



Matthew H. Mead
Governor

Wyoming Department of Transportation

"Providing a safe, high quality, and efficient transportation system"

5300 Bishop Boulevard
Cheyenne, Wyoming 82009-3340



John F. Cox
Director

August 18, 2015

Mr. Joseph Dailey

Wyoming Division Administrator
Federal Highway Administration
2617 E. Lincolnway, Suite D
Cheyenne, WY 82001-5662

Project No: TAP-TL13003 South Park
Pathway Connector Project
South Park Loop Pathway
South Park Loop, Jackson
Teton County
Pathway Construction

THIS DOCUMENT IS A DRAFT ENVIRONMENTAL FIELD REVIEW REPORT

Dear Mr. Dailey:

Pursuant to the requirements of the National Environmental Policy Act, Jackson Hole Community Pathways and the Teton County submits this Categorical Exclusion (CE) for the above referenced project. Justification for the determination of minimal and temporary impacts is presented in the following sections.

PROJECT LOCATION AND DESCRIPTION

The proposed project is located along South Park Loop Road between the intersection with Grand Teton Circle and the Cortland Lane intersection in Teton County, Wyoming. More specifically the proposed project is located in Section 18, 19 and 20, Township 40N, Range 116W (Figure 1). The project will consist of a separated pathway for bicyclists and pedestrians completing a "missing link" of the Jackson/ Teton County Communities Pathway system. This proposed project will connect existing pathways that terminate just north and east of this approximately 1.8 mile long project area (Figure 2). The project area is located within the South Park Loop right-of-way.

PURPOSE AND NEED

The primary purpose of this project is to improve infrastructure for non-motorized travel (bicycles and pedestrians) through a high travel residential area by constructing a separated 10-foot wide pathway. This proposed pathway will complete an approximately 1.8 mile long "missing link" in the pathways system. Existing pathways terminate just north of Grand Teton Circle on the northern end of the proposed project area and at Cortland Drive on the eastern end of the project area. The proposed pathway would connect these two existing pathways, increase safety for bicyclists and pedestrians through this section of road and complete an important missing link within the pathways system. The project area is located within the South Park Loop right-of-way and proximate to several residential subdivisions (e.g. Melody Ranch, Polo Ranch, Flat Creek Fishing Club, Shootin' Iron, North Meadow Ranch and Single Tree Ranches). The pathway will connect these subdivisions with the existing pathways and public schools approximately 4 miles away by pathway. South Park Loop Road is popular with local cycling

enthusiasts and pedestrians as well as a high traffic area with vehicles accessing the residential areas along this stretch of the road and those further to the north along South Park Loop Rd.

Funding for this project is coming from a 2013 TEAL grant via WYDOT (federal enhancement funds) and from Teton County SPET funds voted on in 2014. SPET funds are a local voter-approved funding source financed through sales tax.

The need for this project is to complete an additional segment of the Jackson Hole Community Pathways system that connects the Town of Jackson, Teton County and Grand Teton National Park. This pathway would increase public safety by providing a safe area to recreate and commute via non-motorized means along a busy section of county road. Specifically, this project will provide pathway users a separate travel lane eliminating significant safety concerns of mixing slow-moving, non-motorized users (foot and bicycle travel) with high-speed motorized traffic on county roads with narrow travel lanes and limited shoulders.

Teton County residents strongly support the existing pathways and expansion of the network. Voters have continued to approve public funds for the pathways system. Pathways are also included as a major component of improved multimodal transportation systems in the 2012 Jackson/ Teton County Comprehensive Plan.

Alternatives

The “No Action” alternative is to maintain the status quo with limited to no dedicated non-motorized access along South Park Loop Rd on this approximately 1.8 mile stretch between existing pathways. The dangerous conditions faced by bicyclists and pedestrians along this stretch of county road would only increase with higher traffic demands and increased usage by both motorized and non-motorized users. Residents in this area going to school and otherwise travelling and commuting would continue to be dependent on vehicles to access amenities (e.g. stores, schools and parks) only a short distance from their homes.

The preferred alternative is to construct a pathway along South Park Loop Road to improve non-motorized access to this stretch of a busy county road and local residences located along this corridor. In addition to local access, this road is a popular cyclist route and this segment of pathway is a key segment to completing a pathways system linking Grand Teton National Park, Teton Village, Wilson, Jackson and Hoback Junction.

AFFECTED ENVIRONMENT / IMPACTS

Wyoming Department of Transportation Form 100, attached, summarizes potential environmental impacts associated with this project. There is a potential for minimal and temporary impacts, associated with construction. These impacts, and other pertinent issues, are discussed in more detail below.

SOCIAL IMPACTS

Land Use Changes

The pathway will be located along the side of South Park Loop Road, an existing county road. The current land uses surrounding the project area are predominantly residential neighborhoods

intermixed with a lesser amount of agricultural properties, one gravel extraction business and a landscaping business. Approximately half of the project area is zoned as Neighborhood Conservation Single Family lots while the other half is zoned as Rural under Teton County Zoning designations. There is also a small amount of Planned Unit Development within the project area. It is anticipated that these land uses will persist into the future and that the installation of a pathway will facilitate the use of non-motorized travel between and from residential neighborhoods but not affect the land use.

This project will not have any additional ROW takings outside of the existing road ROW.

Community Cohesion

No portion of the surrounding neighborhoods will be separated or isolated. On the contrary, cohesion between neighborhoods will increase as travel between neighborhoods and between Munger View Park and surrounding neighborhoods will become safer and more accessible to bicyclists, kids and pedestrians.

Relocation Potential

No families will be relocated due to the proposed project.

Churches and Schools

No churches or schools are located in or adjacent to the project area. There is a private school located at a church approximately two miles to the north of the northern terminus of this pathway project. There is an existing pathway along this two-mile stretch of South Park Loop Road between the project area and the church/school.

Controversy Potential

The proposed project is not controversial within the community at large. There is wide-spread support for the completion of this “missing link” within the pathways system to connect these populated neighborhood communities with town destinations (e.g. stores, schools, etc.) by non-motorized means as well as complete an established, and highly used, biking route.

Energy

There are no energy resources (oil, gas, coal, uranium, etc.) in the area.

Utilities

There will be minimal impacts to utilities resulting from this project. Telephone and electric utilities may need to be relocated within the Right of Way. The existing power lines will remain in place when possible. Final determination will coincide with final development plans. The expectation is that other existing underground utilities will not need to be relocated.

Designated Emergency Routes

There are no designated emergency routes in the project area.

Environmental Justice

The socio-economic setting of the area is predominately upper class residential subdivisions. Mixed within these upper class neighborhoods are small pockets of affordable housing developments (e.g. Glory View Subdivision and Melody Ranch Residential) at the eastern end of the project area. There are no low-income families or neighborhoods in the project area. There will not be a disproportional effect on any low-income families resulting from this project.

Public Transportation

There is no public transportation route present within the project area. The closest public transportation route, START bus stops along High School Rd, is 2-3 miles by pathway to the north from either end of the project area. This project would increase ease of non-motorized access to this START bus route for those living within the project area.

Right-of-Way

The entire finished pathway will be located within the road ROW along the county road and therefore has no impact on the size of the Right of Way. During construction, it is expected that all work will take place within the ROW. If work needs to extend outside of the ROW temporary construction easements will be obtained.

Construction Permits

No construction permits will be needed for this project. Construction of the pathway project will be coordinated with Teton County, WYDOT and government agencies through the planning and design period. **All Teton County Planning and Land Development Regulations will be followed including the submission of a Grading and Erosion Control Permit application.** Review will continue throughout the project at the staff level within Teton County, WYDOT and government agencies. WYDOT will review the project plans at 50% complete and at 90% complete. If traffic is affected, a traffic management plan will be prepared and approved prior to the commencement of construction.

Pedestrian and Bicycle

This project's objective is to benefit pedestrians and bicyclists through the completion of a "missing link" within the Jackson/ Teton County Community Pathways network. By completing this "missing link", there will be a significant positive impact on pedestrians and bicycle traffic through this area. Currently bicycle traffic on this section of roadway is unsafe and pedestrian access is limited due to narrow road shoulders, automobile traffic volume and lack of sidewalks.

ARCHAEOLOGICAL AND HISTORICAL IMPACTS

There are no known archaeological or historic sites in the project area. Consultation with The State Historic Preservation Office (SHPO) was initiated on October 15, 2014 (erroneously dated 2012). SHPO concurred in a determination of no historic properties will be affected on October 21, 2014 (Appendix A) and recommends the undertaking proceed in accordance with state and federal laws subject to the following stipulation:

If any cultural materials are discovered during construction, work in the area shall halt immediately, the appropriate State and Federal agency shall be contacted, and the materials evaluated by an archaeologist or historian meeting the Secretary of Interior's Professional Qualification Standards (48 FR22716, Sept. 1983).

SECTION 4(f)

Recreational Areas

Munger View Park is a public park owned by Teton County and located directly to the northeast of the eastern terminus of the project area. The proposed pathway and associated project area do not go through Munger View Park. Non-motorized access to the park from the west will benefit

from the proposed pathway making the park more accessible to all. All other parcels along the project area are privately owned and none currently have open space or conservation easements.

Historic Properties

There are no known archaeological sites, buildings or structures in or adjacent to the project area that are eligible for, or listed on, the National Register of Historic Places (<http://wyoshpo.state.wy.us/NationalRegister/Site.aspx?ID=441>).

NATURAL ENVIRONMENT

Waters of the U.S. and Wetlands

Irrigation ditches in the project area likely flow to Waters of the U.S. These Waters of the U.S. may include Flat Creek and the Snake River. Flat Creek (a tributary to the Snake River) flows in a southerly direction and is located east of the project area flowing under an existing pathway bridge. The Snake River also flows in a southerly direction and is located west of the project area. Several irrigation ditches connected to this river system are located within the project area.

The Army Corps of Engineers was contacted in writing on January 27, 2015 to request written confirmation that the project is allowable under Clean Water Act Section 404 permitting (Appendix A). A written response from the Wyoming Regulatory office was received on February 23, 2015. Since the proposed pathway may cause discharge of dredged or fill material into ditch tributaries of Waters of the US and adjacent wetlands (special aquatic sites adjacent to Waters of the U.S.), a Clean Water Act Section 404 Nationwide Permit 14 Pre-Construction Notification will be required.

There are irrigation ditches with definable beds and banks that flow south through the project area. All work in and around water features will employ best management practices to ensure sediment and other pollutants are contained within the boundaries of the project area as recommended by Wyoming Game and Fish Department (Appendix A).

Wetlands within the project area are likely irrigation induced. Irrigation induced wetlands do not require mitigation under Teton County Land Development Regulations. **The 50% design plan shows that the total area of wetlands potentially filled by this project are expected to be 0.010 acres, and therefore do not qualify as needing compensatory mitigation under Clean Water Act Section 404 Permitting Process since impacts are less than 0.10 acres. A Wetland Evaluation 50% plan design is attached (Figure 3).**

The intent of this project is to minimize overall impacts to natural resources by aligning the proposed pathway as closely as possible with the existing roadway. Alternative routes were investigated and deemed to be cost prohibitive. Alternative routes would involve easements across private lands or require condemnation. Wetlands impacted are immediately adjacent to the roadway (within the ROW) and part of larger wetland areas stemming both north and south from the roadway. Therefore, alternative routes would not avoid wetland areas and would likely have a larger impact than the current alignment.

Practical measures to minimize impacts will include culvert maintenance, limiting fill and revegetation with native species. As recommended by WGFD, best management practices will

be employed to ensure sediment and other pollutants are contained within the boundaries of the project area (Appendix A).

The total area of potentially disturbed wetlands is expected to be 0.010 acres. These wetlands are primarily composed of willow (*Salix* spp.) habitat. These calculations are based on Asset Environmental's wetland delineation report (Asset Environmental Services II, LLC, 2013 surveyed by Nelson Engineering) and compared with Teton County Vegetative Cover Types GIS Data (Cogan Technologies, 2014).

The project will not directly impact any Waters of the U.S.

Water Quality

Based on an increase in impervious surface resulting from a paved pathway, there are minimal potential surface or ground water impacts expected. This increase in impervious surface may increase storm water runoff. This runoff may be partially offset through the implementation of green space between the pathway and the road. Non-motorized traffic will have less impact on water quality than that of motorized traffic. During construction, storm water will be detained within 150 ft. of wetland areas.

There may be minimal impacts to water quality resulting from winter maintenance of the pathways. Winter maintenance may include traction sand to insure user safety. Following best management practices for maintenance techniques could decrease potential impacts.

There are not any WY DEQ Class I waters located on or near the project area. Flat Creek, to the east of the project area, is a Class 2AB waterway.

Wild and Scenic Rivers

There are no designated or proposed Wild and Scenic Rivers in or adjacent to the project area.

Floodplains

The project area is not located in a mapped floodplain.

Farmlands

This project will not take any farmland. There are privately operated ranch lands adjacent to the project area.

Wildlife and Habitat

The project area is not located within WGFD designated big game crucial habitat. The project area is located within moose winter/ yearlong range and moose crucial winter yearlong range is located to the west in the Snake River riparian corridor. A WGFD designated elk migration route passes to the north of the project area. It is likely that migrating elk would also use the project area and possibly the pathway itself for travel purposes. The project area is WGFD designated spring-summer-fall range for elk. However, this spring summer fall range also includes the South Park Feedground, a crucial feed area in the winter. Mule deer occupy WGFD designated crucial winter yearlong range to the east of South Highway 89 while this nearby project area is WGFD designated spring-summer-fall range. The project area is not located within a sage grouse core area but does fall within the sage grouse distribution area. However, Alder Environmental's professional opinion is that the presence of a Greater Sage-Grouse in the project area is unlikely. The project does not warrant a biological assessment.

The project may require the cutting of mature, cottonwood trees that are located within the county road's ROW. The exact number of trees to be removed will be determined once final plans have been completed. Wyoming Game and Fish Department has been consulted on this project and their correspondence is attached (Appendix A). WGFD's primary terrestrial concern is that all fencing installed should be wildlife friendly fencing to assure movement of big game animals, including juveniles, through the project area.

Threatened and Endangered Species

There will be no impacts to Threatened and Endangered Species resulting from this project. There are no prairie dog towns or rock cliffs on the project area. There are large, old cottonwood trees in the project area that may be removed. The project is not located in the Greater Sage Grouse core habitat. Waterways running through the project area consist of irrigation ditches primarily lined with riparian vegetation or surrounded by agricultural meadow.

The U.S. Fish and Wildlife Service was consulted and their correspondence indicated that the project is in accordance with the Endangered Species Act is attached (Appendix A). USFWS provided recommendations in accordance with migratory birds protected under both the Migratory Bird Treaty (16 U.S.C. 703) and the Bald and Golden Eagle Protection Act (16 U.S.C. 668). Per the Migratory Bird Treaty Act and the Eagle Act, vegetation (primarily cottonwood trees and willows in this project area) should be removed outside of the avian nesting season. Typically nesting season is between May 1 and August 15. However, Bald Eagles in this area begin nesting as early as February. This being said, a Bald Eagle's nest within the project area is highly unlikely. If vegetation removal is not possible outside of the avian nesting season than trees and willows scheduled for removal should be inspected prior to removal by a trained biologist to assure no nests are present.

Vegetation

The project area is in the county road right-of-way of an existing 2-lane roadway and will remove or disturb the vegetation within this ROW. The current vegetation consists of willows and other shrubs as well as mature cottonwood trees along the roadway. Areas not containing shrubs or trees are mesic grasslands with both native and non-native species. Vegetation impacted by the project will be re-vegetated using native species included on the Teton County Native Plants List (Teton County Planning & Development).

Ecosystem

This project will result in an increase in non-motorized traffic at the project, local and regional levels. This increase in non-motorized traffic will have a positive effect on the community of living and non-living things but will have minimal ecosystem levels effects. While there may be short-term, negative effects from construction of the pathway (noise, exhaust, material use, etc.), the long-term effects will be positive (decreased automobile use resulting in decreased exhaust, noise, accidents, increased safety, etc.). At the ecosystem level, these negative and positive impacts are not permanent or significant.

PHYSICAL IMPACTS

Noise

The project area is along the ROW of a busy, 2-lane roadway. Therefore, there is already a moderate level of automobile noise. Subdivision neighborhoods, homes and ranches line the roadway.

The project area's County zoning is primarily Neighborhood Conservation Single-Family on the western half of the project area while the eastern half is zoned Rural with a small amount of Neighborhood Conservation Single-Family and Planned Unit Development. Properties immediately adjacent to the project area include residences, ranch lands, a landscaping business and a gravel extraction business. There are no schools within the project area. An increase in non-motorized transportation should decrease or maintain the level of background noise as transportation needs increase thereby having an overall, minimal, positive impact. A noise study is not required.

Air Quality

Long-term, this project should help to maintain or improve air quality through the increased use of non-motorized transportation. This increase in non-motorized transportation should represent a decrease in motorized transportation. Therefore, the impacts to air quality will be positive. The project area is not in a non-attainment area.

Hazardous Waste Sites / Contamination

There are no hazardous waste or contamination sites in the project area. There are no active or inactive gas stations in the project area. There are no lube shops, mechanics, industrial or refineries in the immediate project area. The Wyoming Department of Environmental Quality does not list any permitted tanks or facilities in the project area. (<http://deq.wyoming.gov/shwd/storage-tank/resources/general-information/> Accessed January 26, 2015)

Visual

The Jackson Hole valley is fortunate to have many breathtaking views. Teton County's Scenic Resources Overlay designates many of these scenic areas. Included in this Scenic Resources Overlay are the northern and eastern termini of the project area. Views from these areas to the north allow users to glimpse the Teton Range and buttes surrounding the valley floor. The proposed project will not have an adverse effect on the visual qualities of the South Park Loop roadway. **Nonetheless, all Teton County Land Development Regulations will be followed as pertaining to the project and the Scenic Resources Overlay and environmental analysis will be completed for Teton County Planning department if required.** The project will enhance users ability to enjoy views at a slower pace (non-motorized versus motorized) as well as increase safe access to nearby views for bicyclists and pedestrians. An in-depth visual analysis is not needed.

Pits and Borrow Sources

The amount of material needed will be determined once final project plans are complete. It is likely that these materials will come from a local source.

PUBLIC PARTICIPATION

This project has been included in public meetings since 2005 when the Pathways Master Plan process was initiated. The resulting 2007 Pathway Master Plan identified the South Park Loop pathway as a priority project. Following public meetings have included an open neighborhood meeting (2008), an invited celebration event (2012), and Board of County Commissioners (BCC) meetings such as general meetings (2009, 2010), BCC Teal related meetings (2012, 2013) and BCC SPET related meetings (2013, 2014). Additionally, an open house to begin the design process will likely be held in the summer of 2015.

MITIGATION SUMMARY

The project area outside of the paved pathway will be re-vegetated using native species included on the Teton County Native Plants List appropriate for the habitat, aspect and moisture regime.

If any unanticipated impacts are discovered during project work, the appropriate personnel will be notified immediately to evaluate the impacts and determine the proper measures to be taken to prevent further impacts and mitigate any impacts that require mitigation.

PREPARER

Megan A. Smith, Senior Wildlife Ecologist, Alder Environmental LLC
Brian Remlinger, Owner/ Principal Scientist, Alder Environmental, LLC
Brian Schilling, Coordinator, Jackson Hole Community Pathways

DETERMINATION

I determine that South Park Pathway Project is a categorical exclusion. The following Form 100 describes the impact evaluation and findings.

Brian Schilling
Jackson Hole Community Pathways

Date

Wyoming Department of Transportation Concurrence

Timothy L. Stark, P.E.
Environmental Services Engineer

Date

Wyoming Department of Transportation

Form 100 - Environmental Impact Evaluation

South Park Loop Pathway
Teton County

Project Number: TAP-TL13003 South Park Pathway
Connector Project
South Park Loop, Jackson

SEVERITY OF IMPACTS

	Minimal	No Impacts	None Present	
<u>SOCIAL IMPACTS</u>				<u>REMARKS</u>
Land Use Changes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	project will be located within the road ROW
Community Cohesion	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Relocation Potential	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Churches and Schools	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	nearest church and school (private) are 2 miles away
Controversy Potential	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Energy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Utilities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Designated Emergency Routes	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Environmental Justice	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	affordable housing is located at either end of project area
Public Transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Right-of-Way	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Construction Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TC GEC & temporary construction permits may be needed
Pedestrian & Bicycle	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	postive impact on pedestrian and bike infrastructure
<u>ARCHAEOLOGICAL AND HISTORICAL IMPACTS</u>				
Historic Sites / Districts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Archaeological Sites	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>SECTION 4 (f)</u>				
Recreational Areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Munger View Park is at eastern terminus of project area
Historic Properties	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>NATURAL ENVIRONMENT IMPACTS</u>				
Waters of the U.S. and Wetlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Figure 3 - Wetland Evaluation
Water Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wild and Scenic Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Floodplains	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Farmlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Wildlife and Habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Threatened and Endangered Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	none expected in project area
Vegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ecosystem	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<u>PHYSICAL IMPACTS</u>				
Noise	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	increase non-motorized use
Air Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	increase non-motorized use
Temporary Impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	temporary impacts from construction activities
Contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hazardous Waste Sites	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Visual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	transportation corridor improvements

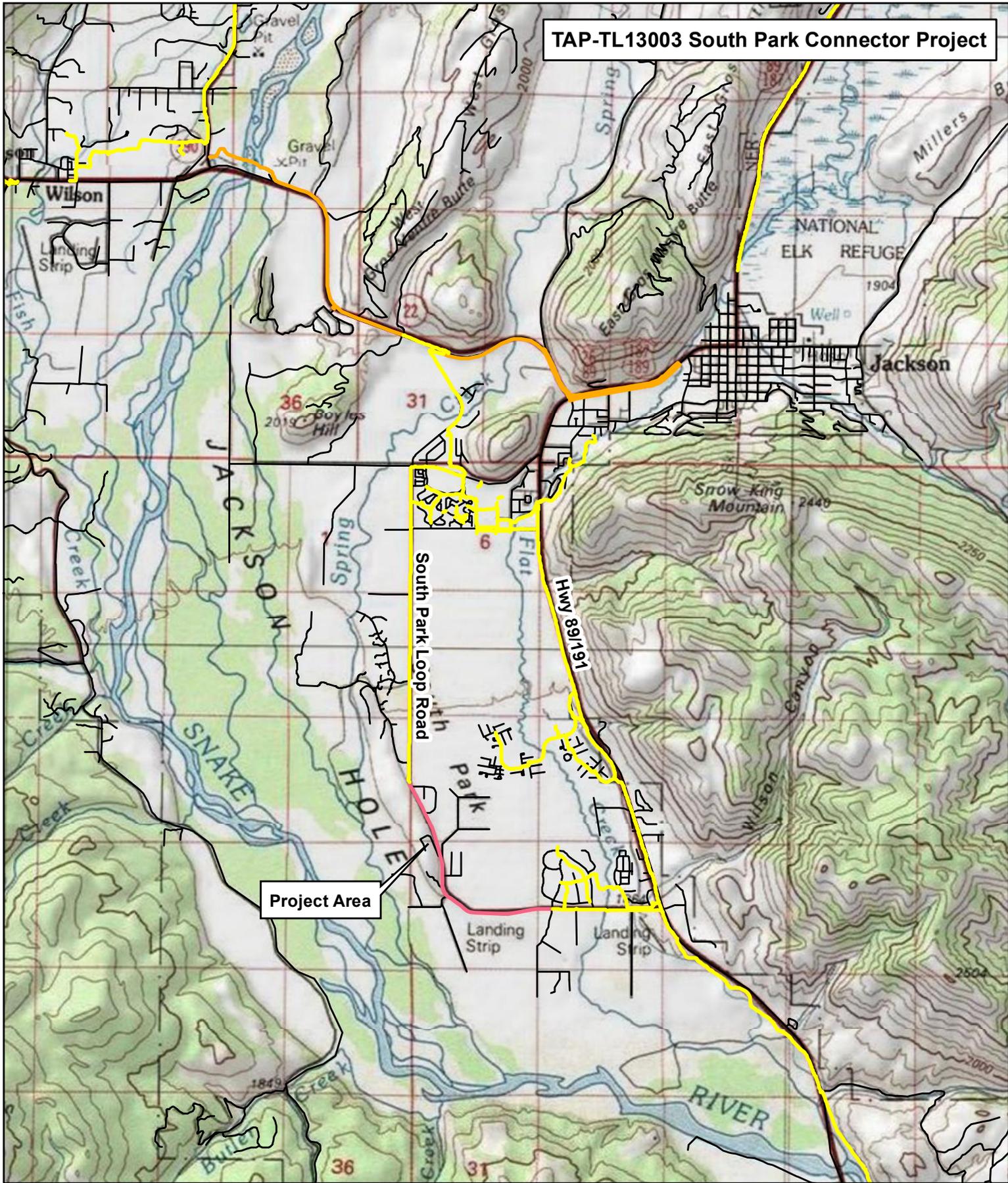
PERMITS REQUIRED

temporary construction permits may be needed with adjacent private landowners

WATERS OF THE U.S. FINDINGS

There are little to no impacts to Waters of the U.S. (ditch and adjacent wetlands)

TAP-TL13003 South Park Connector Project



Project Area

Jackson Hole Community Pathways
Environmental Field Review Report
 Teton County, WY

FIGURE 1:
Site Location
 March 3, 2015

- Legend:**
- Proposed Pathway
 - Future Pathway (planned or under construction)
 - Existing Pathway
 - Road

USGS
 - 1:24,000 Topographic Map
 Teton County
 - Roads
 Jackson Hole Community Pathways
 - Project Area
 - Proposed, Existing and Planned Pathways

2015/Pathways/2_PropProj.mxd

1 inch = 1 miles

0 0.5 1 Miles

↑ NORTH

ALDER ENVIRONMENTAL, LLC
 Water · Wetlands · Ecological Consulting

P.O. Box 6519, Jackson, Wyoming 82002
 (307) 690-3625 www.alderenvironmental.com

TAP-TL13003 South Park Connector Project

Pathway Proposed Alignment

The pathway alignment is proposed to stay within the road Right Of Way on the western and southern sides of South Park Loop Road.

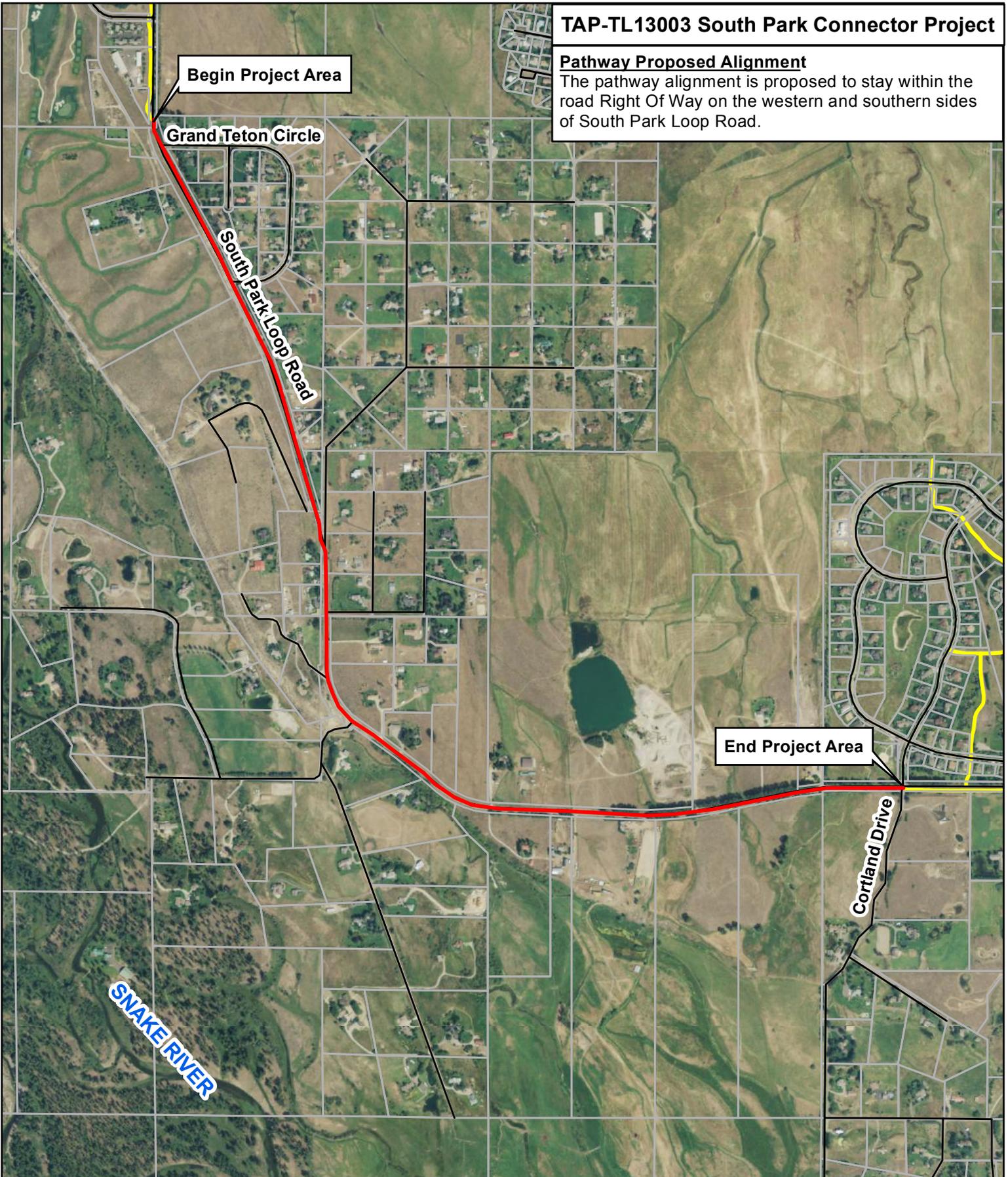


FIGURE 2:
**Proposed
Project**
March 3, 2015

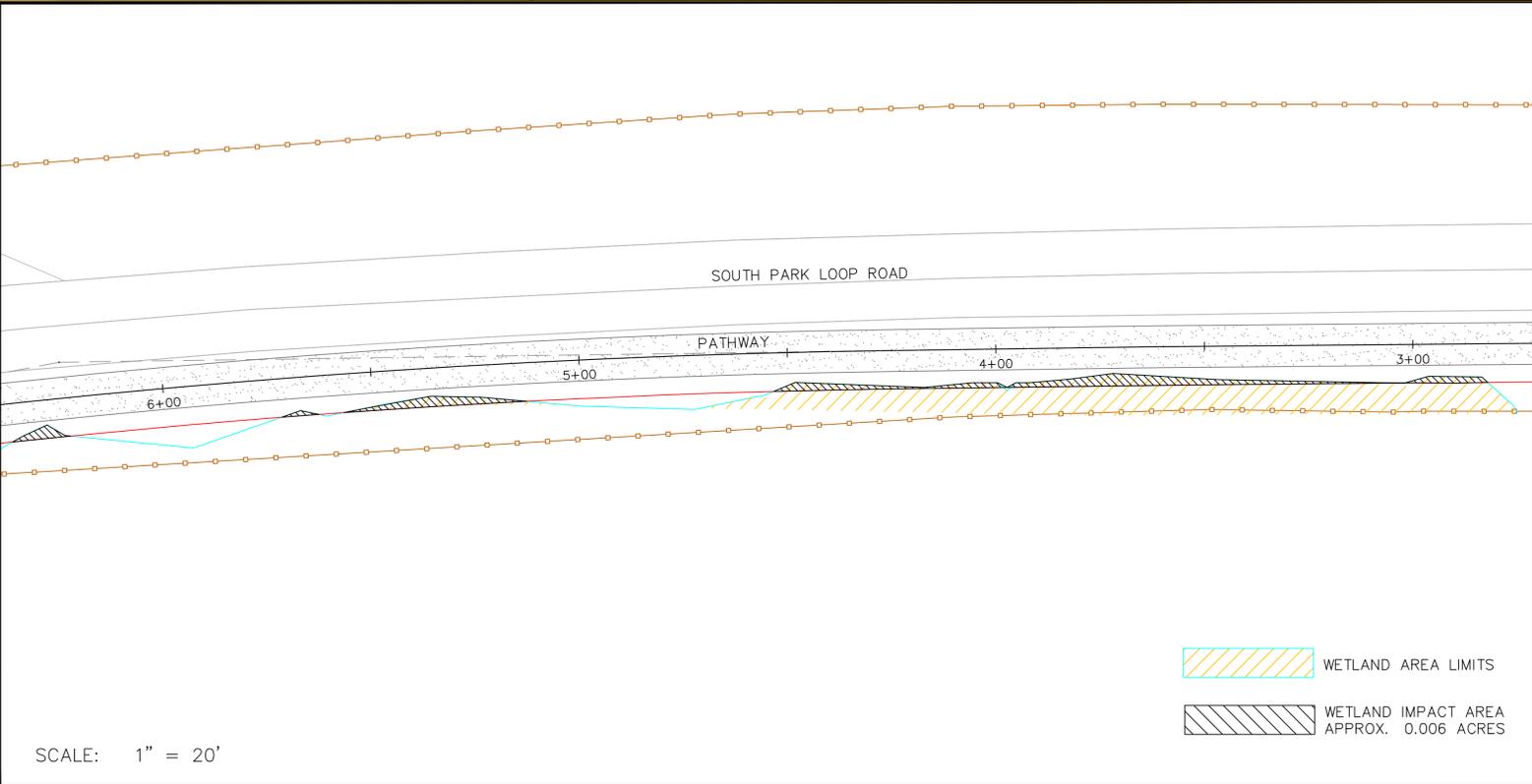
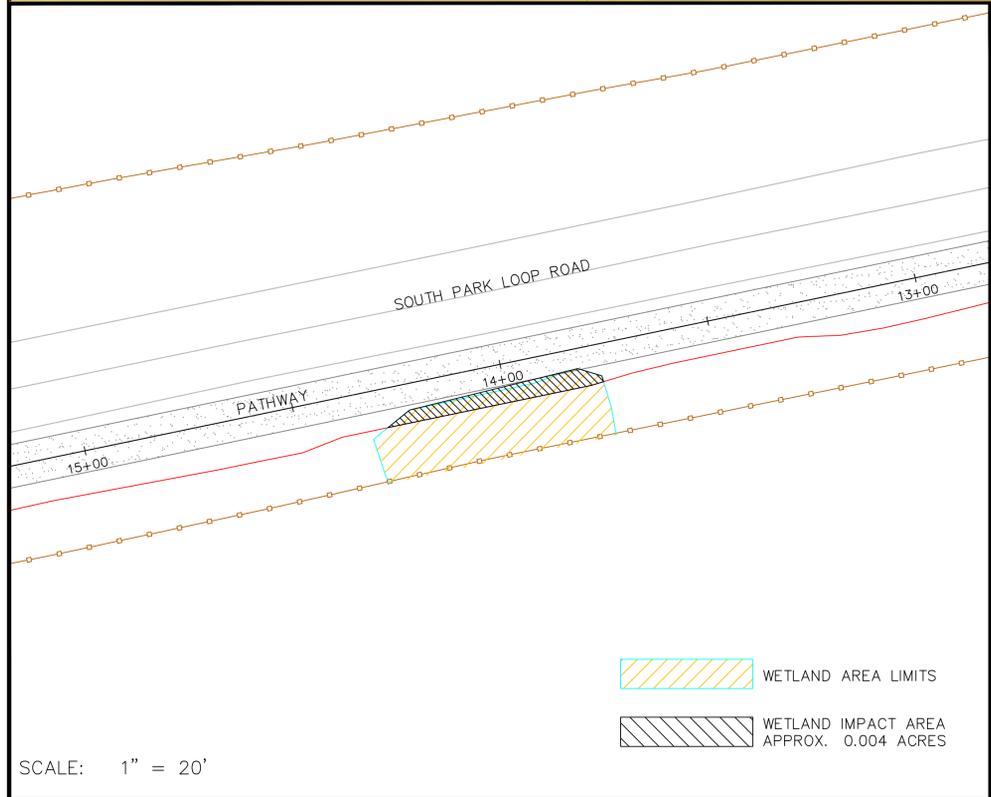
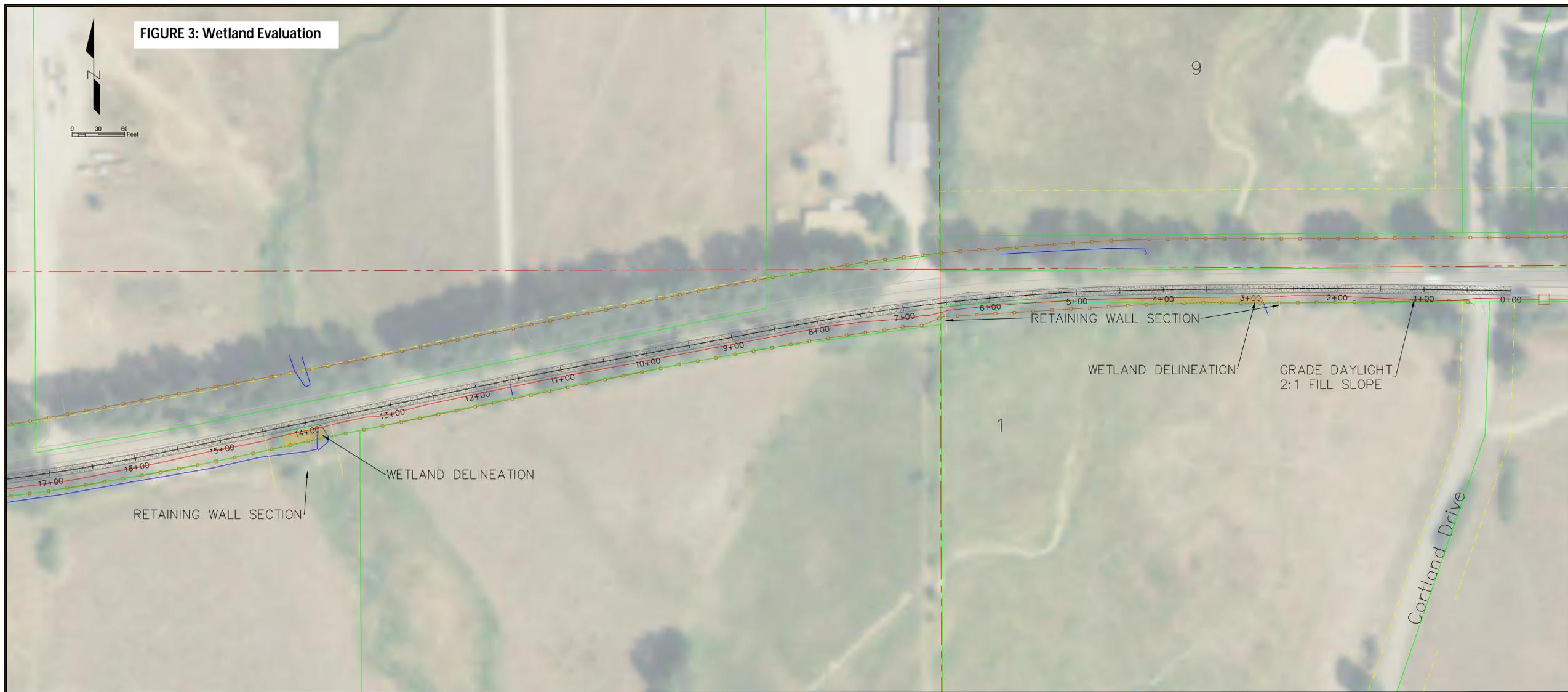
- Legend:**
- Approx. Proposed Pathway
 - Existing Pathway
 - Road
 - Ownership

Teton County
- 2012 1-ft Aerial Imagery
- Ownership Parcels
- Roads
Jackson Hole Community Pathways
- Project Area

1 inch = 1,000 feet
0 500 1,000 Feet
NORTH

ALDER ENVIRONMENTAL, LLC
Water · Wetlands · Ecological Consulting
P.O. Box 6519, Jackson, Wyoming 82602
(307) 690-3625 www.alderenvironmental.com

FIGURE 3: Wetland Evaluation



REVISIONS		NO.	DATE	DESCRIPTION	BY

PROJECT:	SOUTH PARK LOOP ROAD PATHWAY
DESCRIPTION:	WETLAND EVALUATION
LOCATION:	SOUTH PARK LOOP ROAD
S/D:	N/A
LOT #:	N/A
DRAWN BY:	DEG
DATE:	AUGUST 12, 2015
CKD BY:	BS
DATE:	AUGUST 12, 2015
PATH:	r:\splrpathway.dwg
SHEET NUMBER:	1

Appendix A: Agency Letters



JACKSON HOLE COMMUNITY PATHWAYS
320 SOUTH KING STREET • PO Box 1687
JACKSON, WYOMING 83001

PHONE: (307) 732-8573 • FACSIMILE: (307) 734-3864
BSCILLING@CI.JACKSON.WY.US

October 15, 2012
should be October 15, 2014

Mary Flanderka
Statewide Habitat Protection Supervisor
Wyoming Game and Fish Department
5400 Bishop Blvd.
Cheyenne, WY 82006

Re: TAP - TL13003 South Park Pathway Connector Project

Dear Ms. Flanderka:

Jackson Hole Community Pathways and Teton County have been awarded Transportation Alternatives Program (TAP) funding through the Wyoming Department of Transportation (WYDOT) for the construction of bicycle and pedestrian improvements along South Park Loop Road in Teton County, WY. The project is currently in preliminary planning phase and is expected to be constructed in 2016.

As part of the federal requirements for the TAP funding we must comply with NEPA and other environmental regulations. This includes submitting an Environmental Field Review Report to WYDOT/FHWA, which recommends consultation with Wyoming Game and Fish to determine if any wildlife habitat exists in the project area. We have enclosed project vicinity maps for your review, and ask that you please let us know if the Wyoming Game and Fish Department has any concerns regarding fish or wildlife habitat in the project area.

Thank you for your assistance in this project. If you have any questions regarding the information provided, please contact me at (307) 732-8573. I look forward to hearing from you soon.

Sincerely,

A handwritten signature in blue ink, appearing to read "B. Schilling".

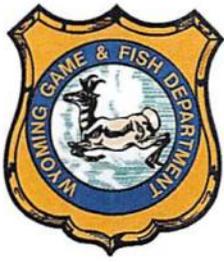
Brian Schilling
Pathways Coordinator



CONNECTING PEOPLE AND PLACES

THE JOINTLY FUNDED COMMUNITY PATHWAY & TRAILS PROGRAM OF JACKSON & TETON COUNTY





WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4699

wgfd.wyo.gov

GOVERNOR
MATTHEW H. MEAD

DIRECTOR
SCOTT TALBOTT

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RICHARD KLOUDA – President
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October 29, 2014

WER 13526

Jackson Hole Community Pathways
TAP-TL13003 South Park Pathway Connector Project
Environmental Review
Teton County

Brian Schilling
Jackson Hole Community Pathways
PO Box 1687
Jackson, WY 83001

Dear Mr. Schilling:

The staff of the Wyoming Game and Fish Department has completed the environmental review for the proposed TAP-TL13003 South Park Pathway Connector Project in Teton County. We offer the following comments for your consideration.

To minimize impacts to the aquatic resources of nearby waterways, we recommend the following:

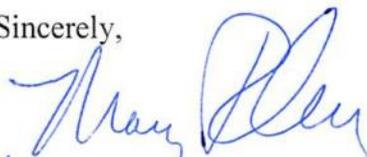
- Accepted best management practices be implemented to ensure that all sediments and other pollutants are contained within the boundaries of the work area. Disturbed areas that are contributing sediment to surface waters as a result of project activities should be promptly re-vegetated to maintain water quality.
- Equipment should be serviced and fueled away from streams and riparian areas. Equipment staging areas should be at least 300 feet from riparian areas.
- Preventing the spread of aquatic invasive species (AIS) is a priority for the State of Wyoming, and in many cases, the intentional or unintentional spread of organisms from one body of water to another would be considered a violation of State statute and Wyoming Game and Fish Commission Regulation. To prevent the spread of AIS, the following is required:
 1. If equipment has been used in a high risk infested water [a water known to contain Dreissenid mussels (zebra/quagga mussels)], the equipment must be inspected by an authorized aquatic invasive species inspector recognized by the state of Wyoming prior to its use in any Wyoming water during all times of year.

2. Any equipment entering the state by land from March through November (regardless of where it was last used), must be inspected by an authorized aquatic invasive species inspector prior to its use in any Wyoming water.
3. If aquatic invasive species are found, the equipment will need to be decontaminated by an authorized aquatic invasive species decontaminator.
4. Any time equipment is moved from one 4th level (8-digit Hydrological Unit Code) watershed to another within Wyoming, the following guidelines are recommended:
DRAIN: Drain all water from watercraft, gear, equipment, and tanks. Leave wet compartments open to dry.
CLEAN: Clean all plants, mud, and debris from vehicle, tanks, watercraft, and equipment.
DRY: Dry everything thoroughly. In Wyoming, we recommend drying for 5 days in summer (June - August); 18 days in Spring (March - May) and Fall (September - November); or 3 days in Winter (December - February) when temperatures are at or below freezing.
5. Any equipment used in a Wyoming water that contains AIS, must be inspected before use in another water. Species currently found in Wyoming waters include New Zealand mudsnail, Asian clam, and curly pondweed. Information on currently affected waters can be found at:
http://wgfd.wyo.gov/web2011/Departments/Fishing/pdfs/AIS_WYWATER_MONITOR130005236.pdf.

*A list of high risk infested waters and locations in Wyoming to obtain an AIS inspection can be found at: wgfd.wyo.gov/AIS.

Thank you for the opportunity to comment. If you have any questions or concerns, please contact Rob Gipson, Jackson Region Fisheries Supervisor, at 307- 733-2321 Ext. 226.

Sincerely,



John Kennedy
Deputy Director

JK/mf/pb

cc: USFWS
Chris Wichmann, Wyoming Department of Agriculture, Cheyenne
Rob Gipson, Jackson Region



WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4699

wgfd.wyo.gov

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November 18, 2014

WER 13526
Jackson Hole Community Pathways
TAP-TL13003 South Park Pathway Connector Project
Environmental Review
Teton County

Brian Schilling
Jackson Hole Community Pathways
PO Box 1687
Jackson, WY 83001

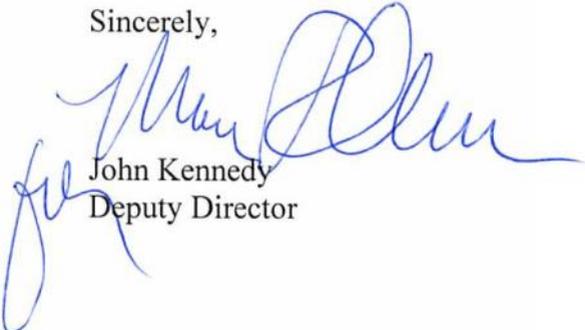
Dear Mr. Schilling:

The staff of the Wyoming Game and Fish Department has reviewed the public scoping for the proposed construction of bicycle and pedestrian improvements along South Park Loop Road in Teton County. We appreciate the efforts of the Town of Jackson and Teton County to provide a pathway network near town while minimizing impacts on wildlife. We offer the following comments for your consideration.

We believe the proposed project which encompasses the development and improvements of pathways for pedestrians and bicyclists will not have significant adverse impacts to wildlife populations and any crucial habitats in the area. However, we request if there is a need to construct fences along the perimeter of the project area that they adhere to a wildlife friendly design that will allow unrestricted movement of big game animals, especially juveniles. The Department can provide specific wildlife friendly fence designs upon request.

Wyoming Game and Fish Department personnel in the Jackson Region are available to discuss specific issues associated with this project. Please contact Wildlife Management Coordinator Doug Brimeyer, in the Jackson Regional office at 307-733-2321 or Wildlife Biologist Gary Fralick, at 307-883-2998 with any additional questions or concerns.

Sincerely,


John Kennedy
Deputy Director

Brian Schilling
November 18, 2014
Page 2 of 2 - WER 13526

JK/mf/ns

cc: USFWS
Chris Wichmann, Wyoming Department of Agriculture, Cheyenne
Doug Brimeyer, WGFD, Jackson Region
Gary Fralick, WGFD, Jackson Region



JACKSON HOLE COMMUNITY PATHWAYS
320 SOUTH KING STREET • PO Box 1687
JACKSON, WYOMING 83001

PHONE: (307) 732-8573 • FACSIMILE: (307) 734-3864
BSCHILLING@CI.JACKSON.WY.US

October 15, 2012
should be October 15, 2014

Tyler Abbott
Deputy Field Supervisor
U. S. Fish and Wildlife Service
5353 Yellowstone Road, Suite 308A
Cheyenne, Wyoming 82003

Re: TAP - TL13003 South Park Pathway Connector Project

Dear Mr. Abbott:

Jackson Hole Community Pathways and Teton County have been awarded Transportation Alternatives Program (TAP) funding through the Wyoming Department of Transportation (WYDOT) for the construction of bicycle and pedestrian improvements along South Park Loop Road in Teton County, WY. The project is currently in preliminary planning phase and is expected to be constructed in 2016.

As part of the federal requirements for the TAP funding we must comply with NEPA and other environmental regulations. This includes submitting an Environmental Field Review Report to WYDOT/FHWA, which recommends consultation with the U.S. Fish and Wildlife Service to determine if habitat for any endangered or threatened species exists in the project area. We have enclosed project vicinity maps for your review, and ask that you please let us know if the USFWS has any concerns regarding fish or wildlife habitat in the project area.

Thank you for your assistance in this project. If you have any questions regarding the information provided, please contact me at (307) 732-8573. I look forward to hearing from you soon.

Sincerely,

A handwritten signature in blue ink, appearing to read "B. Schilling".

Brian Schilling
Pathways Coordinator



CONNECTING PEOPLE AND PLACES

THE JOINTLY FUNDED COMMUNITY PATHWAY & TRAILS PROGRAM OF JACKSON & TETON COUNTY





United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
5353 Yellowstone Road, Suite 308A
Cheyenne, Wyoming 82009



NOV 25 2014

In Reply Refer To:
06E13000-2015-CPA-0005

Brian Schilling, Pathways Coordinator
Jackson Hole Community Pathways
P.O. Box 1687
Jackson, Wyoming 83001

Dear Mr. Schilling:

Thank you for your letter of October 15, 2012 [*sic*], received in our office on October 20, 2014, regarding the Jackson Hole Community Pathways South Park Loop Road Project (Project). This Project will be located in Township 40 North, Range 116 West, Sections 18, 29, and 20, approximately 4 miles southwest of Jackson in Teton County, Wyoming. The Project includes construction of bicycle and pedestrian improvements along approximately 1.75 miles of the South Park Loop Road. You have requested information regarding species listed under the Endangered Species Act of 1973, as amended (ESA), 16 U.S.C. 1531 *et seq.* and any concerns we may have about habitat in the Project area.

The U.S. Fish and Wildlife Service (Service) has transitioned to a new online program to deliver species lists: the Information, Planning, and Conservation (IPaC) system. To obtain a current list of endangered, threatened, proposed, and candidate species and their designated and proposed critical habitat that occur in or may be affected by actions associated with the proposed project, please visit our website at <http://ecos.fws.gov/ipac/>. This website will provide you with an immediate response to your species list request. The response will also include information regarding other Service trust authorities.

Based on information from your request, our understanding of the nature of the project, local conditions, and current information of federally listed species, we have not identified any issues that give us concern relative to species or critical habitat listed under the ESA. However, we are providing recommendations concerning migratory birds in accordance with the Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703, and the Bald and Golden Eagle Protection Act (Eagle Act), 16 U.S.C. 668. In addition, we recommend that any vegetation removal related to the Project be conducted outside of the general avian nesting season (approximately May 1 to August 15) to remove nesting substrate, thereby reducing the potential for nest disturbance or destruction.

We appreciate your efforts to ensure the conservation of endangered, threatened, and candidate species and migratory birds. If you have questions regarding this letter or your responsibilities under the ESA and/or other authorities or resources described above, please contact our office at the letterhead address or phone Ann Belleman at 307-421-5839.

Sincerely,



RS R. Mark Sattelberg
Field Supervisor
Wyoming Field Office

cc: WGFD, Statewide Nongame Bird and Mammal Program Supervisor, Lander, WY (Z. Walker (zack.walker@wyo.gov))
WGFD, Statewide Habitat Protection Coordinator, Cheyenne, WY (M. Flanderka) (mary.flanderka@wyo.gov)
WGFD, Habitat Protection Secretary, Cheyenne, WY (N. Stange) (nancy.stange@wyo.gov)



JACKSON HOLE COMMUNITY PATHWAYS
320 SOUTH KING STREET • PO Box 1687
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PHONE: (307) 732-8573 • FACSIMILE: (307) 734-3864
BSCHILLING@TETONWYO.ORG

October 15, 2012
should be October 15, 2014

Mary Hopkins
State Historic Preservation Officer
Wyoming State Historic Preservation Office
2301 Central Ave., Barrett Building, 3rd Floor
Cheyenne, WY 82002

Re: TAP - TL13003 South Park Pathway Connector Project

Dear Ms. Hopkins:

Jackson Hole Community Pathways and Teton County have been awarded Transportation Alternatives Program (TAP) funding through the Wyoming Department of Transportation (WYDOT) for the construction of bicycle and pedestrian improvements along South Park Loop Road in Teton County, WY. The project is currently in preliminary planning phase and is expected to be constructed in 2016.

This letter is a written request for Section 106 compliance verification on the South Park Pathway Connector project. As part of the federal requirements for the TAP funding we must comply with NEPA and other environmental regulations. This includes submitting an Environmental Field Review Report to WYDOT/FHWA and compliance with the National Historic Preservation Act.

The following information is requested for Wyoming SHPO – Section 106 compliance:

1. **Project Name and Description:** The South Park Loop Pathway Connector Project will design and construct 1.9 miles of 10'-wide shared-use bicycle and pedestrian pathway along South Park Loop that will complete the final missing link in the 10-mile South Park Pathway network. The improvements will be located within the existing highway right-of-way on the south and west side of the road.
2. **Name of Project Proponent:** Teton County, WY
3. **Project Location:** Township, Range, and Section – T40N, R116W, Portions of Section 18, 19, and 20
4. **Name of Lead Permitting Agency:** Federal Highways Administration / Wyoming Department of Transportation

5. **Current Land Use and Previous Disturbances:** Agricultural, residential, and gravel extraction adjacent to a two-lane rural county road.
6. **USGS Topo Map:** see attached
7. **Project Area Map:** see attached
8. **Building/Structures:** numerous residential dwellings border the project area, but no existing buildings or structures will be impacted or altered.

Thank you for your assistance in this project. If you have any questions regarding the information provided, please contact me at (307) 732-8573. I look forward to hearing from you soon.

Sincerely,



Brian Schilling
Pathways Coordinator



CONNECTING PEOPLE AND PLACES

THE JOINTLY FUNDED COMMUNITY PATHWAY & TRAILS PROGRAM OF JACKSON & TETON COUNTY



ARTS. PARKS. HISTORY.

Wyoming State Parks & Cultural Resources

Wyoming State Historic
Preservation Office
2301 Central Avenue
Cheyenne, WY 82001
(307) 777-7697

October 21, 2014

Brian Schilling, Pathways Coordinator
Jackson Hole Community Partners
P.O. Box 1687
Jackson, WY 83001

Re: TAP-TPL13003 South Park Pathway Connector Project (SHPO File # 1014NAW007)

Dear Mr. Schilling,

Thank you for consulting with the Wyoming State Historic Preservation Office (SHPO) regarding the above referenced undertaking. We have reviewed the associated report and find the documentation meets the Secretary of the Interior's Standards for Archaeology and Historic Preservation (48 FR 44716-42). We concur with your finding that no historic properties, as defined in 36 CFR § 800.16(l)(1), will be affected by the undertaking as planned.

We recommend the undertaking proceed in accordance with state and federal laws subject to the following stipulation:

If any cultural materials are discovered during construction, work in the area shall halt immediately, the federal agency must be contacted, and the materials evaluated by an archaeologist or historian meeting the Secretary of the Interior's Professional Qualification Standards (48 FR 22716, Sept. 1983).

This letter should be retained in your files as documentation of a SHPO concurrence on your finding of no historic properties affected. Please refer to SHPO project #1014NAW007 on any future correspondence regarding this undertaking. If you have any questions, please contact Nancy Weidel at 307-777-3418.

Sincerely,


Nancy Weidel, Historian



Matthew H. Mead, Governor
Milward Simpson, Director



JACKSON HOLE COMMUNITY PATHWAYS
320 SOUTH KING STREET • PO Box 1687
JACKSON, WYOMING 83001

PHONE: (307) 732-8573 • FACSIMILE: (307) 734-3864
BSCILLING@CI.JACKSON.WY.US

January 27, 2015

Matt Bilodeau
Chief, Wyoming Regulatory Field Office
US Army Corps of Engineers
2232 Del Range Blvd., Suite 210
Cheyenne, WY 82009

Re: TAP - TL13003 South Park Pathway Connector Project

Dear Mr. Bilodeau:

Jackson Hole Community Pathways and Teton County have been awarded Transportation Alternatives Program (TAP) funding through the Wyoming Department of Transportation (WYDOT) for the construction of bicycle and pedestrian improvements along South Park Loop Road in Teton County, WY. The project is currently in preliminary planning phase and is expected to be constructed in 2016.

As part of the federal requirements for the TAP funding we must comply with NEPA and other environmental regulations. This includes submitting an Environmental Field Review Report to WYDOT/FHWA, which requires written confirmation from the Army Corps of Engineers that the project will be allowable under the appropriate Army Corps permitting. We have enclosed project vicinity maps and wetland delineations for your review, and ask that you please inform us of any concerns you have regarding the proposed project. Based on the wetlands investigation (a full wetlands report can be provided if needed), we expect that the total impacts to wetlands will be less than 0.1 acres.

Thank you for your time and assistance in helping us complete this project, and please let me know if I can answer any questions. I can be reached at (307) 732-8573.

Sincerely,

A handwritten signature in blue ink, appearing to read "B. Schilling".

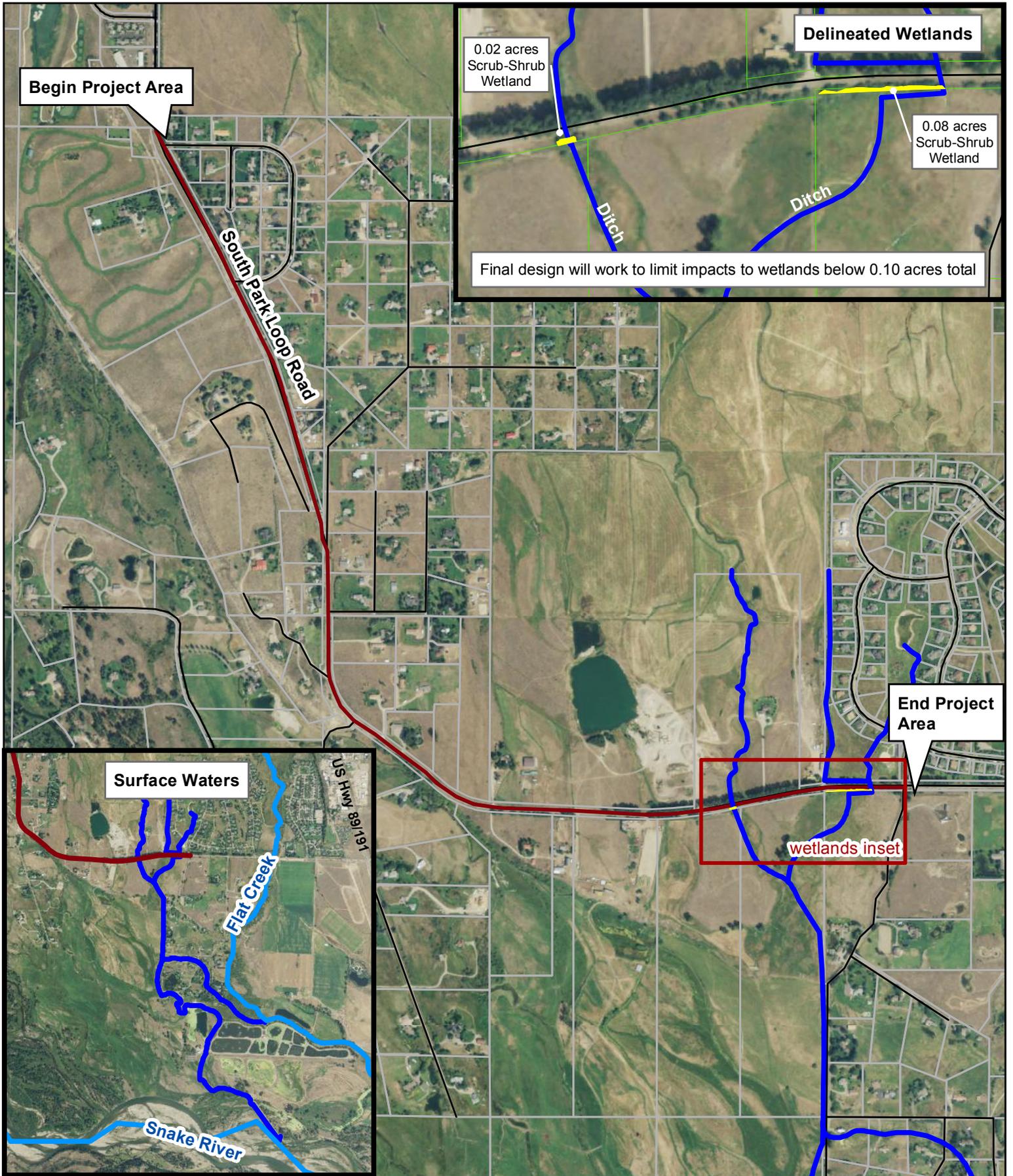
Brian Schilling
Pathways Coordinator



CONNECTING PEOPLE AND PLACES

THE JOINTLY FUNDED COMMUNITY PATHWAY & TRAILS PROGRAM OF JACKSON & TETON COUNTY





**Jackson Hole
Community
Pathways**
**South Park
Loop Rd**
Teton County, WY

FIGURE 1:
**Project Area
& Wetlands
Delineation**
January 26, 2015

- Legend:**
- Wetlands (delineated)
 - Approx. Ditches
 - Approx. Proposed Pathway
 - Road
 - Ownership

Teton County
- 2012 1-ft Aerial Imagery
- Ownership Parcels
- Roads
Jackson Hole Community Pathways
- Project Area
Asset Environmental Services &
Nelson Engineering
- Wetlands Delineation
2015/Pathways/ACOE.mxd

1 inch = 1,000 feet

0 500 1,000 Feet

NORTH

ALDER ENVIRONMENTAL, LLC
Water · Wetlands · Ecological Consulting
P.O. Box 6519, Jackson, Wyoming 82002
(307) 690-3625 www.alderenvironmental.com

Re: TAP - TL13003 South Park Pathway Connector Project – ACOE Reply to NEPA inquiry/wetlands impacts

Email received from Tom Johnson

Mon 2/23/2015 10:47 AM

RE: USACE review of linear transportation project TAP-TL13003 (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Brian,

I'm sending this message as our response to your letter because these types of requests for comments are our lowest priority, especially to organizations that already have considerable knowledge about the Corps' regulatory program requirements. I don't have time to provide a formal comment letter in this case but I realize you are following a procedure required by WYDOT to secure funding.

I have reviewed the delineation report and Figure 1 dated January 26, 2015 and there is nothing unusual about this project or the location that would raise concerns with the Corps of Engineers regarding affects on wetlands. Pathway crossings through wetlands adjacent to Susannah Slough and another irrigation ditch further east can be authorized by Nationwide Permit (NP) 14 as defined in the Federal Register published on February 21, 2012 (Vol. 77, No. 34) because none of the crossings exceed 0.50 acre. The total area of wetland losses would 0.10 acre as currently proposed so compensatory mitigation at a minimum ratio of 1.5:1 would be required. I know that you and Teton County Engineering Department are very familiar with our pre-construction notification procedure so I don't think it's necessary for me to elaborate on those requirements.

Hopefully this message will suffice as documentation of your coordination with our office but if not, please let me know.

Sincerely,

Thomas B. Johnson, P.E.
U.S. Army Corps of Engineers
Wyoming Regulatory Office
2232 Dell Range Boulevard, Suite 210
Cheyenne, Wyoming 82009
(307) 772-2300

Appendix B: Asset Environmental Wetland Delineation Report

**WETLAND DELINEATION REPORT
SOUTH PARK LOOP PATHWAY PROJECT
JACKSON, TETON COUNTY WYOMING**



Submitted To:

Town of Jackson / Teton County
P.O. Box 1687
Jackson, Wyoming 83001

Attention: Mr. Brian Schilling

Project No. AWY-1330

3 October 2013

By: Kathryn G Lane
Katie Lane
Senior Biologist

Reviewed By: Elizabeth Ann Patton
Elizabeth Ann Patton, P.G.
Manager, Investigative Services



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FIGURES

- Figure 1 Site Vicinity Map
- Figure 2 National Wetlands Inventory
- Figure 3 Site Layout of Sample Pits 1 & 2
- Figure 4 Site Layout of Sample Pits 3 & 4
- Figure 5 1994 Color Aerial Photograph
- Figure 6 2006 Color Aerial Photograph

APPENDICES

- Appendix A Glossary of Wetland Terminology
- Appendix B Wetland Delineation Field Data Forms
- Appendix C Selected Reference Data

1.0 PURPOSE AND ORGANIZATION OF REPORT

This report is prepared for the Town of Jackson and Teton County (TOJ/TC) to identify/delineate boundaries of wetlands in an area along the south side of South Park Loop Drive south of Jackson, Wyoming. This delineation report provides the required documentation for routine small area wetland boundary determinations in conformance with Section 404 of the Clean Water Act. This report presents the results of sampling activities at the referenced area. Please refer to Appendix A for definitions of commonly used wetland terminologies.

2.0 SITE INFORMATION AND LEGAL DESCRIPTION

The subject project area (according to TOJ/TC) measures approximately 3300 linear feet along the south side of South Park Loop Drive between the edge of the road and the right-of-way (ROW) line (as approximated by the existing fence line south of the road). The linear extent project area boundary is from the end of the existing bike pathway at Cortland Drive, west to the point where South Park Loop Drive begins to curve north approximately at the driveway accesses to the Lucas and Seherr-Thoss properties.

The project area is located west of Highway 26/89/191 and approximately 5 miles south of the town of Jackson, Wyoming, within Teton County. The project area setting is comprised of: a busy rural, paved, two-lane roadway which slopes outward and downward to private fences lined with cottonwood trees, willow trees and shrubs, sagebrush, and a variety of grasses. Irrigation ditches cross South Park Loop Drive in several places in the project area which support adjacent private pastureland and landscape businesses. Flat Creek flows north to south approximately 0.40 mile east of the project area and eventually discharges into the Snake River southeast of the project area. The Snake River flows north to south approximately 0.58 mile west of the project area. The project area is located in the 6th Principal Meridian as follows:

- North half of the southeast quarter of Section 19, Township 40 North, Range 116 West, and
- Northwest quarter of the southwest quarter of Section 20, Township 40 North, Range 116 West.

Figure 1 shows a topographic map of the project vicinity.

2.1 Project Description

A bike/pedestrian pathway was previously constructed along the south side of South Park Loop Drive and is intended to be extended with this project. The TOJ/TC plans to construct the remaining 3300 linear feet of pathway in 2014. This delineation and report are for aiding in determining if wetlands may exist in the project area which would be subject to mitigation under Teton County land development regulations or U.S. Army Corps of Engineers (USACE) permitting for federally funded linear transportation projects, as per wetland definitions in the appropriate Regional Supplement to 1987 USACE Wetlands Delineation Manual (Environmental Laboratory 1987) and in compliance with Section 404 of the Federal Clean Water Act.

Due to the seasonally ponding nature of, and adjacent irrigation practices near the project area, Asset Environmental Services II, LLC (Asset) was consulted to delineate wetland boundaries within the project footprint.

2.2 Habitat Description

The project area is a linear transportation ROW south of a busy rural roadway and is relatively flat terrain with drainage depressions typical of roadway toeslope construction. There are several irrigation ditch/culvert crossings, some of which contained water at the time of field survey and were vegetated with predominantly facultative wetland species. The average elevation, based on local topographic maps, is approximately 6,036 feet above mean sea level (amsl). The primary vegetative habitat in the area is homogenous throughout and consists of mostly facultative willow/shrub and grassland habitat with some fringe upland vegetation such as sagebrush varieties. Willows (*Salix exigua*) and Cottonwood (*Populus augustifolia*) are the dominant shrub/tree species in the area. The understory is comprised predominantly of grasses, including species of bromes, wheatgrasses, canarygrass, and others.

3.0 WETLAND INVESTIGATION METHODS

3.1 Preliminary Investigation

Wetlands – Prior to fieldwork, potential wetlands were identified within the project area using National Wetlands Inventory (NWI) maps (Figure 2), aerial photography (Figures 5 and 6), and USGS 7.5 minute topographic maps.

NRCS Soil Survey and Aerial Photography – Aerial photographs (dated 1994 and 2006) were also examined to evaluate the area for potential wetlands (Figure 5 and 6, respectively).

Hydrology – Site-specific hydrologic data was collected during the field survey.

Vegetation – Site-specific vegetation data (e.g., dominant species) was recorded during the field survey.

3.2 On-site Wetland Determinations

Using standard delineation procedures described in the Regional Supplement to the 1987 Army Corps of Engineers Wetland Delineation Manual (USACE 1987): Western Mountains, Valleys and Coast Region (USACE 2010), Asset conducted a routine small area wetland delineation of the project area with an on-site inspection on 17 and 19 September 2013 (between rain storms typical for the time of year). See Figures 3 and 4 for a reference of sample point locations.

General site conditions were first observed and evaluated by walking the project area to identify plant communities and dominant plant species, and to identify wetland classification types. Then, a total of four (4) sample points were chosen and analyzed for wetland delineation/determination. These points were sampled using a hand soil auger and spade shovel to analyze soil profile samples down to 22 inches below ground surface (bgs) or depth of refusal, whichever was reached first. A wetland delineation data form was completed for each sample point (Appendix B).

The sample points were evaluated by examining and documenting three technical criteria. A combination of hydrophytic vegetation, hydrology, and hydric soil criteria defines

wetlands as described in the National Food Security Act Manual (Soil Conservation Service, 1994) and the USACE's Wetlands Delineation Manual Regional Supplement. Therefore, for an area to be considered a wetland, it must display each of the following: (a) dominant vegetation that is considered hydrophytic by accepted classification indicators, (b) indications of wetland hydrology (e.g. drainage patterns, saturation or inundation in the upper 12 inches of soil, etc.), and (c) soils that are considered hydric. A hydric soil is defined as a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the uppermost soil horizon that favor the growth and regeneration of hydrophytic vegetation. Hydrophytic vegetation includes plant species specially adapted for saturated and/or anaerobic conditions and have the ability to grow, compete, reproduce and thrive in anaerobic soil. The USACE and the U.S. Fish and Wildlife Service (USFWS) have assigned a wetland indicator status to many plant species based on the estimated probability of the species existing under wetland conditions. Plants are categorized as Obligate (OBL), Facultative Wetland (FACW), Facultative (FAC), Facultative Upland (FACU), and Upland (UPL). Species with an indicator status of OBL, FACW, or FAC are considered to be adaptive to saturated and/or anaerobic (i.e. wetland) conditions and are referred to as hydrophytic vegetation (refer to Table 1 in Appendix C for full indicator status definitions).

Plant communities and dominant plant species within each community were identified, via ocular estimation of percent cover, at each sample point and within representative sampling "plots", to determine the presence/absence of hydrophytic vegetation. Refer to the field data forms in Appendix B for sample plot size for each vegetation strata (e.g., tree, shrub, herb, etc). Plants were then classified by their wetland indicator status, utilizing the US Department of Agriculture, Natural Resources Conservation Service Plants Database regional indicator designation (USDA, NRCS 2009) and a prevalence cover percentage by indicator status was calculated for additional verification of dominance.

Sample points were then evaluated for wetland hydrology and hydric soil characteristics (e.g., mottling, gleying, and saturation). Wetland hydrology was evaluated by investigating geomorphic and hydrologic characteristics. The major soil horizons for the soils within this project area were evaluated for texture, variables of color (hue, value, and chroma according to the Munsell Soil Color Book, 2000), and other wetland soil indicators (such as oxidized root channels, organic streaking, etc.).

4.0 RESULTS

The following analysis is provided for further contact with USACE personnel but does not constitute the final assessment of the wetland delineation. Only the USACE can provide the final determination. Wetland delineation boundaries which were flagged by Asset, will be surveyed by a professional engineering firm and, as such, mapped by that firm. Please refer to engineering drawings for delineated wetland boundaries.

4.1 Preliminary Data Analysis

NWI – The NWI map (Figure 2) indicates that there is predominantly one wetland type within the project area. This wetland is classified as a freshwater emergent wetland type (Palustrine Emergent Seasonally Flooded [PEMC]). The wetland habitat classification system is included in Appendix C.

Aerial Photography – Aerial photography (dated 1994 and 2006) obtained from Google Earth, indicates that the project area is comprised mostly of range and pastureland habitat with increasing anthropomorphic disturbances and influences. See Figures 5 and 6.

4.2 Waters of the U.S.

Although there is not any named creek which flows through the project area, Flat Creek (a tributary to the Snake River) flows north to south just east of the project area. The Snake River, and its oxbow meanders, flow north to south just west of the project area. Several irrigation ditches connected to this river system are located within the project area. Both Flat Creek and the Snake River, as well as the irrigation ditches, were flowing at the time of the September 2013 survey.

4.3 Potential Wetlands

Four sample points were examined during the survey. A summary of each sample point is given below and the sites are identified in Figures 3 and 4. Photographs of each sample point are included in Section 6.0 and the wetland delineation forms for each sample point are included in Appendix B. All sample points were located south of South Park Loop Drive and north of the fence line (which designates the edge of the transportation ROW). Additionally, active irrigation ditch/culvert crossings with ponded and flowing water were thickly vegetated with predominantly facultative wetland species and, as such, their fringe edges appear to possibly qualify as wetland. See pictures P7 and P8 in Section 6.0 of this report.

Sample Point 1 (Plot ID #1)

This sample point was located on the east end of the project area approximately 252 feet west of Cortland Drive. This location was chosen to verify wetland status due to its proximity to adjacent road disturbance and pastureland. The dominant vegetation species at this sample point include: willow (*Salix exigua*) (FacW), cottonwood (*Populus augustifolia*) (FacW), smooth brome (*Bromus inermis*) (Fac), and canarygrass (*Phalaris arundinacea*) (FacW). Other non-dominant vegetation growing in this sample point area included roadside wheatgrasses (which did not have an indicator status listed for the region). While this sample point appeared to be dominated by hydrophytic vegetation species, the soil lacked hydric characteristics and wetland hydrology indicators were also absent at the time of survey. Due to the lack of primary wetland indicators, the habitat at this sample point does not appear to qualify as a wetland.

Sample Point 2 (Plot ID #2)

This sample point was located on the east end of the project area, approximately 133 feet west of Sample Point 1. This location was chosen to verify wetland status due to an increase in percent cover of potential hydrophytic vegetation. The dominant vegetation species at this sample point were similar to Sample Point 1 and include: willow (*Salix exigua*) (FacW), smooth brome (*Bromus inermis*) (Fac), canarygrass (*Phalaris arundinacea*) (FacW), and slender wheatgrass (*Elymus trachycaulus*) (Fac). Other non-dominant vegetation growing in this sample point area included roadside wheatgrasses (which did not have an indicator status listed for the region). This sample point is dominated by hydrophytic vegetation species. In addition, the soil exhibited hydric characteristics, mottling, and contained oxidized root channels. Due to the presence of hydrophytic vegetation, wetland soil, and hydrology, the habitat at this sample point does appear to qualify as a wetland.

Sample Point 3 (Plot ID #3)

This sample point was located towards the west end of the project area, approximately 1443 feet east of Sample Point 4. This location was chosen to verify wetland status due to its proximity to an adjacent irrigation ditch. The dominant vegetation species at this sample point included: willow (*Salix exigua*) (FacW), smooth brome (*Bromus inermis*) (Fac), canarygrass (*Phalaris arundinacea*) (FacW), and slender wheatgrass. Other non-dominant vegetation growing in this area included roadside wheatgrasses. This sample point is dominated by hydrophytic vegetation species. In addition, the soil contained aquatic invertebrates therefore aquatic conditions can be assumed. Due to the presence of dominant hydrophytic vegetation, wetland soil, and hydrology, the habitat at this sample point does appear to qualify as a wetland.

Sample Point 4 (Plot ID #4)

This sample point was located on the west end of the project area near its terminus. This location was chosen to verify wetland status as it contained slightly dissimilar vegetation and coverage. The area between this sample point east toward Sample Point 3 had significant disturbance influences from the road and adjacent land practices. The dominant vegetation species at this sample point included: cottonwood (*Populus augustifolia*) (FacW), smooth brome (*Bromus inermis*) (Fac), intermediate wheatgrass (*Thinopyrum intermedium*) (NI). Other non-dominant vegetation growing in this sample point area included roadside wheatgrasses. While this sample point is somewhat dominated by vegetation species which may exist under wetland conditions, the soil lacked both hydric characteristics and wetland hydrology. Due to the lack of primary wetland indicators, the habitat at this sample point does not appear to qualify as a wetland.

5.0 CONCLUSIONS

Portions of the project area identified would fall under the USACE jurisdiction as it maintains a surface hydrological connection (via irrigation drainages and pasturelands) to extensions of Flat Creek and the Snake River. Portions of this project area do appear to qualify as wetland under standard delineation procedures described in the 1987 Army Corps of Engineers Wetland Delineation Manual (USACE 1987) for a small area routine delineation. If impacts, including discharge of dredge or fill material into jurisdictional waters are proposed, a permit should be obtained from the USACE. If proposed impacts are less than 0.5 acre, authorization under a Nationwide Permit (NWP) would likely apply. If impacts are greater than 0.5 acre, an individual 404 permit may be necessary. State 401 water quality certification and appropriate soil erosion and sediment controls may apply regardless of direct wetland impacts. The amount of impact can be determined once the delineated areas are surveyed and mapped by a professional engineering company.

6.0 AREA PHOTOGRAPHS



P1. View of Sample Pit #1 facing south toward private fenceline/edge of ROW.



P2. View of Sample Pit #2 facing south-southwest toward fenceline/edge of ROW.



P3. View of Sample Pit #3 facing south-southeast toward fenceline/edge of ROW. Active, flowing, irrigation ditch located just on opposite side of fence.



P4. View of soil from Sample Pit #3. Note presence of aquatic invertebrates throughout.



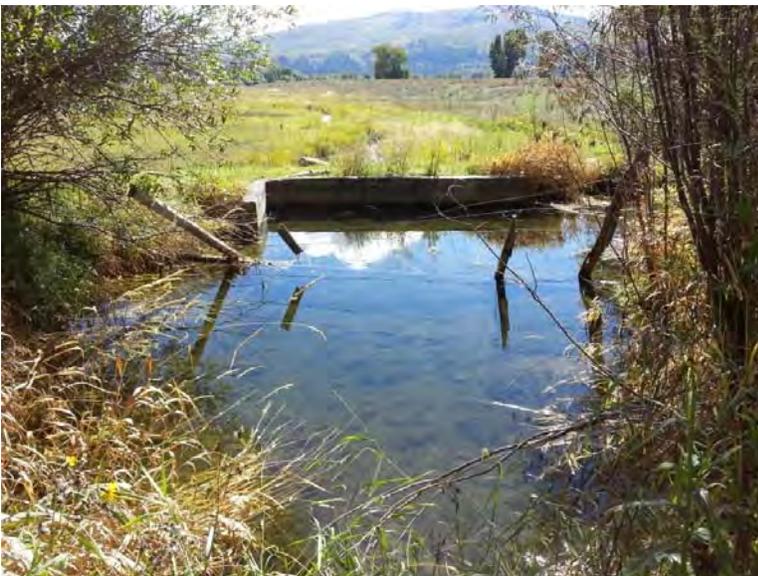
P5. View of Sample Pit #4 facing south.



P6. Another view of Sample Pit #4 facing west.



P7. View of western-most irrigation ditch/culvert crossing, facing south. Private drive off to the left hand side of the picture.



P8. View of another irrigation ditch/culvert crossing east of the crossing in picture #7.

7.0 LIMITATIONS

This report was prepared for the use of Town of Jackson and Teton County and their assigns exclusively. Our services were performed consistent with our agreement with our client. The conclusions provided by Asset are based solely on the information presented in this report. Opinions and recommendations contained in this report apply to conditions existing when our services were performed and are intended only for the use of our clients, unless a written release is obtained from Asset. Furthermore, we are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to the performance of our services. Asset also does not warrant the accuracy of information supplied by others nor the use of segregated portions of this report. The nature and extent of subsurface variations across the site may not be evident based on the information collected and presented herein. Environmental conditions may exist at the site that cannot be identified by visual observation.

8.0 REFERENCES

Munsell Color Book. 1998. Munsell Soil Color Charts. GretagMacbeth, New Windsor, New York.

USACE, 2010. U.S. Army Engineer Research and Development Center Technical Report 10-3. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).

--- 1987. U.S. Army Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1, Vicksburg, MS.

USDA, NRCS. 2013. The PLANTS Database (<http://plants.usda.gov>, 30 September 2013). National Plant Data Team, Greensboro, NC 27401-4901 USA.

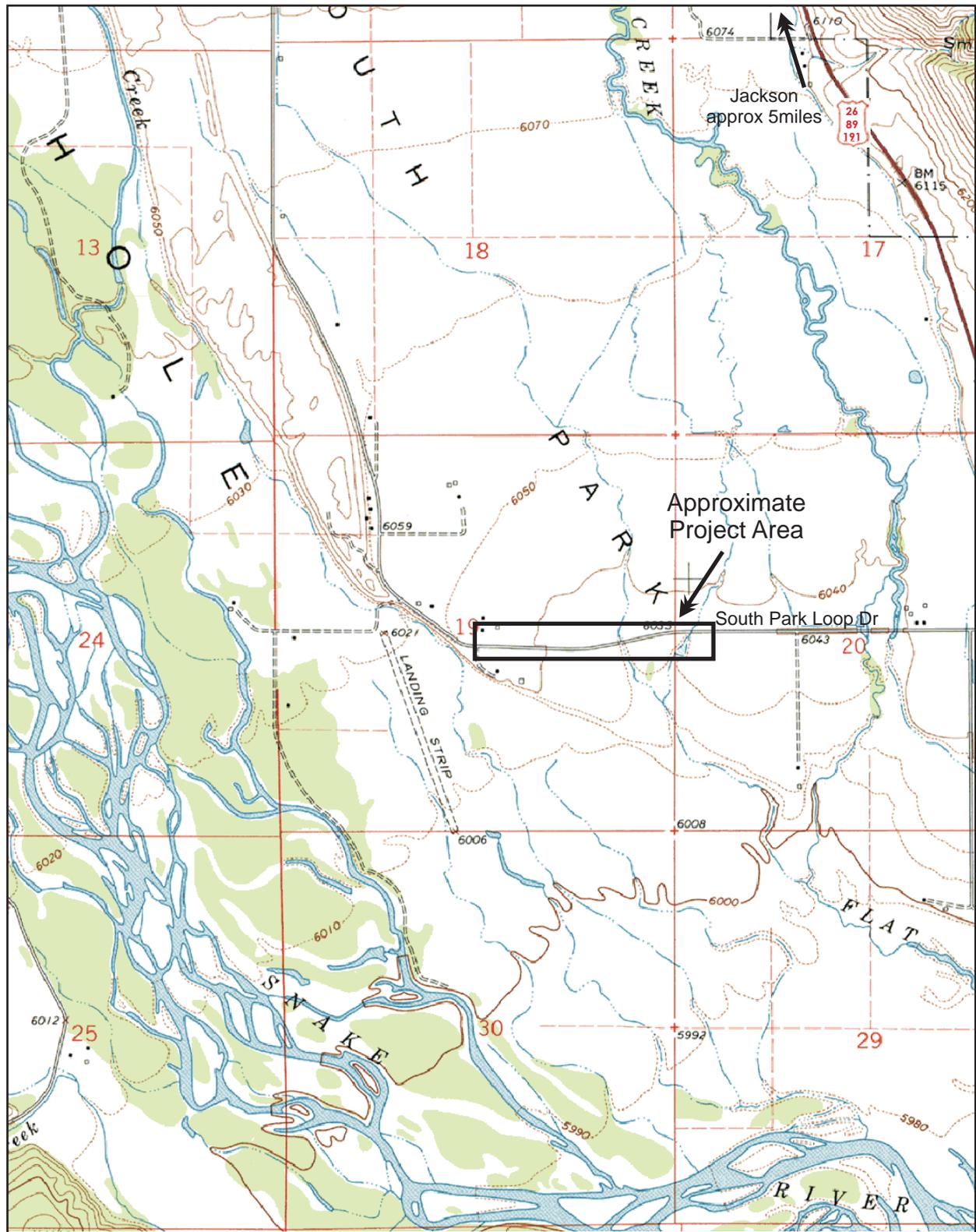
--- Soil Survey Staff. Official Soil Series Descriptions. Available online at <http://soils.usda.gov/technical/classification/osd/index.html> accessed 10 September 2013.

--- Farm Service Agency, 2006. Color aerial imagery via Google Earth.

--- National Water and Climate Center, WETS Station Data for Teton County, Wyoming.

USGS, 1994. Black and white aerial imagery via Google Earth.

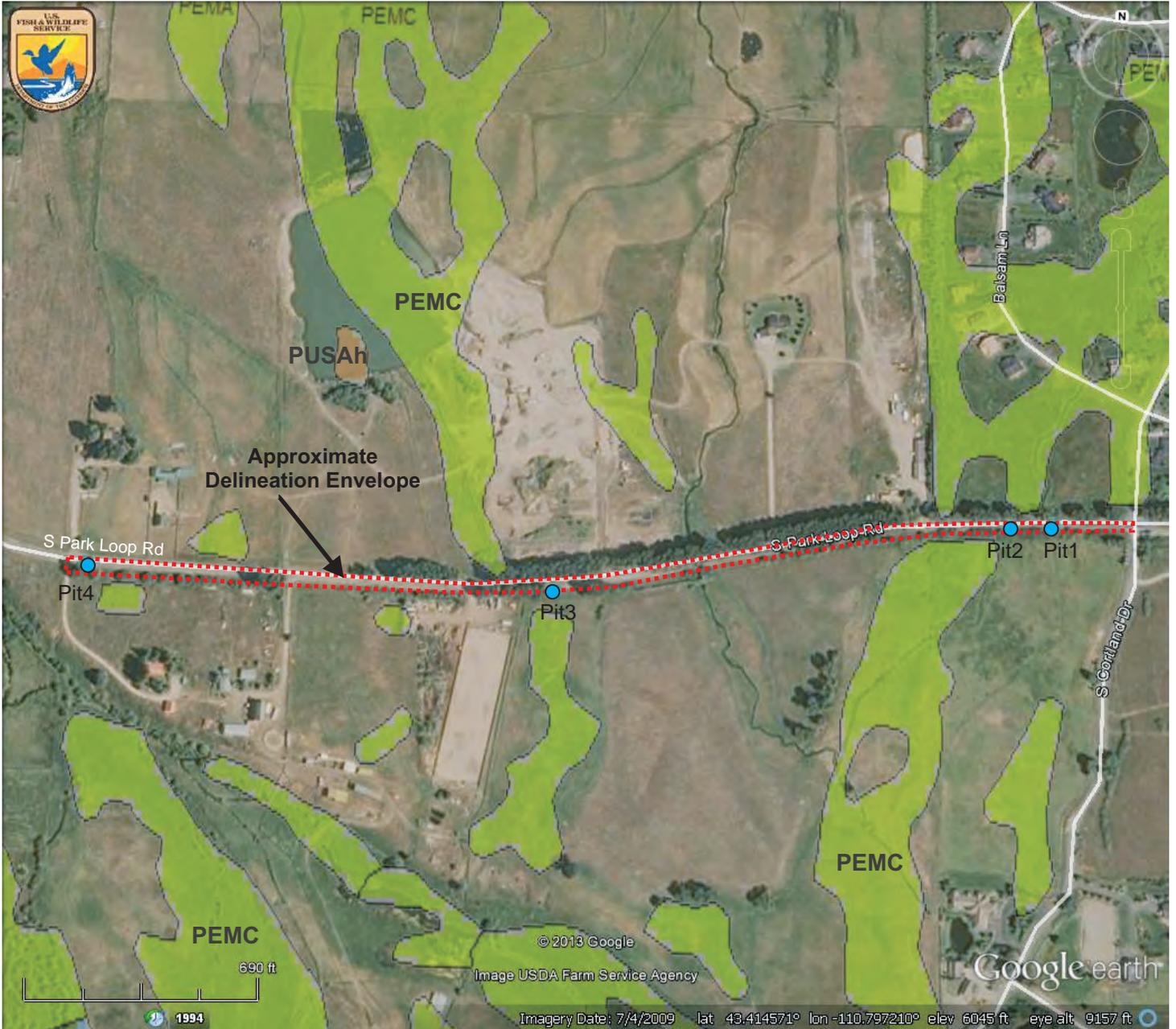
FIGURES



COPIED FROM USGS MAP:
 JACKSON, WYOMING
 DATED 1963



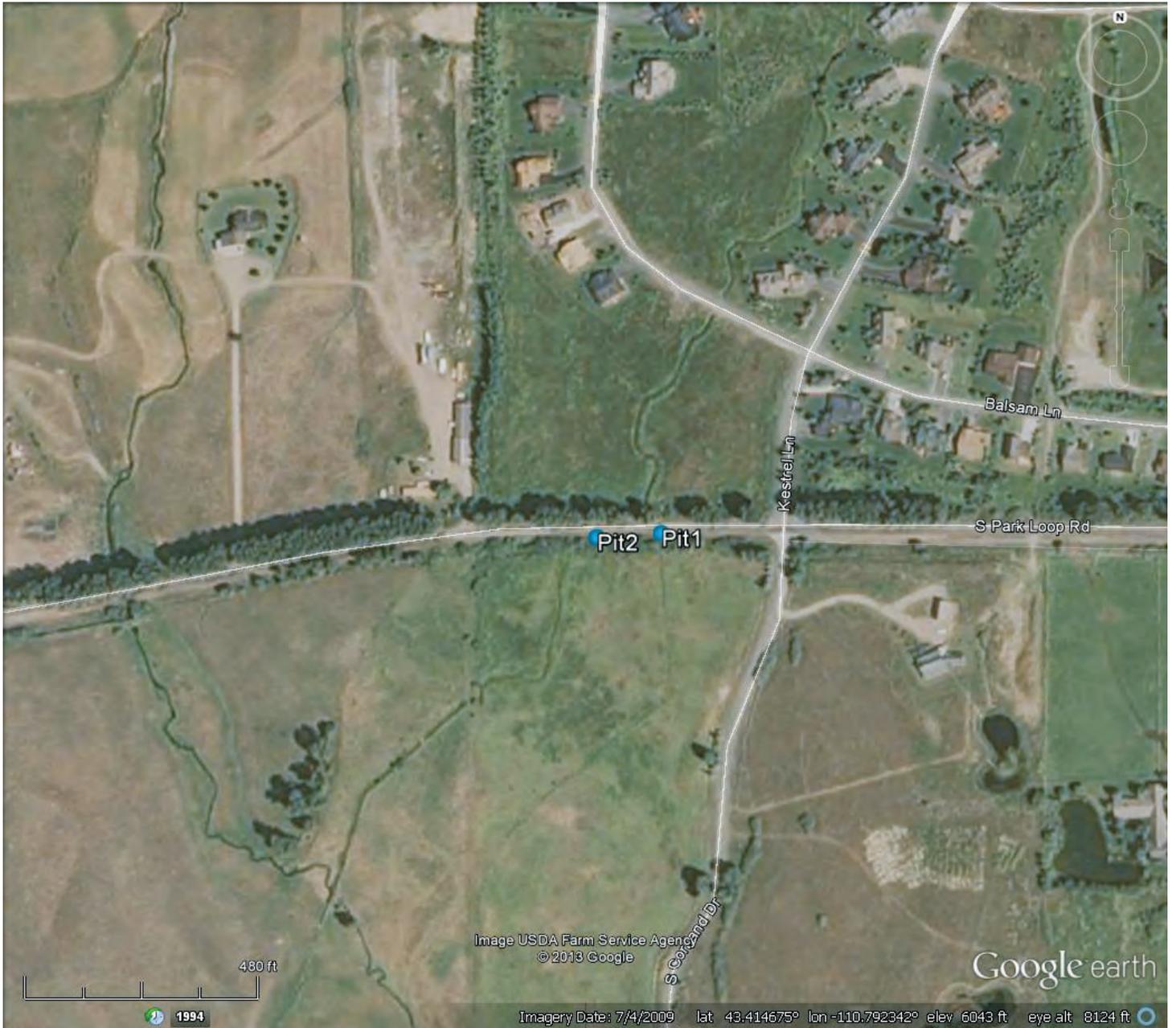
Figure 1. Site Vicinity Map
 South Park Loop Pathway Project
 Wetland Delineation
 Teton County, WY
 Project No. AWY-1330



See Wetland Classification Codes in Appendix C of the Wetland Delineation Report for Wetland Types shown here.

COPIED FROM GOOGLE EARTH WITH THE FOLLOWING LAYERS:
 1. USFWS NATIONAL WETLAND INVENTORY DATA
 2. AERIAL IMAGERY (4 JULY 2009), USDA FARM SERVICE AGENCY





COPIED FROM GOOGLE EARTH USDA FARM SERVICE AGENCY
AERIAL IMAGERY TAKEN 4 JULY 2009





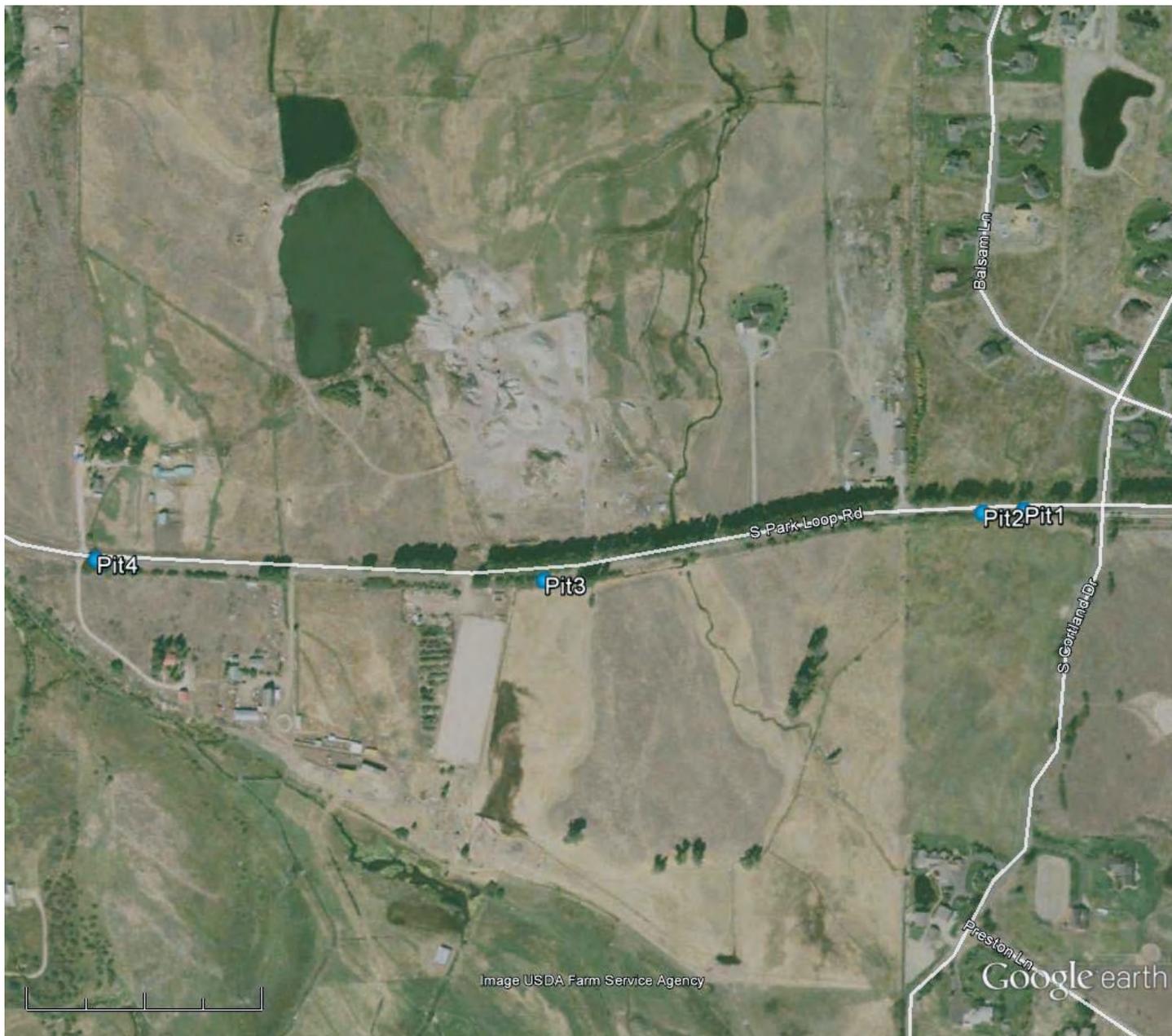
COPIED FROM GOOGLE EARTH USDA FARM SERVICE AGENCY
AERIAL IMAGERY TAKEN 4 JULY 2009





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AERIAL IMAGERY TAKEN 26 JUNE 1994





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AERIAL IMAGERY TAKEN 10 JULY 2006



APPENDIX A

GLOSSARY OF WETLAND TERMINOLOGY

GLOSSARY

Active water table: A condition in which the zone of soil saturation fluctuates, resulting in periodic anaerobic soil conditions. Soils with an active water table often contain bright mottles and matrix chromas of 2 or less.

Atypical situation: Areas in which one or more parameters (soil, hydrology, vegetation) have been sufficiently altered by recent human activities or natural to preclude the presence of wetland indicators.

Capillary fringe: A zone immediately above the water table (zero gauge pressure) in which water is drawn upward from the water table by capillary action.

Chroma: The relative saturation of a color; intensity of distinct hue as related to grayness; one of the three variables of color. Ranges from /0 (very grey) to /8 (true color).

Duration (inundation/soil saturation): The length of time during which water stands at or above the soil surface (inundation), or during which the soil is saturated; duration refers to a period during the growing season.

Flooded: A condition in which the soil surface is temporarily covered with flowing water from any source.

Gleyed: A soil condition resulting from prolonged soil saturation, which is manifested by the presence of bluish or greenish colors through the soil mass or in mottles among other colors. Gleying occurs under reducing soil conditions resulting from soil saturation, by which iron is reduced predominantly to the ferrous state.

Histic epipedon: An 8- to 16-inch-thick soil layer at or near the surface that is saturated for 30 or more consecutive days during the growing season in most years and contains a minimum of 20 percent organic matter when no clay is present or a minimum of 30 percent organic matter when 60 percent or more clay is present.

Hue: The primary or secondary color of the soil. A characteristic of color that denotes a color in relation to red, yellow, blue, and so forth; one of the three variables of color. Each color chart in the Munsell Color Book (1998) consists of a specific hue.

Hydric soil: A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the definition of hydric soils. Also, soils in which the hydrology has been artificially modified are considered to be hydric if the soil, in an unaltered state, was hydric (USDA, NRCS).

Hydrology: The science dealing with the properties, distribution, and circulation of water.

Hydrophytic Vegetation: Plant species that grow in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content; plants typically found in wet habitats. Hydrophytic species, due to morphological, physiological, and reproductive adaptations, have the ability to grow, effectively compete, reproduce, and thrive in anaerobic

soil. The ACOE and the USFWS have assigned indicator status to many plant species based on the estimated probability of the species existing under wetland conditions. Plants are categorized as Obligate (OBL), Facultative Wetland (FACW), Facultative (FAC), Facultative Upland (FACU), and Upland (UPL). Species with an indicator status of OBL, FACW, or FAC are considered to be adaptive to saturated and/or anaerobic (i.e. wetland) conditions and are referred to as hydrophytic vegetation.

Inundation: A condition in which water from any source temporarily or permanently covers the surface of the land.

Mottles: Spots or blotches of different color or shades of color interspersed within the dominant color in a soil layer, usually resulting from the presence of periodic reducing soil conditions.

Poorly drained: Soils that are commonly wet at or near the surface during a sufficient part of the year such that field crops cannot be grown under natural conditions. Poorly drained conditions are caused by a saturated zone, a layer with low hydraulic conductivity, seepage, or a combination of these conditions.

Reducing environment: An environment conducive to the removal of oxygen and chemical reduction of ions in the soil.

Routine wetland determination: A type of wetland determination in which office data or relatively simple, rapidly applied onsite methods are employed to determine whether or not an area is a wetland. Most wetland determinations are this type, which does not require the collection of quantitative data.

Soil: Unconsolidated mineral and organic material that supports, or is capable of supporting, plants, and which has recognizable properties due to the integrated effect of climate and living matter acting upon parent material, as conditioned by relief and time.

Soil horizon: A layer of soil or soil material approximately parallel to the land surface and differing from adjacent layers in physical, chemical, and biological properties or characteristics, such as color, texture, or structure.

Soil profile: A vertical section of a soil through all of its horizons and extending into the parent material.

Soil structure: The combination or arrangement of primary soil particles into secondary particles, units, or peds.

Soil texture: The relative proportion of the various sizes of particles in a soil.

Upland: Areas that do not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soils, or hydrologic characteristics associated with wetlands.

Value: A measure of darkness of the soil. The relative lightness or intensity of color approximately a function of the square root of the total amount of light reflected from a surface; one of the three variables of color. Ranges from 10/0 (pure white) to 5/0 (grey) to 0/0 (pure black).

Water table: The upper surface of groundwater or that level below which the soil is saturated with water.

Wetlands: Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support (and that under normal circumstances do support) a prevalence of vegetation typically adapted to life in saturated soil conditions.

Wetland boundary: The point on the ground at which a shift from wetlands to uplands or aquatic habits occurs.

Wetland soil: A soil that has characteristics developed in a reducing atmosphere, which exists when periods of prolonged soil saturation result in anaerobic conditions.

APPENDIX B

WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: South Park Loop Pathway Project City/County: Jackson/Teton Sampling Date: 9/17/13
 Applicant/Owner: Teton County / Town of Jackson State: WY Sampling Point: #1
 Investigator(s): KGL, EAP Section, Township, Range: 20, T40N, R116W
 Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): concave Slope (%): 3-5
 Subregion (LRR): LRR E Lat: 43.414583 Long: -110.79175 Datum: NAD83
 Soil Map Unit Name: Newfork fine sandy loam NWI classification: Near PEMC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Remarks: Sample site is located at the toe slope of existing roadway disturbance adjacent to irrigated pasture. Road bed slopes to, or close to, fence. Nearby weather data suggest that this area had slightly higher than normal rainfall for the month of September.					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. <u>Populus augustifolia</u>	<u>5</u>	<u>yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. <u>Salix exigua</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover		Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><u>Total % Cover of:</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>65</u></td> <td>x2 = <u>130</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x3 = <u>75</u></td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>205</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.28</u></td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species _____	x1 = _____	FACW species <u>65</u>	x2 = <u>130</u>	FAC species <u>25</u>	x3 = <u>75</u>	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: <u>90</u> (A)	<u>205</u> (B)	Prevalence Index = B/A = <u>2.28</u>	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species _____	x1 = _____																			
FACW species <u>65</u>	x2 = <u>130</u>																			
FAC species <u>25</u>	x3 = <u>75</u>																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: <u>90</u> (A)	<u>205</u> (B)																			
Prevalence Index = B/A = <u>2.28</u>																				
Sapling/Shrub Stratum (Plot size: 15 foot radius)																				
1. <u>Salix exigua</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = <u>5</u> , 20% = <u>2</u>	<u>10</u>	= Total Cover																		
Herb Stratum (Plot size: 5 foot radius)																				
1. <u>Phalaris arundinacea</u>	<u>30</u>	<u>yes</u>	<u>FACW</u>																	
2. <u>Bromus inermis</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>																	
3. <u>Elymus trachycaulus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
50% = <u>27.5</u> , 20% = <u>11</u>	<u>55</u>	= Total Cover																		
Woody Vine Stratum (Plot size: 30 foot radius)																				
1. <u>none</u>	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u><5</u>																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%;">Hydrophytic Vegetation Present?</td> <td style="width: 10%;">Yes</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 10%;">No</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/></td> </tr> </table>				Hydrophytic Vegetation Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>												
Hydrophytic Vegetation Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>																
Remarks:																				

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: South Park Loop Pathway Project City/County: Jackson/Teton Sampling Date: 9/19/13
 Applicant/Owner: Teton County / Town of Jackson State: WY Sampling Point: #2
 Investigator(s): KGL Section, Township, Range: 20, T40N, R116W
 Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): concave Slope (%): 0-3
 Subregion (LRR): LRR E Lat: 43.414556 Long: -110.79225 Datum: NAD83
 Soil Map Unit Name: Newfork fine sandy loam NWI classification: Just N of PEMC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks: Sample site is located at the toe slope of existing roadway disturbance adjacent to irrigated pasture. Road bed slopes to, or close to, fence. Nearby weather data suggest that this area had slightly higher than normal rainfall for the month of September.					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover		Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;"><u>Total % Cover of:</u></td> <td style="width: 50%; text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>75</u></td> <td>x2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x3 = <u>75</u></td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>225</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.25</u></td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species _____	x1 = _____	FACW species <u>75</u>	x2 = <u>150</u>	FAC species <u>25</u>	x3 = <u>75</u>	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: <u>100</u> (A)	<u>225</u> (B)	Prevalence Index = B/A = <u>2.25</u>	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species _____	x1 = _____																			
FACW species <u>75</u>	x2 = <u>150</u>																			
FAC species <u>25</u>	x3 = <u>75</u>																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: <u>100</u> (A)	<u>225</u> (B)																			
Prevalence Index = B/A = <u>2.25</u>																				
<u>Sapling/Shrub Stratum (Plot size: 15 foot radius)</u>																				
1. <u>Salix exigua</u>	<u>40</u>	<u>yes</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = <u>20</u> , 20% = <u>8</u>	<u>40</u>	= Total Cover																		
<u>Herb Stratum (Plot size: 5 foot radius)</u>																				
1. <u>Phalaris arundinacea</u>	<u>35</u>	<u>yes</u>	<u>FACW</u>																	
2. <u>Bromus inermis</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>																	
3. <u>Elymus trachycaulus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover																		
<u>Woody Vine Stratum (Plot size: 30 foot radius)</u>																				
1. <u>none</u>	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u><5</u>																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%;">Hydrophytic Vegetation Present?</td> <td style="width: 10%;">Yes</td> <td style="width: 10%;">No</td> <td style="width: 10%;"></td> <td style="width: 35%;"></td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> </tr> </table>				Hydrophytic Vegetation Present?	Yes	No				<input checked="" type="checkbox"/>	<input type="checkbox"/>									
Hydrophytic Vegetation Present?	Yes	No																		
	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		

Remarks:

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 2/2	100	_____	_____	_____	_____	Loam	organic, abundant roots
7-11	_____	_____	_____	_____	_____	_____	Rock	cobble, rocks, gravel
11-22	10YR 4/2	95	10YR 5/6	5	C	PL	Clay	slight mottling
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____ Depth (inches): _____	

Remarks: Aquic conditions assumed due to presence of hydrophytic vegetation and wetland hydrology indicators.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	(except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Oxidation only in minor amounts. Toe slope/road drainageway at edge of busy rural road disturbance. Adjacent land is irrigated pasture with active grazing. This sample point appears to be within a drainage/channel which has formed along a portion of the road - potentially influenced by nearby irrigation ditches and road culvert crossings.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: South Park Loop Pathway Project City/County: Jackson/Teton Sampling Date: 9/19/13
 Applicant/Owner: Teton County / Town of Jackson State: WY Sampling Point: #3
 Investigator(s): KGL Section, Township, Range: S19, T40N, R116W
 Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): concave Slope (%): 0-3
 Subregion (LRR): LRR E Lat: 43.413917 Long: -110.797556 Datum: NAD83
 Soil Map Unit Name: Tineman gravelly loam, wet NWI classification: Just N of PEMC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks: Sample site is located at the toe slope of existing roadway disturbance adjacent to irrigated pasture. Road bed slopes to, or close to, fenceline. This sample point is located adjacent to an active irrigation channel and is approximately 0.86 miles east of Snake River meander channels. Nearby weather data suggest that this area had slightly higher than normal rainfall for the month of September.					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover		Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Total % Cover of:</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>75</u></td> <td>x2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x3 = <u>75</u></td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>225</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.25</u></td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species _____	x1 = _____	FACW species <u>75</u>	x2 = <u>150</u>	FAC species <u>25</u>	x3 = <u>75</u>	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: <u>100</u> (A)	<u>225</u> (B)	Prevalence Index = B/A = <u>2.25</u>	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species _____	x1 = _____																			
FACW species <u>75</u>	x2 = <u>150</u>																			
FAC species <u>25</u>	x3 = <u>75</u>																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: <u>100</u> (A)	<u>225</u> (B)																			
Prevalence Index = B/A = <u>2.25</u>																				
Sapling/Shrub Stratum (Plot size: 15 foot radius)																				
1. <u>Salix exigua</u>	<u>40</u>	<u>yes</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = <u>20</u> , 20% = <u>8</u>	<u>40</u>	= Total Cover																		
Herb Stratum (Plot size: 5 foot radius)																				
1. <u>Phalaris arundinacea</u>	<u>35</u>	<u>yes</u>	<u>FACW</u>																	
2. <u>Bromus inermis</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>																	
3. <u>Elymus trachycaulus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover																		
Woody Vine Stratum (Plot size: 30 foot radius)																				
1. <u>none</u>	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u><5</u>																				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				

Remarks: Vegetation species similar to those present at sample point #2.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: South Park Loop Pathway Project City/County: Jackson/Teton Sampling Date: 9/19/13
 Applicant/Owner: Teton County / Town of Jackson State: WY Sampling Point: #4
 Investigator(s): KGL Section, Township, Range: S19, T40N, R116W
 Landform (hillslope, terrace, etc.): toe slope Local relief (concave, convex, none): concave Slope (%): 3-5
 Subregion (LRR): LRR E Lat: 43.414056 Long: -110.802972 Datum: NAD83
 Soil Map Unit Name: Tineman gravelly loam, wet NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology , naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Remarks: Sample site is located near the western end of proposed project area at the toe slope of existing roadway disturbance adjacent to irrigated pasture. Road bed slopes to, or close to, fenceline. This sample point is located approximately 0.59 miles east of Snake River meander channels. Nearby weather data suggest that this area had slightly higher than normal rainfall for the month of September.					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30 foot radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. <u>Populus augustifolia</u>	<u>50</u>	<u>yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover		Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><u>Total % Cover of:</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x3 = <u>135</u></td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>310</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.82</u></td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species _____	x1 = _____	FACW species <u>50</u>	x2 = <u>100</u>	FAC species <u>45</u>	x3 = <u>135</u>	FACU species _____	x4 = _____	UPL species <u>15</u>	x5 = <u>75</u>	Column Totals: <u>110</u> (A)	<u>310</u> (B)	Prevalence Index = B/A = <u>2.82</u>	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
OBL species _____	x1 = _____																			
FACW species <u>50</u>	x2 = <u>100</u>																			
FAC species <u>45</u>	x3 = <u>135</u>																			
FACU species _____	x4 = _____																			
UPL species <u>15</u>	x5 = <u>75</u>																			
Column Totals: <u>110</u> (A)	<u>310</u> (B)																			
Prevalence Index = B/A = <u>2.82</u>																				
Sapling/Shrub Stratum (Plot size: 15 foot radius)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
Herb Stratum (Plot size: 5 foot radius)																				
1. <u>Bromus inermis</u>	<u>45</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Thinopyrum intermedium</u>	<u>15</u>	<u>yes</u>	<u>NL (UPL)</u>																	
3. <u>Elymus trachycaulus</u>	<u><5</u>	<u>no</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover																		
Woody Vine Stratum (Plot size: 30 foot radius)																				
1. <u>none</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u><5</u>																				
Remarks:																				

APPENDIX C

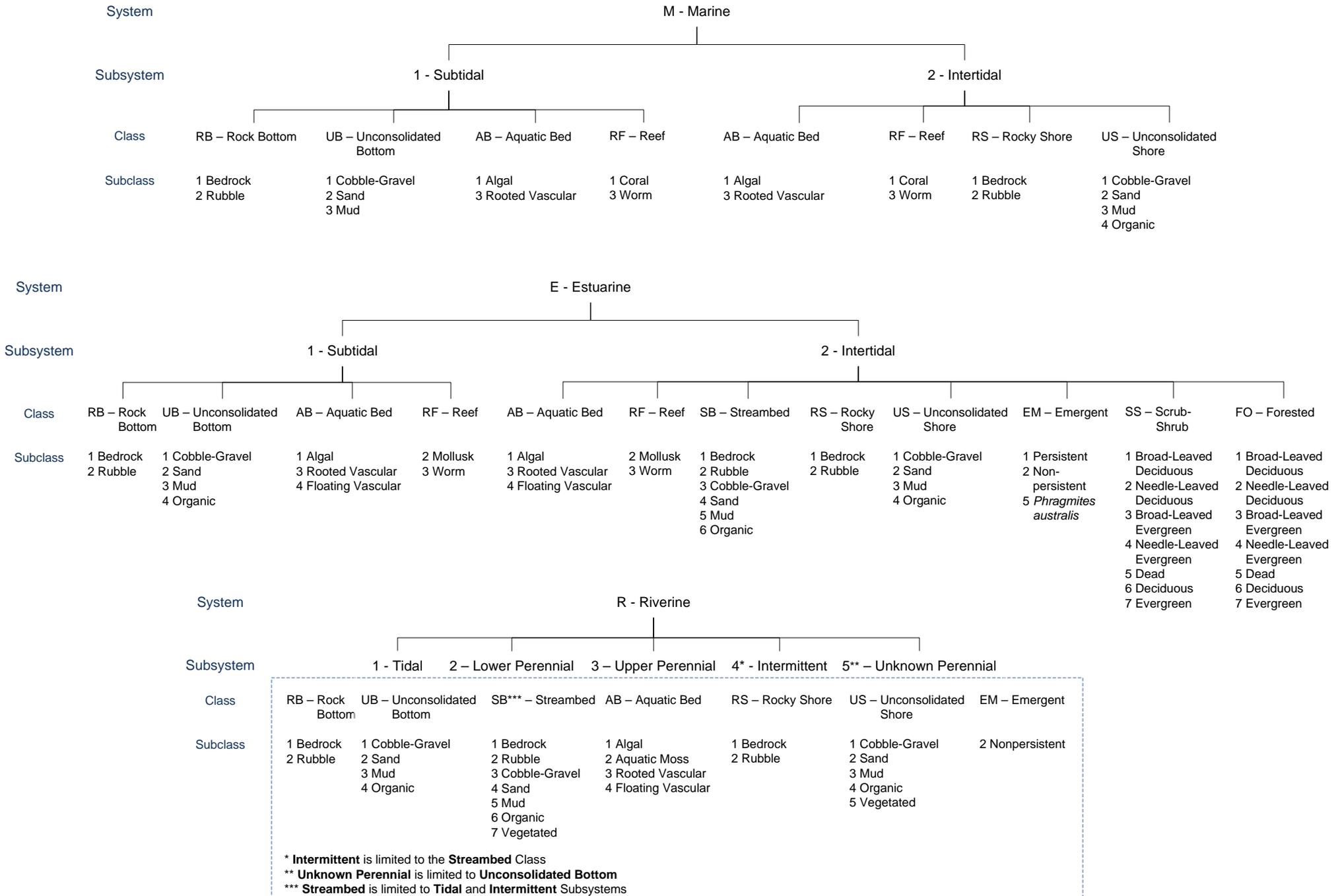
SELECTED REFERENCE DATA

- Table of Plant Indicator Status Categories C-1
- Wetland and Deepwater Habitats Classification System C-2
- WETS Station Climate Report C-4

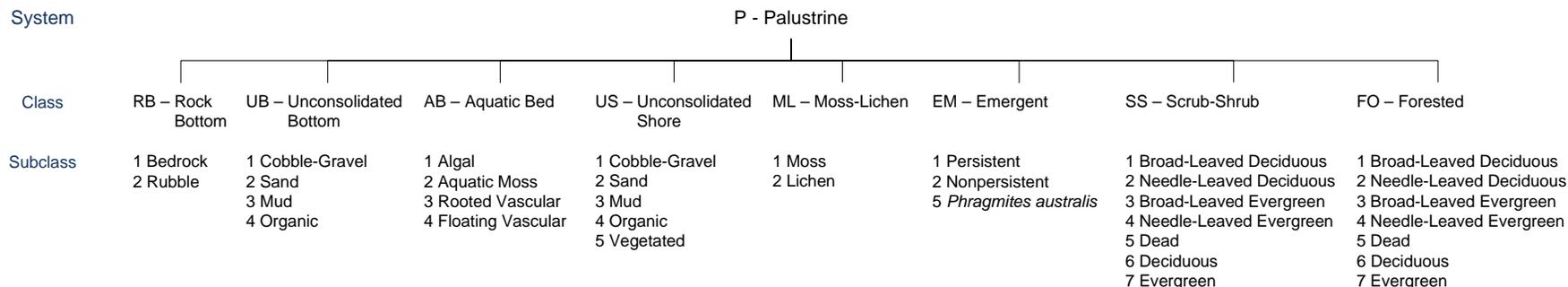
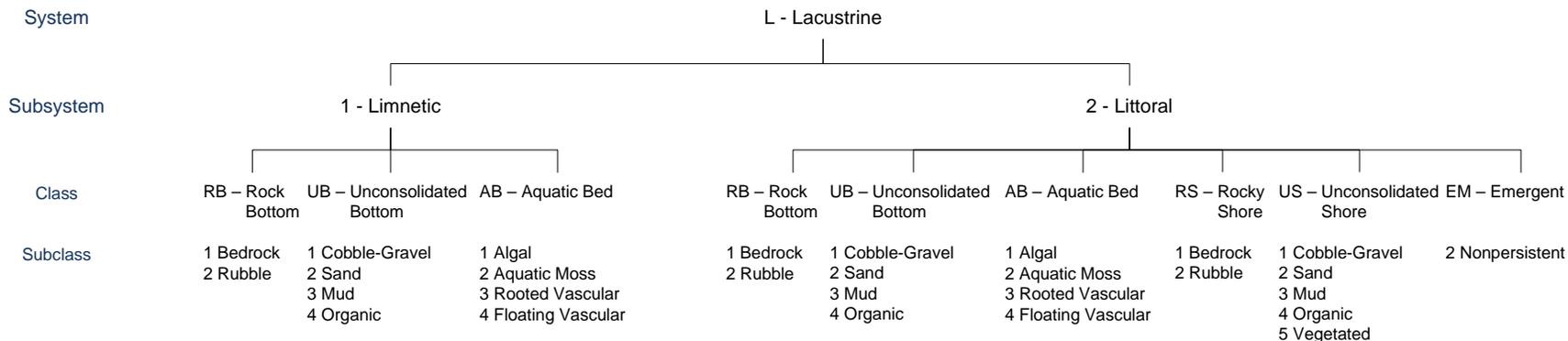
Table 1. Plant Indicator Status Categories	
Obligate Wetland Plants (OBL)	Plants that occur in wetlands, under natural conditions, approximately 99 percent of the time.
Facultative Wetland Plants (FACW)	Plants that occur in wetlands approximately 67-99 percent of the time.
Facultative (FAC)	Plants that are as likely to be found in wetlands as in non-wetlands; approximately 34 to 66 percent of the time in either.
Facultative Upland Plants (FACU)	Plants that occur in non-wetlands approximately 1 to 33 percent of the time.
Obligate Upland Plants (UPL)	Plants that occur in non-wetlands, under natural conditions, approximately 99 percent of the time.
No Indicator (NI)	Plant species that have not been given an indicator status, and assumed to be upland.

Source: National List of Plants that Occur in Wetlands: Northwest (Region 9), U.S. Fish and Wildlife Service Biological Report 88(26.9), (Revised 1993) 89 p.

WETLANDS AND DEEPWATER HABITATS CLASSIFICATION



WETLANDS AND DEEPWATER HABITATS CLASSIFICATION



MODIFIERS							
In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.							
Water Regime			Special Modifiers	Water Chemistry			Soil
Nontidal	Saltwater Tidal	Freshwater Tidal		Coastal Halinity	Inland Salinity	pH Modifiers for all Fresh Water	
A Temporarily Flooded	L Subtidal	S Temporarily Flooded-Tidal	b Beaver	1 Hyperhaline	7 Hypersaline	a Acid	g Organic
B Saturated	M Irregularly Exposed	R Seasonally Flooded-Tidal	d Partly Drained/Ditched	2 Euhaline	8 Eusaline	t Circumneutral	n Mineral
C Seasonally Flooded	N Regularly Flooded	T Semipermanently Flooded-Tidal	f Farmed	3 Mixohaline (Brackish)	9 Mixosaline	I Alkaline	
E Seasonally Flooded/ Saturated	P Irregularly Flooded	V Permanently Flooded-Tidal	h Diked/Impounded	4 Polyhaline	0 Fresh		
F Semipermanently Flooded			r Artificial	5 Mesohaline			
G Intermittently Exposed			s Spoil	6 Oligohaline			
H Permanently Flooded			x Excavated	0 Fresh			
J Intermittently Flooded							
K Artificially Flooded							

WETS Station : JACKSON, WY4910

Creation Date: 09/10/2002

Latitude: 4329

Longitude: 11046

Elevation: 06230

State FIPS/County(FIPS): 56039

County Name: Teton

Start yr. - 1971 End yr. - 2000

Month	Temperature (Degrees F.)			Precipitation (Inches)				
	avg daily max	avg daily min	avg	avg	30% chance will have		avg	avg total snow fall
					less than	more than	# of days w/.1 or more	
January	28.3	5.0	16.7	1.36	0.79	1.66	4	20.3
February	33.2	8.1	20.7	0.95	0.53	1.16	4	13.4
March	42.8	17.5	30.2	1.21	0.64	1.47	4	7.8
April	53.1	24.4	38.8	1.16	0.61	1.42	4	2.4
May	63.0	30.8	46.9	2.26	1.56	2.69	7	0.8
June	73.4	37.0	55.2	1.63	1.02	1.97	5	0.2
July	81.9	40.9	61.4	1.31	0.75	1.62	4	0.0
August	80.8	39.2	60.0	1.33	0.85	1.60	4	0.0
September	71.1	31.3	51.2	1.33	0.56	1.61	4	0.1
October	58.4	23.4	40.9	1.25	0.71	1.55	4	1.0
November	39.5	15.6	27.5	1.65	0.85	2.02	5	11.0
December	28.3	5.9	17.1	1.56	0.83	1.91	6	17.4
Annual	-----	-----	-----	-----	12.13	18.24	--	----
Average	54.5	23.3	38.9	-----	-----	-----	--	----
Total	-----	-----	-----	17.00	-----	-----	55	74.5

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		

50 percent *	5/25 to 9/12 110 days	6/19 to 8/29 71 days	7/10 to 8/15 36 days
70 percent *	5/20 to 9/18 120 days	6/13 to 9/ 4 83 days	7/ 5 to 8/20 46 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.