TOWN OF JACKSON
PLANNING & BUILDING DEPARTMENT

TRANSMITTAL MEMO

Town of Jackson
- ☒ Public Works/Engineering
- ☒ Building
- ☐ Title Company
- ☒ Town Attorney
- ☒ Police

Joint Town/County
- ☒ Parks and Recreation
- ☒ Pathways
- ☒ Housing Department

Teton County
- ☐ Planning Division
- ☐ Engineer
- ☐ Surveyor- *Nelson*
- ☐ Assessor
- ☐ Clerk and Recorder
- ☐ Road and Levee

State of Wyoming
- ☐ Teton Conservation
- ☐ WYDOT
- ☐ TC School District #1
- ☐ Game and Fish
- ☐ DEQ

Federal Agencies
- ☐ Army Corp of Engineers

Utility Providers
- ☐ Qwest
- ☐ Lower Valley Energy
- ☐ Bresnan Communications

Special Districts
- ☒ START
- ☒ Jackson Hole Fire/EMS
- ☐ Irrigation Company

Date: January 25, 2023

Item #: P23-015

Planner: Paul Anthony

Phone: 733-0440 ext. 1305

Email: panthony@jacksonwy.gov

Owner:
Christopher Swann & Snake River Bend Ranch LLC
3060 Peachtree Rd. NW STE 1080
Atlanta, GA 30305

Applicant:
Jorgensen Associates, Inc.
PO Box 9550
Jackson WY 83002

REQUESTS:

Teton County is submitting a request for a Town of Jackson review of an Amended PUD and Development Plan associated with Snake River Canyon Ranch Resort located at 12455 S River Bend Rd, 985 W Elk Ridge Rd, and W Elk Ridge Road, PIDN: 22-39-16-32-4-01-005, 22-39-16-32-4-02-001; 22-39-16-32-4-02-002

For questions, please call Paul Anthony at 733-0440, x1303 or email to the address shown below. Thank you.

Please respond by: **February 15, 2023 (with Comments)**

RESPONSE: For Departments not using Trak-it, please send responses via email to:
alangley@jacksonwy.gov

RECEIVED
By Heather Thompson at 2:56 pm, Jun 29, 2022

PLANNING PERMIT APPLICATION

Planning & Building Services Department
Planning Division

200 S. Willow St.
P.O. Box 1727
Jackson, WY 83001

ph: (307) 733-3959
www.tetoncountywy.gov

For Office Use Only

Fees Paid $5,000

Check # 13698 Credit Card _____ Cash _____

Application #s PUD2022-0003 _____ _____

PROJECT

Name/Description: SRCRR PUD Amendment and DEV for Lot 23 and Density Transfer and Employee Housing

Physical Address: 12455 S RIVER BEND ROAD, 985 W ELK RIDGE ROAD, 865 W ELK RIDGE ROAD

Lot, Subdivision: Lot 23 of Plat 1030 and Lots 24 & 25 of Plat 1031 PIDN: 22-39-16-32-4-01-005, ~~22-39-16-32-4-02-001;~~ 22-39-16-32-4-02-002`

OWNER

Name: Christopher Swann & Snake River Bend Ranch, LLC Phone: _____

Mailing Address: 3060 Peachtree Road NW, Suite 1080 ZIP: 30305

E-mail: _____

APPLICANT/AGENT

Name: Jorgensen Associates, Inc. Phone: 307.733.5150

Mailing Address: 1315 HWY 89 S., Suite 201 ZIP: 83002

E-mail: bschulte@jorgeng.com

DESIGNATED PRIMARY CONTACT

_____Owner X Applicant/Agent

TYPE OF APPLICATION *Check all that apply; see the applicable application submittal checklists and Planning Fee Schedule online.*

Use Permit

_____Basic Use
_____Conditional Use
_____Special Use

Physical Development

_____Sketch Plan
X Development Plan

Interpretations

_____Formal Interpretation
X Zoning Compliance Verification

Relief from the LDRs

_____Administrative Adjustment
_____Variance
_____Beneficial Use Determination
_____Appeal of an Admin. Decision

Development Option/Subdivision

_____Development Option Plan
_____Subdivision Plat
_____Boundary Adjustment (replat)
_____Boundary Adjustment (no plat)

Amendments to the LDRs

X LDR Text Amendment
_____Zoning Map Amendment
X Planned Unit Development

PRE-SUBMITTAL STEPS *Pre-submittal steps, such as a pre-application conference, environmental analysis, or neighborhood meeting, are required before application submittal for some application types. See Section 8.1.5, Summary of Procedures, for requirements applicable to your application package. If a pre-submittal step is required, please provide the information below. If you need assistance locating the project number or other information related to a pre-submittal step, contact the Planning Department.* ***If this application is amending a previous approval, indicate the original permit number.***

Pre-application Conference #: PAP 2021-0103 Environmental Analysis #:

Original Permit #: Date of Neighborhood Meeting: 11/18/2021

SUBMITTAL REQUIREMENTS *Please ensure all submittal requirements are included. The Planning Department will not hold or process incomplete applications. Partial or incomplete applications will be returned to the applicant.*

X **Application Fee** Fees are cumulative. Applications for multiple types of permits, or for multiple permits of the same type, require multiple fees. See the currently adopted Planning Fee Schedule on the county website for more information.

X **Electronic Submittal** A complete digital file of the application with attachments/plans.

X **Hard Copy Submittal** A complete printed file of the application with attachments/plans.

X **Notarized Letter of Authorization** A notarized letter of consent from the landowner is required if the applicant is not the owner. Please see the Letter of Authorization template on the county website for a sample.

X **Corporations and Partnerships** If the owner is a partnership or corporation, proof that the owner can sign on behalf of the partnership or corporation.

X **Response to Submittal Checklist** All applications require response to applicable review standards. These standards are outlined on the submittal checklists for each application type. If a pre-application conference is held, the submittal checklists will be provided at the conference. If no pre-application conference is required, please see the website for the applicable checklists. The checklist is intended as a reference to assist you in submitting a sufficient application; submitting a copy of the checklist itself is not required.

FORMAT

The main component of any application is demonstration of compliance with all applicable Land Development Regulations (LDRs) and Resolutions. The submittal checklists are intended to identify applicable LDR standards and to outline the information that must be submitted to sufficiently address compliance with those standards.

For some submittal components, minimum standards and formatting requirements have been established. Those are referenced on the checklists where applicable. For all other submittal components, the applicant may choose to make use of narrative statements, maps, drawings, plans and specifications, tables and/or calculations to best demonstrate compliance with a particular standard.

Note: Information provided by the applicant or other review agencies during the planning process may identify other requirements that were not evident at the time of application submittal or a Pre-Application Conference, if held. Staff may request additional materials during review as needed to determine compliance with the LDRs.

Under penalty of perjury, I hereby certify that I have read this application and associated checklists and state that, to the best of my knowledge, all information submitted in this request is true and correct. I agree to comply with all county and state laws relating to the subject matter of this application, and hereby authorize representatives of Teton County to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.

Aaron M. Levy — June 27, 2022

Signature of Owner or Applicant/Authorized Agent — Date

Ron Levy — Land Use Project Manager

Name Printed — Title/Role

Amendment to the Planned Unit Development
And Development Plan
for
Employee Housing and Density Transfer
As part of
AREA II of the Snake River Canyon Ranch Resort

Applicant:

Snake River Bend Ranch, LLC
& Christopher Swann
3060 Peachtree Road NW - Suite 1080
Atlanta, GA 30305

Prepared by:

Jorgensen
Engineers, Land Surveyors, & Planners
1315 Highway 89 South, Suites 201
PO Box 9550
Jackson, WY 83002
307.733.5150

Teton County, WY
Initial Submittal Date: June 23, 2022
Jorgensen Associates, Inc.
Project No. 15040.131

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TABLE OF CONTENTS

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SECTION 1 - PROJECT BACKGROUND, OVERVIEW, FINDINGS AND RESPONSE TO SUBMITTAL CHECKLIST

A. PROJECT BACKGROUND & HISTORY

The Snake River Canyon Ranch Resort Planned Unit Development (SRCRR) was approved in 1999 and amended in 2015. The 2015 amendment rezoned approximately 95 acres of land within the Resort PUD-PR to Park and Open Space. The density was relocated to lots 1-6, 69, and 80 of the Snake River Sporting Club, Plat No. 1165 and subsequently renamed to Sub Area III of SRCRR Master Plan. This resulted in a total of 63 units to be developed on 20.04 acres at Sub Area III. In turn the density transfer allowed for the re-establishment of Astoria Hot Springs Park as a public amenity while moving density to a more appropriate location near the Snake River Sporting Club.

Phases 1 through 3 of SRCRR have all been platted and all 49 units are either complete or currently permitted for construction. Phase 4 will consist of 15 condominium units in the Lodge, which is currently under construction.

The project area contemplated in this application is located within Area II of the Snake River Canyon Ranch Resort (SRCRR). More specifically the properties are legally described as Lot 23 of the River Homes Plat No. 1030 as recorded in the Office of the Clerk of Teton County, Wyoming, and Lots 24 and 25 of the Ranch Homes, Plat No. 1031, as recorded in said Office. This project is generally located north of the golf course at Snake River Sporting Club (SRSC) and south and west of Astoria Hot Springs Park. The Snake River is located to the west of this property and USFS Bridger-Teton National Forest lands are located to the east of the property.

The Resort is governed by the Amended and Restated Snake River Canyon Ranch Resort Master Plan (Master Plan) approved by Teton County Planning Department on February 2, 2018. This application has been prepared in accordance with the limitations established by the Master Plan.

B. OWNER & PROJECT TEAM INFORMATION

PROPERTY OWNERS & APPLICANTS:

Snake River Bend Ranch, LLC
3060 Peachtree Road NW, Suite 1080
Atlanta, GA 30305

Christopher Swann
3060 Peachtree Road NW, Suite 1080
Atlanta, GA 30305
cswann@cygnuscapital.com

LAND PLANNING, SURVEYING & ENGINEERING
Jorgensen Associates, Inc.
PO Box 9550
Jackson, Wyoming 83002
307-733-5150
bschulte@jorgeng.com
mdi@jorgeng.com

ENVIRONMENTAL CONSULTING
EcoConnect Consulting LLC
PO Box 13259
Jackson, WY 83002
megan@ecoconnectjh.com

C. DEVELOPMENT PROPOSAL

This application proposes to transfer a single dwelling unit with a short-term rental use from said Lot 23 located with Area II adjacent to the Snake River, and surrounded by Astoria Park, to a more appropriate location on the bench where said Lots 24 and 25 would be replatted with this additional dwelling unit to create proposed Lots 29, 30, and 31 of the Ranch Homes 2nd Filing. Total density allowed at the Resort would not increase. This transfer would allow for the construction of employee housing and an office on Lot 23, while moving the residential resort uses closer together. An updated environmental analysis was filed and approved by Teton County for proposed Lots 29, 30 and 31 in 2021. This application contemplates the relocation of this density up onto the bench and its impact to the NRO in that area. See **Section 5** for both the updated EA and the review letter from Teton County.

The employee housing units are contained within a two-story building with approximately 2,000 sf of residential space on the second floor divided between two (2) 550 sf studio apartments and one (1) 900 sf 2-bedroom unit. Employee housing would be deed restricted as workforce housing which would require an employee of Snake River Sporting Club, Snake River Sporting Club ISD, Astoria Park, or any other employer of Teton County Wyoming, according to the Rules and regulations of the Jackson-Teton County Housing Department. It would not have any income restriction. This housing is targeted toward “manager-level” employees with family income that could exceed the maximum of 120% -200% AMI. Because this housing is not required as mitigation for another development and is voluntary, this deed restriction should be acceptable to the county.

The bottom floor will be approximately 2,000 sf of office space for resort support use or other ancillary and/or historic businesses operating on resort property such as the Snake River Sporting Club, , Snake River Sporting Club Improvement Service District (ISD), Snake River Sporting Club Owners Association (HOA), Astoria Park Conservancy and High Mountain Heli-Skiing.

The proposal also contemplates a bus shelter for potential future community bus or ride share transit options as well as potential future bicycle connectivity to the Pathway system via Johnny Counts Road.

To achieve this proposal the following sequence of actions and applications considered herein will require approval by the Board of County Commissioners:

1) A PUD amendment to initiate the change. This is considered a major amendment due to the increase in intensity with the addition of office space. Employee Housing IS exempt from a square footage calculation as per the master plan in Area I.
2) A text amendment is required to complete the following:
    a. To update language in the Master Plan that clarifies the ability transfer of a dwelling unit within Sub Area II of SCRRR so that the dwelling unit at Lot 23 can be moved up on to the bench in between Lots 24 and 25 to create proposed lots 29,30, and 31.
    b. To update language in the Master Plan that clarifies the workforce housing is excluded from floor area calculations as a similar note to what is contained in Area I.
    c. To update language in the Master Plan to add "Resort Support Use" to the Use Table for Sub Area II to allow for Employee Housing.
    d. to update the LDRS which also contains language from the Master Plan. See Text Amendment finding and Section 5 for marked up LDR pages for SRCRR.
3) A Development Plan for the employee housing and office building on Lot 23.
4) A Development Plan on Lots 24 and 25, which will receive the density transfer, and become proposed lots 29, 30, and 31.

Subsequent to the approval of this application, the applicant will then submit a separate subdivision application to re-plat lots 24 and 25 into proposed lots 29, 30, and 31 of The Ranch Homes.

D. FINDINGS FOR APPROVAL

I. 8.2.13.D Planned Unit Development Amendment Findings for Approval
See 8.7.3.D and:

1. PUD Option Available*. An amendment to an existing PUD shall, to the maximum extent practicable, meet the standards for the PUD option found in Article 4.*

Not Applicable. The Resort PUD is no longer available in the LDRs.

2. PUD Option No Longer Available. *An amendment to an existing PUD or other special project identified in 1.8.2.C for which the original PUD option is no longer available shall:*

a. Improve the implementation of the desired future character of the area identified in the Jackson/Teton County Comprehensive Plan;

Complies. Common Value 3 of Community Character is Quality of Life, of which Principles 5.1 through 5.4 are devoted to Workforce Housing. Through the density transfer proposed in this application, a lot (Lot 23) will be available for employee housing units to be built on site, in an area where there are otherwise no other affordable options. Without this density transfer, there would be no available space for employee housing at Snake River Canyon Ranch Resort.

b. Comply with the requirements of the underlying base zoning to the maximum extent practicable;

Complies. The base zoning for the area is Planned Resort, governed by the Master Plan. It allows for 7 units in Sub Area II, which this proposal will not change. All dimensional limitations for development will also remain unchanged. There are 6 remaining units in Sub Area II. Lot 23, combined lots 2 and 3 of the Canyon Homes which now has one existing dwelling unit on it after the second unit was moved up to Sub Area III to be made part of the Lodge, and lots 24, 25, 26, and 27 of the Ranch Homes up on the bench.

c. Complies with the standards of the Natural Resource Overlay (NRO) and Scenic Resources Overly (SRO), if applicable;

Complies. See **Section 5** of this application for a Visual Resource Analysis showing compliance with the standards of the SRO. Environmental analysis has been completed and accepted by the County in compliance with the standards of the NRO. All development will proceed according to these requirements.

d. ***Not adversely impact public facilities and services, including transportation, potable water and wastewater facilities, parks, schools, police, fire, EMS facilities.***

Complies. The transfer of an entitled density unit within Sub Area II will not adversely affect any public facilities or services as it is not adding new density to the area which is already sufficiently served.

II. 8.7.3.D. Planned Unit Development - Findings for Approval

1. ***The extent to which the PUD enhances the implementation of the desired future character for the land of the proposal beyond what could be achieved by base zoning.***

Not Applicable: The proposal herein seeks to amend an existing, previously approved PUD. Considering the PUD was previously approved and PUR-PR zoning is currently in place on the subject property, Teton County has found that the PUD enhances the implementation of the desired future character for the land of the proposal beyond what could be achieved by base zoning.

2. ***The findings for the applicable PUD option found in Article 4.***

Not Applicable. The Planned Unit Development-Planned Resort (PUD-PR) is no longer a PUD option contained within Article 4 the LDRs. This application will be reviewed as an amendment of an existing PUD. See above in Section 1.D.I on page 8.

3. ***The applicable findings for the amendment of an existing PUD or other special project found in 8.2.13.D.***

   Complies. See above in Section 1.D.I on page 8.

4. ***The findings of Sec. 8.7.1.; and***

   Complies. Please see discussion below under Section 1.D.IV - 8.7.1.C. LDR Text Amendment Findings for Approval.

5. ***The findings of Sec. 8.7.2.***

   Not Applicable. A Zoning Map Amendment is not necessary as part of this application.

III. Division 8.3.2.C. Development Plan Findings for Approval

In this section, we will address both the Development Plan for proposed the Employee housing and Office use on Lot 23 and the reconfiguring of proposed lots 29, 30, and 31 due to the density transfer via the PUD Amendment. These will be addressed separately as "Proposed lots 29, 30, and 31" and "Employee Housing/Office" under each of the findings below.

1. ***Is consistent with the desired future character for the site in the Jackson/Teton County Comprehensive Plan.***

   Proposed lots 29, 30, and 31: **Complies**. This development falls within District 8.3: River Bottom/Canyon Corridor of the Comprehensive Plan. The goals for this area are largely conservation-oriented, with an emphasis on preservation of scenic quality and reducing impacts to wildlife. No new units are contemplated as part of these three lots, which are already part of a clustering form of development, with the more intensive, short-term uses concentrated up on the bench, away from the river and largely on previously agricultural land. The building envelopes and all development on these lots will follow the stipulations of the SRO and NRO (see below), thereby respecting the resources this District seeks to preserve.

   Employee Housing/Office: Complies. This development falls within District 8.3: River Bottom/Canyon Corridor of the Comprehensive Plan. The goals for this area are largely conservation-oriented, with an emphasis on preservation of scenic quality and reducing impacts to wildlife. The housing and office space contemplated in this development plan contribute to wildlife safety by reducing commuter traffic on Highway 89, which is an important wildlife corridor. In addition, the applicant proposes to grant an easement to Astoria Park that will allow park visitors to access the river through Lot 23, which supports Common Value 3, 6.1.b, eco-tourism, via public access. The plan also provides future areas for resort support services such as office space for HOA, ISD, Park or High Mountain Heli Staff.

2. ***Achieves the standards and objectives of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable.***

   Proposed lots 29, 30, and 31: **Complies.** The subject property is in both the NRO and SRO. Via the density transfer up on the bench and away from the highway, river and riparian areas, the units are clustered thus reducing their overall impact to natural resources protected by the NRO. Sub Area II can be seen from the highway and a visual resource analysis is included with this application to show the screening achieved through natural vegetation and topography to minimize and / or negate the visual impact of the development, complying with the standards of the SRO. Screening a single 2 story structure with a 2,000 sf footprint is more achievable that one that potentially can have up to 10,000 sf spread out over multiple structures as currently entitle for Lot 23.

   Employee Housing/Office: Complies. See above for Proposed lots 29, 30, and 31**.**

3. ***Does not have significant impact on public facilities and services, including transportation, potable water and wastewater facilities, parks, schools, police fire, and EMS facilities.***

   Proposed lots 29, 30, and 31. Complies. This project is served by community water and wastewater systems. See Section 2 (Engineer's Report), Sub-section K, for more details regarding the Waste Water and Well Supply, and DEQ permits. As conditioned in PUD 2015-0002, this development does not have significant impacts on transportation infrastructure. This proposal does not result in an increase in the entitled residential development previously approved for the Resort and it will not generate additional impacts on parks, schools, police, fire or EMS facilities, as these are all planned for already.

   Employee Housing/Office: Complies. The employee housing contemplated by this application will reduce road use and traffic in the area, with the associated potential reduction of collision risk between other vehicles and wildlife. The community wastewater and water systems are sized sufficiently to accommodate the increase in use from residences and office space (see Engineer's Report – Section 2).

4. ***Complies with all relevant standards of these LDRs and other County Resolutions.***

   Proposed lots 29, 30, and 31: Complies. This PUD amendment complies with all applicable standards of the Master Plan, LDRs and other County Resolutions. There will not be any added overall density to the development, and all dimensional standards and other requirements will be adhered to.

   Employee Housing/Office: Complies. The project will comply with all relevant standards in the LDRs and Master Plan, including those of the NRO and SRO.

5. ***Is in substantial conformance with all standards or conditions of any prior or applicable permits or approvals.***

   Proposed lots 29, 30, and 31: Complies. See **Section 3** for detailed accounting of all previously approved permits, text and zoning map amendments, and the requisite conditions that carry through to this permit application.

   Employee Housing/Office: Complies. See above for Proposed lots 29, 30, and 31.

IV. Division 8.7.1.C LDR Text Amendment

This text amendment is necessary to update Section 4.3.6.D.2 of the lDRS. See Section 5 for the marked up section of text proposed for change to support this application.

1. ***Is consistent with the purposes and organization of the LDRs;***

   Complies. This text amendment is consistent with the purpose and organization of the LDRs and does not introduce any inconsistencies or conflicts. The location of the text amendment is coherent.

2. ***Improves the consistency of the LDRs with other provisions of the LDRs;***

   Complies. This text amendment will be consistent with the PUD Amendment, if it were to be approved, improving the internal consistency of the LDRs.

3. ***Provides flexibility for landowners within standards that clearly define desired character;***

   Complies. This text amendment will allow for the transfer of a residential unit within the same subarea of the resort to better locate development where it is desired and allow for other desired uses that benefit the community in the previous location. The support of the desired character of the area has been addressed in Section 1.D.II. above.

4. ***Is necessary to address changing conditions, public necessity, and/or state or federal legislation;***

   Not Applicable.

5. ***Improves implementation of the Comprehensive Plan; and***

   Complies. This text amendment will allow for an alternative use of the property the unit is being transferred that is in concert with Common Value 3 of Community Character - Quality of Life, of which Principles 5.1 through 5.4 are devoted to Workforce Housing.

6. ***Is consistent with other adopted County Resolutions.*** **Complies**.

E. PROPOSED DEVELOPMENT PROGRAM

I. Development Summary/Dimensional Limitations

The development program for **Lot 23** is intended to include three employee housing units, one office space, a driveway, parking, a bus shelter and a potential public access easement. See site plan in Section 4 of this application. The three employee housing units would consist of 2,000 sf total, broken up into two (2) 550 sf studios and one (1) 900 sf 2-bedroom unit. The office space would be on the ground floor reserved for Resort business or businesses operating on the property. The parking area would be for the office and employee housing residences. Employee housing would be deed restricted as Work Force Housing with no income limit as per Teton County rules.

The development program for proposed lots 29, 30, and 31 are single family residences that have a maximum scale of development as allowed by the Sub Area listed below. Each of these also have a short-term rental use attached to them.

II. Maximum Scale of Development

Individual residential units are limited to 10,000 sf and governed by the Master Plan.

III. Structure Location and Mass (Setbacks)

Structure locations and uses will be confined to their allowed areas as per the Master Plan and underlying LDRs. See the site plan in **Section 4** of this application for the intended layout. All development on other lots in Sub Area II is governed by the Master Plan and will be constructed within those parameters. See below.

Site Development Max	Street Setback Min	Side Setback Min	Rear Setback Min	Height Max	FAR Max
GSA (0.4) +15,007sf	5’	5’	5’	30’	10,000sf +100sf/acre>10

The Master Plan includes building envelopes for each Lot, which require approval from the Snake River Sporting Club Owners Association for any changes. Building envelopes for proposed lots 29, 30, and 31 have been approved tentatively by Teton County in EVA2021-0003. In addition, all development is required to be located outside of the Teton County Scenic Preserve Trust and/or Jackson Hole Land Trust conservation easement areas. The development contemplated in this application will respect the boundaries of these easements.

IV. Building Designs

Will be confirmed during future building permit submittals.

V. Site Development & Landscape Surface Ratio (LSR)

Will be confirmed during building permit submittals.

F. LANDSCAPING

The applicant will provide landscape plans at building permit.

G. ENVIRONMENTAL STANDARDS

I. Natural Resource Buffers - All development planned within this permit application complies with these buffers. See Site Plan in Section 4 for details and below for buffers.

Rivers	150’
Streams	50’ or edge of riparian plant community up to 150’
Natural Lakes or Ponds	50’ or edge of riparian plant community up to 150’
Wetland	30’

II. Irrigation Ditch Setback - There are no irrigation ditches running through the properties contemplated in this plan. Irrigation ditch setbacks are 15’.

III. Wild Animal Feeding - As per Division 5.1.3 of the LDRs wild animal feeding is prohibited in Sub Area II.

IV. Natural Resource Overlay (NRO) - The entirety of Sub Area II is within the NRO which requires that any development conduct and submit an Environmental Assessment (EA). For Proposed lots 29, 30, and 31, updated EAs were submitted and approved by County Planning and can be found in **Section 6** of this application.

V. Bear Conflict Area Standards - Sub Area II is entirely within Bear Conflict Priority Area I and will comply with all standards of Division 5.2.2 of the LDRs which include specific measures for storage of garbage and the use of bird feeders.

H. SCENIC STANDARDS

I. Exterior Lighting - All proposed exterior lighting standards will be complied with at building permit to eliminate or reduce the nuisance and hazards of excessive exterior lighting.

II. Scenic Resource Overlay (SRO) Standards - Part of the proposed development is in the Snake River Canyon Scenic Area and subject to the standards of the SRO. A Visual Resource Analysis for Lot 23 has been performed and is included in this application in Section 5.

I. NATURAL HAZARDS TO AVOID

There are no steep slopes, avalanche hazards, unstable soils, or fault lines within or near the proposed development area.

I. Steep Slopes – all development will occur in building envelopes that are not encumbered by steep slopes

II. **Areas of Unstable Soils-** see Engineers Report – Section 2

III. **Fault Areas -** No active faults are mapped on or near the proposed Employee Housing

IV. **Floodplains -** Lot 23 is in Flood zone A, map 56023C0057D. A Floodplain development permit may be required unless the building can be relocated outside flood zone A.

Proposed lots 29, 30, and 31 are in Flood zone X and not a concern

V. **Wildland Urban Interface**
Sub Area II is entirely within the Wildland Urban Interface and shall comply with the International Wildland Urban Interface Code, 2012 edition, as per the Fire Code Resolution of the LDRs.

J. SIGNS

There is no proposed signage at this time. Any future proposed signage will comply with the Master Plan and the Architectural Review Board sign standards already approved.

K. GRADING, EROSION CONTROL

See Engineer's Report in Section 2.

L. STORMWATER MANAGEMENT

See Engineer's Report in Section 2.

M. USE STANDARDS

I. Allowed Uses

The proposed uses in this application include Resort Support Use (office space and employee housing). The Resort Support Use of office space is not currently permitted in the Sub Area II Use Table, and this application proposes to amend Section 2.2.C.1 Use Standards, in the Master Plan to include "Resort Support Use."

II. Use Requirements

1. **Parking –** See Engineers report in Section 2

2. **Employees Required to be Housed –** The Office Use may require a portion of f person for mitigation which would likely result in a fee in lieu. There are other factors at play with previously submitted applications that may affect this calculation. The applicant will work with the Housing Department to determine this requirement as part of the approval of this application.

III. Maximum Scale of Use

Single Family Units are allowed 10,000sf of habitable floor area.

IV. Operational Standards

1. **Outside Storage**
   All development will comply with the standards in 6.4.1 of the Teton County LDRs. No unusual circumstances are anticipated in the area of Outside Storage.

2. **Refuse and Recycling**
   All refuse and recycling will be handled on site within a bear resistant outdoor enclosure.

3. **Noise**
   No noise shall exceed the maximum sound levels described in Section 6.4.3.A.

4. **Vibration**
   N/A.

5. **Electrical Disturbances**
   N/A

6. **Fire and Explosive Hazards**
   No fire and / or explosive hazards are anticipated at this site.

7. **Heat and Humidity**
   All uses shall conform with the standards set forth in Section 6.4.7 of the Teton County LDRs.

8. **Radioactivity**
   N/A

N. RESIDENTIAL SUBDIVISION REQUIREMENTS

Upon approval of this application a plat will be filed to replat lots 24 and 25 to proposed lots 29, 20, and 31.

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SECTION 2 – ENGINEER'S REPORT

A. INTRODUCTION

This Engineer's Report discusses the engineering related subjects relative to this development of one building with three two-bedroom employee housing units, and one office space on the 7.8 acres of Lot 23 The River Homes of the Snake River Canyon Ranch subdivision. Additionally, the two existing lots, 24 and 25, are contemplated as three proposed lots, 29, 30 and 31. Supporting infrastructure will be extensions of the existing lines and facilities constructed as part of the Snake River Canyon Ranch Resort and Astoria Park started in 2003 with updates finished in 2022. The basic layout and design elements are shown on the plan set attached in Section 4 and the general engineering items are discussed here.

B. SETTING

Historically the lands occupied by the Snake River Sporting Club were hay meadow, range land, and natural riparian lands adjacent to the Snake River in the Snake River Canyon between Hoback Junction and Alpine. With the development of the Astoria Park and Snake River Canyon Ranch Resort, the golf course, and residential home sites, infrastructure was installed to support the development. Shrub, hillside rangeland, riparian cottonwood forests, and meadow grass are the predominant types of ground cover surrounding the site today.

C. SOILS AND SITE CONDITIONS

Based on geologic mapping, soils on Lot 23 are dominated by transported alluvial deposits which create a terraced depositional environment. Composition is variable and ranges from clay to gravel and cobble-sized particles. Natural hot springs are present and bedrock benches are visible to the south of the lot.

D. GROUNDWATER, STREAMS, & RIVERS

Groundwater on Lot 23 is regularly monitored for the Wyoming Department of Environmental Quality Underground Injection Control Permit (UIC) associated with the community leachfield that is located on the southern portion of the lot. Groundwater has been observed to be - 4' 6' below ground surface. Building foundations will need to take into account the elevation of groundwater. Natural hot springs are present and the groundwater temperatures are elevated in the area. Proposed lots 29, 30, and 31 are located up on the bench where groundwater is not an issue.

Lot 23 is adjacent to the Snake River that comprises the boundary of the property to the north and west. There are wetlands on site as documented by EVA2020-0003. There is a hot spring that surfaces on Lot 23 near the southwest property corner above the Snake River. There are no other streams on the site. Surface drainage and wet areas are prevalent in areas on the lot, across the road, and on adjacent properties. Proposed lots 29, 30, and 31 are located up on the bench with no streams or drainages on site. For all lots, spring snow melt and large rainstorms have the potential to create surface runoff. No obvious runoff channels exist, and no concentrated flows are expected.

E. GRADING, EROSION CONTROL, DRAINAGE, & STORMWATER

Development on Lot 23 and proposed lots 29, 30, and 31 leave extensive green space and natural ground. These areas are sufficient to accommodate stormwater runoff. Space around the future buildings provides adequate area for local detention and there is ample space to create areas for infiltration should the runoff exceed the local detention.

While no significant increase in runoff from the development is expected, there will be control strategies employed to manage the runoff. The general control strategy is to create small detention areas throughout the site to intercept runoff before it has an opportunity to concentrate and cause damaging erosion. Culverts will be installed underneath roadways to convey runoff to detention areas where necessary.

Soils in the area are erodible and erosion control strategies to limit the concentration of runoff, reduce runoff velocities, and armor the soils in place will be implemented. Efforts to limit sediment transfer from the property to the Snake River will be important to have in place prior to any construction activities.

F. ROADS AND ACCESS

Access to Lot 23 is over the Astoria Bridge from Highway 89 and along River Bend Road. The lot is located immediately to the right as you exit the bridge. The Astoria Bridge (Red Bridge) is a one lane bridge with a limited load rating and clearance. The heaviest and largest loads heading for Snake River Sporting Club use an historic Forest Service Access Road crossing the Snake River at Rodgers Point and travels along an old two-track gravel road. Once in the subdivision the roads are a minimum of 20 feet wide.

Access to the Employee Housing and Office Building will be a two-way 20 feet wide access drive meeting Teton County access drive standards. A 5 feet wide path from Johnny Counts Road into the building is proposed along the access drive. A bus station pullout is provided along Johnny Counts Road at the beginning of the access drive.

The access to proposed lots 29, 30 and 31 is via River Bend Road and Elk Ridge Road, both 20 ft. wide meeting Teton County access drive standards. Long term viability and responsibility for the Astoria bridge is the responsibility of the Snake River Sporting Club Improvement and Service District (SRSC ISD).

G. TRAFFIC

Traffic trip changes expected with the employee housing and office development, and transfer of density are expected to be minimal. Net traffic from single family residences will stay the same with no new residential lots added. The single family lots will be rearranged within the same overall development, with no new density change. The employee housing and office use should also result in minimal changes. The proposed office use will be a relocation of office use from the Snake River Sporting Club Clubhouse. This relocation may result in additional internal trips, however no new trips

outside the development are expected. Snake River Sporting Club is a members only private club, the removal of the office uses in the Clubhouse may result in more member activity at the Clubhouse. Therefore, internal trips may increase, but external trips should remain constant depending on the type of additional activities. The addition of employee housing at this location will result in no new added work-related trips with employees living on site, however there will be an increase in external domestic trips. With only three employee housing units the increase should be minimal. Additionally, the new public transit stop near the employee housing and office space may also decrease vehicles entering and exiting the development, either for work, recreation or residential use.

H. PARKING

There will be 14 parking spaces at the Employee Housing and office building on Lot 23. The parking calculation was performed using an independent calculation per the Master Plan. 3.3 spots/1,000 sf was used for the 2000 sf of office space and 2 spaces per employee housing unit. Required parking is calculated as 13 spaces while 14 spaces are provided.

I. PATHWAYS

A pedestrian pathway is designed from the bus station pullout along the access drive to the parking lot and employee/office building. The alignment of this path will allow connection from the employee housing building to the bus station on the main road into and out of the Resort.

J. WATER

The employee housing and office building will be served by the Snake River Sporting Club ISD water system. The water system consists of three supply wells, a 200,000 gallon concrete storage tank, supply, transmission, distribution, and service piping. The water system was originally sized for the development potential of both the Snake River Sporting Club and the Snake River Canyon Ranch. The combined demands of those developments were used in sizing the original system with two wells. A third well was built and integrated into the system in 2022. The water system now has redundancy and excess capacity for this and future development at the resort.

Water demands for this development are estimated at 2800 GPD on the maximum day. The early water use projections for the design of the water system included an allowance for employee housing. These water demands anticipate the use of water saving devices and limited lawn and landscape watering.

4" main will be constructed to provide domestic and fire suppression water supply to the building. A Wyoming Department of Environmental Quality Permit to Construct will be required. The permitting documents will be prepared once the development is approved in concept.

K. WASTEWATER

Wastewater treatment and disposal for the Employee Housing Building and Office is through the Snake River Canyon Ranch Underground Injection Control (UIC) septic system. The system is an effluent pressure sewer collection system with disposal of effluent in a pressure dosed disposal field (leachfield) on Lot 23 directly adjacent to River Bend Road. The system currently collects wastewater

from Astoria Park, one single family residence, the gate house, and the employee housing building located above the gate house. See attached Astoria Utility Plan in Section 4.

The wastewater system is permitted under WYO DEQ UIC 13-100 as the Snake River Canyon Ranch Class V Septic System. It is permitted for a discharge of up to 21,285 gallons per day. The disposal field is 50% built out with space reserved for a replacement of the entire area designated for in-ground wastewater disposal. The projected wastewater flows from the Employee Housing and Office use are estimated to be 1,280 gpd on the maximum day and 780 gpd for the average day. The constructed disposal area is sufficient to accommodate the existing uses and the addition of the Employee Housing and Office development. The WYDEQ permit requires regular reporting of discharge flows as part of the permit. Teton County Engineering will require a Small Wastewater Facility permit for the septic tank and lift station system that will connect into UIC system.

L. CABLE UTILITIES AND GAS

Power and communication lines are currently available at Lot 23 and proposed lots 29, 30, and 31.

M. SNOW STORAGE

Lot 23 and proposed lots 29, 30, and 31 are all large parcels of land that will be able to accommodate any snow storage generated for the uses contemplated for those sites.

SECTION 3 – RESPONSES TO PREVIOUS CONDITIONS OF APPROVAL

A. CONDITIONAL USE PERMIT FOR THE SNAKE RIVER SPORTING CLUB (THE CLUB) - CUP-2015-0003

Approved based upon finding that the application meets the findings in Section 8.4.2.C of the Teton County Land Development Regulations as discussed in the staff report with the conditions as listed in the BCC Condition column of the BCC Condition Discussion Table dated September 17, 2015.

1. *Approval of these applications is contingent upon the subsequent approval of PUD2015-0002, ZMA2015-0002, and AMD2015-0003. If those applications are not approved, this approval shall be rendered null and void.* **Status: Approved.**
2. *Prior to November 5, 2018, the applicant shall submit an application for a Development Plan for employee housing adequate to accommodate a minimum of 14.75 employees on property located south of the Astoria Bridge through construction of an employee housing building, deed restriction of lots within Sub Area III, or a combination of these methods. The applicant may use the employee housing proposal approved in 2003 (as modified by MDV2008-0004) as a template for the proposed housing. The applicant shall not be limited to the original floor plans provided the proposed structure is determined upon review to adequately house 14.75 people. Failure to proceed through the application process and obtain necessary permits and/or to complete deed restriction of a lot by this date shall result in revocation of the Conditional Use Permit for the golf course. At the time of submittal of a grading permit, a final mitigation plan as detailed in the EA conditions shall be required to be submitted, subject to review and approval by the Planning Director.* **Status: Approved**

3. *No dike, levee or retaining wall shall be constructed in the Snake River, its floodway or floodplain for bank stabilization, erosion control, or other purpose, nor shall the bank height be altered. No bendway weir or other bank stabilization measure (but not dikes, levees or retaining walls) shall be used on the Snake River, its floodway, or floodplain unless authorized by the governmental entity having primary jurisdiction over the subject matter, or, by each governmental entity having concurrent jurisdiction over the subject matter, which includes Teton County.* **Status: Ongoing.**

4. *All development shall be setback 15 feet from the edge of all irrigation ditches, man-made ponds, and other water features not of natural origin. Verification of compliance shall be made by field inspection upon construction.* **Status: Ongoing.**

5. *The following mitigation measures shall be implemented (see the Development Impact Assessment by Pioneer Environmental Services dated October 2001 for original recommendations):*
    a. *Woody debris shall be retained in streams and undeveloped forested areas and firewood collection shall be prohibited.*
    b. *Snags (standing dead trees) shall not be removed/felled during construction, operation, or use of the project area unless absolutely necessary to provide for public safety.*

c. *Only minimal disturbance of existing trees and natural habitat shall be permitted around homes. In cases where trees must be removed for construction, they shall be selectively cut.*

d. *All livestock grazing, including horses, shall be removed from sensitive riparian areas on the Canyon Club property.*

e. *Removal of mature trees shall be done with special devices, when feasible, that will allow them to be reestablished in appropriate areas likely to be beneficial to bald eagles.*

f. *Landscaping in the immediate vicinity of residential units shall consist of species not palatable to ungulates.*
Status: Ongoing.

6. *All fencing shall comply with Section 5.1.2, or its current equivalent, except as provided in the open space easements for River Bend Ranch properties where "elk-proof" fencing may be permitted immediately adjacent to hay storage, and except that temporary elk-proof fencing may be installed around the greens on the golf course during fall, winter and spring to prevent greens from becoming a food source for migrating ungulates.* **Status: Ongoing.**

7. *Each year, the owner of the golf course shall submit an Annual Operation Plan and Monitoring Program in accordance with the outline approved as part of the Development Plan and in accordance with the requirements of LDR Section 6.1.3, or its current equivalent.*
Status: Ongoing.

8. *Clubhouse shall be no more than 23,000 square feet of gross floor area, including basements and partial levels such as lofts and interior balconies.* **Status: Complies.**

9. *All golf course buildings and structures over four feet in height shall be setback 50 feet from the perimeter of the golf course parcel.* **Status: Ongoing.**

10. *A traffic counter, capable of capturing peak hour counts, shall be installed within 60 days of issuance of the permit with the capability to capture daily and hourly traffic counts during peak operations across the single lane bridge. The traffic counter shall be in place and operational year round. Traffic count reports including daily and peak hour counts shall be summarized and reported annually. An observational traffic movement study shall be conducted annually in July during one calendar week during normal operational hours (defined as 7 am to 6 pm) to observe and document actual vehicle queuing/stacking and peak hour traffic counts for both weekday and weekend timeframes. This study shall be conducted by an independent qualified engineering firm with an individual with experience in transportation/traffic engineering. This study shall also produce a qualitative functional analysis (level of service). This annual study shall be provided to the County Engineer. If during the reporting time, vehicle stacking into the US 89 clear zone (30') is observed (with the exception of any special event that implements traffic control) the applicant shall be required to implement a mitigation plan to reduce the vehicle queuing length to be outside of the 30' clear zone of US 89. Mitigating measures including, but not limited to, installing traffic signals, controlling the number of vehicles*

entering the site, various traffic demand management tactics or improvements to the bridge facility shall be required. **Status: Traffic Counter has been installed and is currently collecting data. Study has been completed and is submitted under a separate cover on an annual basis.**

11. *Prior to issuance of any physical development permit associated with the golf course, including but not limited to physical development permits required for the allowed ancillary platform tennis courts, or for the swimming pool proposed by this application, the applicant shall be required to vacate Lots 96 and 97 as originally required by DEV2013-0011 (see the staff report associated with that permit for more information).* **Status: Completed and Recorded.**

12. *Should expansion of golf course operations, maintenance activities, or other ancillary uses beyond the 1.4-acre area identified in this application be proposed in the future, prior amendment of the CUP to reflect the increased area is required.* **Status: A CUP amendment has been submitted to relocate the Maintenance facility onto the Golf Course Lot.**

B. DEVELOPMENT PLAN FOR A PLANNED RESIDENTIAL DEVELOPMENT – DEV2015-0002

Was approved based upon finding that the application meets the findings in Section 8.3.2.C of the Teton County Land Development Regulations as discussed in the staff report with the conditions as listed in the BCC Condition column of the BCC Condition Discussion Table dated September 17, 2015.

1. *Approval of these applications is contingent upon the subsequent approval of PUD2015-0002, ZMA2015-0002, and AMD2015-0003. If those applications are not approved, this approval shall be rendered null and void.* **Status: Approved.**

2. *All garages shall be setback 20 feet from a vehicular access easement or road right-of-way and all other structures shall be setback a minimum of 10 feet from all vehicular access easements, road rights-of-way, and property lines.* **Status: Ongoing.**

3. *No dike, levee or retaining wall shall be constructed in the Snake River, its floodway or floodplain for bank stabilization, erosion control, or other purpose, nor shall the bank height be altered. No bendway weir or other bank stabilization measure (but not dikes, levees or retaining walls) shall be used on the Snake River, its floodway, or floodplain unless authorized by the governmental entity having primary jurisdiction over the subject matter, or, by each governmental entity having concurrent jurisdiction over the subject matter, which includes Teton County.* **Status: Ongoing.**

4. *Under no condition will development occur within 15 feet of Martin Creek and all vegetation in that zone shall be native.* **Status: Ongoing.**

5. *The introduction of water in excess of 3 cfs is allowed into Martin Creek to provide for cutthroat trout spawning habitat improvement, subject to the issuance of appropriate permits by Teton County, Wyoming State Engineer, and the United States Army Corps of Engineers. The setback from Martin Creek will not be required to be greater than 15 feet.* **Status: Ongoing.**

6. *All development shall be setback 15 feet from the edge of all irrigation ditches, man-made ponds, and other water features not of natural origin. Verification of compliance shall be made by field inspection upon construction.* **Status: Ongoing.**

7. *The following mitigation measures shall be implemented (see the Development Impact Assessment by Pioneer Environmental Services dated October 2001 for original recommendations):*
    a. *Woody debris shall be retained in streams and undeveloped forested areas and firewood collection shall be prohibited.*
    b. *Snags (standing dead trees) shall not be removed/felled during construction, operation, or use of the project area unless absolutely necessary to provide for public safety.*
    c. *Only minimal disturbance of existing trees and natural habitat shall be permitted around homes. In cases where trees must be removed for construction, they shall be selectively cut.*
    d. *All livestock grazing, including horses, shall be removed from sensitive riparian areas on the Canyon Club property.*
    e. *Removal of mature trees shall be done with special devices, when feasible, that will allow them to be reestablished in appropriate areas likely to be beneficial to bald eagles.*
    f. *Landscaping in the immediate vicinity of residential units shall consist of species not palatable to ungulates.* **Status: Ongoing.**

8. *Building permit applications for structures located within any "blue zone" as shown in the Snow Avalanche Mapping and Hazard Analysis prepared in April 2002 or as subsequently updated, shall be accompanied by demonstration that the building design has received a stamp of approval by a structural engineer. The building design shall also be reviewed by an Avalanche-control engineer, or similarly qualified person, and shall be approved only if no change in the snow avalanche mapping and hazard analysis is found for potential surrounding buildings, i.e. a proposed building design shall not cause the snow avalanche mapping for a neighboring lot to change from blue zone to red zone. All platted lots in an avalanche zone shall show this on the plat and all lots accessed through an avalanche zone shall show this on the plat.* **Status: Ongoing.**

9. *A traffic counter, capable of capturing peak hour counts, shall be installed within 60 days of issuance of the permit with the capability to capture daily and hourly traffic counts during peak operations across the single lane bridge. The traffic counter shall be in place and operational year round. Traffic count reports including daily and peak hour counts shall be summarized and reported annually. An observational traffic movement study shall be conducted annually in July during one calendar week during normal operational hours (defined as 7 am to 6 pm) to observe and document actual vehicle queuing/stacking and peak hour traffic counts for both weekday and weekend timeframes. This study shall be conducted by an independent qualified engineering firm with an individual with experience in transportation/traffic engineering. This study shall also produce a qualitative functional analysis (level of service). This annual study shall be provided to the County Engineer. If during the reporting time, vehicle stacking into the*

US 89 clear zone (30') is observed (with the exception of any special event that implements traffic control) the applicant shall be required to implement a mitigation plan to reduce the vehicle queuing length to be outside of the 30' clear zone of US 89. Mitigating measures including, but not limited to, installing traffic signals, controlling the number of vehicles entering the site, various traffic demand management tactics or improvements to the bridge facility shall be required. **Status: Traffic Counter has been installed and is currently collecting data. Study has been completed and is submitted under a separate cover on an annual basis.**

C. AMENDMENT TO PLANNED UNIT DEVELOPMENT FOR SNAKE RIVER CANYON RANCH RESORT (THE RESORT) PLANNED RESORT – PUD2015-0002

Was approved pursuant to the standards for an amendment outlined in Section 4.3.1.E.8.a, rather than the standards for a reconsideration under Section 4.3.1.E.8.d., based upon finding that the application meets the findings in Section 8.7.3.D of the Teton County Land Development Regulations as discussed in the staff report with the conditions as listed in the BCC Condition column of the BCC Condition Discussion Table dated September 17th, 2015.

1. *Prior to issuance of a Development Plan or Conditional Use permit for Sub Area III of the resort, the applicant shall either record a deed restriction, in a form acceptable to the Teton County Housing Authority, limiting the use of Johnny Counts Cabin to housing and office for employees of the Astoria Hot Springs Park or otherwise employed in Teton County or build onsite housing for four Teton County or Astoria Park employees. Preference shall be given to employees of Astoria Hot Springs Park.* **Status: Employee Housing Building is almost complete Certificate of Occupancy is expected in July 2022.**

2. *Prior to approval of any Use, Physical Development, or Development Option permit for any phase of the resort, the applicant shall propose amendments to the CC&Rs applicable to those seven lots to ensure the transfer fee requirement is imposed through the CC&Rs and that the applicable provisions of the CC&Rs cannot be amended without prior approval of the Board of County Commissioners. The Board of County Commissioners shall review and approve the CC&R amendments prior to recording.* **Status: Complete.**

3. *Prior to approval of any Use, Physical Development, or Development Option permit for any phase of the resort:*
    a. *A new transfer fee agreement, which imposes a 1% transfer fee on the gross sales prices of properties sold within the resort, shall be required between the applicant and Teton County, subject to review and approval by the County Attorney's office, to reflect the lots, parcels, or units subject to the agreement, the amount of the fee-in-lieu obligation, and the structure of payments and dispersal of funds. The new transfer fee agreement shall be subject to approval and signature by the Board of County Commissioners as part of review and approval of the Development Plan for the first phase of the project.*
    b. *The transfer fee agreement shall be recorded against all properties subject to the new transfer fee agreement, to ensure payment of the fees as required.*
    c. *The agreement and payment structure will allow for 100% of fees collected to be paid*

to Teton County for purposes of fulfilling the employee housing obligation until the amount of the fee-in-lieu requirement is paid in full, at which time the agreement shall could be structured to split payment between Teton County and an entity that benefits Teton County School District employees.

d. *Any new transfer fee agreement shall make clear the new obligation to pay a 1% transfer fee shall not be duplicative of any other transfer fee agreement already on the property, whether a separate agreement or an applicable provision in Covenants, Conditions, and Restrictions (CC&Rs).*
Status: Approved and Recorded on July 13th, 2016.

4. *Prior to or concurrent with any application for Development Plan or Building Permit for physical development associated with the hot springs park, the applicant shall be required to obtain a Conditional Use Permit for the entirety of the park use*. **Status: Approved CUP2017-0004**

5. *A traffic counter, capable of capturing peak hour counts, shall be installed within 60 days of issuance of the permit with the capability to capture daily and hourly traffic counts during peak operations across the single lane bridge. The traffic counter shall be in place and operational year round. Traffic count reports including daily and peak hour counts shall be summarized and reported annually. An observational traffic movement study shall be conducted annually in July during one calendar week during normal operational hours (defined as 7 am to 6 pm) to observe and document actual vehicle queuing/stacking and peak hour traffic counts for both weekday and weekend timeframes. This study shall be conducted by an independent qualified engineering firm with an individual with experience in transportation/traffic engineering. This study shall also produce a qualitative functional analysis (level of service). This annual study shall be provided to the County Engineer. If during the reporting time, vehicle stacking into the US 89 clear zone (30') is observed (with the exception of any special event that implements traffic control) the applicant shall be required to implement a mitigation plan to reduce the vehicle queuing length to be outside of the 30' clear zone of US 89. Mitigating measures including, but not limited to, installing traffic signals, controlling the number of vehicles entering the site, various traffic demand management tactics or improvements to the bridge facility shall be required.* **Status: Traffic Counter has been installed and is currently collecting data. Study has been completed and is submitted under a separate cover on an annual basis.**

6. *Prior to issuance of any Use, Physical Development, or Development Option permit associated with any phase of the resort, the applicant shall install appropriate signage, to be approved by the County Engineer, at each bridge end, with traffic required to yield at the SW bridge end.* **Status: Complete.**

7. *Prior to issuance of a Development Plan permit for any phase of the resort, the applicant shall be required to provide the following to the County Engineering office for review, approval, or approval subject to additional conditions and requirements:*
    a. *Documentation of an official agreement with the US Forest Service formalizing Johnny Counts Road/South Hoback Junction Road for emergency access and limited construction access purposes in instances where the load cannot meet the height limits*

of the Astoria Bridge. If an official agreement has not been reached at that time, the applicant shall either provide written documentation from the US Forest Service regarding anticipated timing for an agreement or confirmation that an agreement is not possible, to be submitted to the County Engineer.

b. *Documents necessary for establishment of the proposed Improvement and Service District or HOA-controlled entity which will be charged with operation and maintenance of the bridge, monitoring and submittal of traffic counts as required by other conditions of this approval, development and management of the proposed community traffic awareness program, evaluation, implementation and enforcement of travel demand management strategies, including, but not limited to, those described in the June 23, 2015 memo prepared by Jorgensen Associates, and establishment of a long-term capital plan to create a reserve fund for the eventual capital needs of the bridge.*
Status: Complete.

8. *Within one year of the date of approval of this application, subject to extension by the Planning Director for good cause shown, the applicant shall revise and consolidate the Master Plan as described in Key Issue 4 of the staff report, to the satisfaction of the Planning Director, and record both the Master Plan and Certificate of Standards as required by the LDRs. This condition shall be satisfied before applications for any future phase of the project may be submitted.* **Status: Complete.**

9. *Prior to recording of the approved Master Plan and Standards and Conditions, the applicant shall add sections to the supplemented version of the SRSC Design Guidelines included with this submittal. The additional sections shall address standards for pathways and walkways, landscaping and lighting of common areas, and resort-wide signage.* **Status: Complete**

10. *Within one year of the date of approval of this application, subject to extension by the Planning Director for good cause shown, the applicant shall replat and record the conversion of the 95 acres of park zoned land, amend the CCR's to allow public access to AREA I and begin the process of completing a conservation easement on the park.* **Status: Complete**

11. *Prior to Development Plan approval for any resort development except that associated with the development of the park, the applicant shall be required to submit a revised phasing plan that incorporates necessary infrastructure improvements, any housing requirements, and a monitoring plan with performance measures as required by the LDRs. The revised phasing plan shall be subject to review and approval by the Board of County Commissioners.*
Status: Complete.

12. *Prior to issuance of any Grading or Building Permit, Planning staff shall verify, on behalf of the Teton County Scenic Preserve Trust, that all proposed structures are located outside of the conservation easement area.* **Status: Complete.**

13. *Within one year of the date of approval of this application, subject to extension by the Planning Director for good cause shown, the applicant shall revise the Master Plan to clarify that units transferred from Sub Area II to Sub Area III of the Resort shall be relocated*

consistent with their original approvals with regard to size and mitigation requirements.
Status: Complete.

14. *Due to the highly conceptual nature of Sketch Plans, a Development Plan with full public review, as outlined in Section 8.3.2 of the LDRs, shall be required to establish unit types, footprints, circulation and parking prior to issuance of a Building Permit for any phase of resort development.* **Status: Complete.**

15. *Within one year of the date of approval of this application, subject to extension by the Planning Director for good cause shown, the applicant shall revise the Master Plan to incorporate the dimensional limitations for Sub Area III as presented to the Planning Commission on August 10, 2015, with the following changes:*
    a. *The standard for Maximum Impervious Surface shall be re-labeled Maximum Site Development and shall apply to the entire development, not a lot-by-lot standard. The standard shall be 0.45-0.75*
    b. *The standard regulating APOs shall be eliminated.*
    c. *The standard for minimum Right-of-Way (ROW) width shall be eliminated.*
    d. *The minimum ROW standard shall not apply to access through general common elements or areas*
    e. *A minimum wetland setback of 30 feet shall be incorporated into the dimensional limitations table.*
    f. *A footnote should be added to the dimensional limitations table specifying that in the absence of a specific standard, the currently applicable LDRs shall apply.*
    Status: Complete.

D. LDR TEXT AMENDMENT – AMD2015-0003

Approved LDR Text Amendment AMD2015-0003 with staff's recommended changes to revise the text of Section 4.3.6. of the Teton County Land Development Regulations, based upon finding that with changes to the proposed text as recommended by staff the application meets the findings in Section 8.7.1.C of the Teton County Land Development Regulations as discussed in the staff report, with **no conditions.**

E. ZONING MAP AMENDMENT FOR PARK ZONE – ZMA2015-0002

Approved Zoning Map Amendment ZMA2015-0002 to rezone 101.7 acres of land from Planned Unit Development-Planned Resort Zoning to Park zoning, based upon finding that the application meets the findings in Section 8.7.2.C of the Teton County Land Development Regulations as discussed in the staff report with the conditions as listed in the BCC Condition column of the BCC Condition Discussion Table dated September 17, 2015.

1. *Within one year of the date of approval of this application, subject to extension by the Planning Director for good cause shown, and prior to recording of the Zoning Map Amendment with the Teton County Clerk, the applicant shall demonstrate, to the satisfaction of the Planning Director and the County Attorney, that transfer of the property to a qualified non-profit corporation has occurred.*
   Status: Complete – approved by the Teton County Planning director on July 8th, 2016.

F. SKETCH PLAN FOR A 5.2 ACRE PARK AND TO DEVELOP 62 UNITS AT SUB AREA III OF SRCRR – SKC2015-0001

Approved Sketch Plan SKC2015-0001 based upon finding that the application meets the findings in Section 8.3.1.C of the Teton County Land Development Regulations as discussed in the staff report with the conditions as listed in the BCC Condition column of the BCC Condition Discussion Table dated September 17, 2015.

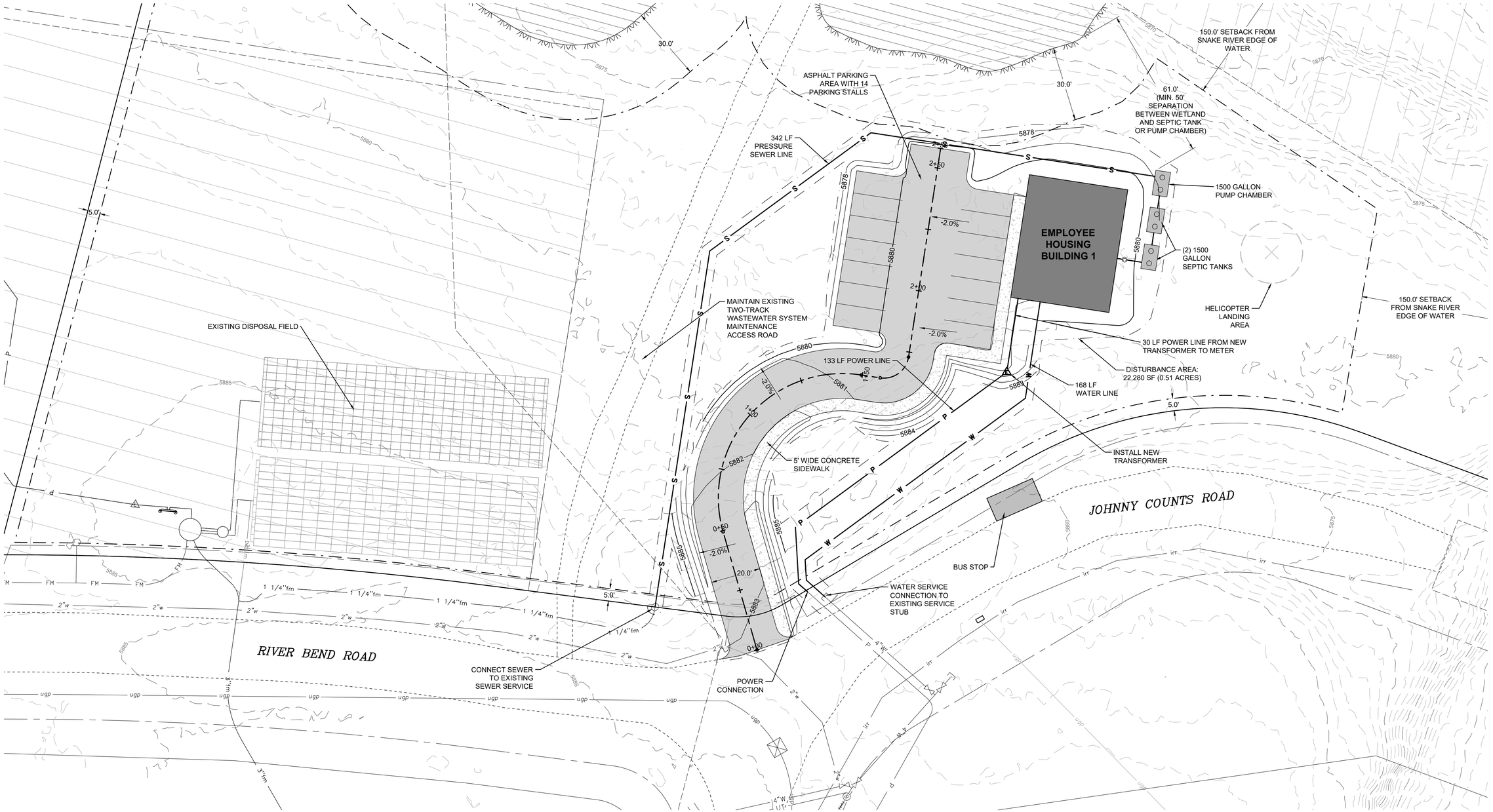
1. *At the time of Development Plan, the applicant shall be required to submit a site plan that adheres to the dimensional limitations established in the amended Resort Master Plan, being reviewed concurrently with this application.* **Status: Complete.**

2. *Prior to approval of a Development Plan or Building Permit for any phase of the resort, the applicant shall be required to provide confirmation from Wyoming DEQ regarding the adequacy of the existing wastewater and water systems or copies of permits to construct for any improvements to or expansions of existing systems or for proposed new systems. This condition does not restrict the issuance of Building Permits for lots within the Snake River Sporting Club Planned Residential Development.* **Status: Complete.**

3. *The applicant shall be required to obtain a Conditional Use Permit for the entirety of Astoria Hot Springs Park concurrently with the first Physical Development permit for the park.* **Status: Complete.**

4. *Prior to approval of a Development Plan for any phase of the development described in this Sketch Plan, the applicant shall be required to submit a more detailed visual analysis of the final bulk and scale proposed, to ensure that development is adequately screened and visual impacts are minimized. Building materials will be confirmed at the time of Building Permit.* **Status: Complete.**

SECTION 4 – DEVELOPMENT PLAN MAPS



JORGENSEN
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PROJECT TITLE:
SNAKE RIVER SPORTING CLUB
LOT 23, THE RIVER HOMES
SNAKE RIVER CANYON RANCH
TETON COUNTY, WYOMING

SHEET TITLE:
SITE PLAN

DRAFTED BY:	KB
REVIEWED BY:	BB
PLAN VERSION	DATE
DEVELOPMENT PLAN	06/27/2022

PROJECT NUMBER
15040.131

SHEET
C1

– PRELIMINARY –
SUBJECT TO CORRECTION AND APPROVAL

SCALE: 1 INCH = 20 FEET
THIS SCALE VALID ONLY FOR 22x34 PRINTS

SECTION 5 – OTHER SUPPORTING DOCUMENTATION

2.2 Standards Applicable to Sub Area II – Legacy Lots and Resort Infrastructure

A. Intent and Purpose

Sub Area II shall have a western character reminiscent of the great mountain lodges of the West but smaller in scale. Development shall have a presentation from the highway that is in scale with the mountain backdrop, have varied roof lines and horizontal planes that visually reduce the bulk and scale of the buildings, and a development pattern that favors a reduction in building footprints to protect the natural resources of the site, thereby minimizing overall impact of development. Development will highlight the natural features of a site, retain the rural atmosphere, and protect habitat and environmentally sensitive areas.

The purpose of Sub Area II – Legacy Lots and Resort Infrastructure is to maintain the entitlements and standards established in the original Snake River Canyon Ranch Resort Master Plan approved on July 6, 1999. These entitlements and standards apply to Lots 2, and 3, The Canyon Ranch Homes, Snake River Canyon Ranch (Plat #1040), Lot 23, River Homes, Snake River Canyon Ranch (Plat #1030), Lots 24, 25, 26 and 27, The Ranch Homes, Snake River Canyon Ranch (Plat #1031).

Map of Sub Area II

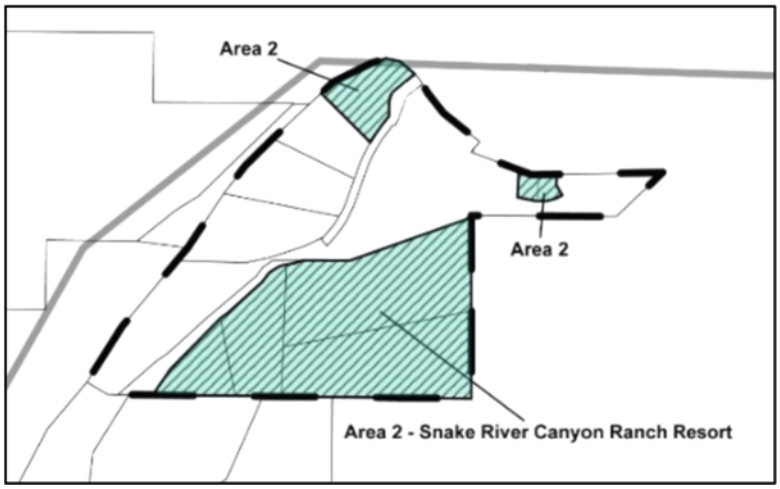


Figure 3**:** Map of Sub Area II – "Snake River Original Lots, for illustration purposes only. See Appendix 2 for legal description

B. Physical Development Standards

Standards applicable to the physical development of Sub Area II are provided within this sub-section. Cross references provided refer to specific sections of the Teton County Land Development Regulations.

B.1. Structure Location and Mass

	Site Development (Max)	Street Setback (Min)	Side Setback (Min)	Rear Setback (min)	Height (max)	FAR (max)
All Allowed Uses	GSA(.04) +15,007 s.f.	5'	5'	5'	30'	10,000 s.f. + 100 s.f./ acre > 10

Building envelopes for each of these lots are approved and recorded with Teton County as follows:

- The Canyon Homes, Snake River Canyon Ranch, Lots 2 and 3. Building Envelopes are recorded at Book 447, pages 804-849.
- The River Homes, Snake River Canyon Ranch Lot 23 and The Ranch Homes, Snake River Canyon Ranch Lots 24, 25, 26 and 27 are recorded at Book 434 Pages 783-839.

Building envelopes for lots within Sub Area II are included herein as Attachment 3.

Add Text: **Exceptions: Floor Area associated with dedicated deed restricted workforce housing is excluded from Floor Area Calculations**

These building envelopes are approved by Teton County and are the approved building envelopes under the Snake River Canyon Ranch Master Declaration of Covenants, Conditions and Restrictions. In the event of a discrepancy between zoning requirements and the building envelopes approved for lots within Sub Area II, the individual building envelopes shall govern.

Any changes or amendments to these building envelopes require approval from the Snake River Sporting Club Owners Association, Inc. Teton County shall review and approve development on lots within Sub Area II based on the provisions of this Master Plan.

The above notwithstanding, development on lots within Sub Area II shall be required to locate all development outside the Teton County Scenic Preserve Trust's and/or the Jackson Hole Land Trust's conservation easement area. Building envelopes and development on lots within Sub Area II may be located anywhere outside areas restricted by any conservation easements subject to other restrictions stated within this Master Plan, subject to Owners Association review and subject to Teton County review.

B.2. Maximum Scale of Development

Individual Building (max gross FA):

Part of Single Family Unit 10,000 s.f.

B.3. Building Design

All Building Materials:

External Surfaces shall be non-reflective. Colors shall blend into terrain using muted colors and earthy hues. No other Teton County limitations apply.

Note: Sub Area II is subject to certain Snake River Sporting Club Design Guidelines which may be amended from time to time. Approval of building designs by the SRSC-ARB is required prior to building permit submittal to Teton County.

B.4. Site Development

Site Development Setbacks (min)

Side/Rear Setback: ½ structure setback

Front Setback:

40% of lineal lot frontage: ½ structure setback

60% of lineal lot frontage: ½ structure setback

Exemptions:

Driveways providing access across a street yard; and shared parking and driveways

B.5. Landscaping: LDR Div. 5.5

Plant Units (min)

Residential: 1/DU

B.6. Fencing: LDR Sec. 5.1.2

Wildlife friendly fencing

Special Purpose Fencing Height

In Street Yard: 4'

In Side or Rear Yard: 6'

Special Purpose Fencing Setback:

Any Yard 0'

B.7. Environmental Standards:

Natural Resource Buffers: LDR Sec. 5.1.1

No Environmental Analysis is required for development of single family lots within Sub Area II. In addition, existing building envelopes for lots within Sub Area II are approved by both Teton County and the Owners Association and if any of the Teton County approved building envelopes are not compliant with the Natural Resource Buffers stated herein, they are permitted to be developed within any buffers standards described herein, and shall be permitted pursuant to review and approval of a building permit application.

Rivers: 150'

Streams 50' or edge of riparian plant community up to 150'

Natural Lakes or Ponds: 50' or edge of riparian plant community up to 150'

Wetland: 30'

Irrigation Ditch Setback: LDR Sec. 7.7.4.D

Irrigation Ditch: 15'

Wild Animal Feeding LDR Sec. 5.1.3

Wild Animal Feeding Prohibited

Natural Resource Overlay (NRO) Standards LDR Sec. 5.2.1

Bear Conflict Standards LDR Sec. 5.2.2

Bear Resistant trash required in conflict area 1

B.8. Scenic Standards:

Exterior Lighting: LDR Sec. 5.3.1

Total cut off angle (max) 90

Illumination in footcandles .50

Height 15'

Scenic Resource Overlay (SRO) Standards LDR Sec. 5.3.2

Building envelopes for lots within Sub Area II have previously been approved. No further Scenic Resource Analysis required unless building envelopes change.

B.9. Natural Hazards to Avoid:

Steep Slopes LDR Sec. 5.4.1

Development Prohibited: Slopes >30%

Areas of Unstable Soils: LDR Sec. 5.4.2

Fault Areas: LDR Sec. 5.4.3

Floodplains: LDR Sec. 5.4.4

Wildland Urban Interface LDR Sec. 5.4.5

Avalanche Hazard Areas LDR Sec. 5.4.2

B.10. Signs: LDR Div. 5.6

Allowable Signage

No limitation. Subject to Development Plan approval

Sign Area

See Snake River Sporting Club Architectural Review Board Design Guidelines Signage Plan (Attachment 7). Subject to Development Plan approval.

Sign Height:

See Snake River Sporting Club Architectural Review Board Design Guidelines Signage Plan (Attachment 7). Subject to Development Plan approval.

B.11. Grading, Erosion Control, Stormwater:

Grading LDR Sec. 5.7.2

Erosion control LDR Sec. 5.7.3

Erosion shall be controlled at all times

Stormwater Management LDR Sec. 5.7.4

No increase in peak flow rate or velocity across property lines.

B12. Required Physical Development Permits

Permitting for physical development for any dwelling units within Sub Area II is limited to submittal and approval of Building Permit Pursuant to Section 8.3.3 of the Teton County LDRs dated October 19, 2015. No Development Plan is required.

The following identifies the required physical development permits for development within Sun Area II:

Physical Development	Sketch Plan	Development Plan	Building Permit	Sign permit	Grading permit
All residential development	n/a	n/a	Required	Included with Bldg. Permit	LDR Sec. 5.7.1

C. Use Standards

Standards applicable to uses in Sub Area II of the Resort are provided or referenced below. Allowed uses are listed in Subsection 2.2.C.1. Uses that are not listed are prohibited, unless a similar use determination is made pursuant to LDR section 6.1.2.D.

Add Resort Support Use here after residential as listed in Sub Area I.

C.1. Allowed Uses / C.2. Use Requirements

Use	Permit	BSA (min)	Density (max)	Parking (min)	Employees required to be housed
Open Space					
Agriculture	Y	0 ac.	n/a	n/a	See MP Sec.2.2.E
Residential					
Detached Single Family	Y	0 s.f.	1 unit/lot	2/DU	See MP Sec.2.2.E
Lodging					
Short Term Rental	Y	0 s.f.	1 unit/lot	2/lodging unit	See MP Sec.2.2.E
Transportation/Infrastructure					
Utility Facility	Y	0 ac.	n/a	1/employee +1/stored vehicle	Exempt.
Wireless communication Facilities	6.1.10.D	6.1.10.D	n/a	1/employee + 1/stored vehicle	Exempt
Accessory Uses					
Accessory Residential Unit	Y	0 s.f.	1 unit/lot	1/DU	Exempt
Home Occupation	B	0 s.f.	n/a	n/a	Exempt
Temporary Uses					
Real Estate Sales Office	Y	0 s.f.	n/a	3.3/1,000 s.f.	Exempt
Temporary Shelter	Y	0 s.f.	1/ valid bld. Permit*	2/DU	Exempt
Temporary Gravel Extraction and Processing	Y	0 s.f.	n/a	1/employee	Exempt

Y = Allowed Use, no permit required, B= Basic Use Permit (LDR Sec. 8.4.1), C= Conditional Use Permit (LDR Section 8.4.2)

* Temporary Shelter is an allowed use and shall be permitted in accordance with Section 6.1.12.D. of the Teton County Land Development Regulations.

C.3. Maximum Scale of Use

Individual Use (floor area) (max)

Single Family Unit (detached)

Habitable Floor Area excluding basement — 8,000 s.f.

C.4. Operational Standards — LDR Div. 6.4

Refer to LDR Division 6.4.

D. Development Options

Standards applicable to development options and subdivision in Sub Area III of the SRCRR PUD-PR are provided or referenced below.

D.1. Allowed Subdivision Development Options

Option	BSA	Lot Size (min)	Density (Max)	OSR (Min)	FAR (max)	Height (max)
Land Division	35 ac	n/a	n/a	n/a	Determined by physical development	30'
Transfer of Units from Area II to Area III	Consistent with original allowances for lots in Area II					

Change this text to: "Transfer of Units from Area II to Area III and within Area II from one physical location to another"

Add the following text: Units tra
geographic location to another
allowed and shall be reviewed
~~option,~~

It is explicitly recognized within this Master Plan that transfer of development units and associated floor area from Sub Area II to Sub Area III is permitted under the provisions of this Master Plan. Units transferred from Sub Area II to Sub Area III shall be relocated in accordance with the original approvals granted for development of parcels or lots within Sub Area II. Transfer of Development Units from Sub Area II to Sub Area III that does not include the expansion of the land area of Sub Area III shall be reviewed as a Development Options Plan pursuant to LDR Section 8.5.2

D.2. Required Subdivision and Development Option Permits

Option	Sketch Plan (8.3.1)	Development Plan (8.3.2)	Development Option Plan (8.5.2)	Subdivision Plat (8.5.3)
Transfer of Units			X	

D.3. Affordable and Employee Housing Standards

Properties within Sub Area II are not subject to the Employee Housing Agreement. Lots within Sub Area II are also not subject to the Affordable Housing Requirements of the LDRs. To meet the purpose of the Affordable and Employee Housing requirements within Teton County, lots within Sub Area II continue to be subject to a 1% Real Estate Transfer Fee as described in Section 4.7 of the SRSC CC&Rs, that portion of which may not be amended without approval of the Board of County Commissioners.

No other housing standards and conditions apply to development within Sub Area II.

D.4. Infrastructure Requirements and Standards

1. Transportation Plan:

There is no specific transportation plan for Sub Area II. The transportation plan for the entire Resort, discussed in Division 3 of this Master Plan shall govern transportation plan requirements for Sub Area II.

2. Stormwater Management Plan

All stormwater shall be handled and accommodated in accordance with Section 5.7.4 of the Teton County LDRs.

F. Environmental or Visual Analysis

An EA shall be performed that specifies any action necessary to mitigate impacts to wildlife, especially along the Gros Ventre River corridor, and wetlands. Notwithstanding the resort area being outside the SRO, a visual component shall be included in the EA or a Visual Resources Analysis prepared, which specifies necessary action to mitigate negative visual impacts of new development from Spring Gulch Road and surrounding residential developments. The visual component shall be prepared pursuant to the procedures and standards in Sec. 5.3.2.

G. Golf Course

The Golf Course shall remain intact as a recreational facility open to the public.

4.3.6. Snake River Canyon Ranch (1/17/17)

A. Area Description

The Snake River Canyon Ranch Planned Resort Zone consists of those lands designated PR-SR on the Official Zoning Map.

B. Master Plan

The Snake River Canyon Ranch Planned Resort Zone is governed by the Planned Unit Development—Planned Resort Master Plan titled, “Snake River Canyon Ranch Resort Master Plan.” Throughout this Section, the master plan shall be referred to as Snake River Canyon Ranch Resort Master Plan.

C. Character

The character objectives for the Snake River Canyon Ranch Resort are that it shall offer a unique hot springs recreation experience for the public while providing lodging in a rural atmosphere. Important characteristics of all areas of the Resort include:

1. identification of the Astoria Hot Springs and the surrounding park as the central recreational amenity available to the public;
2. lodging, with a residential character, located throughout the resort and not necessarily centered on the hot springs amenity;
3. presentation of a highway profile that is in scale with the mountain backdrop, has varied roof and horizontal planes that visually reduce the bulk and scale of the buildings, and a development pattern that favors a minimizing in building footprints to protect the natural resources of the site, thereby minimizing the overall visual impact of development;
4. highlight the natural features of site, retain the rural atmosphere, and protect habitat and environmentally sensitive areas; and
5. edges and boundaries that buffer natural resources.

D. Resort Character Subareas

To better achieve the overall character objectives for the Snake River Canyon Ranch Resort, three resort subareas, have been identified.

1. Area I—Astoria Hot Springs Park

    a. Area Description. Area I—Astoria Hot Springs Park consists of 5.2 acres, as identified on the Master Site Plan included in the Snake River Canyon Ranch Resort Master Plan.

    b. Additional Character Objectives

        i. A hot springs recreation experience designed to take advantage of the natural environmental setting and highlight the natural resources of the site; and

        ii. Ancillary park-oriented commercial uses reflective of desired rural community character of the Canyon Corridor Subarea, as identified in the Teton County Comprehensive Plan.

    c. Size

        i. Lodging. There are no lodging facilities or uses in this Area of the Resort.

        ii. Buildings. No more than 9,000 square feet of structure space shall be developed within Area I.

2. Area II—Snake River Canyon Ranch Lodging Area

    a. Area Description. Area II—Snake River Canyon Ranch Lodging Area consists of seven properties totaling 88 acres, as identified on the Master Site Plan included in the Snake River Canyon Ranch Resort Master Plan.

    b. Additional Character Objectives

        i. Small-scale western character styled buildings in a rural setting; and

        ii. Identification of the Snake River Sporting Club golf course and recreational facilities as additional amenities for resort residents and guests.

    c. Size

        i. Lodging. A maximum of seven detached single-family residences are allocated to Area II, all of which shall be available for short-term rental.

        ii. Buildings. Each of the units in Area II shall be limited to a total of 10,000 square feet of floor area, 8,000 square feet of which may be habitable space.

    d. Transfer. A maximum of seven units allocated to Area II may be relocated within Area III.

3. Area III—Snake River Sporting Club Lodging Area

   a. Area Description. Area III—Snake River Sporting Club Lodging Area consists of 20.04 acres, as identified on the Master Site Plan included in the Snake River Canyon Ranch Resort Master Plan.

   b. Additional Character Objectives

      i. Clustered, small-scale, western-character styled buildings; and

      ii. Ancillary resort-supporting commercial lodging reflective of the desired rural community character of Subarea 8.3: Canyon Corridor identified in the Teton County Comprehensive Plan.

   c. Size

      i. Lodging. A maximum of 63 attached or detached single-family units are permitted in Area III, all of which shall be available for short-term rental.

      ii. Buildings. No more than 218,500 square feet of floor area may be developed in Area III.

   d. Transfer. A maximum of seven units allocated to Area II may be relocated within Area III. The maximum number of units within Area III, including any units transferred from Area II, shall not exceed 70 total units.

E. Recreation and Preserved Area

The recreation and preserved area shall consist of at least 101.7-acres of land, zoned Park on the Official Zoning Map, located adjacent to but not within the Snake River Canyon Ranch Resort. An open space easement shall not be requited to preserve these lands, but a minimum of 101.7 acres of open space shall be available as passive recreation area for the Astoria Hot Springs Park.

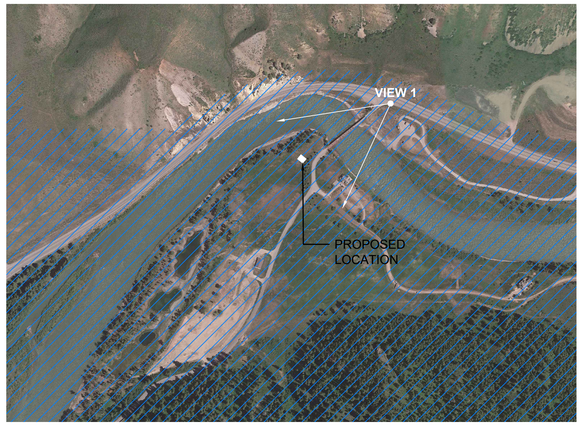
4.3.7. Grand Targhee (1/1/15)

A. Area Description

The Grand Targhee Planned Resort Zone consists of those lands designated PR-TG on the Official Zoning Map. The following areas, as depicted on the "Land Use Districts" map within the Grand Targhee Resort Master Plan, comprise the Grand Targhee Planned Resort Zone:

1. Resort Center Plan Area. The Resort Center Plan Area includes retail, food and beverage uses, resort services and amenities, support and services, and residential and accommodation units. There will be parking spaces for day guests and below grade parking garages associated with accommodation buildings. The Resort Center Plan Area is comprised of 36 acres.

AERIAL PHOTO (N.T.S.)



NOTE: ENTIRE PARCEL IS WITHIN SCENIC RESOURCE OVERLAY DISTRICT

VIEW 1: EXISTING LANDSCAPE VIEW LOOKING SOUTHWEST

PROJECT NARRATIVE

THE PROPOSED DEVELOPMENT PLAN FOR ASTORIA - SRSC EMPLOYEE HOUSING INCLUDES THE CONSTRUCTION OF PARKING LOT, CONNECTING ROAD, AND AN ALTERNATIVE HELICOPTER LANDING SITE ON A PREVIOUSLY DISTURBED AREA OF THE SITE (CURRENTLY GRAVEL MIXED INTO NATURALIZED GRASS). THE PARKING LOT, EXCLUSIVE TO SRSC EMPLOYEES, WILL CONTAIN ENOUGH SPACES FOR A RESIDENTIAL EMPLOYEE DWELLING; THE PATH, EITHER CONCRETE OR CRUSHED GRAVEL, WILL CONNECT THE EMPLOYEE HOUSING TO RIVERBEND ROAD; AND THE ADJACENT ALTERNATIVE HELICOPTER LANDING SITE WILL BE AVAILABLE FOR ANY NECESSARY MEDICAL EVACUATIONS, SCREENED AWAY FROM THE MAIN ROAD.

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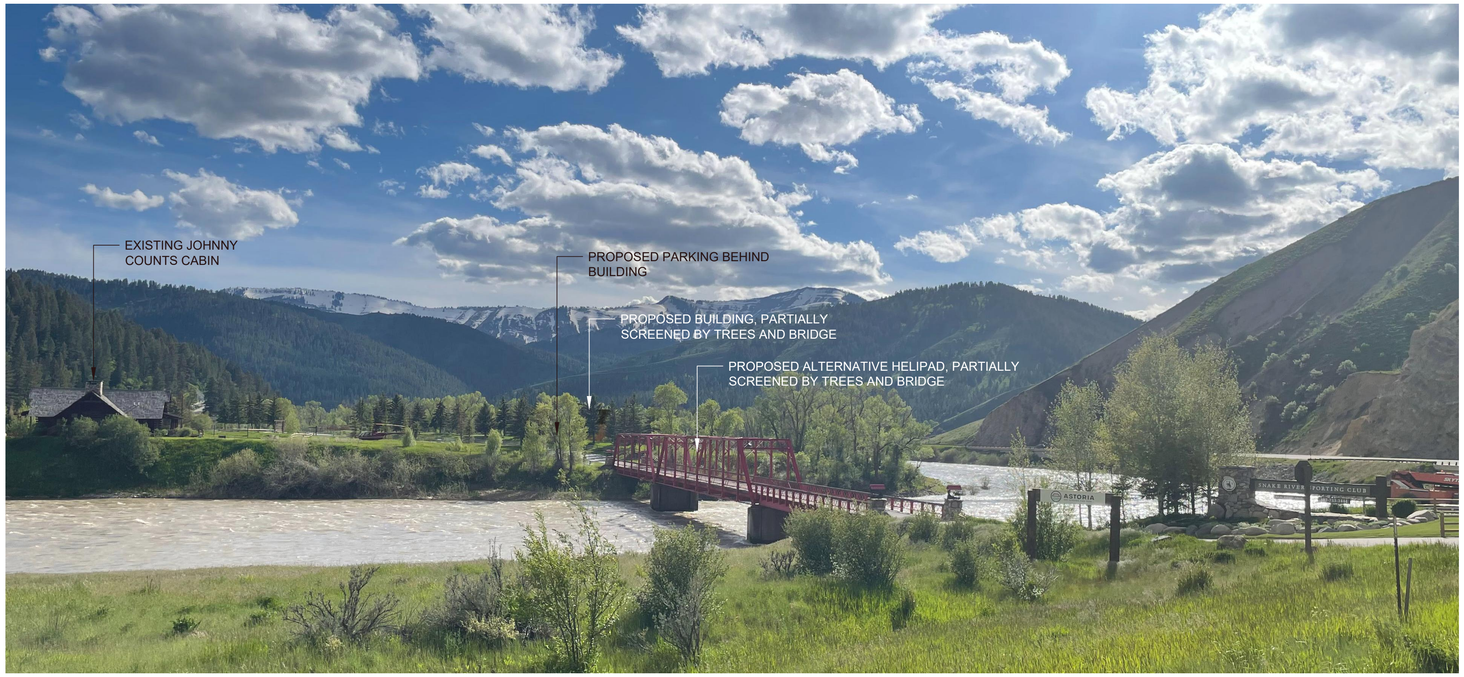

FIELD STUDIO
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PROJECT NUMBER: 1933.00

ASTORIA - SRSC EMPLOYEE HOUSING

HOBACK, WY 83001

DATE	ISSUE
2022.06.15	VIS. ANALYSIS

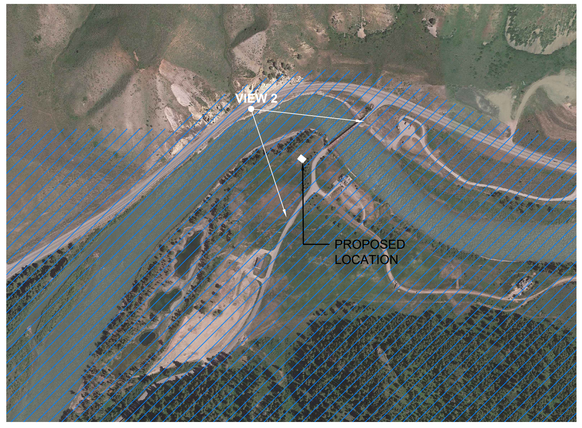
SHEET TITLE

VISUAL ANALYSIS
RESOURCE
RENDERING

SHEET 1 OF 3

L-1.0

AERIAL PHOTO (N.T.S.)



NOTE: ENTIRE PARCEL IS WITHIN SCENIC RESOURCE OVERLAY DISTRICT

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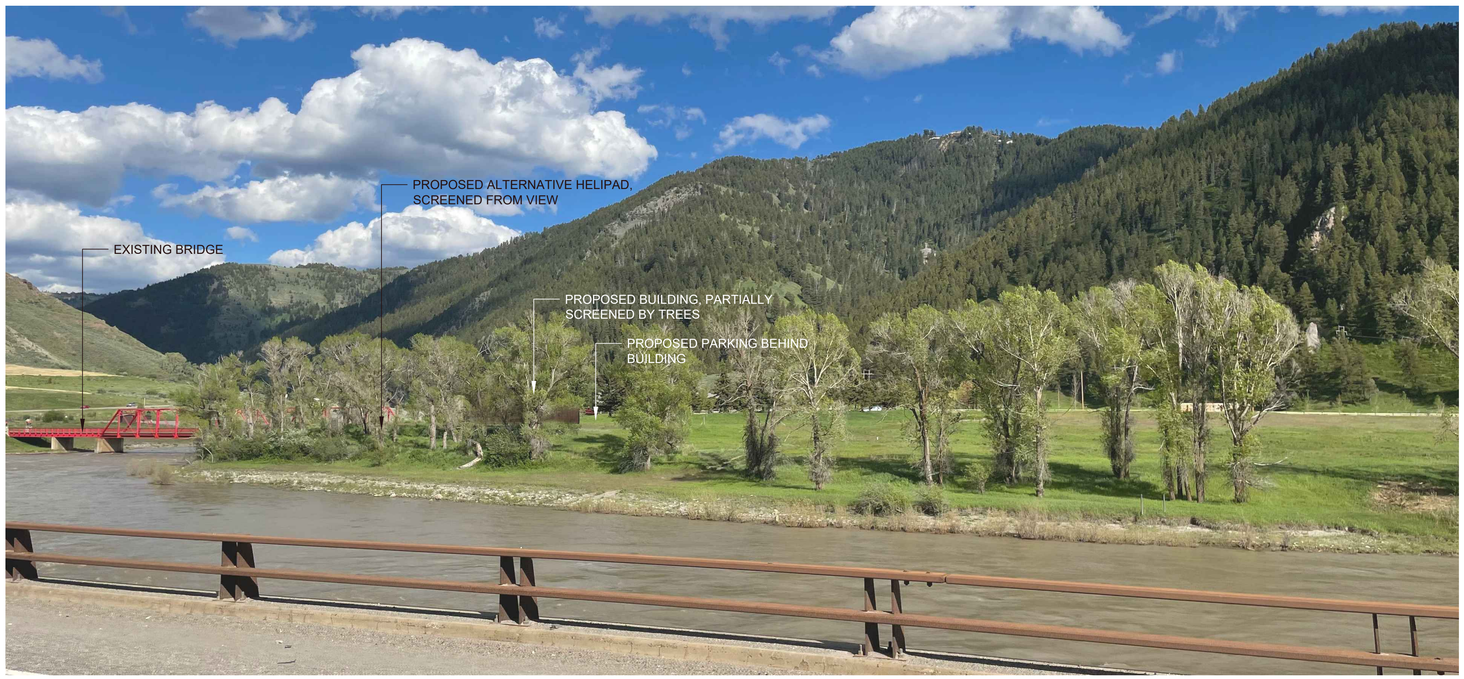
VIEW 2: EXISTING LANDSCAPE VIEW LOOKING SOUTHEAST

VIEW 2: PROPOSED LANDSCAPE VIEW LOOKING SOUTHEAST



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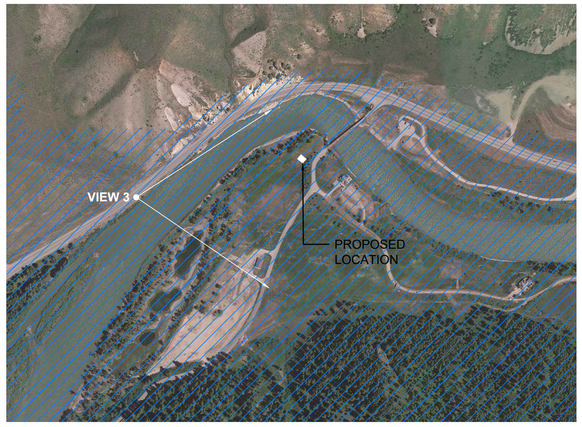
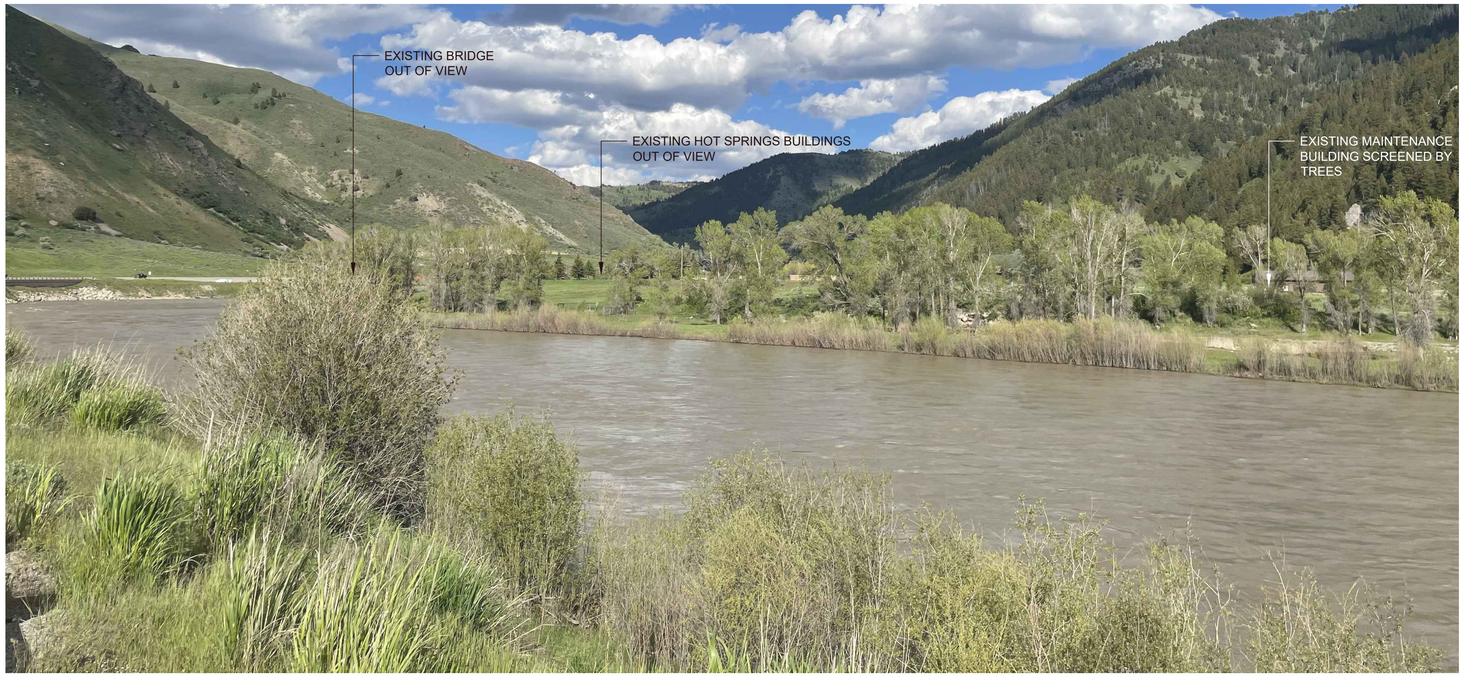


NOTE: ENTIRE PARCEL IS WITHIN SCENIC RESOURCE OVERLAY DISTRICT

VIEW 3: EXISTING LANDSCAPE VIEW LOOKING EAST



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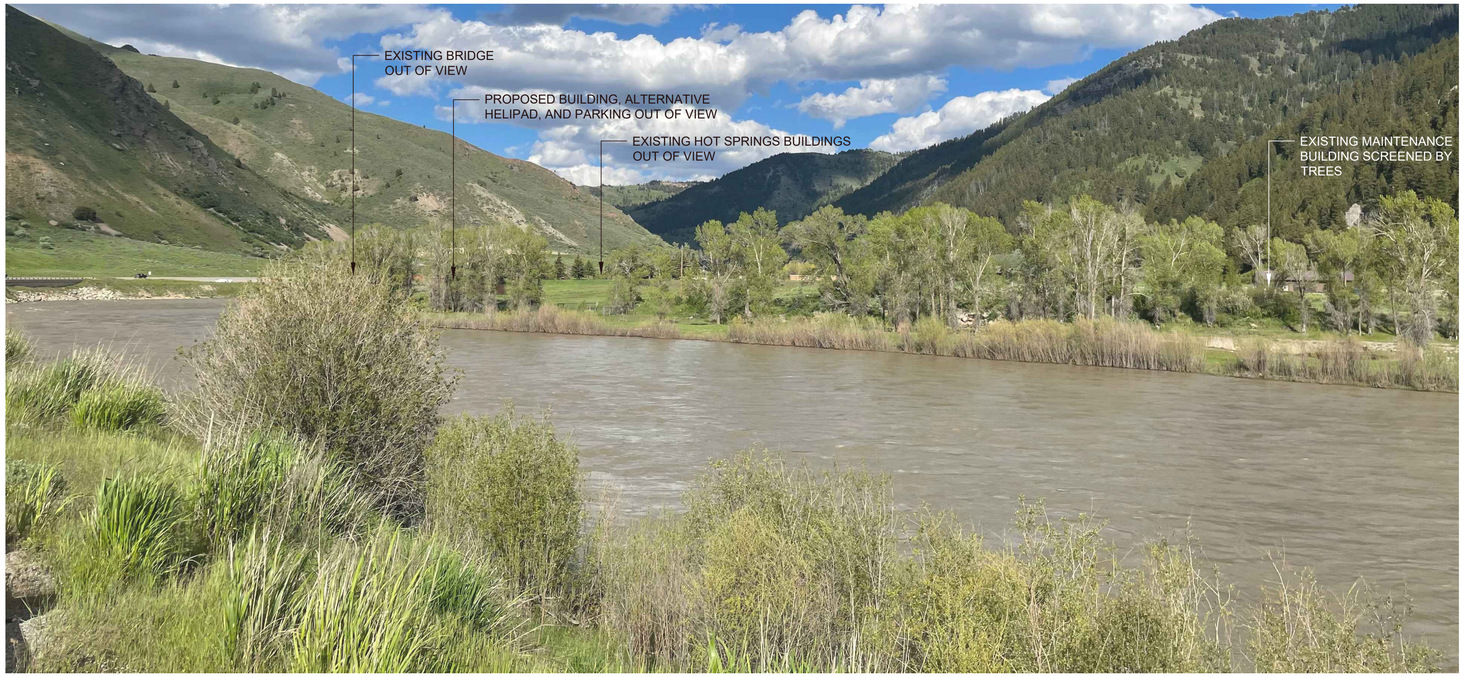

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SHEET TITLE

VISUAL ANALYSIS
RESOURCE
RENDERING

SHEET 3 OF 3

L-1.2

Neighborhood Meeting Summary

Held: November 18th 5-6 pm via Zoom (Recording HERE)

Attendance:

Dale Christinasen

Robert Samuelian

Leanne Richter

Debra

C Swann

Me

Brendan

Smokin' Hot

Joe Cranston

Michelle Todes?

Paige

Project Background/Description:

1. Pud amendment
2. Development plan for lot 23
3. Rezone lot to park zone

Comments/Discussion:

Preventative measures/plans to 'protect gateway to resort'

Increasing density – not transferring density

5 lots – single family

Development plan

Exempt from floor area

1st phase – transfer

CC&Rs/HOA

Christian – start bus across bridge? Plan for parking?

Christopher – vision is to ask now for down the line

Feedback

How to monitor traffic

Investment properties – protections?

*Gary Gigot

SECTION 6 – ENVIRONMENTAL ANALYSES

Environmental Analysis Update

Astoria Park Conservancy
c/o The Trust for Public Land

PIDN: 22-39-16-32-4-04-001, PIDN: 22-39-16-32-4-01-005 & PIDN: 22-39-16-32-4-01-001

Teton County, WY

November 18, 2019
FINAL

Prepared for:
Paige Byron Curry, Executive Director
Astoria Park Conservancy

Prepared By:

EcoConnect Consulting LLC
Connecting Ecology and Community
PO Box 13259, Jackson, WY 83002
www.ecoconnectjh.com

Table of Contents

PROJECT OVERVIEW

INTRODUCTION

EcoConnect Consulting LLC has conducted an Environmental Analysis Update (EA Update) in support of the Astoria Park Conservancy's Phase II Development. Phase II development includes the establishment of park facilities, redesigned driveway and parking areas and an initial trails system to the south and west of the Phase I Hot Springs Facilities development.

This Environmental Analysis Update, required by Teton County's Planning and Building Department (PAP2019-0036), is an update of an Environmental Analysis conducted by Biota Environmental in 2014 (EVA2014-0008) for the Trust for Public Land parcel (PIDN: 22-39-16-32-4-04-001). In addition to the Trust for Public Land parcel examined in the 2014 EA, this EA Update is inclusive of an adjacent private parcel owned by Christopher Swann (PIDN: 22-39-16-32-4-01-005) and a portion of the River Bend Road owned by the Snake River Sporting Club Improvement and Service District (PIDN: 22-39-16-32-4-01-001).

Within the Trust for Public Land and private parcel, this EA Update is limited to the area affected by Phase II development (excludes the Phase I development area) and demonstrates compliance with Teton County Land Regulations outlined in Article 5, Division 5.1, *General Environmental Standards*, Division 5.2, *Environmental Standards Applicable in Specific Areas* and Division 8.2.2, *Environmental Analysis* (Teton County, 2019). Additionally, this EA Update is inclusive of an Aquatic Resources Inventory conducted by Pioneer Environmental Services, Inc. to confirm the location and type of wetland resources present on the site (Appendix D).

The Phase II project area is approximately 104± acres in size and partially encumbered by a Teton County Scenic Preserve Trust conservation easement. The project area is located within the Natural Resource Overlay as well as the Scenic Resource Overlay and zoned Public Park (P) or Private Resort (PR) (Figure 1) (Greenwood Mapping, Inc, 2019).

METHODS

Prior to the on-site inventory of the property, EcoConnect Consulting LLC consulted with property representatives, studied current and historic aerial photographs, USGS topographic maps, Teton County's vegetative cover GIS data and species of the region to become as familiar as possible with the landscape. Site visits to the property were conducted on July 22 & 27 and September 6, 2019 to record baseline information. Equipment used included a Garmin GPSMAP 64 Global Positioning System unit with ±6ft accuracy, a compass and a digital camera. The site visit was conducted by walking the property surveying land use, wildlife use, vegetation and distinct natural features. Wetland delineation was conducted by Pioneer Environmental Services and is documented in the attached Aquatic Resources Inventory as well as incorporated into this environmental analysis update. Representative photographs of vegetation communities and other significant natural and human-made features were taken. Vegetation, wildlife, infrastructure and other information were recorded in field notes and on aerial photographic field maps.

One-foot resolution, Teton County aerial photographs (6/8/2017 and 6/13/2015 & 6/14/2015), Google Earth aerial photography (6/29/2014), NAIP 2015 & 2017 Imagery (9/12/2015 and 10/25/2017) and Teton County's Vegetative Cover Types GIS Data which is based on 2011 aerial imagery (Cogan & Johnson, 2013) were used to supplement on-site observations. Information recorded here pertaining to vegetation cover, water resources and other landscape observations are therefore based on a combination of site visit observations, aerial photographs and existing data. While the Cogan and Johnson (2013) Teton County Vegetative Cover Types GIS Data layer was used as a reference for vegetation type characteristics, vegetative cover type definitions were based on those published in the Teton County Land Development Regulations Article 5, Section 5.2.1.F, *Vegetative Cover Type Standards* (Teton County, 2019).

HABITAT INVENTORY

PROJECT AREA

The project area is approximately 104.1± acre in size and is generally described as located on an upper and lower bench of a bend in the Snake River. The project area is bordered to the north and west by the Snake River and is located on The Trust for Public Land Astoria Hot Springs Park Lot 1 and adjoining private parcels.

VEGETATIVE COVER TYPES

The vegetative cover types located in the project area are typical of the Snake River corridor and, more specifically, an area that has seen disturbance in the form of river effects and historic human disturbance from agricultural activities and the former Astoria Hot Springs development. While this EA Update is being conducted as an update of the 2014 Biota Environmental Analysis (EVA2014-0008) (Biota, 2014), vegetative cover types listed below were developed based on current conditions and a combination of information obtained from aerial imagery (Teton County 2017 and NAIP 2015 & 2017). The 2014 Biota Environmental Analysis (Biota, 2014) and Teton County Vegetative Cover Types GIS Data (Cogan & Johnson, 2013) were used as reference documents in comparison to current site conditions.

Vegetative cover types are used by Teton County Regulations to determine relative habitat values and development priorities on the property (Section 5.2.1.F.4.a, *Ordinal Ranking*). The property's vegetative cover types are illustrated in Figure 2, summarized in Table 1, and described below.

Table 1. Vegetative Cover Types and Ordinal Rankings

VEGETATIVE COVER TYPE	AREA (ACRES)	AREA PERCENTAGE	ORDINAL RANKING
Open Water	23.2	22%	n/a
Exposed Shoreline	3.9	4%	n/a
Scrub-Shrub Wetland	3.0	3%	10
Emergent Wetland	16.5	16%	9
Nonmesic Tall Shrub	2.5	2%	8
Mesic Tall Shrub	1.0	1%	8
Cottonwood Forest	7.3	7%	6
Mixed Forest	2.9	3%	6
Douglas Fir	7.1	7%	6
Mesic Shrub	3.0	3%	5
Agricultural Meadow	14.2	14%	2
Previously Disturbed	4.2	4%	n/a
Landscaping	1.0	1%	n/a
Disturbed	14.3	14%	n/a
TOTAL	**104.1**	**100%**	

Open Water and Exposed Shoreline

While open water and exposed shoreline combined cover a total of 27.1 acres (26% of the project area), the composition of these areas have the potential to shift based on water levels in the Snake River. The Snake River and associated exposed shoreline (river cobble) is the most prominent water feature covering a total of approximately 26.0 acres of the project area. The main channel of the Snake River creates the northern and western boundary of the project area as it bends around the parcels. In addition to the Snake River, an intermittent stream (0.2 ac) is located on the eastern portion of the study area. This drainage is contained within a densely vegetated drainage and flows into the Snake River to the north.

Three constructed ponds (0.9 ac) are located on the western, lower bench of the project area. These ponds were constructed after 1994 based on aerial imagery (Greenwood Mapping, Inc, 2019) and appear to have been abandoned mid-construction. The Biota 2014 EA reported that the northern most pond was lined while the southern two were unlined and that the northern most pond was fed by a groundwater well (Biota, 2014). This EA Update would concur that the northern most pond was lined as some of the lining has been exposed over time while the status of the southern two ponds is unknown. Furthermore, while there is a groundwater well, it is currently inactive and the ponds appear to be fed primarily through groundwater sources (Greenwood Mapping, Inc, 2019; Pioneer, 2019).

Open water and exposed shorelines do not receive an ordinal ranking under Teton County's land development regulations.

Scrub-Shrub Wetland

Scrub-shrub wetlands are wetlands that primarily consist of woody vegetation less than 20 feet tall. In this project area, scrub-shrub wetlands cover approximately 3.0 acres (3% of the project area) and are comprised of shrub systems along the Snake River, groundwater seeps and the intermittent stream. The primary shrub species found in these areas were coyote willow (*Salix exigua*), redosier dogwood (*Cornus sericea*) and mountain alder (*Alnus incana*).

The areas delineated as scrub-shrub wetlands in 2019 are similar to those delineated by Biota in 2014 (Biota, 2014) with the exception of a small wetland (0.08 ac) between the maintenance shed and River Bend Road. This area appears to be unintentionally created through landscaping efforts which were then infiltrated by groundwater.

Scrub-shrub wetlands are important to many species of wildlife including both ungulates and avian species. Therefore, in Teton County, scrub-shrub wetland cover types receive an ordinal ranking of 10.

Emergent Wetland

Emergent wetlands are wetlands that primarily consist of herbaceous vegetation. In this project area, emergent wetlands cover approximately 16.5 acres (16% of the project area) and are hydrologically supported by groundwater supply. The primary wetland species associated with these areas include reed canarygrass (*Phalaris arundinacea*), Alaska rush (*Juncus effusus*), Nebraska sedge (*Carex nebrascensis*), field mint (*Mentha arvensis*), baltic rush (*Juncus balticus*), field horsetail (*Equisetum hyemale*), creeping spikerush (*Eleocharis palustris*), narrowleaf cattail (*Typha angustifolia*) and common reedgrass (*Phragmites australis*).

Areas delineated as emergent wetlands in 2019 are similar to those delineated by Biota is 2014 (Biota, 2014). A comparison of these two environmental analyses indicate that the emergent wetland areas have expanded in size in areas that were previously disturbed such as around the man-made ponds,

along the River Bend Road and associated parking lot. Furthermore, this environmental analysis includes an adjoining parcel which contains emergent wetland areas that were not included in the 2014 EA.

Emergent wetland areas and the associated water systems are important to wildlife species and therefore receive an ordinal ranking of 9.

Nonmesic Tall Shrub

Nonmesic tall shrub cover type are areas dominated by tall shrub species with less than 10% tree canopy cover present. Within this project area, nonmesic tall shrubs comprise approximately 2.5 acres (2% of the project area) and are located on the edge of the coniferous forest in upland areas where snow likely accumulates on north-facing aspects and moisture is retained. Tall shrub species are also present in the understory of the coniferous forest cover type (Photo 10). Shrub species typically found in these areas include serviceberry (*Amelanchier alnifolia*), chokecherry (*Prunus virginiana*), and mountain snowberry (*Symphoricarpos albus*). Nonmesic tall shrubs receive an ordinal ranking of 8.

Areas characterized as shrub cover types, both mesic and nonmesic, shifted slightly since 2014. This is more likely a result of differing characterization rather than a shift in species or location.

Mesic Tall Shrub

Mesic tall shrubs are distinguished from nonmesic tall shrubs based on the areas likely water regime and, to a lesser extent, species present. Areas of willow that are not classified as a wetland are included in this cover type. Within this project area, areas of mesic tall shrub comprise approximately 1.0 acres (1% of the project area) and are located in areas with greater access to groundwater sources. Shrub species found in these areas include black hawthorn (*Crataegus douglasii*), chokecherry (*Prunus virginiana*), serviceberry (*Amelanchier alnifolia*) and currant species (*Ribes spp*). Mesic shrubs receive an ordinal ranking of 8

Areas characterized as shrub cover types, both mesic and nonmesic, shifted slightly since 2014. This is more likely a result of differing characterization rather than a shift in species or location.

Cottonwood Riparian Forest/ Mature Narrowleaf Cottonwood

Mature narrowleaf cottonwood (*Populus angustifolia*) trees cover approximately 7.3 acres (7% of the project area). The cottonwood cover type has an overstory of sparse, mature narrowleaf cottonwood trees intermixed with Engelmann (*Picea engelmannii*) and blue spruce (*Picea pungens*). The understory is a mix of both native and non-native grasses with areas of bare ground resulting from past disturbance activities. Furthermore, there is little evidence of cottonwood regeneration activities throughout this cover type. Cottonwood systems are dependent on periodic flooding for regeneration.

The riparian cottonwood corridor along the Snake River is important movement and cover areas for wildlife species and support high avian species diversity. Many cavity nesting avian species are present in cottonwood communities. Because of their importance to wildlife, cottonwood cover types receive an ordinal ranking of 6.

In the 2014 Biota EA, a small area was characterized as mixed cottonwood/ spruce that has been recharacterized here as cottonwood riparian forest since it does not differ drastically from the areas characterized, both in 2014 and in 2019, as cottonwood. It is a natural progression for a cottonwood species to be succeeded by spruce as cottonwoods mature in the absence of periodic flood disturbance events.

Mixed Forest

Mixed forests cover approximately 2.9 acres (3% of the project area) on the eastern portion of the project area adjacent to both the Snake River, intermittent stream and the neighboring USFS property. These areas of mixed forest are a combination of narrowleaf cottonwood (*Populus angustifolia*), quaking aspen (*Populus tremuloides*) and conifer species, primarily Douglas fir (*Pseudotsuga menziesii*).

In the 2014 Biota EA, these areas were characterized as nonmesic conifer forest. However, given that higher than 10% of cottonwood, aspen and conifer species are represented in the canopy, this EA has recharacterized these areas as mixed forest. Both nonmesic conifer forest and mixed forest have an ordinal ranking of 6.

Douglas Fir Forest

Douglas fir (*Pseudotsuga menziesii*) coniferous forest cover approximately 7.1 acres (7% of the project area) on the southern boundary of the project area that adjoins either USFS lands or adjacent private parcels. These areas are either currently, or likely were historically, an extension of the north facing conifer system found along a ridge to the east. The understory of this cover type varies from shrubs including snowberry (*Symphoricarpos albus*) and serviceberry (*Amelanchier alnifolia*) to forbs and grasses. Game trails, scat and browse of shrub species are evident through this cover type indicating use by ungulate species.

Observations recorded in the 2014 Biota EA are similar to those found here. The Douglas fir forest cover type receives an ordinal ranking of 6.

Mesic Shrub

Mesic shrubs cover approximately 3.0 acres (3% of the project area) on the eastern portion of the project area and consist of primarily mountain big sagebrush (*Artemisia tridentata* subsp. *vaseyana*). Other shrub species such as snowberry (*Symphoricarpos albus)* and serviceberry (*Amelanchier alnifolia*) are mixed throughout interspersed with immature conifer and bunch grasses.

The 2014 Biota EA classification is similar to that found here. Mesic shrub cover type receives and ordinal ranking of 5.

Agricultural Meadow

Based on aerial photography (Greenwood Mapping, Inc, 2019) the project area has an extensive history of disturbance through both hot springs facilities as well agricultural operations. Agricultural meadow cover type areas are likely remnants from historic ranching operations. As an example, the 1967 and 2003 aerial photographs (Greenwood Mapping, Inc, 2019) clearly indicate the extent of past agricultural activities (primarily hay production and horse pasturing) within the project area. In this EA Update, 14.2 acres (14% of the project area) are classified as passive agricultural meadow. These areas are primarily grasslands on upper bench outside of the emergent wetland cover type as well as areas on the lower bench in and around the cottonwood and wetland cover types that have begun to passively recover.

Based on aerial photography this agricultural meadow cover type continued to be cultivated through 2003. These areas are a mix of native and non-native grass species. Representative species likely include smooth brome (*Bromus inermis*), slender wheatgrass (*Elymus trachycaulus*) and noxious weed species. Based on a lack of species diversity, agricultural meadows are given an ordinal ranking of 1.

Disturbed

While the vast majority of the project area has been disturbed ground at some point in the past (e.g. 1967, 1989, 1999, 2001, 2003 and 2007 aerial photography are all insightful examples) (Greenwood Mapping, Inc, 2019), the areas designated as disturbed in this EA Update total 19.5 acres (19% of the project area). Areas identified as disturbed are those that currently contain no vegetation or have noxious weeds as the dominant species (14.3 acres), those where past disturbance has clearly taken place (4.2 acres) and areas previously landscaped that have not unintentionally converted to a natural cover type (1.0 acres). Previously disturbed areas are those where past disturbances (e.g. an old road bed or grading) are still visible.

Disturbed areas do not receive an ordinal ranking under Teton County's land development regulations and are areas where future development or habitat enhancement activities are recommended.

PROTECTED WATERBODIES, WETLAND RESOURCES AND BUFFERS

An Aquatic Resources Inventory conducted by Pioneer Environmental Services (Pioneer, 2019) (Appendix D) concluded that there are river, intermittent stream, constructed ponds and wetland resources in the project area (Figure 3). Pioneer's Aquatic Resources Inventory came to similar conclusions as the inventory conducted by Biota in 2014 in association with their Environmental Analysis (Biota, 2014).

Snake River

The Snake River flows from the northeastern terminus of the project area to the south western project area terminus and represents the northern and western project area boundaries. Under Teton County's Land Development Regulations (Section 5.1.1.C.1.a., *River*), the Snake River is an identified, protected river and therefore afforded a 150 foot development setback.

Intermittent Stream

Teton County defines a stream as a body of running water that is not an identified river and has an average flow level of 3 cfs or greater and/ or provides Trumpeter Swan winter habitat or cutthroat trout spawning habitat (Section 5.1.1.C.1.b., *Stream*). The intermittent stream on the eastern portion of the project area originates from the south of the project area on USFS lands likely from groundwater seeps. This stream does not maintain flows high enough to qualify as a stream under Teton County's Land Development Regulations nor does it provide habitat for Trumpeter Swans or cutthroat trout. Therefore, this stream is not a protected stream and no protection buffers have been assigned.

Constructed Ponds and Associated Wetlands

Three constructed ponds are located on the western, lower bench of the project area. These ponds were constructed after 1994 based on aerial imagery (Greenwood Mapping, Inc, 2019) and appear to have been abandoned mid-construction. Much of the area surrounding the pond remains classified as disturbed cover type (as it was in 2014) and does not appear to have been reclaimed or enhanced since the time of original ground disturbance.

The Biota 2014 EA reported that the northern most pond was lined while the southern two were unlined and that the northern most pond was fed by a groundwater well (Biota, 2014). This EA Update would concur that the northern most pond was lined as some of the lining has been exposed over time while the status of the southern two ponds is unknown. Furthermore, while there is a groundwater well, it is currently inactive (P. Byron Curry pers. comm. 2019) and the ponds appear to be fed primarily through groundwater sources (Greenwood Mapping, Inc, 2019; Pioneer, 2019).

Teton County Land Development Regulations define a natural lake/ pond as "a body of standing water, usually at least 6 feet in depth, which was created by natural processes" (Section 5.1.1.C.c., *Natural Lake/ Pond*). Since these ponds were constructed, the conclusion remains the same as was reached in 2014 that these ponds are not protected resources and therefore no protection buffers have been assigned (Shawn Means, EVA2014-0008 Review Memo, January 23, 2015).

In association with the three constructed ponds, emergent wetland areas are located immediately adjacent to the ponds. The largest of these emergent wetlands is to the south in what appears to be a proposed wetland mitigation effort that was never fully implemented (as was noted the 2014 Biota EA). Nonetheless, the presence of groundwater in this area over time has unintentionally converted this former, land disturbance to an area of emergent wetlands. As with the constructed ponds, these wetlands are not classified as naturally occurring and therefore do not qualify as wetlands protected under the land development regulations (Shawn Means, EVA2014-0008 Review Memo, January 23, 2015).

In addition to the wetland areas associated with the constructed ponds, there is also a small (0.08 ac.) scrub-shrub wetland area located immediately between the maintenance building and River Bend Road. In Biota's 2014 EA, this area was identified as a disturbed cover type. It appears that in the ensuing 5 years, landscaping was installed which likely involved the addition of topsoil and irrigation. These landscaping efforts in close proximity to naturally occurring wetland areas appear to have unintentionally created a small wetland area that remains immediately adjacent to the roadway and existing maintenance building. In order to be consistent across the project area, it is recommended that this man-made, unintentionally created scrub-shrub wetland not qualify as a protected resource under the Teton County Land Development Regulations.

Naturally Occurring Wetlands

Naturally occurring scrub-shrub and emergent wetlands are present on both the upper and lower benches of the project area. Naturally occurring wetlands were delineated by Pioneer Environmental Services as a component of this EA Update (Appendix D). These wetland areas are largely similar to those delineated by Biota in 2014 with the exception of slight expansions in wetland area based on a likely change in water regimes. Naturally occurring wetlands receive a 30 foot development setback (Section 5.1.1.D.2.d., *Wetlands*).

WILDLIFE HABITATS PROTECTED BY NATURAL RESOURCES OVERLAY

"The purpose of the Natural Resources Overlay (NRO) is to provide protection to the most important and sensitive natural areas" (Teton County, 2019). Teton County LDRs define the NRO as areas that include the habitats listed in Section 5.2.1.B, *Establishment of the NRO*. The presence of NRO defining habitats both in the project area and within ½ mile of the project area are listed in Table 2. Based on this site-specific analysis of the project area and the habitats present within ½ mile, it is reasonable to conclude that the project area is appropriately mapping within the NRO.

Table 2. Wildlife Habitats Protected by the NRO

WILDLIFE HABITAT	IN THE PROJECT AREA	WITHIN ½ MILE OF PROJECT AREA
Elk Crucial Winter Range	Yes	Yes
Mule Deer Crucial Winter Range	No	Yes
Moose Crucial Winter Range	No	No
Trumpeter Swan Nesting Habitat	No	Possible
Trumpeter Swan Winter Habitat	Yes	Yes
Snake River Cutthroat Trout Spawning Habitat	Yes	Yes
Bald Eagle Nesting Habitat	Yes	Yes
Bald Eagle Crucial Winter Habitat	Yes	Yes
Big Game Migration Corridors (Mule Deer & Elk)	Yes	Yes

Elk Crucial Winter Range

Crucial elk winter range consists primarily of xeric and mesic sagebrush-grasslands, mixed shrub, mesic and xeric open grassland and agricultural meadows that are used by elk 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*). The project area includes areas designated as crucial winter yearlong and crucial winter range (WGFD, 2012). The Dog Creek WGFD Feedground is approximately 1 mile southwest of the project area on the opposite side of the Snake River. This feedground is located within elk crucial winter yearlong range and is bordered to the west by WGFD designated elk parturition lands. Both the feedground and the parturition lands are separated from the project area by the Snake River (Figure 4). Elk sign and game trails were visible throughout the project area. This use was also indicated in the 2014 Biota EA.

Mule Deer Crucial Winter Range

Mule deer crucial winter range consists of scrub-shrub grasslands located at lower elevations and on south facing slopes that are used by mule deer 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*). More specifically, mule deer in Teton County in the winter use south facing, 22-45° slopes below approximately 8,000 ft in elevation (Riginos, et al., 2013).

The project area and ½ mile project area vicinity are located on lands designated by WGFD as crucial winter yearlong range (Figure 5). However, the cover types found within the project area are likely more appropriate for mule deer use during the spring, summer and fall seasons rather than as crucial winter habitat. A further refinement of appropriate mule deer winter range can be found by examining suitable habitat models for mule deer. Based on these models, suitable (not crucial) habitat within ½ mile of the project area would be located on the hillsides above, and away from the project area (EcoConnect, 2018). Therefore, while the WGFD's mapping of crucial winter yearlong range extends to the north and east along the Snake and Hoback river corridors, within this broad area mule deer likely utilize the south

facing xeric shrub hillsides not the entirety of the river corridors. Biota (2014) concurred with this mule deer habitat assessment.

Moose Crucial Winter Range

Crucial moose winter habitat consists primarily of riparian and wetland shrub-willow and cottonwood forests, highly mesic cottonwood/spruce forests, upland forest-subalpine fir habitat types, and secondarily xeric and mesic sagebrush-grasslands and mixed shrub types. These habitats are used by moose during the crucial winter months 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*).

The project area is located within and near a remnant cottonwood gallery next to the Snake River. The project area and ½ mile analysis buffer include WGFD designated moose winter/yearlong range but not crucial winter yearlong range (WGFD, 2012). This winter yearlong range encompasses the Snake River and Hoback River drainages as well as adjacent, smaller drainages.

Trumpeter Swan Nesting Habitat

Trumpeter Swan nesting habitat is found on wetland and aquatic sites that have adequate open water, aquatic vegetation (forage) and protection from predators. Nesting locations typically are islands located in ponds and wetlands. There are no known nesting ponds in the area, however, suitable nesting sites with adequate protection from predators could be found within ½ mile of the project area primarily on islands and side channels of the Snake River.

Trumpeter Swan Winter Habitat

Trumpeter Swan winter habitat consists of aquatic sites with abundant vegetation that stay open throughout the winter months (Section 5.2.1.B.3, *NRO Definitions*). Many side channels and streams along the Snake River corridor provide winter habitat for Trumpeter Swans (S. Patla pers. comm. 2018). Side channels along the Snake River as it flows through the project area and ½ mile vicinity may provide adequate resources for wintering Trumpeter Swans particularly in geothermal areas.

Snake River Cutthroat Trout Spawning Habitat

Snake River cutthroat trout spawning habitat is located in riffles along the Snake River and its tributaries. Inland cutthroat trout species are native to western rivers and streams and have been recognized as a significant species in Teton County (Section 5.2.1.B.3, *NRO Definitions*).

This project area is inclusive of the Snake River but does not contain any major tributaries of the river. Therefore, any Snake River cutthroat trout spawning habitat would be found in the Snake River and therefore protected as a part of this resource.

Bald Eagle Nesting Habitat

Prime nesting habitat consists of uneven-aged stands of riparian forest with old-growth attributes and perching possibilities near watercourses or waterbodies that provide foraging opportunities (5.2.1.B.3, *NRO Definitions*). Bald Eagle nesting habitat is found along the Snake River riparian corridor and its larger tributaries.

There are established Bald Eagle nests south of the ½ mile project area vicinity on Snake River Sporting Club lands (WGFD, 2017). While all known nest locations are outside of the project area vicinity, the project area is likely used for foraging by Bald Eagles associated with nearby nests.

Bald Eagle Crucial Winter Habitat

Bald Eagle crucial winter habitat is found in riparian areas near ungulate crucial winter range and in Bald Eagle nesting areas. The Bald Eagle winter diet is comprised primarily of carrion from dead carcasses with the remainder comprised of fish and waterfowl (Section 5.2.1.B.3, *NRO Definitions*). The proximity of this project area to the Snake River and the potential presence of winter carrion on the nearby elk feedground provide for good winter Bald Eagle habitat.

The presence of nests to the south of the project area and in such close proximity to each other indicate a strong likelihood of an adequate food resource in the area. These eagles likely depend on a diet primarily of fish from the Snake River year-round.

Migration Corridors

Mule deer and elk migration corridors are protected characteristics of the Natural Resources Overlay (Section 5.2.1.B.1, *Included within the NRO*). As defined by Teton County's LDRs, mule deer and elk migration corridors are designated as crucial if used 8 out of every 10 years.

WGFD data indicate that a mule deer migration corridor passes immediately to the south of the project area and within the ½ mile buffer (Figure 5). The Snake River corridor and neighboring USFS lands appear to be utilized by these deer as summer range as the migration corridor terminates in the vicinity of the Dog Creek Feedground on the opposite side of the Snake River from the project area. Mule deer likely cross the river in shallow areas connecting sandbars and islands to facilitate their crossing.

WGFD elk migration corridors indicate that elk will travel to the Dog Creek Feedground from the north (Figure 4). While these migration corridors are not located within the project area or within the ½ mile buffer, it is likely that elk will also pass through this area in search of safe, river crossing locations. The number of game trails observed indicate that elk will move from the ridge tops on neighboring USFS lands and through Douglas fir and open space of the Astoria Park lands before crossing the Snake River to access the Dog Creek Feedground on the western side of the river. Past communications with WGFD wildlife biologists indicate that this is a known movement pattern. While fall and winter season observations were not conducted for this EA Update, the 2014 Biota EA indicates that the open space/ large emergent wetland area is also an important staging and winter feeding area for elk. This use pattern seems reasonable and in line with the summer and fall observations made for this EA Update. Furthermore, a Teton County Scenic Preserve Trust Easement (originally filed in 1999) that encumbers a portion of the project area is aligned with the portions of the project area most likely to be utilized by migrating and wintering elk.

Other Wildlife Species

An Osprey nest is located on the eastern portion of the project area. This nest was built on the top of a power pole near the neighboring residence. The nest was mentioned in the 2014 Biota EA and appears to remain an active nest location. Nonetheless, this species has tolerated human activity and the nest site is located away from where additional Phase II Development activities will be located.

DEVELOPMENT IMPACT ASSESSMENT

DEVELOPMENT

The development proposed for Phase II of the Astoria Hot Spring Park was approved by the Teton County Planning Department and the Board of County Commissioners under CUP2017-0004. The proposed development below represents minor adjustments on the draft plans presented in CUP2017-0004. Adjustments proposed (e.g. trail realignment) were made with the intent of avoiding and minimizing impacts to the current conditions of natural resources present in the project area. Phase II of the Astoria Hot Springs Park development includes trails, multi-use pathways, nature and wildlife viewing areas, picnic areas, gathering and event spaces/ community programming facility, playgrounds, restroom facilities and associated signage (Figure 6).

Since the 2014 EA (Biota, 2014), a Land Use Plan for Astoria Hot Springs Park has been submitted and approved as a portion of the Conditional Use Permit (CUP2017-0004) and a Final Use Management Plan Evaluation (Biota, 2017). These documents address possible impacts from human use elements (e.g. human activity resulting in disturbance to wildlife) and should be referenced for impacts resulting from human use. The impacts below are focused on current physical development elements proposed for Phase II development plans.

HABITAT IMPACT ASSESSMENT

Impact to Vegetative Cover

The impacts to vegetation listed below to higher ordinal ranking vegetative cover types (6 and above) can be avoided through trail building techniques such as field fitting trails to avoid tree removal in forested cover types and spanning wetland crossings with a no impact crossing structures. The building of trails, or pathways, in wetland and river buffers is an allowable use under Teton County Land Development Regulations (Section 5.1.1.D.2.f., *Buffer*). These trails are planned to be appropriately sized and surfaced with either dirt or woodchips and accessible for public use. Impacts from trails in this document were calculated based on a 6 foot wide estimation.

The impacts listed in Table 3 are a worst case scenario and are inclusive of potential impacts to higher ranking vegetative cover types which can be avoided through construction techniques and best management practices.

Table 3. Impacts to Vegetative Cover Types

VEGETATIVE COVER TYPE	AREA (ACRES)	AREA (SQ FT)	ORDINAL RANKING[3]
Emergent Wetland	<0.1	498	9
Cottonwood Forest	0.2	8,609	6
Agricultural Meadow	0.5	22,709	2
Previously Disturbed	0.3	11,858	n/a
Landscaping	<0.1	844	n/a
Disturbed	1.4	62,439	n/a
TOTAL	**2.5**	**106,957**	

Emergent Wetlands

Impacts to emergent wetland cover type (ordinal ranking of 9) were calculated to be approximately 498± sq ft. (Figure 7) and can be avoided through the use of best management practices such as field fitting trails and wetland spanning footbridges. These potential impacts result from two locations where a trail is proposed to cross emergent wetland stringers. The first location is between the two southern ponds and crosses an emergent wetland area that was deemed to not be protected under Teton County's Land Development Regulations (see Constructed Ponds and Associated Wetlands section above). It is likely that this crossing location represents a depression in the topography and could be spanned with a bridge thereby avoiding impacts to the constructed wetlands. Furthermore, these ponds are slated for restoration in the future and construction of this crossing can be incorporated into future restoration plans for the ponds as a whole. The second, wetland crossing location is along a proposed path from the parking area to the Phase I hot springs development through the agricultural meadow cover type rather than along River Bend Road. This wetland crossing is across a small seep flowing out of the emergent wetland area to the east and downslope toward the Snake River. This emergent wetland stringer can be spanned with a footbridge thereby avoiding impacts to the emergent wetland species.

Cottonwood Forest

Impacts to cottonwood forest cover type (ordinal ranking of 6) were calculated to be approximately 0.2± acres (8,609± sq ft). These calculated impacts result from the construction of a trail system meandering through the cottonwood forest along the Snake River. This trail system is a water dependent use and therefore allowed under Teton County's Land Development Regulations within the Snake River's 150 ft setback (Section 5.1.1.D.2.f., *Buffer*). Furthermore, it should be noted that only a portion of this 0.2± acres of potential disturbance is located within 150 ft of the Snake River (Figure 7). This cottonwood forest cover type is mature and lacks understory growth throughout much of the area making it easily navigated in its current state. Therefore, the construction of a path through this cover type using field fitting techniques should be able to avoid impacts to individual cottonwood trees thereby eliminating the potential 0.2± acres of potential impacts to this cover type.

Agricultural Meadow, Previously Disturbed, Landscaping and Disturbed

All other potential impacts resulting from the Phase II development of an community programming facility, trails, multi-use pathways, parking lots, picnic areas/ shelters and restroom facilities would be located in areas of lower ranking (5 and below) cover types such as agricultural meadow (0.5± acres) and previously disturbed, disturbed and landscaping areas (2.1± acres). A playground and lawn were not calculated as impacts as these amenities will be located in currently disturbed areas and will be developed through restoration to grass cover types.

Previously disturbed areas are identified as areas where previous disturbance such as a roadbed or other disturbances remain visible both on the ground as well as in aerial imagery. Two examples of these prior disturbances are on the southern portion of the project area where an old roadway and current powerline were and are located. This old roadway was removed sometime between 1999 and 2001 (Greenwood Mapping, Inc, 2019). However, on the ground, this roadway remains visible and currently provides an easy walking path along the toe of the slope and the edge of a large emergent wetlands area. Similarly, the powerline uphill of this old roadway was installed prior to 1989 (Greenwood Mapping, Inc, 2019) and creates a cut through

the formerly Douglas fir cover type. It is both practical and intuitive to locate paths along these previously disturbed areas thereby avoiding additional, new disturbances to natural resources.

Similarly, the northern most proposed parking lot is located in an existing parking lot area outside of the nearby emergent wetlands but within the wetland buffer. This proposed parking lot is located in an area of existing disturbance. The neighboring wetland area is immediately adjacent to an existing, gravel and dirt driveway and parking lot that happens to also be within a 30-ft wetland setback. Therefore, it is practical to continue to use this existing disturbed parking area even though it is located within a wetland buffer.

Impact to Wildlife Movement

Proposed development of park amenities should not have significant impacts on wildlife habitat or wildlife movement. The Land Use Plan Management Plan Evaluation (Biota, 2017) allows for the closure of paths and various areas of the park to human use in an effort to avoid or lessen impacts to wildlife. Furthermore, the park will be closed from sunset to sunrise when wildlife (e.g. elk) are most likely to be utilizing the project area.

Project Vicinity Impact Statement

The Astoria Hot Springs Park is located to the north of the Snake River Sporting Club. The Snake River Sporting Club is accessed by the River Bend Road and associated Gate House which bisect the project area. The Snake River is located to the north and west of this project area. A mix of residential lots associated with the Sporting Club are located to the south and USFS Bridger-Teton National Forest lands are located to the south and east of the project area. The WGFD Dog Creek Elk Feedground is located to the west on the opposite side of the Snake River from the project area.

The relatively open nature of this project area continues to provide for wildlife movement and habitat in concert with surrounding natural resources within a ½ mile vicinity. Much of the land within this ½ mile vicinity is located on the Bridger-Teton National Forest or within the Snake River.

Based on aerial photography (Greenwood Mapping, Inc, 2019) the project area has an extensive history of disturbance through both hot springs facilities as well agricultural operations. A former version of the Astoria Hot Spring Park operated on this same site from 1961-1998 (Huffman, 2017). In addition to a public hot springs facility, this land has gone through several iterations of agricultural operations.

The proposed development of a park for outdoor recreation is in line with uses found at nearby resort facilities, on USFS lands and as has been found historically in this location.

Threatened and Endangered Species

No known threatened or endangered plant or vertebrate species were observed while on the property. It is unlikely that the species listed below, would pass through the property. However, the Snake River corridor is the largest wildlife movement corridor in Teton County. Therefore, a property such as this in the Snake River corridor and adjacent to USFS lands could be subject to a wide variety of vertebrate species' movement patterns.

While the lands of this project area are mapped as critical lynx habitat, the vegetation present does not meet the habitat requirements for Canada lynx. Canada lynx require dense conifer forest containing healthy snowshoe hare populations (their primary food resource). The resources available in this project area do not justify the mapping of the project area as critical lynx habitat. The mapping of USFWS critical lynx habitat was done at a coarse scale and follows the eastern shore of the Snake River thereby including this project area.

USFWS Teton County Species List (USFWS, 2019):

- Canada Lynx (Threatened)
- Grizzly Bear (Threatened)
- North American Wolverine (Proposed Threatened)
- Yellow-billed Cuckoo (Threatened)
- Whitebark Pine (Candidate)
- Canada Lynx Critical Habitat (Designated)

ALTERNATIVES ANALYSIS

The impacts section above provides for methods or alternatives to avoid or minimize impacts to higher ordinal ranking vegetative cover types and impacts to wildlife. As a result, the proposed development is in compliance with Teton County Land Development Regulation's requirement to minimize or avoid impacts to lands protected by the Natural Resources Overlay (Section 5.2.1.E.1. *Minimizes Wildlife Impacts*) and an alternatives analysis is not needed. Furthermore, all development proposed here is in line with 2017 CUP application.

HABITAT ENHANCEMENT PLAN

As noted above, impacts to higher ordinal ranking vegetative cover types can be avoided. Therefore, a habitat enhancement plan is not needed at this time (Section 5.2.1.E., *Impacting the NRO*).

In addition to avoidance of impacts to higher ordinal ranking vegetative cover types as addressed above, future plans include the restoration of disturbed areas to provide for enhanced natural resources in comparison with the current state of the project area. Much of this future restoration will finish projects that were left incomplete by historic, disturbance activities.

APPENDIX

APPENDIX A: REFERENCES

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APPENDIX B: FIGURES

Figure 1. Vicinity

Figure 2. Vegetative Cover

Figure 3. Waterbodies, Wetlands and Buffers

Figure 4. Elk Habitat

Figure 5. Mule Deer Habitat

Figure 6. Proposed and Existing Phase II Development

Figure 7. Proposed Development and Vegetative Cover

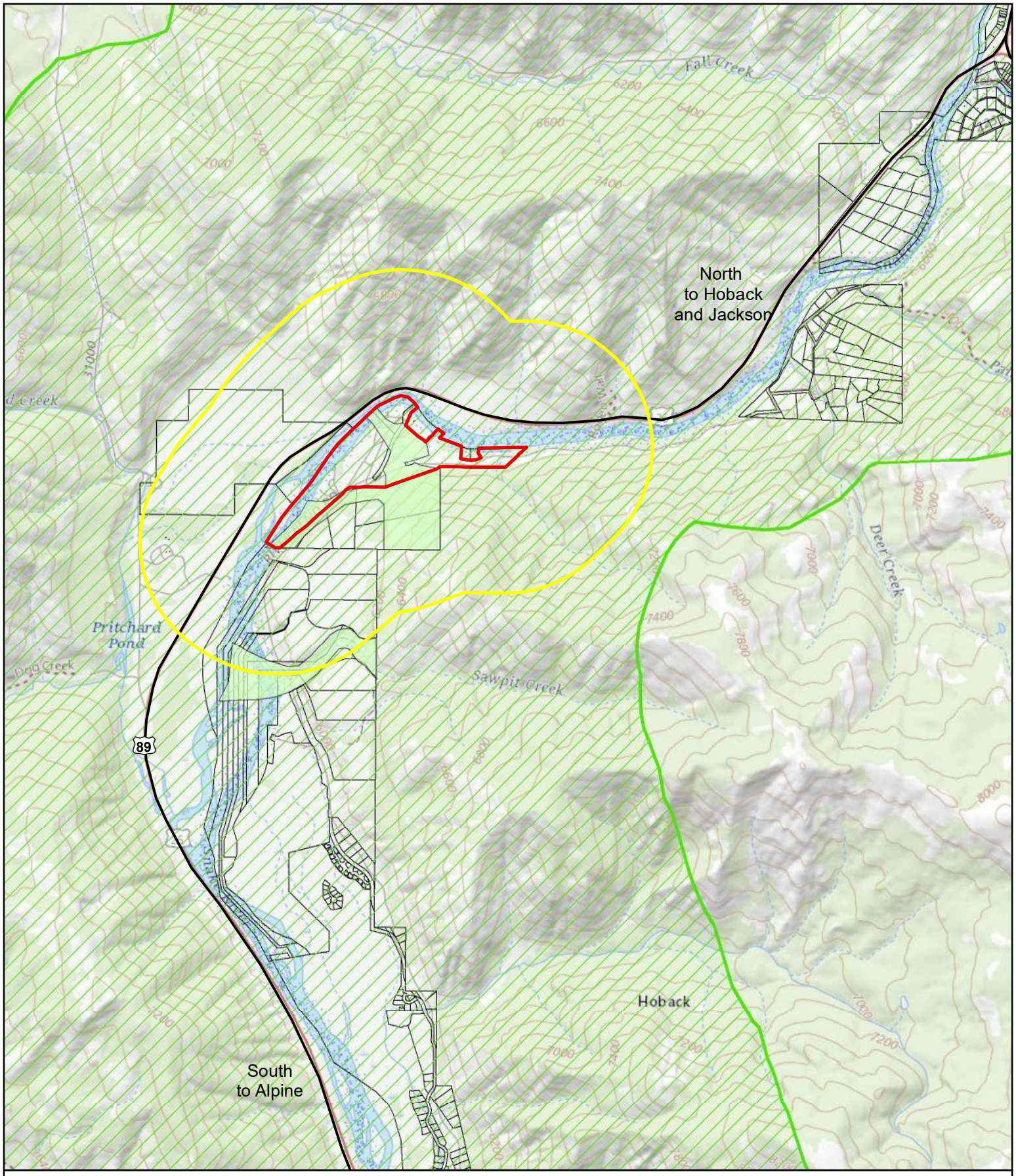

Figure 1:
Project Vicinity

Astoria Park Conservancy
Phase II Development
Environmental Analysis

Legend

- Project Area
- 1/2 Mile Project Area Vicinity
- TCSPT Easement
- NRO
- Parcels
- Road

Sources
USGS
- Topo
Teton County
- Roads
- Parcels
- Zoning Overlay

1 in = 0.5 miles
0 0.5 Miles

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N

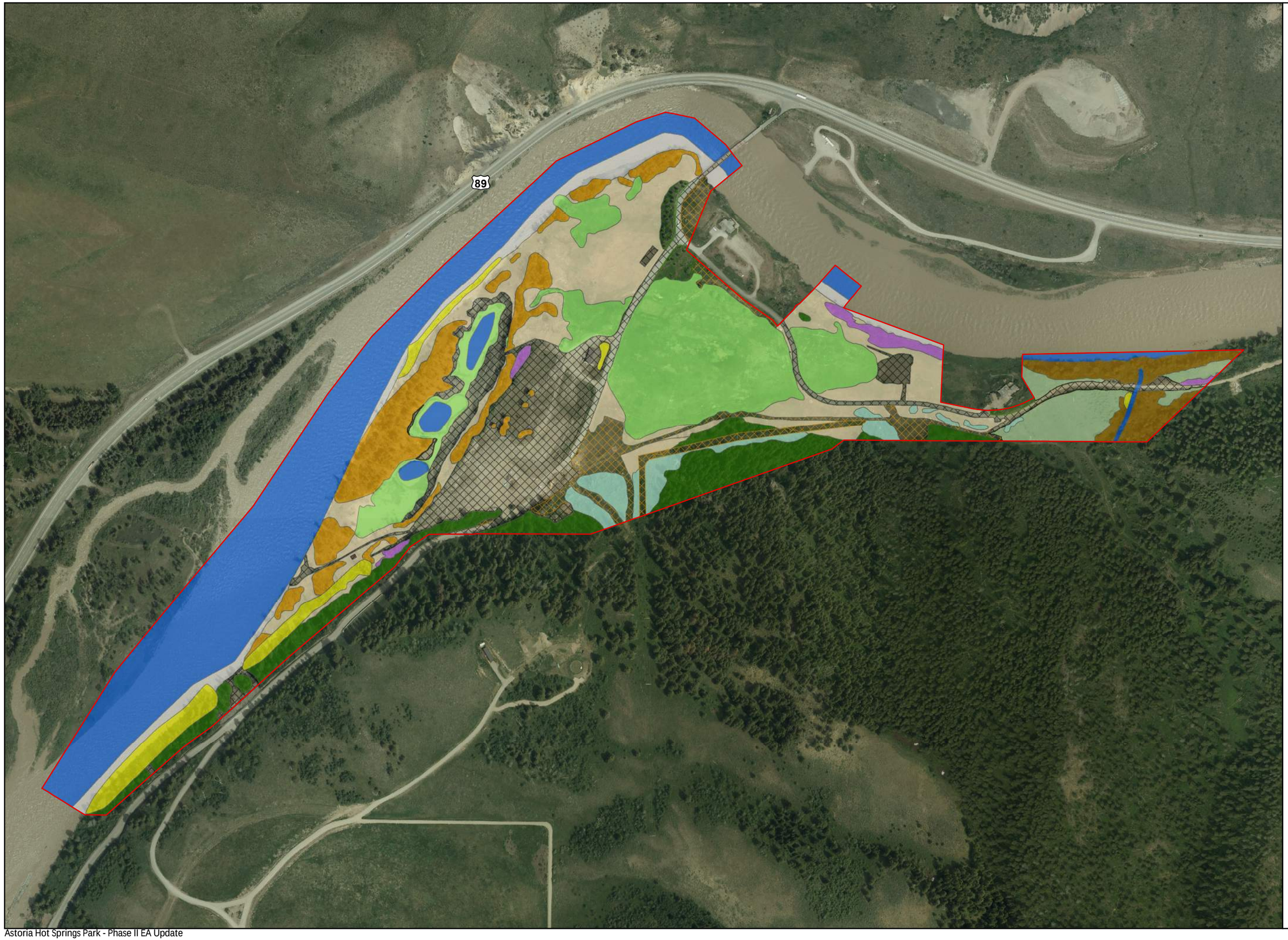

Figure 2:
Vegetative Cover

Astoria Park Conservancy
Phase II Development
Environmental Analysis

Legend

Project Area

Vegetative Cover (Ordinal Rank)

- Open Water (n/a)
- Exposed Shoreline (n/a)
- Scrub-Shrub Wetland (10)
- Emergent Wetland (9)
- Nonmesic Tall Shrub (8)
- Mesic Tall Shrub (8)
- Cottonwood Forest (6)
- Mixed Forest (6)
- Douglas Fir (6)
- Mesic Shrub (5)
- Agricultural Meadow (2)
- Previously Disturbed (n/a)
- Landscaping (n/a)
- Disturbed (n/a)

1 in = 400 feet

0 400 Feet

N

Sources
Teton County
- 2017 1 ft Aerial
- Parcels
- Roads

Pioneer Environmental
- Wetland Delineation

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Figure 3:
Waterbodies, Wetlands and Buffers

Astoria Park Conservancy Phase II Development Environmental Analysis

Legend

- Project Area
- 150 ft River Buffer
- 30 ft Wetland Buffer

Vegetative Cover (Ordinal Rank)

- Open Water (n/a)
- Exposed Shoreline (n/a)
- Scrub-Shrub Wetland (10)
- Emergent Wetland (9)

1 in = 400 feet

0 400 Feet

N

Sources
Teton County
- 2017 1 ft Aerial
- Parcels
- Roads

Pioneer Environmental
- Wetland Delineation

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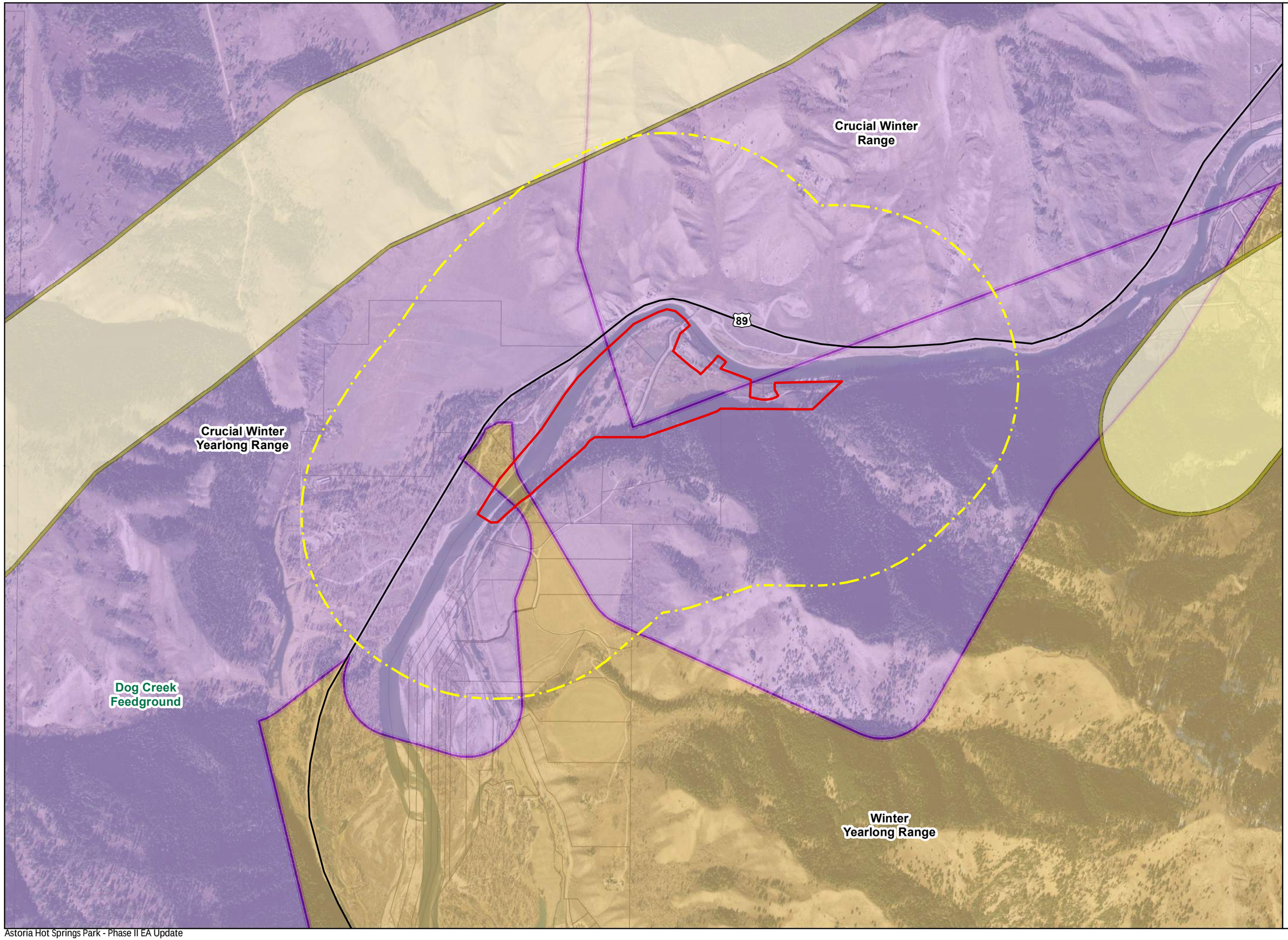

Figure 4:
Elk Habitat

Astoria Park Conservancy
Phase II Development
Environmental Analysis

Legend

- Project Area
- 1/2 Mile Project Area Vicinity
- WGFD Elk Migration Route
- Crucial Winter & Winter Yearlong Range
- Winter Yearlong Range
- Road

1 in = 0.25 miles

0 0.25 Miles

N

Sources
NAIP
- 2017 1-m Aerial
Teton County
- Roads
- Parcels
WGFD
- Wildlife Ranges and Migration Routes

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Figure 5:
Mule Deer Habitat

Astoria Park Conservancy
Phase II Development
Environmental Analysis

Winter
Yearlong Range

89

Crucial Winter
Yearlong Range

Winter
Yearlong Range

Dog Creek
Feedground

Legend

- Project Area
- 1/2 Mile Project Area Vicinity
- MuleDeerMigrationCorri...
- Crucial Winter Yearlong Range
- Winter Yearlong Range
- Road

1 in = 0.25 miles

0 0.25 Miles

N

Sources
NAIP
- 2017 1-m Aerial
Teton County
- Roads
- Parcels
WGFD
- Wildlife Ranges and Migration Routes

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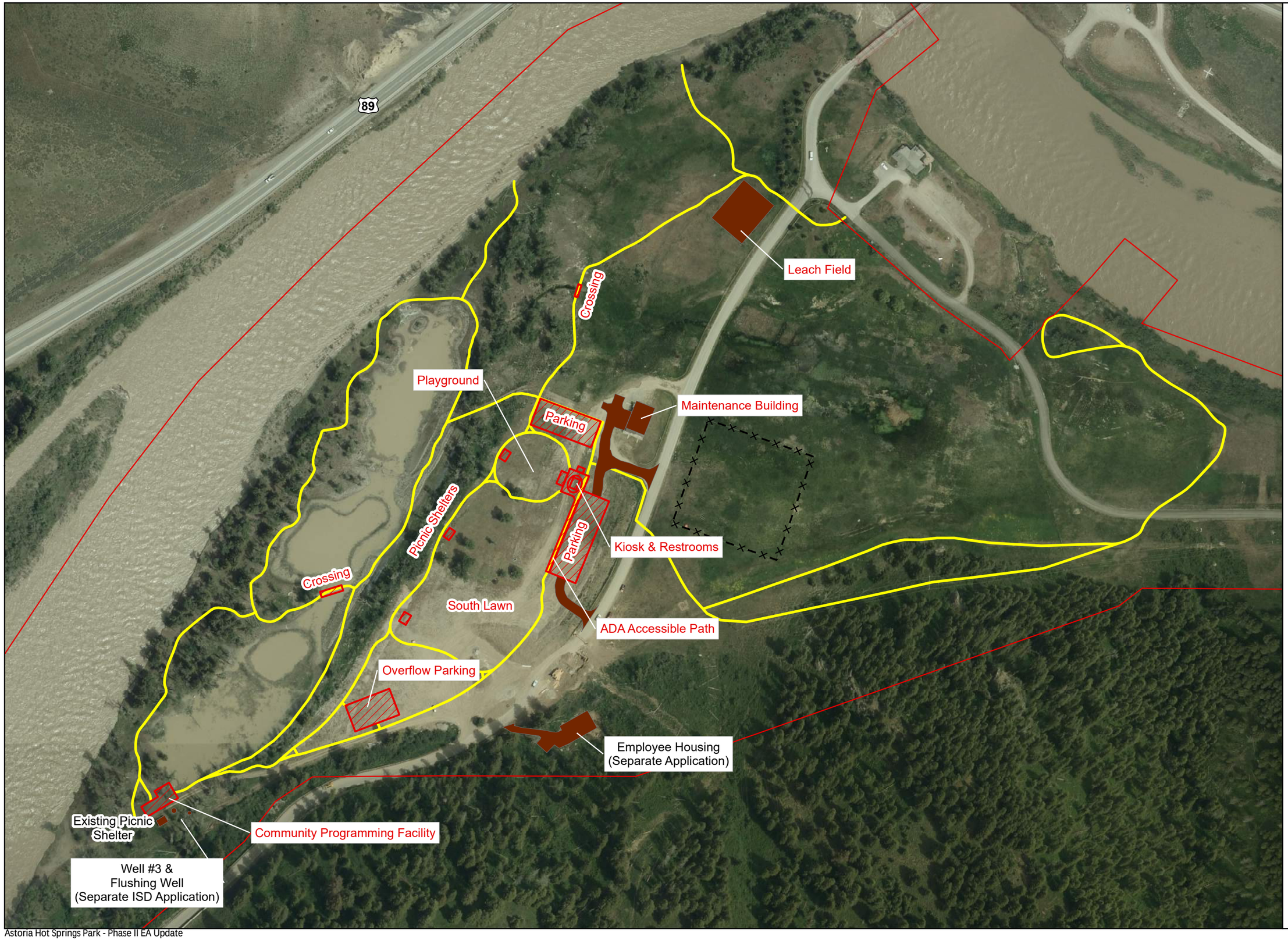

Figure 6:
Proposed Phase II Development and Existing Structures

Astoria Park Conservancy
Phase II Development
Environmental Analysis

Legend

- Project Area
- Proposed Amenities
- Existing or Approved Development
- Proposed Trail System
- Existing Fence

1 in = 200 feet
0 200 Feet
N

Sources
Teton County
- 2017 1 ft Aerial
- Roads

Astoria Park Conservancy
- Existing and Proposed Development

November 18, 2019

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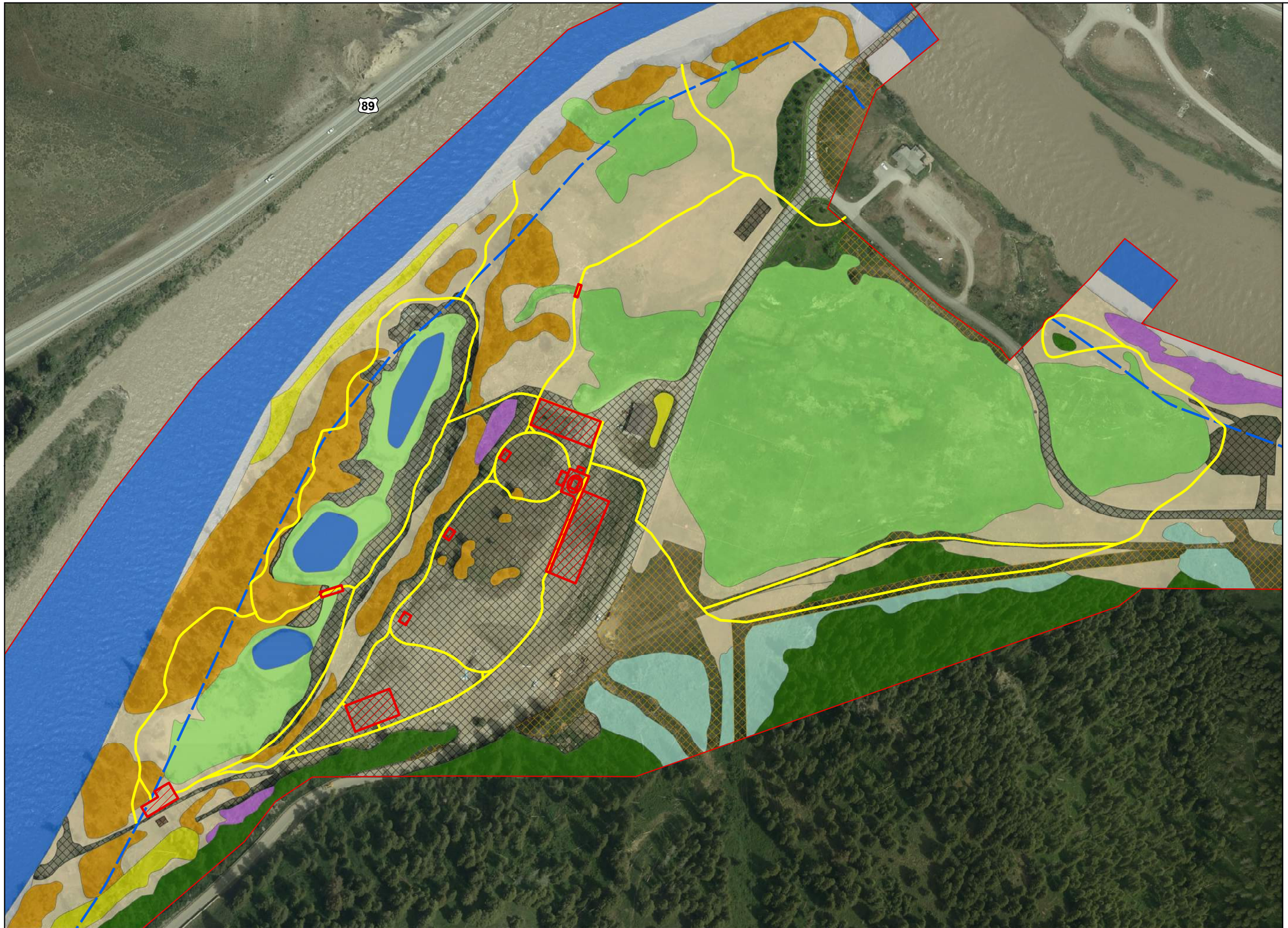

Figure 7:
Proposed Phase II Development and Vegetative Cover

Astoria Park Conservancy
Phase II Development
Environmental Analysis

Legend

- Project Area
- Proposed Amenities
- Proposed Trail System

Vegetative Cover (Ordinal Rank)

- Open Water (n/a)
- Exposed Shoreline (n/a)
- Scrub-Shrub Wetland (10)
- Emergent Wetland (9)
- Nonmesic Tall Shrub (8)
- Mesic Tall Shrub (8)
- Cottonwood Forest (6)
- Mixed Forest (6)
- Douglas Fir (6)
- Mesic Shrub (5)
- Agricultural Meadow (2)
- Previously Disturbed (n/a)
- Landscaping (n/a)
- Disturbed (n/a)

1 in = 200 feet
0 200 Feet
N

Sources
Teton County
- 2017 1 ft Aerial
- Roads
Astoria Park Conservancy
- Proposed Development

November 18, 2019

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APPENDIX C: PHOTOGRAPHS

Photo 1. Cottonwood stand

Photo 2. Cottonwood with sparse understory near Snake River

Photo 3. Snake River, cottonwood and disturbed cover types

Photo 4. Existing picnic shelter

Photo 5. Constructed pond

Photo 6. Constructed pond and adjacent disturbance

Photo 7. Scrub-shrub wetland

Photo 8. Douglas fir and nonmesic tall shrub cover types

Photo 9. Mesic shrub cover type

Photo 10. Nonmesic tall shrub, agricultural meadow (passive), Douglas fir matrix

Photo 11. Previously disturbed roadway example

APPENDIX D: AQUATIC RESOURCES INVENTORY

Aquatic Resources Inventory Report

Astoria Park Conservancy

Astoria Hot Spring Park Phase II Development

Jackson, WY

Provided by Pioneer Environmental Services, Inc.

September 19, 2019

Aquatic Resources Inventory Report

for the

Astoria Hot Springs Park

Jackson, Wyoming

Prepared for:

Paige Byron Curry
Executive Director
Astoria Park Conservancy

Prepared By:

PIONEER
ENVIRONMENTAL SERVICES, INC.

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September 19, 2019

Table of Contents

Appendices

1.0 Introduction

Pioneer Environmental Services, Inc. (Pioneer) was contracted by EcoConnect Consulting, LLC to complete an Aquatic Resources Inventory (ARI) for the Astoria Park (Phase II Development) located in Hoback, Teton County, Wyoming. The purpose of the ARI is to fulfill Teton County Planning and Development Department's requirement for a complete updated Environmental Assessment (prepared by EcoConnect Consulting) (PAP2019-0036). The work was authorized by an agreement between EcoConnect and Astoria Park Conservancy as part of an Environmental Analysis (EA) Update submittal to Teton County Planning and Development.

The subject project area is approximately 12 miles south of Jackson, WY, adjacent to Highway 89 to the north, and the Snake River to the west, in Hoback, WY, specifically: Township 39 North, Range 116 West, 43°15'47.627"N, 110°46'46.026"W (Figure 1). The project area can be accessed by turning south off of Highway 89 onto River Bend Road, over the Snake River on an existing historic bridge. The west side of the project area is accessed from River Bend Road while the east side of the project area is accessed from Johnny Counts Road.

The project area is comprised of two parcels owned by the Trust for Public Land (PIDN: 22-39-16-32-4-04-001) and Christopher Swann (PIDN: 22-39-16-32-4-01-005), totaling approximately 105 ac. The area is zoned in Teton County as Public Park (P) and Planned Resort (PR).

1.1 Background

In an effort to provide necessary documentation for the required permit applications, Teton County has required that an updated Aquatic Resources Inventory (ARI) for this site be prepared and submitted to the County as part of a complete Environmental Analysis (EA) Update for the Astoria Hot Springs Park Phase II Development. An Environmental Analysis including an ARI report was conducted for the Astoria Hot Springs Park by Biota in 2014. Biota concluded that 13.2 ac. of wetland existed within the 97.2-ac. property. In the 2019 ARI, Pioneer observed similar sizes, locations, and types of aquatic resources as Biota.

2.0 Methodology

The project area was surveyed during July 22-24th, 2019 by staff of Pioneer Environmental Services, Inc. The methodologies provided in the *1987 Army Corps of Engineers Wetland Delineation Manual* and the *2010 Regional Supplement to the Corps of Engineers (USACE) Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* were followed (USACE 2010).

The wetland survey began by first walking the designated area to identify primary vegetation, drainage patterns, and hydrologic features that might be indicators of wetlands as defined by the USACE. Preliminary wetland boundaries were also identified based on aerial photographs. Soils, where present, were analyzed in representative locations inside and outside of the preliminary wetland boundaries to determine if they qualified as 'Hydric Soils' as defined by the USACE.

Vegetation within the boundaries was identified and percent cover was estimated based on ocular estimates. Channels and other watercourses were also identified that might qualify as other "Waters of the U.S." (WOTUS).

All data were recorded on the USACE Western Mountains – Wetland Determination Form, Version 2.0 (Appendix C). Preliminary wetland boundaries were finalized and delineated using an Archer^2 GPS with Everglade® wetland delineation software, Version 2.1.

By definition, wetlands are "those areas that are inundated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions" (Environmental Laboratory 1987). Three classification parameters must be met in order for an area to be considered a wetland: hydrophytic plants must be the dominant vegetative cover, hydric soils must be present, and adequate wetland hydrology must be present during the growing season.

3.0 Findings

3.1 Soil Survey –Teton County, Wyoming

Soil information was collected from the Natural Resources Conservation Services (NRCS) Web Soil Survey for the Teton County Area, Wyoming (USDA 2019). No soil data was available for the project site or on any portion of the Astoria Hot Springs project area or within the Snake River Sporting Club property to the south (Appendix D).

Although no listed hydric soils are present within the project area, Pioneer identified areas with soils that contained hydric soil characteristics and indicators. Most soil samples taken revealed sandy soil types. The most frequently occurring hydric soil indicators included redox depressions (F8), sandy gleyed matrix (S4), and thick dark surface (A12). Each sample point was recorded on the appropriate *USACE Wetland Determination Data Form for the Western Mountains, Valleys, and Coast Region - Version 2.0* (USACE 2010) and are included in Appendix C.

3.2 National Wetlands Inventory (NWI)

The NWI (USFWS 2019) identifies three main wetland habitat classification types within the project site and adjacent areas – palustrine emergent, scrub-shrub, and riverine (Figure 2). These include:

<u>Riverine</u>

- R3UBH (riverine (R), upper perennial (3), unconsolidated bottom (UB), permanently flooded (H)),
- R4SBC (riverine (R), intermittent (4), streambed (SB), seasonally flooded (C)),
- R5UBH (riverine (R), unknown perennial (5), unconsolidated bottom (UB), permanently flooded (H)), and

- R3USC (riverine (R), upper perennial (3), unconsolidated shore (US), seasonally flooded (C));

Palustrine Emergent

- PEM1C (palustrine emergent, persistent, seasonal flooding) and
- PEM1A (palustrine emergent, persistent, temporary flooded); and

Scrub-Shrub

- PSSA (palustrine scrub-shrub, temporary flooded).

The aquatic resources that exist within the boundaries of the surveyed project site include all three main NWI classifications: freshwater emergent (PEM1C/PEM1A), palustrine scrub-shrub (PSSA), and riverine (R3UBH/R3USC/R4SBC/R5UBH). The Snake River (R3UBH) is located along the north and western boundaries of the project area. The NWI provides information regarding potential existing aquatic resources; however, this data can be inaccurate when applied to a parcel-scale. Therefore, the aquatic resources and wetlands delineated in this survey differ from those mapped according to the NWI.

3.3 Vegetation

According to the Teton County vegetation mapping layer (Greenwood 2019), the project area is comprised mostly of irrigated agricultural fields, streams and rivers, blue spruce riparian forest, sagebrush dry shrubland, cottonwood riparian forest, mixed planted and introduced grassland herbaceous vegetation, previous disturbed, flooded wet meadow, riparian shrubland (mixed native *Salix* species, willow shrubland), mixed tall deciduous shrubland, and mixed grassland herbaceous vegetation (Figure 3).

Upland areas within the project area are comprised of grasses such as wiregrass (*Cymbopogon sp.*) and slender wheatgrass (*Elymus trachycaulus*), smooth brome (*Bromus inermus*), Idaho fescue (*Festuca idahoensis*), bentgrass (*Agrostis sp.*) as well as invasive species, including Canada thistle (*Cirsium arvense*), houndstongue (*Cynoglossum officinale*), ox-eyed daisy (*Leucanthemum vulgare*), and musk thistle (*Carduus nutans).* The upland shrub stratums include narrowleaf cottonwood (*Populus angusitfolia*), black hawthorn (*Crataegus douglasii*), and scattered coyote willow (*Salix exigua*).

Palustrine emergent wetlands within the project area consist of reed canarygrass (*Phalaris arundinacea),* Alaska rush (*Juncus effusus*), Nebraska sedge (*Carex nebrascensis*), field mint (*Mentha arvensis*), baltic rush (*Juncus balticus*), field horsetail (*Equisetum hyemale*), creeping spikerush (*Eleocharis palustris*), narrowleaf cattail (*Typha angustifolia*) and common reedgrass (*Phragmites australis*). Scrub shrub wetlands within the project area are mostly comprised of coyote willow (*Salix exigua*), redosier dogwood (*Cornus sericea*), and mountain alder (*Alnus incana*).

3.4 Hydrology

The project site is located within the Snake River floodplain on fluvial terraces. The Snake River dominates the area west and north of the site. The Snake River through the western section is subjected to braiding and channelization, and is dominated by small channels and gravel bars. The channel reflects the effects of extreme changes in flow between spring and fall. Flows in the Snake River can be in excess of 30,000 cfs during spring runoff (measurement taken downstream of the project area in the Snake River Canyon). Wetlands in the vicinity of the project site are generally located within the low-lying areas and riparian zones of the Snake River, and other nearby riparian zones and remnant channels and oxbows of the river, which are no longer flooded, but still maintain a high water table. Record level high flows were recorded in the spring of 2017 at 44,000 cfs (USGS 2018).

The western portion of the project area contains three man-made ponds that appear to have been created sometime between 1994 and 1999 according to aerial photography on the Teton County MapServer (Greenwood 2019). According to the 2014 Environmental Analysis (Biota 2014), the northernmost pond is lined, and the other two are not lined. Biota observed that hydrology for the northernmost pond was supplied by a groundwater well, while the other two ponds are fed by outflows from the northernmost pond, as well as groundwater. These ponds were likely created as part of the Canyon Club development project, but construction was never completed (Biota 2014). Currently, the existing well between the northern and middle ponds is not in use and the ponds are fed from groundwater (*Paige Byron Curry, pers. commun.*).

The surrounding wetlands mapped in 2019 are larger than those mapped by Biota in 2014. This may have been a result of groundwater seepage and/or flooding of the ponds, increasing the adjacent wetland acreage. According to a consultation between Biota and Teton County in 2014, it was determined that the wetlands associated with the man-made ponds are not considered to be protected under Teton County Land Development Regulations (Biota 2014; Teton County Planning, 2015).

The north and west portions of the project area are located within the FEMA Flood Hazard Zone A, 100-year floodplain (Map # 56039C3150E) (FEMA 2019; Meridian Engineering 2019).

3.4.1 Precipitation and Temperature

The average annual precipitation in the project area is about 17 inches of rainfall and about 67 inches of snow per year. December, January, and February typically receive the most precipitation on average. Annual temperatures range from the average high of 54^{o}F to the average low of 24.5^{o}F (U.S. Climate Data 2019).

3.4.2 Groundwater

Snowpack is the main source that contributes to ground water storage and sustains stream flows from the area, including an intermittent stream (R-01), located on the northeast corner of the project area, and the Snake River (R-02), located directly adjacent along the northern and

western boundaries of the project area. In addition, groundwater seeps and geothermal features exist within the project area.

3.4.3 Surface Run-off from Neighboring Properties

Since most of the seasonal precipitation comes in the form of snow and springtime runoff, and the sandy soils are shallow over rock, a significant portion of this melt-water leaves the site as surface runoff from the areas of higher elevation located to the south and west of the project area. The remaining water enters rock fissures and contributes to more extended stream flow and seeps downslope, and is either intercepted by existing wetlands, or flows into irrigation ditches/canals, or the Snake River. A leach field exists on the project area, located in an upland area on the west side of River Bend Road.

4.0 Preliminary Aquatic Resources Inventory and Recommendations

The 2019 ARI (Pioneer) identified 12 individual wetland areas totaling approximately 19.5 ac. (3.0 ac. palustrine scrub shrub and 16.5 ac. palustrine emergent), in addition to 2 riverine features (5,395 lf. perennial and 442 lf. intermittent streams) totaling 5,837.0 lf. that may qualify as other "Waters of the U.S." within the project area (Figure 4). Pioneer concludes that those areas not identified as having all three wetland characteristics on Figure 4 are uplands. These areas not identified as wetlands have strong upland characteristics with very small patches of soil that exhibit some wetland characteristics, but not in a dominant fashion. In addition, some areas with the project boundaries contain hydric vegetation, but do not contain the adequate hydrology and/or soil requirements to classify as a wetland. Palustrine emergent wetlands are located adjacent to the man-made ponds, and in the central areas of the project area. Palustrine scrub shrub wetlands are located along the Snake River, riparian areas, and along the intermittent stream at the northeastern portion of the project area. Table 1 describes each individual aquatic resource found on the project area.

Table 1. Aquatic resources located within the Astoria Hot Springs Park project area.

Name	Type*	Area (ac.)	Area (sf.)	Length (lf.)
W-1	PSSA	0.9	3,8543.5	--
W-2	PEM	2.5	106,552.6	--
W-3	PEM	0.01	419.8	--
W-4	PEM	1.3	54,504.9	--
W-5	PSSA**	0.08	3,344.7	--
W-6	PEM	10.0	433,513.5	--
W-7	PEM	1.9	83269.9	--

W-8	PEM	0.9	37,127.9	--
W-9	PEM	0.1	4,220.67	--
W-10	PSSA	0.04	1,784.0	--
W-11	PSSA	1.5	66,879.1	--
W-12	PSSA	0.5	20,123.0	--
R-01	R4SBC	--	--	442.0
R-02	R3UBH	--	--	5,395.0
Total		**19.5**	**850,283.40**	**5,837.0**
* PEM = Palustrine Emergent, PSSA = Palustrine Scrub Shrub, R4SBC = Intermittent Stream, R3UBH = Perennial Stream. **W-5 is classified as PSSA, however the few scrub-shrub species present have been planted there as part of a landscaping plan.				

Pioneer recognizes that it is the sole responsibility of the USACE to determine which areas do and do not qualify as wetlands, and which of those will be considered jurisdictional. This ARI is not currently intended as a submittal for a Section 404 Wetland Permit, but the information found in it may be used in the future for that purpose.

5.0 Summary

As a result of this ARI for the Astoria Hot Springs Park, Pioneer identified 19.5 ac. as potential wetlands and approximately 5,837.0 lf. of riverine within the project area.

The Astoria Hot Springs Park project area is typical of surrounding Snake River terraces, where hydrophytic vegetation is common in both wetland areas and in some surrounding uplands, and wetland boundaries fluctuate over time due to the dynamic nature of the Snake River and changing water levels.

Pioneer believes that this ARI accurately describes the size and type of the existing aquatic resources, as well as those impacted by the project. The final determination as to whether or not this report adequately describes the existing aquatic resources rests with the USACE.

6.0 References

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Appendix A

Maps and Figures

Figure 1. General Location and Vicinity of the Project Area at the Astoria Hot Springs Park Teton County, WY.

Astoria Hot Springs Project Area

August 30, 2019
Pioneer Environmental Services, Inc.

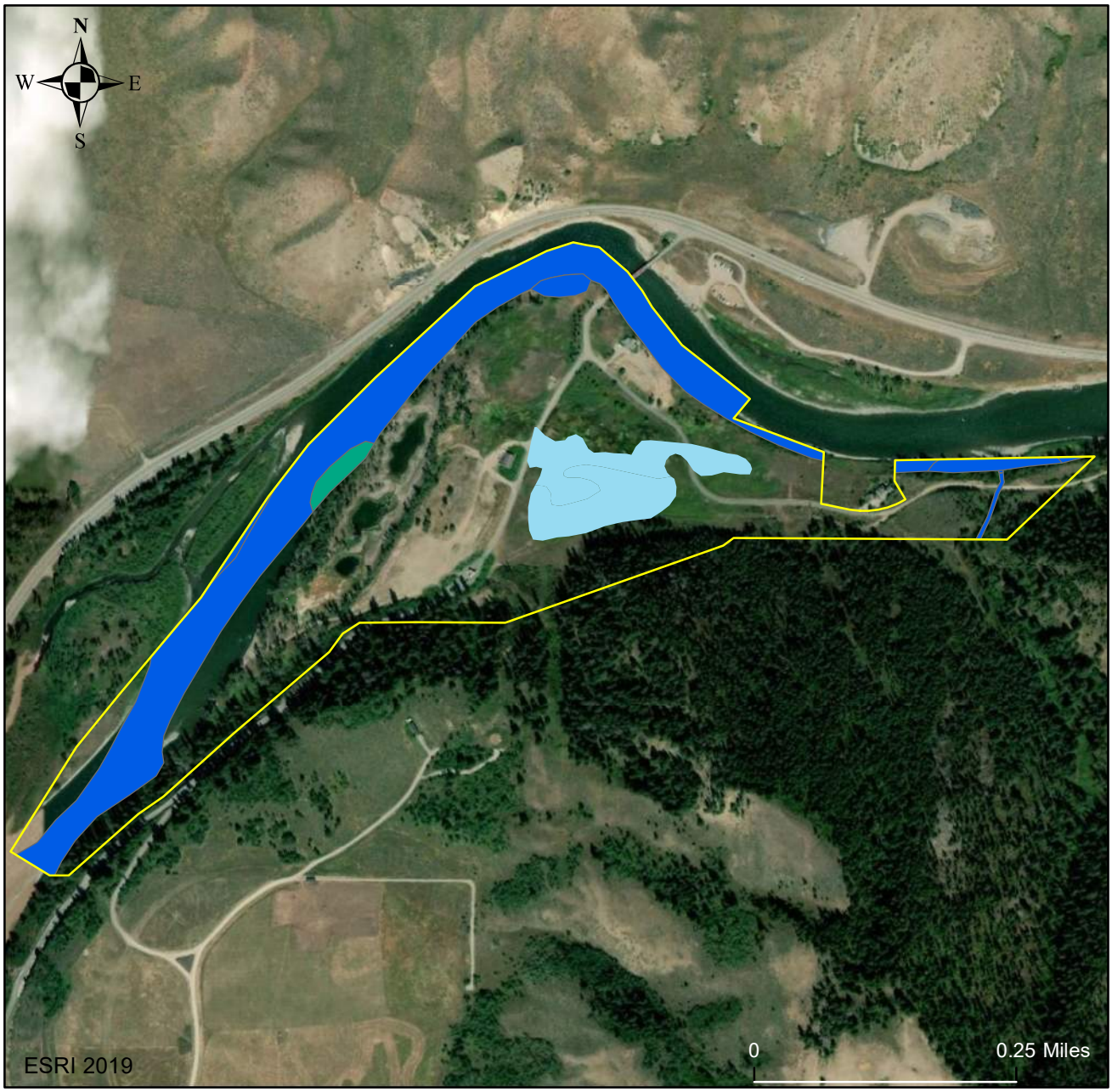

Figure 2. National Wetland Inventory (NWI) for the Astoria Hot Springs Park, Teton County, WY.

Astoria Hot Springs Project Area

NWI Wetland Type

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Riverine

July 29, 2019
Pioneer Environmental Services, Inc.
X

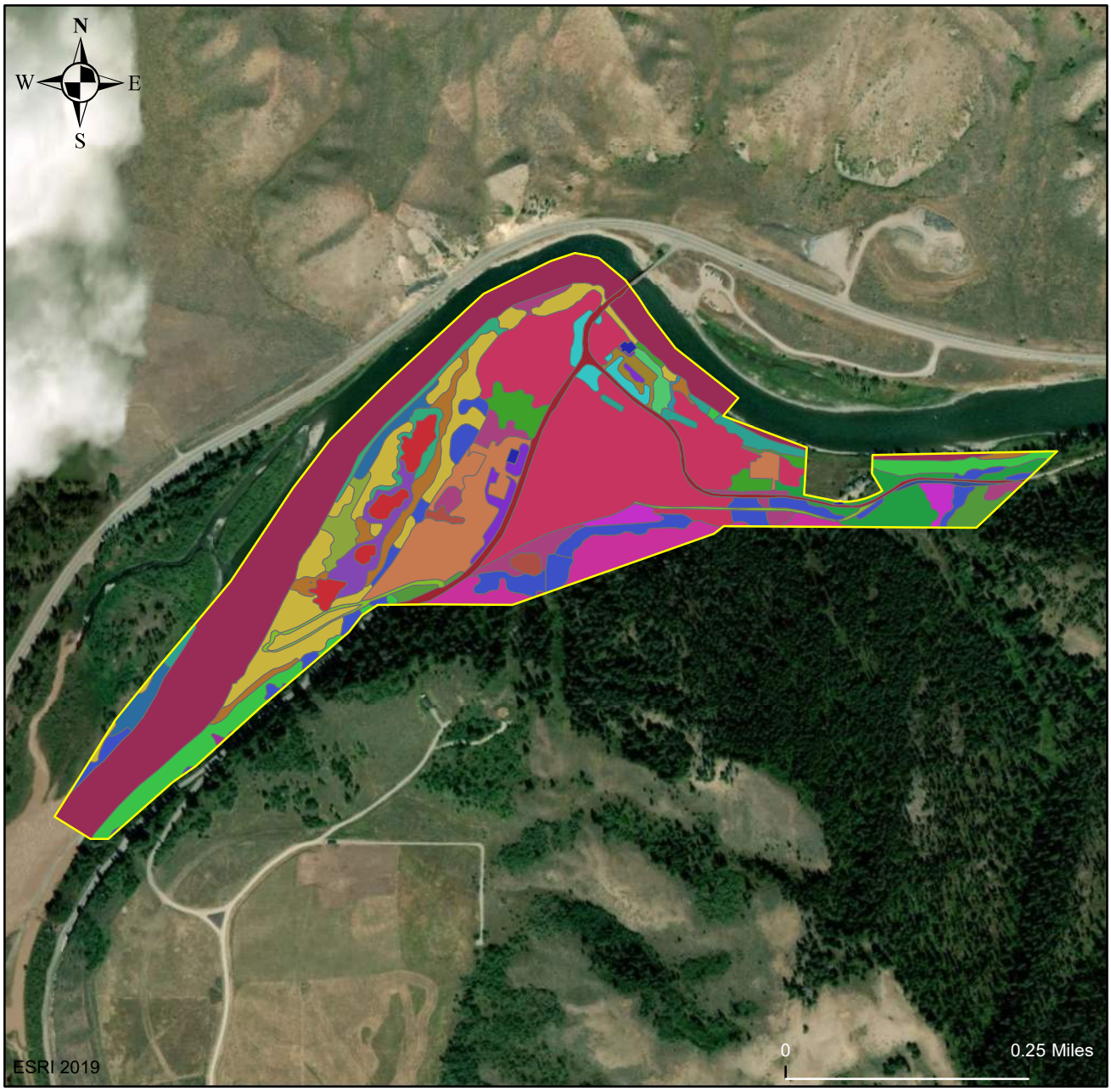

Figure 3. Teton County Vegetation Cover Types for the Astoria Hot Springs Property, Teton County, WY.

Astoria Hot Springs Project Area

Teton County Vegetation Cover Types

- Aspen Forest
- Blue Spruce Riparian Forest
- Buildings and Driveways
- Canals
- Cottonwood Riparian Forest
- Douglas-fir Forest
- Exposed Hillside Sparse Vegetation
- Exposed Shore - Stream Deposit Sparse Vegetation
- Flooded Wet Meadow Herbaceous Vegetation
- Herbaceous Aquatics
- Horse and Ski Trails
- Irrigated Agricultural Fields
- Lakes, Ponds, and Reservoirs
- Lawns and Landscaping
- Mixed Blue Spruce - Aspen - Cottonwood Semi-natural Planted Woodland
- Mixed Conifer Forest
- Mixed Cottonwood - Blue Spruce Riparian Forest
- Mixed Evergreen - Aspen Forest
- Mixed Grassland Herbaceous Vegetation
- Mixed Planted and Introduced Grassland Herbaceous Vegetation
- Mixed Tall Deciduous Shrubland
- Non-Irrigated Agricultural Fields
- Parking Lots
- Paved Roads
- Perennially Flooded Agricultural Fields
- Rock Outcrop / Cliff
- Sagebrush Dry Shrubland
- Streams and Rivers
- Transitional Areas
- Willow Shrubland

July 29, 2019
Pioneer Environmental Services, Inc.
NAD_1983_StatePlane_Wyoming_West_FIPS_4904_Feet

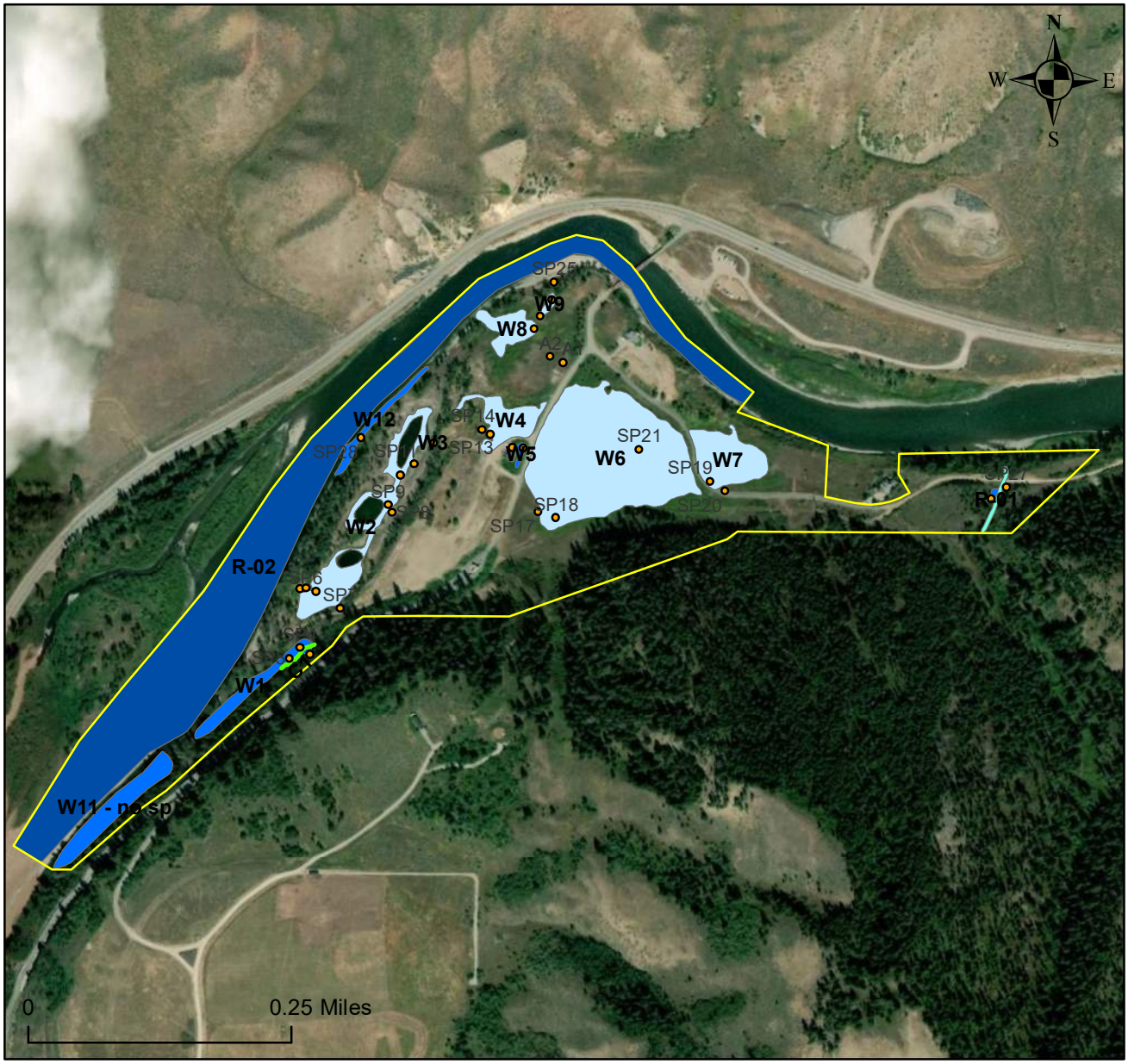

Figure 4. Aquatic resource inventory including wetland delineation for the Astoria Hot Springs Park, Teton County, WY.

Astoria Project Area
Sample Points
Channels/Ditches

Wetlands (2019)

Palustrine Emergent
Riverine (Intermittent)
Riverine (Perennial)
Scrub-Shrub

August 30, 2019
Pioneer Environmental Services, Inc.

Appendix B

Photographs

*All photographs were taken July 22-24, 2019

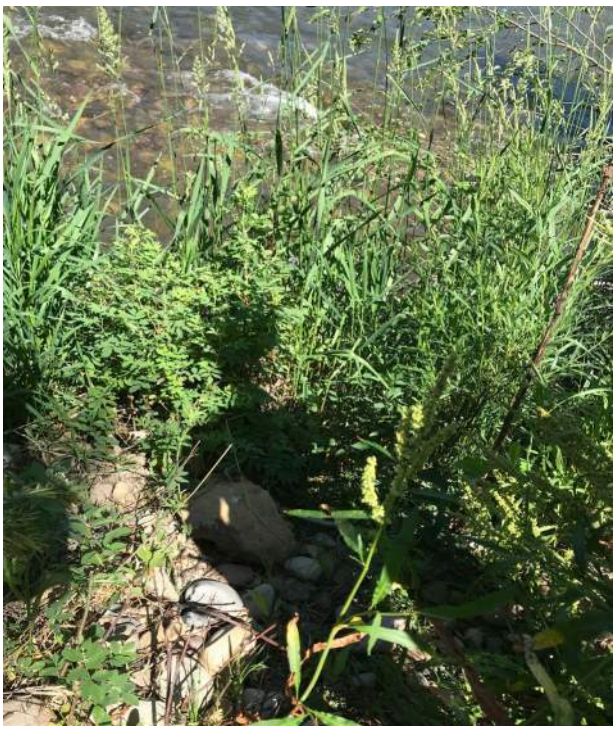

Photo 1: Drainage from scrub shrub wetland (W1) into Snake River (W).

Photo 2: Scrub-shrub vegetation (SW).

Photo 3: Scrub-shrub wetland (W1) (SW).

Photo 4: Riparian fringe wetland along Snake River (W).

Photo 5: Existing manmade pond (Pond 1) and PEMA wetland (W3) (S).

Photo 6: Existing manmade pond (2) and fringe PEMA wetland (W3) (S).

Photo 7: Existing manmade pond (Pond 3), and wetland (W3) (S).

Photo 8: Large palustrine emergent wetland (W6) (E).

Photo 9: Open water/palustrine emergent scrub wetland complex (W6) (E).

Photo 10: Riparian channel and associated scrub shrub wetland (W10) (E).

Photo 11: Typical wetland soil sample.

Photo 12: Riparian scrub-shrub wetland (W10) (S).

Appendix C

Data Sheets

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: A1

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): flat | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation x, Soil x, or Hydrology x significantly disturbed? Are "Normal Circumstances" present? Yes X 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	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Bromus tectorum*	50	Yes	UPL
2. *Elymus trachycaulus*	10	No	FAC
3. *Festuca pratensis*	10	No	FACU
4. *Ericameria nauseosa*	30	No	UPL
5. *Rumex crispus*	5	No	FAC
6. *Centaurea stoebe*	50	Yes	UPL
7.			
8.			
9.			
10.			
11.			
	155	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	10	x 4 =	40
UPL species	130	x 5 =	650
Column Totals:	155 (A)		735 (B)

Prevalence Index = B/A = 4.74

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: A1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 3

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ? Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria City/County: Teton Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy State: WY Sampling Point: A2

Investigator(s): PES Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): LRR E Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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	No X	**Is the Sampled Area within a Wetland?** **Yes** **No** X
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Centaurea stoebe*	70	Yes	UPL
2. *Lepidium latifolium*	10	No	FAC
3. *Poa pratensis*	20	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	70	x 5 =	350
Column Totals:	100 (A)		440 (B)
Prevalence Index = B/A =			4.40

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** X

Remarks:

SOIL

Sampling Point: A2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 3

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ? Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria City/County: Teton Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy State: WY Sampling Point: SP1

Investigator(s): PES Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): LRR E Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	No	**Is the Sampled Area within a Wetland?** **Yes** **No** x
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus angustifolia*	15	Yes	FACW
2.			
3.			
4.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Crataegus douglasii*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	=Total Cover	
Herb Stratum (Plot size:)			
1. *Amelanchier canadensis*	15	No	FACU
2. *Symphoricarpos occidentalis*	15	No	FAC
3. *Bromus inermis*	85	Yes	FAC
4. *Cynoglossum officinale*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			FACU
	120	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Rosa woodsii*	5	Yes	FACU
2.			
	5	=Total Cover	

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	110	x 3 =	330
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	150 (A)		460 (B)

Prevalence Index = B/A = 3.07

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100						LS

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 3

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ? Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria City/County: Teton Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy State: WY Sampling Point: SP2

Investigator(s): PES Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): LRR E Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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	No X	**Is the Sampled Area within a Wetland?** **Yes** **No** X
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Centaurea stoebe*	70	Yes	UPL
2. *Lepidium latifolium*	15	No	FAC
3. *Poa pratensis*	15	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	70	x 5 =	350
Column Totals:	100 (A)		440 (B)
Prevalence Index = B/A =			4.40

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** X

Remarks:

SOIL

Sampling Point: SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 5

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ? Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria City/County: Teton Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy State: WY Sampling Point: SP3

Investigator(s): PES Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): LRR E Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	No	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes x	No	
Wetland Hydrology Present?	Yes x	No	

Remarks:
strip scrub/shrub wetland ---> scrub/shrub complex

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix exigua*	40	Yes	FACW
2. *Alnus incana*	30	Yes	FACW
3.			
4.			
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Salix exigua*	60	Yes	FACW
2. *Prunus virginiana*	30	Yes	FACU
3.			
4.			
5.			
	90	=Total Cover	
Herb Stratum (Plot size:)			
1. *Carex nebrascensis*	40	Yes	OBL
2. *Maianthemum racemosum*	20	Yes	FAC
3. *Calamagrostis canadensis*	30	Yes	FACW
4. *Carex rostrata*	10	No	OBL
5. *Juncus articulatus*	10	No	OBL
6. *Equisetum hyemale*	10	No	FACW
7. *Equisetum arvense*	10	No	FAC
8. *Amelanchier alnifolia*	5	No	FACU
9. *Cirsium vulgare*	5	No	FACU
10. *Hierochloe odorata*	10	No	
11. *Solidalgo canadensis*	3	No	FACU
	153	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	170	x 2 =	340
FAC species	30	x 3 =	90
FACU species	43	x 4 =	172
UPL species	0	x 5 =	0
Column Totals:	303 (A)		662 (B)

Prevalence Index = B/A = 2.18

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sampling Point: SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	85	10YR 4/2	10	D	M		
			7.5YR 4/6	5	CS			

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- x Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP04

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): | Local relief (concave, convex, none): NONE | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x No

Hydric Soil Present? Yes x No

Wetland Hydrology Present? Yes x No

Is the Sampled Area within a Wetland? **Yes** X **No**

Remarks:
strip scrub/shrub wetland ---> scrub/shrub complex

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix exigua*	30	Yes	FACW
2. *Alnus incana*	45	Yes	FACW
3.			
4.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Salix exigua*	40	Yes	FACW
2.			
3.			
4.			
5.			
	40	=Total Cover	
Herb Stratum (Plot size:)			
1. *Carex nebrascensis*	15	No	OBL
2. *Maianthemum racemosum*	5	No	FAC
3. *Calamagrostis canadensis*	30	Yes	FACW
4. *Carex rostrata*	5	No	OBL
5. *Juncus articulatus*	10	No	OBL
6. *Equisetum hyemale*	20	Yes	FACW
7. *Equisetum arvense*	5	No	FAC
8.			
9.			
10.			
11.			
	90	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	165	x 2 =	330
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	205 (A)		390 (B)
Prevalence Index = B/A =			1.90

Hydrophytic Vegetation Indicators:

x 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vacular Plants[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sampling Point: SP04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	85	10YR 4/2	10	D	M		
			7.5YR 4/6	5	CS			

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___		
Water Table Present?	Yes ___	No x	Depth (inches): ___		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 4	**Wetland Hydrology Present?**	**Yes** X **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP5

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): pond | Local relief (concave, convex, none): none | Slope (%): 5

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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	No x	**Is the Sampled Area within a Wetland?** **Yes** **No** x
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:
UPL

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			FACW
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Elymus trachycaulus*	5	No	FACU
2. *Poa pratensis*	10	Yes	FAC
3. *Bromus inermis*	5	No	FAC
4. *Solidago canadensis*	5	No	FACU
5. *Sambucus racemosa*	10	Yes	FACU
6.			
7.			
8.			
9.			
10.			
11.			FACU
	35	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 50

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	35 (A)		125 (B)

Prevalence Index = B/A = 3.57

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** x

Remarks:

SOIL

Sampling Point: SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100						very gravelly

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 3

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP6

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): pond edge | Local relief (concave, convex, none): flat | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 x No

Hydric Soil Present? Yes x No

Wetland Hydrology Present? Yes x No

Is the Sampled Area within a Wetland? **Yes** X **No**

Remarks:
S. most pond / southern end SS (willow) + PEMA --- dry conditions

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Salix exigua*	100	Yes	FACW
2.			
3.			
4.			
5.			
	100 =Total Cover		
Herb Stratum (Plot size:)			
1. *Schoenoplectus americanus*	40	Yes	OBL
2. *Typha latifolia*	80	Yes	OBL
3. *Juncus tenuis*	20	No	FAC
4. *Calamagrostis canadensis*	10	No	FACW
5. *Alopecurus pratensis*	15	No	FAC
6. *Phragmites australis*	25	No	FACW
7.			
8.			
9.			
10.			
11.			FACU
	190 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	120	x 1 =	120
FACW species	135	x 2 =	270
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	290 (A)		495 (B)

Prevalence Index = B/A = 1.71

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sampling Point: SP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/2	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ROCK

Depth (inches): 6

Hydric Soil Present? **Yes** X **No** ___

Remarks:
surface muck

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- x Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: sp07

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): toe of slope | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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	No x	**Is the Sampled Area within a Wetland?** **Yes** **No** x
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:
small depression area

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Salix exigua*	10	Yes	FACW
2. *Amelanchier canadensis*	10	Yes	FACU
3. *Sambucus racemosa*	10	Yes	FACU
4.			
5.			
	30 =Total Cover		
Herb Stratum (Plot size:)			
1. *Equisetum hyemale*	10	No	FACW
2. *Poa pratensis*	80	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			FACU
	90 =Total Cover		
Woody Vine Stratum (Plot size:)			
1. *Rosa woodsii*	25	Yes	FACU
2.			
	25 =Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	80	x 3 =	240
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	145 (A)		460 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** X

Remarks:

SOIL

Sampling Point: sp07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100						organic material
2-6	7.5YR 2.5/2	95	7.5YR 5/2	5	CS	M	Sandy	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ROCK

Depth (inches): 6

Hydric Soil Present? **Yes** ___ **No** x

Remarks:
very dry, crumbly, sandy

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- x Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP8

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): pond edge | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 x	No	**Is the Sampled Area within a Wetland?** Yes No x
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:
small depression area

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.	10	Yes	
2.	10	Yes	FACU
3.	10	Yes	
4.			
5.			
	30	=Total Cover	
Herb Stratum (Plot size:)			
1. *Ranunculus bulbosus*	10	Yes	FAC
2. *Juncus tenuis*	10	Yes	FAC
3. *Poa abbreviata*	20	Yes	FACU
4. *Calamagrostis canadensis*	10	Yes	FACW
5. *Juncus effusus*	5	No	FACW
6. *Poa pratensis*	10	Yes	FAC
7.			
8.			
9.			
10.			
11.			
	65	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.	25	Yes	
2.			
	25	=Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 44.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	30	x 3 =	90
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	75 (A)		240 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No

Remarks:
has some wet veg. but lacks soil and hydrology requirements

SOIL

Sampling Point: SP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 3/2	100						gravel

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:
gravel, very dry

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria City/County: Teton Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy State: WY Sampling Point: sp9

Investigator(s): PES Section, Township, Range:

Landform (hillside, terrace, etc.): pond edge Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): LRR E Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 x No

Hydric Soil Present? Yes x No

Wetland Hydrology Present? Yes x No

Is the Sampled Area within a Wetland? **Yes** x **No**

Remarks:
along manmade pond, so soils are very gravelly

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix exigua*	50	Yes	FACW
2.			
3.			
4.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Typha latifolia*	70	Yes	OBL
2.			
3.			
4.			
5.			
	70	=Total Cover	
Herb Stratum (Plot size:)			
1. *Carex nebrascensis*	60	Yes	OBL
2. *Juncus tenuis*	20	No	FAC
3. *Cirsium arvense*	5	No	FAC
4. *Calamagrostis canadensis*	5	No	FACW
5. *Alopecurus pratensis*	10	No	FAC
6. *Schoenoplectus americanus*	15	No	OBL
7.			
8.			
9.			
10.			
11.			
	115	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.	25	Yes	
2.			
	25	=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	145	x 1 =	145
FACW species	55	x 2 =	110
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	235 (A)		360 (B)

Prevalence Index = B/A = 1.53

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: sp9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100						very pebbly

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ROCK

Depth (inches): 6

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- x High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- x Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP10

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): POND AREA | Local relief (concave, convex, none): NONE | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix exigua*	5	Yes	FACW
2.			
3.			
4.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Typha latifolia*	45	Yes	OBL
2. *Eleocharis palustris*	30	Yes	OBL
3. *Juncus arcticus*	30	Yes	OBL
4. *Calamagrostis canadensis*	20	No	FACW
5. *Juncus*	10	No	
6.			
7.			
8.			
9.			
10.			
11.			
	135	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.	25	Yes	
2.			
	25	=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	105	x 1 =	105
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		155 (B)

Prevalence Index = B/A = 1.19

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: SP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	15	10YR 3/1	85				gravely/sandy

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 12

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- x High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- x Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (inches): 0		
Water Table Present?	Yes x	No ___	Depth (inches): 0		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0	**Wetland Hydrology Present?**	**Yes** x **No** ___

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

Remarks:

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

Project/Site: Astoria City/County: Teton Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy State: WY Sampling Point: SP11

Investigator(s): PES Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): LRR E Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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	No x	**Is the Sampled Area within a Wetland?** **Yes** **No** x
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Salix exigua*	30	Yes	FACW
2.			
3.			
4.			
5.			
	30 =Total Cover		
Herb Stratum (Plot size:)			
1. *Poa abbreviata*	30	Yes	FACU
2. *Poa pratensis*	20	No	FAC
3.	30	Yes	
4.	20	No	
5.	10	No	
6.			
7.			
8.			
9.			
10.			
11.			
	110 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 40

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	20	x 3 =	60
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	80 (A)		240 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** x

Remarks:
rocky

SOIL

Sampling Point: SP11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100						gravely/sandy

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 3

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/22/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP12

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): hillslope toe | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 x	No	**Is the Sampled Area within a Wetland?** **Yes** x **No**
Hydric Soil Present?	Yes x	No	
Wetland Hydrology Present?	Yes x	No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus angustifolia*	10	Yes	FACW
2.			
3.			
4.			
	10	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Salix exigua*	10	Yes	FACW
2.			
3.			
4.			
5.			
	10	=Total Cover	
Herb Stratum (Plot size:)			
1. *Carex rostrata*	70	Yes	OBL
2. *Sambucus racemosa*	15	No	FACU
3. *Equisetum hyemale*	15	No	FACW
4. *Maianthemum racemosum*	50	Yes	FAC
5. *Amelanchier alnifolia*	5	No	FACU
6. *Juncus arcticus*	60	Yes	OBL
7.			
8.			
9.			
10.			
11.			
	215	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Rosa woodsii*	15	Yes	FACU
2.			
	15	=Total Cover	

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	130	x 1 =	130
FACW species	35	x 2 =	70
FAC species	50	x 3 =	150
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	250 (A)		490 (B)
Prevalence Index = B/A =			1.96

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: SP12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 2.5/2	90	7.5YR 4/2	10	CS	M		SCL

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 10

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 1

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks:
base of slope, small depressional concave, PEMA wetland

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP13

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): wet meadow | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x No

Hydric Soil Present? Yes x No

Wetland Hydrology Present? Yes x No

Is the Sampled Area within a Wetland? **Yes** x **No**

Remarks:
wet meadow / wet complex - areas w/ standing water, PEMA, small pockets of up , dominated by sedges, cattails, rushes

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Salix exigua*	2	No	FACW
2.			
3.			
4.			
5.			
	2 =Total Cover		
Herb Stratum (Plot size:)			
1. *Schoenoplectus americanus*	30	Yes	OBL
2. *Typha latifolia*	45	Yes	OBL
3. *Juncus balticus*	20	Yes	OBL
4. *Juncus tenuis*	10	No	FAC
5. *Eleocharis palustris*	15	Yes	OBL
6. *Alopecurus pratensis*	10	No	FAC
7. *Calamagrostis canadensis*	2	No	FACW
8. *Juncus articulatus*	15	Yes	OBL
9. *Juncus hallii*	15	Yes	FAC
10. *Elymus canadensis*	15	Yes	FAC
11. *Carex nebrascensis*	15	Yes	OBL
	192 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	140	x 1 =	140
FACW species	4	x 2 =	8
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	194 (A)		298 (B)

Prevalence Index = B/A = 1.54

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: SP13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/2	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- x High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (inches): 1		
Water Table Present?	Yes x	No ___	Depth (inches): 0		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0	**Wetland Hydrology Present?**	**Yes** x **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP14

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): meadow | Local relief (concave, convex, none): NONE | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No	**Is the Sampled Area within a Wetland?** Yes No x
Hydric Soil Present?	Yes x	No	
Wetland Hydrology Present?	Yes	No x	

Remarks:
upland area adjacent to W4

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Silybum marianum*	2	No	FAC
2. *Elymus canadensis*	25	Yes	FAC
3. *Hierochloe odorata*	45	Yes	
4. *Poa pratensis*	10	No	FAC
5. *Rumex crispus*	2	No	FAC
6. *Schedonnardus paniculatus*	5	No	
7.			
8.			
9.			
10.			
11.			
	89	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	39	x 3 =	117
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	39 (A)		117 (B)
Prevalence Index = B/A =	3.00		

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No

Remarks:

SOIL

Sampling Point: SP14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 3/2	100						Gravel

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 5

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: | Sampling Point: sp15

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): roadside | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x No

Hydric Soil Present? Yes x No

Wetland Hydrology Present? Yes x No

Is the Sampled Area within a Wetland? **Yes** x **No**

Remarks:
wet meadow / wet complex - areas w/ standing water, PEMA, small pockets of up , dominated by sedges, cattails, rushes

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus angustifolia*	10	Yes	FACW
2. *Picea pungens*	10	Yes	FAC
3.			
4.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Ericameria nauseosa*	2	Yes	
2. *Amelanchier alnifolia*	5	Yes	FACU
3.			
4.			
5.			
	7	=Total Cover	
Herb Stratum (Plot size:)			
1. *Equisetum hyemale*	15	No	FACW
2. *Typha latifolia*	90	Yes	OBL
3. *Juncus balticus*	10	No	OBL
4. *Juncus tenuis*	10	No	FAC
5. *Eleocharis palustris*	15	No	OBL
6. *Rumex crispus*	2	No	FAC
7. *Calamagrostis canadensis*	10	No	FACW
8. *Elymus canadensis*	2	No	FAC
9.			
10.			
11.			
	154	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	115	x 1 =	115
FACW species	35	x 2 =	70
FAC species	24	x 3 =	72
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	179 (A)		277 (B)

Prevalence Index = B/A = 1.55

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: sp15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	85	10YR 4/3	15	D	M		SC

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- x High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: | Sampling Point: SP16

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): roadside | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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	No X	**Is the Sampled Area within a Wetland?** Yes No x
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes x	No	

Remarks:
upland area adjacent to W4

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Picea pungens*	10	Yes	FAC
2. *Populus angustifolia*	10	Yes	FACW
3.			
4.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Rumex crispus*	10	No	FAC
2. *Poa*	30	Yes	
3. *Arrhenatherum elatius*	40	Yes	UPL
4. *Elymus canadensis*	40	Yes	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	120	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	110 (A)		400 (B)
Prevalence Index = B/A =			3.64

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No

Remarks:

SOIL

Sampling Point: SP16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	7.5YR 4/3	100					Loamy/Clayey	
1-5	7.5YR 3/2						Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 5

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No ___	Depth (inches): ___		
Water Table Present?	Yes ___	No ___	Depth (inches): ___		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 5	**Wetland Hydrology Present?**	**Yes** x **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP17

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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	No x	**Is the Sampled Area within a Wetland?** **Yes** **No** x
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:
very large PEMA wetland border - UPL area

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Rumex crispus*	5	No	FAC
2. *Poa pratensis*	10	No	FAC
3. *Bromus inermis*	65	Yes	UPL
4. *Elymus canadensis*	50	Yes	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	130 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	65	x 3 =	195
FACU species	0	x 4 =	0
UPL species	65	x 5 =	325
Column Totals:	130 (A)		520 (B)
Prevalence Index = B/A =			4.00

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** x

Remarks:

SOIL

Sampling Point: SP17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 2

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP18

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): meadow | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	No	**Is the Sampled Area within a Wetland?** **Yes** x **No**
Hydric Soil Present?	Yes x	No	
Wetland Hydrology Present?	Yes x	No	

Remarks:
v large pema - pasture area

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Typha latifolia*	50	Yes	OBL
2. *Carex nebrascensis*	55	Yes	OBL
3. *Calamagrostis canadensis*	10	No	FACW
4. *Schoenoplectus americanus*	70	Yes	OBL
5. *Cirsium arvense*	2	No	FAC
6. *Rumex crispus*	2	No	FAC
7. *Juncus tenuis*	5	No	FAC
8. *Equisetum hyemale*	5	No	FACW
9.			
10.			
11.			
	199 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	175	x 1 =	175
FACW species	15	x 2 =	30
FAC species	9	x 3 =	27
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	199 (A)		232 (B)

Prevalence Index = B/A = 1.17

Hydrophytic Vegetation Indicators:

x 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vacular Plants[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: SP18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	85	7.5YR 5/8	15	C	M		L

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- x Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 8

Hydric Soil Present? **Yes** x **No** ___

Remarks:

dry soil but has lots of redox ---> seasonal inundation patterns (?)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- x Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP19

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): roadside/terrace | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 x	No	**Is the Sampled Area within a Wetland?** **Yes** x **No**
Hydric Soil Present?	Yes x	No	
Wetland Hydrology Present?	Yes x	No	

Remarks:
very large PEMA wetland between roads

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Typha latifolia*	35	No	OBL
2. *Carex nebrascensis*	80	Yes	OBL
3. *Juncus balticus*	60	Yes	OBL
4. *Schoenoplectus americanus*	5	No	OBL
5. *Rumex crispus*	2	No	FAC
6. *Equisetum hyemale*	40	No	FACW
7.			
8.			
9.			
10.			
11.			
	222	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	180	x 1 =	180
FACW species	40	x 2 =	80
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	222 (A)		266 (B)

Prevalence Index = B/A = 1.20

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: SP19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 2.5/2	95	7.5YR 5/6	5	CS	M	Sandy	very dark
								SANDY

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 12

Hydric Soil Present? **Yes** X **No** ___

Remarks:

dry soil but has lots of redox ---> seasonal inundation patterns (?)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 5

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

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

Project/Site: Astoria City/County: Teton Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy State: WY Sampling Point: SP20

Investigator(s): PES Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): NONE Slope (%): 0

Subregion (LRR): LRR E Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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	No X	**Is the Sampled Area within a Wetland?** **Yes** **No** x
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Bromus inermis*	90	Yes	UPL
2. *Equisetum hymale*	5	No	FACW
3. *Cirsium arvense*	5	No	FAC
4. *Elymus trachycaulus*	10	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	110 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	90	x 5 =	450
Column Totals:	110 (A)		505 (B)

Prevalence Index = B/A = 4.59

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** X

Remarks:

SOIL

Sampling Point: SP20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 3/2	100						very dark

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 3

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP21

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:
very large PEMA wetland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Alopecurus pratensis*	70	Yes	FAC
2. *Carex nebrascensis*	50	No	OBL
3. *Lemna minor*	75	Yes	OBL
4. *Schoenoplectus americanus*	75	Yes	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	270 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	200	x 1 =	200
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	270 (A)		410 (B)

Prevalence Index = B/A = 1.52

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:

SOIL

Sampling Point: SP21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100						
6-18	10YR 2/1	60	10YR 5/2	40				depletion matrix

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: N.A

Depth (inches): ___

Hydric Soil Present? **Yes** x **No** ___

Remarks:
mucky soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No ___	Depth (inches): ___		
Water Table Present?	Yes x	No ___	Depth (inches): 8		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0	**Wetland Hydrology Present?**	**Yes** X **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP22

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): | Local relief (concave, convex, none): none | Slope (%): 2

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No	**Is the Sampled Area within a Wetland?** **Yes** x **No**
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Schoenoplectus americanus*	85	Yes	OBL
2. *Alopecurus pratensis*	40	No	FAC
3. *Carex nebrascensis*	60	Yes	OBL
4. *Juncus balticus*	15	No	FAC
5. *Calamagrostis canadensis*	40	No	FACW
6. *Equisetum hyemale*	10	No	FACW
7.			
8.			
9.			
10.			
11.			
	250 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	145	x 1 =	145
FACW species	50	x 2 =	100
FAC species	55	x 3 =	165
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	250 (A)		410 (B)

Prevalence Index = B/A = 1.64

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vacular Plants[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sampling Point: SP22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					Mucky Sand	
2-6	10YR 2/1	100	7.5yr 4/6	15	cs	m	Sandy	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 6

Hydric Soil Present? **Yes** x **No** ___

Remarks:
smells sulfurly

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___		
Water Table Present?	Yes ___	No X	Depth (inches): ___		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 2	**Wetland Hydrology Present?**	**Yes** X **No** ___

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

Remarks:

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

Project/Site: Astoria City/County: Teton Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy State: WY Sampling Point: SP23

Investigator(s): PES Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): LRR E Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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	No x	**Is the Sampled Area within a Wetland?** **Yes** **No** x
Hydric Soil Present?	Yes	No x	
Wetland Hydrology Present?	Yes	No x	

Remarks:
very large PEMA wetland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Bromus inermis*	95	Yes	UPL
2. *Populus angustifolia*	5	No	FACW
3. *Elymus canadensis*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	95	x 5 =	475
Column Totals:	105 (A)		500 (B)
Prevalence Index = B/A =	4.76		

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No** x

Remarks:

SOIL

Sampling Point: SP23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/2	100						silty sand

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:
mucky soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/23/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: sp24

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): 2

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No	**Is the Sampled Area within a Wetland?** **Yes** x **No**
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Carex nebrascensis*	60	Yes	OBL
2. *Cynoglossum officinale*	15	No	FACU
3. *Equisetum hyemale*	45	Yes	FACW
4. *Calamagrostis canadensis*	35	Yes	FACW
5. *Alopecurus pratensis*	25	No	FAC
6. *Elymus canadensis*	10	No	FAC
7. *Cirsium arvense*	5	No	FAC
8. *Poa*	20	No	
9. *Juncus balticus*	30	No	OBL
10. *Solidago canadensis*	5	No	FACU
11. *Juncus articulatus*	15	No	OBL
	265 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	105	x 1 =	105
FACW species	80	x 2 =	160
FAC species	40	x 3 =	120
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	245 (A)		465 (B)
Prevalence Index = B/A =	1.90		

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vacular Plants[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:
PASSES PREV INDEX TEST

SOIL

Sampling Point: sp24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 6

Hydric Soil Present? **Yes** X **No** ___

Remarks:
smells sulfurly

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (inches): 1		
Water Table Present?	Yes x	No ___	Depth (inches): 0		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0	**Wetland Hydrology Present?**	**Yes** X **No** ___

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/24/2019

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: sp25

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): TERRACE | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Remarks:
UPLAND AREA BY RIVER

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Bromus inermis*	50	Yes	UPL
2. *Cynoglossum officinale*	10	No	FACU
3. *Cirsium arvense*	10	No	FAC
4. *Poa pratensis*	15	No	FAC
5. *Elymus canadensis*	60	Yes	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	145	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	85	x 3 =	255
FACU species	10	x 4 =	40
UPL species	50	x 5 =	250
Column Totals:	145 (A)		545 (B)
Prevalence Index = B/A =			3.76

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: sp25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/2	100					Sandy	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 8

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/24/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP26

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:
drainage area

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Magnolia fraseri*	5	No	FACU
2. *Acer spicatum*	45	Yes	FACU
3. *Heracleum maximum*	40	Yes	FAC
4. *Calamagrostis canadensis*	65	Yes	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	155 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	65	x 2 =	130
FAC species	40	x 3 =	120
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	155 (A)		450 (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

5 - Wetland Non-Vacular Plants[1]

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks:
passes prev. test

SOIL

Sampling Point: SP26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 12

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (inches): 0
Water Table Present?	Yes x	No ___	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:
riparian - running water

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/24/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP27

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): | Local relief (concave, convex, none): | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Artemisia cana*	35	No	FACU
2. *Picea pungens*	50	Yes	FAC
3. *Crataegus douglasii*	50	Yes	FAC
4. *Acer spicatum*	15	No	FACU
5. *Phleum pratense*	15	No	FAC
6. *Geranium viscosissimum*	10	No	FACU
7. *Trifolium repens*	10	No	FAC
8.			
9.			
10.			
11.			
	185 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	125	x 3 =	375
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	185 (A)		615 (B)

Prevalence Index = B/A = 3.32

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vacular Plants[1]
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: SP27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/3	100						Loam

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 4

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

N + W of wetland area ---> dry, well-drained soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

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

Project/Site: Astoria | City/County: Teton | Sampling Date: 7/24/19

Applicant/Owner: Astoria Park Conservancy | State: WY | Sampling Point: SP28

Investigator(s): PES | Section, Township, Range:

Landform (hillside, terrace, etc.): terrace | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRR): LRR E | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	No ____	**Is the Sampled Area within a Wetland?** **Yes** x **No** ____
Hydric Soil Present?	Yes x	No ____	
Wetland Hydrology Present?	Yes x	No ____	

Remarks:
scrub shrub strip of wetland adjacent to snake river

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix exigua*	80	Yes	FACW
2.			
3.			
4.			
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Salix exigua*	50	Yes	FACW
2.			
3.			
4.			
5.			
	50	=Total Cover	
Herb Stratum (Plot size: ____)			
1. *Phalaris arundinacea*	20	Yes	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	130	x 2 =	260
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		260 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

x 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ 5 - Wetland Non-Vacular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No** ____

Remarks:

SOIL

Sampling Point: SP28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	90	7.5YR 5/6	5	CS	M	Sandy	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- x Sandy Redox (S5)
- ? Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: rock

Depth (inches): 8

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- x Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- x Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- x FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 3

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks:

Appendix D

Map Unit Descriptions from the Teton County Area, Wyoming Soil Survey

Figure 1. USDA NRCS Soil Map Unit Number for the Astoria Hot Springs Property, Teton County, WY.

Astoria Hot Springs Project Area

USDA NRCS Soil Map Unit Number

NOTCOM

July 29, 2019
Pioneer Environmental Services, Inc.
NAD_1983_StatePlane_Wyoming_West_FIPS_4904_Feet

TETON COUNTY WYOMING

www.tetoncountywy.gov

PO Box 1727
200 South Willow Street
Jackson, Wyoming 83001

ph: 307.733.3959

April 9, 2020

Paige Byron
Astoria Park Conservancy
25 Johnny Counts Road
Jackson, WY 83001
[sent via email to: paige@astoriapark.org]

RE: Astoria Park Conservancy/Phase 2 Development Environmental Analysis Update (EVA2020-0003)

Greetings,

Planning Staff has reviewed the Environmental Analysis Update (EAU) for Phase 2 of the Astoria Park Conservancy development, submitted with an Aquatic Resources Inventory (ARI). Pursuant to the Planning pre-application checklist, (PAP2019-0036), the updated Environmental Analysis submittal presents the current natural resource information pertaining to the subject property in sufficient detail. The application also addresses compliance with Sections 5.1 and 5.2 of the Land Development Regulations (LDRs) within the boundaries of the Astoria Hot Springs Park, for which a Conditional Use Permit for Outdoor Recreation was issued in 2017 (CUP2017-0004).

The approximately 104.1-acre site is comprised of three properties, within which development is located. Conceptually the three parcels are treated as a site, given that either the approved outdoor recreation use or necessary park infrastructure is proposed throughout each of the contiguous properties, as described in the application, being Lot 1, Astoria Hot Springs Park (Plat No. 1395), Lot 23, The River homes, Snake River Canyon Ranch, and Lot 19, The River Homes Snake River Canyon Ranch (Road & Utility Easement). The project area in its entirety is located within the Natural Resources Overlay (NRO), and a portion of the site is encumbered through conservation easement held by the Teton County Scenic Preserve Trust. The EA presents current vegetation, wetland and wildlife habitat information. A Development Impact Assessment is presented to illustrate the location of proposed development and associated vegetative covertype impacts. As presented in the Development Impact Assessment, a Habitat Enhancement Plan is not required given that proposed development avoids protected natural resources that require mitigation.

An EA review does not constitute approval of the EA or a physical development plan. It is a component of a possible or pending physical development application. The purpose of an EA review is to analyze the findings of the environmental professional, following the guidance of the Jackson/Teton County Comprehensive Plan, and the regulations of the Teton County Land Development Regulations, including Section 8.2.2, Div. 5.1, and Div. 5.2.

Based on the data and analyses contained in the EA, the Planning Director shall recommend a site design from the analyzed alternatives that best meets the applicable standards referenced above.

Given the preexisting approvals, this application did not consider any alternatives to the site plan considered in the development impact assessment (Figure 6). The Planning Director may also recommend conditions of approval for the project based on the content of the EA and any prior approvals. Proposed development includes a proposed trail system, community programming facility, parking, restrooms, picnic shelters and a playground consistent with the Conditional Use Permit site plan, specifically Sheet L4.00, (CUP2017-0004), with minor adjustments. The proposed limits of disturbance for the development totals approximately 2.5 acres. All development will occur within the areas represented for development within this document.

Waterbodies and Wetlands: The surface waters within the Study Area include the Snake River, an intermittent stream in the eastern extent of the project area with connectivity to the Snake River, three constructed ponds on the lower bench of the project area, and close to 20 acres of primarily naturally occurring scrub-shrub and emergent wetlands, though those wetlands around the perimeter of the excavated ponds are deemed to be manmade, and highly degraded a result of the high intensity disturbance of the pond excavation area, pursuant to Section 5.1.1D.3.b.i of the LDRs.

The EA presentation of Protected Resources and Setbacks (Appendix A, Figure 3) accurately depicts protected waterbodies within the project area, with requisite setbacks. Two areas of proposed impacts to protected waterbodies, wetlands or associated buffers that shall be addressed as Conditions of Approval through the course of this review area as follows:

1. Figure 6 depicts the Community Programming Facility within the Snake River 150-foot protected waterbody setback. As presented in Figure 7 of the application in relation to the Snake River protected waterbody setback, the proposed Community Programming Facility does not comply with the LDRs. No development, including the construction limits of disturbance, shall occur within the Snake River setback, that is not found to be compliant with Sections 5.1.1.D.2 and 5.1.1.D.3.a of the LDRs.
2. The EA Habitat Impact Assessment, *Emergent Wetlands* section (p. 13), asserts that spanning of a naturally occurring emergent wetland with a footbridge is an avoidance of impacts to this protected resource. Spanning of wetlands, alone, is not an acceptable avoidance of wetland impacts and the trail route as depicted does not represent an essential crossing with no alternate site, pursuant to Sec. 5.1.1D.3.b. No development, including the construction limits of disturbance, shall occur within wetlands, that is not found to be compliant with Sections 5.1.1.D.2 and 5.1.1.D.3.b of the LDRs.

Wildlife: The property is located entirely within mapped mule deer crucial winter yearlong habitat and partially within elk crucial winter yearlong habitat, as well as providing migration corridors for both species. The EA confirms the occurrence of this habitat for elk, supported by direct observation and extensive sign of such use; however, extant mule deer habitat on property does not match the Wyoming Game and Fish Department characterization of the area as crucial winter yearlong range. Mule deer are very common on the site, but likely do not use the 104-acre project area during crucial winter months in 8 out of every 10 years, as described in the definition of crucial winter range essential for survival in the LDRs. The EAU also illustrates the importance of the Snake River corridor, identifying trumpeter swan and bald eagle winter habitat within the site boundaries. No threatened or endangered species, trumpeter swan nest sites or bald eagle nest sites, or other raptor nests would be impacted from proposed development. Cutthroat trout spawning habitat is also documented from riffles along the Snake River, and as such is possible in the riverine portion of the site.

Natural Resources Overlay (NRO): The NRO represents a combination of important wildlife habitats throughout Teton County. Included in the overlay are crucial winter range and movement corridors for elk, moose, mule deer, and bighorn sheep: nesting and foraging areas for bald eagles and peregrine falcons; nesting and wintering areas for trumpeter swans; and spawning areas for

Snake River fine-spotted cutthroat trout. Development occurring on properties partially or entirely within the NRO is required to be located, if possible, outside crucial wildlife habitat areas or to minimize impacts to resident species and their habitats to the greatest extent practicable (Division 5.2.1. Natural Resources Overlay (NRO) Standards). The EA confirms that the NRO in this location accurately identifies existence of protected wildlife habitats; specifically, elk crucial winter range, elk and mule deer migration corridors, and to a lesser degree potential cutthroat trout spawning habitat and trumpeter swan and bald eagle winter foraging habitat. The site is also quite unique in that underlying geothermal processes result in warmed water at the site surface supporting a large expanse of emergent wetlands that remains snow free through the winter months. This dynamic has led to elk wintering in a location that would otherwise be under heavy snow loads.

Impacting the NRO: The entirety of the Study Area is within the NRO. Staff evaluated the following applicable sections of the LDRs. Environmental Standards Section 5.2.1.E states that "Where densities/intensities permitted cannot be achieved by locating development outside of the NRO, then lands protected by the NRO may be impacted pursuant to the standards of this Subsection." LDR Section 5.2.1.E.1 requires minimization of wildlife impacts and states, "The location of the proposed development shall minimize impacts on the areas protected (e.g., crucial migration routes, crucial winter range, nesting areas). For the purposes of this standard, "minimize" is defined as, "locating development to avoid higher quality habitats or vegetative cover types for lesser quality habitats or vegetative cover types." The proposed development meets the guidelines of Sec. 5.2.1 cited above.

Planning Staff Recommendation: This review is required pursuant to LDR Section 5.2.1.E.1 to protect the most valuable habitat as determined by the ordinal ranking in Subsection 5.2.1.4.F.a. The proposed development presented in the application has demonstrated minimization of development impacts to the greatest extent practicable through location of the general location of permanent physical development within the lowest available ranked vegetative covertypes within the parameters of an existing Use Management Plan and infrastructure development plan approved through the CUP process.

Through this review of the information provided the Planning Director, with the guidance of the Jackson/Teton County Comprehensive Plan and the regulations of the Teton County Land Development Regulations, Section 8.2.2, Div. 5.1, and Div. 5.2, accepts the proposed development as presented in the Environmental Analysis, with the following conditions:

1. Prior to issuance of any physical development permits, EA digital mapping layers shall be provided.
2. The project area falls within Bear Conflict Priority Area 1; therefore, this area is a high priority area for mitigating and preventing conflicts and addressing property and human safety concerns. All attractants must be properly secured and stored during and after construction, and bear conflict prevention standards pursuant to Sec. 5.2.2.C.2 shall apply to ongoing and future development in this location.
3. The project area falls within the Wildland Urban Interface. Demonstration of conformance with the International Wildland-Interface Code (IWUIC) is required at the time of submittal of building permits.
4. Any proposed fencing shall comply with the LDRs to allow free and easy movement of wildlife through the property.
5. No development, including the construction limits of disturbance, shall occur within the Snake River setback, that is not found to be compliant with Sections 5.1.1.D.2 and 5.1.1.D.3.a of the LDRs.
6. No development, including the construction limits of disturbance, shall occur within wetlands, that is not found to be compliant with Sections 5.1.1.D.2 and 5.1.1.D.3.b of the LDRs.

If you have any questions or concerns, please feel free to contact me at (307) 733-3959 or via email at hsmith@tetoncountywy.gov .

Sincerely,

Hamilton Smith
Principal Planner

Cc: Megan Smith, EcoConnect Consulting

Environmental Analysis Update

Snake River Canyon Ranch
The Ranch Homes Lot 29

PIDN: TBD

Previous Lot 24 PIDN: 22-39-16-32-4-02-001 (partial)

Teton County, WY

December 10, 2021

Revised March 14, 2022

Prepared for:
Snake River Bend Ranch, LLC

Prepared By:

EcoConnect Consulting LLC
Connecting Ecology and Community
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Table of Contents

PROJECT OVERVIEW

INTRODUCTION

EcoConnect Consulting LLC has conducted an Environmental Analysis Update (EAU) in support of the Snake River Bend Ranch, LLC's update of a building envelope on Snake River Canyon Ranch's The Ranch Homes Lot 29 ("Lot 29" or "the property") and to document current, natural resource conditions.

This Environmental Analysis Update is required by Teton County's Planning and Building Department (Hamilton Smith, Principal Planner, Teton County Planning Division, September 23, 2021, *email commun.*) to confirm and/ or update site conditions and possible impacts resulting from the proposed reconfiguration of lots and building envelopes transitioning from Lots 24-25 to Lots 29-31 and associated three building envelopes (Lot 29 addressed herein). The previous EA was prepared by Biota Research and Consulting, Inc. (dated December 17, 1998) for Mr. Dick Edgecomb, SRCR Development Co., LLC (Biota, 1998). The 1998 EA pertained to 195 acres inclusive of the 5.1± area addressed in this EAU.

Within Lot 29, this EAU is focused on the changes in natural resources and environmental conditions since 1998 as well as the possible impacts to vegetative cover types within the proposed building envelope. The most notable change in vegetative cover type in the last two decades, has been the aspen forest expansion into the xeric sagebrush cover type. Furthermore, this EAU demonstrates compliance with Teton County Land Regulations outlined in Article 5, Division 5.1, *General Environmental Standards*, Division 5.2, *Environmental Standards Applicable in Specific Areas* and Division 8.2.2, *Environmental Analysis* (Teton County, 2021).

Lot 29 is approximately 5.1± acres in size and contains an encumberment by a Teton County Scenic Preserve Trust (TCSPT) conservation easement (Edgcomb) outside of the proposed building envelope. In addition to Lot 29 lands, this TCSPT conservation easements encumbers riparian and upland areas on neighboring parcels. Lot 29 is located within the Natural Resource Overlay (Figure 1) as well as the Scenic Resource Overlay and zoned Planned Resort (PR) as it is a component of the Snake River Canyon Ranch (Greenwood Mapping, Inc, 2021).

METHODS

Prior to the on-site inventory of the property, EcoConnect Consulting LLC consulted with property representatives, studied current and historic aerial photographs and documentation, USGS topographic maps, Teton County's vegetative cover GIS data and species of the region to become as familiar as possible with the landscape. A site visit to the property was conducted on October 5, 2021 to record baseline information. Equipment used included a Garmin GPSMAP 64 Global Positioning System unit with ±6ft accuracy, a compass and a digital camera. The site visit was conducted by walking the property surveying land use, wildlife use, vegetation and distinct natural features. Representative photographs of vegetation communities and other significant features were taken. Vegetation, wildlife, infrastructure and other information were recorded in field notes and on aerial photographic field maps.

One-foot resolution, Teton County aerial photographs, NAIP Imagery and Teton County's Vegetative Cover Types GIS Data (Cogan & Johnson, 2013) were used to supplement on-site observations. Information recorded here pertaining to vegetation cover, water resources and other landscape observations are therefore based on a combination of site visit observations, aerial photographs and existing data. While the Cogan and Johnson (2013) Teton County Vegetative Cover Types GIS Data layer was used as a reference for vegetation type characteristics, vegetative cover type definitions were based on those published in the Teton County Land Development Regulations Article 5, Section 5.2.1.F, *Vegetative Cover Type Standards* (Teton County, 2021).

HABITAT INVENTORY

PROPERTY

The property is approximately 5.1± acre in size and is generally described as located on an upper bench of the Snake River corridor. The property is bordered on all sides by private parcels including the Astoria Park Conservancy, inclusive of the Snake River, to the north. The Bridger-Teton National Forest is approximately one-quarter mile to the east and on the western side of the Snake River.

VEGETATIVE COVER TYPES

The vegetative cover types on the property are as was documented in the Biota 1998 EA (Biota, 1998). However, the abundance of various cover types has changed since 1998. These changes in vegetative cover type configuration demonstrate the dynamic nature of natural resources and does not appear to have been intentionally influenced by human activity or management. Expansion of the aspen cover type over the last 22 years is a normal characteristic of aspen stands.

The vegetative cover types located on the property are typical of the Snake River corridor and associated upland foothills. Vegetative cover types listed below were developed based on current conditions and information obtained from aerial imagery (Greenwood Mapping, Inc, 2021). Teton County Vegetative Cover Types GIS Data (Cogan & Johnson, 2013), which is based on 2011 aerial photography, was used as a reference document in comparison to current site conditions.

Vegetative cover types are used by Teton County Land Development Regulations to determine relative habitat values and development priorities on the property (Section 5.2.1.F.4.a, *Ordinal Ranking*). The property's vegetative cover types are illustrated in Figure 2, summarized in Table 1, and described below.

Table 1. Vegetative Cover Types and Ordinal Rankings

VEGETATIVE COVER TYPE	AREA (ACRES)	AREA PERCENTAGE	ORDINAL RANKING
Tall Shrubs	0.1	2%	8
Mature Aspen Forest	1.2	23%	7
Douglas Fir	0.3	6%	6
Xeric Sagebrush	3.5	69%	3
Disturbed	<0.1	<1%	n/a
TOTAL	**5.1**	**100%**	

Tall Shrub

Tall shrubs found on the property cover approximately 0.1 acres (2% of the property) and are generally located in transitional areas between Douglas Fir or aspen stands and sagebrush. Shrub species found in these areas include common snowberry (*Symphoricarpos albus*), serviceberry (*Amelanchier alnifolia*) and common chokecherry (*Prunus virginiana*). These tall shrub species are a component of the understory of the neighboring forested cover types. The non-mesic, tall shrubs receive an ordinal ranking of 8 due to their important to wildlife.

Mature Aspen Forest

Non-mesic, mature quaking aspen (*Populus tremuloides*) forest covers approximately 1.2 acres (23% of the property). This vegetative cover type is located along the northwestern portion of the property, adjacent to the Douglas fir forest and in distinct stands within the sagebrush cover type. These stands are mature with a shrub understory, dominated by common snowberry (*Symphoricarpos albus*). Regeneration is primarily along the stand edge and expansion of these aspen stands is visible on aerial photography since 1998 when the original EA was written (Biota, 1998). Non-mesic, mature aspen cover type receives an ordinal ranking of 7 due to its importance to wildlife as both cover and for the forage typically found in the understory.

Douglas Fir

Douglas Fir (*Pseudotsuga menziesii*) forest covers approximately 0.3 acres (6% of the property). This Douglas fir cover type is associated with northwest facing, steep sloped, Douglas fir stands on neighboring parcels. The relatively open understory (in comparison to the aspen stands on the property) is composed of tall shrub and forb species including serviceberry (*Amelanchier alnifolia),* common snowberry (*Symphoricarpos albus*) and grasses. Use of this forested cover type by ungulates is evidenced by game trails and scat piles (e.g. elk). Due to its importance to wildlife, the Douglas fir cover type receives an ordinal ranking of 6.

Xeric Sagebrush

The xeric sagebrush cover type is the dominant cover type on the property as it was in 1998 (Biota, 1998). The sagebrush community covers approximately 3.5 acres (69% of the property). Within the sagebrush community, there is a mix of grasses and sagebrush with a small representation of lodgepole pine individuals. The sagebrush and grasses mix seems to be a result of relative, small undulations in topography likely creating pockets were snow collects. Therefore, the amount of snowmelt water available to shrub and grass species varies throughout the cover type. Mountain big sagebrush (*Artemisia tridentata* subsp. *vaseyana*) with lesser amounts of common rabbitbrush (*Chrysothamnus nauseosus*), antelope bitterbrush (*Purshia tridentata*) and bunch grasses compose this cover type. Xeric sagebrush cover type receives an ordinal ranking of 3.

Disturbed

The area identified as disturbed on the property (<0.1 acres; <1%) is Elk Ridge Road. This gravel road, Elk Ridge Road, connects this and neighboring properties to River Bend Road and the remainder of the Snake River Sporting Club. Disturbed areas do not receive an ordinal ranking under Teton County's land development regulations.

PROTECTED WATERBODIES, WETLAND RESOURCES AND BUFFERS

No protected waterbodies, wetland resources or buffers are located on this upland bench property. While located near the Snake River to the north and west, an Aquatic Resources Inventory was not required since no waterbodies or wetland resources are located the property.

WILDLIFE HABITATS PROTECTED BY NATURAL RESOURCES OVERLAY

"The purpose of the Natural Resources Overlay (NRO) is to provide protection to the most important and sensitive natural areas" (Teton County, 2021). Teton County LDRs define the NRO as areas that include the habitats listed in Section 5.2.1.B, *Establishment of the NRO*. The presence of NRO defining habitats both on the property and within a ½ mile vicinity of the property are listed in Table 2. Based on

this site-specific analysis of the property and the habitats present within ½ mile, it is reasonable to conclude that the parcel is appropriately mapped within the NRO.

The following wildlife information has been updated since the 1998 EA (Biota, 1998) as species identified in Teton County's Land Development Regulations (Teton County, 2021) have changed as has information provided by Wyoming Game and Fish Department (WGFD) and other local, wildlife professionals.

Table 2. Wildlife Habitats Protected by the NRO

WILDLIFE HABITAT	ON THE PROPERTY	WITHIN ½ MILE OF PROPERTY
Elk Crucial Winter Range	Mapped	Yes
Mule Deer Crucial Winter Range	Mapped	Yes
Moose Crucial Winter Range	No	No
Trumpeter Swan Nesting Habitat	No	Possible
Trumpeter Swan Winter Habitat	No	Yes
Snake River Cutthroat Trout Spawning Habitat	No	Yes
Bald Eagle Nesting Habitat	Possible	Possible
Bald Eagle Crucial Winter Habitat	Yes	Yes
Big Game Migration Corridors (Mule Deer)	No	No
Big Game Migration Corridors (Elk)	No	No

Elk Crucial Winter Range

Crucial elk winter range consists primarily of xeric and mesic sagebrush-grasslands, mixed shrub, mesic and xeric open grassland and certain agricultural meadow types that are used by elk 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*). The property includes areas WGFD has designated as crucial winter yearlong range (WGFD, 2018). This WGFD elk ranges data set "was developed for statewide and regional use" and "this data set should never be used at a scale larger than 1:100,000 [a landscape scale]" (WGFD, 2018). Data sets at landscape scales, are adequate starting points for general area assessments but not determinant at the parcel level or scale (Courtemanch, 2020). The WGFD revised the Fall Creek elk ranges in 2018 based on a landscape scale analysis of collared data (Courtemanch, 2020).

A parcel-scale assessment of the property, identifies potential elk use areas, not crucial winter habitat, as primarily found on the north and western forested portions of the property that are contained within the TCSPT easement. Field observations found elk scat within this area. It is likely that elk use this area for local movements rather than as crucial, winter habitat.

The Dog Creek WGFD Feedground is approximately 1.5 miles southwest of the property on the opposite side of the Snake River. This feedground is located within elk crucial winter yearlong range and is bordered to the west by WGFD designated elk parturition lands. Both the feedground and the parturition lands are separated from the property by the Snake River (Figure 3).

Mule Deer Crucial Winter Range

Mule deer crucial winter yearlong range consists of scrub-shrub grasslands located at lower elevations and on south facing slopes that are used by mule deer 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*). More specifically, mule deer wintering in Teton County use south facing, 22-45° slopes below approximately 8,000 ft in elevation (Riginos, et al., 2013).

The property and ½ mile vicinity are located on lands designated by WGFD as crucial winter yearlong range (Figure 4). However, the cover types found within the property are likely more appropriate for mule deer use during the spring, summer and fall seasons rather than as crucial winter habitat. As with elk, a further refinement of appropriate mule deer winter range can be found by examining suitable habitat at the parcel scale. Based on vegetation and habitat models, suitable (not crucial) suitable habitat within ½ mile of the property would be located on the forested areas away from the proposed building envelopes (EcoConnect, 2018). Therefore, while the WGFD's mapping of crucial winter yearlong range extends to the north and south along the Snake River corridor, within this broad area mule deer likely utilize the south facing xeric shrub hillsides not the entirety of the river corridors.

Moose Crucial Winter Range

Crucial moose winter habitat consists primarily of riparian and wetland shrub-willow and cottonwood forests, highly mesic cottonwood/spruce forests, upland forest-subalpine fir habitat types, and secondarily xeric and mesic sagebrush-grasslands and mixed shrub types. These habitats are used by moose during the crucial winter months 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*).

The property and ½ mile analysis vicinity include WGFD designated moose winter/yearlong range but not crucial winter yearlong range (WGFD, 2012). This winter yearlong range encompasses the Snake River drainage.

Trumpeter Swan Nesting Habitat

Trumpeter Swan nesting habitat is found on wetland and aquatic sites that have adequate open water, aquatic vegetation (forage) and protection from predators. Nesting locations typically are islands located in ponds and wetlands. There are no known nesting ponds on the property, however, suitable nesting sites with adequate protection from predators could be found within ½ mile of the property on islands and side channels of the Snake River.

Trumpeter Swan Winter Habitat

Trumpeter Swan winter habitat consists of aquatic sites with abundant vegetation that stay open throughout the winter months (Section 5.2.1.B.3, *NRO Definitions*). Many side channels and streams along the Snake River corridor provide winter habitat for Trumpeter Swans (S. Patla pers. comm. 2018). Side channels along the Snake River within the ½ mile vicinity may provide adequate resources for wintering Trumpeter Swans.

Snake River Cutthroat Trout Spawning Habitat

Snake River cutthroat trout spawning habitat is located in riffles along the Snake River and its tributaries. Inland cutthroat trout species are native to western rivers and streams and have been recognized as a significant species in Teton County (Section 5.2.1.B.3, *NRO Definitions*).

This property is not inclusive of the Snake River but a half mile buffer around the property does contain the Snake River; but no major tributaries of the river. Therefore, any Snake River cutthroat trout spawning habitat would be found in the Snake River and therefore protected as a part of this waterbody resource.

Bald Eagle Nesting Habitat

Prime nesting habitat consists of uneven-aged stands of riparian forest with old-growth attributes and perching possibilities near watercourses or waterbodies which provide foraging opportunities (5.2.1.B.3, *NRO Definitions*). Bald Eagle nesting habitat is found along the Snake River riparian corridor and its larger tributaries.

There are no established Bald Eagle nests on the property. There are established Bald Eagle nests outside of the ½ mile property vicinity on Snake River Sporting Club lands (WGFD, 2019). While all known nest locations are outside of the property, the steep forested areas of the property overlooking the Snake River do provide possible, future nesting locations. The Snake River and associated lands may be used for foraging by Bald Eagles associated with the nearby nests.

Bald Eagle Crucial Winter Habitat

Bald Eagle crucial winter habitat is found in riparian areas near ungulate crucial winter range and in Bald Eagle nesting areas. The Bald Eagle winter diet is comprised primarily of carrion from dead carcasses with the remainder comprised of fish and waterfowl (Section 5.2.1.B.3, *NRO Definitions*). The proximity of this property to the Snake River and the potential presence of winter carrion on the nearby elk feedground provide for good winter Bald Eagle habitat.

The presence of nearby nests in close proximity to each other indicate a strong likelihood of an adequate food resource in the area. These eagles likely depend on a year-round diet primarily of fish from the Snake River.

Migration Corridors

Mule deer and elk migration corridors are protected characteristics of the Natural Resources Overlay (Section 5.2.1.B.1, *Included within the NRO*). As defined by Teton County's LDRs, mule deer and elk migration corridors are designated as crucial if used 8 out of every 10 years.

WGFD designated migration corridors indicate that the Sublette mule deer migration corridor passes to the south of the property and along the edge of ½ mile buffer (Figure 4). This designated migration corridor terminates in the vicinity of the Dog Creek Feedground on the opposite side of the Snake River from the property indicating that the Snake River corridor and neighboring USFS lands appear to be utilized as **summer** range. Mule deer likely cross the river in shallow areas connecting gravel bars and islands to facilitate their crossing.

WGFD elk migration corridors (WGFD, 2012) indicate that elk likely travel to the Dog Creek Feedground from the north. While these migration corridors are not located within the ½ vicinity, it is likely that elk will also pass through this area. Past communications with WGFD wildlife biologists indicate that elk will move along ridgelines on neighboring USFS lands and through areas to the north of the property. A TCSPT easement encumbers land on the northern portion of the property and to the east of the property. A second TCSPT easement encumbers lands to the south of the property but within the half mile vicinity area. These TCSPT easements are aligned with the portions of the vicinity most likely to be utilized by migrating elk (Figure 3).

DEVELOPMENT IMPACT ASSESSMENT

DEVELOPMENT

The building envelope proposed for Lot 29 is approximately 1.9± acres in size and primarily located within the xeric sagebrush cover type (Figure 5 & Figure 6). Specific development plans to be located within this building envelope have not been developed. In addition to the xeric sagebrush cover type within the building envelope, an essential access driveway will be needed to reach the building envelope from Elk Ridge Rd. This driveway will cross the xeric sagebrush cover type, the lowest ordinal rank cover type on the property. Therefore, it's unknown location has not been shown as the impacts will be fully contained within the lowest ordinal rank cover type on the property.

HABITAT IMPACT ASSESSMENT

Impact to Vegetative Cover

The habitat impacts identified below represent impacts if the entire building envelope were to be developed. All potential impacts resulting from development of the 1.9± acre building envelope would be located primarily in areas of xeric sagebrush, with lesser impacts in aspen and tall shrub cover types.

Table 3. Vegetative Cover Type Potential Impacts

VEGETATIVE COVER TYPE	AREA (ACRES)	AREA PERCENTAGE	ORDINAL RANKING
Tall Shrubs	<0.1	<1%	8
Mature Aspen Forest	0.4	21%	7
Xeric Sagebrush*	1.5	79%	3
TOTAL	**1.9**	**100%**	

*Additional impacts to xeric sagebrush, the lowest ordinal rank cover type, would be required for an access driveway connecting the building envelope with Elk Ridge Rd.

Impact to Wildlife Movement

Proposed development of this building envelope should not have significant impacts on wildlife habitat or movement. The nearby Ranch Estates contain parcels of 35 acres or greater thereby allowing for wildlife movement through the area. The proposed Ranch Homes, while smaller lots, would also provide for wildlife movement through the TCSPT easement on forested hillsides and undeveloped portions of the property. Furthermore, it is recommended that all future fences, with the exception of pet yard enclosures, should be wildlife friendly fencing.

Project Vicinity Impact Statement

Lot 29 is located in Area II of the Snake River Canyon Ranch Resort (SRCRR), north of the golf course at Snake River Sporting Club (SRSC) and south of Astoria Hot Springs park. The Snake River is located to the west of this property and USFS Bridger-Teton National Forest lands are located to the east of the property. The WGFD Dog Creek Elk Feedground is located to the west of the property on the opposite side of the Snake River.

While human use in the area has undergone significant change since the 1998 EA was written (Biota, 1998), the areas identified for a building envelope remain relatively similar (Appendix A). The Astoria Hot Springs Park to the north has transitioned from both day and night use (e.g. campground with pool) to primarily a day use area while the Snake River Sporting Club development (of which this lot is

proximate) has seen an increase in human use (e.g. automobiles, residential development, golf course, etc.) through its development.

Nonetheless, the relatively open nature of this area continues to provide for wildlife movement and habitat in concert with surrounding natural resources within a ½ mile vicinity. Much of the surrounding land is located on the Bridger-Teton National Forest or within the Snake River. Based on aerial photography (Greenwood Mapping, Inc, 2021), the surrounding area has an extensive history of disturbance from agricultural operations conducted by the Snake River Bend Ranch. These nearby agricultural lands have recently been divided into ten 35 acre parcels. These neighboring lots have been developed for residential use or are currently under construction and contain a mix of residential and agricultural uses.

Similarly, the proposed development of a residential building envelope on Lot 29 is in line with the mix of residential and agricultural uses found on nearby parcels and within the Snake River Sporting Club. If agricultural uses are continued in the future, the lot is fed by an agricultural irrigation system and possesses water rights.

Threatened and Endangered Species

No known threatened or endangered plant or vertebrate species were observed while on the property. It is unlikely that the species listed below would pass through, or be found on, the property. However, the Snake River corridor is the largest wildlife movement corridor in Teton County. Therefore, a property such as this proximate to the Snake River corridor and adjacent to USFS lands could be subject to a wide variety of vertebrate species' movement patterns.

The mapping of USFWS critical lynx habitat was done at a coarse scale and follows the eastern shore of the Snake River thereby including this property. While the lands in this property's vicinity are mapped as critical lynx habitat, the vegetation present on the property does not meet the habitat requirements for Canada lynx. Canada lynx require expanses of dense conifer forest containing healthy snowshoe hare populations (their primary food resource). The resources available on this property do not justify the mapping of the property as critical lynx habitat.

USFWS Species List (USFWS, 2021):

- Canada Lynx (Threatened)
- Grizzly Bear (Threatened)
- Yellow-billed Cuckoo (Threatened)
- Monarch Butterfly (Candidate)
- Canada Lynx Critical Habitat (Designated)

ALTERNATIVES ANALYSIS

The proposed development is in compliance with Teton County Land Development Regulation's requirement to minimize or avoid impacts to lands protected by the Natural Resources Overlay (Section 5.2.1.E.1. *Minimizes Wildlife Impacts*), therefore, an alternatives analysis is not needed.

HABITAT ENHANCEMENT PLAN

As noted above, impacts to higher ordinal ranking vegetative cover types are to be minimized or avoided through focusing development primarily in the xeric sagebrush cover type (79% or 1.5 acres of the potential impacts). Therefore, a complete habitat enhancement plan is not needed at this time (Section 5.2.1.E., *Impacting the NRO*).

Potential impacts to higher ordinal ranking vegetative cover types (aspen and tall shrubs) have been minimized to *below* the currently approved levels (approved acres vs proposed acres) with potential impacts being *both* minimized in size and primarily placed in lower ordinal ranking vegetative cover types (xeric shrub) (Appendix A).

The proposed building envelope does contain tall shrubs and aspen located on the western portion of the building envelope. If final development plans cause impacts to these tall shrubs and aspen, mitigation of individuals impacted will be required by Teton County at a 2:1 ratio. The planting of shrubs or trees of equal ordinal ranking vegetative cover types (e.g. immature aspen) could be located within cover types with an ordinal ranking less than or equal to tall shrubs (an ordinal ranking of 8) or aspen (ordinal ranking of 7). A potential location may include within the xeric shrub cover type outside of the building envelope and adjacent to existing vegetation and neighboring properties.

APPENDICES

APPENDIX A: APPROVED VERSUS PROPOSED IMPACTS COMPARISON LOT 29-31

While the 1998 EA (Biota, 1998) indicated "areas most suitable for development", it did not indicate building envelopes. Since 1998 building envelopes have been identified as part of the Snake River Canyon Ranch Master Plan (Office of the Clerk of Teton County, Wyoming in Document #0909214). Both the approved building envelopes and the proposed building envelopes are generally located within what the 1998 Biota EA deemed "areas most suitable for development". While the vegetation contained within this area has altered in the last two decades, as was indicated above, the building envelopes continue to be proposed in the "areas most suitable for development".

The following table is a comparison of approved impacts resulting from developing Lots 24 and 25 with approved building envelopes (grey) and the proposed Lots 29, 30 and 31 and associated building envelopes (green).

Table 4. Comparison of Lot 25 & 25 Existing Building Envelopes with Proposed Lot 29-31 Proposed Building Envelopes

VEGETATIVE COVER TYPE	ORDINAL RANKING	APPROVED BUILDING ENVELOPE VEGETATION IMPACTS			PROPOSED BUILDING ENVELOPE VEGETATION IMPACTS			
		Lot 24	**Lot 25**	**Total**	**Lot 29**	**Lot 30**	**Lot 31**	**Total**
Tall Shrubs	8	0.1		**0.1**	<0.1			**<0.1**
Mature Aspen Forest	7	1.0	0.3	**1.4**	0.4	0.2	0.1	**0.7**
Douglas Fir	6	<0.1		**<0.1**				**0.0**
Lodgepole Pine	4		0.2	**0.2**				**0.0**
Xeric Sagebrush	3	2.0	2.5	**4.5**	1.5	1.2	2.6	**5.3**
Total		**3.1**	**3.1**	**6.2**	**1.9**	**1.4**	**2.7**	**6.0**

Potential impacts to higher ordinal ranking vegetative cover types (aspen and tall shrubs) have been minimized to *below* the approved levels (approved acres vs proposed acres) with potential impacts being *both* minimized in size and primarily placed in lower ordinal ranking vegetative cover types (xeric shrub).

APPENDIX B: REFERENCES

Biota. (1998). *Biota Research and Consulting, Inc. Environmental Analysis Snake River Canyon Ranch Property (December 17, 1998).*

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WGFD. (2019). Bald Eagle Nest Data. Jackson, WY: Wyoming Game and Fish Department.

APPENDIX C: FIGURES

Figure 1. Vicinity

Figure 2. Vegetative Cover

Figure 3. Elk Habitat

Figure 4. Mule Deer Habitat

Figure 5. Proposed Building Envelope

Figure 6. Proposed Building Envelope and Vegetative Cover

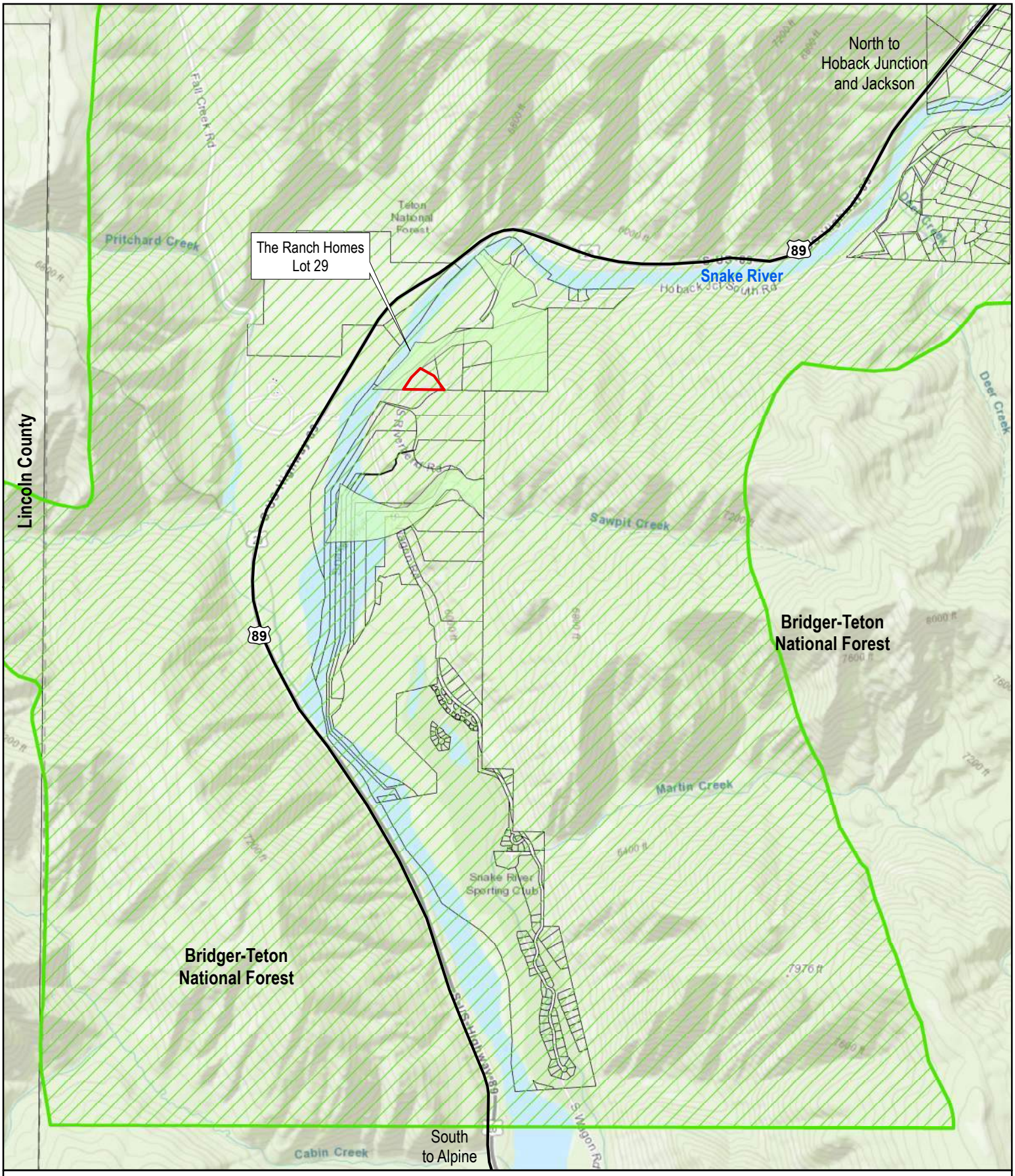

Figure 1:
Project Vicinity

The Ranch Homes Lot 29 Environmental Analysis

Legend

- Lot 29
- Road
- TCSPT Easement
- NRO
- Parcels

Sources
USGS
- Topo

Teton County
- Roads
- Parcels
- Zoning Overlay

1 in = 0.5 miles
0 0.5 Miles

March 14, 2022

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Figure 2:
Vegetative Cover Types

The Ranch Homes Lot 29 Environmental Analysis

Legend

- Lot 29
- Parcels

Cover Type (Ordinal Rank)

- Tall Shrubs (8)
- Aspen (6)
- Douglas Fir (6)
- Xeric Sagebrush (3)
- Distrubed (n/a)

1 in = 100 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

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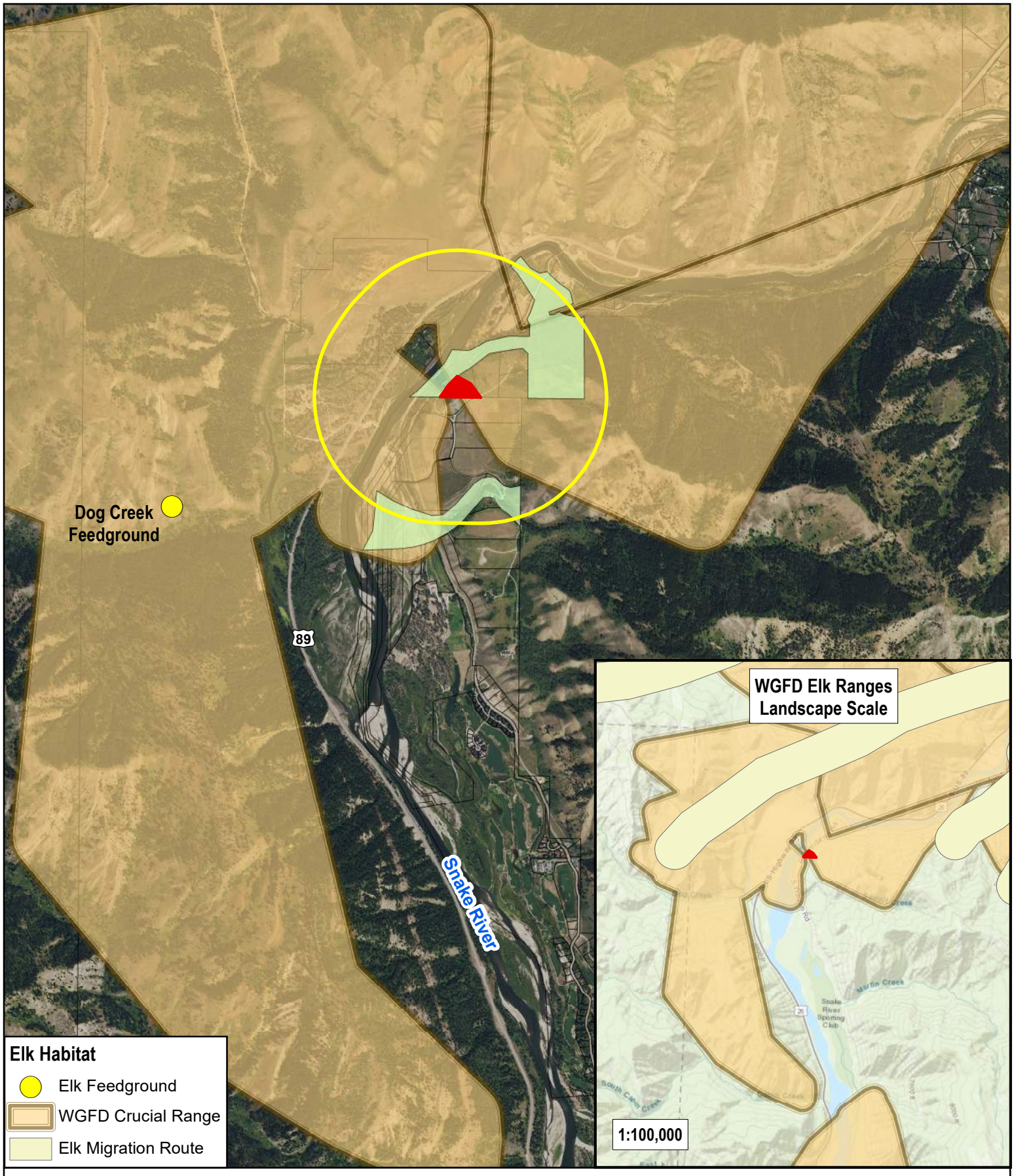

Figure 3:
Elk Habitat

The Ranch Homes Lot 29 Environmental Analysis

Legend

- Lot 29
- 1/2 Mile Vicinity
- TCSPT Easement
- Parcels

Sources
NAIP 2019 1 m Aerial
USGS Topo
Teton County
- Roads and Parcels
WGFD
- Big Game Range

1 in = 0.5 miles
0 0.5 Miles

March 14, 2022

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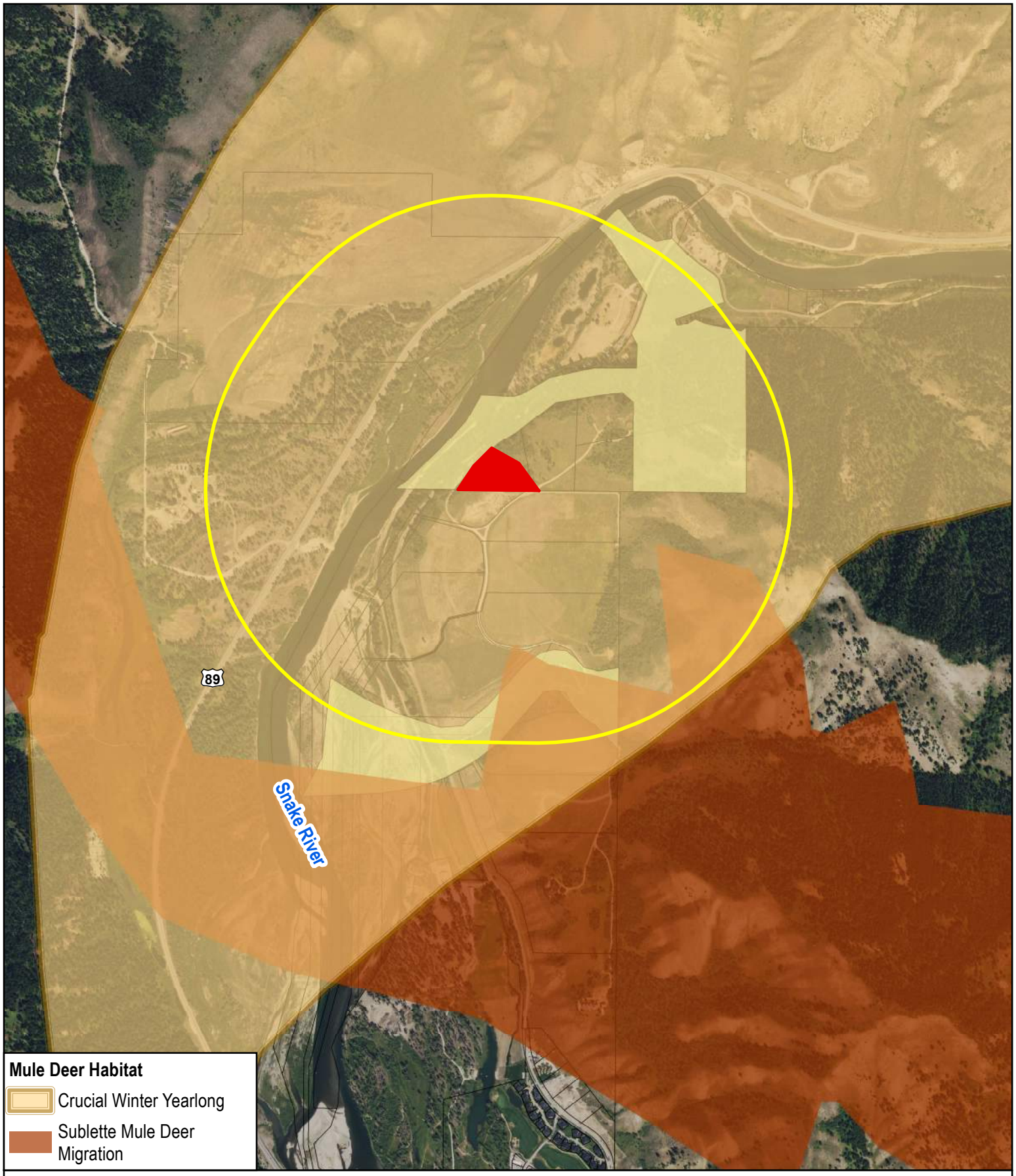

Figure 4:
Mule Deer Habitat

The Ranch Homes Lot 29 Environmental Analysis

Legend

- Lot 29
- 1/2 Mile Vicinity
- TCSPT Easement
- Parcels

Sources
NAIP 2019 1 m Aerial
Teton County
- Roads and Parcels
WGFD
- Big Game Range
- Migration Corridor

1 in = 0.25 miles

0 0.25 Miles

March 14, 2022

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Figure 5:
Proposed Building Envelope and Lot

The Ranch Homes Lot 29 Environmental Analysis

Legend

- Building Envelope
- Lot 29
- Parcels

1 in = 100 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

March 14, 2022

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Figure 6:
Proposed Building Envelope and Vegetative Cover Types

The Ranch Homes Lot 29 Environmental Analysis

Legend

- Building Envelope
- Lot 29
- Parcels
- Irrigation 15ft Setback

Cover Type (Ordinal Rank)

- Tall Shrubs (8)
- Aspen (6)
- Douglas Fir (6)
- Xeric Sagebrush (3)
- Distrubed (n/a)

1 in = 100 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

March 14, 2022

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APPENDIX D: PHOTOGRAPHS

Photo 1. Representative photo of xeric sagebrush cover type mix with grasses, aspen suckers and undulating topography (October 5, 2021)

Photo 2. Representative photo of xeric sagebrush cover type mix with grasses and undulating topography (October 5, 2021)

Photo 3. Representative photo of aspen stand with snowberry understory and conifer matrix (October 5, 2021)

Photo 4. Representative photo of transition between aspen and Douglas fir cover types with associated transition in understory composition aligning with a change to slope and aspect. (October 5, 2021)

Photo 5. Representative photo of Douglas fir cover type and relatively sparse understory (October 5, 2021)

Photo 6. Vegetative cover types matrix (original Lot 24 platform) (October 5, 2021)

To: Megan Smith, Applicant
From: Chandler Windom, Senior Planner
Re: EVA2021-0028 Snake River Canyon Ranch the Ranch Homes "Future Lot 29" Update
March 18, 2022

Dear Megan,

I have reviewed the Environmental Analysis Update submitted on behalf of Snake River Bend Ranch, LLC for the purpose of analyzing a future "Lot 29" of The Ranch Homes at the Snake River Canyon Ranch (EVA2021-0028). This future parcel is proposed to be a portion of the existing Lot 25, 865 W Elk Ridge Road (PIDN 22-39-16-32-4-02-002) and a portion of Lot 24, 985 W Elk Ridge Road (PIDN 22-39-16-32-4-02-001). The EA was prepared by EcoConnect Consulting, LLC, for the potential 5.1-acre property, submitted on December 20, 2021, and then revised March 14, 2022. The property is zoned Planned Unit Development-Planned Resort (PUD-PR) for the Snake River Canyon Ranch Resort and is within the mapped Natural Resources Overlay. This is an update to the original analysis for the entire north parcel of the Snake River Canyon Ranch completed in 1998. The EA update now contemplates a development area for a future Plat Amendment and conceptual mitigation for impacts within the NRO, to be finalized into a Habitat Enhancement Plan at or prior to application for physical development permits.

Pursuant to Teton County Land Development Regulations (LDR) Section 8.2.2.A, the objective of this EA review is to provide a recommendation from the Planning Director of the most suitable area and site design for a future Plat Amendment on the parcel with the goal of minimizing the impact to priority vegetation and crucial wildlife habitat to the greatest extent possible as directed by the standards of LDR Divisions 5.1 and 5.2. An EA review does not constitute "approval" of an EA, Plat Amendment, or physical development. It is a component of a possible or pending Subdivision Permit or physical development application. The result is recommended natural resource protections for a future use or physical development application. A portion of the property does contain a Teton County Scenic Preserve Trust conservation easement, but it does not provide a baseline inventory suitable of analyzing this entire future lot.

Waterbodies and Wetlands (LDR Section 5.1.1): There are no identified protected waterbodies or wetlands on the property.

Establishment of the NRO (LDR Section 5.2.1.B & C): Since the NRO shown on the Official Zoning Map generally identifies NRO boundaries and is intended to put the landowner

on notice that land may be included in the NRO, a site-specific analysis is required to ensure that the NRO designation is valid. Based on mapped Wyoming Game and Fish Department (WGFD) data supported by the EA, the subject parcel was designated within the Natural Resources Overlay due to its location within crucial elk and mule deer winter range as well as Bald Eagle winter and possible nesting habitat.

Applicability of NRO Standards (LDR Section 5.2.1.D): The future lot is entirely within the boundaries of the NRO and the development does not meet any available exemption options so the standards of the NRO are applicable to the whole development.

Impacting the NRO (LDR Section 5.2.1.E&F): The development area is located within the NRO, so all development is subject to the following standards:

Minimizes Wildlife Impact: The location of proposed development shall minimize impacts on the areas protected (e.g., crucial migration routes, crucial winter range, nesting areas). For the purposes of this standard, "minimize" is defined as locating development to avoid higher quality habitats or vegetative cover types for lesser quality habitats or vegetative cover types. Only when avoidance is not practicable due to significant topographical constraints related to the property, may higher quality habitats or vegetative cover types be impacted.

Development impacts for the 1.9 acre building envelope are primarily xeric sagebrush and mature aspen. There were originally two small areas of tall shrub within the proposed development area, which staff has recommended that those shrubs be left undisturbed during construction. The application updated March 14, 2022 shows better avoidance of the impacts to the western area of tall shrubs. The development area completely avoids the mature aspen stand to the East. The updated building envelope (March 14, 2022) is recommended as it demonstrates minimization of overall impacts. Comparison of the existing Lots 24 & 25 and their building envelopes with the proposed future Lots 29-31 show an overall reduction in area of impact, as well as reduction in impacts to mature aspen forest. It is recommended that all tall shrubs be left undisturbed during construction, even those within the recommended development area.

Habitat Enhancement: A habitat mitigation plan is not provided with this EA update as no physical development is proposed at this time. In the future, a final habitat mitigation plan may be required for the impacts to aspen trees in the development area.

Crucial Habitat Protection Standards (LDR Sec. 5.2.1.G): Per the EA materials, no bald eagle's nests, trumpeter swan nests, or trout spawning habitat were identified within regulatory protected distance of the proposed development area. No crucial winter roost sites of repeatedly used perch trees for raptors were identified in the development area. The site is entirely within elk and mule deed crucial winter range. Physical development and use are only allowed in crucial winter range for elk and mule deer if it can be demonstrated that it can be located in such a way that it will not detrimentally affect the

food supply and/or cover provided by the crucial winter range to the species, or detrimentally affect the potential for survival of the individuals using the crucial winter range. EA materials indicate that, while all proposed development impacts are within those crucial ranges, as mapped by the Wyoming Game and Fish Department, those impacts are unavoidable, the development area has been designed to be clustered with adjacent lots. Use of the impacted habitat by individual ungulates will be disrupted but overall use and movement of elk and mule deer through the area will be maintained. Additionally, the Teton County Scenic Preserve Trust Easement that covers the northwestern portion of the property is intended to protect wildlife movement and will not be disturbed.

Please keep in mind that specific wildlife friendly fencing and wildlife feeding regulations apply to all development and use within Teton County. On properties within the NRO, domestic pets shall be physically restrained or accompanied by a person who has strict voice control over the animals at all times. Cats and dogs shall not be allowed to roam unaccompanied in the NRO. Wildlife feeding is prohibited. All new fencing must meet wildlife friendly fencing standards or receive a special purpose fencing exemption from the Planning Director. As a property within Bear Conflict Priority Area 1, all trash and recycling shall be stored in bear-proof containers. Any forthcoming Grading and Erosion Control permit application is required to include an Invasive Species Management Plan for review by Teton County Weed and Pest. Please initiate coordination with Teton County Weed and Pest prior to submittal to discuss best management practices.

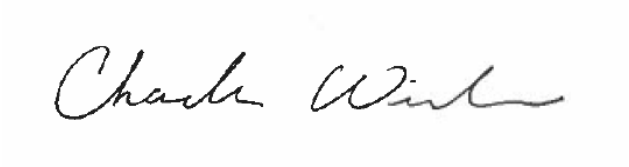
Based upon the review of the access and development area submitted with this EA, and in accord with Division 5.1 and 5.2 of the LDRs, the Planning Director recommends that the updated building envelope/development area, as described in EA Figure 6 dated March 14, 2022, is acceptable with the following eight (8) conditions:

1. Prior to issuance of any building or grading permits, EA digital mapping layers shall be provided.
2. This EA shall expire March 18, 2025 or at the discretion of the Planning Director in accordance with LDR Sec. 8.2.2.E.2. *Please note that the LDRs governing Environmental Standards, including EAs, may be updated, and may render this EA expired prior to March 18, 2025.*
3. Tall shrubs shall be well delineated and left undisturbed during construction, including those within the recommended building envelope/development area.
4. Future access to the development area from Elk Ridge Road shall only impact xeric sagebrush cover types.
5. Domestic pets shall be physically restrained or accompanied by a person who has strict voice control over the animals at all times. Cats and dogs shall not be allowed to roam unaccompanied in the NRO.

6. Temporary development impacts shall be reclaimed with a natural vegetative cover type of equal or higher value upon completion of construction.
7. All new fencing must meet wildlife friendly fencing standards or receive a special purpose fencing exemption from the Planning Director.
8. Prior to the issuance of any physical development permits, a final mitigation plan and cost estimate shall be prepared by the applicant for the development impacts. A surety may be required for 125% the cost of mitigation.

If you have any questions or concerns regarding this review, please feel free to contact me at (307) 733-3959 or via email at: cwindom@tetoncountywy.gov.

Sincerely,



Chandler Windom
Senior Planner, Teton County Planning Division

Environmental Analysis Update

Snake River Canyon Ranch
The Ranch Homes Lot 30

PIDN: TBD

Previous Lot 24 PIDN: 22-39-16-32-4-02-001 (partial)
Previous Lot 25 PIDN: 22-39-16-32-4-02-002 (partial)

Teton County, WY

December 10, 2021

Revised March 14, 2022

Prepared for:
Snake River Bend Ranch, LLC

Prepared By:

EcoConnect Consulting LLC
Connecting Ecology and Community
PO Box 13259, Jackson, WY 83002
www.ecoconnectjh.com

Table of Contents

PROJECT OVERVIEW

INTRODUCTION

EcoConnect Consulting LLC has conducted an Environmental Analysis Update (EAU) in support of the Snake River Bend Ranch, LLC's update of a building envelope on Snake River Canyon Ranch's The Ranch Homes Lot 30 ("Lot 30" or "the property") and to document current, natural resource conditions.

This Environmental Analysis Update is required by Teton County's Planning and Building Department (Hamilton Smith, Principal Planner, Teton County Planning Division, September 23, 2021, *email commun.*) to confirm and/ or update site conditions and possible impacts resulting from the proposed reconfiguration of lots and building envelopes transitioning from Lots 24-25 to Lots 29-31 and associated three building envelopes (Lot 30 addressed herein). The previous EA was prepared by Biota Research and Consulting, Inc. (dated December 17, 1998) for Mr. Dick Edgecomb, SRCR Development Co., LLC (Biota, 1998). The 1998 EA pertained to 195 acres inclusive of the 5.8± area addressed in this EAU.

Within Lot 30, this EAU is focused on the changes in natural resources and environmental conditions since 1998 as well as the possible impacts to vegetative cover types within the proposed building envelope. The most notable change in vegetative cover type in the last two decades, has been the aspen forest expansion into the xeric sagebrush cover type. Furthermore, this EAU demonstrates compliance with Teton County Land Regulations outlined in Article 5, Division 5.1, *General Environmental Standards*, Division 5.2, *Environmental Standards Applicable in Specific Areas* and Division 8.2.2, *Environmental Analysis* (Teton County, 2021).

Lot 30 is approximately 5.8± acres in size and contains an encumberment by a Teton County Scenic Preserve Trust (TCSPT) conservation easement (Edgcomb) outside of the proposed building envelope. In addition to Lot 30 lands, this TCSPT conservation easements encumbers riparian and upland areas on neighboring parcels. Lot 30 is located within the Natural Resource Overlay (Figure 1) as well as the Scenic Resource Overlay and zoned Planned Resort (PR) as it is a component of the Snake River Canyon Ranch (Greenwood Mapping, Inc, 2021).

METHODS

Prior to the on-site inventory of the property, EcoConnect Consulting LLC consulted with property representatives, studied current and historic aerial photographs and documentation, USGS topographic maps, Teton County's vegetative cover GIS data and species of the region to become as familiar as possible with the landscape. A site visit to the property was conducted on October 5, 2021 to record baseline information. Equipment used included a Garmin GPSMAP 64 Global Positioning System unit with ±6ft accuracy, a compass and a digital camera. The site visit was conducted by walking the property surveying land use, wildlife use, vegetation and distinct natural features. Representative photographs of vegetation communities and other significant features were taken. Vegetation, wildlife, infrastructure and other information were recorded in field notes and on aerial photographic field maps.

One-foot resolution, Teton County aerial photographs, NAIP Imagery and Teton County's Vegetative Cover Types GIS Data (Cogan & Johnson, 2013) were used to supplement on-site observations. Information recorded here pertaining to vegetation cover, water resources and other landscape observations are therefore based on a combination of site visit observations, aerial photographs and existing data. While the Cogan and Johnson (2013) Teton County Vegetative Cover Types GIS Data layer was used as a reference for vegetation type characteristics, vegetative cover type definitions were based on those published in the Teton County Land Development Regulations Article 5, Section 5.2.1.F, *Vegetative Cover Type Standards* (Teton County, 2021).

HABITAT INVENTORY

PROPERTY

The property is approximately 5.8± acre in size and is generally described as located on an upper bench of the Snake River corridor. The property is bordered on all sides by private parcels including the Astoria Park Conservancy, inclusive of the Snake River, to the north. The Bridger-Teton National Forest is approximately one-quarter mile to the east and on the western side of the Snake River.

VEGETATIVE COVER TYPES

The vegetative cover types on the property are as was documented in the Biota 1998 EA (Biota, 1998). However, the abundance of various cover types has changed since 1998. These changes in vegetative cover type configuration demonstrate the dynamic nature of natural resources and does not appear to have been intentionally influenced by human activity or management. Expansion of the aspen cover type over the last 22 years is a normal characteristic of aspen stands.

The vegetative cover types located on the property are typical of the Snake River corridor and associated upland foothills. Vegetative cover types listed below were developed based on current conditions and information obtained from aerial imagery (Greenwood Mapping, Inc, 2021). Teton County Vegetative Cover Types GIS Data (Cogan & Johnson, 2013), which is based on 2011 aerial photography, was used as a reference document in comparison to current site conditions.

Vegetative cover types are used by Teton County Land Development Regulations to determine relative habitat values and development priorities on the property (Section 5.2.1.F.4.a, *Ordinal Ranking*). The property's vegetative cover types are illustrated in Figure 2, summarized in Table 1, and described below.

Table 1. Vegetative Cover Types and Ordinal Rankings

VEGETATIVE COVER TYPE	AREA (ACRES)	AREA PERCENTAGE	ORDINAL RANKING
Mature Aspen Forest	1.2	21%	7
Douglas Fir	1.0	17%	6
Lodgepole Pine	0.1	2%	4
Xeric Sagebrush	3.4	58%	3
Disturbed	0.1	2%	n/a
TOTAL	**5.8**	**100%**	

Mature Aspen Forest

Non-mesic, mature quaking aspen (*Populus tremuloides*) forest covers approximately 1.2 acres (21% of the property). This vegetative cover type is located along the northwestern portion of the property, adjacent to the Douglas fir forest and in distinct stands within the sagebrush cover type. These stands are mature with a shrub understory, dominated by common snowberry (*Symphoricarpos albus*). Regeneration is primarily along the stand edge and expansion of these aspen stands is visible on aerial photography since 1998 when the original EA was written (Biota, 1998). Non-mesic, mature aspen cover type receives an ordinal ranking of 7 due to its importance to wildlife as both cover and for the forage typically found in the understory.

Douglas Fir

Douglas Fir (*Pseudotsuga menziesii*) forest covers approximately 1.0 acres (17% of the property). This Douglas fir cover type is associated with northwest facing, steep sloped, Douglas fir stands on neighboring parcels. The relatively open understory (in comparison to the aspen stands on the property) is composed of tall shrub and forb species including serviceberry (*Amelanchier alnifolia),* common snowberry (*Symphoricarpos albus*) and grasses. Use of this forested cover type by ungulates is evidenced by game trails and scat piles (e.g. elk). Due to its importance to wildlife, the Douglas fir cover type receives an ordinal ranking of 6.

Lodgepole Pine

Lodgepole Pine (*Pinus contorta*) stands covers approximately 0.1 acres (2% of the property). This lodgepole pine cover type is likely associated with areas of the property where snow pockets accumulate moisture. It is likely that in the last 22 years, individual lodgepole pine trees within the sagebrush cover type have expanded to small stands in areas of higher moisture content and appropriate growing conditions much in the same manner, albeit on a smaller scale, as the aspen cover type has expanded. Lodgepole pine is also associated with seral stage aspen stands (DeByle, 1985). The lodgepole pine cover type receives an ordinal ranking of 4.

Xeric Sagebrush

The xeric sagebrush cover type is the dominant cover type on the property as it was in 1998 (Biota, 1998). The sagebrush community covers approximately 3.4 acres (58% of the property). Within the sagebrush community, there is a mix of grasses and sagebrush with a small representation of lodgepole pine individuals. The sagebrush and grasses mix seems to be a result of relative, small undulations in topography likely creating pockets were snow collects. Therefore, the amount of snowmelt water available to shrub and grass species varies throughout the cover type. Mountain big sagebrush (*Artemisia tridentata* subsp. *vaseyana*) with lesser amounts of common rabbitbrush (*Chrysothamnus nauseosus*), antelope bitterbrush (*Purshia tridentata*) and bunch grasses compose this cover type. Xeric sagebrush cover type receives an ordinal ranking of 3.

Disturbed

The area identified as disturbed on the property (0.1 acres; 2%) is Elk Ridge Road. Elk Ridge Road is a gravel road connecting this and neighboring properties to River Bend Road and the remainder of the Snake River Sporting Club. Disturbed areas do not receive an ordinal ranking under Teton County's land development regulations.

PROTECTED WATERBODIES, WETLAND RESOURCES AND BUFFERS

No protected waterbodies, wetland resources or buffers are located on this upland bench property. While located near the Snake River to the north and west, an Aquatic Resources Inventory was not required since no waterbodies or wetland resources are located the property.

WILDLIFE HABITATS PROTECTED BY NATURAL RESOURCES OVERLAY

"The purpose of the Natural Resources Overlay (NRO) is to provide protection to the most important and sensitive natural areas" (Teton County, 2021). Teton County LDRs define the NRO as areas that include the habitats listed in Section 5.2.1.B, *Establishment of the NRO*. The presence of NRO defining habitats both on the property and within a ½ mile vicinity of the property are listed in Table 2. Based on this site-specific analysis of the property and the habitats present within ½ mile, it is reasonable to conclude that the parcel is appropriately mapped within the NRO.

The following wildlife information has been updated since the 1998 EA (Biota, 1998) as species identified in Teton County's Land Development Regulations (Teton County, 2021) have changed as has information provided by Wyoming Game and Fish Department (WGFD) and other local, wildlife professionals.

Table 2. Wildlife Habitats Protected by the NRO

WILDLIFE HABITAT	ON THE PROPERTY	WITHIN ½ MILE OF PROPERTY
Elk Crucial Winter Range	Mapped	Yes
Mule Deer Crucial Winter Range	Mapped	Yes
Moose Crucial Winter Range	No	No
Trumpeter Swan Nesting Habitat	No	Possible
Trumpeter Swan Winter Habitat	No	Yes
Snake River Cutthroat Trout Spawning Habitat	No	Yes
Bald Eagle Nesting Habitat	Possible	Possible
Bald Eagle Crucial Winter Habitat	Yes	Yes
Big Game Migration Corridors (Mule Deer)	No	No
Big Game Migration Corridors (Elk)	No	No

Elk Crucial Winter Range

Crucial elk winter range consists primarily of xeric and mesic sagebrush-grasslands, mixed shrub, mesic and xeric open grassland and certain agricultural meadow types that are used by elk 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*). The property includes areas WGFD has designated as crucial winter yearlong range (WGFD, 2018). This WGFD elk ranges data set "was developed for statewide and regional use" and "this data set should never be used at a scale larger than 1:100,000 [a landscape scale]" (WGFD, 2018). Data sets at landscape scales, are adequate starting points for general area assessments but not determinant at the parcel level or scale (Courtemanch, 2020). The WGFD revised the Fall Creek elk ranges in 2018 based on a landscape scale analysis of collared data (Courtemanch, 2020).

A parcel-scale assessment of the property, identifies potential elk use areas, not crucial winter habitat, as primarily found on the north and western forested portions of the property that are contained within the TCSPT easement. Field observations found elk scat within this area. It is likely that elk use this area for local movements rather than as crucial, winter habitat.

The Dog Creek WGFD Feedground is approximately 1.5 miles southwest of the property on the opposite side of the Snake River. This feedground is located within elk crucial winter yearlong range and is bordered to the west by WGFD designated elk parturition lands. Both the feedground and the parturition lands are separated from the property by the Snake River (Figure 3).

Mule Deer Crucial Winter Range

Mule deer crucial winter yearlong range consists of scrub-shrub grasslands located at lower elevations and on south facing slopes that are used by mule deer 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*). More specifically, mule deer wintering in Teton County use south facing, 22-45° slopes below approximately 8,000 ft in elevation (Riginos, et al., 2013).

The property and ½ mile vicinity are located on lands designated by WGFD as crucial winter yearlong range (Figure 4). However, the cover types found within the property are likely more appropriate for mule deer use during the spring, summer and fall seasons rather than as crucial winter habitat. As with elk, a further refinement of appropriate mule deer winter range can be found by examining suitable habitat at the parcel scale. Based on vegetation and habitat models, suitable (not crucial) suitable habitat within ½ mile of the property would be located on the forested areas away from the proposed building envelopes (EcoConnect, 2018). Therefore, while the WGFD's mapping of crucial winter yearlong range extends to the north and south along the Snake River corridor, within this broad area mule deer likely utilize the south facing xeric shrub hillsides not the entirety of the river corridors.

Moose Crucial Winter Range

Crucial moose winter habitat consists primarily of riparian and wetland shrub-willow and cottonwood forests, highly mesic cottonwood/spruce forests, upland forest-subalpine fir habitat types, and secondarily xeric and mesic sagebrush-grasslands and mixed shrub types. These habitats are used by moose during the crucial winter months 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*).

The property and ½ mile analysis vicinity include WGFD designated moose winter/yearlong range but not crucial winter yearlong range (WGFD, 2012). This winter yearlong range encompasses the Snake River drainage.

Trumpeter Swan Nesting Habitat

Trumpeter Swan nesting habitat is found on wetland and aquatic sites that have adequate open water, aquatic vegetation (forage) and protection from predators. Nesting locations typically are islands located in ponds and wetlands. There are no known nesting ponds on the property, however, suitable nesting sites with adequate protection from predators could be found within ½ mile of the property on islands and side channels of the Snake River.

Trumpeter Swan Winter Habitat

Trumpeter Swan winter habitat consists of aquatic sites with abundant vegetation that stay open throughout the winter months (Section 5.2.1.B.3, *NRO Definitions*). Many side channels and streams along the Snake River corridor provide winter habitat for Trumpeter Swans (S. Patla pers. comm. 2018). Side channels along the Snake River within the ½ mile vicinity may provide adequate resources for wintering Trumpeter Swans.

Snake River Cutthroat Trout Spawning Habitat

Snake River cutthroat trout spawning habitat is located in riffles along the Snake River and its tributaries. Inland cutthroat trout species are native to western rivers and streams and have been recognized as a significant species in Teton County (Section 5.2.1.B.3, *NRO Definitions*).

This property is not inclusive of the Snake River but a half mile buffer around the property does contain the Snake River; but no major tributaries of the river. Therefore, any Snake River cutthroat trout spawning habitat would be found in the Snake River and therefore protected as a part of this waterbody resource.

Bald Eagle Nesting Habitat

Prime nesting habitat consists of uneven-aged stands of riparian forest with old-growth attributes and perching possibilities near watercourses or waterbodies which provide foraging opportunities (5.2.1.B.3, *NRO Definitions*). Bald Eagle nesting habitat is found along the Snake River riparian corridor and its larger tributaries.

There are no established Bald Eagle nests on the property. There are established Bald Eagle nests outside of the ½ mile property vicinity on Snake River Sporting Club lands (WGFD, 2019). While all known nest locations are outside of the property, the steep forested areas of the property overlooking the Snake River do provide possible, future nesting locations. The Snake River and associated lands may be used for foraging by Bald Eagles associated with the nearby nests.

Bald Eagle Crucial Winter Habitat

Bald Eagle crucial winter habitat is found in riparian areas near ungulate crucial winter range and in Bald Eagle nesting areas. The Bald Eagle winter diet is comprised primarily of carrion from dead carcasses with the remainder comprised of fish and waterfowl (Section 5.2.1.B.3, *NRO Definitions*). The proximity of this property to the Snake River and the potential presence of winter carrion on the nearby elk feedground provide for good winter Bald Eagle habitat.

The presence of nearby nests in close proximity to each other indicate a strong likelihood of an adequate food resource in the area. These eagles likely depend on a year-round diet primarily of fish from the Snake River.

Migration Corridors

Mule deer and elk migration corridors are protected characteristics of the Natural Resources Overlay (Section 5.2.1.B.1, *Included within the NRO*). As defined by Teton County's LDRs, mule deer and elk migration corridors are designated as crucial if used 8 out of every 10 years.

WGFD designated migration corridors indicate that the Sublette mule deer migration corridor passes to the south of the property and along the edge of ½ mile buffer (Figure 4). This designated migration corridor terminates in the vicinity of the Dog Creek Feedground on the opposite side of the Snake River from the property indicating that the Snake River corridor and neighboring USFS lands appear to be utilized as **summer** range. Mule deer likely cross the river in shallow areas connecting gravel bars and islands to facilitate their crossing.

WGFD elk migration corridors (WGFD, 2012) indicate that elk likely travel to the Dog Creek Feedground from the north. While these migration corridors are not located within the ½ vicinity, it is likely that elk will also pass through this area. Past communications with WGFD wildlife biologists indicate that elk will move along ridgelines on neighboring USFS lands and through areas to the north of the property. A TCSPT easement encumbers land on the northern portion of the property and to the east of the property. A second TCSPT easement encumbers lands to the south of the property but within the half mile vicinity area. These TCSPT easements are aligned with the portions of the vicinity most likely to be utilized by migrating elk (Figure 3).

DEVELOPMENT IMPACT ASSESSMENT

DEVELOPMENT

The building envelope proposed for Lot 30 is approximately 1.4± acres in size and primarily located within the xeric sagebrush and aspen cover types (Figure 5 & Figure 6). Specific development plans to be located within this building envelope have not been developed. In addition to the xeric sagebrush and aspen cover types within the building envelope, an essential access driveway will be needed to reach the building envelope from Elk Ridge Rd. This driveway will cross the xeric sagebrush cover type, the lowest ordinal rank cover type on the property. Therefore, it's unknown location has not been shown as the impacts will be fully contained within the lowest ordinal rank cover type on the property.

HABITAT IMPACT ASSESSMENT

Impact to Vegetative Cover

The habitat impacts identified below represent impacts if the entire building envelope were to be developed. All potential impacts resulting from development of the 1.4± acre building envelope would be located primarily in areas of xeric sagebrush with lesser impacts in the aspen cover type.

Table 3. Vegetative Cover Types Potential Impacts

VEGETATIVE COVER TYPE	AREA (ACRES)	AREA PERCENTAGE	ORDINAL RANKING
Mature Aspen Forest	0.2	14%	7
Xeric Sagebrush*	1.2	86%	3
TOTAL	**1.4**	**100%**	

*Additional impacts to xeric sagebrush, the lowest ordinal rank cover type, would be required for an access driveway connecting the building envelope with Elk Ridge Rd.

Impact to Wildlife Movement

Proposed development of this building envelope should not have significant impacts on wildlife habitat or movement. The nearby Ranch Estates contain parcels of 35 acres or greater thereby allowing for wildlife movement through the area. The proposed Ranch Homes, while smaller lots, would also provide for wildlife movement through the TCSPT easement on forested hillsides and undeveloped portions of the property. Furthermore, it is recommended that all future fences, with the exception of pet yard enclosures, should be wildlife friendly fencing.

Project Vicinity Impact Statement

Lot 30 is located in Area II of the Snake River Canyon Ranch Resort (SRCRR), north of the golf course at Snake River Sporting Club (SRSC) and south of Astoria Hot Springs park. The Snake River is located to the west of this property and USFS Bridger-Teton National Forest lands are located to the east of the property. The WGFD Dog Creek Elk Feedground is located to the west of the property on the opposite side of the Snake River.

While human use in the area has undergone significant change since the 1998 EA was written (Biota, 1998), the areas identified for a building envelope remain relatively similar (Appendix A). The Astoria Hot Springs Park to the north has transitioned from both day and night use (e.g. campground with pool) to primarily a day use area while the Snake River Sporting Club development (of which this lot is

proximate) has seen an increase in human use (e.g. automobiles, residential development, golf course, etc.) through its development.

Nonetheless, the relatively open nature of this area continues to provide for wildlife movement and habitat in concert with surrounding natural resources within a ½ mile vicinity. Much of the surrounding land is located on the Bridger-Teton National Forest or within the Snake River. Based on aerial photography (Greenwood Mapping, Inc, 2021), the surrounding area has an extensive history of disturbance from agricultural operations conducted by the Snake River Bend Ranch. These nearby agricultural lands have recently been divided into ten 35 acre parcels. These neighboring lots have been developed for residential use or are currently under construction and contain a mix of residential and agricultural uses.

Similarly, the proposed development of a residential building envelope on Lot 30 is in line with the mix of residential and agricultural uses found on nearby parcels and within the Snake River Sporting Club. If agricultural uses are continued in the future, the lot is fed by an agricultural irrigation system and possesses water rights.

Threatened and Endangered Species

No known threatened or endangered plant or vertebrate species were observed while on the property. It is unlikely that the species listed below would pass through, or be found on, the property. However, the Snake River corridor is the largest wildlife movement corridor in Teton County. Therefore, a property such as this proximate to the Snake River corridor and adjacent to USFS lands could be subject to a wide variety of vertebrate species' movement patterns.

The mapping of USFWS critical lynx habitat was done at a coarse scale and follows the eastern shore of the Snake River thereby including this property. While the lands in this property's vicinity are mapped as critical lynx habitat, the vegetation present on the property does not meet the habitat requirements for Canada lynx. Canada lynx require expanses of dense conifer forest containing healthy snowshoe hare populations (their primary food resource). The resources available on this property do not justify the mapping of the property as critical lynx habitat.

USFWS Species List (USFWS, 2021):

- Canada Lynx (Threatened)
- Grizzly Bear (Threatened)
- Yellow-billed Cuckoo (Threatened)
- Monarch Butterfly (Candidate)
- Canada Lynx Critical Habitat (Designated)

ALTERNATIVES ANALYSIS

The proposed development is in compliance with Teton County Land Development Regulation's requirement to minimize or avoid impacts to lands protected by the Natural Resources Overlay (Section 5.2.1.E.1. *Minimizes Wildlife Impacts*), therefore, an alternatives analysis is not needed.

HABITAT ENHANCEMENT PLAN

As noted above, impacts to higher ordinal ranking vegetative cover types are to be minimized or avoided through focusing development mostly in the xeric sagebrush cover type (86% or 1.4 acres of the potential impacts). Therefore, a complete habitat enhancement plan is not needed at this time (Section 5.2.1.E., *Impacting the NRO*).

Potential impacts to higher ordinal ranking vegetative cover types (aspen) have been minimized to *below* the currently approved levels (approved acres vs proposed acres) with potential impacts being both minimized in size and primarily placed in lower ordinal ranking vegetative cover types (xeric shrub) (Appendix A).

The proposed building envelope does contain aspen located on the northwestern portion of the building envelope. If final development plans cause impacts to these aspen, mitigation of individuals impacted will be required by Teton County at a 2:1 ratio. The planting of vegetative cover types of equal or higher ordinal ranking (e.g. immature aspen) could be located within cover types with an ordinal ranking less than or equal to mature aspen (ordinal ranking of 7). Potential locations may include within the xeric shrub cover type outside of the building envelope and adjacent to existing aspen, neighboring properties or across Elk Ridge Rd (the area between Elk Ridge Rd and the proposed building envelope contains irrigation infrastructure).

APPENDICES

APPENDIX A: APPROVED VERSUS PROPOSED IMPACTS COMPARISON LOT 29-31

While the 1998 EA (Biota, 1998) indicated "areas most suitable for development", it did not indicate building envelopes. Since 1998 building envelopes have been identified as part of the Snake River Canyon Ranch Master Plan (Office of the Clerk of Teton County, Wyoming in Document #0909214). Both the approved building envelopes and the proposed building envelopes are generally located within what the 1998 Biota EA deemed "areas most suitable for development". While the vegetation contained within this area has altered in the last two decades, as was indicated above, the building envelopes continue to be proposed in the "areas most suitable for development".

The following table is a comparison of approved impacts resulting from developing Lots 24 and 25 with approved building envelopes (grey) and the proposed Lots 29, 30 and 31 and associated building envelopes (green).

Table 4. Comparison of Lot 25 & 25 Existing Building Envelopes with Proposed Lot 29-31 Proposed Building Envelopes

VEGETATIVE COVER TYPE	ORDINAL RANKING	APPROVED BUILDING ENVELOPE VEGETATION IMPACTS			PROPOSED BUILDING ENVELOPE VEGETATION IMPACTS			
		Lot 24	Lot 25	Total	Lot 29	Lot 30	Lot 31	Total
Tall Shrubs	8	0.1		**0.1**	<0.1			**<0.1**
Mature Aspen Forest	7	1.0	0.3	**1.4**	0.4	0.2	0.1	**0.7**
Douglas Fir	6	<0.1		**<0.1**				**0.0**
Lodgepole Pine	4		0.2	**0.2**				**0.0**
Xeric Sagebrush	3	2.0	2.5	**4.5**	1.5	1.2	2.6	**5.3**
Total		**3.1**	**3.1**	**6.2**	**1.9**	**1.4**	**2.7**	**6.0**

Potential impacts to higher ordinal ranking vegetative cover types (aspen and tall shrubs) have been minimized to *below* the approved levels (approved acres vs proposed acres) with potential impacts being *both* minimized in size and primarily placed in lower ordinal ranking vegetative cover types (xeric shrub).

APPENDIX B: REFERENCES

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APPENDIX C: FIGURES

Figure 1. Vicinity

Figure 2. Vegetative Cover

Figure 3. Elk Habitat

Figure 4. Mule Deer Habitat

Figure 5. Proposed Building Envelope

Figure 6. Proposed Building Envelope and Vegetative Cover

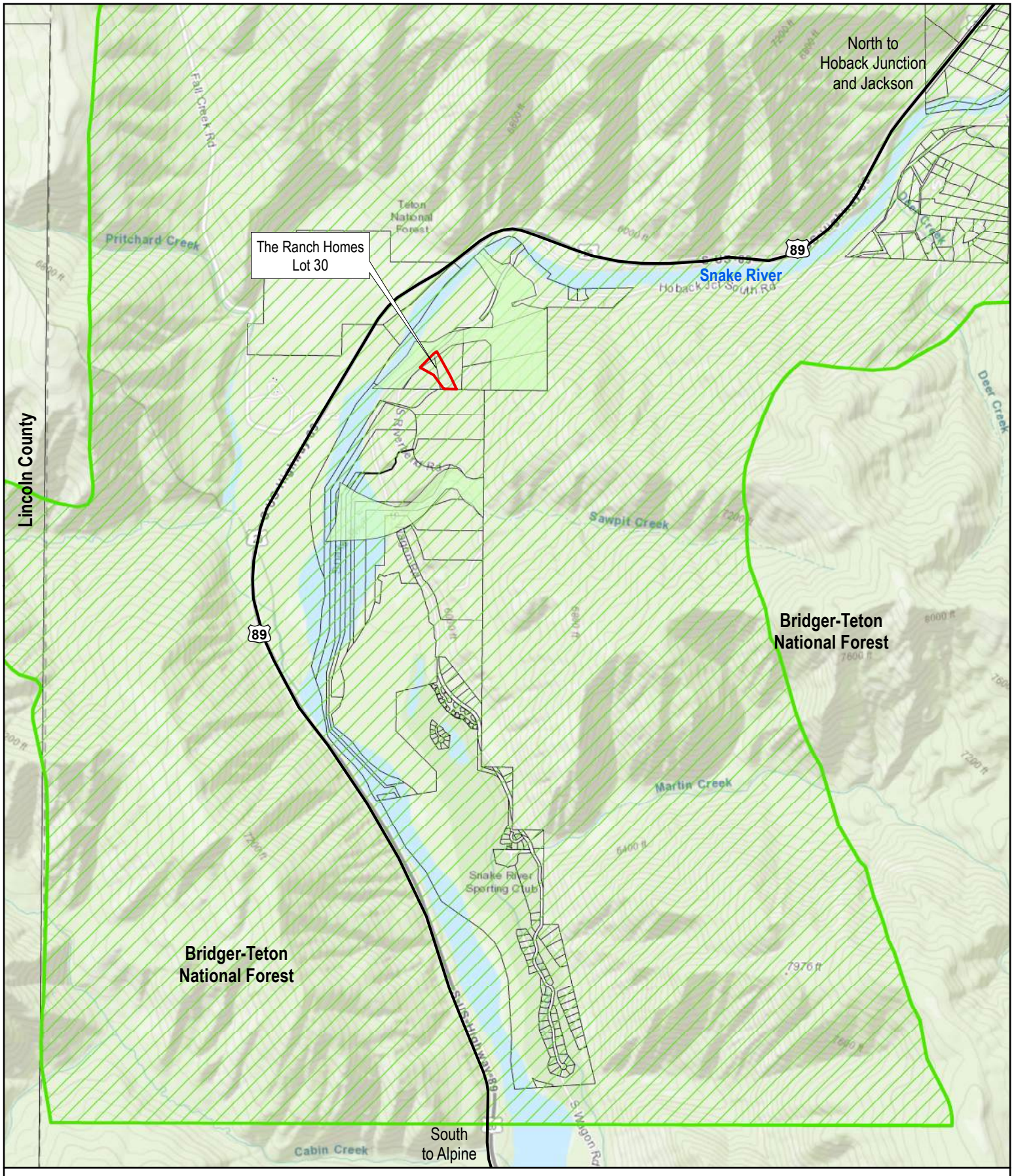

Figure 1:
Project Vicinity

The Ranch Homes Lot 30 Environmental Analysis

Legend

- Lot 30
- Road
- TCSPT Easement
- NRO
- Parcels

Sources

USGS
- Topo

Teton County
- Roads
- Parcels
- Zoning Overlay

1 in = 0.5 miles

0 0.5 Miles

March 14, 2022

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Figure 2:
Vegetative Cover Types

The Ranch Homes Lot 30 Environmental Analysis

Legend

- Lot 30
- Parcels

Cover Type (Ordinal Rank)

- Aspen (6)
- Douglas Fir (6)
- Lodgepole Pine (4)
- Xeric Sagebrush (3)
- Distrubed (n/a)

1 in = 100 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

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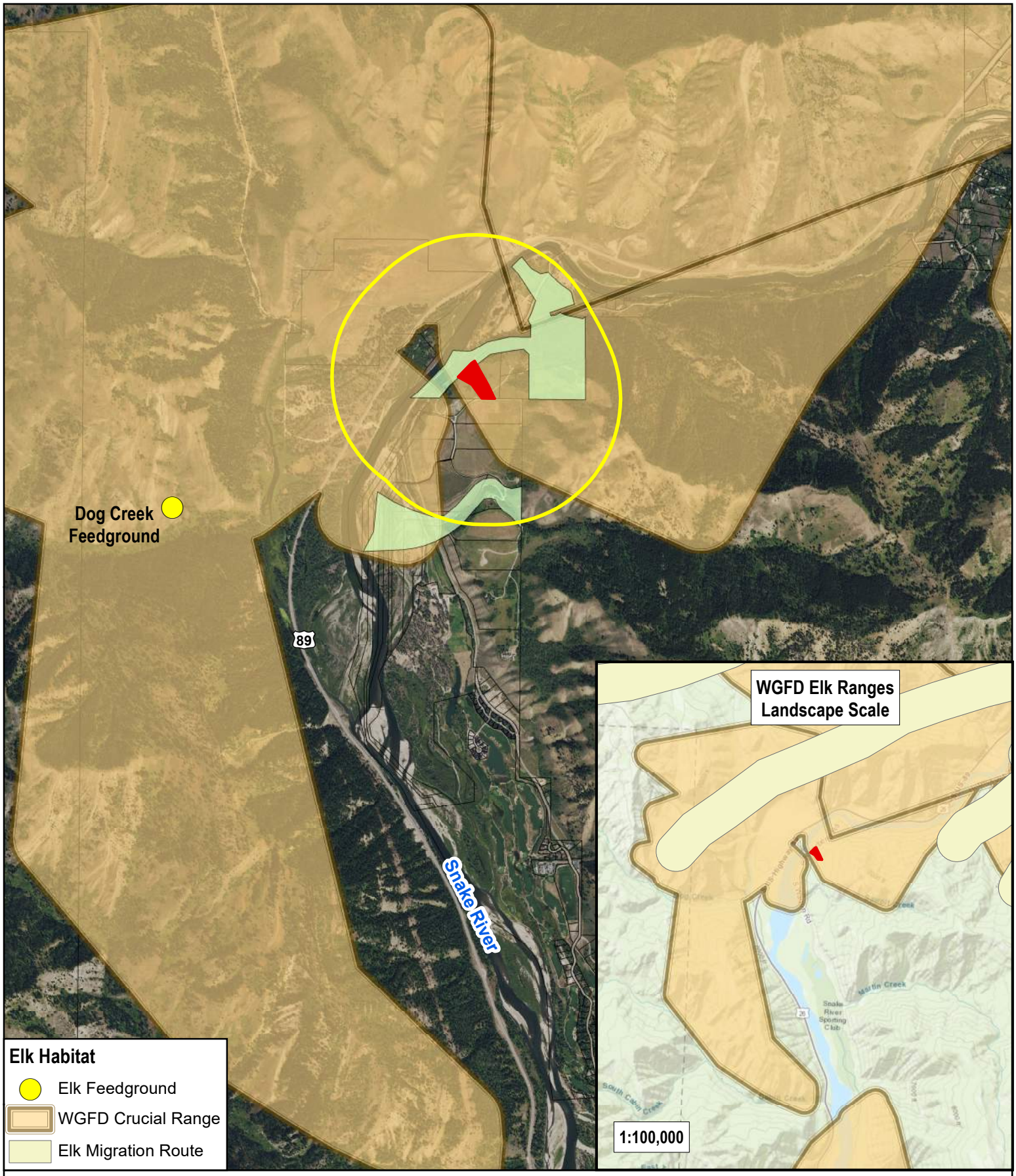

Figure 3:
Elk Habitat

The Ranch Homes Lot 30 Environmental Analysis

Legend

- Lot 30
- 1/2 Mile Vicinity
- TCSPT Easement
- Parcels

Sources
NAIP 2019 1 m Aerial
USGS Topo
Teton County
- Roads and Parcels
WGFD
- Big Game Range

1 in = 0.5 miles
0 0.5 Miles

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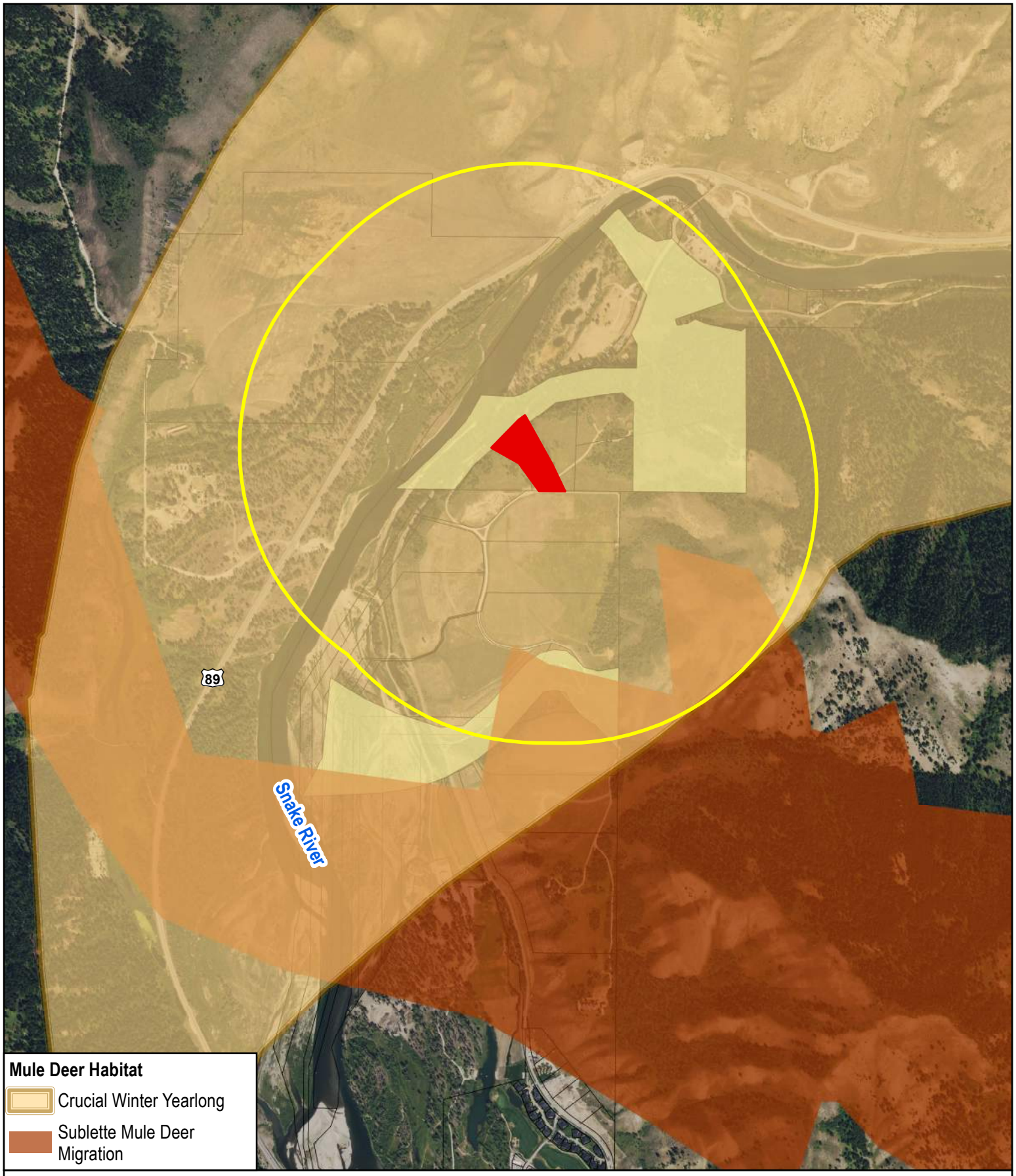

Figure 4:
Mule Deer Habitat

The Ranch Homes Lot 30 Environmental Analysis

Legend

- Lot 30
- 1/2 Mile Vicinity
- TCSPT Easement
- Parcels

Sources
NAIP 2019 1 m Aerial
Teton County
- Roads and Parcels
WGFD
- Big Game Range
- Migration Corridor

1 in = 0.25 miles

0 0.25 Miles

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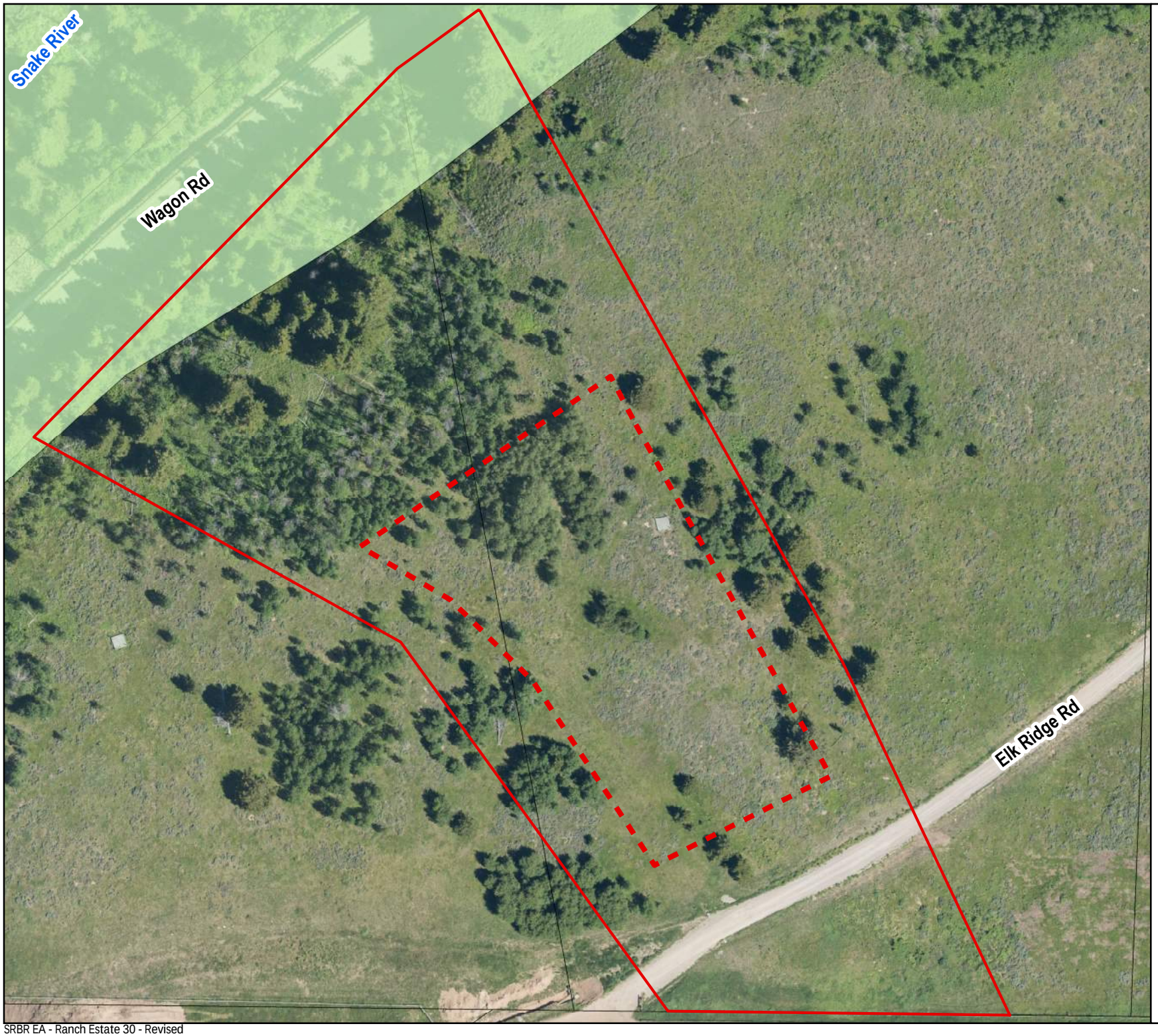

Figure 5:
Proposed Building Envelope and Lot

The Ranch Homes Lot 30 Environmental Analysis

Legend

- Building Envelope
- Lot 30
- TCSPT Easement
- Parcels

1 in = 100 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

March 14, 2022

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Figure 6:
Proposed Building Envelope and Vegetative Cover Types

The Ranch Homes Lot 30 Environmental Analysis

Legend

- Building Envelope
- Lot 30
- Parcels
- Irrigation 15ft Setback

Cover Type (Ordinal Rank)

- Aspen (6)
- Douglas Fir (6)
- Lodgepole Pine (4)
- Xeric Sagebrush (3)
- Distrubed (n/a)

1 in = 100 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

March 14, 2022

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APPENDIX D: PHOTOGRAPHS

Photo 1. Representative photo of xeric sagebrush cover type mix with grasses, aspen suckers and undulating topography (October 5, 2021)

Photo 2. Representative photo of xeric sagebrush cover type mix with grasses and undulating topography (October 5, 2021)

Photo 3. Representative photo of aspen stand with snowberry understory and conifer matrix (October 5, 2021)

Photo 4. Representative photo of transition between aspen and Douglas fir cover types with associated transition in understory composition aligning with a change to slope and aspect. (October 5, 2021)

Photo 5. Representative photo of Douglas fir cover type and relatively sparse understory (October 5, 2021)

Photo 6. Vegetative cover types matrix (original Lot 25 platform) (October 5, 2021)

Photo 7. Representative photo of lodgepole pine stand (October 5, 2021)

To: Megan Smith, Applicant
From: Chandler Windom, Senior Planner
Re: EVA2021-0027 Snake River Canyon Ranch the Ranch Homes "Future Lot 30" Update
March 18, 2022

Dear Megan,

I have reviewed the Environmental Analysis Update submitted on behalf of Snake River Bend Ranch, LLC for the purpose of analyzing a future "Lot 30" of The Ranch Homes at the Snake River Canyon Ranch (EVA2021-0027). This future parcel is proposed to be a portion of the existing Lot 25, 865 W Elk Ridge Road (PIDN 22-39-16-32-4-02-002) and a portion of Lot 24, 985 W Elk Ridge Road (PIDN 22-39-16-32-4-02-001). The EA was prepared by EcoConnect Consulting, LLC, for the potential 5.8-acre property, submitted on December 20, 2021, and then revised March 14, 2022. The property is zoned Planned Unit Development-Planned Resort (PUD-PR) for the Snake River Canyon Ranch Resort and is within the mapped Natural Resources Overlay. This is an update to the original analysis for the entire north parcel of the Snake River Canyon Ranch completed in 1998. The EA update now contemplates a development area for a future Plat Amendment and conceptual mitigation for impacts within the NRO, to be finalized into a Habitat Enhancement Plan at or prior to application for physical development permits.

Pursuant to Teton County Land Development Regulations (LDR) Section 8.2.2.A, the objective of this EA review is to provide a recommendation from the Planning Director of the most suitable area and site design for a future Plat Amendment on the parcel with the goal of minimizing the impact to priority vegetation and crucial wildlife habitat to the greatest extent possible as directed by the standards of LDR Divisions 5.1 and 5.2. An EA review does not constitute "approval" of an EA, Plat Amendment, or physical development. It is a component of a possible or pending Subdivision Permit or physical development application. The result is recommended natural resource protections for a future use or physical development application. A portion of the property does contain a Teton County Scenic Preserve Trust conservation easement, but it does not provide a baseline inventory suitable of analyzing this entire future lot.

Waterbodies and Wetlands (LDR Section 5.1.1): There are no identified protected waterbodies or wetlands on the property.

Establishment of the NRO (LDR Section 5.2.1.B & C): Since the NRO shown on the Official Zoning Map generally identifies NRO boundaries and is intended to put the landowner

on notice that land may be included in the NRO, a site-specific analysis is required to ensure that the NRO designation is valid. Based on mapped Wyoming Game and Fish Department (WGFD) data supported by the EA, the subject parcel was designated within the Natural Resources Overlay due to its location within crucial elk and mule deer winter range as well as Bald Eagle winter and possible nesting habitat.

Applicability of NRO Standards (LDR Section 5.2.1.D): The future lot is entirely within the boundaries of the NRO and the development does not meet any available exemption options so the standards of the NRO are applicable to the whole development.

Impacting the NRO (LDR Section 5.2.1.E&F): The development area is located within the NRO, so all development is subject to the following standards:

Minimizes Wildlife Impact: The location of proposed development shall minimize impacts on the areas protected (e.g., crucial migration routes, crucial winter range, nesting areas). For the purposes of this standard, "minimize" is defined as locating development to avoid higher quality habitats or vegetative cover types for lesser quality habitats or vegetative cover types. Only when avoidance is not practicable due to significant topographical constraints related to the property, may higher quality habitats or vegetative cover types be impacted.

Development impacts for the 1.4 acre building envelope are primarily xeric sagebrush and mature aspen. There is a large aspen stand to the rear of the property, which staff has recommended is avoided to the greatest extent possible. The application updated March 14, 2022 shows better avoidance of the impacts to that aspen stand, while retaining the vegetation along the proposed property boundaries. The development area completely avoids the Douglas Fir stand on the Northeast end of the parcel. The updated building envelope (March 14, 2022) is recommended as it demonstrates minimization of overall impacts. Comparison of the existing Lots 24 & 25 and their building envelopes with the proposed future Lots 29-31 show an overall reduction in area of impact, as well as reduction in impacts to mature aspen forest.

Habitat Enhancement: A habitat mitigation plan is not provided with this EA update as no physical development is proposed at this time. In the future, a final habitat mitigation plan may be required for the impacts to aspen trees in the development area. The site has several possible areas for on-site mitigation.

Crucial Habitat Protection Standards (LDR Sec. 5.2.1.G): Per the EA materials, no bald eagle's nests, trumpeter swan nests, or trout spawning habitat were identified within regulatory protected distance of the proposed development area. No crucial winter roost sites of repeatedly used perch trees for raptors were identified in the development area. The site is entirely within elk and mule deed crucial winter range. Physical development and use are only allowed in crucial winter range for elk and mule deer if it can be demonstrated that it can be located in such a way that it will not detrimentally affect the

food supply and/or cover provided by the crucial winter range to the species, or detrimentally affect the potential for survival of the individuals using the crucial winter range. EA materials indicate that, while all proposed development impacts are within those crucial ranges, as mapped by the Wyoming Game and Fish Department, those impacts are unavoidable, the development area has been designed to be clustered with adjacent lots. Use of the impacted habitat by individual ungulates will be disrupted but overall use and movement of elk and mule deer through the area will be maintained. Additionally, the Teton County Scenic Preserve Trust Easement that covers the northwestern portion of the property is intended to protect wildlife movement and will not be disturbed.

Please keep in mind that specific wildlife friendly fencing and wildlife feeding regulations apply to all development and use within Teton County. On properties within the NRO, domestic pets shall be physically restrained or accompanied by a person who has strict voice control over the animals at all times. Cats and dogs shall not be allowed to roam unaccompanied in the NRO. Wildlife feeding is prohibited. All new fencing must meet wildlife friendly fencing standards or receive a special purpose fencing exemption from the Planning Director. As a property within Bear Conflict Priority Area 1, all trash and recycling shall be stored in bear-proof containers. Any forthcoming Grading and Erosion Control permit application is required to include an Invasive Species Management Plan for review by Teton County Weed and Pest. Please initiate coordination with Teton County Weed and Pest prior to submittal to discuss best management practices.

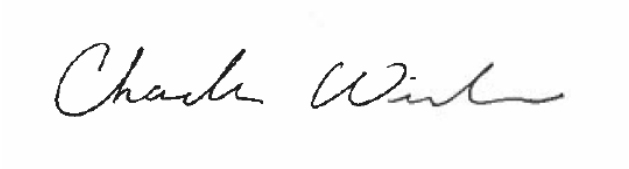
Based upon the review of the access and development area submitted with this EA, and in accord with Division 5.1 and 5.2 of the LDRs, the Planning Director recommends that the updated building envelope/development area, as described in EA Figure 6 dated March 14, 2022, is acceptable with the following seven (7) conditions:

1. Prior to issuance of any building or grading permits, EA digital mapping layers shall be provided.
2. This EA shall expire March 18, 2025 or at the discretion of the Planning Director in accordance with LDR Sec. 8.2.2.E.2. *Please note that the LDRs governing Environmental Standards, including EAs, may be updated, and may render this EA expired prior to March 18, 2025.*
3. Future access to the development area from Elk Ridge Road shall only impact xeric sagebrush cover types.
4. Domestic pets shall be physically restrained or accompanied by a person who has strict voice control over the animals at all times. Cats and dogs shall not be allowed to roam unaccompanied in the NRO.
5. Temporary development impacts shall be reclaimed with a natural vegetative cover type of equal or higher value upon completion of construction.

6. All new fencing must meet wildlife friendly fencing standards or receive a special purpose fencing exemption from the Planning Director.
7. Prior to the issuance of any physical development permits, a final mitigation plan and cost estimate shall be prepared by the applicant for the development impacts. A surety may be required for 125% the cost of mitigation.

If you have any questions or concerns regarding this review, please feel free to contact me at (307) 733-3959 or via email at: cwindom@tetoncountywy.gov.

Sincerely,



Chandler Windom
Senior Planner, Teton County Planning Division

RECEIVED
By Heather Thompson at 12:20 pm, Dec 20, 2021

ENVIRONMENTAL ANALYSIS (EVA) APPLICATION

Planning & Building Services Department
Planning Division

200 S. Willow St.
P.O. Box 1727
Jackson, WY 83001

ph: (307) 733-3959
www.tetoncountywy.gov

For Office Use Only

Fees Paid $400

Check # _____ Credit Card **8000 Cash _____

Application # EVA2021-0026

APPLICABILITY *This applicotion should be used when applying for review of on* ***Environmental Analysis.*** *The purpose of the enviranmentol onolysis is to coardinate the applicotian af all-notural resource protection stondords thraugh identificotian af the noturol resources on o site.*

When is an Environmental Analysis required?
An environmental analysis is required for all physical development, use, development option, or subdivision proposals that are subject to Division 5.1: General Environmental Standards, Division 5.2: Environmental Standards Applicable in Specific Areas, or Section 7.1.2, Planned Residential Development, unless the project qualifies for one of the exemptions listed in Subsection 8.2.2.B of the LDRs. If required, an environmental analysis application must be deemed sufficient prior to submittal of an application for the physical development, use, development option or subdivision proposed.

Do I need a Pre-Application Conference?
Yes, a Pre-Application Conference is required, except for updates of previously approved EAs.

Pre-Application Conference # _____ **Original Permit # (for updates)** Biota EA dated December 17, 1998

PROJECT

Name/Description: Snake River Canyon Ranch The Ranch Homes Lot 31

Physical Address: TBD Elk Ridge Rd, Jackson, WY 83001

Lot, Subdivision: Lot 31, The Ranch Homes, Snake River Canyon Ranch PIDN: Previous Lot 25 PIDN: 22-39-16-32-4-02-002 (partial)

APPLICANT/OWNER

Name, Agency: Snake River Bend Ranch, LLC Phone: _____

Mailing Address: 3060 Peachtree Rd NW, Suite 1080, Atlanta, GA ZIP: 30305

E-mail: c/o Brendan Schulte, Jorgensen Associates, bschulte@jorgeng.com

QUALIFIED ENVIRONMENTAL PROFESSIONAL

Name, Agency: Megan A Smith, EcoConnect Consulting LLC Phone: 307-699-0896

Mailing Address: PO Box 13259, Jackson, WY ZIP: 83002

E-mail: megan@ecoconnectjh.com

County Hired Environmental Professional? ☐ Yes ☑ No

DESIGNATED PRIMARY CONTACT

X Applicant/Owner X Environmental Professional

SUBMITTAL REQUIREMENTS *Pleose ensure oll submittol requirements ore included. The Plonning Deportment will not hold or process incomplete opplicotions.*

X **Application Fee** See the currently adopted Planning Fee Schedule on the county website for more information.

X **Electronic Submittal** A complete digital file of the application with attachments/plans.

X **Hard Copy Submittal** A complete printed file of the application with attachments/plans.

n/a **Notarized Letter of Authorization** A notarized letter of consent from the landowner is required if the signatory on this application is not the owner. Please see the Letter of Authorization template on the county website for a sample.

n/a **Response to Environmental Analysis Pre-Application Conference Summary Checklist** During the pre-application conference, you will be provided with a summary and checklist of applicable LDR standards and requirements that must be addressed for a sufficient application.

Under penalty of perjury, I hereby certify that I have read this application and associated checklists and state that, to the best of my knowledge, all information submitted in this request is true and correct. I agree to comply with all county and state laws relating to the subject matter of this application, and hereby authorize representatives of Teton County to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.

Signature of Applicant/Owner or Authorized Agent

12.5.21
Date

Christopher Swann
Name Printed

Managing Member
Title/Role

Environmental Analysis Update

Snake River Canyon Ranch
The Ranch Homes Lot 31

PIDN: TBD

Previous Lot 25 PIDN: 22-39-16-32-4-02-002 (partial)

Teton County, WY

December 10, 2021

Prepared for:
Snake River Bend Ranch, LLC

Prepared By:

EcoConnect Consulting LLC
Connecting Ecology and Community
PO Box 13259, Jackson, WY 83002
www.ecoconnectjh.com

Table of Contents

PROJECT OVERVIEW

INTRODUCTION

EcoConnect Consulting LLC has conducted an Environmental Analysis Update (EAU) in support of the Snake River Bend Ranch, LLC's update of a building envelope on Snake River Canyon Ranch's The Ranch Homes Lot 31 ("Lot 31" or "the property") and to document current, natural resource conditions.

This Environmental Analysis Update is required by Teton County's Planning and Building Department (Hamilton Smith, Principal Planner, Teton County Planning Division, September 23, 2021, *email commun.*) to confirm and/ or update site conditions and possible impacts resulting from the proposed reconfiguration of lots and building envelopes transitioning from Lots 24-25 to Lots 29-31 and associated three building envelopes (Lot 31 addressed herein). The previous EA was prepared by Biota Research and Consulting, Inc. (dated December 17, 1998) for Mr. Dick Edgecomb, SRCR Development Co., LLC (Biota, 1998). The 1998 EA pertained to 195 acres inclusive of the 8.8± area addressed in this EAU.

Within Lot 31, this EAU is focused on the changes in natural resources and environmental conditions since 1998 as well as the possible impacts to vegetative cover types within the proposed building envelope. The most notable change in vegetative cover type in the last two decades, has been the aspen forest expansion into the xeric sagebrush cover type. Furthermore, this EAU demonstrates compliance with Teton County Land Regulations outlined in Article 5, Division 5.1, *General Environmental Standards*, Division 5.2, *Environmental Standards Applicable in Specific Areas* and Division 8.2.2, *Environmental Analysis* (Teton County, 2021).

Lot 31 is approximately 8.8± acres in size and contains an encumberment by a Teton County Scenic Preserve Trust (TCSPT) conservation easement (Edgcomb) outside of the proposed building envelope. In addition to Lot 31 lands, this TCSPT conservation easements encumbers riparian and upland areas on neighboring parcels. Lot 31 is located within the Natural Resource Overlay (Figure 1) as well as the Scenic Resource Overlay and zoned Planned Resort (PR) as it is a component of the Snake River Canyon Ranch (Greenwood Mapping, Inc, 2021).

METHODS

Prior to the on-site inventory of the property, EcoConnect Consulting LLC consulted with property representatives, studied current and historic aerial photographs and documentation, USGS topographic maps, Teton County's vegetative cover GIS data and species of the region to become as familiar as possible with the landscape. A site visit to the property was conducted on October 5, 2021 to record baseline information. Equipment used included a Garmin GPSMAP 64 Global Positioning System unit with ±6ft accuracy, a compass and a digital camera. The site visit was conducted by walking the property surveying land use, wildlife use, vegetation and distinct natural features. Representative photographs of vegetation communities and other significant features were taken. Vegetation, wildlife, infrastructure and other information were recorded in field notes and on aerial photographic field maps.

One-foot resolution, Teton County aerial photographs, NAIP Imagery and Teton County's Vegetative Cover Types GIS Data (Cogan & Johnson, 2013) were used to supplement on-site observations. Information recorded here pertaining to vegetation cover, water resources and other landscape observations are therefore based on a combination of site visit observations, aerial photographs and existing data. While the Cogan and Johnson (2013) Teton County Vegetative Cover Types GIS Data layer was used as a reference for vegetation type characteristics, vegetative cover type definitions were based on those published in the Teton County Land Development Regulations Article 5, Section 5.2.1.F, *Vegetative Cover Type Standards* (Teton County, 2021).

HABITAT INVENTORY

PROPERTY

The property is approximately 8.8± acre in size and is generally described as located on an upper bench of the Snake River corridor. The property is bordered on all sides by private parcels including the Astoria Park Conservancy, inclusive of the Snake River, to the north. The Bridger-Teton National Forest is approximately one-quarter mile to the east and on the western side of the Snake River.

VEGETATIVE COVER TYPES

The vegetative cover types on the property are as was documented in the Biota 1998 EA (Biota, 1998). However, the abundance of various cover types has changed since 1998. These changes in vegetative cover type configuration demonstrate the dynamic nature of natural resources and does not appear to have been intentionally influenced by human activity or management. Expansion of the aspen cover type over the last 22 years is a normal characteristic of aspen stands.

The vegetative cover types located on the property are typical of the Snake River corridor and associated upland foothills. Vegetative cover types listed below were developed based on current conditions and information obtained from aerial imagery (Greenwood Mapping, Inc, 2021). Teton County Vegetative Cover Types GIS Data (Cogan & Johnson, 2013), which is based on 2011 aerial photography, was used as a reference document in comparison to current site conditions.

Vegetative cover types are used by Teton County Land Development Regulations to determine relative habitat values and development priorities on the property (Section 5.2.1.F.4.a, *Ordinal Ranking*). The property's vegetative cover types are illustrated in Figure 2, summarized in Table 1, and described below.

Table 1. Vegetative Cover Types and Ordinal Rankings

VEGETATIVE COVER TYPE	AREA (ACRES)	AREA PERCENTAGE	ORDINAL RANKING
Mature Aspen Forest	0.9	10%	7
Douglas Fir	2.6	30%	6
Lodgepole Pine	0.1	1%	4
Xeric Sagebrush	5.1	58%	3
Disturbed	0.1	1%	n/a
TOTAL	8.8	100%	

Mature Aspen Forest

Non-mesic, mature quaking aspen (*Populus tremuloides*) forest covers approximately 0.9 acres (10% of the property). This vegetative cover type is located along the northern portion of the property, adjacent to the Douglas fir forest and in distinct stands within the sagebrush cover type. These stands are mature with a shrub understory, dominated by common snowberry (*Symphoricarpos albus*). Regeneration is primarily along the stand edge and expansion of these aspen stands is visible on aerial photography since 1998 when the original EA was written (Biota, 1998). Non-mesic, mature aspen cover type receives an ordinal ranking of 7 due to its importance to wildlife as both cover and for the forage typically found in the understory.

Douglas Fir

Douglas Fir (*Pseudotsuga menziesii*) forest covers approximately 2.6 acres (30% of the property). This Douglas fir cover type is associated with northwest facing, steep sloped, Douglas fir stands on neighboring parcels. The relatively open understory (in comparison to the aspen stands on the property) is composed of tall shrub and forb species including serviceberry (*Amelanchier alnifolia),* common snowberry (*Symphoricarpos albus*) and grasses. Use of this forested cover type by ungulates is evidenced by game trails and scat piles (e.g. elk). Due to its importance to wildlife, the Douglas fir cover type receives an ordinal ranking of 6.

Lodgepole Pine

Lodgepole Pine (*Pinus contorta*) stands covers approximately 0.1 acres (1% of the property). This lodgepole pine cover type is likely associated with areas of the property where snow pockets accumulate moisture. It is likely that in the last 22 years, individual lodgepole pine trees within the sagebrush cover type have expanded to small stands in areas of higher moisture content and appropriate growing conditions much in the same manner, albeit on a smaller scale, as the aspen cover type has expanded. Lodgepole pine is also associated with seral stage aspen stands (DeByle, 1985). The lodgepole pine cover type receives an ordinal ranking of 4.

Xeric Sagebrush

The xeric sagebrush cover type is the dominant cover type on the property as it was in 1998 (Biota, 1998). The sagebrush community covers approximately 5.1 acres (58% of the property). Within the sagebrush community, there is a mix of grasses and sagebrush with a small representation of lodgepole pine individuals. The sagebrush and grasses mix seems to be a result of relative, small undulations in topography likely creating pockets were snow collects. Therefore, the amount of snowmelt water available to shrub and grass species varies throughout the cover type. Mountain big sagebrush (*Artemisia tridentata* subsp. *vaseyana*) with lesser amounts of common rabbitbrush (*Chrysothamnus nauseosus*), antelope bitterbrush (*Purshia tridentata*) and bunch grasses compose this cover type. Xeric sagebrush cover type receives an ordinal ranking of 3.

Disturbed

The area identified as disturbed on the property (0.1 acres; 1%) is Elk Ridge Road. Elk Ridge Road is a gravel road connecting this and neighboring properties to River Bend Road and the remainder of the Snake River Sporting Club. Disturbed areas do not receive an ordinal ranking under Teton County's land development regulations.

PROTECTED WATERBODIES, WETLAND RESOURCES AND BUFFERS

No protected waterbodies, wetland resources or buffers are located on this upland bench property. While located near the Snake River to the north and west, an Aquatic Resources Inventory was not required since no waterbodies or wetland resources are located the property.

WILDLIFE HABITATS PROTECTED BY NATURAL RESOURCES OVERLAY

"The purpose of the Natural Resources Overlay (NRO) is to provide protection to the most important and sensitive natural areas" (Teton County, 2021). Teton County LDRs define the NRO as areas that include the habitats listed in Section 5.2.1.B, *Establishment of the NRO*. The presence of NRO defining habitats both on the property and within a ½ mile vicinity of the property are listed in Table 2. Based on this site-specific analysis of the property and the habitats present within ½ mile, it is reasonable to conclude that the parcel is appropriately mapped within the NRO.

The following wildlife information has been updated since the 1998 EA (Biota, 1998) as species identified in Teton County's Land Development Regulations (Teton County, 2021) have changed as has information provided by Wyoming Game and Fish Department (WGFD) and other local, wildlife professionals.

Table 2. Wildlife Habitats Protected by the NRO

WILDLIFE HABITAT	ON THE PROPERTY	WITHIN ½ MILE OF PROPERTY
Elk Crucial Winter Range	Mapped	Yes
Mule Deer Crucial Winter Range	Mapped	Yes
Moose Crucial Winter Range	No	No
Trumpeter Swan Nesting Habitat	No	Possible
Trumpeter Swan Winter Habitat	No	Yes
Snake River Cutthroat Trout Spawning Habitat	No	Yes
Bald Eagle Nesting Habitat	Possible	Possible
Bald Eagle Crucial Winter Habitat	Yes	Yes
Big Game Migration Corridors (Mule Deer)	No	No
Big Game Migration Corridors (Elk)	No	No

Elk Crucial Winter Range

Crucial elk winter range consists primarily of xeric and mesic sagebrush-grasslands, mixed shrub, mesic and xeric open grassland and certain agricultural meadow types that are used by elk 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*). The property includes areas WGFD has designated as crucial winter yearlong range (WGFD, 2018). This WGFD elk ranges data set "was developed for statewide and regional use" and "this data set should never be used at a scale larger than 1:100,000 [a landscape scale]" (WGFD, 2018). Data sets at landscape scales, are adequate starting points for general area assessments but not determinant at the parcel level or scale (Courtemanch, 2020). The WGFD revised the Fall Creek elk ranges in 2018 based on a landscape scale analysis of collared data (Courtemanch, 2020).

A parcel-scale assessment of the property, identifies potential elk use areas, not crucial winter habitat, as primarily found on the north and western forested portions of the property that are contained within the TCSPT easement. Field observations found elk scat within this area. It is likely that elk use this area for local movements rather than as crucial, winter habitat.

The Dog Creek WGFD Feedground is approximately 1.5 miles southwest of the property on the opposite side of the Snake River. This feedground is located within elk crucial winter yearlong range and is bordered to the west by WGFD designated elk parturition lands. Both the feedground and the parturition lands are separated from the property by the Snake River (Figure 3).

Mule Deer Crucial Winter Range

Mule deer crucial winter yearlong range consists of scrub-shrub grasslands located at lower elevations and on south facing slopes that are used by mule deer 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*). More specifically, mule deer wintering in Teton County use south facing, 22-45° slopes below approximately 8,000 ft in elevation (Riginos, et al., 2013).

The property and ½ mile vicinity are located on lands designated by WGFD as crucial winter yearlong range (Figure 4). However, the cover types found within the property are likely more appropriate for mule deer use during the spring, summer and fall seasons rather than as crucial winter habitat. As with elk, a further refinement of appropriate mule deer winter range can be found by examining suitable habitat at the parcel scale. Based on vegetation and habitat models, suitable (not crucial) suitable habitat within ½ mile of the property would be located on the forested areas away from the proposed building envelopes (EcoConnect, 2018). Therefore, while the WGFD's mapping of crucial winter yearlong range extends to the north and south along the Snake River corridor, within this broad area mule deer likely utilize the south facing xeric shrub hillsides not the entirety of the river corridors.

Moose Crucial Winter Range

Crucial moose winter habitat consists primarily of riparian and wetland shrub-willow and cottonwood forests, highly mesic cottonwood/spruce forests, upland forest-subalpine fir habitat types, and secondarily xeric and mesic sagebrush-grasslands and mixed shrub types. These habitats are used by moose during the crucial winter months 8 out of every 10 years (5.2.1.B.3, *NRO Definitions*).

The property and ½ mile analysis vicinity include WGFD designated moose winter/yearlong range but not crucial winter yearlong range (WGFD, 2012). This winter yearlong range encompasses the Snake River drainage.

Trumpeter Swan Nesting Habitat

Trumpeter Swan nesting habitat is found on wetland and aquatic sites that have adequate open water, aquatic vegetation (forage) and protection from predators. Nesting locations typically are islands located in ponds and wetlands. There are no known nesting ponds on the property, however, suitable nesting sites with adequate protection from predators could be found within ½ mile of the property on islands and side channels of the Snake River.

Trumpeter Swan Winter Habitat

Trumpeter Swan winter habitat consists of aquatic sites with abundant vegetation that stay open throughout the winter months (Section 5.2.1.B.3, *NRO Definitions*). Many side channels and streams along the Snake River corridor provide winter habitat for Trumpeter Swans (S. Patla pers. comm. 2018). Side channels along the Snake River within the ½ mile vicinity may provide adequate resources for wintering Trumpeter Swans.

Snake River Cutthroat Trout Spawning Habitat

Snake River cutthroat trout spawning habitat is located in riffles along the Snake River and its tributaries. Inland cutthroat trout species are native to western rivers and streams and have been recognized as a significant species in Teton County (Section 5.2.1.B.3, *NRO Definitions*).

This property is not inclusive of the Snake River but a half mile buffer around the property does contain the Snake River; but no major tributaries of the river. Therefore, any Snake River cutthroat trout spawning habitat would be found in the Snake River and therefore protected as a part of this waterbody resource.

Bald Eagle Nesting Habitat

Prime nesting habitat consists of uneven-aged stands of riparian forest with old-growth attributes and perching possibilities near watercourses or waterbodies which provide foraging opportunities (5.2.1.B.3, *NRO Definitions*). Bald Eagle nesting habitat is found along the Snake River riparian corridor and its larger tributaries.

There are no established Bald Eagle nests on the property. There are established Bald Eagle nests outside of the ½ mile property vicinity on Snake River Sporting Club lands (WGFD, 2019). While all known nest locations are outside of the property, the steep forested areas of the property overlooking the Snake River do provide possible, future nesting locations. The Snake River and associated lands may be used for foraging by Bald Eagles associated with the nearby nests.

Bald Eagle Crucial Winter Habitat

Bald Eagle crucial winter habitat is found in riparian areas near ungulate crucial winter range and in Bald Eagle nesting areas. The Bald Eagle winter diet is comprised primarily of carrion from dead carcasses with the remainder comprised of fish and waterfowl (Section 5.2.1.B.3, *NRO Definitions*). The proximity of this property to the Snake River and the potential presence of winter carrion on the nearby elk feedground provide for good winter Bald Eagle habitat.

The presence of nearby nests in close proximity to each other indicate a strong likelihood of an adequate food resource in the area. These eagles likely depend on a year-round diet primarily of fish from the Snake River.

Migration Corridors

Mule deer and elk migration corridors are protected characteristics of the Natural Resources Overlay (Section 5.2.1.B.1, *Included within the NRO*). As defined by Teton County's LDRs, mule deer and elk migration corridors are designated as crucial if used 8 out of every 10 years.

WGFD designated migration corridors indicate that the Sublette mule deer migration corridor passes to the south of the property and along the edge of ½ mile buffer (Figure 4). This designated migration corridor terminates in the vicinity of the Dog Creek Feedground on the opposite side of the Snake River from the property indicating that the Snake River corridor and neighboring USFS lands appear to be utilized as **summer** range. Mule deer likely cross the river in shallow areas connecting gravel bars and islands to facilitate their crossing.

WGFD elk migration corridors (WGFD, 2012) indicate that elk likely travel to the Dog Creek Feedground from the north. While these migration corridors are not located within the ½ vicinity, it is likely that elk will also pass through this area. Past communications with WGFD wildlife biologists indicate that elk will move along ridgelines on neighboring USFS lands and through areas to the north of the property. A TCSPT easement encumbers land on the northern portion of the property and to the east of the property. A second TCSPT easement encumbers lands to the south of the property but within the half mile vicinity area. These TCSPT easements are aligned with the portions of the vicinity most likely to be utilized by migrating elk (Figure 3).

DEVELOPMENT IMPACT ASSESSMENT

DEVELOPMENT

The building envelope proposed for Lot 31 is approximately 2.7± acres in size and primarily located within the xeric sagebrush and aspen cover types (Figure 5 & Figure 6). Specific development plans to be located within this building envelope have not been developed. In addition to the xeric sagebrush and aspen cover types within the building envelope, an essential access driveway will be needed to reach the building envelope from Elk Ridge Rd. This driveway will cross the xeric sagebrush cover type, the lowest ordinal rank cover type on the property. Therefore, it's unknown location has not been shown as the impacts will be fully contained within the lowest ordinal rank cover type on the property.

HABITAT IMPACT ASSESSMENT

Impact to Vegetative Cover

The habitat impacts identified below represent impacts if the entire building envelope were to be developed. All potential impacts resulting from development of the 2.7± acre building envelope would be located primarily in areas of xeric sagebrush with lesser impacts in the aspen cover type.

VEGETATIVE COVER TYPE	AREA (ACRES)	AREA PERCENTAGE	ORDINAL RANKING
Mature Aspen Forest	0.1	4%	7
Xeric Sagebrush*	2.6	96%	3
TOTAL	**2.7**	**100%**	

*Additional impacts to xeric sagebrush, the lowest ordinal rank cover type, would be required for an access driveway connecting the building envelope with Elk Ridge Rd.

Impact to Wildlife Movement

Proposed development of this building envelope should not have significant impacts on wildlife habitat or movement. The nearby Ranch Estates contain parcels of 35 acres or greater thereby allowing for wildlife movement through the area. The proposed Ranch Homes, while smaller lots, would also provide for wildlife movement through the TCSPT easement on forested hillsides and undeveloped portions of the property. Furthermore, it is recommended that all future fences, with the exception of pet yard enclosures, should be wildlife friendly fencing.

Project Vicinity Impact Statement

Lot 31 is located in Area II of the Snake River Canyon Ranch Resort (SRCRR), north of the golf course at Snake River Sporting Club (SRSC) and south of Astoria Hot Springs park. The Snake River is located to the west of this property and USFS Bridger-Teton National Forest lands are located to the east of the property. The WGFD Dog Creek Elk Feedground is located to the west of the property on the opposite side of the Snake River.

While human use in the area has undergone significant change since the 1998 EA was written (Biota, 1998), the areas identified for a building envelope remain relatively similar (Appendix A). The Astoria Hot Springs Park to the north has transitioned from both day and night use (e.g. campground with pool) to primarily a day use area while the Snake River Sporting Club development (of which this lot is proximate) has seen an increase in human use (e.g. automobiles, residential development, golf course, etc.) through its development.

Nonetheless, the relatively open nature of this area continues to provide for wildlife movement and habitat in concert with surrounding natural resources within a ½ mile vicinity. Much of the surrounding land is located on the Bridger-Teton National Forest or within the Snake River. Based on aerial photography (Greenwood Mapping, Inc, 2021), the surrounding area has an extensive history of disturbance from agricultural operations conducted by the Snake River Bend Ranch. These nearby agricultural lands have recently been divided into ten 35 acre parcels. These neighboring lots have been developed for residential use or are currently under construction and contain a mix of residential and agricultural uses.

Similarly, the proposed development of a residential building envelope on Lot 31 is in line with the mix of residential and agricultural uses found on nearby parcels and within the Snake River Sporting Club. If agricultural uses are continued in the future, the lot is fed by an agricultural irrigation system and possesses water rights.

Threatened and Endangered Species

No known threatened or endangered plant or vertebrate species were observed while on the property. It is unlikely that the species listed below would pass through, or be found on, the property. However, the Snake River corridor is the largest wildlife movement corridor in Teton County. Therefore, a property such as this proximate to the Snake River corridor and adjacent to USFS lands could be subject to a wide variety of vertebrate species' movement patterns.

The mapping of USFWS critical lynx habitat was done at a coarse scale and follows the eastern shore of the Snake River thereby including this property. While the lands in this property's vicinity are mapped as critical lynx habitat, the vegetation present on the property does not meet the habitat requirements for Canada lynx. Canada lynx require expanses of dense conifer forest containing healthy snowshoe hare populations (their primary food resource). The resources available on this property do not justify the mapping of the property as critical lynx habitat.

USFWS Species List (USFWS, 2021):

- Canada Lynx (Threatened)
- Grizzly Bear (Threatened)
- Yellow-billed Cuckoo (Threatened)
- Monarch Butterfly (Candidate)
- Canada Lynx Critical Habitat (Designated)

ALTERNATIVES ANALYSIS

The proposed development is in compliance with Teton County Land Development Regulation's requirement to minimize or avoid impacts to lands protected by the Natural Resources Overlay (Section 5.2.1.E.1. *Minimizes Wildlife Impacts*), therefore, an alternatives analysis is not needed.

HABITAT ENHANCEMENT PLAN

As noted above, impacts to higher ordinal ranking vegetative cover types are to be minimized or avoided through focusing development mostly in the xeric sagebrush cover type (96% or 2.6 acres of the potential impacts). Therefore, a complete habitat enhancement plan is not needed at this time (Section 5.2.1.E., *Impacting the NRO*). The proposed building envelope does contain aspen located on the southern portion of the building envelope. If final development plans cause impacts to these aspen, mitigation of individuals impacted will be required by Teton County at a 2:1 ratio. The planting of vegetative cover types of equal or higher ordinal ranking (e.g. immature aspen) could be located within

cover types with an ordinal ranking less than or equal to mature aspen (ordinal ranking of 7). A potential location may include within the xeric shrub cover type outside of the building envelope and adjacent to existing aspen, neighboring properties or along Elk Ridge Rd.

APPENDICES

APPENDIX A: APPROVED VERSUS PROPOSED IMPACTS COMPARISON LOT 29-31

While the 1998 EA (Biota, 1998) indicated "areas most suitable for development", it did not indicate building envelopes. Since 1998 building envelopes have been identified as part of the Snake River Canyon Ranch Master Plan (Office of the Clerk of Teton County, Wyoming in Document #0909214). Both the approved building envelopes and the proposed building envelopes are generally located within what the 1998 Biota EA deemed "areas most suitable for development". While the vegetation contained within this area has altered in the last two decades, as was indicated above, the building envelopes continue to be proposed in the "areas most suitable for development".

The following table is a comparison of approved impacts resulting from developing Lots 24 and 25 with approved building envelopes (grey) and the proposed Lots 29, 30 and 31 and associated building envelopes (green).

VEGETATIVE COVER TYPE	ORDINAL RANKING	APPROVED BUILDING ENVELOPE VEGETATION IMPACTS			PROPOSED BUILDING ENVELOPE VEGETATION IMPACTS			
		Lot 24	**Lot 25**	**Total**	**Lot 29**	**Lot 30**	**Lot 31**	**Total**
Tall Shrubs	8	0.1		**0.1**	0.1			**0.1**
Mature Aspen Forest	7	1.0	0.3	**1.4**	0.4	0.9	0.1	**1.4**
Douglas Fir	6	<0.1		**<0.1**	<0.1			**<0.1**
Lodgepole Pine	4		0.2	**0.2**				**0.0**
Xeric Sagebrush	3	2.0	2.5	**4.5**	1.5	1.2	2.6	**5.3**
Total		**3.1**	**3.1**	**6.2**	**2.0**	**2.1**	**2.7**	**6.8**

Potential impacts to higher ordinal ranking vegetative cover types (aspen and tall shrubs) have been maintained at the approved levels with additional potential impacts being minimized in size and placed in lower ordinal ranking vegetative cover types (xeric shrub).

APPENDIX B: REFERENCES

Biota. (1998). *Biota Research and Consulting, Inc. Environmental Analysis Snake River Canyon Ranch Property (December 17, 1998).*

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Greenwood Mapping, Inc. (2021). *Teton County MapServer*. Retrieved from https://maps.greenwoodmap.com/tetonwy/mapserver/

Riginos, C., Krasnow, K. D., Hall, E., Graham, M., Sundaresan, S., Brimeyer, D., . . . Wachob, D. (2013). *Mule Deer (Odocoileus hemionus) Movement and Habitat Use Patterns in Relation to Roadways in Northwest Wyoming FHWA-WY-13/08F.* FHWA-WY-13/08F.

Teton County. (2021). *Land Development Regulations (updated 5/3/2021).*

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WGFD. (2018). Elk Seasonal Ranges Boundaries - 2018 for Wyoming at 1:100,000. Laramie, WY: Wyoming Game and Fish Department.

WGFD. (2019). Bald Eagle Nest Data. Jackson, WY: Wyoming Game and Fish Department.

APPENDIX C: FIGURES

Figure 1. Vicinity

Figure 2. Vegetative Cover

Figure 3. Elk Habitat

Figure 4. Mule Deer Habitat

Figure 5. Proposed Building Envelope

Figure 6. Proposed Building Envelope and Vegetative Cover

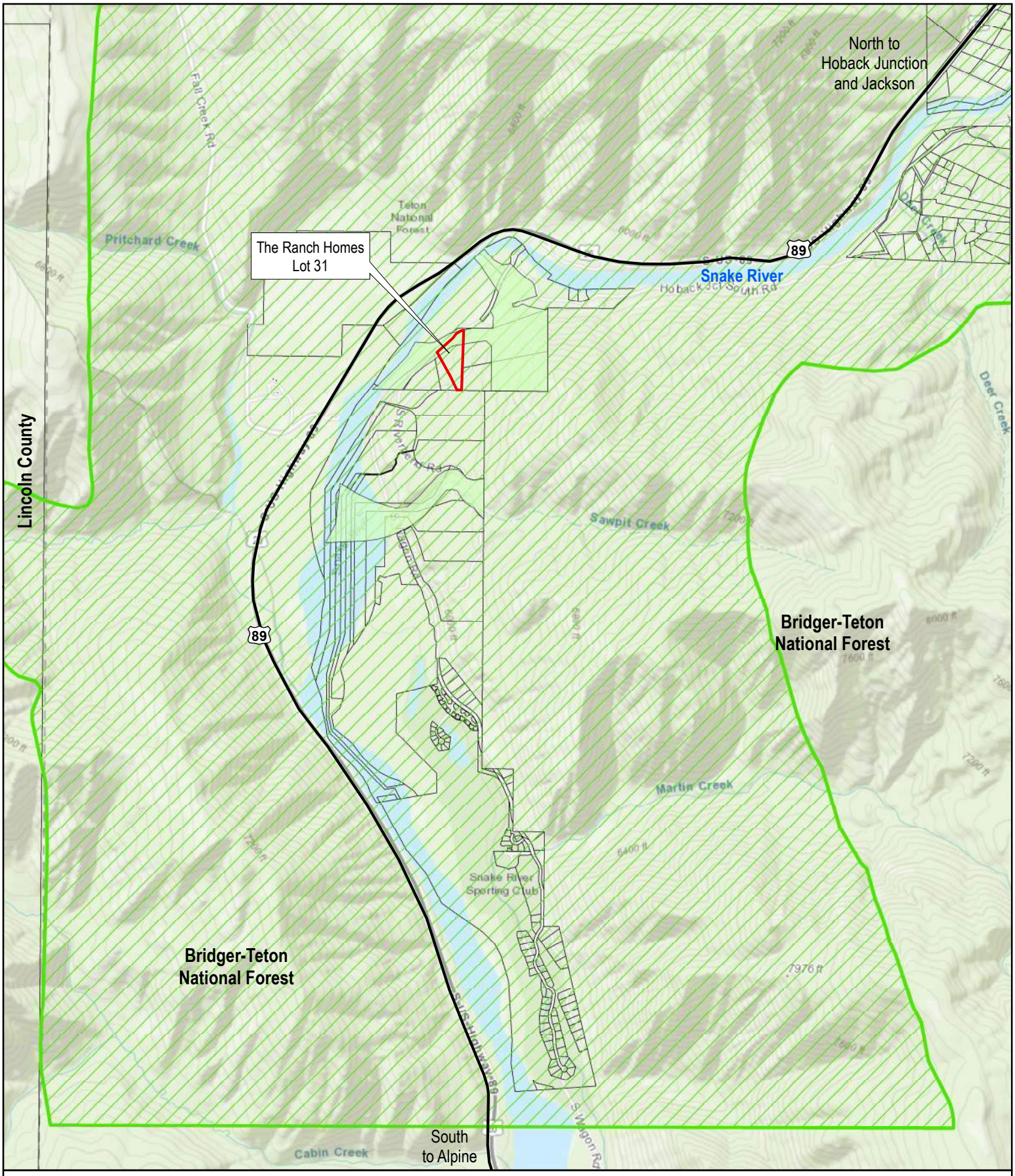

Figure 1:
Project Vicinity

The Ranch Homes Lot 31 Environmental Analysis

Legend

- Lot 31
- Road
- TCSPT Easement
- NRO
- Parcels

Sources
USGS
- Topo

Teton County
- Roads
- Parcels
- Zoning Overlay

1 in = 0.5 miles
0 0.5 Miles

December 10, 2021

EcoConnect Consulting LLC
Connecting Ecology and Community
www.ecoconnectjh.com

N

Figure 2:
Vegetative Cover Types

The Ranch Homes Lot 31 Environmental Analysis

Legend

- Lot 31
- Parcels

Cover Type (Ordinal Rank)

- Aspen (6)
- Douglas Fir (6)
- Lodgepole Pine (4)
- Xeric Sagebrush (3)
- Distrubed (n/a)

1 in = 170 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

December 10, 2021

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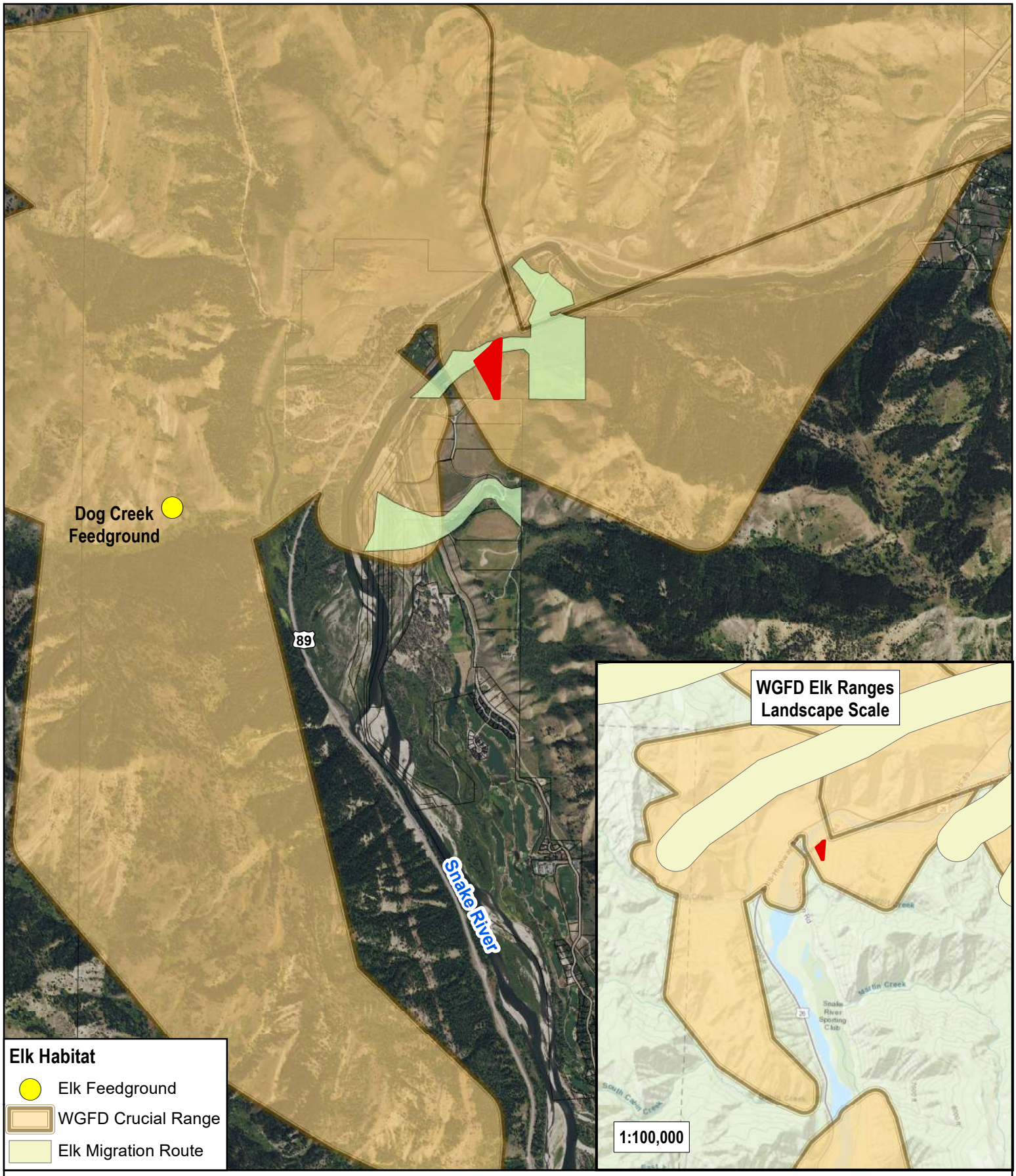

Figure 3:
Elk Habitat

The Ranch Homes Lot 31 Environmental Analysis

Legend

- Lot 31
- 1/2 Mile Vicinity
- TCSPT Easement
- Parcels

Sources
NAIP 2019 1 m Aerial
USGS Topo
Teton County
- Roads and Parcels
WGFD
- Big Game Range

1 in = 0.5 miles
0 0.5 Miles

December 10, 2021

EcoConnect Consulting LLC
Connecting Ecology and Community
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N

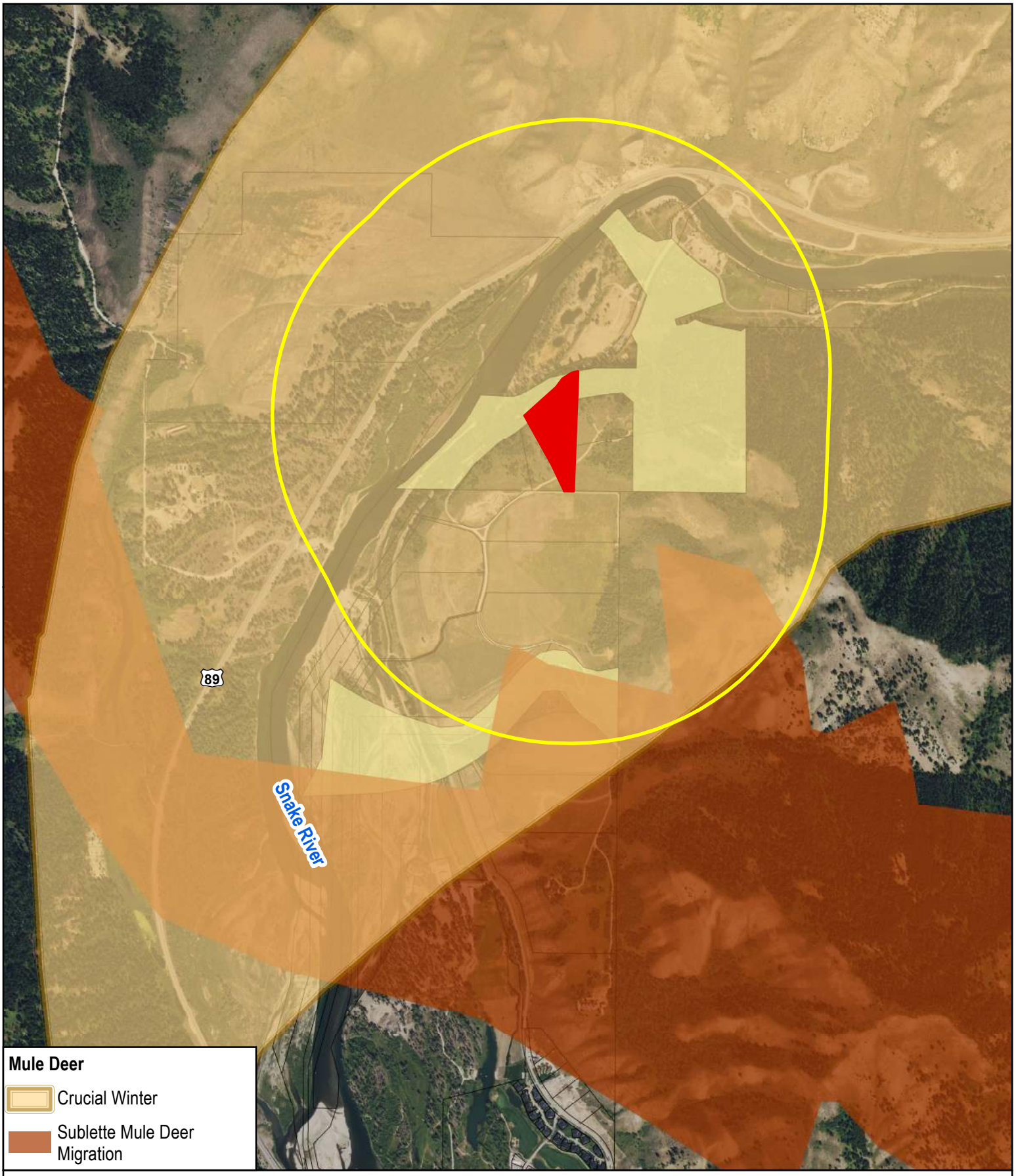

Figure 4:
Mule Deer Habitat

The Ranch Homes Lot 31 Environmental Analysis

Legend

- Lot 31
- 1/2 Mile Vicinity
- TCSPT Easement
- Parcels

Sources
NAIP 2019 1 m Aerial
Teton County
- Roads and Parcels
WGFD
- Big Game Range
- Migration Corridor

1 in = 0.25 miles

0 0.25 Miles

December 10, 2021

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www.ecoconnectjh.com

N

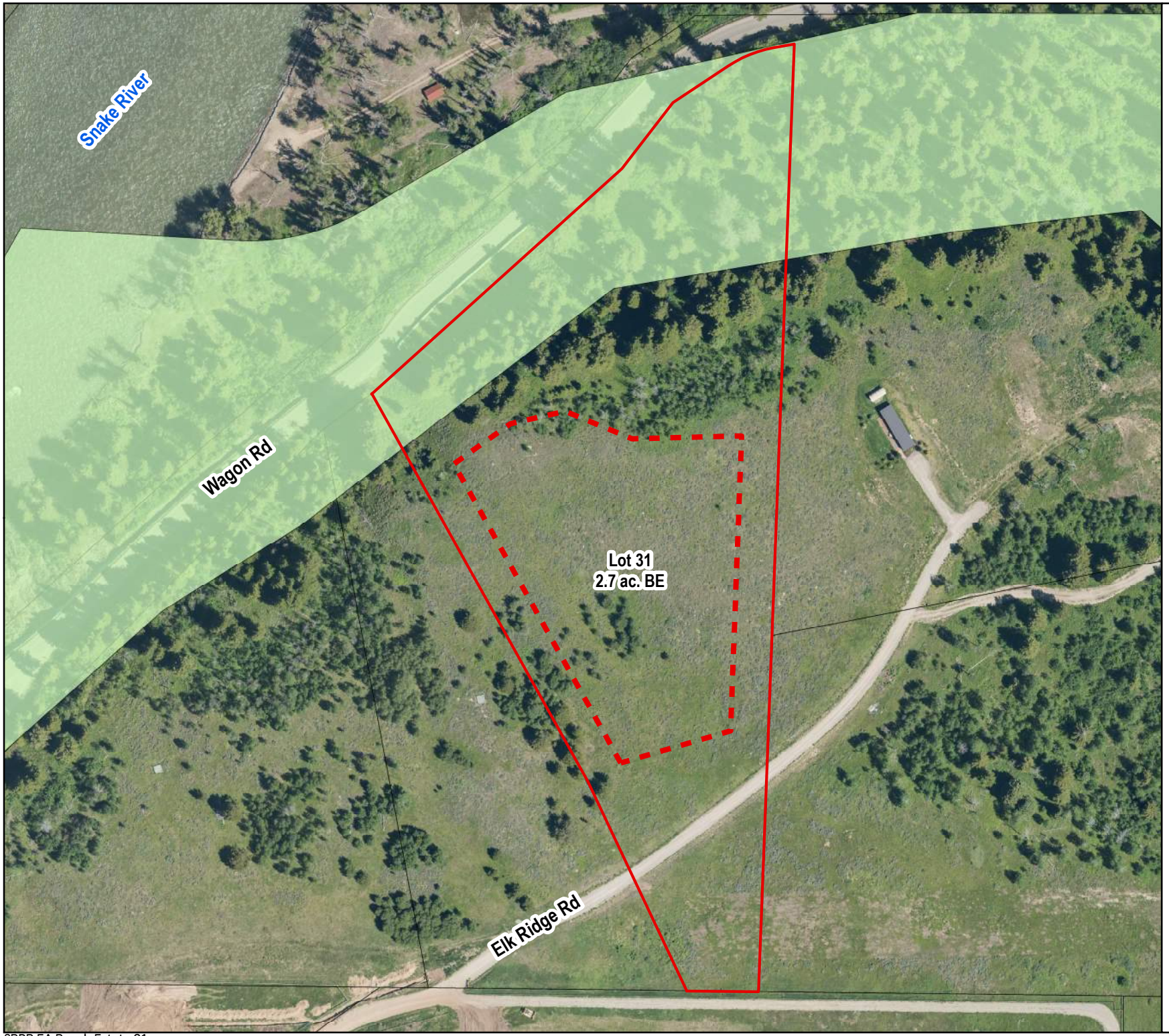

Figure 5:
Proposed Building Envelope and Lot

The Ranch Homes Lot 31 Environmental Analysis

Legend

- Building Envelope
- Lot 31
- TCSPT Easement
- Parcels

1 in = 170 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

December 10, 2021

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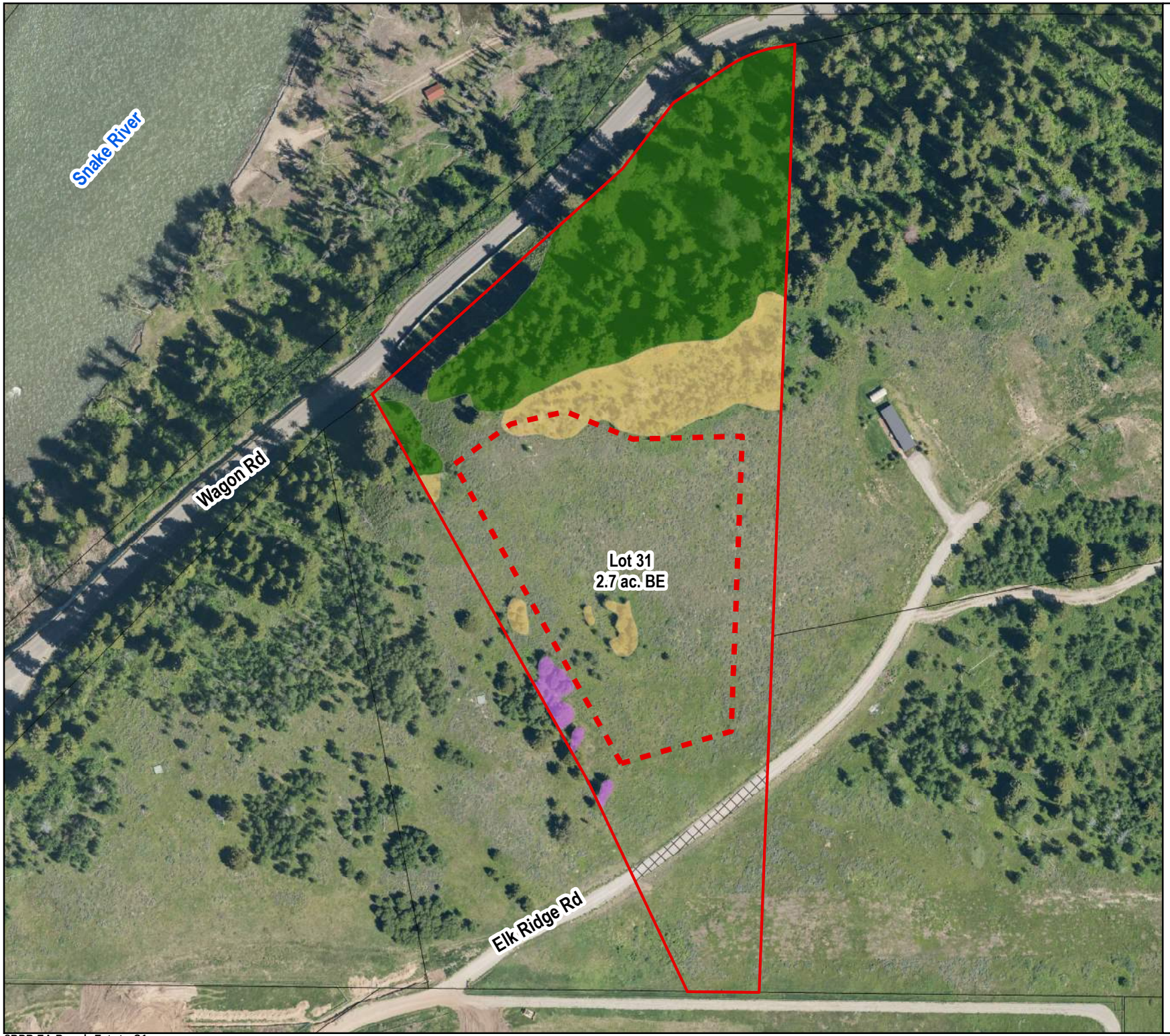

Figure 6:
Proposed Building Envelope and Vegetative Cover Types

The Ranch Homes Lot 31 Environmental Analysis

Legend

- Building Envelope
- Lot 31
- Parcels

Cover Type (Ordinal Rank)

- Aspen (6)
- Douglas Fir (6)
- Lodgepole Pine (4)
- Xeric Sagebrush (3)
- Distrubed (n/a)

1 in = 170 feet

N

0 50 100 Feet

Sources
Teton County
- Roads
- Parcels
- 2019 Aerial

December 10, 2021

EcoConnect Consulting LLC
Connecting Ecology and Community
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APPENDIX D: PHOTOGRAPHS

Photo 1. Representative photo of xeric sagebrush cover type mix with grasses, aspen suckers and undulating topography (October 5, 2021)

Photo 2. Representative photo of xeric sagebrush cover type mix with grasses and undulating topography (October 5, 2021)

Photo 3. Representative photo of aspen stand with snowberry understory and conifer matrix (October 5, 2021)

Photo 4. Representative photo of transition between aspen and Douglas fir cover types with associated transition in understory composition aligning with a change to slope and aspect. (October 5, 2021)

Photo 5. Representative photo of Douglas fir cover type and relatively sparse understory (October 5, 2021)

Photo 6. Relatively open nature of Lot 31 and vegetative cover types matrix (October 5, 2021)

Photo 7. Representative photo of lodgepole pine stand (October 5, 2021)

To: Megan Smith, Environmental Consultant for Snake River Bend Ranch, LLC
From: Chandler Windom, Senior Planner
Re: EVA2021-0026 Snake River Canyon Ranch the Ranch Homes "Future Lot 31" Update
February 17, 2022

Dear Megan,

I have reviewed the Environmental Analysis Update submitted on behalf of Snake River Bend Ranch, LLC for the purpose of analyzing a future "Lot 31" of The Ranch Homes at the Snake River Canyon Ranch (EVA2021-0026). This future parcel is proposed to be a portion of the existing Lot 25, 865 W Elk Ridge Road (PIDN 22-39-16-32-4-02-002) The EA was prepared by EcoConnect Consulting, LLC, for the potential 8.8-acre lot and submitted on December 20, 2021. The property is zoned Planned Unit Development-Planned Resort (PUD-PR) for the Snake River Canyon Ranch Resort and is within the mapped Natural Resources Overlay. This is an update to the original analysis for the entire north parcel of the Snake River Canyon Ranch completed in 1998. The EA update now contemplates a development area for a future Plat Amendment/Building Envelope on "Lot 31" and conceptual mitigation for impacts within the NRO, to be finalized into a Habitat Enhancement Plan at or prior to application for physical development permits.

Pursuant to Teton County Land Development Regulations (LDR) Section 8.2.2.A, the objective of this EA review is to provide a recommendation from the Planning Director of the most suitable area and site design for a future Plat Amendment on the parcel with the goal of minimizing the impact to priority vegetation and crucial wildlife habitat to the greatest extent possible as directed by the standards of LDR Divisions 5.1 and 5.2. An EA review does not constitute "approval" of an EA, Planned Unit Development Amendment, Plat Amendment, or physical development. It is a component of a possible or pending planning permit or physical development application. The result is recommended natural resource protections for a future use or physical development application. A portion of the property does contain a Teton County Scenic Preserve Trust conservation easement, but it does not provide a baseline inventory suitable of analyzing this entire future lot.

Waterbodies and Wetlands (LDR Section 5.1.1): There are no identified protected waterbodies or wetlands on the property.

Establishment of the NRO (LDR Section 5.2.1.B & C): Since the NRO shown on the Official Zoning Map generally identifies NRO boundaries and is intended to put the landowner on notice that land may be included in the NRO, a site-specific analysis is required to

ensure that the NRO designation is valid. Based on mapped Wyoming Game and Fish Department (WGFD) data supported by the EA, the subject parcel was designated within the Natural Resources Overlay due to its location within crucial elk and mule deer winter range as well as Bald Eagle winter and possible nesting habitat.

Applicability of NRO Standards (LDR Section 5.2.1.D): The future lot is entirely within the boundaries of the NRO and the development does not meet any available exemption options so the standards of the NRO are applicable to the whole development/amendment.

Impacting the NRO (LDR Section 5.2.1.E&F): The development area is located within the NRO, so all development is subject to the following standards:

Minimizes Wildlife Impact: The location of proposed development shall minimize impacts on the areas protected (e.g., crucial migration routes, crucial winter range, nesting areas). For the purposes of this standard, "minimize" is defined as locating development to avoid higher quality habitats or vegetative cover types for lesser quality habitats or vegetative cover types. Only when avoidance is not practicable due to significant topographical constraints related to the property, may higher quality habitats or vegetative cover types be impacted.

Development impacts are primarily xeric sagebrush with some minor impacts to aspen. There is a small aspen stand in the center of the property that would be impracticable to avoid, and the impacts are minimal. However, the impacts to the larger aspen stand on the north side of the development area would be easy to avoid and do not minimize impacts, and therefore it is recommended that aspen stand be left undisturbed during construction. The figure to the right identifies those aspen trees that are recommended to be left undisturbed.

Figure 1: Identifying "Northern Aspen Stand" within Recommended Building Envelope

Habitat Enhancement: A habitat mitigation plan is not provided with this EA update due to potential impacts being primarily contained in low-ranking vegetative cover types and final impacts still to be determined. A final habitat mitigation plan may be required for the impacts to aspen trees in the development area with future physical development permits.

Crucial Habitat Protection Standards (LDR Sec. 5.2.1.G): Per the EA materials, no bald eagle's nests, trumpeter swan nests, or trout spawning habitat were identified within regulatory protected distance of the proposed development area. No crucial winter roost sites of repeatedly used perch trees for raptors were identified in the development area. The site is entirely within elk and mule deed crucial winter range. Physical development and use are only allowed in crucial winter range for elk and mule deer if it can be demonstrated that it can be located in such a way that it will not detrimentally affect the food supply and/or cover provided by the crucial winter range to the species, or detrimentally affect the potential for survival of the individuals using the crucial winter range. EA materials indicate that, while all proposed development impacts are within those crucial ranges, as mapped by the Wyoming Game and Fish Department, those impacts are unavoidable, the development area has been designed to be clustered with adjacent lots. Use of the impacted habitat by individual ungulates will be disrupted but overall use and movement of elk and mule deer through the area will be maintained. Additionally, the Teton County Scenic Preserve Trust Easement that covers the northern portion of the property is intended to protect wildlife movement and will not be disturbed.

Please keep in mind that specific wildlife friendly fencing and wildlife feeding regulations apply to all development and use within Teton County. On properties within the NRO, domestic pets shall be physically restrained or accompanied by a person who has strict voice control over the animals at all times. Cats and dogs shall not be allowed to roam unaccompanied in the NRO. Wildlife feeding is prohibited. All new fencing must meet wildlife friendly fencing standards or receive a special purpose fencing exemption from the Planning Director. As a property within Bear Conflict Priority Area 1, all trash and recycling shall be stored in bear-proof containers. Any forthcoming Grading and Erosion Control permit application is required to include an Invasive Species Management Plan for review by Teton County Weed and Pest. Please initiate coordination with Teton County Weed and Pest prior to submittal to discuss best management practices.

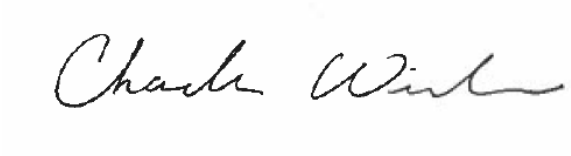
Based upon the review of the access and development area submitted with this EA, and in accord with Division 5.1 and 5.2 of the LDRs, the Planning Director recommends that the updated development area/building envelope, as described in EA Figure 6, is acceptable with the following eight (8) conditions:

1. Prior to issuance of any building or grading permits, EA digital mapping layers shall be provided.

2. This EA shall expire February 17, 2025 or at the discretion of the Planning Director in accordance with LDR Sec. 8.2.2.E.2. ***Please note that the LDRs governing Environmental Standards, including EAs, may be updated, and may render this EA expired prior to February 17, 2025.***
3. The northern aspen stand shall not be impacted, including those aspen trees within the northern boundary of the recommended development area (See Figure 1 in this review).
4. Access to the development area from Elk Ridge Road shall only impact xeric sagebrush cover types.
5. Domestic pets shall be physically restrained or accompanied by a person who has strict voice control over the animals at all times. Cats and dogs shall not be allowed to roam unaccompanied in the NRO.
6. Temporary development impacts shall be reclaimed with a natural vegetative cover type of equal or higher value upon completion of construction.
7. All new fencing must meet wildlife friendly fencing standards or receive a special purpose fencing exemption from the Planning Director.
8. Prior to the issuance of any physical development permits, a final mitigation plan and cost estimate shall be prepared by the applicant for the development impacts. A surety may be required for 125% the cost of mitigation.

If you have any questions or concerns regarding this review, please feel free to contact me at (307) 733-3959 or via email at: cwindom@tetoncountywy.gov.

Sincerely,



Chandler Windom
Senior Planner
Teton County Planning Division

SECTION 7 – APPLICATION MATERIALS

Jackson Hole Title and Escrow
255 Buffalo Way/ PO Box 921
Jackson, Wyoming 83001

JACKSON HOLE
TITLE & ESCROW
307.733.3153

GENERAL WARRANTY DEED

This GENERAL WARRANTY DEED is made this 27 day of June, 2018, by and between Rutland Development L.L.C., a Florida limited liability company ("Grantor") and Christopher Swann, a married man ("Grantee"), whose address is 3060 Peachtree Road NW, Suite 1080, Atlanta, GA 30305.

Grantor, for and in consideration of the sum of Ten dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, hereby CONVEYS, WARRANTS AND ASSIGNS to Grantee, his heirs, successors and assigns, the real property located in Teton County, Wyoming described as follows:

> Lot 23 of the Snake River Canyon Ranch, The River Homes, Teton County, Wyoming, according to that plat recorded in the Office of the Teton County Clerk on September 18, 2001 as Plat No. 1030 (the "Seller Land"), together with (i) all improvements and interests appurtenant to the Seller Land; (ii) all easements and rights benefitting or appurtenant to the Seller Land; and (iii) all rights and appurtenances pertaining to the foregoing, if any, including any right, title and interest of Seller, if any, in and to adjacent rights-of-way (collectively, the "Property"), which has a common address of 12455 South River Bend Road, Jackson, WY 83001, PIDN Number 22-39-16-32-4-01-005.

The Property is subject only to general taxes for the year 2018 (but not prior years) and homeowners association assessments, building and zoning regulations, city, county and state subdivision and zoning laws, and subject to the easements, restrictive covenants, and, reservations of record.

To have and to hold the Property, together with all and singular the rights, members, and appurtenances thereof to the same belonging or in anywise appertaining to the use, benefit, and behalf of the Grantee, his heirs, successors and assigns forever in fee simple.

The Property is transferred on the condition that a transfer fee shall be payable to Teton County, Wyoming and to the Teton County Education Foundation, a Wyoming non-profit corporation, in connection with each subsequent transfer of the Property in accordance with the provisions of the Snake River Sporting Club Community Second Amended and Restated Master Declaration of Covenants, Conditions and Restrictions, dated July 11, 2016. The above-described covenant shall run with the land and shall be binding upon the owner of the Property and its successors and assigns.

IN WITNESS WHEREOF, Grantor has executed this General Warranty Deed on the date set forth above.

GRANTOR:

Rutland Development L.L.C., a Florida limited liability company

By: Hubert Rutland III Testamentary Trust, Its Manager

By: Melissa Rutland

Name: Melissa J. Rutland

Title: Co-Trustee

STATE OF Florida)
) ss.
COUNTY OF Pinellas)

The foregoing instrument was acknowledged before me by Melissa J. Rutland as Co-Trustee of the Hubert Rutland III Testamentary Trust, Manager of Rutland Development L.L.C., a Florida limited liability company, this 27 day of June, 2018.

Witness my hand and official seal.

(Seal, if any)

Kiara S
Signature of notarial officer

Notary
Title of notarial officer

My commission expires: August 6, 2021

KIARA EDWARDS
MY COMMISSION # GG131760
EXPIRES: August 06, 2021

GRANTOR: RUTLAND DEVELOPMENT LLC
GRANTEE: SWANN,CHRISTOPHER
Doc 0951942 Filed At 09:34 ON 07/02/18
Sherry L. Daigle Teton County Clerk fees: 15.00
By Mary Antrobus Deputy Clerk

GRANTOR:

Rutland Development L.L.C., a Florida limited liability company

By: Hubert Rutland III Testamentary Trust, Its Manager

By: Nancy E. Rutland

Name: Nancy E. Rutland

Title: Co-Trustee

STATE OF Florida)
) ss.
COUNTY OF Pinellas)

The foregoing instrument was acknowledged before me by Nancy E. Rutland as Co-Trustee of the Hubert Rutland III Testamentary Trust, Manager of Rutland Development L.L.C., a Florida limited liability company, this 27th day of June, 2018.

Witness my hand and official seal.

(Seal, if any)

Signature of notarial officer

Notary Public

Title of notarial officer

My commission expires: 01/30/21

THEODORA TRAYCHEV
MY COMMISSION # GG067990
EXPIRES January 30, 2021

Jackson Hole Title and Escrow
255 Buffalo Way/ PO Box 921
Jackson, Wyoming 83001

JACKSON HOLE TITLE & ESCROW
307.733.3153

GRANTOR: SCHRAM,STEPHEN C
GRANTEE: SNAKE RIVER BEND RANCH LLC
Doc 0939502 Filed At 14:39 ON 11/15/17
Sherry L. Daigle Teton County Clerk fees: 15.00
By Mary Antrobus Deputy Clerk

s Use Only

WARRANTY DEED

File No.: **656190JAC (mgm)**

Stephen C. Schram, a married man, GRANTOR(S), for Ten Dollars ($10.00) and other good and valuable consideration in hand paid, receipt of which is hereby acknowledged, CONVEY(S) AND WARRANT(S) to

Snake River Bend Ranch, LLC, a Wyoming limited liability company, GRANTEE(S),

whose mailing address is 3060 Peachtree Rd NW, Suite #1080, Atlanta, GA 30305, the following described real estate, situated in the County of **Teton**, State of **Wyoming,** hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of the State of Wyoming, to-wit:

Lot 24 of Snake River Canyon Ranch, The Ranch Homes, Teton County, Wyoming, according to that plat recorded in the Office of the Teton County Clerk on September 18, 2001 as Plat Number 1031.

State Identification Number 22-39-16-32-4-02-001

Notice: This property is transferred on the condition that a transfer fee shall be payable to Teton County, Wyoming and to the Teton County Education Foundation, a Wyoming non-profit corporation, in connection with each subsequent transfer of this property in accordance with the provisions of the Snake River Sporting Club Community Second Amended and Restated Master Declaration of Covenants, Conditions and Restrictions, as further supplemented and amended. The above-described covenant shall run with the land and shall be binding upon the owner of this property and its successors and assigns.

Including and together with all and singular the tenements, hereditaments, appurtenances and improvements thereon or thereunto belonging, but subject to taxes, reservations, covenants, encroachments, conditions, restrictions, rights-of-way and easements of record.

Patricia Wilcock Schram, spouse of Stephen C. Schram, joins in the execution of this Warranty Deed solely for the purpose of waiving any rights she may have under the homestead exemption laws of the State of Wyoming.

WITNESS the due execution and delivery of this Warranty Deed this 14 day of November, 2017.

Stephen C. Schram

State of Connecticut)
ss.
County of Fairfield) Darien

This instrument was acknowledged before me on this 14 day of November, 2017 by Stephen C. Schram.

MARCELA CHIAPPETTA NOTARY PUBLIC CONNECTICUT

Notary Public
My Commission expires: 1/31/2018

WITNESS the due execution and delivery of this Warranty Deed

this 14th day of November, 2017.

Patricia Wilcock Schram

State of CONNECTICUT)
ss. Darien
County of FAIRFIELD)

This instrument was acknowledged before me on this 14 day of November, 2017 by Patricia Wilcock Schram.

MARCELA CHIAPPETTA NOTARY PUBLIC CONNECTICUT

Marcela Chiappetta
Notary Public
My Commission expires: 1/31/2018

QUITCLAIM DEED

Cygnus Jackson Hole, LLC, a Wyoming limited liability company ("Grantor") for and in consideration of TEN DOLLARS ($10.00) and other good and valuable consideration, receipt of which is hereby acknowledged, CONVEYS AND QUITCLAIMS to Snake River Bend Ranch, LLC, a Wyoming limited liability company ("Grantee"), whose address is 3060 Peachtree Rd. NW, Ste. 1080, Atlanta, GA 30305, the following described real estate, situated in Teton County, Wyoming:

Lots 25 and 26 of Snake River Canyon Ranch, The Ranch Homes, Teton County, Wyoming, according to that plat recorded in the Office of the Teton County Clerk on September 18, 2001 as Plat Number 1031.

PIDN (Lot 25): 22-39-16-32-4-02-002
PIDN (Lot 26): 22-39-16-32-4-02-003

RELEASED	
INDEXED	✓
ABSTRACTED	✓
SCANNED	

WITNESS our hand this 3rd day of November, 2017.

Cygnus Jackson Hole, LLC,
a Wyoming limited liability company

By _____
Name: Christopher Swann
Title: Manager

STATE OF Georgia)
) ss.
COUNTY OF Paulding)

The foregoing instrument was acknowledged before me on the 3rd day of November 2017 by Christopher Swann, as Manager of Cygnus Jackson Hole, LLC.

(Seal, if any)

_____
Signature of notarial officer

_____
Title of notarial officer

My commission expires: 9/25/2021

KITARA ANDERSON NOTARY PUBLIC PAULDING CO., GEORGIA MY COMMISSION EXPIRES SEPT 25 2021

GRANTOR: CYGNUS JACKSON HOLE LLC
GRANTEE: SNAKE RIVER BEND RANCH LLC
Doc 0940028 Filed At 14:47 ON 11/27/17
Sherry L. Daigle Teton County Clerk fees: 12.00
By Mary D Antrobus Deputy

Teton County Planning and Building Department
200 S. Willow, P.O. Box 1727
Jackson, WY 83001
Phone (307)733-7030

LETTER OF AUTHORIZATION BY OWNER

THE LETTER OF AUTHORIZATION IS TO BE SUBMITTED ONLY IF THE APPLICANT/AGENT IS NOT THE RECORDED OWNER OF THE PROPERTY. THE RECORDED OWNER MUST SIGN THE LETTER OF AUTHORIZATION AND HAVE IT NOTARIZED.

OWNER, CO-OWNER, OR CORPORATE OWNER:

Name: SWANN, CHRISTOPHER
Physical Address of Property: 12455 S RIVER BEND ROAD
Mailing Address: 3060 PEACHTREE RD, SUITE 1080 ATLANTA, GA
Zip code: 30305 Phone: _____
Email: _____

AGENT OR CONTRACTOR: (If authorizing Agent and Contractor, fill out a form for each)

Name: JORGENSEN ASSOCIATES, INC (AGENT)
Mailing Address: P.O. BOX 9550
Zip code: 83002 Phone: 307-733-5150
Email: _____

Owner, Co-Owner, or Corporate Owner, ("Owner") which property is specifically described as LOT 23, THE RIVER HOMES, SNAKE RIVER CANYON RANCH hereby authorizes Agent or Contractor, as stated above, to represent and/or act for Owner in making application for, receiving, and accepting on Owner's behalf, any permits or other action by the Teton County Commissioners, Planning and Development, Building, and/or Engineering Departments relating to Owner's Property in Teton County, and the modification, development, planning, platting, replatting, improvements, use or occupancy of land, or energy mitigation in Teton County. Owner acknowledges and agrees to be bound and must abide by the written terms or conditions of issuance of any such named Agent or Contractor, whether actually delivered to Owner or not. Owner agrees that no modification, development, planning, platting or replatting, improvements, use or occupancy of land, or energy mitigation involved in any application, as it relates to Owner's Property, shall take place until approved by the appropriate official(s) of Teton County, in accordance with all applicable codes and regulations. Owner agrees to pay any fines and/or mitigation fees to Teton County and will be liable for any other penalties arising out of the failure to comply with the terms of any permit or arising out of any violation of the applicable laws, codes, and/or regulations applicable to the action sought to be permitted by the application authorized herein. Owner agrees and authorizes Agent or Contractor to pay any fines and/or mitigation fees to Teton County and for the Agent or Contractor to accept and receive any reimbursement or fee payments due to Owner from Teton County, including but not limited to energy mitigation fees.

Under penalty of perjury, the undersigned swears that the foregoing is true and, if signing on behalf of a corporation, partnership, limited liability company or other entity, the undersigned swears that this authorization is given with the appropriate approval of such entity, if required.

OWNER, CO-OWNER, CORPORATE OWNER:

Print Name: _____

Signature: DocuSigned by: Christopher Swann EA4FCCEF8F9D427... _____

Title: _____

STATE OF Wyoming

COUNTY OF Teton **SS.**

Subscribed and sworn to before me by Christopher Swann this 24th day of June, 2022.

WITNESS my hand and official seal.

_____
Notary Public

My commission expires: August 2, 2022

YARON LEVY - NOTARY PUBLIC
County of Teton
State of Wyoming
Commission Expires August 2, 2022

Teton County Planning and Building Department
200 S. Willow, P.O. Box 1727
Jackson, WY 83001
Phone (307)733-7030

LETTER OF AUTHORIZATION BY OWNER

THE LETTER OF AUTHORIZATION IS TO BE SUBMITTED ONLY IF THE APPLICANT/AGENT IS NOT THE RECORDED OWNER OF THE PROPERTY. THE RECORDED OWNER MUST SIGN THE LETTER OF AUTHORIZATION AND HAVE IT NOTARIZED.

OWNER, CO-OWNER, OR CORPORATE OWNER:

Name: SNAKE RIVER BEND RANCH, LLC
Physical Address of Property: 800 W ELK RIDGE ROAD
Mailing Address: 3060 PEACHTREE RD NW, SUITE 1080 ATLANTA, GA
Zip code: 30305-2251 Phone: _____
Email: _____

AGENT OR CONTRACTOR: (If authorizing Agent and Contractor, fill out a form for each)

Name: JORGENSEN ASSOCIATES, INC (AGENT)
Mailing Address: P.O. BOX 9550
Zip code: 83002 Phone: 307-733-5150
Email: _____

Owner, Co-Owner, or Corporate Owner, ("Owner") which property is specifically described as LOT 26, THE RANCH HOMES, SNAKE RIVER CANYON RANCH hereby authorizes Agent or Contractor, as stated above, to represent and/or act for Owner in making application for, receiving, and accepting on Owner's behalf, any permits or other action by the Teton County Commissioners, Planning and Development, Building, and/or Engineering Departments relating to Owner's Property in Teton County, and the modification, development, planning, platting, replatting, improvements, use or occupancy of land, or energy mitigation in Teton County. Owner acknowledges and agrees to be bound and must abide by the written terms or conditions of issuance of any such named Agent or Contractor, whether actually delivered to Owner or not. Owner agrees that no modification, development, planning, platting or replatting, improvements, use or occupancy of land, or energy mitigation involved in any application, as it relates to Owner's Property, shall take place until approved by the appropriate official(s) of Teton County, in accordance with all applicable codes and regulations. Owner agrees to pay any fines and/or mitigation fees to Teton County and will be liable for any other penalties arising out of the failure to comply with the terms of any permit or arising out of any violation of the applicable laws, codes, and/or regulations applicable to the action sought to be permitted by the application authorized herein. Owner agrees and authorizes Agent or Contractor to pay any fines and/or mitigation fees to Teton County and for the Agent or Contractor to accept and receive any reimbursement or fee payments due to Owner from Teton County, including but not limited to energy mitigation fees.

Under penalty of perjury, the undersigned swears that the foregoing is true and, if signing on behalf of a corporation, partnership, limited liability company or other entity, the undersigned swears that this authorization is given with the appropriate approval of such entity, if required.

OWNER, CO-OWNER, CORPORATE OWNER:

Print Name: Christopher Swann

Signature: Christopher Swann

DocuSigned by: EA4FCCEF8F9D427...

Title: managing member

STATE OF Wyoming

COUNTY OF Teton **SS.**

Subscribed and sworn to before me by Christopher Swann this 6th day of June, 2022.

WITNESS my hand and official seal.

PAMELA ANN MCMAHON
Notary Public - State of Wyoming
Commission ID # 159537
My Commission Expires
July 26, 2027

Pamela Ann McMahon
Notary Public

My commission expires:

July 26, 2027