetland Action and the May 2011 Floodplain and Wetland Assessment report were posted on the DOE public reading room webpage at: http://www.eere.energy.gov/golden/Reading_Room.aspx. The public and agency comment period ran from May 20, 2011 to June 6, 2011, thus meeting the 15-day requirement of 10 CFR 1022.15(a). DOE received two responses from agencies, the U.S. Fish & Wildlife Service and Jefferson County Planning and Zoning Division, which are attached and both indicated that they did not have any comments on the proposed action. DOE did not receive any comments from persons or groups of interest or the general public.

7. CONCLUSIONS AND STATEMENT OF FINDINGS

It is anticipated that this project would not result in adverse impacts to the 100-year floodplain. Temporary disturbance within the floodplain would cease following completion of construction activities associated with this proposed action. Proper erosion and sediment control measures would be utilized and site restoration would occur upon completion of the construction activity. This proposed action would not result in any increase in the Base Flood Elevations from pre-project conditions to post-project conditions or other long-term impacts to the floodplain and its functionality. No effects to lives and property associated with floodplain disturbance are anticipated. The CLOMR prepared for this action was approved by FEMA on February 25,

2011. Upon completion of this project, an application for floodplain map revision would be submitted to Urban Drainage and Flood Control District and FEMA. FEMA would issue a LOMR upon concurrence with the findings of the map revision application, thus completing the floodplain action mitigation process. Therefore, this action conforms to applicable floodplain protection standards.

The Moss Street Extension road alignment and the bridge spanning Lena Gulch have been located and designed to minimize impacts to Lena Gulch and its wetlands. The installation of the concrete abutments, minor channel modifications, and riprap channel protection would result in the permanent loss of 0.25 acres of wetlands along Lena Gulch. Pursuant with 40 CFR Part 230, *Compensatory Mitigation for Losses of Aquatic Resources*, as well as U.S. Environmental Protection Agency's and USACE's policy of "No Net Loss" of jurisdictional wetlands, DOE would purchase compensatory mitigation credits from an approved wetland mitigation bank in Brighton, Colorado.

In accordance with 10 CFR Part 1022 and based upon the information presented in this Statement of Findings, DOE concludes that this action conforms to applicable floodplain and wetland protection standards and the appropriate steps have been taken to minimize potential harm within the floodplain and wetlands. Upon publication of this document, DOE will initiate a 15-day public review period prior to implementing the proposed action.

8. REFERENCES

Code of Federal Regulations, Title 10, Energy, Part 1022, Compliance with Floodplain and Wetland Environmental Review Requirements.

Code of Federal Regulations, Title 40, Environment, Part 230, Compensatory Mitigation for Losses of Aquatic Resources.

DOE (U.S. Department of Energy). 2009. *Supplement- II to Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain Complex*. DOE/EA 1440-S-II. November.

DOE (U.S. Department of Energy), 2009. Wetland Delineation of Lena Gulch. Letter and Delineation to the U.S. Army Corps of Engineers from the U.S. Department of Energy. Corp File NOW-2011-255-DEN. November.

Environmental Laboratory. (1987). *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

U.S. Army Corps of Engineers. 2008. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

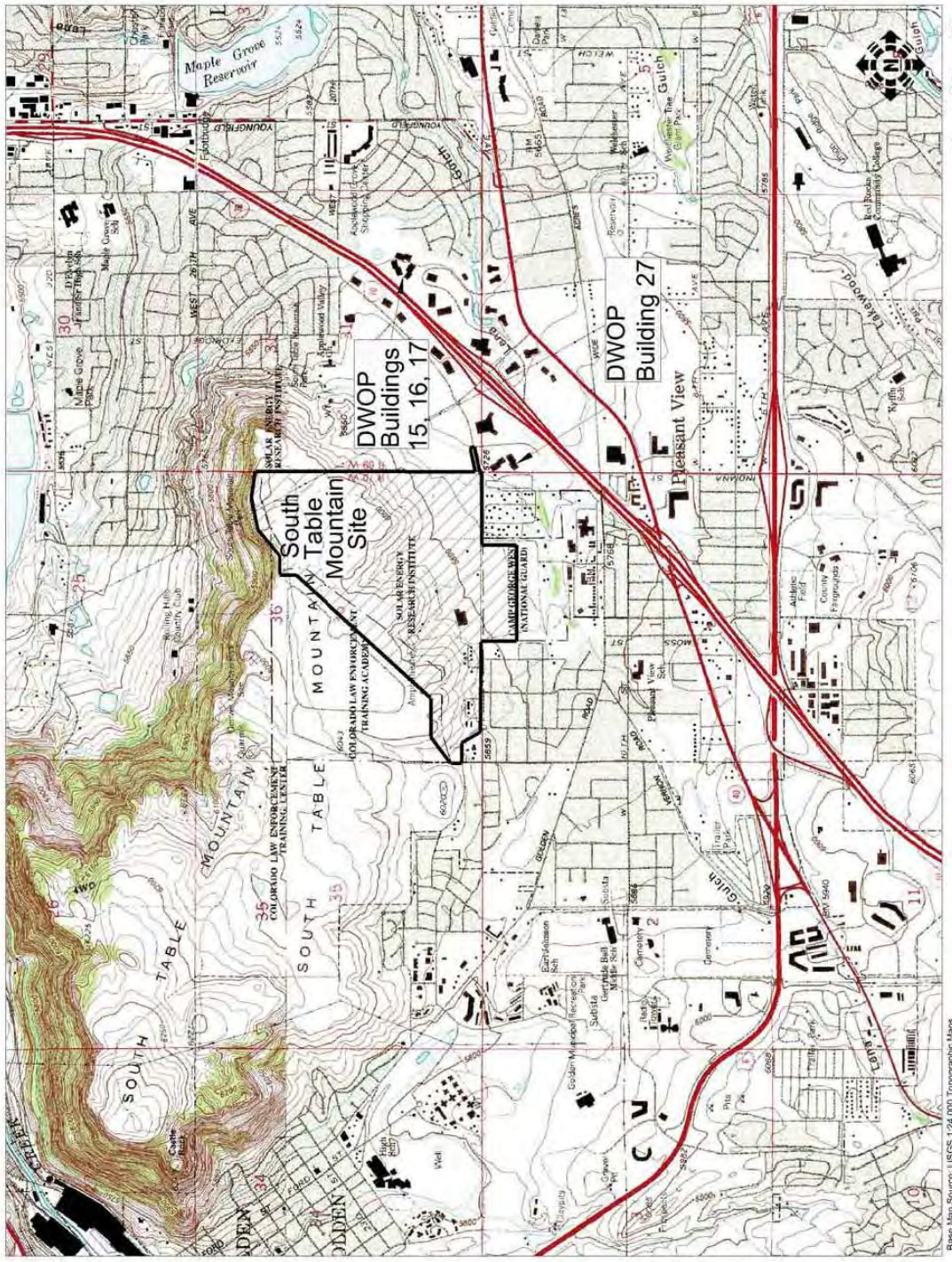

Figure 1. STM Site Vicinity

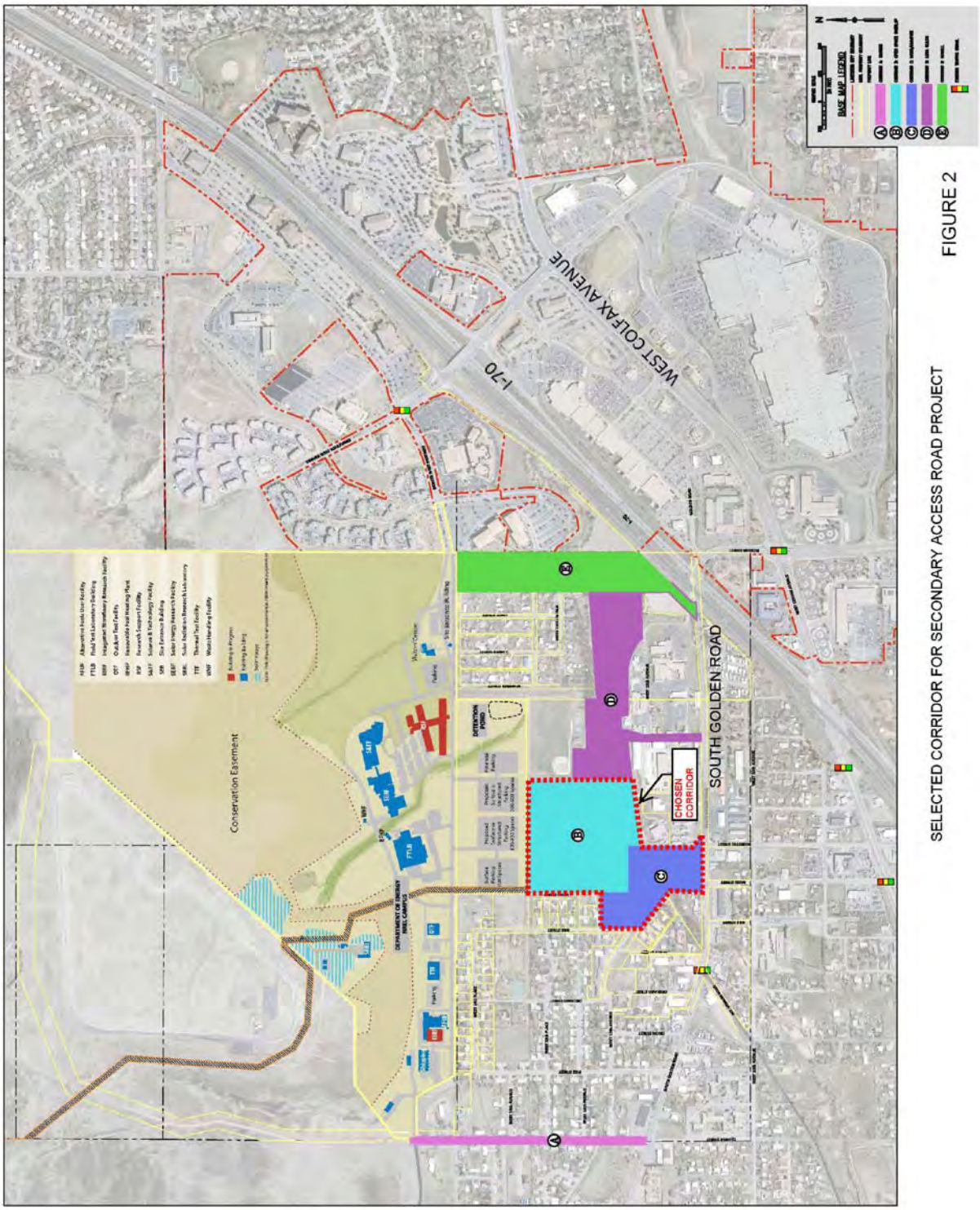

FIGURE 2

SELECTED CORRIDOR FOR SECONDARY ACCESS ROAD PROJECT

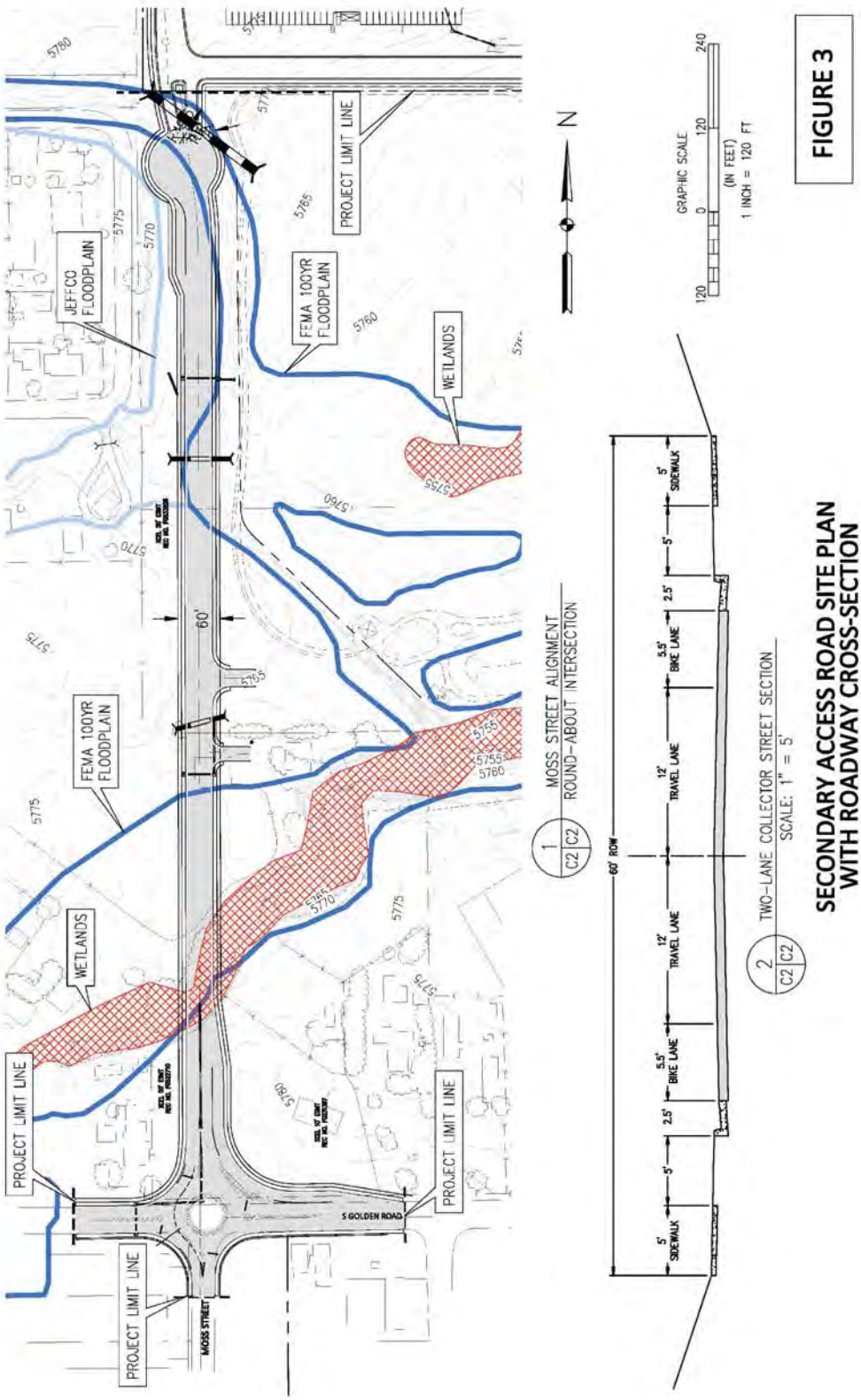

FIGURE 3

SECONDARY ACCESS ROAD SITE PLAN WITH ROADWAY CROSS-SECTION

ATTACHMENT

AGENCY COMMENT LETTERS

JUN/03/2011/FRI 12:51 PM ES/CFO FAX No. 303 236 4005 P. 002

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

May 20, 2011

DISTRIBUTION LIST

SUBJECT: REQUEST FOR PUBLIC AND AGENCY COMMENTS ON FLOODPLAIN AND WETLAND ASSESSMENT FOR THE SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY'S SOUTH TABLE MOUNTAIN COMPLEX ACROSS LENA GULCH

The U.S. Department of Energy (DOE) has prepared a floodplain and wetland assessment to describe the potential floodplain and wetland impacts associated with the construction of an access road leading from South Golden Road to the National Renewable Energy Laboratory (NREL) South Table Mountain Complex in Golden, Colorado. The floodplain and wetland assessment was prepared in accordance with federal regulation 10 CFR Part 1022, *Compliance with Floodplain and Wetlands Environmental Review Requirements*.

The floodplain and wetland assessment for this project is available for review on DOE's electronic information kiosk in the NREL Visitors Center and the DOE Golden Field Office public reading room website at: http://www.eere.energy.gov/golden/Reading_Room.aspx.

Additional information on the proposed second full service access road is contained in the *Supplement II to Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's South Table Mountain Complex* (DOE/EA 1440-S-II) and the associated Finding of No Significant Impact (FONSI). These documents are also posted on the public reading room website at: http://www.eere.energy.gov/golden/Reading_Room.aspx.

Public comments on the proposed floodplain and wetland action will be accepted until June 6, 2011 via post, facsimile or e-mail. Please submit your comments to:

NREL NEPA Comments
National Renewable Energy Laboratory,
EHS Office, M.S. RSF 103
1617 Cole Boulevard,
Golden, Colorado 80401-3393
Fax #: (303) 275-4002
E-mail: NREL_NEPA_Comments@nrel.gov

U.S. FISH AND WILDLIFE SERVICE
☐ CONCUR NO EFFECT
☐ CONCUR NOT LIKELY TO ADVERSELY AFFECT
☒ NO COMMENT
JUN - 2 2011
COLORADO FIELD SUPERVISOR (DATE)
Susan C. Linner

Please provide your input on or before June 6, 2011. We look forward to hearing from you.

Sincerely,

Lori Plummer

Lori Plummer, NEPA Compliance Officer
U.S. Department of Energy, Golden Field Office

Federal Recycling Program Printed on Recycled Paper

Smith, Robert

From: Ross Klopf [rklopf@co.jefferson.co.us]
Sent: Monday, June 06, 2011 4:06 PM
To: 'NREL.NEPA.Comments@nrel.gov'
Cc: Charles Barthel; Mike Schuster; Mike Vanatta; Mark Hearon; 'Stewart'; Steven Snyder
Subject: Request for comments on Floodplain and Wetland Assessment

Good Afternoon,

Jefferson County has no comments or concerns with the proposed Conditional Letter of Map Revision that has been approved or the Wetland Assessment for the Moss Street connection.

Please let me know if you have any questions.

Kind Regards,

Ross Klopf, PE, CFM, Civil Planning Engineer

Planning and Zoning Division

100 Jefferson County Parkway, Suite 3550

Golden, Colorado 80419-3550

303-271-8733 Fax: 303-271-8744

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DOE to USACE Nationwide Permit #14, February 9, 2011, Letter

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

February 9, 2011

Mr. Terry McKee
U.S. Army Corps of Engineers
Denver Regulatory Office
9307 South Wadsworth Blvd.
Littleton, CO 80128-6901

Dear Mr. McKee:

SUBJECT: PRE-CONSTRUCTION NOTIFICATION FOR USE OF NATIONWIDE PERMIT NO. 14 – LINEAR TRANSPORTATION PROJECT SECONDARY FULL SERVICE ACCESS ROAD CROSSING LENA GULCH IN GOLDEN, COLORADO

I am writing to request written verification from the U.S. Army Corps of Engineers (USACE) of authorization for use of a Nationwide Permit (NWP) No. 14 for the above-referenced construction project. Pursuant to General Condition No. 27 of NWP No. 14 for Linear Transportation Crossings, the following provides the project description, location, and other notification requirements.

The U.S. Department of Energy's (DOE) Golden Field Office (GO) provides oversight of and direction to the National Renewable Energy Laboratory (NREL). NREL conducts research, development, and demonstration projects related to DOE's energy efficiency and renewable energy programs.

PERMITTEE; PROJECT LOCATION, DESCRIPTION AND PURPOSE; AND PROJECT IMPACTS

A. Permitee

The DOE-GO is the permitee for this project. The Management and Operating Contractor for NREL and its' subcontractors will manage and construct the project under the direction of DOE-GO.

U.S. Department of Energy
Golden Field Office
Ms. Lori Plummer, CSP
NEPA Compliance Officer
1617 Cole Boulevard
Golden, CO 80401-3393
(720) 356-1568

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B. Project Location

The proposed right-of-way (ROW) for NREL's secondary access road is located in the NE1/4 of Section 1, Township 4S, Range 70W, Colorado 6th Principle Meridian, Morrison Quadrangle within Jefferson County. The nearest major intersection is I-70 and Highway U.S. 40. (Please see Figure 1).

Driving directions from the USACE offices in Littleton are as follows:
C-470 West to I-70 East
West Colfax Ave/US40 Exit 262
Follow West Colfax Avenue to turn (at light) for South Golden Road
Follow South Golden Road (veers to west/left) to Kilmer Street
Turn north/right on Kilmer Street (will see signs for Colorado State Motor Vehicle)
Follow Kilmer into Pleasant View Community Park parking lot

C. Project Description and Purpose

DOE is involved in a multi-year build-out of the NREL's South Table Mountain (STM) complex in Golden, CO. Traffic studies commissioned by DOE in 2008 and 2009, to assess the consequences of future staff growth at NREL and staff re-location from nearby office park buildings, have indicated the need for a secondary full service access road linking South Golden Road with the STM complex. The capacity of Denver West Parkway, the primary means of access to the complex, is expected to be exceeded in the near future as the employee population of the STM complex subsequently increases. Consequently, a southern access road corridor has been identified in DOE's STM Site-wide Environmental Assessment (EA), Supplement II (DOE/EA 1440-S-II) (available at http://www.eere.energy.gov/golden/Reading_Room.aspx).

This new road would cross Lena Gulch in a straight alignment configuration starting at the intersection of South Golden Road and Moss Street and continuing north to the STM surface parking area (Figure 2). The new access point would lessen NREL-related traffic congestion along Denver West Parkway and the associated Denver West Boulevard/I-70 interchange to acceptable levels. Figure 2 shows the project area (i.e., project ROW) with wetlands and Waters of the U.S. (WOUS) along Lena Gulch.

D. Delineated Wetlands and Waters of the U.S.

WOUS including wetlands were delineated in 2009 within the area of interest for the referenced EA including the reach of Lena Gulch extending through Pleasant View Park. The delineation report was delivered to USACE in a letter dated 8/13/2009 (Corps File No. NWO-2009-2120-DEN). Based on an August 2010 field visit (T. McKee, USACE and T. Ryon/G. Braus, NREL) and more detailed topographic information and project designs, the map provided in the 8/13/2009 letter has been updated. The delineated wetland boundaries as well as area of interest labeling within the project ROW are presented in Figure 2.

Predicted impacts to WOUS including wetlands are 12,415 SF (0.285 Ac), comprised of 10,890 SF (0.250 Ac) of permanent impacts and 1,525 SF (0.035 Ac) of temporary impact. These losses will be created by the installation of bridge foundation and bank armoring that

will impact riparian fringe wetlands and stream channel areas (riverine unconsolidated shore – vegetated or riverine streambed - sand).

E. Mitigation Statement

Should the USACE's review determine that mitigation is required for this project, NREL on behalf of DOE would purchase wetland credits from the Riverdale Wetlands Mitigation Bank at a ratio of 1 to 1. NREL has confirmed that this is a viable solution with Mr. Matt Montgomery of the USACE Littleton Regulatory Office.

All temporary impacts will be minimized to the maximum extent possible by keeping construction equipment out of WOUS except only when necessary to complete the project. However, for the temporary impacts we are estimating, we propose including those impacts in the calculation of wetland banking credits. Upon completion of the project we would return these temporarily impacted areas back to pre-construction grades, but will not revegetate these areas.

F. Other Regulatory Compliance

DOE has addressed all concerns for federally protected species and critical habitat under Section 7 of the Endangered Species Act including the Preble's meadow jumping mouse, the Ute ladies' tresses orchid, and the Colorado butterfly plant with the U.S. Fish and Wildlife Service (USFWS). No Effect Concurrence letters from USFWS dated August 20, 2009; September 24, 2009; and December 1, 2010 are available upon request.

DOE is currently engaged in consultations with the Colorado State Historic Preservation Officer (SHPO) and other consulting parties pursuant with Section 106 of the National Historic Preservation Act and its implementing regulations codified at Title 36 Code of Federal Regulation Part 800. However, it should be noted that no features or structures of historic or cultural significance would be impacted in areas of USACE jurisdiction.

Additionally, DOE is pursuing a Conditional Letter of Map Revision (CLOMR) with Jefferson County, Urban Flood and Drainage Control District, and the Federal Emergency Management Agency for floodplain impacts associated with the proposed project.

We appreciate your review of the attached maps and the wetland delineation and assessment of possible jurisdictional waters in the Corps File No. NWO-2009-2120-DEN. We look forward to your response. Please contact Mr. Tom Ryon (303-275-3252) or Ms. Genny Braus (303-275-3251) of NREL or Rob Smith (720-356-1576) of my staff with any questions you might have.

Sincerely,

Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

cc: Rob Smith, DOE GO
Brian Larsen – NREL
John Eickhoff – NREL
Genevieve Braus – NREL
Tom Ryon – NREL
Kenny Boyd – Baseline Engineering

Attachments

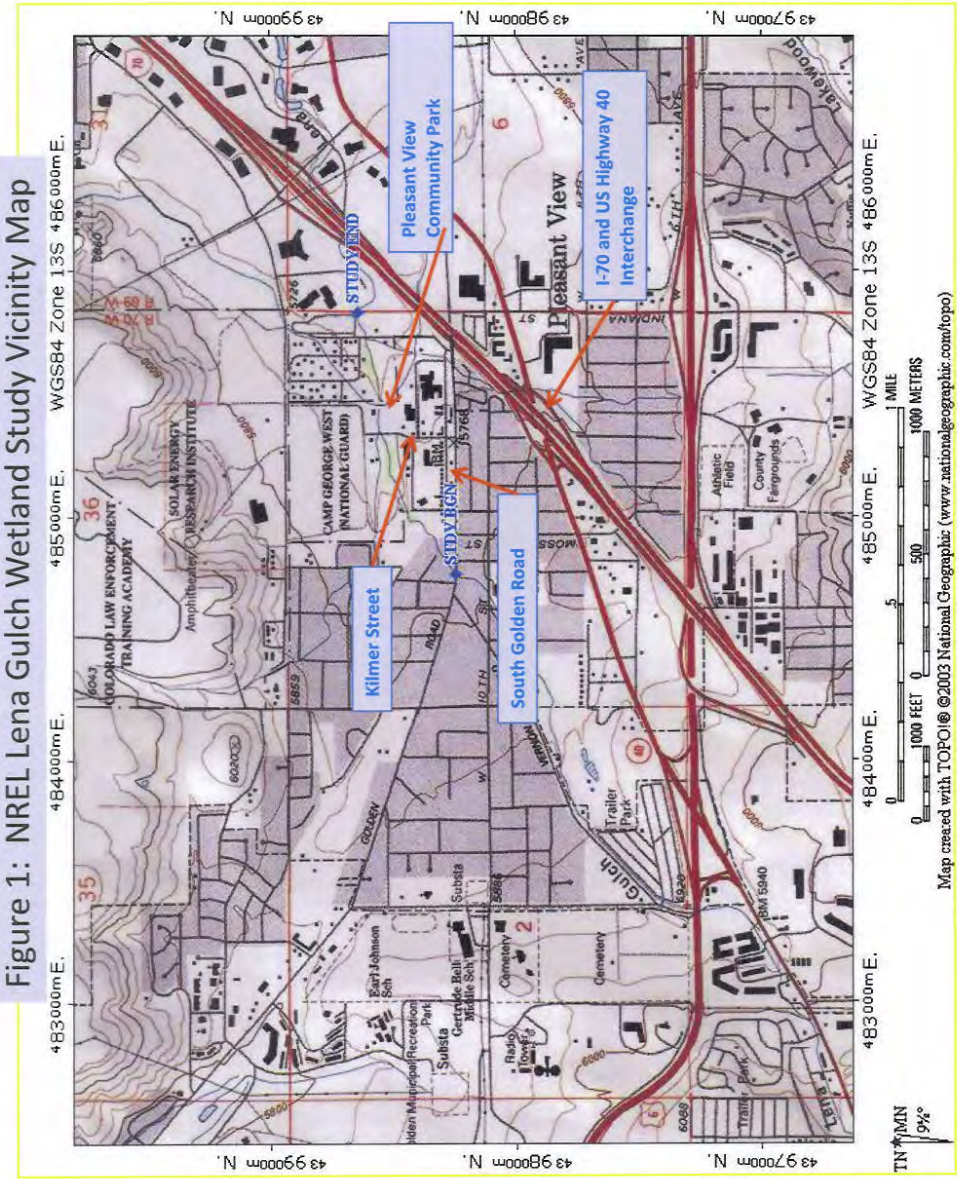
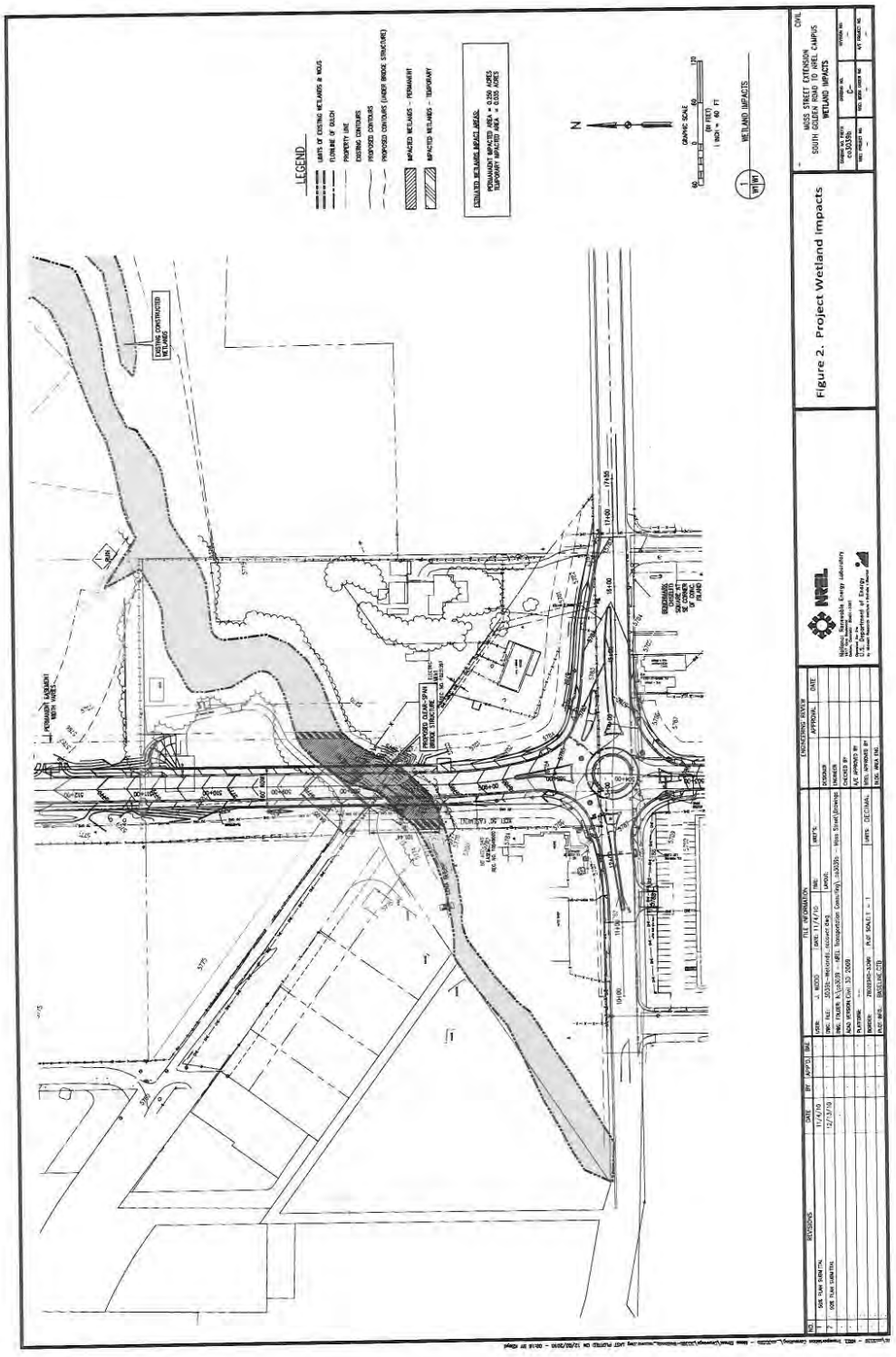


Figure 1: NREL Lena Gulch Wetland Study Vicinity Map


LEGEND
LIMITS OF EXISTING WETLANDS & MOAS
CENTERLINE OF DITCH
PROPERTY LINE
ROADWAY CONTOURS
PROPOSED CONTOURS (UNDER BRIDGE STRUCTURE)
IMPACTED WETLANDS - PERMANENT
IMPACTED WETLANDS - TEMPORARY
ESTIMATED WETLANDS IMPACT AREAS:
PERMANENT IMPACTED AREA = 0.350 ACRES
TEMPORARY IMPACTED AREA = 0.030 ACRES
N
GRAPHIC SCALE
(IN FEET)
1 INCH = 40 FT
WETLAND IMPACTS
Figure 2. Project Wetland Impacts
MOSS STREET EXTENSION
SOUTH GOLDEN ROAD TO NREL CAMPUS
WETLAND IMPACTS
NREL
National Renewable Energy Laboratory
U.S. Department of Energy

USACE Response, February 15, 2011, Letter

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
DENVER REGULATORY OFFICE, 9307 SOUTH WADSWORTH BOULEVARD
LITTLETON, COLORADO 80128-6901

February 15, 2011

U.S. Department of Energy
Golden Field Office
Ms. Lori Plummer, CSP
NEPA Compliance Officer
1617 Cole Boulevard
Golden, CO 80401-3393

RE: Secondary Full Service Access Road Crossing, Lena Gulch
Nationwide Permit No. 14, Corps File No. NWO-2011-255-DEN

Dear Ms. Plummer:

Reference is made to the above-mentioned project which will result in the loss of 0.250 acre of wetlands located in the NE ¼ of Section 1, T4S, R70W, Jefferson County, Colorado.

Based on the information provided, this office has determined that the work within Colorado is authorized by the **Department of the Army Nationwide Permit No. 14**, found in the March 12, 2007, Federal Register. Enclosed is a fact sheet, which fully describes this Nationwide Permit and lists the General Conditions, Section 404 Only Conditions, and Colorado Regional Conditions, which must be adhered to for this authorization to remain valid.

Although an Individual Department of the Army permit will not be required for this work, this does not eliminate the requirement that any other applicable Federal, state, tribal or local permits be obtained as required. Please be advised that deviations from the original plans and specifications of this project could require additional authorization from this office.

Permit No. 14 (Corps File No. NWO-2011-255-DEN) Special Conditions:

The permittee will purchase 0.250 acre of mitigation credits from a commercial mitigation bank that has been approved by the Corps of Engineers. **Please notify Mr. Matt Montgomery of this office at (303) 979-4120 prior to the purchase of the mitigation credits so that the bank of your choice can be approved.** The credits must be purchased prior to impacts occurring to wetlands authorized by this permit. Written proof of the mitigation credit purchase shall be provided to the Denver Regulatory Office. Upon receipt of such proof, all liabilities for the success, monitoring, and long-term management of the mitigation bank wetlands covered by this authorization will become the responsibility of the mitigation bank sponsor. Once this office receives the proof of purchase for the required mitigation credits the permittee will have satisfied all mitigation requirements for this permit, unless additional on-site mitigation is a condition of this authorization.

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The applicant is responsible for all work accomplished in accordance with the terms and conditions of the nationwide permit. If a contractor or other authorized representative will be accomplishing the work authorized by the nationwide permit on behalf of the applicant, it is strongly recommended that they be provided a copy of this letter and the attached conditions so that they are aware of the limitations of the applicable nationwide permit. Any activity which fails to comply with all the terms and conditions of the nationwide permit will be considered unauthorized and subject to appropriate enforcement action.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2012. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP. In compliance with general Condition 14, the attached "Certification of Completed Work" form (blue) must be signed and returned to this office upon completion of the authorized work and any required mitigation.

Should anyone at any time become aware that either an endangered and/or threatened species or its critical habitat exists within the project area, this office must be notified immediately.

We have prepared a Preliminary Jurisdictional Determination (JD) which is a written indication that wetlands and waterways within your project area may be Waters of the United States (attached). Such waters will be treated as jurisdictional Waters of the US for purposes of computation of impacts and compensatory mitigation requirements. If you concur with the findings of the Preliminary JD, please sign it and return it to the letterhead address within two weeks. If you believe the Preliminary JD is inaccurate, you may request an Approved JD, which is an official determination regarding the presence or absence of Waters of the US. If an approved JD is requested, the Corps will complete one and you may not begin work on the proposed project until after the Approved JD is complete. If you do not want the Corps to complete an Approved JD, you may proceed with the proposed project.

The Omaha District, Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our website at http://per2.nwp.usace.army.mil/survey.html. If you do not have Internet access, you may call and request a paper copy of the survey that you can complete and return to us by mail or fax. (Completing the survey is a voluntary action)

If there are any questions call **Mr. Terry McKee** of my office at **(303) 979-4120** and reference **Corps File No. NWO-2011-255-DEN**.

Sincerely,

Timothy T. Carey
Chief, Denver Regulatory Office

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tm

Enclosures

Copies Furnished:

U.S. Fish & Wildlife Service
Colorado Department of Public Health & Environment
Environmental Protection Agency
Colorado Division of Wildlife
State Historic Preservation Office

DOE to USACE Concurring on Wetland Jurisdictional Determination, March 1, 2011, Letter

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

March 1, 2011

Mr. Terry McKee
U.S. Army Corps of Engineers
Denver Regulatory Office
9307 South Wadsworth Blvd.
Littleton, CO 80128-6901

Dear Mr. McKee:

SUBJECT: CONCURRENCE OF USACE'S PRELIMINARY JURSIDICTIONAL DETERMINATION (CORPS FILE NO. NWO-2011-255-DEN) SECONDARY FULL ACCESS ROAD CROSSING LENA GULCH IN GOLDEN, COLORADO

Per the February 15th, 2011 letter from your office, enclosed is the U.S. Department of Energy's concurrence of the Corp's Preliminary Jurisdictional Determination. Please contact Mr. Tom Ryon (303-275-3252) or Ms. Genny Braus (303-275-3251) of NREL with any questions you might have.

Sincerely,

Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

cc: Rob Smith, DOE GO
Brian Larsen – NREL
John Eickhoff – NREL
Genevieve Braus – NREL
Tom Ryon – NREL
Kenny Boyd – Baseline Engineering

Attachments

Federal Recycling Program Printed on Recycled Paper

DOE to USACE Wetland Proof of Purchase, May 4, 2011, Letter

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

May 4, 2011

Mr. Terry McKee
U.S. Army Corps of Engineers
Denver Regulatory Office
9307 South Wadsworth Blvd.
Littleton, CO 80128-6901

Dear Mr. McKee:

SUBJECT: PROOF OF PURCHASE OF WETLAND MITIGATION CREDITS FOR SECOND FULL SERVICE ACCESS ROAD CROSSING LENA GULCH IN GOLDEN, COLORADO
CORPS FILE NO. NWO-2011-255-DEN

Per the February 15th, 2011 letter from your office, enclosed is written proof of the purchase of 0.25 acres of mitigation credits from South Platte Wetlands, Inc. at the Riverdale Wetlands Mitigation Bank. Please contact Mr. Tom Ryon (303-275-3252) of NREL with any questions you might have.

Sincerely,

Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

Enclosure: South Platte Wetlands, Inc. Cover Letter
Wetland Credit Verification Certificate

cc: Rob Smith, DOE GO
Randy Dins, DOE GO
Eric Telesmanich – NREL
John Eickhoff – NREL
Tom Ryon – NREL

Federal Recycling Program Printed on Recycled Paper

Wetland Mitigation Credit Purchase Certificate, April 11, 2011

SOUTH PLATTE WETLANDS, INC.
11910 RIVERDALE ROAD
BRIGHTON, COLORADO 80602
Cell 303 717-3420

APRIL 11, 2011

Mr. Thomas Ryon
Senior Env Scientist/Wildlife Biologist
Environment, Health & Safety
National Renewable Energy Laboratory
1617 Cole Boulevard, Mail Stop RSF103
Golden Co 80401

Regarding: 0.250 acre wetland mitigation banking credits

This completes our transaction on .25 wetland mitigation credits for the Access road project proposed by the National Renewable Energy Laboratory U S Army Corps of Engineers File NOW-2011-255-DEN.
I will report this transaction to the U S Army Corps of Engineers.
If I can be of further service please contact me.

Kenneth McIntosh

CREDIT VERIFICATION CERTIFICATE

Certificate Number

0032

South Platte Wetlands, Inc. verifies that

U.S. Department of Energy and the Alliance for Sustainable Energy at the National Renewable Energy Laboratory

Has purchased 0.250 Mitigation Credits

As compensatory mitigation for a bridge crossing at Lena Gulch in Jefferson County. Located in the NE ¼ of section 1, Township 4 South, Range 70 West, Jefferson County, Colorado. U S Army Corps of Engineers File NOW-2011-255-DEN.

Each mitigation credit is equivalent to 1 acre of compensatory mitigation. Credits are granted in accordance with the requirements of the Riverdale Wetland Mitigation Bank Agreement dated February 1, 2002.

Kenneth McIntosh, Manager

Dated: April 11, 2011

USACE to DOE, Mitigation Credits Accepted, May 6, 2011

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
DENVER REGULATORY OFFICE, 9307 SOUTH WADSWORTH BOULEVARD
LITTLETON, COLORADO 80128-6901

May 6, 2011

U.S. Department of Energy
Golden Field Office
Ms. Lori Plummer, CSP
NEPA Compliance Officer
1617 Cole Boulevard
Golden, CO 80401-3393

RE: Secondary Full Service Access Road Crossing, Lena Gulch
Nationwide Permit No. 14, Corps File No. NWO-2011-255-DEN

Dear Ms. Plummer:

Reference is made to the above-mentioned project which will result in the loss of 0.250 acre of wetlands located in the NE ¼ of Section 1, T4S, R70W, Jefferson County, Colorado.

Mr. Terry McKee of my office has received the proof of 0.25 acre purchase of wetland mitigation credits for this project. By the purchase of the 0.250 acre of mitigation credits from the South Platte Wetlands, Inc. mitigation bank you have met the wetland mitigation requirements for this project. No further action by the permittee or this office is required.

If you have any questions call **Mr. Terry McKee** of this office at **(303) 979-4120** and reference **Corps file No. DEN-2011-255-DEN.**

Sincerely,

Timothy T. Carey
Chief, Denver Regulatory Office

tm

APPENDIX B

FLOODPLAIN CONSULTATIONS

Baseline Conditional Letter of Map Revision (CLOMR) to Urban Drainage and Flood Control District, July 26, 2010, Letter

July 26, 2010

Urban Drainage and Flood Control District
2480 West 26th Avenue, Suite 156-B
Denver, CO 80211
303-455-6277
Fax: 303-455-7880

BASELINE corporation
planning • engineering • surveying

RE: Request for CLOMR – Lena Gulch at Proposed Moss Street and Pleasant View Tributary to Lena Gulch.

The Alliance For Sustainable Energy (Alliance), operator of the National Renewable Energy Laboratory (NREL) on behalf of the United States Department of Energy (DOE) has requested Baseline Engineering Corporation to prepare a CLOMR for the proposed Moss Street Extension Project in Jefferson County, Colorado.

As a result of the proposed roadway construction, the existing floodplain for Lena Gulch and Pleasant View Tributary (PVT) will be modified. The roadway is proposed to cross Lena Gulch on private property currently zoned residential and will cross the PVT on Jefferson County Open Space (JC) property.

Flow rates for Lena Gulch were obtained from the Flood Hazard Area Delineation (FHAD) study for Upper Lena Gulch, prepared in January 1993. Lena Gulch flows obtained from the FHAD corresponded to the latest CLOMR issued for Lena Gulch, Case No. 01-08-146R on September 13, 2001. PVT flows were obtained from the Flood Insurance Study for Jefferson County, CO, effective date, June 13, 2003. Flow rates for both Lena Gulch and PVT used in this study are shown below:

Flows (cfs)	Lena Gulch	Pleasant View Tributary
Q_{100}=	2,150	350
Q_{500}=	3,300	570

The proposed improvements will consist of a new roadway starting at the existing intersection of Moss Street and South Golden Road. The roadway will extend as a county owned public roadway directly north through existing private residential properties, Jefferson County Open Space property and terminate as a public roadway at the north property line of JCOS. From there, it will continue onto the NREL site and will be owned and maintained by NREL and/or DOE.

Corporate Headquarters
Denver West Office Park Building 4
1536 Cole Boulevard, Suite 220
Golden, Colorado 80401
Ph 303.940.9966
Fax 303.940.9959

Northern Bureau
Downtown Greeley
710 11th Avenue, Suite 105
Greeley, Colorado 80631
Ph 970.353.7600
Fax 970.353.7601

Wyoming
Montgomery Building
109 East 17th Street, Suite 1
Cheyenne, Wyoming 82001
Ph 307.635.1734
Fax 866.242.9106

Northern Mountains
Pentagon West Building
2740 Acre Lane, Suite 205
Steamboat Springs, Colorado 80487
Ph 970.879.1825
Fax 866.242.9106

The public portion of the roadway will cross Lena Gulch approximately 310 ft north of the intersection of South Golden Road and Moss St.

Proposed improvements to Lena Gulch and PVT will consist of the following:

- Lena Gulch alignment will not be altered. The current proposed crossing of Moss Street over Lena Gulch consists of a 60 foot span bridge near station 304+20. Minor channel modifications will include regrading the existing channel directly under the bridge to have a trapezoidal shape with 20 foot bottom and 4:1 sideslopes extended to the abutments. The 60 foot span bridge is sized to convey the 100-yr flow without overtopping the road.
- Pleasant View Tributary modifications will include two 8'x5' culverts near station 17+50. Downstream of the proposed culvert crossing, the existing PVT channel will be shifted approximately 25 feet to the east to allow for the road to be constructed in the location of the existing channel. The proposed culverts and channel are sized to convey the 100-yr flow with sufficient freeboard and without overtopping the road.

Noticeable discrepancies in the FIS profiles from historical data are explained below. (FIS-08059CV04A from June 17, 2003; CLOMR from 9/13/2001, HEC2 data from 1983)

- Topo utilized for this modeling included 2' contours prepared for the Democratic National Convention in 2008 utilizing LiDAR technology on NAD83 and NGVD88 datums. The FIS study and FIRM map are on NAVD27 datum. For the purposes of this CLOMR, we converted the DNC topo to NAVD27 datum by adjusting it down 3.156'. See attached conversion calculator.
- It appears the FIS profile flowline of Lena Gulch includes several drop structures that do not exist. This is likely the cause for the difference in channel inverts between the FIS and existing conditions.
- Stationing for this CLOMR request referenced the FIS flood profiles. We matched stationing where Lena Gulch intersects Isabelle St. at station 272+90. Utilizing the DNC 2' contours, we delineated the Lena Gulch centerline upstream to the intersection of South Golden Road. Utilizing the DNC topo, we calculated the stationing at SGR to be 311+06 (compared to the FIS study of 310+30), which equates to a difference of 76 ft longer than the FIS study. This difference is likely the result of utilizing a more detailed topographic survey compared to when the FIS was originally created from the USGS topo. Some channel modifications were also constructed with the Pleasant View Park around 2002 that may have resulted in slight realignment of Lena Gulch.
- Historical hydraulic data was requested from FEMA. Effective models were unable to be obtained for Lena Gulch or PVT through the FEMA library or local sources. However, some nominal Hec2 data was obtained for both channels but was insufficient for generating duplicate effective models. FIS profiles were utilized with attempts to establish tie-in points for the existing conditions and proposed models.

Comparison tables outlining our findings in relation to the FIS profile and proposed conditions for Lena Gulch and Pleasant View Tributary are included in the Appendix.

Included with this report are the required MT-2 forms and supporting documentation including HECRAS models for existing and proposed conditions, historical reference reports and FIRM map.

Please direct any questions or concerns to Baseline.

Kenny Boyd, PE
Manager

Baseline Engineering Corporation, Acting for DOE, to Planning and Zoning Department, September 1, 2010, Letter

September 1, 2010

Mr. Ross Klopf, PE
Planning and Zoning Department
100 Jefferson County Parkway, Suite 3550
Golden, CO 80419-3550

BASELINE corporation
planning • engineering • surveying

Re: Case Number 10-115122FL, CLOMR review for Moss Street Extension – Response Letter

Dear Mr. Klopf:

The following provides a response to your review comments from the letter dated August 10, 2010.

CLOMR Comments

1. The proposed and existing 100-year water surface elevation must tie into the set elevation at the upstream and downstream ends of the proposed CLOMR. Please include water surface elevations on the Flood Insurance Study Profile so it is clear that the elevations tie in properly.
   Response: Comparison profiles have been provided with the updated CLOMR package. The proposed 100-year profile has been redlined on the FIS profile. As explained in the narrative of the report, the thalweg elevations from the current survey used for the proposed model do not match those from the FIS. We have compared our existing conditions models versus the proposed conditions models. The 100-year water surface elevation will not increase under proposed conditions. The relative depth of water for the 100-yr models generally matches the FIS water depths.
2. Please complete the attached Floodplain Permit application form. The $156 review fee is not required for federal projects.
   Response: The Floodplain Permit application form is included.
3. The floodplain permit must identify the effects of the 100-year floodplain on off-site properties. Notification is required to neighbors affected by the adjusted floodplain.
   Response: Acknowledged. The Floodplain Workmaps and the Annotated FIRM show the proposed 100-year floodplain limits. We will send out notification to neighbors affected by the adjusted floodplain after the first review by UDFCD is complete. We will provide the County with evidence of these notifications.

Additional Comments

1. Urban Drainage and Flood Control District construction plan approval is required for the areas where improvements are to be eligible for maintenance assistance.
   Response: The pertinent sheets from the Moss Street Construction Plan Set are included with the updated CLOMR package. The Construction Plans are being

Corporate Headquarters
Denver West Office Park Building 4
1536 Cole Boulevard, Suite 220
Golden, Colorado 80401
Ph 303.940.9966
Fax 303.940.9959

High Plains
Downtown Greeley
710 11th Avenue, Suite 105
Greeley, Colorado 80631
Ph 970.353.7600
Fax 970.353.7601

Wyoming
Montgomery Building
109 East 17th Street, Suite 1
Cheyenne, Wyoming 82001
Ph 307.635.1734
Fax 866.242.9106

Rocky Mountains
Pentagon West Building
2740 Acre Lane, Suite 205
Steamboat Springs, Colorado 80487
Ph 970.879.1825
Fax 866.242.9106

submitted to the County for the first review concurrently with submittal of the CLOMR. We will provide updated Construction Plans to UDFCD as review and revisions are completed.

2. The CLOMR approval will be based on an approved operations and maintenance plan. The maintenance plan should identify the roles and responsibilities of the entity providing maintenance.
   Response: Acknowledged. The updated narrative within the CLOMR report identifies maintenance access for the Moss Street crossing of Lena Gulch and the Pleasant View Tributary and the relocated PV Tributary channel. We propose further discussion between NREL, JeffCo, UDFCD, and Baseline once all parties have reviewed the CLOMR package in order to identify roles and responsibilities for maintenance. We will refine the language relating to maintenance once these roles and responsibilities have been defined.
3. An active 404 permit is required to be submitted with this application. This is a requirement in Section 50.H.(2) of the Zoning Resolution and Chapter 44 of the Code of Federal Regulations Section 60.3(b)(1). Work in the wetlands will require a 404 permit.
   Response: Acknowledged. A 404 permit application is currently being prepared. We will provide the County with copies of correspondence to the ACOE when the application is submitted and a copy of the 404 permit as soon as it is issued.

Redline Comments

Response:
FIS profile with proposed information provided.
The HEC-RAS table from the Lena Gulch CLOMR at Camp George West Park was referenced as another source of the 100-year and 500-year flows. The pages from this CLOMR that were provided to us did not extend to Lena Gulch Station 30,300. It is possible that the modeling for this CLOMR did not extend upstream to station 30,300.

The updated CLOMR package has been organized to comply with the UDFCD Digital Letter of Map Change Guidelines. Please let me know if you have any questions or concerns.

Sincerely,

Rick Behning, PE

cc: Brian Larson, NREL
Drew Detamore, NREL

FEMA to Jefferson County, February 25, 2011, Conditional Letter of Map Revision (CLOMR)

Federal Emergency Management Agency
Washington, D.C. 20472

February 25, 2011

RECEIVED
FEB 28 2011
JEFFERSON COUNTY
PLANNING AND ZONING

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:
Case No.: 10-08-1037R

The Honorable Faye Griffin
Chairman, Jefferson County
Board of Commissioners
100 Jefferson County Parkway
Golden, CO 80419-5550

Community: Jefferson County, CO
Community No.: 080087

104

Dear Ms. Griffin:

This responds to a request that the Department of Homeland Security's Federal Emergency Management Agency (FEMA) comment on the effects that a proposed project would have on the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for your community, in accordance with Part 65 of the National Flood Insurance Program (NFIP) regulations. In a letter dated September 1, 2010, Mr. Rick Behning, P.E., Baseline Engineering Corporation, requested that FEMA evaluate the effects that proposed channel modifications associated with the Moss Street Crossing project along Lena Gulch, from approximately 260 feet downstream of South Golden Road to approximately 1,160 feet upstream of the confluence with Lena Gulch Tributary, and along Lena Gulch Tributary from just downstream of Niles Street to approximately to 600 feet upstream of the confluence with Lena Gulch, would have on the flood hazard information shown on the effective FIRM and FIS report. The proposed modifications along Lena Gulch will include the extension of Moss Street and the construction of the new bridge above Lena Gulch, placement of fill, and grading. The proposed modifications along Lena Gulch Tributary will include: channel relocation, construction of two 10-foot by 4-foot reinforced-concrete box culverts beneath Moss Street, placement of fill, and grading.

All data required to complete our review of this request for a Conditional Letter of Map Revision (CLOMR) were submitted with letters from Mr. Ross Klopf, Civil Planning Engineer, Jefferson County Planning and Zoning, and Mr. Behning.

We reviewed the submitted data and the data used to prepare the effective FIRM for your community and determined that the proposed project meets the minimum floodplain management criteria of the NFIP. The submitted existing conditions HEC-RAS hydraulic computer model dated January 21, 2011, based on updated cross-section data and updated topographic information, was used as the base conditions model in our review of the proposed conditions model for this CLOMR request. We believe that if the proposed project is constructed as shown on the drawings entitled "Moss St Extension, Moss St and South Golden Rd., Proposed Lena Gulch Plan," "Moss St Extension, Moss St and South Golden Rd., Proposed Lena Gulch Profile," and "Moss St. and South Golden Road, Moss and South Golden Road, Pleasant View Tributary Proposed Plan & Profile," all prepared by Baseline Engineering Corporation, dated September 1, 2010, final revision January 14, 2011, and the data listed below are received, the floodplain boundaries of the base (1-percent-annual-chance) flood and the 0.2-percent-annual-chance flood will be delineated as shown on the above-referenced drawings entitled "Moss St Extension, Moss St and South Golden Rd., Proposed Lena Gulch Plan" and "Moss St. and South Golden Road, Moss and South Golden Road, Pleasant View Tributary Proposed Plan & Profile."

Our review of the existing conditions revealed that the Base Flood Elevations (BFEs) for Lena Gulch increased compared to the effective BFEs. The maximum increase in BFE, 1.9 feet, occurred approximately 360 feet downstream of South Golden Road. Our review of the existing conditions revealed that the BFEs for Lena Gulch Tributary increased in some areas and decreased in other areas compared to the effective BFEs. The maximum increase in BFE, 2.5 feet, occurred approximately 160 feet downstream of Niles Street. The maximum decrease in BFE, 1.4 feet, occurred approximately 380 feet downstream of Niles Street.

The proposed conditions model incorporated the proposed project into the existing conditions model. As a result of the proposed project, the BFEs for Lena Gulch will decrease compared to the existing conditions BFEs. The maximum decrease in BFE, 1.6 feet, will occur approximately 740 feet downstream of South Golden Road. As a result of the proposed project, the BFEs for Lena Gulch Tributary will increase in some areas and decrease in other areas compared to the existing conditions BFEs. The maximum increase in BFE, 0.4 foot, will occur approximately 380 feet downstream of Niles Street. The maximum decrease in BFE, 1.0 foot, will occur approximately 590 feet downstream of Niles Street.

As a result of the updated cross-section data, updated topographic information, and proposed project, the BFEs for Lena Gulch will increase in some areas and decrease in other areas compared to the effective BFEs. The maximum increase in BFE, 1.9 feet, will occur approximately 360 feet downstream of South Golden Road. The maximum decrease in BFE, 0.6 foot, will occur approximately 740 feet downstream of South Golden Road. As a result of the updated cross-section data, updated topographic information, and proposed project, the BFEs for Lena Gulch Tributary will increase in some areas and decrease in other areas compared to the effective BFEs. The maximum increase in BFE, 2.5 feet, will occur approximately 160 feet downstream of Niles Street. The maximum decrease in BFE, 1.2 feet, will occur approximately 260 feet downstream of Niles Street.

As a result of the updated cross-section data, updated topographic information and proposed project, the width of the Special Flood Hazard Area (SFHA), the area that would be inundated by the base flood, for Lena Gulch will decrease compared to the effective SFHA width. The maximum decrease in SFHA width, approximately 230 feet, will occur approximately 690 feet downstream of South Golden Road. The width of the SFHA for Lena Gulch Tributary will decrease compared to the effective SFHA width. The maximum decrease in SFHA width, approximately 150 feet, will occur approximately 940 feet downstream of Niles Street.

Upon completion of the project, your community must submit the data listed below and request that we make a final determination on revising the effective FIRM and FIS report.

- Detailed application and certification forms, which were used in processing this request, must be used for requesting final revisions to the maps. Therefore, when the map revision request for the area covered by this letter is submitted, Form 1, entitled "Overview & Concurrence Form," must be included. (A copy of this form is enclosed.)

- The detailed application and certification forms listed below may be required if as-built conditions differ from the preliminary plans. If required, please submit new forms (copies of which are enclosed) or annotated copies of the previously submitted forms showing the revised information.

  Form 2, entitled "Riverine Hydrology & Hydraulics Form"

3

Form 3, entitled "Riverine Structures Form"

Hydraulic analyses for as-built conditions of the base flood; the 10-, 2-, and 0.2-percent-annual-chance floods; together with a topographic work map showing the revised floodplain boundaries, must be submitted with Form 2.

- Effective January 13, 2010, FEMA revised the fee schedule for reviewing and processing requests for conditional and final modifications to published flood information and maps. In accordance with this schedule, the current fee for this map revision request is $5,000 and must be received before we can begin processing the request. Please note, however, that the fee schedule is subject to change, and requesters are required to submit the fee in effect at the time of the submittal. Payment of this fee shall be made in the form of a check or money order, made payable in U.S. funds to the National Flood Insurance Program, or by credit card (Visa or MasterCard only). The payment must be forwarded to the following address:

LOMC Clearinghouse
7390 Coca Cola Drive, Suite 204
Hanover, MD 21076

- As-built plans, certified by a registered professional engineer, of all proposed project elements.

- Community acknowledgment of the map revision request.

- A topographic work map showing a revised delineation of the Lena Gulch Tributary floodplain, correlating with the revised conditions BFEs on the east side of the proposed embankment, which parallels Moss Street. As an alternative, please submit MT-2 Form 3, Section E "Levee/Floodwall" and all items required under Section 65.10 of the NFIP Regulations. Please note that the current fee to review the map revision request for this alternative is $7,150, which should be submitted in lieu of the fee discussed above.

- Evidence of notification of all property owners who will be adversely affected by any increases in width and/or shifting of the base floodplain and/or increases in the BFEs.

After receiving appropriate documentation to show that the project has been completed, FEMA will initiate a revision to the FIRM and FIS report. Because the BFEs would change as a result of the project, a 90-day appeal period would be initiated, during which community officials and interested persons may appeal the revised BFEs based on scientific or technical data.

The basis of this CLOMR is, in whole or in part, a channel-modification/bridge project. NFIP regulations, as cited in Paragraph 60.3(b)(7), require that communities assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management regulations. Consequently, the ultimate responsibility for maintenance of the modified channel and bridge rests with your community.

This CLOMR is based on minimum floodplain management criteria established under the NFIP. Your community is responsible for approving all floodplain development and for ensuring all necessary permits required by Federal or State law have been received. State, county, and community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction in

the SFHA. If the State, county, or community has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP criteria.

If you have any questions regarding floodplain management regulations for your community or the NFIP in general, please contact the Consultation Coordination Officer (CCO) for your community. Information on the CCO for your community may be obtained by calling the Director, Mitigation Division of FEMA in Denver, Colorado, at (303) 235-4830.

If you have any questions regarding this CLOMR, please call our Map Information eXchange (FMIX), toll free, at 1-877-FEMA MAP (1-877-336-2627).

Sincerely,

David N. Bascom, CFM, Program Specialist
Engineering Management Branch
Federal Insurance and Mitigation Administration

For: Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Enclosures

cc: Mr. Ross Klopf
Civil Planning Engineer
Jefferson County Planning and Zoning

Mr. Bill DeGroot, P.E.
Manager, Floodplain Management Program
Urban Drainage and Flood Control District

Mr. Rick Behning, P.E.
Baseline Engineering Corporation

APPENDIX C

THREATENED OR ENDANGERED SPECIES

NREL Request for USFWS Concurrence with Habitat Assessments, August 3, 2009, Letter

National Renewable Energy Laboratory
Innovation for Our Energy Future

August 3, 2009

Ms. Susan Linner
U.S. Fish and Wildlife Service
Ecological Services
Colorado Field Office
P.O. Box 25486, DFC (MS 65412)
Denver, Colorado 80225-0486

RE: LENA GULCH ROAD CROSSING – GOLDEN, COLOROADO

Dear Ms. Linner,

On July 20. 2009, I conducted a site visit of the proposed **Lena Gulch Road Crossing** study area to assess the potential for the development of a road crossing over Lena Gulch to affect Preble's meadow jumping mouse (Preble's mouse) habitat. The National Renewable Energy Lab is considering a second full service access road from South Golden Road to the South Table Mountain (STM) Complex to accommodate future growth at the facility. The road would likely cross Lena Gulch to create a southern route for STM access. Figure 1 presents the project area.

The US Department of Energy (DOE) is currently preparing an Environmental Assessment (EA) Supplement for five proposed Site Development Projects at the National Renewable Energy Laboratory's STM site: 1) Energy Systems Integration Facility (ESIF), 2) expansion of campus infrastructure, 3) Waste Handling Facility (WHF) expansion, 4) Visitor's Center expansion, and 5) the addition of a second full service access road (secondary access) to STM. This habitat assessment for the Preble's mouse is needed to determine baseline conditions for the secondary access portion of the EA and represents an effort by DOE to afford the U.S. Fish and Wildlife Service an opportunity to be involved early in project planning. This habitat assessment determines the potential for affecting the Preble's mouse, a federally protected species in Colorado.

Project Location

The project location is north of I-70 and west of Denver West Parkway on a portion of the former Camp George West National Guard facility in Jefferson County. The land within the project area includes private land and land currently owned by Jefferson County Open Space and leased by the Pleasant View Metropolitan District (T04S, R70W, SEC 01, NE1/4 – Morrison Quadrangle-Figure 1). The UTM coordinates (NAD83) representing the upstream and downstream extents of the project area under consideration are upstream: Zone 13, 4398241mN, 484740mE; downstream: Zone 13, 4398582mN and 485724mE. Adjacent properties include the Pleasant View Subdivision to the west, NREL to the north, the Colorado State Patrol Academy and correctional facility to the south, and the Richards Heights subdivision and a larger private parcel to the east. Access to the site is from South Golden Road and Kilmer Street.

1617 Cole Blvd. • Golden, CO 80401-3305 • (303) 275-3000 • NREL is a national laboratory of the U.S. Department of Energy Office of Energy Efficiency & Renewable Energy, operated by the Alliance for Sustainable Energy, LLC

Vegetation and Habitat

Lena Gulch originates in the foothills in the Apex Park Open Space west of the Heritage Square Amusement Park. The gulch continues east and is often conveyed in concrete canals through the Golden area. Lena Gulch becomes forested as it crosses South Golden Road with typical tree species of riparian areas in eastern Colorado. After crossing two private parcels, Lena Gulch crosses into the Pleasant View Community Park and this reach extends through the park for approximately ½ mile. Once the drainageway crosses back into private land, it again becomes channelized and adjacent land use encroaches as Lena Gulch crosses through urban and suburban landscapes until it reaches its confluence with Clear Creek near the intersection of 44th Avenue and Kipling Street.

Common trees along this reach within Pleasant View Community Park include plains cottonwood (*Populus deltoides*), peachleaf willow (*Salix amygdaloides*), Russian olive (*Elaeagnus angustifolia*), green ash (*Fraxinus pennsylvanica*), and Siberian elm (*Ulmus pumila*) (Photo 1). Shrubs are localized along the riparian zone and include chokecherry (*Prunus virginiana*), wild plum (*Prunus americana*), and red hawthorn (*Crataegus erythropoda*). Only one small area along Lena Gulch, supports sandbar willow (*Salix exigua*). Understory vegetation consists mostly of grasses including smooth brome (*Bromus inermis*), reed canarygrass (*Phalaris arundinacea*), and tall fescue (*Schedonorus phoenix*) (Photo 2).

Upland vegetation includes grasses and a dominance of weedy herbs. Dominant plants include western wheat grass (*Pascopyrum smithii*), crested wheat grass (*Agropyron cristatum*), smooth brome, cheatgrass (*Bromus tectorum*), and fringe sage (Artemisia ludoviciana).

Remnant drainageways remain, north of Lena Gulch and a patch (about ¼ acre) of sandbar willow remains along one of the larger drainageways (Photo 3). These drainageways were more evident before Pleasant View Metro District began re-engineering of the drainage patterns across the site. Also, the entire site was likely disturbed and reworked during operations of Camp Georg West and during decommissioning.

Lena Gulch has an incised channel (Photo 4) throughout this reach and overbank flooding appears limited to a few locations. Recently, the Pleasant View Metro District has created a side channel to the south of the natural drainage for wetland mitigation and flood storage (Photo 5). This area was excavated and lined with rip-rap and is now supporting robust cattail (*Typha latifolia*) stands and diverse wetland vegetation upgradient from the cattails.

History of Trapping and Habitat Assessments in the General Area

Lena Gulch at the Camp George West site was trapped previously (Kane 1999). No Preble's mice were captured during this trapping effort. An interesting observation from this report and an ecological report (Anderson 1999) was the reporting of willows and other shrubs in the understory of the riparian zone. Currently, the riparian area supports only one small patch of sandbar willow and a larger patch off-channel. These past reports seem to indicate that shrubs was much more widespread 10 years ago.

Once Lena Gulch passes under Interstate 70 near Denver West Parkway, it enters the Denver Urban Drainage Block Clearance Area. Considering past trapping and the Lena Gulch drainageway, the riparian area found within this study area is isolated and does not support Preble's mouse habitat given the history of the area and the continued human presence and disturbance the site has experienced. Additionally, succession or stream processes (i.e., increased channel down-cutting) have eliminated riparian shrub communities once present at the site.

Recommendations

Given the past trapping results, the history of the site, and the relative isolation of this site in a surrounding urban/suburban landscape, it seems very unlikely that Lena Gulch supports a population of Preble's mice. Any impacts from the development of a road and associated creek crossing would not impact the Preble's mouse. Therefore, I recommend that this area be disqualified as habitat for the Preble's mouse. It may also be appropriate to incorporate this area of Lena Gulch into the Denver Urban Drainage Block Clearance Area.

I ask that you provide written concurrence to this habitat assessment if you agree with the disqualification. If you have further questions or concerns regarding this assessment, please contact me.

Sincerely,

Thomas Ryon

Thomas Ryon, Wildlife Biologist

Cc: Tom Anderson – Battelle
Steve Blazek – DOE, Golden Field Office
John Eickhoff – EHS, NREL

References

Anderson & Company. 1999. Preble's mouse trapping at Camp George West park site. Prepared for Pleasantview Metropolitan District and The Norris Dullea Company. July. 10+ photos and appendix.

Kane, D. 1999. Preble's mouse trapping at Camp George West park site. Prepared for Pleasantview Metropolitan District and The Norris Dullea Company. September. 11 pp+ photos and appendix.

Photo 1. Riparian forest gallery line Lena Gulch.

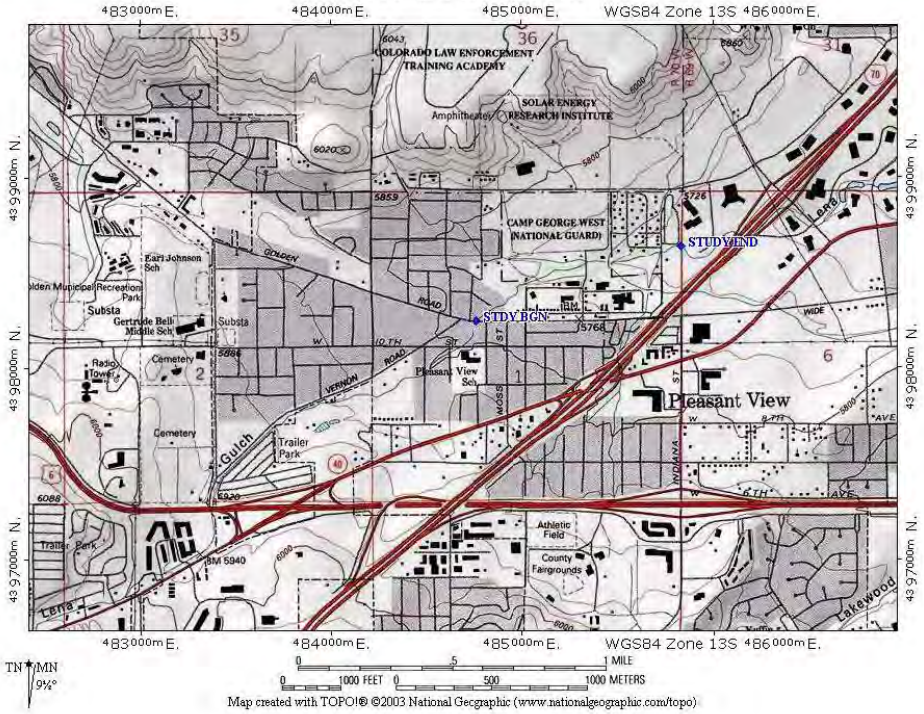
Photo 2. Understory along Lena Gulch is primarily grasses.

Photo 3. An isolated patch of willow shrubs found north of Lena Gulch. Lena Gulch is in the background of this photo with the willow patch in the mid-ground.

Photo 4. Lena Gulch is incised for most of its length through the Pleasant View Park.

Photo 5. Constructed wetlands and flood storage channel adjacent to the south bank of Lena Gulch.

Figure 1. Lena Gulch Study Area



U.S. Fish & Wildlife Service

Colorado Field Office

Preble's Meadow Jumping Mouse

Survey Field Data Compilation Form

Preble's Meadow Jumping Mouse, *Zapus hudsonius preblei*

2005 Survey Field Data Compilation Form

☐ TRAPPING SURVEY ☒ EVALUATED, NOT TRAPPED

Fill out both sections 1 and 2 if trapping survey, fill out section 1 only if habitat evaluation (ie. not trapped). Compilation forms needed for updated habitat evaluations and site disqualification requests.

SECTION 1

Surveyor:

Date of Site/Habitat Assessment 20 July 2009

Organization/Company National Renewable Energy Laboratory

Full Name(s) Tom Ryon

Location:

Project Name (if applicable) Environmental Assessment of the Southern Access Route from the NREL South Table Mesa Campus.

Project Description (nearby road intersection, type of impact, etc.) South Golden Road and considering several potential intersections but only one will be chosen. Included are Quaker Street, Moss Street, McIntyre Street, Kilmer Street, and Isabella Street. Project will likely be a road crossing of Lena Gulch.

U.S.G.S. Quad Name Morrison County Jefferson Elevation 5,810 to 5730 feet

Township(s) 4S Range(s) 70W Section(s) 1

¼¼ Section(s) NE

UTM Coordinates, Zone 13 Northing 484740 to 485724m Easting 4398241 to 4398582m

UTM Coordinate Datum NAD27 ☐ NAD83 ☒

Directions to Location I-70 to West Colfax Blvd, South on Colfax to South Golden Road. North on South Golden Road to Isabell to bridge crossing over Lena Gulch. Travel upstream on foot to where Lena Gulch goes under South Golden Road.

Land Ownership Jefferson County Open Space – Leased by Pleasant View Metro District

Habitat:

General Habitat Description : Riparian mixed gallery forest including Plains Cottonwood and Peachleaf Willow surrounded by grasslands and upland swales

Dominant Overstory Plant Community: mixed riparian forest of cottonwood and non native tree species including plains cottonwood, peachleaf willow, Russian olive, green ash, and Siberian elm.

Dominant Understory Plant: Community grass and minor herb component. Nearly completely lacking a shrub component.

Current Land Use open space

Drainage Name: Lena Gulch Type: Perennial Stream XXXXX

Ephemeral Stream _____ Pond/Lake _____ Ditch _____ Other _____

DOE Conclusion on Preble's Meadow Jumping Mouse, August 7, 2009

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3305

07 August 2009

Ms. Susan Linner
U.S. Fish and Wildlife Service
Ecological Services
Colorado Field Office
P.O. Box 25486, DFC (MS 65412)
Denver, Colorado 80225-0486

SUBJECT: PREBLES MEADOW JUMPING MOUSE HABITAT ASSESSMENT AT LENA GULCH

In compliance with the U.S. Fish and Wildlife Service Preble's Meadow Jumping Mouse Survey Guidelines, Revised April 2004, we have conducted a habitat assessment along Lena Gulch in documenting baseline conditions for conducting a supplemental environmental assessment for NREL's South Table Mountain (STM) Campus.

The US Department of Energy (DOE) is currently preparing an Environmental Assessment (EA) Supplement for five proposed Site Development Projects at the National Renewable Energy Laboratory's STM site: 1) Energy Systems Integration Facility (ESIF), 2) expansion of campus infrastructure, 3) Waste Handling Facility (WHF) expansion, 4) Visitor's Center expansion, and 5) the addition of a second full service access road (secondary access) to STM. The attached habitat assessment for the Preble's mouse is needed to determine baseline conditions for the secondary access portion of the EA and represents an effort by DOE to afford the U.S. Fish and Wildlife Service an opportunity to be involved early in project planning. This habitat assessment determines the potential for affecting the Preble's mouse, a federally protected species in Colorado.

Please review the attached report, prepared by Thomas Ryon (Federal Permit No. TE081867-0) of our NREL staff and provide a response at your earliest convenience. We understand that the U.S. Fish and Wildlife Service has 30 days to respond to such reports and are planning our EA schedule accordingly.

DOE plans to complete a draft EA for Public Review by September 2009. Beyond your response to this report, we welcome your input throughout the NEPA process.

Sincerely,

Kristin Kerwin

for Steve Blazek, NEPA Compliance Officer

Federal Recycling Program Printed on Recycled Paper

USFWS Confirmation on Preble's Meadow Jumping Mouse, August 20, 2009

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
P.O. Box 25486, DFC (65412)
Denver, Colorado 80225-0486

IN REPLY REFER TO:
ES/CO: T&E/PMJM/other
65412-2009-I-0553

AUG 2 0 2009

Steve Blazek
Department of Energy, Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3305

Dear Mr. Blazek:

We are responding to your letter of August 07, 2009, requesting site disqualification under the authority conferred to the U.S. Fish and Wildlife Service (Service) by the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*). The Service has reviewed the Preble's meadow jumping mouse, *Zapus hudsonius preblei* (Preble's), habitat assessment report for proposed Department of Energy's proposed **Lena Gulch Road Crossing** in Jefferson County, Colorado (Section 1, Township 4 South, Range 70 West).

Based on the information provided, the Service finds the report acceptable and agrees that a population of Preble's is not likely to be present within the subject area. The Service concludes that the proposed crossing should not have direct adverse effects on Preble's or Preble's habitat. Thus, this site is disqualified for consideration under provisions of the ESA.

Please note that this clearance is valid for one year from the date of this letter. Should additional information regarding listed or proposed species become available, this determination may be reconsidered under the ESA. If the proposed project has not commenced within one year, please contact the Colorado Field Office to request a clearance extension.

If we can be of further assistance, please contact Peter Plage of my staff at (303) 236-4750.

Sincerely,

Susan C. Linner
Colorado Field Supervisor

pc: Plage

PPlage:PMJMSurvey\2009.11:0822 09

Urban's Letter to USFWS Mouse Letter, May 6, 2010

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT

Paul A. Hindman, Executive Director
2480 W. 26th Avenue, Suite 156B
Denver, CO 80211-5304

Telephone 303-455-6277
Fax 303-455-7880
www.udfcd.org

May 6, 2010

Ms. Susan Linner
Colorado Field Office
U.S. Fish and Wildlife Service
P.O. Box 25486, DFC
Denver, Colorado 80225

RE: Proposed Renewal and Additions to the Preble's Meadow Jumping Mouse Block Clearance for the Denver Metropolitan Area

Dear Ms. Linner:

The Urban Drainage and Flood Control District (District) is submitting to you a request to renew and expand the boundaries of the Denver Metro Block Clearance Zone for the Preble's meadow jumping mouse (Preble's). The block clearance zone is scheduled to expire on May 13, 2010.

The District and its contractor, ERO Resources, have reviewed the U.S. Fish and Wildlife Service database updated through 2009. Based on this information, the District has identified two areas where presence/absence surveys and habitat assessments for the Preble's indicate that potential habitat is not present or that the species has been extirpated from the area. The District and others believe that the expenditure of resources for habitat assessments and trapping surveys for Preble's in these portions of the Denver metro area are no longer productive. Similarly, the limited staff of the U.S. Fish and Wildlife Service spends unproductive time reviewing the results of these habitat assessments and trapping surveys. We believe that suspending these additional portions of the Denver metropolitan area from the need of further trapping surveys or habitat assessments for the Preble's is warranted.

Enclosed are two maps that provide the basis for continuation and expansion of the existing block clearance zone. The first map (Figure 1) shows past trapping survey locations and areas where habitat evaluations were completed and the site disqualified for the lack of suitable habitat. This map also delineates the existing boundary of the Denver Metro Area Block Clearance Zone and the two areas proposed to be added to the zone. Figure 2 is a map with just the existing boundary and proposed additions. A brief description of the boundaries of these two areas and the justification for inclusion into the block clearance zone are provided below:

East of U.S. 85 to Jordan Road – This area is located south of the existing boundary, west to U.S. 85, and east to Jordan Road. The drainages in this area (Big Dry Creek, Happy Canyon Creek, Newlin Gulch, and Lemon Creek) generally lack suitable habitat. Historically, these drainages were dry to ephemeral with little to no shrub or lush herbaceous vegetation to support Preble's. Although the District is not aware of any new surveys in this area, these drainages have been thoroughly trapped or evaluated and no Preble's have been caught. Furthermore, much of the land within this area has already been developed, and none of these drainages are

covered under the Douglas County Riparian Conservation Zone (DCRCZ). The District proposes to shift the Block Clearance Zone limits from the east side of U.S. 85 to Jordan Road and south to the District boundary.

Clear Creek Downstream of SH 93 – Although the District is aware of no new surveys in this area, this reach of Clear Creek through the City of Golden has been thoroughly trapped in the past and no Preble's have never been caught. The District requests extending the boundary west to SH 93, which will include most, developed areas within the City of Golden.

Please let me know what the District, or ERO on behalf of the District, can do to facilitate your prompt review of the enclosed materials. Additionally, we can provide a PDF file, which can be uploaded to your website, and multiple paper copies of the map for your distribution.

If you have any questions, please do not hesitate to contact me.

Sincerely,

David Bennetts

David Bennetts, P.E., CFM
Manager, Design, Construction, and Maintenance Program

Cc: Clint Henke, ERO Resources Corporation
Jenelle Kreuzter, ERO Resources Corp.

USFWS Renewed Addition to Preble's Meadow Jumping Mouse Block Clearance, June 15, 2010

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
P.O. Box 25486, DFC (65412)
Denver, Colorado 80225-0486

RECEIVED
JUN 15 2010

IN REPLY REFER TO:
ES/CO: T&E/PMJM/Other
TAILS 65412-2010-TA-0421

David Bennetts
Urban Drainage and Flood Control District
2480 Suite 156B
Denver, Colorado 80211-5304

Dear Mr. Bennetts:

This responds to your letter of May 6, 2010 proposing renewal and additions to the Preble's meadow jumping mouse Block Clearance for the Denver Metropolitan area. The U.S. Fish and Wildlife Service (Service) has reviewed your proposal under authority conferred to the Service by the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*).

We concur with your conclusions concerning areas "East of U.S. 85 to Jordan Road" and "Clear Creek downstream of SH 93." In designating a block clearance zone, the Service eliminates the need for individuals or agencies to coordinate with the Service prior to conducting activities in habitats that otherwise would be deemed to have the potential to support Preble's. The extension of this block clearance zone is based on the likely absence of Preble's within the area, and there appears to be little likelihood that these areas would be of importance in any future plan to recover the species. Should Preble's be discovered within the block clearance zone it would be subject to full protection under the Act and the Service would consider modification of the zone.

Effective the date of this letter, the block clearance zone, with the approved additions, will be effective for three years. After three years the Service will review the clearance and any additional information, and may renew the clearance as deemed appropriate. Based on additional information, the clearance zone may be expanded or adjusted periodically. We will have maps of the block clearance zone available on our web site (http://www.r6.fws.gov/preble) and at our office. Please send us the PDF file and a large paper copy of the final map.

The Service emphasizes that while wetlands and riparian habitats within the block clearance zone do not support Preble's, they should be conserved and enhanced for other values including fish and wildlife habitat, flood control, and maintenance of water quality.

Please contact Peter Plage, of the Colorado Field Office further assistance at (303) 236-4750.

Sincerely,

Susan C. Linner
Colorado Field Supervisor

cc: COE, Littleton, CO (T. Carey)
ERO, Denver, CO (C. Henkey)

PPlage:PMJMDenverBC:61110

DOE to USFWS Rare Plant Survey, November 24, 2010

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

November 24, 2010

Mr. Adam Mizstal
U.S. Fish and Wildlife Service
Ecological Services
Colorado Field Office
P.O. Box 25486, DFC (MS 65412)
Denver, Colorado 80225-0486

SUBJECT: 2010 RARE PLANT SURVEY AT LENA GULCH – SOUTHERN ACCESS ROAD PROJECT

Dear Mr. Mizstal:

The Department of Energy's National Renewable Energy Laboratory (NREL) is proposing the development of a second full service access road to the facility to accommodate future access needs. The road would extend from South Golden Road to NREL, crossing Lena Gulch.

Enclosed is a Rare Plant Survey report, of the project area, for your review and concurrence. NREL conducted a habitat assessment along Lena Gulch to document baseline conditions of the project area as required by the Endangered Species Act. The assessment was conducted in accordance with the U.S. Fish and Wildlife Service Ute Ladies' Tresses Orchid Survey Guidelines.

Please review the enclosed report, prepared by Thomas Ryon (Federal Permit No. TE081867-0) of our NREL staff, and provide a written response of concurrence/non-concurrence with the survey methodology and the findings stated in the referenced report. We understand that the U.S. Fish and Wildlife Service will have up to 30 days to respond to the report's conclusion.

If you have any questions or concerns regarding this assessment, please contact Thomas Ryon of NREL at 303-275-3252 or myself at 720-356-1568.

Sincerely,

Lori Plummer

Lori Plummer
NEPA Compliance Officer

Enclosure: as stated

cc w/enclosure:
Ellen Mayo – U.S. Fish and Wildlife Service
Robin Sweeney – DOE Golden Field Office
Rob Smith – DOE, Golden Field Office

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Randy Dins – DOE, Golden Field Office
John Eickhoff – EHS, NREL
Tom Ryon – EHS, NREL

RARE PLANT SURVEY – LENA GULCH STUDY AREA
FOR
NREL SOUTHERN ACCESS ROAD

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Cover photograph

Ute ladies'-tresses orchid (*Spiranthes diluvialis*): photograph credit – Robert Fiehweg

Report photos – Brenda Beatty and Tom Ryon

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Introduction

The Department of Energy's National Renewable Energy Laboratory (NREL) is proposing the development of a second full service access road from South Golden Road to the South Table Mountain (STM) complex to accommodate future growth at the facility. The road will cross Lena Gulch to create a southern route for STM access. Figure 1 presents the study area.

In accordance with the Endangered Species Act, NREL (for DOE) conducted a survey for the federally listed Ute ladies' tresses Orchid (*Spiranthes diluvialis*- Orchid) and the Colorado butterfly plant (*Gaura neomexicana coloradensis*- CBP). This survey was conducted over the entire reach of interest (from South Golden Road to Isabell Street – study area) on August 19th, 2010 when local populations of orchids (Wheat Ridge and Boulder, Colorado) were known to be blooming.

Previously, a rare plant survey was conducted within the same study area in 2009 to determine baseline conditions for the secondary access portion of an Environmental Assessment (EA) Supplement for five proposed site development projects at NREL's STM site including the addition of a second full service access road (secondary access) to STM. DOE received concurrence regarding the 2009 survey from your office dated September 24th, 2009. This report provides details on a 2010 year survey effort along Lena Gulch between South Golden Road and Isabell Street.

Study Area

NREL's STM complex is located at 15003 Denver West Parkway, Golden, Colorado. The project location is north of I-70 and south of Denver West Parkway on a portion of the former Camp George West National Guard facility in Jefferson County. The land within the study area includes private land and land currently owned by Jefferson County Open Space and leased by the Pleasant View Metropolitan District (T04S, R70W, SEC 01, NE1/4 – Morrison Quadrangle- Figure 1). The UTM coordinates (NAD83) representing the upstream and downstream extents of the study area under consideration are upstream: Zone 13, 4398244mN, 484736mE; downstream: Zone 13, 4398582mN and 485724mE. Adjacent properties include the Pleasant View Subdivision to the southwest, Ortega Subdivision to the northwest, NREL to the north, the Colorado State Patrol Academy and correctional facility to the south, and the Richards Heights subdivision and a larger private parcel to the east. Access to the study area location is from South Golden Road and Kilmer Street (Figure 1). The majority of the study area is contained within Pleasant View Community Park with adjoining private parcels up- and down-stream of the park.

Site History and Management

A portion of the study area was formerly the Camp George West National Guard facility. The past use of the site was for military training, administrative, and storage purposes. Remnant drainageways north of Lena Gulch support a patch (about ¼ acre) of sandbar willow (*Salix exigua*). These drainageways were more evident before recent park development that reworked drainage across the site.

Land formerly part of Camp George West has been fallow following decommissioning in the late 1950's, but was likely disturbed and reworked during operations of Camp Georg West and during decommissioning. Over the last 10 years, Pleasant View Metro District has begun re-engineering the drainage patterns across the site and constructing ball fields and a parking lot. A constructed wetland was built south of Lena Gulch to reorient the floodplain to the south.

Private parcels adjacent to Camp George West are all large-lot residential properties. Some parcels have horses and meadows. One parcel is a combined use of residential and small business.

Vegetation and Habitat

Lena Gulch originates in the foothills in the Apex Park Open Space west of the Heritage Square Amusement Park. The gulch continues east and is often conveyed in concrete canals through the Golden area. Lena Gulch becomes forested as it crosses South Golden Road (into the study area) with typical tree species of riparian areas in eastern Colorado. After crossing two private parcels, Lena Gulch crosses into the Pleasant View Community Park extending through the park for approximately ½ mile. Once the drainageway crosses back into private land, it again becomes channelized, and adjacent land use encroaches as Lena Gulch continues through urban and suburban landscapes to its confluence with Clear Creek near the intersection of 44th Avenue and Kipling Street.

Common trees along this reach within Pleasant View Community Park include plains cottonwood (*Populus deltoides*), peachleaf willow (*Salix amygdaloides*), Russian olive (*Elaeagnus angustifolia*), green ash (*Fraxinus pennsylvanica*), and Siberian elm (*Ulmus pumila*) (Photo 1). Shrubs are localized along the riparian zone and include chokecherry (*Prunus virginiana*), wild plum (*Prunus americana*), and red hawthorn (*Crataegus erythropoda*). Understory vegetation

consists mostly of grasses including smooth brome (*Bromus inermis*), reed canarygrass (*Phalaris arundinacea*), and tall fescue (*Schedonorus phoenix*) (Photo 2).

Only a few locations supported plant species commonly associated with orchids. These include Field Horsetail (*Equisetum arvense*) and Goldenrod (*Solidago* spp.).

Upland vegetation includes grasses and a dominance of weedy herbs. Dominant plants include western wheat grass (*Pascopyrum smithii*), crested wheat grass (*Agropyron cristatum*), smooth brome, fescue (*Festuca* sp.). cheatgrass (*Bromus tectorum*), and fringe sage (*Artemisia ludoviciana*).

Hydrology and Landscape

Lena Gulch is identified as an intermittent stream on the USGS Morrison Quadrangle map. However, given the level of urbanization upstream of the study area, the stream likely flows most of the year if not all year round. A large portion of Lena Gulch from its headwaters to the project area has shown evidence of channelization. Channelization often creates instability and active erosion and deposition that are extensive (Anderson 1999a). Consequently, Lena Gulch has an incised channel (Photo 3) throughout most of the reach of the study area, and overbank flooding appears limited to a few locations. The Pleasant View Metro District has created a side channel to the south of the natural drainage for wetland mitigation and flood storage (Photo 4). This area was excavated and lined with rip-rap and is now supporting robust cattail (*Typha latifolia*) stands and diverse wetland vegetation among and upgradient from the cattails.

Previous Studies

Several studies have been completed previously that aided in better understanding of the study area. In 1999, Anderson (1999a, b) conducted an environmental assessment of Pleasant View Park including an orchid survey and small mammal trapping. In 2009, NREL delineated wetlands within the study area and a map was created and submitted to the U.S. Army Corps of Engineers for approval. NREL also completed its first rare plant survey of the study area (NREL 2009). These past efforts helped NREL biologists with site familiarity and an understanding of hydric soils in the area. All of these reports are available upon request. Current soil characteristics described during the wetland delineation match closely with the soil descriptions listed in the 1999 rare plant survey (Anderson 1999b).

Survey Methods

The rare plant survey was conducted on August 19th, 2010. Once biologists confirmed that nearby local orchid populations were in bloom (i.e., Prospect Park, Wheat Ridge and South Boulder Creek, Boulder) all potential wetland and wetland fringe areas within the limits of the study area were surveyed for the presence of orchids and CBP in accordance with the current interim guidelines published by the U.S. Fish and Wildlife Service (USFWS 1992). The study area was also surveyed for CBP. Tom Ryon, a prequalified *Spiranthes diluvialis* surveyor , led a team of 3 biologists conducting the surveys. Mr. Ryon's qualifications are available upon request.

Potential habitat areas at Lena Gulch, as identified by areas with commonly associated plant species for the orchid and CBP and a general knowledge of wetlands within the study area, were walked in a 5 to 10-foot grid pattern and the understory was carefully observed. Small drainages were walked along the length of both banks in potential habitat areas.

Survey Results

This is the third time the Lena Gulch area has been surveyed for these two federally protected plants. Anderson (1999b) conducted a survey of the Camp George West site for a park development project for the Pleasant View Metropolitan District. A second survey was conducted in August 2009 by NREL staff. Both of these surveys resulted in no orchids or CBP being observed.

The results of this most recent survey revealed no orchids or CBP within the study area along Lena Gulch and adjoining tributaries. All potential habitat areas exhibiting vegetative or hydrologic potential were surveyed. In searching Lena Gulch and the lower reaches of various tributaries, only two species commonly associated with the orchid occurred; Field Horsetail (*Equisetum arvense*) and Goldenrod (*Solidago* spp.). Soils on this site generally do not appear to be conducive to the establishment of the orchid or CBP (Anderson 1999b). Recent soil observations during wetland delineations support Anderson's (1999a) findings.

Conclusion

After three survey attempts (Anderson 1999b, NREL 2009, current survey), confirming only marginal habitat conditions within the study area, it is certain that *Spiranthes diluvialis* and *Gaura neomexicana coloradensis* do not exist within this study area.

References

Anderson & Company. 1999a. Ecological Assessment at Camp George West park site. Prepared for Pleasantview Metropolitan District and The Norris Dullea Company. July. 10+ tables.

Anderson & Company. 1999b. *Spiranthes diluvialis* Survey of the Camp George West Park Site. Prepared for Pleasant View Metropolitan District and The Norris Dullea Company. July. 10+ photos and appendix.

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National Renewable Energy Lab (NREL) 2009. Rare Plant Survey of Lena Gulch. Letter submitted through Department of Energy, Golden Field Office to U.S. Fish and Wildlife Service, Colorado Field Office. August 31.

United States Department of the Interior, Fish and Wildlife Service. 1992. FEW/CO:ES Plants – *Spiranthes diluvialis* (Ute ladies'-tresses orchid). Interim. Survey requirements for *Spiranthes diluvialis*.

United States Department of Agriculture, Soil Conservation Service. 1980. Soil survey of the Golden Area, Colorado. Online: < http://soils.usda.gov/survey/online_surveys/> and < http://websoilsurvey.nrcs.usda.gov/>

Weber, W.A. 1990. Colorado Flora: Eastern Slope. University Press of Colorado, Niwot, Colorado.

Figures and Photos

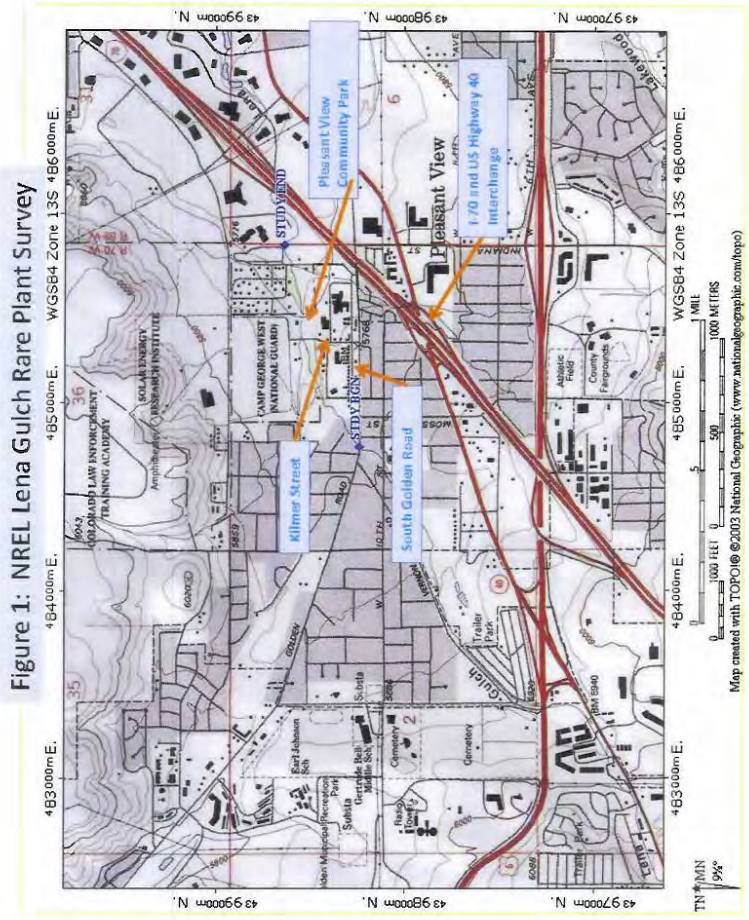

Figure 1: NREL Lena Gulch Rare Plant Survey

LenaGulch_USFWS_RarePlant_REPORT10-18-10.docx

Page | 9

November 18, 2010

Photo 1. Riparian forest gallery line Lena Gulch.

Photo 2. Understory along Lena Gulch is primarily grasses.

Photo 3. Lena Gulch is incised for most of its length throughout the study area.

Photo 4. Constructed wetlands and flood storage channel adjacent to the south bank of Lena Gulch.

USFWS Concurrence Rare Plant Survey, December 1, 2010

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

RECEIVED
NOV 29 2010

November 24, 2010

Mr. Adam Mizstal
U.S. Fish and Wildlife Service
Ecological Services
Colorado Field Office
P.O. Box 25486, DFC (MS 65412)
Denver, Colorado 80225-0486

U.S. FISH AND WILDLIFE SERVICE
☒ CONCUR NO EFFECT
☐ CONCUR NOT LIKELY TO ADVERSELY AFFECT
☐ NO COMMENT
DEC - 1 2010
COLORADO FIELD SUPERVISOR (DATE)
Susan C. Linner

SUBJECT: 2010 RARE PLANT SURVEY AT LENA GULCH – SOUTHERN ACCESS ROAD PROJECT

Dear Mr. Mizstal:

The Department of Energy's National Renewable Energy Laboratory (NREL) is proposing the development of a second full service access road to the facility to accommodate future access needs. The road would extend from South Golden Road to NREL, crossing Lena Gulch.

Enclosed is a Rare Plant Survey report, of the project area, for your review and concurrence. NREL conducted a habitat assessment along Lena Gulch to document baseline conditions of the project area as required by the Endangered Species Act. The assessment was conducted in accordance with the U.S. Fish and Wildlife Service Ute Ladies' Tresses Orchid Survey Guidelines.

Please review the enclosed report, prepared by Thomas Ryon (Federal Permit No. TE081867-0) of our NREL staff, and provide a written response of concurrence/non-concurrence with the survey methodology and the findings stated in the referenced report. We understand that the U.S. Fish and Wildlife Service will have up to 30 days to respond to the report's conclusion.

If you have any questions or concerns regarding this assessment, please contact Thomas Ryon of NREL at 303-275-3252 or myself at 720-356-1568.

Sincerely,

Lori Plummer

Lori Plummer
NEPA Compliance Officer

Enclosure: as stated

cc w/enclosure:
Ellen Mayo – U.S. Fish and Wildlife Service
Robin Sweeney – DOE Golden Field Office
Rob Smith – DOE, Golden Field Office

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APPENDIX D

CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

DOE Transmittal Letter to SHPO, December 16, 2010

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

December 16, 2010

Edward C. Nichols
State Historic Preservation Officer
History Colorado
Civic Center Plaza
1560 Broadway
Suite 400
Denver, CO 80202

Dear Mr. Nichols:

SUBJECT: INITIATION OF THE SECTION 106 CONSULTATION PROCESS FOR A SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY, SOUTH TABLE MOUNTAIN COMPLEX, GOLDEN, CO

The U.S. Department of Energy (DOE) is initiating consultation pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its associated implementing regulations codified at 36 CFR Part 800 for the construction and operation of a second full service access road to the National Renewable Energy Laboratory (NREL), South Table Mountain Complex (STM) located in the City of Golden, County of Jefferson, State of Colorado (Figure 1 and Figure 2).

Background
This proposed action was analyzed by DOE pursuant with the National Environmental Policy Act (NEPA) in an Environmental Assessment (EA) document entitled *Final Supplement-II to the Final Site-Wide Environmental Assessment: National Renewable Energy Laboratory South Table Mountain Complex (DOE/EA-1440-S-II), November 2009 (available at http://www.eere.energy.gov/golden/Reading_Room.aspx)*. DOE issued a Finding of No Significant Impact (FONSI) for the EA on November 10, 2009, which determined that the utilization of preferred corridor, Alternative B/C (See Figure 3), could be accomplished without significant impacts.

During the EA process, DOE consulted with various agencies and stakeholders, including your office, as documented by DOE letters dated November 24, 2008 and August 11, 2009. As stated in the August 11, 2009 correspondence, since the EA analyzed corridors, and not specific route alignments, further consultation with your office would occur once a specific route alignment was selected. DOE has continued to work with federal, state, and local agencies as well as private landowners, and has now finalized a specific proposed route alignment within the B/C Corridor.

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Project Description
NREL is the only national laboratory solely focused on energy efficiency and renewable energy research, and as such has recently experienced significant growth. Due to this growth and additional projected staffing increases at NREL DOE needed to pursue a second full access road to prevent an unacceptable degradation of traffic flow in the area. The proposed second full access road would connect the South Table Mountain campus to South Golden Road via an extension of Moss Street north to the campus as depicted in the attached Figure 4. Currently Moss Street ends at South Golden Road.

Undertaking
The proposed action of the construction of the second full access road to the NREL's South Table Mountain Complex meets the definition of an undertaking as defined in 36 CFR 800.16(y).

Area of Potential Effect
Consideration has been given to the potential for a range of effects in addition to direct effects that might result from the undertaking, including visual, auditory, socio-cultural, as well as indirect and secondary effects.

DOE proposes an area of potential effect (APE) to include the approximate 0.3 mile north-south oriented linear road feature from the intersection of South Golden Rd and Moss Street north to the NREL campus with a 100-foot width to account for the road right-of-way as well as permanent and temporary construction easements. As this proposed action will not result in increased elevation of the land beyond typical road grading or include the construction of vertical features, DOE does not propose to extend the APE boundaries beyond the area to be disturbed by construction activities for indirect visual impacts. Furthermore, the established tree canopies associated with Lena Gulch would serve as a view-shed barrier of the proposed access road to the Camp George West Historic District features south of Lena Gulch (See Figure 6 and 12 of the enclosed Class III Cultural Resource Inventory report). As this area is highly urbanized and has elevated ambient noise from the Denver West Office Park, Colorado Mills Mall, Colfax Avenue, South Golden Road, and Interstate 70, DOE does not proposed to extend the APE beyond the area of disturbance for auditory impacts.

Historic Properties Affected
Per 36 CFR 800.4, DOE is required to identify all properties listed, or eligible for listing in the National Register of Historic Places which may be affected by the proposed undertaking. DOE/NREL retained RMC Consultants, Inc. of Lakewood, Colorado to conduct a Class III Cultural Resource Inventory of a 100-foot right-of way for the proposed south access road. Field work was conducted in June 2010 and the methodology and findings were documented in the enclosed September 2010 Class III Cultural Resource Inventory report. Two previously documented historic resources, the

southern two firing features (5JF145.66), and one undocumented resource, a channelized ditch (5JF4874.1), were located within the survey area during the inventory efforts.

Despite some loss of physical integrity, such as broken ends and damage from vegetative overgrowth, the firing line features retain sufficient integrity to continue to be considered as contributing to the Camp George West Historic District. The channelized ditch is not eligible for the National Register of Historic Places under any of the criteria. This feature is not part of an irrigation network or system of ditches, is not related to agricultural land use, and apparently was not found to be associated with Camp George West during previous inventory and research efforts of that district.

The proposed action would not affect other remaining historic features associated with the Camp George West Historic District north of Lena Gulch and east of the proposed APE, such as the two bridges spanning Lena Gulch (5JF145.56 and 5JF145.62), the Recreation Hall (5JF145.27), and the second most southern firing line (5JF145.66) located east of the channelized ditch feature. As noted in the DOE letter to your office dated August 11, 2009, the Golden Gun Club (5JF145.61) structure lost significant integrity when it was destroyed by an arson fire during the weekend of July 25-26, 2009.

Alternatives Analyzed

During the NEPA Environmental Assessment process in 2008 and 2009, DOE analyzed five different corridor alternatives for the second full access road, as depicted in Figure 3. The corridors were assessed in the EA against a variety of environmental and socioeconomic factors as presented in the attached matrix (Table 1), including impacts to historic resources. Detailed descriptions of the impacts of each corridor can be found in Section 3.0 of the November 2009 EA. Corridor B/C was selected based upon the following aspects:

- Minimizes impacts to residential and business properties;
- Minimizes impacts to floodplain, wetland, and cultural resources;
- Minimizes impacts to Pleasant View Park and Camp George West;
- Provides the most direct access to Colfax Ave and I-70 as well as best traffic flow of the five corridors analyzed; and
- Preferred by state and local agencies consulted during the NEPA process, including State Dept of Public Safety, Jefferson County Open Space, Jefferson County Economic Council, City of Golden, City of Lakewood, and Pleasant View Metropolitan District.

Assessment of Adverse Effect

DOE has determined that this proposed project would result in an adverse effect of the southernmost firing line (5JF145.66). Approximately a 50-foot segment of the western

extent of the firing line would have to be removed as it would fall within the proposed right-of-way and easements of the access road as shown in Figure 4.

Therefore, I am requesting your concurrence of an adverse effect on this proposed undertaking and will continue consultations with your office and other appropriate consulting parties to mitigate the impact to the southernmost firing line. With HABS/HAER Level II documentation provided for the northern two firing lines, DOE suggests an alternative mitigation approach, such as an interpretative display/sign, especially given the park setting of this area of Camp George West. DOE has informally discussed this matter with Ms. Amy Pallante of your office, and DOE is currently engaging Jefferson County Open Space and Pleasant View Park for their input on the feasibility of such an approach. DOE currently envisions that the interpretative display would be located between the new western extent of the firing line and the eastern sidewalk of the proposed access road.

Please feel free to contact Rob Smith of my office at 720-356-1576 or myself at 720-356-1568 if you have any questions regarding this project. DOE looks forward to continued consultations with your office in this matter.

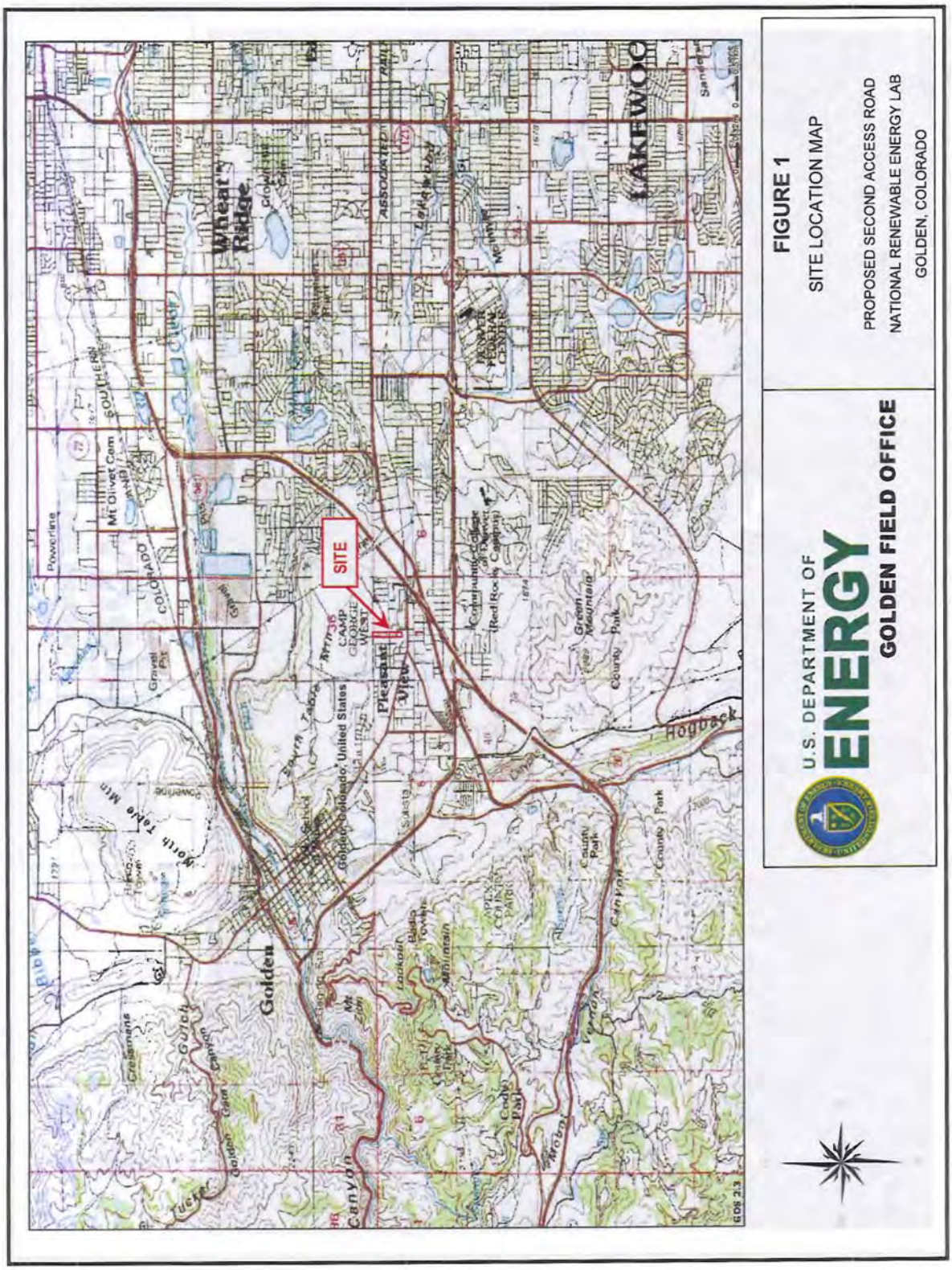
Sincerely,

Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

Cc (w/o enclosures):
Jefferson County Historical Commission
Jefferson County Historical Society
Golden Landmarks Association
Rob Smith, DOE
Tom Ryon, NREL

Enclosures: as stated


SITE
Wheat Ridge
LAKEWOOD
Golden
Pleasant View
Hogback
Mt Olivet Cem
Powerline
Gravel Pit
Green Mountain
County Park
Canyon
Golden, Colorado, United States
U.S. DEPARTMENT OF
ENERGY
GOLDEN FIELD OFFICE
FIGURE 1
SITE LOCATION MAP
PROPOSED SECOND ACCESS ROAD
NATIONAL RENEWABLE ENERGY LAB
GOLDEN, COLORADO

PROJECT AREA
FIGURE 2
PROJECT LOCATION MAP
PROPOSED SECOND ACCESS ROAD
NATIONAL RENEWABLE ENERGY LAB
GOLDEN, COLORADO
U.S. DEPARTMENT OF
ENERGY
GOLDEN FIELD OFFICE

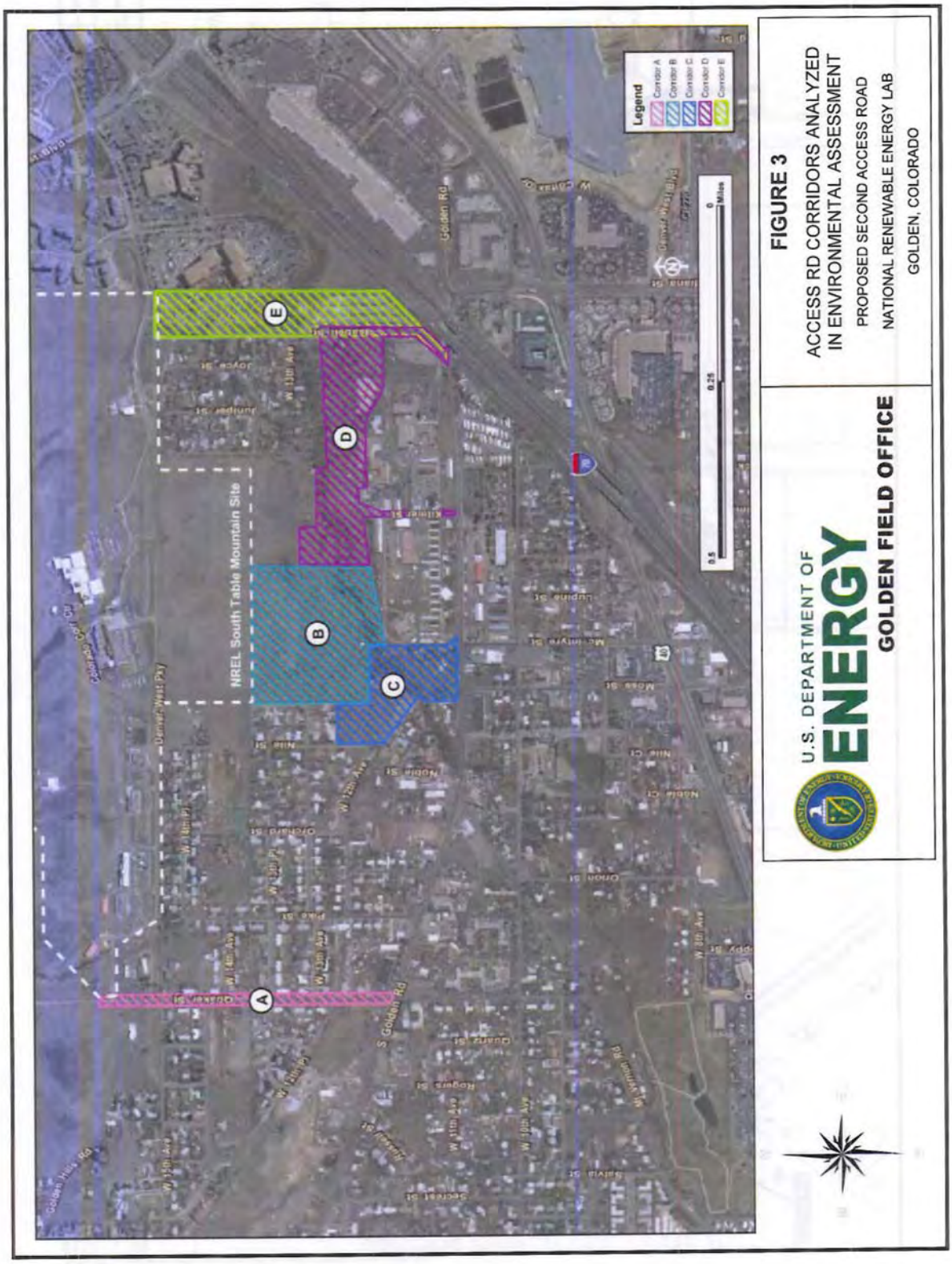


FIGURE 3
ACCESS RD CORRIDORS ANALYZED
IN ENVIRONMENTAL ASSESSMENT
PROPOSED SECOND ACCESS ROAD
NATIONAL RENEWABLE ENERGY LAB
GOLDEN, COLORADO
U.S. DEPARTMENT OF
ENERGY
GOLDEN FIELD OFFICE
Legend
Corridor A
Corridor B
Corridor C
Corridor D
Corridor E
NREL South Table Mountain Site
A
B
C
D
E
Golden Rd
S Golden Rd
Denver West Pky
Quaker St
Kittelar St
Lupine St
Mc Intyre St
Moss St
Nile St
Noble St
Orchard St
Orion St
Quartz St
Rogers St
Salvia St
Secrest St
W 13th Ave
W 14th Ave
W 15th Ave
W 10th Ave
W 8th Ave
Golden Hills Rd
Colorado Corr Cir
0.5
0.25
0
Miles

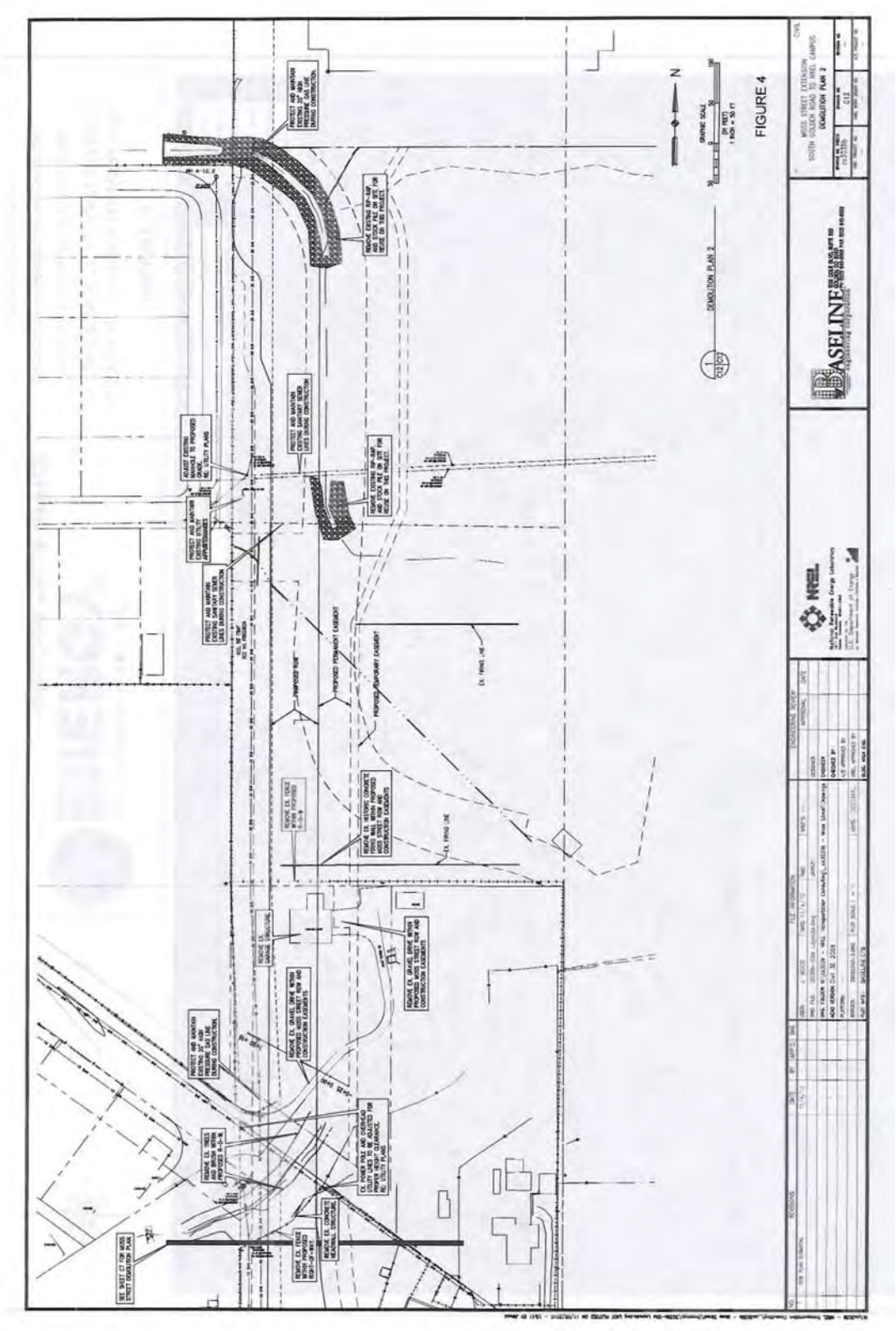


FIGURE 4
DEMOLITION PLAN 2
BASELINE
NREL

Attribute	Corridor				
	A	B/C	B/D/Kilmer	B/D/E	E
New road required	N	Y	Y	Y	N
Upgrades and ROW expansion to existing off-site roads required	Y	N	Y	Y	Y
Private residences directly affected by ROW expansion	~15	0-3	0	0-2	10-12
Residential yards converted to ROW (acres)	1-2	1-2	0	0-1	1-2
Private residences experiencing new commuter traffic noise	~15	0-9	0-6	0-8	10-12
Conflicts with existing off-site businesses or uses	N	Y	Y	Y	Y
Camp George West Historic District affected by ROW expansion	N	Y	Y	Y	N
Historic resources potentially affected by ROW	0	0-4	11-15	0-4	0
Affected land ownership (percent)					
Private	100	50	-	25	100
County	-	50	75	50	-
State	-	-	25	25	-
Natural vegetation converted to ROW (acres)	0	2	3	3	0
Wetlands potentially affected (acres)	0	0.1-1	0.1-1	0.1-1	0.1
Floodplains potentially affected (acres)	0	0.1-2	0.1-3	0.1-3	0.1
Lena Gulch crossing (new or modified)	N	Y	Y	Y	Y
LOS AM at South Golden Road[a]	A	B	A	A	A
LOS PM at South Golden Road[a]	C	C	C	B	B
Percent increase in AM traffic[b]	235	NA[c]	514	412	412
Percent increase in PM traffic[b]	166	NA[c]	860	374	374
South Golden Road intersection improvement required	Y	Y	Y	Y	Y
Favorable traffic flow per DOT	N	Y	N	N	N

a. LOS – level of service.
b. Traffic increases estimated along the affected roadway (e.g., Corridor A – Quaker Street, Corridor E – Isabell Street)
c. NA - not applicable, because there is no existing street within this corridor.

U.S. DEPARTMENT OF ENERGY
GOLDEN FIELD OFFICE

TABLE 1
CORRIDOR IMPACT ASSESSMENT MATRIX
PROPOSED SECOND ACCESS ROAD
NATIONAL RENEWABLE ENERGY LAB
GOLDEN, COLORADO

SHPO Response, January 18, 2011, Letter

HISTORY Colorado

January 18, 2011

Lori Plummer
NEPA Compliance Officer
Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

Re: Second Full Service Access Road to the National Renewable Energy Laboratory, South Table Mountain Complex, Golden, Colorado (CHS #58640)

Dear Ms. Plummer:

Thank you for your correspondence dated December 16, 2010 (received by our office on December 20, 2010) regarding the subject project.

Following our review of the documentation provided, we concur that linear resource 5JF145.66 contributes to the Camp George West Historic District (5JF145). We further concur that 5JF4874.1 does not support the eligibility of the larger linear resource of which it is a part.

We concur that the proposed project will result in an **adverse effect.** However, we believe that the effect is to Camp George West in its entirety, and not just to the firing line (5JF145.66). Our office has reviewed the proposed mitigation approach that is outlined within the cover letter and inventory report. We find that the proposed measures provide a good basis to begin further discussions on mitigation for this undertaking. Our office anticipates that continued consultation between all applicable parties will occur with regard to the development of a Memorandum of Agreement in order to avoid, minimize, or mitigate the adverse effect to the sites impacted by this project. Please note that as stipulated in 36 CFR 800.6(1) the lead agency shall notify the Advisory Council of the adverse effect finding.

Thank you for the opportunity to comment. We look forward to continued consultation on the subject project. If we may be of further assistance, please contact Amy Pallante, Section 106 Compliance Manager, at (303) 866-4678 or Shina duVall, Section 106 Compliance Manager, at (303) 866-4674 or shina.duvall@chs.state.co.us.

Sincerely,

Edward C. Nichols
State Historic Preservation Officer
ECN/SAD

THE COLORADO HISTORICAL SOCIE

CHIVO CENTER PLAZA 1560 BROADWAY SUITE 400 DENVER COLORADO 80202 www.historycolorado.c

DOE Letter to ACHP, February 24, 2011

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

February 24, 2011

Mr. Tom McCulloch
Office of Federal Agency Programs
Advisory Council on Historic Preservation
1100 Pennsylvania Ave., N.W., Suite 803
Washington, D.C. 20004

Subject: NOTIFICATION OF ADVERSE EFFECT DETERMINATION AND INVITATION TO PARTICIPATE IN CONSULTATION SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY, SOUTH TABLE MOUNTAIN COMPLEX, GOLDEN, COLORADO (CHS #58640)

Dear Mr. McCulloch:

This letter constitutes as notification to the Advisory Council on Historic Preservation (ACHP) pursuant with 36 CFR 800.6(a)(1) that the U.S. Department of Energy (DOE) has determined that the above-referenced proposed project would result in an adverse effect to a contributing feature, a firing line (5JF145.66), of the Camp George West Historical District (NRIS# 92001865). Please consider this a formal invitation to participate in consultation if ACHP requests. DOE is currently in ongoing consultation with the Colorado State Historic Preservation Officer and other consulting parties to determine appropriate mitigation measures.

If ACHP chooses not to participate in consultation, DOE will forward a copy of the executed Memorandum of Agreement (MOA) to ACHP per § 800.6(b) upon adverse effect resolution with the consulting parties. Enclosed is the requisite effect determination documentation as specified in § 800.11(e) for your use.

Please contact Mr. Rob Smith of my staff at 720-356-1576 or Robert.smith@go.doe.gov if you have any questions or require additional information.

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Sincerely,

Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

Attachments: December 16, 2010 DOE consultation letter to Colorado SHPO
September 2010 RMC Consultants Class III Cultural Resource Inventory Report

cc: Tom Ryon, NREL

ACHP Response to DOE Letter, March 4, 2011

Preserving America's Heritage

March 4, 2011

Ms. Lori Plummer
NEPA Compliance Officer
Department of Energy
Golden Filed Office
1617 Cole Boulevard
Golden, CO 80401-3393

Ref: Proposed Construction of Second Full Service Access Road to the Notational Renewable Energy Laboratory, South Table Mountable Complex (CHS #58640)
Golden, Jefferson County, Colorado

Dear Ms. Plummer:

On February 28, 2011, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced project on the Camp George West Historic District, which is eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the Colorado SHPO, and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with the opportunity to review this undertaking. If you have any questions, please contact Tom McCulloch at 202-606-8554, or via email at tmcculloch@achp.gov.

Sincerely,

Raymond V. Wallace

Raymond V. Wallace
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 Pennsylvania Avenue NW, Suite 803 ¬ Washington, DC 20004
Phone: 202-606-8503 □ Fax: 202-606-8647 □ achp@achp.gov □ www.achp.gov

DOE to SHPO transmitting Addendum May 27, 2011

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

May 27, 2011

Edward C. Nichols
State Historic Preservation Officer
History Colorado
Civic Center Plaza
1560 Broadway
Suite 400
Denver, CO 80202

SUBJECT: ADDENDUM TO THE SECTION 106 CONSULTATION PROCESS FOR A SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY, SOUTH TABLE MOUNTAIN COMPLEX, GOLDEN, CO (CHS#58640)

Dear Mr. Nichols:

The U.S. Department of Energy (DOE) is continuing consultation pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its associated implementing regulations codified at 36 CFR Part 800 for the construction and operation of a second full service access road to the National Renewable Energy Laboratory (NREL), South Table Mountain Complex (STM) located in the City of Golden, County of Jefferson, State of Colorado.

Background
On December 16, 2010, DOE began Section 106 consultations with your office concerning the specific alignment of extending Moss Street north from the intersection of Moss Street and South Golden Road. DOE's determination in the December 16, 2010 letter was an assessment of adverse effect to contributing features of the Camp George West Historic District, which your office concurred with on January 18, 2011. DOE notified the Advisory Council of the adverse effect determination and invited them to participate in consultation on February 24, 2011, which they declined. On February 25, 2011, email correspondence from Ms. Shina duVall of your office agreed with DOE's proposed mitigation approach of an interpretative feature to be located in the vicinity of the remaining sections of the Camp George West Firing Lines in the western portion of Pleasant View Park at Camp George West. DOE submitted a draft Memorandum of Agreement (MOA) on April 26, 2011 for your office's review and received comments from Ms. duVall on May 13, 2011. DOE has fully accepted SHPO's comments and is awaiting execution of the MOA by Pleasant View Metropolitan District upon which DOE will transmit the MOA to your office for signature. However at the time of the initiation of consultation, one segment of the proposed new access right-of-way was not able to be inventoried, due to a lack of access permission for this segment of private property.

Project Description, Undertaking, and Area of Potential Effect
The undertaking, project description, and Area of Potential Effect (APE) remain unchanged from the descriptions included in DOE's December 16, 2010 letter. This letter addresses a segment of the Area of Potential Effect (APE), which was unable to be inventoried due to property access

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issues. The segment is approximately 330 feet by 100 feet and is located in the southern extent of the APE.

Historic Properties Affected
Per 36 CFR 800.4, DOE is required to identify all properties listed, or eligible for listing in the National Register of Historic Places which may be affected by the proposed undertaking. DOE/NREL retained RMC Consultants, Inc. (RMC) of Lakewood, Colorado to conduct a Class III Cultural Resource Inventory of a 100-foot right-of way for the proposed south access road. Field work was conducted in May 2011 and the methodology and findings are documented in the enclosed May 2011 Addendum to Class III Cultural Resource Inventory report.

Three previously undocumented historic resources were located within this segment of the survey area during the May 2011 inventory efforts:

- 5JF817.8 – Previously unrecorded segment of the Denver & Intermountain Railroad
- 5JF4943 – Concrete machinery platforms
- 5JF4944 – Concrete bridge abutments

Descriptions of the three previously undocumented resources, as well as the relevant resource management forms can be found in the May 2011 Addendum to Class III Cultural Resource Inventory report. RMC recommended that all three resources were Not Eligible for nomination to the National Register of Historic Places under any of the criteria. The segment of the Denver & Intermountain Railroad (JF817.8) has lost all physical integrity and lacks the ability to convey any significant association as there is no visual trace or physical evidence of the railroad remaining in this location. While RMC concluded that 5JF4943 and 5JF4944 are possibly associated with the Denver & Intermountain Railroad, the association could not be definitely established based upon either archival documentation or physical remains.

REQUEST FOR CONCURRENCE
DOE requests concurrence on the determination that the three previously undocumented historic resources inventoried by RMC are not eligible for inclusion to the National Register of Historic Places under any of the criteria. DOE has determined that this proposed project within this southern segment of the APE would result in a no historic properties affected determination and the overall undertaking would retain its adverse effect to the contributing features of Camp George West Historical District as determined in the December 16, 2010 DOE correspondence.

Please note that this road construction project is a critical element of NREL's South Table Mountain build-out plan. We hope to begin construction as early as mid-June and an expedited review of this Addendum to Class III Cultural Resource Inventory report would be appreciated. DOE and NREL staff is eager to work with you to provide any additional information. As stated earlier, DOE will immediately forward the MOA to your office once it is executed by Pleasant View Metropolitan District. Please feel free to contact Rob Smith of my office at 720-356-1576 or myself at 720-356-1568 if you have any questions regarding this project. DOE looks forward to the successful completion of consultation with your office in this matter.

Sincerely,

Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

Enclosures: as stated

cc (w/o enclosures):
Jefferson County Historical Commission
Jefferson County Historical Society
Golden Landmarks Association
Rob Smith, DOE
Randy Dins, DOE
Tom Ryon, NREL

SHPO Response, June 6, 2011, Letter

HISTORY Colorado

June 6, 2011

Lori Plummer
NEPA Compliance Officer
Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

Re: Addendum to Class III Cultural Resource Inventory of the Proposed South Access Road, National Renewable Energy Laboratory, Jefferson County, Colorado (CHS #58640)

Dear Ms. Plummer:

Thank you for your correspondence dated May 27, 2010 (received by our office on May 31, 2010) regarding the subject project.

After our review of the information provided, we concur with your determination that the following sites are **not eligible** for the National Register of Historic Places (NRHP): 5JF817.8, 5JF4943, and 5JF4944. As a result, we concur with your finding of "**no historic properties affected**" for the proposed project.

In the future, we recommend that a site form should not be completed when "there is no visible trace or any physical evidence of the railroad remaining at this location; the entire railroad grade, tracks, ballast, rails, etc. have been completed removed and obliterated" as in the case of the Denver & Intermountain Railroad segment (5JF817.8). Further, although no maps show a railroad bridge at the location of 5JF4944, we may be reasonably confident that the concrete bridge abutment (recorded as 5JF4944) are the remains of such a feature and may better be recorded under the 5JF817(.8) designation. Our Information Management staff may opt to make these minor revisions and they will apprise you of any number changes. Please feel free to contact me to discuss this matter further.

Our office looks forward to the continued consultation between all applicable parties with regard to the development of a Memorandum of Agreement in order to avoid, minimize, or mitigate the adverse effect to the sites impacted by this project. Please note that as stipulated in 36 CFR 800.6(1) the lead agency shall notify the Advisory Council of the adverse effect finding.

Thank you for the opportunity to comment. If we may be of further assistance, please contact Mark Tobias, Section 106 Compliance Manager, at (303) 866-4674 or mark.tobias@chs.state.co.us.

Sincerely,

for Edward C. Nichols
State Historic Preservation Officer
ECN/MAT

THE COLORADO HISTORICAL SOCIETY
CIVIC CENTER PLAZA 1560 BROADWAY SUITE 400 DENVER COLORADO 80202 www.historycolorado.org

Memorandum of Agreement, June 27, 2011

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

June 27, 2011

Edward C. Nichols
State Historic Preservation Officer
History Colorado
Civic Center Plaza
1560 Broadway
Suite 400
Denver, CO 80202

SUBJECT: TRANSMITTAL OF THE MEMORANDUM OF AGREEMENT (MOA) FOR THE SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY, SOUTH TABLE MOUNTAIN COMPLEX, GOLDEN, CO (CHS#58640)

Dear Mr. Nichols:

The U.S. Department of Energy (DOE) Golden Field Office has prepared for your review and signature a Memorandum of Agreement (MOA) that identifies mitigation measures for the adverse effect to the Camp George West Firing Lines (5JF145.66), which are a contributing feature to the Camp George West Historical District, by DOE's proposed second full access road to National Renewable Energy Laboratory's (NREL) South Table Mountain site in Golden, Colorado. Specifically, DOE would design, construct, and install an interpretative feature in Pleasant View Community Park at Camp George West. DOE also commits to halting work and contacting the SHPO in the event that archaeological resources are encountered during ground-disturbing activities.

This MOA was reviewed by Ms. Shina duVall, formerly of your office, on May 13, 2011 and Mr. Mark Tobias, Section 106 Compliance Manager, on June 21, 2011. Please execute the three copies of the enclosed MOA and return them to this office. Upon execution by the DOE, the fully executed copies will be transmitted back to all three signatory parties. Additionally, DOE will forward a fully executed copy of the MOA to the Advisory Council fulfilling our obligations pursuant with 36 CFR 800.6(b)(iv).

Please feel free to contact Rob Smith of my office at 720-356-1576 or myself at 720-356-1568 if you have any questions regarding this project. DOE looks forward to the successful completion of consultations with your office in this matter.

Sincerely,

Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

Cc: Rob Smith, DOE

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Tom Ryon, NREL

Enclosures: as stated

SHPO Response, June 29, 2011, Letter

HISTORY Colorado

June 29, 2011

Lori Plummer
NEPA Compliance Officer
Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

Re: Memorandum of Agreement Among the Department of Energy, Pleasant View Metropolitan District, and the Colorado State Historic Preservation Officer Regarding Adverse Effects to a Contributing Site (5JF145.66) in the Camp George West Historic District by the Proposed Second Full Service Access Road to the National Renewable Energy Laboratory, South Table Mountain Complex in Jefferson County, Colorado (CHS #58640)

Dear Ms. Plummer:

Thank you for your correspondence dated June 27, 2011 (received by our office on June 28, 2011) and for providing the final Memorandum of Agreement (MOA).

Following our review of the final MOA provided, we find the MOA satisfactory and have signed three copies. We look forward to receiving a fully executed copy for our records.

Thank you for the opportunity to comment. If we may be of further assistance, please contact Mark Tobias, Section 106 Compliance Manager, at (303) 866-4674 or mark.tobias@chs.state.co.us.

Sincerely,

for Edward C. Nichols
State Historic Preservation Officer
ECN/MAT

THE COLORADO HISTORICAL SOCIETY
CIVIC CENTER PLAZA 1560 BROADWAY SUITE 400 DENVER COLORADO 80202 www.historycolorado.org

DOE to SHPO, July 8, 2011, Letter

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

July 8, 2011

Edward C. Nichols
State Historic Preservation Officer
History Colorado
Civic Center Plaza
1560 Broadway
Suite 400
Denver, CO 80202

SUBJECT: TRANSMITTAL OF THE EXECUTED MEMORANDUM OF AGREEMENT (MOA) FOR THE SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY, SOUTH TABLE MOUNTAIN COMPLEX, GOLDEN, CO (CHS#58640)

Dear Mr. Nichols:

Please find attached a copy of the fully executed Memorandum of Agreement (MOA) for the above referenced undertaking. Additionally, DOE will forward a fully executed copy of the MOA to the Advisory Council fulfilling our lead agency responsibility pursuant with 36 CFR 800.6(b)(iv).

Please feel free to contact Mr. Rob Smith of my office at 720-356-1576 or myself at 720-356-1568 if you have any questions regarding this project. DOE has appreciated the support and professionalism from your office in assisting us in fulfilling our obligations under Section 106 of National Historic Preservation Act and 36 CFR Part 800.

Sincerely,

Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

LP/rvs
cc: Rob Smith, DOE
Tom Ryon, NREL

Enclosures: as stated

Federal Recycling Program Printed on Recycled Paper

MEMORANDUM OF AGREEMENT

AMONG THE DEPARTMENT OF ENERGY, PLEASANT VIEW METROPOLITAN DISTRICT, AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER

REGARDING ADVERSE EFFECTS TO A CONTRIBUTING SITE (5JF.145.66) IN THE CAMP GEORGE WEST HISTORIC DISTRICT BY THE PROPOSED SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY, SOUTH TABLE MOUNTAIN COMPLEX IN JEFFERSON COUNTY, COLORADO

WHEREAS, the Department of Energy (DOE) proposes to build a second full service access road to the National Renewable Energy Laboratory (NREL) South Table Mountain Complex via an extension of Moss Street north from the intersection of South Golden Road and Moss Street through a portion of the Camp George West Historic District herein after referred to as "Moss Street Extension;" and

WHEREAS, the proposed Moss Street Extension would physically impact a 50-foot extent of a linear firing line feature (5JF145.66), which contributes to the Camp George West Historic District's eligibility to the National Register of Historic Places; and

WHEREAS, DOE has determined that the proposed action will have an adverse effect on historic properties, and has consulted with the Colorado State Historic Preservation Officer (SHPO) pursuant to 36 CFR Section 800.14(b) of the Advisory Council on Historic Preservation (Council) regulations (36 CFR Part 800), implementing Section 106 of the *National Historic Preservation Act* (16 USC 470f); and

WHEREAS, in accordance with 36 CFR. Section 800.6(a)(1), the Council has been notified of DOE's adverse effect determination and has elected not to participate in consultation pursuant to 36 CFR Section 800.6(a)(1)(iii); and

WHEREAS, the Pleasant View Metropolitan District (PVMD) operates the Pleasant View Community Park at Camp George West; and

NOW THEREFORE, DOE, PVMD, and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to satisfy DOE's Section 106 responsibilities.

I. STIPULATIONS

DOE shall ensure that the following measures are carried out:

1. **Establishment of Interpretative Feature** – After the completion of the Moss Street Extension, DOE will design, fabricate, and place an interpretative feature in the Pleasant View Community Park at Camp George West. The design, content and location of the interpretative feature will be agreed upon by PVMD and DOE. DOE shall provide SHPO documentation demonstrating that the feature has been constructed and placed. Title to the interpretative feature shall be held by PVMD.

2. **Discovery of Archaeological Resources** – In the event that archaeological resources are encountered during ground-disturbing activities, DOE shall halt work until such resources are evaluated in consultation with the Colorado SHPO.

PVMD shall ensure that the following measures are carried out:

1. **Maintenance of Interpretative Feature** – Upon the placement of the interpretative feature to be furnished by the DOE, PVMD shall be responsible for the maintenance and upkeep of said feature.

II. DURATION

This agreement will be null and void if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, DOE may consult with the SHPO to reconsider the terms of the agreement and amend in accordance with Paragraph V below.

III. MONITORING AND REPORTING

Five years following the execution of this agreement or upon expiration or termination of the agreement, DOE shall provide all parties to this agreement a summary report detailing work undertaken pursuant to its terms. Such report shall include any problems encountered, and any disputes and objections received in DOE's efforts to carry out the terms of this agreement. Failure to provide such summary report may be considered noncompliance with the terms of this MOA pursuant to Paragraph V, below.

IV. DISPUTE RESOLUTION

Should any party to this agreement object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, DOE shall consult with the objecting party to resolve the objection. If DOE determines, within 30 days, that such objection(s) cannot be resolved, DOE will:

A. Forward all documentation relevant to the dispute to the Council in accordance with 36 CFR Section 800.2(b)(2). Upon receipt of adequate documentation, the Council shall review and advise DOE on the resolution of the objection within 30 days. Any comment provided by the Council, and all comments from the parties to the MOA, will be taken into account by DOE in reaching a final decision regarding the dispute.

B. If the Council does not provide comments regarding the dispute within 30 days after receipt of adequate documentation, DOE may render a decision regarding the dispute. In reaching its decision, DOE will take into account all comments regarding the dispute from the parties to the MOA.

C. DOE's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged. DOE will notify all parties of its decision in writing before implementing that portion of the Undertaking subject to dispute under this stipulation. DOE's decision will be final.

V. AMENDMENTS AND NONCOMPLIANCE

If any signatory to this MOA determines that its terms will not or cannot be carried out or that an amendment to its terms must be made, that party shall immediately consult with the other parties to develop an amendment to this MOA pursuant to 36 CFR Sections 800.6(c)(7) and 800.6(c)(8). The amendment will be effective on the date a copy signed by all of the original signatories is filed with the Council. If the signatories cannot agree to appropriate terms to amend the MOA, any signatory may terminate the agreement in accordance with Paragraph VI, below.

VI. TERMINATION

If an MOA is not amended following the consultation set out in Paragraph V, it may be terminated by any signatory. Within 30 days following termination, the DOE shall notify the Colorado SHPO if it will initiate consultation to execute an MOA with the signatories under 36 CFR §800.6(c)(1) or request the comments of the Council under 36 CFR §800.7(a) and proceed accordingly.

VII. CONSENT

Nothing in this MOA shall require any party to commit funds without the consent of that party. All DOE actions are subject to available funding. Notwithstanding the provisions of this MOA to the contrary, PVMD's obligations hereunder are subject to the annual appropriation of funds necessary for the performance thereof, which appropriations shall be made in the sole discretion of PVMD's Board of Directors.

Execution of this Memorandum of Agreement by DOE, PVMD, and Colorado SHPO, the submission of documentation and filing of this Memorandum of Agreement with the Council pursuant to 36 CFR Section 800.6(b)(1)(iv) prior to DOE's approval of specific future development activities in the area of potential effect, and implementation of its terms evidence that DOE has taken into account the effects of this undertaking on historic properties, afforded the Council an opportunity to comment, and satisfied its responsibilities under Section 106 of the National Historic Preservation Act and applicable implementing regulations.

SIGNATORIES:

U.S. Department of Energy

By: _____ Date: 7-8-11

Carol Battershell
Manager, Golden Field Office

Colorado State Historic Preservation Officer

By: _____ Date: 6-30-2011
Deputy SHPO

for Edward C. Nichols
State Historic Preservation Officer

Pleasant View Metropolitan District

By: _____ Date: 6/21/11

Gerri Lewis
President, Board of Directors

DOE to ACHP, July 19, 2011, Letter

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

July 19, 2011

Mr. Tom McCulloch
Office of Federal Agency Programs
Advisory Council on Historic Preservation
1100 Pennsylvania Ave., N.W., Suite 803
Washington, D.C. 20004

Subject: TRANSMITTAL OF FULLY EXECUTED FINAL MEMORANDUM OF AGREEMENT AND SUPPORTING DOCUMENTATION FOR THE SECOND FULL SERVICE ACCESS ROAD TO THE NATIONAL RENEWABLE ENERGY LABORATORY, SOUTH TABLE MOUNTAIN COMPLEX, GOLDEN, COLORADO (CHS #58640)

Dear Mr. McCulloch:

Pursuant with the requirements set forth in 36 CFR 800.6(b)(1)(iv), please find attached a copy of the fully executed final Memorandum of Agreement (MOA) developed in consultation with Colorado State Historic Preservation Officer (SHPO) and other consulting parties for the above referenced undertaking. Additionally, this letter will provide the U.S. Department of Energy's (DOE) supplementary documentation as required per § 800.11(f).

Substantive Revisions or Additional Documentation
In addition to the original effect determination documentation provided to Advisory Council of Historic Preservation (ACHP) in our correspondence dated February 24th, 2011, DOE conducted a subsequent Class III Cultural Resource Inventory of a segment of the Area of Potential Effect (APE) which was originally unable to be inventoried due to property access issues. The segment is approximately 330 feet by 100 feet and is located in the southern extent of the overall undertaking's APE. Attached for your records are the May 27, 2011 DOE correspondence transmitting the Class III Cultural Resource Inventory report to the consulting parties, the May 2011 Addendum to Class III Cultural Resource Inventory Report prepared by RMC Consultants, Inc., and the June 6, 2011 letter from Colorado SHPO indicating their concurrence with our National Register of Historic Places eligibility determination for three resources recorded in this segment as well as our no historic properties affected determination. As this did not result in an adverse effect determination for this specific segment of the

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undertaking, the Advisory Council was not notified or asked to participate in consultations.

Evaluation of Measures
This proposed action (Figure 1 and 2) was analyzed by DOE pursuant with the National Environmental Policy Act (NEPA) in an Environmental Assessment (EA) document entitled *Final Supplement-II to the Final Site-Wide Environmental Assessment: National Renewable Energy Laboratory South Table Mountain Complex* (DOE/EA-1440-S-II), November 2009 (available at http://www.eere.energy.gov/golden/Reading_Room.aspx). DOE issued a Finding of No Significant Impact (FONSI) for the EA on November 10, 2009, which determined that the utilization of preferred corridor, Alternative B/C (See Figure 3), could be accomplished without significant impacts.

Through the NEPA EA process, DOE analyzed five different corridor alternatives for the second full service access road, as depicted in Figure 3. The corridors were assessed in the EA against a variety of environmental and socioeconomic factors as presented in the attached matrix (Table 1), including impacts to historic resources. Detailed descriptions of the impacts of each corridor can be found in Section 3.0 of the November 2009 EA. Corridor B/C was selected based upon the following aspects:

- Minimizes impacts to residential and business properties;
- Minimizes impacts to floodplain, wetland, and cultural resources;
- Minimizes impacts to Pleasant View Park and Camp George West;
- Provides the most direct access to Colfax Ave and I-70 as well as best traffic flow of the five corridors analyzed; and
- Preferred by state and local agencies consulted during the NEPA process, including State Dept of Public Safety, Jefferson County Open Space, Jefferson County Economic Council, City of Golden, City of Lakewood, and Pleasant View Metropolitan District.

DOE continued to work with federal, state, and local agencies as well as private landowners to finalize a specific proposed route alignment within the B/C Corridor. These discussions included considerations for minimizing impacts to known cultural resources and contributing features to the Camp George West Historic District. Once the road alignment was finalized, Class III cultural resource inventories were conducted in the APE by a qualified cultural resource consultant. DOE also has programs and policies in place to respond to the discovery of previously unknown cultural resources during construction activities that require DOE to consult with Colorado SHPO and other consulting parties as required.

Summary of Views of Consulting Parties and the Public
Views of the consulting parties and the public were in favor of the selected form of mitigation, the establishment of an interpretative feature, in lieu of recordation

or other mitigation techniques. The interpretative feature was the preferred form of mitigation since the APE is largely in a public park setting and due to the lack of existing interpretative features documenting the history of the Camp George West Historic District. The interpretative feature will be readily accessible to the general public, enrich the value of the Pleasant View Park at Camp George West, and provide a linkage to the military heritage of the site.

With this filing of the final MOA developed in consultation with the Colorado SHPO and other consulting parties, and related documentation provided to ACHP through this correspondence, DOE has complied with the requirements of 36 CFR §800.6(b)(1)(iv) and §800.11(f). Therefore, DOE has completed the requirements of Section 106 of the National Historic Preservation Act for this undertaking.

Please contact Mr. Rob Smith of my staff at 720-356-1576 or Robert.smith@go.doe.gov if you have any questions or require additional information.

Sincerely,

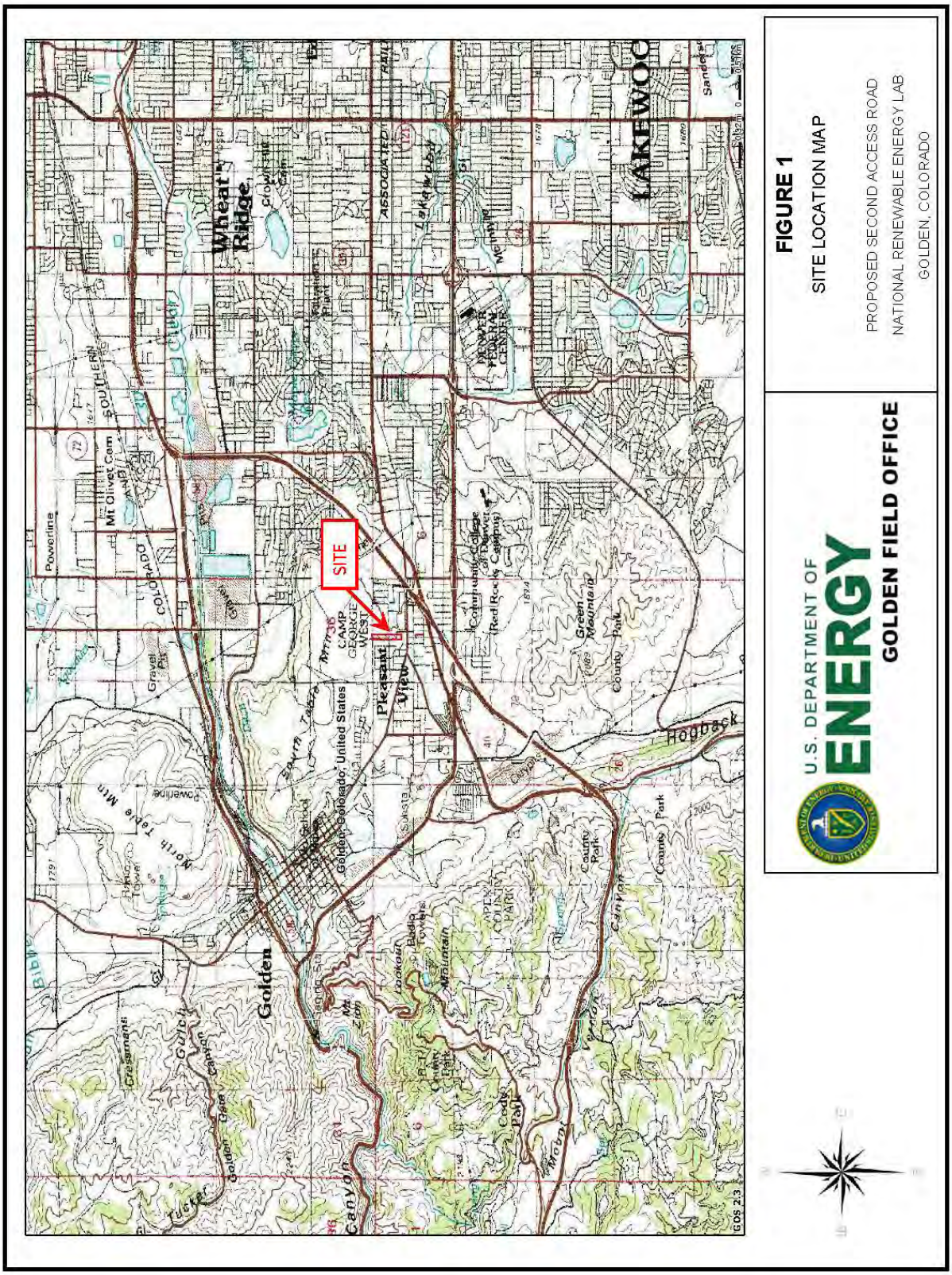
Lori Plummer

Lori Plummer, CSP
NEPA Compliance Officer

LP/rvs

Cc (w/o enclosures):
Mark Tobias, Colorado SHPO
Tom Ryon, NREL
Rob Smith, DOE

Attachments: As stated


SITE
Wheat Ridge
LAKEWOOD
Golden
Pleasant View
Hogback
U.S. DEPARTMENT OF ENERGY
GOLDEN FIELD OFFICE
FIGURE 1
SITE LOCATION MAP
PROPOSED SECOND ACCESS ROAD
NATIONAL RENEWABLE ENERGY LAB
GOLDEN, COLORADO

PROJECT AREA
FIGURE 2
PROJECT LOCATION MAP
PROPOSED SECOND ACCESS ROAD
NATIONAL RENEWABLE ENERGY LAB
GOLDEN, COLORADO
U.S. DEPARTMENT OF ENERGY
GOLDEN FIELD OFFICE

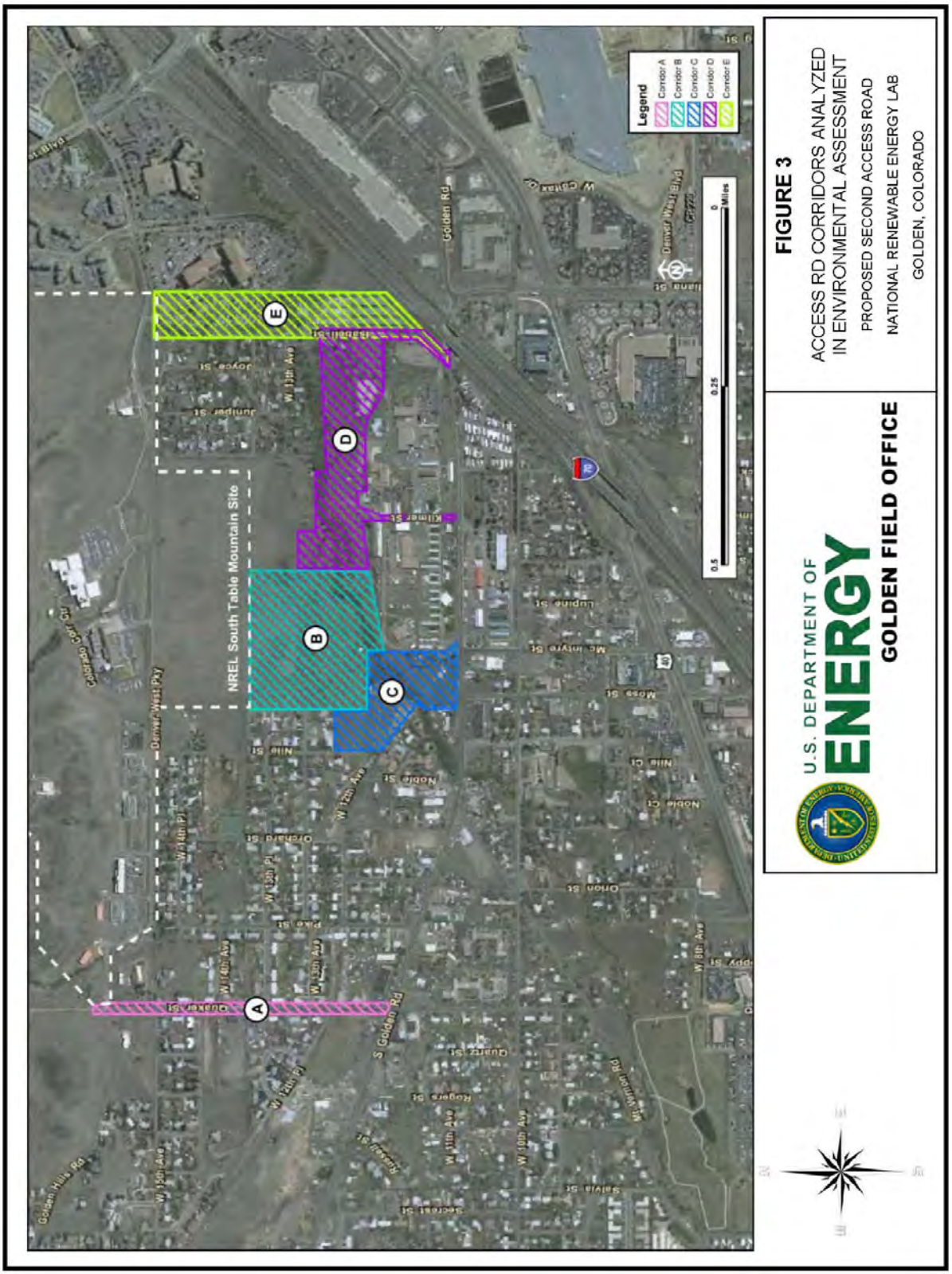


FIGURE 3
ACCESS RD CORRIDORS ANALYZED
IN ENVIRONMENTAL ASSESSMENT
PROPOSED SECOND ACCESS ROAD
NATIONAL RENEWABLE ENERGY LAB
GOLDEN, COLORADO
U.S. DEPARTMENT OF
ENERGY
GOLDEN FIELD OFFICE
Legend
Corridor A
Corridor B
Corridor C
Corridor D
Corridor E
NREL South Table Mountain Site
A
B
C
D
E
Golden Rd
S Golden Rd
Denver West Pky
Denver West Blvd
Colorado Corr Cir
Golden Hills Rd
Mt Vernon Rd
W 13th Ave
W 12th Ave
W 14th Ave
W 15th Ave
W 11th Ave
W 10th Ave
W 8th Ave
Quaker St
Kilmer St
Nile St
Noble St
Orchard St
Orion St
Pike St
Quartz St
Rogers St
Salvia St
Secrest St
Lupine St
Moss St
Mc Intyre St
Juniper St
Joyce St
Isabell St
0.5
0.25
0
Miles

Attribute	Corridor				
	A	B/C	B/D/Kilmer	B/D/E	E
New road required	N	Y	Y	Y	N
Upgrades and ROW expansion to existing off-site roads required	Y	N	Y	Y	Y
Private residences directly affected by ROW expansion	~15	0-3	0	0-2	10-12
Residential yards converted to ROW (acres)	1-2	1-2	0	0-1	1-2
Private residences experiencing new commuter traffic noise	~15	0-9	0-6	0-8	10-12
Conflicts with existing off-site businesses or uses	N	Y	Y	Y	Y
Camp George West Historic District affected by ROW expansion	N	Y	Y	Y	N
Historic resources potentially affected by ROW	0	0-4	11-15	0-4	0
Affected land ownership (percent)					
Private	100	50	-	25	100
County	-	50	75	50	-
State	-	-	25	25	-
Natural vegetation converted to ROW (acres)	0	2	3	3	0
Wetlands potentially affected (acres)	0	0.1-1	0.1-1	0.1-1	0.1
Floodplains potentially affected (acres)	0	0.1-2	0.1-3	0.1-3	0.1
Lena Gulch crossing (new or modified)	N	Y	Y	Y	Y
LOS AM at South Golden Road[a]	A	B	A	A	A
LOS PM at South Golden Road[a]	C	C	C	B	B
Percent increase in AM traffic[b]	235	NA[c]	514	412	412
Percent increase in PM traffic[b]	166	NA[c]	860	374	374
South Golden Road intersection improvement required	Y	Y	Y	Y	Y
Favorable traffic flow per DOT	N	Y	N	N	N

a. LOS – level of service.
b. Traffic increases estimated along the affected roadway (e.g., Corridor A – Quaker Street, Corridor E – Isabell Street)
c. NA - not applicable, because there is no existing street within this corridor.

U.S. DEPARTMENT OF ENERGY
GOLDEN FIELD OFFICE

TABLE 1
CORRIDOR IMPACT ASSESSMENT MATRIX
PROPOSED SECOND ACCESS ROAD
NATIONAL RENEWABLE ENERGY LAB
GOLDEN, COLORADO

Preserving America's Heritage

July 26, 2011

Ms. Lori Plummer
NEPA Compliance Officer
Department of Energy
Golden Filed Office
1617 Cole Boulevard
Golden, CO 80401-3393

Ref: Proposed Construction of Second Full Service Access Road to the Notational Renewable Energy Laboratory, South Table Mountable Complex (CHS #58640)
Golden, Jefferson County, Colorado

Dear Ms. Plummer:

On July 25, 2011, the Advisory Council on Historic Preservation (ACHP) received the Memorandum of Agreement (MOA) for the above referenced project. In accordance with Section 800.6(b)(1)(iv) of the ACHP's regulations, the ACHP acknowledges receipt of the MOA. The filing of the MOA, and execution of its terms, completes the requirements of Section 106 of the National Historic Preservation Act and the ACHP's regulations.

We appreciate you providing us with a copy of this MOA and will retain it for inclusion in our records regarding this project. Should you have any questions or require additional assistance, please contact us at 202-606-8505.

Sincerely,

Raymond V. Wallace

Raymond V. Wallace
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov