File No. EA2024-103

CITY OF RICHLAND
Determination of Non-Significance

Description of Proposal: Phased installation of a 24" sewer line with the first phase extending north from Battelle Blvd. to Horn Rapids Road and then east toward Stevens Drive. The second phase will extend approximately 2,600' north from Horn Rapids Road with east and west extensions installed approximately 2,100' north of Horn Rapids Road.

Mitigation for approximately 3 acres of impacts to Fish and Wildlife Habitat Conservation Areas (primarily in the form of Shrub-Steppe Habitat) has already occurred for this and other projects proposed within the 1,641 acres of land conveyed to the City of Richland, Tri-City Development Council (TRIDEC) and Port of Benton (DOE/EA-1915 Mitigation Action Plan).

Proponent: City of Richland
625 Swift Blvd
Richland, WA 99352

Location of Proposal: This project is located within Sections 15 & 16, T10N, R28E W.M., Benton County, Washington.

Lead Agency: City of Richland

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

( ) There is no comment for the DNS.

(**X**) This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for fourteen days from the date of issuance.

( ) This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

Responsible Official: Mike Stevens
Position/Title: Planning Manager
Address: 625 Swift Blvd., MS #35, Richland, WA 99352

Date: February 13, 2024
Comments Due: February 28, 2024

Signature 

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable: **1341 Acre Sewer Extension**

2. Name of applicant: **City of Richland**

3. Address and phone number of applicant and contact person: **625 Swift Blvd., Richland, WA 99352, Contact: Adam Lutes (509) 942-7638**

4. Date checklist prepared: **January 5th, 2023**

5. Agency requesting checklist: **City of Richland**

6. Proposed timing or schedule (including phasing, if applicable): **Construction to begin – Winter of 2024**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. **Yes, the City has plans to lease/sell additional land north of Horn Rapids Road that may require a sewer line connection.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. **There are no existing issues known. There has been a critical area report and a cultural resources report that has been completed on the proposed area with no findings of wetlands or historical artifacts.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. **An Erosivity Waiver is being submitted to the Department of Ecology. This project meets all the minimum requirements.**

10. List any government approvals or permits that will be needed for your proposal, if known. **Erosivity Waiver is being submitted for this project.**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)
PROPOSED SEWER: Consists of the installation of a 24" sewer line west on Battelle Blvd. to then north to Horn Rapids Road and east toward Stevens Drive. No Cultural Resource or Critical Area Study was completed along Horn Rapids Road since the proposed sewer line is being proposed in an already disturbed area under the existing road and waterline were installed. The proposed sewer line length will be approximately 7,000 feet.

FUTURE SEWER: In the future when development requires it, the 24 inch sewer line will be extended to the north, east and west. This area previously had a cultural resource study and critical area study performed because the area has never been disturbed.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic

map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. **This project is located within the SW1/4 of S15, T10N and R28E. The Sewer Line will be tapped off the City's existing sewerline located on Battelle Blvd., near the Battelle Blvd Lift station and will be installed to the west, the line will continue to the north Horn Rapids Road. The new proposed sewer line will continue east along Horn Rapids Road approximately 3,300 feet to the east property line of the Department of Energy parcel (the old dump site).**

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one): Flat, **rolling**, hilly, steep slopes, mountainous, other:

b. What is the steepest slope on the site (approximate percent slope)? **2.5- 5 percent**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. **Loamy Sand, Sand**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. **None known.**

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. **Approximately 17,500 cubic yards will be excavated to install the sewer line. All material excavated will be suitable for fill.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **Not on this project. The general grading will be site contained, and will be stabilized with mulch/hydroseed.**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? **No additional impervious surface is being developed as part of this project.**

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
N/A

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. **During construction there could be blowing dust.**

The Contractor is required to have a water truck onsite to keep this from happening. Once the sewer is excavated, constructed and the disturbed trench width is mulched/hydroseeded and stabilized there shall be no issues.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **N/A**

c. Proposed measures to reduce or control emissions or other impacts to air, if any: **The Contractor is required to have a water truck onsite to keep this from happening.**

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
N/A

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.
No

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
N/A

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
No

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
No

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
No

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.
No

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the

number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

24" Sewer Pipe will be installed.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. **N/A**

2) Could waste materials enter ground or surface waters? If so, generally describe. **N/A**

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: **N/A**

4. Plants [help]

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
__x__shrubs
__x__grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered? **The existing natural dryland grasses and sage brush will be removed when excavating for the sewer line.**

c. List threatened and endangered species known to be on or near the site.

N/A

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: **N/A**

e. List all noxious weeds and invasive species known to be on or near the site.

None known.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, bald eagle, songbirds, other: **Seagulls.**
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened and endangered species known to be on or near the site.

None known.

c. Is the site part of a migration route? If so, explain.

No

d. Proposed measures to preserve or enhance wildlife, if any:

None

e. List any invasive animal species known to be on or near the site.

N/A

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

None

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. **No**

1) Describe any known or possible contamination at the site from present or past uses.

N/A

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.
N/A

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.
The Contractor will refuel their equipment, and may store some fuel onsite.

4) Describe special emergency services that might be required.
None needed.

5) Proposed measures to reduce or control environmental health hazards, if any: **N/A**

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? **None.**

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. **Normal construction noise, from 7:30am to 5:00pm. This would be for project duration.**

3) Proposed measures to reduce or control noise impacts, if any: **Make sure that the Contractor is working with the City's Ordinance of working hours.**

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.
Currently, the land is undeveloped from Battelle Blvd to Framatome. Between Battelle Blvd. and Horn Rapids Road is the west parking lot for Framatome. The sewer easement agreement requires the asphalt to be replaced once the sewer main is installed.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? **No**

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: **No**

c. Describe any structures on the site. **N/A**
d. Will any structures be demolished? If so, what? **No**

e. What is the current zoning classification of the site?
M-2 Heavy Manufacturing

f. What is the current comprehensive plan designation of the site? **IND- Industrial**

g. If applicable, what is the current shoreline master program designation of the site? **N/A**

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.
No

i. Approximately how many people would reside or work in the completed project? **N/A, application is for the installation of a 24 inch sewer main.**

j. Approximately how many people would the completed project displace? **None.**

k. Proposed measures to avoid or reduce displacement impacts, if any: **N/A**

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: **The City has/will coordinate with Framatome on construction of the project.**

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: **N/A**

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
No houses are proposed in this specific area of development.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
None

c. Proposed measures to reduce or control housing impacts, if any:
N/A

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
N/A

b. What views in the immediate vicinity would be altered or obstructed?
N/A

b. Proposed measures to reduce or control aesthetic impacts, if any:
None

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

N/A

b. Could light or glare from the finished project be a safety hazard or interfere with views?

N/A

c. What existing off-site sources of light or glare may affect your proposal?

N/A

d. Proposed measures to reduce or control light and glare impacts, if any:

N/A

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

None

b. Would the proposed project displace any existing recreational uses? If so, describe.

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

N/A

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

N/A

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

N/A

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

N/A

c. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. **N/A**

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The work site can be accessed either by Horn Rapids Road on the north side or Battelle Blvd. on the south side.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No, the closest transit stop is approximately 1.5 miles away.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

N/A – There are no buildings being constructed at this time.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Yes, Horn Rapids road may need to be reconstructed to allow for the underground sewer line.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Vehicular transportation will be used.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

N/A

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. **No**

h. Proposed measures to reduce or control transportation impacts, if any:

N/A

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

N/A

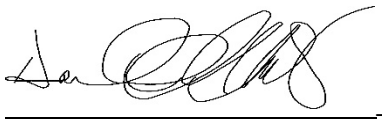
16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, **water,** refuse service, telephone, sanitary sewer, septic system, other _____

d. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
Sewer– provided by the City of Richland

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 

Name of signee Danielle M. Mullins

Position and Agency/Organization City of Richland Public Works Department

Date Submitted: 1/17//2024

D. Supplemental sheet for non-project actions [HELP]

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

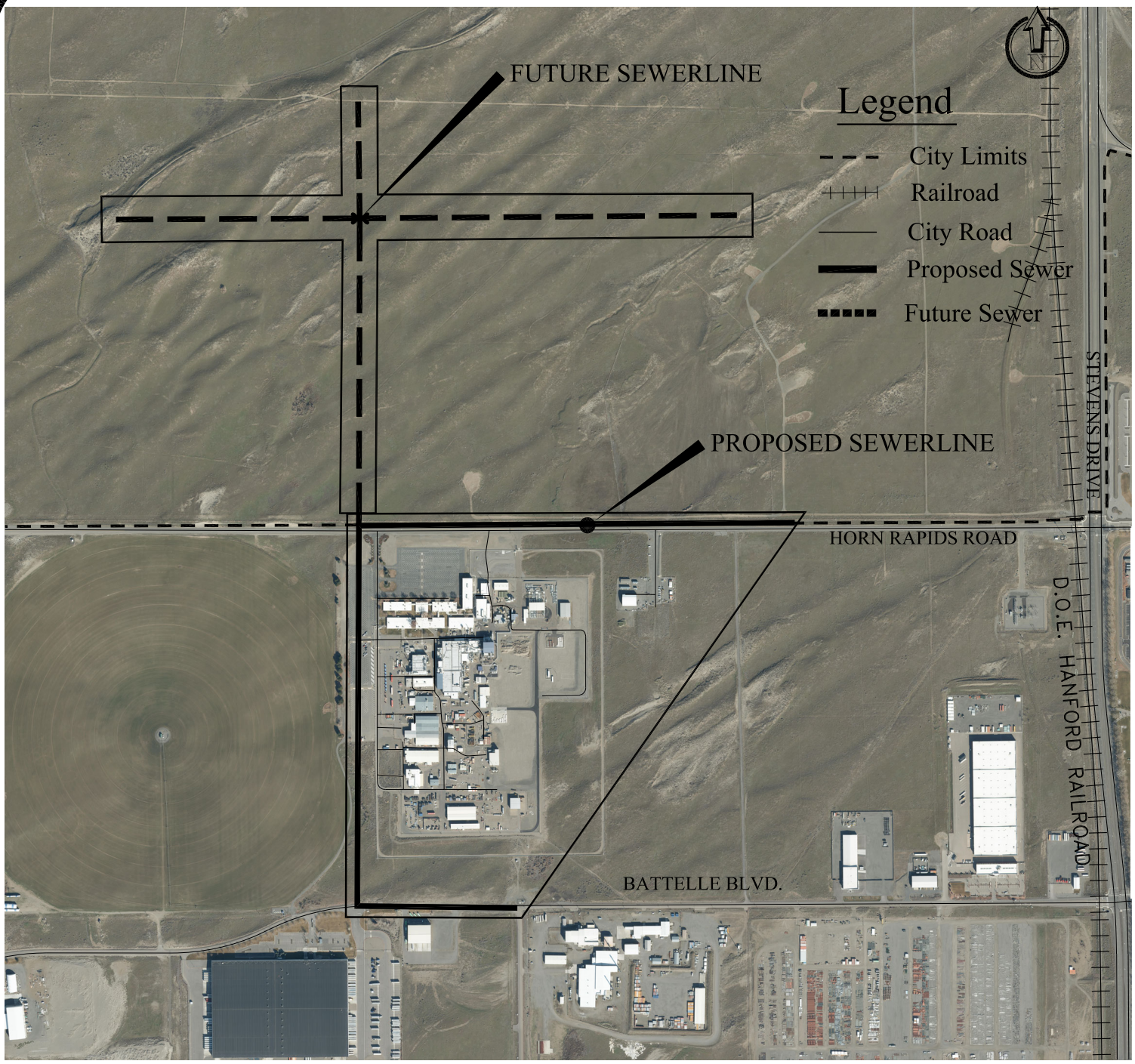
5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.



1341 ACRES SEWER EXTENSION

(BATTELLE BLVD. NORTH TO HORN RAPIDS ROAD)

Richland Washington

DATE: 01-22-2024
DRAWN BY:
SCALE: NTS
CAD DWG: TBD

DOE/EA-1915

MITIGATION ACTION PLAN

PROPOSED CONVEYANCE OF LAND AT THE HANFORD SITE, RICHLAND, WASHINGTON

AGENCY: U.S. Department of Energy Richland Operations Office

ACTION: Mitigation Action Plan

SUMMARY: This Mitigation Action Plan (MAP) is an integral part of the Finding of No Significant Impact (FONSI) for the United States Department of Energy's (DOE) *Environmental Assessment for Proposed Conveyance of Land at the Hanford Site, Richland, Washington* (DOE/EA-1915). The Proposed Action would convey 1,641 acres of land on the Hanford Site, located in Richland, Benton County, Washington, from DOE ownership to the Tri-City Development Council (TRIDEC) for the purpose of economic development, pursuant to the *National Defense Authorization Act of 2015* (NDAA; Public Law 113-291), Section 3013.

In the Environmental Assessment (EA), DOE considered mitigation measures to avoid, minimize, rectify, or compensate for potential adverse environmental effects associated with the Proposed Action. DOE has made the decision to implement mitigation measures in the table below to better achieve an environmentally-preferable outcome.

Mitigation measures for the Proposed Action will be implemented through three mechanisms: 1) incorporation of applicable mitigation measures into the deed as deed restrictions and covenants, 2) performance of the agreed upon stipulations in the Memorandum of Agreement (MOA) resulting from the National Historic Preservation Act (NHPA) Section 106 process, and 3) completion of additional mitigation measures identified in this MAP by DOE. The three mechanisms (deed, MOA, and DOE additional mitigation measures) are interrelated and may contain exact or similar language. For example, many of the mitigation measures that are in the deed are also reflected in the MOA. It should also be noted that the mitigation measures in the MOA which address the adverse effects to specific individual historic properties and traditional cultural properties are not spelled out in detail in the MAP but are instead incorporated by reference. For further reference, the list of deed restrictions is included in the EA as Table 5-2, and the MOA is included in the EA as Appendix K.

As a means of enforcement, the deed includes a requirement for the Grantee[1] to submit an annual report to DOE regarding compliance with deed restrictions and any challenges encountered during the previous year. This information will be used in DOE's annual report on implementation of the MAP, which will be posted on DOE's National Environmental Policy Act (NEPA) website.

[1] The term "Grantee" means DOE's designated Community Reuse Organization, Tri-City Development Council, "TRIDEC," and includes the following partners of TRIDEC: the City of Richland, the County of Benton and the Port of Benton.

If you have any general questions about the MAP, please contact:

Paula Call
DOE/EA-1915, NEPA Document Manager
U.S. Department of Energy
Richland Operations Office
P.O. Box 550, MSIN A2-15
Richland, WA 99352
paula.call@rl.doe.gov

MITIGATION MEASURES: The table below provides mitigation measures and implementation mechanisms.

Resource	Mitigation Measure Mechanism		
	DOE	**Deed**	**MOA**
Geology	To prevent disturbance to area hydrologic conditions that might affect transport of contaminants in the groundwater, the deed will prohibit mining.	Grantee is prohibited from mining the premises including extraction or production of any coal, oil, gas, geothermal steam, associated geothermal resources, aggregate and any other minerals.	Same as deed
Water	To prevent disturbance to area hydrologic conditions that might affect transport of contaminants in the groundwater, the deed will prohibit access to groundwater.	Grantee is prohibited from extracting, permitting to be extracted, consuming or otherwise accessing or utilizing any groundwater below the surface of the premises.	
	To enable DOE to conduct long-term groundwater monitoring, the deed will reserve DOE's right to access and operate its systems.	• Grantee is prohibited from altering, destroying or otherwise tampering with grantor's established roads or other access routes to all groundwater monitoring wells. • Grantee is prohibited from developing an alternate access road or other access route to all groundwater monitoring wells without receiving grantor's written permission, which will not unreasonably be withheld. • Grantee is prohibited from tampering with or damaging grantor's groundwater monitoring or remediation systems located on the premises. • Grantee is prohibited from access closer than twenty (20) feet around the periphery of grantor's groundwater monitoring wells and remediation systems, as delineated on the ground by grantor. The designated twenty (20) feet around each groundwater well and all remediation systems is for grantor's exclusive access only. • Grantee is prohibited from narrowing or shortening the minimum required width of ten (10) feet for the full length of all roads or other access routes or approved alternate access routes to grantor's groundwater wells. The designated roads or access routes to or from grantor's groundwater wells are non-exclusive in nature such that such roads and routes may be accessed by grantee, with the exception of the twenty (20) feet radius around each groundwater well, which is for grantor's access only.	
	To prevent disturbance to water table conditions that might adversely affect the movement or other transportation of	Grantee is prohibited from placement of swales, ponds, and other storm water drainage facilities in the area between the following two lines: (a) line 1,969 feet (600	

Resource	Mitigation Measure Mechanism		
	DOE	**Deed**	**MOA**
	groundwater contaminants or changes to the water table under existing landfills and disposal facilities, the deed will limit the location of stormwater drainage facilities.	meters) north of the centerline of Horn Rapids Road, and (b) line 15,781 feet (4,810 meters) north of the centerline of Horn Rapids Road.	
	To prevent disturbance to area hydrologic conditions that might affect transport of contaminants in the groundwater, the deed will limit the depth of excavations.	Any ground disturbance performed by the grantee resulting from construction activities, construction or installation of any piping or utility system component, drilling, digging or other any excavation, of whatsoever nature and type, on any portion of the premises is prohibited below a depth of twenty (20) feet (6.1 meters) from the surface of the ground, and prohibited within 6.6 feet (2 meters) of the groundwater whichever is most restrictive, except upon the express written permission of the grantor.	
Ecological	Enhance native vegetation communities to benefit migratory bird and pollinator habitats by planting native forbs at the 120-acre 100 C-7 backfill and re-vegetation site.		
	Collaborate with tribal nations to include an appropriate mixture of native shrubs, grasses and forbs in re-vegetation projects identified in the MOA for the land conveyance project.		
	Identify the swale habitats located in the PAAL and described in the EA for protection within the larger area designated for industrial uses under the Comprehensive Land Use Plan. Provide administrative protection from disturbance from future projects or management actions consistent with the CLUP management plans, including the Hanford Biological Resources Management Plan (BRMP). Identify the swale habitats as BRMP Level 4 habitat based upon the documented intensity of pollinator use and unique vegetation assemblages.		
	Conduct a Pollinator Habitat study for the Hanford Site, focusing on identifying pollinator species and the plants and habitats they require for their life cycle. The study shall provide data and recommendations needed to carry out habitat enhancement, proper management, and collaboration with other agencies and institutions to ensure this valuable resource is protected. Following the initial study, incorporate pollinator and habitat surveys into the Hanford Site ecological monitoring program.		
	To protect migratory birds and pollinators, the deed will prohibit Concentrated Solar Power technology on the conveyed lands.	Grantee is prohibited from constructing and operating a CSP Solar Farm System on the premises.	Same as deed
	Install burrowing owl boxes in a location to be determined in consultation with the U.S. Fish and Wildlife Service and the Washington Department of Fish and Wildlife, for the		

Resource	Mitigation Measure Mechanism		
	DOE	**Deed**	**MOA**
	purposes of supporting new colonies or enhancing existing colony habitat on the Hanford Site.		
	To protect migratory birds and their habitats, the deed will include a covenant that bird-friendly building design would be incorporated into buildings, structures, and improvements to the extent it is reasonably practical to do so.	Grantee covenants that it will incorporate bird-friendly building design into grantee's design for buildings, structures and improvements on the premises to the extent it is reasonably practical to do so.	
	To minimize the potential for wildfire, the deed will include a covenant requiring special consideration for the placement of combustible materials.	Grantee agrees that within the immediate landscaped area (from the structure to approximately 30 feet), special consideration should be given that any combustible materials (e.g., lawn furniture, litter, and construction materials) should be removed or reduced in an effort to protect property (e.g., wildlands, buildings, and equipment) by minimizing fire risk.	
Historic Properties and Cultural	Through the NHPA process, DOE has completed NHPA Section 106 consultation with all consulting parties and has reached an MOA that includes measures to avoid, minimize, or mitigate potential adverse effects to historic properties, traditional cultural properties (TCPs) and cultural resources. (See Appendix K of the EA, "Memorandum of Agreement.") Furthermore, the MOA contains the language to be used for various deed restrictions related to development of the site, which would mitigate potential effects (see also deed restrictions and covenants table above). Through the MOA, DOE has agreed to implement a number of general mitigation measures that will apply to the transferred land parcels. DOE will also implement specific mitigation measures for the individual historic properties, TCPs, and cultural resources as indicated in the MOA. Not all mitigation requires funding, but DOE will fund mitigation as agreed to and will allow tribes to use cooperative agreement funds as indicated in the MOA. The MOA addresses who is responsible for these mitigation measures and when these measures will be implemented. DOE will continue to consult with tribes regarding the land conveyance as tribes may determine topics for consultation under DOE's Native American Indian Policy and Order 144.1, Department of Energy	Grantor requires Grantee's acoustic and noise signature on the premises will not exceed current Washington State standards and exemptions for Class C industrial areas.[2]	Same as deed
		The Grantee, its successors and assigns, covenants and agrees to restrict or prohibit activities on the premises that generate vibration in excess of the PNNL Vibration Standard and the LIGO Vibration Standard described below: (1) PNNL Vibration Standard. The parties are in agreement that, after the date of this conveyance, vibration impacts arising from the premises shall be limited such that: a. Any Heavy Reciprocating Machinery must be at least three (3) kilometers from the PNNL Site boundary b. Any Balanced Non-Reciprocating Industrial Machinery must be at least one (1) kilometer from the PNNL Site boundary c. Activities on the premises that result in vibrations created by continuous and/or routine blasting are prohibited. To the extent any uncertainty arises with respect to the application of this vibration standard for non-routine blasting, Article 12, Periodic Discussions and Development Plans, of Exhibit I of this Quitclaim Deed shall be utilized to mitigate those non-routine blasting activities. (2) LIGO Vibration Standard. The parties are in agreement that, after the date of this conveyance, vibration (dependent on frequency) emanating from the premises shall be consistent with non-reciprocating power plant machinery or balanced industrial machinery operating above 300 RPM (5Hz) or must meet the following specifications below 300 RPM (5 Hz):	Same as deed

[2] The noise, vibration, and EMF standards may be revised or removed if the Grantor, Grantee, PNNL, LIGO, and Tribes agree.

Resource	Mitigation Measure Mechanism		
	DOE	**Deed**	**MOA**
	American Indian Tribal Government Interactions and Policy.	a. In the frequency range from 0.3 Hz to 1.5 Hz, ground vibration levels as measured 100 meters from the source should not exceed 0.3 micrometers/ sec/root (Hz). For example, in the frequency band from 0.5 Hz to 1.5 Hz this would be equivalent to a vibration level of 0.3 micrometers/sec RMS. b. In the frequency range from 1.5 Hz to 2.5 Hz, ground vibration levels as measured 100 meters from the source should not exceed 0.3 micrometers/ sec/root (Hz). For example, in the frequency band from 1.5 Hz to 2.5 Hz this would be equivalent to a vibration level of 0.3 micrometers/sec RMS. c. In the frequency range from 2.5 Hz to 3.5 Hz, ground vibration levels as measured 100 meters from the source should not exceed 0.5 micrometers/ sec/root (Hz). For example, in the frequency band from 2.5 Hz to 3.5 Hz this would be equivalent to a vibration level of 0.5 micrometers/sec RMS. d. In the frequency range from 3.5 Hz to 5 Hz, ground vibration levels as measured 100 meters from the source should not exceed 2.5 micrometers/ sec/root (Hz). For example, in the frequency band from 3.5 Hz to 5 Hz this would be equivalent to a vibration level of 3 micrometers/sec RMS. e. These vibration levels should be compatible with operation of motor vehicles driven on smooth pavement. However trucks driven off-pavement, over pavement in poor repair, or over speed bumps would likely cause these vibration levels to be exceeded. f. Reciprocating power-plant machinery, rock crushers and heavy machinery would likely cause these vibration levels to be exceeded.[2]	
		Grantee agrees to restrict or prohibit activities on the premises that generate electrical field (EF) and magnetic (M) interferences in excess of the EF/M Interference Standard described below. EF/M Interference Standard. The parties are in agreement that, after the date of this deed transfer, all intentional radiators on the premises shall not exceed the Federal Communications Commission Standard at 47 CFR Part 15, Subpart C.[2]	Same as deed
		By acceptance of this deed, the Grantee covenants and agrees to restrict or prohibit activities on the premises that cause airborne radionuclide emissions in excess of the Natural Occurrences and Radionuclide Emissions Standards described below. Radionuclide Emissions Standard. The Grantee is prohibited from activities on the premises creating or otherwise causing emissions into the airborne environment arising from the possession, use or discharge from any fissionable material, fission products or activation products.	
		Grantee is required to provide access to the premises prior to its development to members of the Confederated Tribes	Same as deed

Resource	Mitigation Measure Mechanism		
	DOE	**Deed**	**MOA**
		and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe and the Wanapum Band of Indians (collectively "tribes") for tribal activities. An access agreement will be developed between the tribes and the land owners to facilitate access.	
		Grantee is required to comply with Washington State laws for cultural resource protection: (1) Indian Graves and Records Act (RCW 27.44); (2) Archaeological Sites and Resources Act (RCW 27.53); (3) Abandoned and Historic Cemeteries and Historic Graves Act (RCW 68.60); (4) Archaeological Excavation and Removal permit process (WAC 25-48); and (5) Human Remains (RCW 68.50).	Same as deed
		Grantor retains ownership of all pre-contact archeological materials. Grantee is required to return all pre-contact archeological material to grantor for relocation in consultation with tribes.	Same as deed
		Grantee is required to return any and all contaminated pre-contact artifacts or human remains found on the premises to grantor for tribal consultation and reburial on the Hanford Site.	Same as deed
		This restriction has been put in place to set forth the required protocol, in the event that Grantee does not comply with one or more deed restrictions of the Quitclaim Deed.	Same as deed
		The Grantee shall implement the Cultural Resource Protection Protocol. The Cultural Resource Protection Protocol can be amended as agreed to between Grantee and the tribes. (See Appendix K, MOA).	Same as deed
Visual	To carry out specific provisions of the MOA, the deed will include restrictions and covenants regarding the height and color of buildings and the use of native plants in landscaping.	1. The Grantee agrees that the height of buildings that are constructed on the conveyed land will not exceed the height limits that are authorized pursuant to Chapter 23.28.030 of the Richland Municipal Code (RMC); as amended. Grantee agrees that it shall not seek a waiver of the height limitations contained in these provisions of the RMC by utilizing the variance provisions of RMC 23.70.150, or by application of any other process that may allow the Grantee to construct a building with a height greater than that explicitly allowed by RMC Chapter 23.28.030. 2. The Grantee agrees that buildings (including roofs) will be finished in colors that are non-reflective and that emulate those of the natural surroundings. 3. The Grantee agrees to xeriscaping utilizing native plants to lessen impacts to adjacent plant communities and eliminate need for supplemental watering.	Same as deed

SUBMITTED TO:
Port of Benton
3250 Port of Benton
Boulevard
Richland, WA 99354

BY:
Shannon & Wilson
400 N. 34th Street, Suite 100
Seattle, WA 98103

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CRITICAL AREA REPORT

Horn Rapids Sewer Line Extension

RICHLAND, WASHINGTON

SHANNON & WILSON

May 16, 2022

Shannon & Wilson No: 106853-001

Submitted To: Port of Benton
3250 Port of Benton Boulevard
Richland, WA 99354
Attn: Ms. Diahann Howard, Executive Director

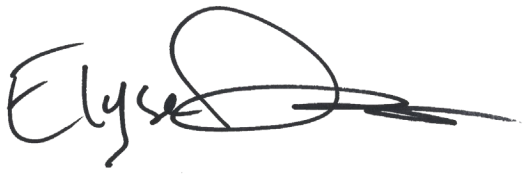
Subject: CRITICAL AREA REPORT, HORN RAPIDS SEWER LINE EXTENSION, RICHLAND, WASHINGTON

Shannon & Wilson prepared this report and participated in this project as a consultant to the Port of Benton. Our scope of services was specified in an agreement with the Port of Benton signed on January 19, 2022. This report presents the results of the site investigation and was prepared by the undersigned.

We appreciate the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

SHANNON & WILSON



Elyse Denkers, PWS
Ecologist, Permitting Specialist

EBD:MAC:PCJ/ebd

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1 INTRODUCTION

Shannon & Wilson conducted a critical area investigation to support the Port of Benton's/City of Richland's Horn Rapids Sewer Line Extension Project (Project). The Project is located between Battelle Boulevard and Horn Rapids Road (Parcel ID 116084000000000 and 115083000001000) within the City of Richland, and north of Horn Rapids Road (Parcel ID 110081000001003) within unincorporated Benton County (Sections 9, 10, 15, 16, Township 10N, Range 28E, W.M.) (see Figure 1). The Project consists of installing approximately 5,600 linear feet of new 21-inch sewer line running north from Battelle Boulevard, and approximately 4,500 linear feet of new 18-inch sewer line running east/west and bisecting the 21-inch alignment at its north end (see Figure 2). The site investigation Study Area is composed of the proposed sewer line alignment, plus a 100-foot buffer on either side.

The purpose of this report is to present the results of the site investigation, which included the identification of critical areas, limited to wetlands, streams, and fish and wildlife habitat conservation areas within the Study Area, in accordance with the City of Richland's critical area regulations (Chapter 22.10 Richland Municipal Code [RMC]) and Benton County's critical areas ordinance (Title 15 Benton County Code [BCC]). Within the Study Area, no wetlands or fish and wildlife habitat conservation areas were identified.

2 BACKGROUND REVIEW

Desktop research was conducted to help identify potential critical areas within the Study Area. These data sources included:

- U.S. Natural Resources Conservation Service (NRCS) Web Soil Survey interactive map (NRCS, 2022),
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping system (USFWS, 2022),
- Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) on the Web map (WDFW, 2022),
- Benton County's Planning Department web map (Benton County, 2022),
- City of Richland's Geological Hazards and Critical Areas web map (Richland, 2022), and
- U.S. National Oceanic and Atmospheric Administration (NOAA) Regional Climate Centers Agriculture Applied Climate Information System (NOAA, 2022).

According to the NRCS's Web Soil Survey, soils within the Study Area are mapped as Quincy loamy sand, 2 to 15% slopes, and Finley fine sandy loam, 2 to 5% slopes, south of Horn Rapids Road (NRCS, 2022). Neither of these soil units are considered hydric soils. Soils are not mapped north of Horn Rapids Road.

A review of the USFWS NWI map reveals a riverine feature flowing north from Horn Rapids Road, approximately 1,800 feet west of the Study Area (USFWS, 2022). There is also a freshwater pond depicted approximately 800 feet east of the Study Area within the Framatome manufacturing facility south of Horn Rapids Road.

WDFW PHS on the Web map identifies shrub-steppe habitat as a priority habitat feature throughout the entire northern portion of the Study Area, and within the undeveloped portions of the southern Study Area south of Horn Rapids Road (WDFW, 2022). WDFW also identifies burrowing owl (*Athene cunicularia*) habitat approximately 1,500 feet east and 4,000 feet west of the Study Area. No other priority habitats or species are displayed within or near the Study Area.

The Benton County web map displays no water bodies, wetlands, wildlife habitat areas, or flood-prone areas within or near the Study Area (Benton County, 2022).

The City of Richland web map displays no water bodies, wetlands, or flood-prone areas within or near the Study Area (Richland, 2022). There is, however, one unidentified wildlife habitat area approximately 300 feet west of the Study Area, just north of Horn Rapids Road.

Monthly totals and departures from normal precipitation data were collected from the Richland station (NOAA, 2022) for the three months preceding the February 2022 site visit. According to the Richland station data, monthly precipitation totals demonstrated drier than normal conditions for the three-month period preceding the site visit (see Exhibit 2-1).

	Long-Term Rainfall (WETS)						
Month	30% Chance Will Have		Observed (2021) Precipitation	Condition (Dry, Normal, Wet)	Condition Value*	Month Weight Value	Product (Condition Value x Month Value)
	Less Than	More Than					
Jan	0.65	1.18	0.36	Dry	1	3	3
Dec	0.74	1.31	1.3	Normal	2	2	4
Nov	0.57	1.22	1.13	Normal	2	1	2
Weather Station: Richland Station, Period of Record 1981-2020						**Total**	9

(Table methodology adapted from *NRCS Engineering Field Handbook, Chapter 19* [NRCS, 1997])

If Sum is:	Then:
6-9	Prior Period Has Been Drier Than Normal
10-14	Prior Period Has Been Normal
15-18	Prior Period Has Been Wetter Than Normal

*Condition Value:
Dry = 1
Normal = 2
Wet = 3

Exhibit 2-1: Precipitation Analysis for February 2022, Richland Station

3 FIELD METHODS

The Study Area was evaluated for the potential of wetlands using methods described in the U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* (USACE, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0)* (U.S. Army Engineer Research and Development Center, 2008). Ground visual surveys were used to describe the vegetation community (Federal Geographic Data Committee, 2013). The Munsell Soil Color Chart was used to describe soil colors (Munsell Color, 2000).

Potential wetland areas were identified using the triple-parameter approach, which considers vegetation types, soil conditions, and hydrologic conditions. For an area to be considered wetland, it must display each of the following: (a) dominant plant species that are considered hydrophytic by the accepted classification indicators, (b) soils that are considered hydric under federal definition, and (c) indications of wetland hydrology in accordance with federal definition. Appendix A includes a more detailed summary of the federal delineation methodology.

During the site investigations, data points describing vegetation, soil, and hydrology were collected in the Study Area. Data point locations are shown in Figure 2, and the corresponding Wetland Determination Data Forms are included in Appendix B. Data point locations were collected using a hand-held global positioning system unit with an accuracy of approximately 5 feet.

4 RESULTS

Shannon & Wilson conducted fieldwork on February 16, 2022, to identify critical area conditions within the Study Area. Although the site investigation occurred outside of the growing season, on-site conditions allowed the use of the routine delineation methods described in Section 3.

No wetlands or streams were identified within the Study Area. Besides the shrub-steppe ecosystem, no significant wildlife or habitat conservation areas were present within the Study Area. The site is composed of a typical dry shrub-steppe plant community, including big sagebrush (*Artemisia tridentata*), Russian olive (*Elaeagnus angustifolia*), Russian thistle (*Salsola tragus*), and bunch grasses.

The southern section of the Study Area, south of Horn Rapids Road, is topographically flat and located between a large irrigated agricultural field and a large manufacturing plant (Framatome). Half of the vegetation within the southern portion of the Study Area is composed of common shrub-steppe vegetation, a small portion is composed of disturbed

soils in a grove of Russian olive trees, and the remaining portion consists of a gravel parking lot. The northern section of the Study Area, north of Horn Rapids Road, is undeveloped and topographically undulating. Vegetation in the northern section is composed of typical shrub-steppe vegetation, including big sagebrush and bunch grasses.

Photographs of the Study Area are included in Appendix C.

4.1 Uplands

Data pit 1 (DP-1) was collected in the southern portion of the sewer alignment, within a grove of Russian olive trees between an irrigated field and the Framatome facility. Vegetation at this location is composed of largely bare soils, with a small percentage of hairy cat's ear (*Hypochaeris radicata*) and Russian olive. The soil is dark olive brown loamy sand and was dry to 15 inches below the surface. There was a restrictive layer of large cobble and gravel at 15 inches. No hydrophytic vegetation, wetland hydrology, or hydric soil indicators were present at this data pit.

Data pit 2 (DP-2) was collected within a topographic low point of a relic drainage channel at the northwest terminus of the sewer alignment. Vegetation at this site includes Sandberg bluegrass (*Poa secunda*), spring draba (*Draba verna*), and moss on the soil surface. The soil is olive brown sand and was dry to at least 20 inches below the surface. No hydrophytic vegetation, wetland hydrology, or hydric soil indicators were present at this data pit.

As indicated in the above data, the triple parameter approach for identifying wetlands was not met anywhere within the Study Area. Additionally, no wetland or other aquatic features were observed from the edge of the Study Area.

4.2 Fish and Wildlife Habitat Conservation Areas

Shannon & Wilson conducted a wildlife and habitat survey during the February site investigation. Shrub-steppe ecosystems in this region provide unique habitat for priority species such as burrowing owl, sage thrasher (*Oreoscoptes montanus*), and ferruginous hawk (*Buteo regalis*).

All observed wildlife was documented, with a focus on burrowing owl habitat in the Study Area. Potential burrowing owl presence was determined using methods outlined in the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium, 1993). Burrowing owl surveys were conducted using the transect survey approach outlined in the survey protocols, with alterations to fit the Study Area. Transects of varying widths (25 to 50 feet) were created on both sides of the sewer alignment. The width of the survey area at any given location was primarily influenced by the level of

surrounding disturbance and presence of suitable habitat. The entirety of the Study Area was surveyed on foot by two biologists walking parallel to each other. Any burrow of appropriate size, that appeared to be in use or recently in use by any species, would be marked in the field using a global positioning system unit. Burrows that were partially or completely collapsed would not be documented.

No signs of active or recently active burrowing owls were observed within the Study Area. Active and inactive rodent and coyote burrows were found in abundance throughout the Study Area. However, none of these burrows showed signs of use by burrowing owls.

In addition to the burrowing owl survey, a more general wildlife survey was conducted during the investigation, including visual observation of animal tracks and scat, visually checking trees and utility structures for potential nests, and monitoring for any birds in flight. Other wildlife and habitat observations included an abandoned stick nest found in a Russian olive tree, an American kestrel (*Falco sparverius*) seen flying overhead, and numerous passerine birds were observed in flight, including western meadowlark (*Sturnella neglecta*).

5 REGULATIONS

The following sections outline potential environmental regulations that would be required if critical areas were located on site.

5.1 Federal

5.1.1 U.S. Army Corps of Engineers

USACE Clean Water Act (CWA) Section 404 review process is required for projects involving discharges of dredge or fill material into jurisdictional Waters of the U.S., including certain streams and wetlands. Any proposed impact located within a USACE jurisdictional wetland or stream would require either a Nationwide Permit or an Individual Permit from the USACE. If no impacts are anticipated to jurisdictional streams or wetlands, local and state regulations would still apply.

Projects that require a federal permit from the USACE would also require review and approval under the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, and the National Historic Preservation Act.

The Project will not impact any wetlands or streams and is therefore not expected to require a USACE CWA Section 404 permit.

5.1.2 U.S. Fish and Wildlife Service

If any active migratory bird nests are observed on the site, the subject bird(s) will be protected under the Migratory Bird Treaty Act (MBTA) of 1918 (as amended), regulated by the USFWS. Under the MBTA, it is illegal to "take" or harass, disturb, injure, or harm a migratory bird or its active nest. The planning of site development should consider surveying for active nests so that construction activities and construction timing can be coordinated to avoid impacts to active nests during the mating and nesting season.

No active migratory bird nests were observed during the site investigation; however, it is possible that nesting birds could occupy the site prior to or during the commencement of construction activities. If any active nests are observed during the time of construction, the project would need to comply with the rules set out in the MBTA to avoid take.

5.2 State

5.2.1 Washington State Department of Ecology

The Washington State Department of Ecology (Ecology) has been authorized to implement Section 401 of the CWA for Water Quality Certification in Washington for most projects that require USACE permits under CWA Section 404 (see discussion above under "Federal"). Typically, projects requiring a CWA Section 404 permit also require a CWA Section 401 Water Quality Certification. The purpose of the certification process is to ensure that federally permitted activities comply with the federal CWA, state water quality laws, and any other applicable state laws. As a CWA Section 404 permit is not expected due to the absence of any Waters of the U.S., we do not anticipate a CWA Section 401 Water Quality Certification will be required from Ecology either.

Ecology also regulates wetlands and other aquatic ecosystems that are not considered jurisdictional Waters of the U.S. under the authority provided to them under the Washington Pollution Control Act. Under this statute, Ecology has the authority to regulate waters of the State that are not considered federally jurisdictional waters of the U.S. through the administrative order process. However, as the project Study Area does not include any waters of the U.S. or waters of the State, an administrative order from Ecology is not expected to be required either.

Projects that may disturb more than one acre of land, or that might result in a discharge to a waterbody that exceeds water quality standards, are also required to obtain coverage under the National Pollutant Discharge Elimination System's (NPDES's) Construction Stormwater General Permit. Ecology administers the NPDES program under the state's Water Pollution Control Act and the federal CWA.

5.2.2 Washington Department of Fish and Wildlife

WDFW issues Hydraulic Project Approvals (HPAs) for construction activities that will use, obstruct, divert, or change the natural flow or bed of state waters. Issuance of an HPA would allow construction activities to occur provided they comply with permit conditions, such as in-water work windows, best management practices, and other minimization measures.

The proposed project will not impact any streams and will therefore not require an HPA.

If any priority habitats or species are identified in the project corridor during survey efforts or construction, WDFW should be consulted.

5.3 Local

5.3.1 Benton County

Benton County regulates critical areas within its jurisdiction under its critical areas ordinance (Title 15 BCC). Within the County, critical areas include wetlands, fish and wildlife habitat conservation areas, aquifer recharge areas, frequently flooded areas, and geologically hazardous areas.

Wetlands are classified and provided protection under BCC Chapter 15.04. Wetlands are categorized in accordance with Ecology's Washington State Wetland Rating System for Eastern Washington - Revised (Ecology Publication #14-06-030). Wetland buffer widths within the County are established in Chapter 15.04.040(b) and based on the category of wetland and the habitat score as determined by a qualified wetland professional using Ecology's rating system. No wetlands were observed within or near the Study Area, hence, these provisions do not apply to the Project as currently defined.

Fish and wildlife habitat conservation areas are defined, classified, and provided protection under BCC Chapter 15.14. Fish and wildlife habitat conservation areas, as defined by the County, include: areas where federal or state designated endangered, threatened, and sensitive species have a primary association, state priority habitats and areas associated with state priority species, habitats and species of local importance, waters of the state (e.g., lakes and streams), Washington State Wildlife Areas as defined, established, and managed by WDFW, and Washington State Natural Area Preserves and Natural Resource Conservation Areas as defined, established, and managed by the Washington State Department of Natural Resources. Benton County adopts the water typing system specified in Washington Administrative Code (WAC) 222-16-030 for classifying waters of the state. Buffers are established based upon that water-typing system, in accordance with BCC 15.14.040(g).

Shrub-steppe habitat is designated as a habitat of local importance in Benton County and a state priority habitat by WDFW. Thus, the Project will have to comply with the performance standards of BCC 15.04.040. Although this region is associated with the potential for burrowing owl, no sign of this species was found during field survey of the Study Area. If during construction a critical species is identified on site, the project would have to comply with additional performance standards and mitigation requirements of BCC 15.14.040.

Compliance with the provisions of the County's critical areas chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may also be required.

5.3.2 City of Richland

The City of Richland regulates critical areas within its jurisdiction under its critical areas code chapter (RMC Chapter 22.10). Within the City, critical areas are defined as wetlands, fish and wildlife habitat conservation areas, critical aquifer recharge areas, frequently flooded areas, and geologically hazardous areas.

Wetlands are classified and provided protection under RMC 22.10.050 through 22.10.160. Wetlands are categorized in accordance with Ecology's Washington State Wetland Rating System for Eastern Washington - Revised (Hruby, 2014). Wetland buffer widths within the City are established in RMC 22.10.110 and based on the category and habitat score of the wetland and the proposed land use intensity. No wetlands were observed within or near the Study Area, hence, these provisions do not apply to the Project as currently defined.

Fish and wildlife habitat conservation areas are defined, classified, and provided protection under RMC 22.10.170 through 22.10.230. Fish and wildlife habitat conservation areas, as defined by the City, include: areas where federal or state designated endangered, threatened, and sensitive species have a primary association, state priority habitats and areas associated with state priority species, habitats and species of local importance, areas listed as a national wildlife refuge, national park, natural area preserve or any preserve or reserve designated under WAC 332-30-151, the Yakima River Delta area, the Hanford Islands in the Columbia River managed by USFWS, Amon Creek Natural Preserve, Badger Mountain Natural Preserve, Category I wetlands, state nature area preserves or natural resource conservation areas and state wildlife areas, documented habitat, other than accidental presence, of threatened or endangered species and of regional or national significance for migrating birds, waters of the state (e.g., lakes and streams).

Shrub-steppe habitat is designated as a state priority habitat by WDFW. Thus, the Project will have to comply with the performance standards of RMC 22.10.210. Although this

region is associated with the potential for burrowing owl, no sign of this species was found during field survey of the Study Area. If during construction a critical species is identified on site, the project would have to comply with additional performance standards and mitigation requirements of RMC 22.10.210 and 22.10.220.

Compliance with the provisions of the City's critical areas chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may also be required.

6 CLOSURE

The findings and conclusions documented in this report have been prepared for specific application to this Project, and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions set forth in our agreement. The conclusions presented in this report are professional opinions based on interpretation of information currently available to us, and are made within the operational scope, budget, and schedule constraints of this Project. No warranty, express or implied, is made.

Shannon & Wilson has prepared the enclosed "Important Information About Your Wetland Delineation/Mitigation and/or Stream Classification Report" to assist you and others in understanding the use and limitations of our reports.

7 REFERENCES

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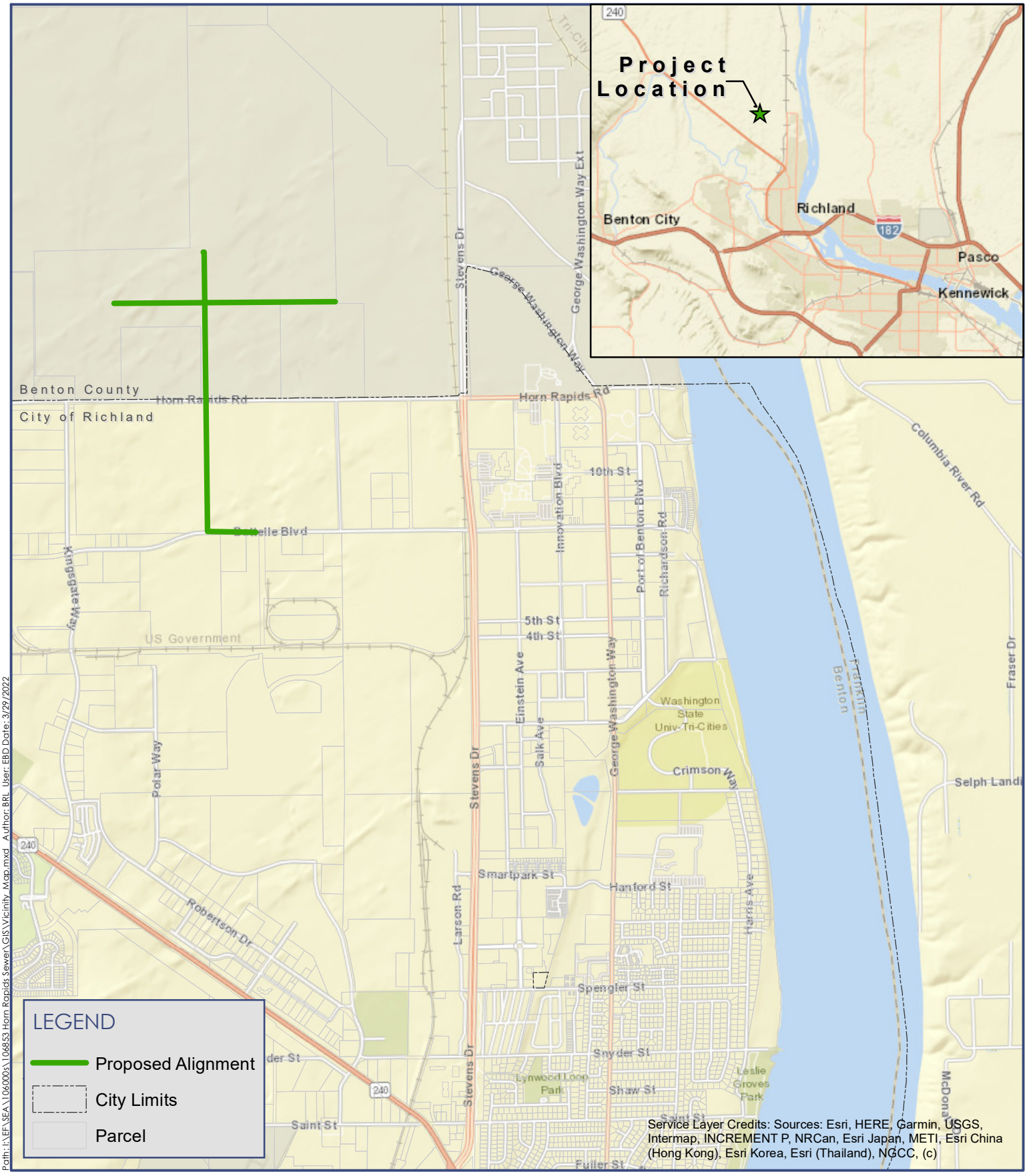

Path: I:\EF\SEA\106000s\106853 Horn Rapids Sewer\GIS\Vicinity_Map.mxd Author: BRL User: EBD Date: 3/29/2022

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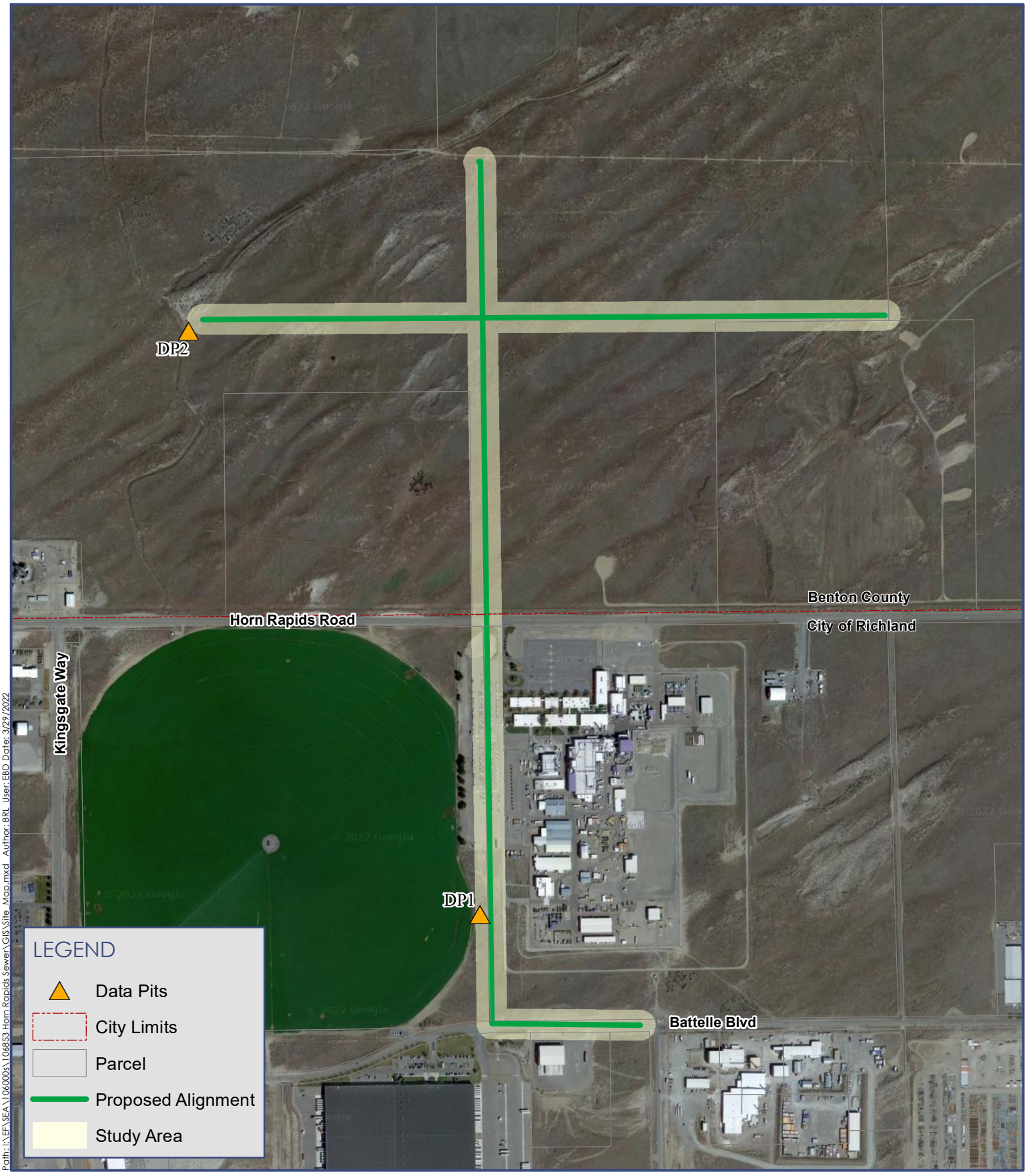
March 2022

Vicinity Map

Figure 1



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N

0 1,000 2,000

Feet

Data pit points were collected using a hand-held GPS device with accuracy of approximately 5 feet.

March 2022

Site Map

Figure 2

APPENDIX A: WETLAND DELINEATION METHODOLOGY

Appendix A

Wetland Delineation Methodology

CONTENTS

Exhibit

APPENDIX A: WETLAND DELINEATION METHODOLOGY

A.1 INTRODUCTION

The triple-parameter approach, as required in the U.S. Army Corps of Engineers' (the Corps') 1987 Corps of Engineers Wetland Delineation Manual and the Corps' 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0) was used to identify and delineate the wetlands on the site described in this report. The triple-parameter approach requires that vegetation, soils, and hydrology are each evaluated to determine the presence or absence of wetlands. An area is considered to be a wetland if each of the following is met: (a) dominant hydrophytic vegetation is present in the area, (b) the soils in the area are hydric, and (c) the necessary hydrologic conditions within the area are met.

A determination of wetland presence was made by conducting a Routine Delineation. Corresponding upland and wetland plots were recorded to characterize surface and subsurface conditions and more accurately determine the boundaries of on-site wetlands.

A.2 WETLAND VEGETATION

Hydrophytic plants are plant species specially adapted for saturated and/or anaerobic conditions. These species can be found in areas where there is a significant duration and frequency of inundation, which produces permanently or periodically saturated soils. Hydrophytic species, due to morphological, physiological, and reproductive adaptations, have the ability to grow, effectively compete, reproduce, and thrive in anaerobic soil. Indicators of hydrophytic vegetation are based on the wetland indicator status of plant species on the national wetland plant list (Lichvar and others, 2016). Plants are categorized as Obligate (OBL), Facultative Wetland (FACW), Facultative (FAC), Facultative Upland (FACU), or Upland (UPL). Species in the facultative categories (FACW, FAC, and FACU) are recognized as occurring in both wetlands and non-wetlands to varying degrees. Most wetlands are dominated mainly by species rated as OBL, FACW, or FAC (Exhibit A-1).

Exhibit A-1 Plant Indicator Status

Plant Indicator Status Categories
Obligate Wetland (OBL) – Plants that almost always occur in wetlands.
Facultative Wetland (FACW) – Plants that usually occur in wetlands but may occur in non-wetlands.
Facultative (FAC) – Plants that occur in wetlands or non-wetlands.
Facultative Upland (FACU) – Plants that usually occur in non-wetlands but may occur in wetlands.
Obligate Upland (UPL) – Plants that almost never occur in wetlands.

Source: Lichvar and others, 2016

The approximate percentage of absolute cover for each of the different plant species occurring within the tree, sapling/shrub, woody vine, and herbaceous strata was determined. Trees within a 30-foot radius, sapling/shrubs and woody vines within a 15-foot radius, and herbaceous species within a 5-foot radius of each data point were identified and noted. However, where site conditions merited it, the dimensions of the tree, sapling/shrub, woody vine, and herbaceous strata were modified.

The dominance test is the primary hydrophytic vegetation indicator and it is used in all wetland delineations. Dominant plant species are considered to be those that, when cumulatively totaled in descending order of absolute percent cover, exceed 50 percent of the total absolute cover for each vegetative stratum. Any additional species individually representing 20 percent or greater of the total absolute cover for each vegetative strata are also considered dominant. Hydrophytic vegetation is considered to be present when greater than 50 percent of the dominant plant species within the area had an indicator status of OBL, FACW, or FAC.

If a plant community does not meet the dominance test in areas where hydric soils and wetland hydrology are present, vegetation is reevaluated using the prevalence index, plant morphological adaptations for living in wetlands, and/or abundance of bryophytes (e.g., mosses) adapted to living in wetlands. The prevalence index is a weighted average that takes into account the abundance of all plant species within the sampling area to determine if hydrophytic vegetation is more or less prevalent. Using the prevalence index, all plants within the sampling area are grouped by wetland indicator status and absolute percent cover is summed for each group. Total cover for each indicator status group is weighted by the following multipliers: OBL=1, FACW=2, FAC=3, FACU=4, UPL=5. The prevalence index is calculated by dividing the sum of the weighted totals by the sum of total cover in the sampling area. A prevalence index of 3.0 or less indicates that hydrophytic vegetation is present.

A.3 HYDRIC SOILS

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (U.S. Department of Agriculture [USDA] Soil Conservation Service [SCS], 1994). Repeated periods of saturation and inundation for more than a few days, in combination with soil microbial activity, causes depletion in oxygen (anaerobic conditions) and results in delayed decomposition of organic matter and reduction of iron, manganese, and sulfur elements. As a result of these processes, most hydric soils develop distinctive characteristics observable in the field during both wet and dry periods (Vasilas and others, 2018). These characteristics may be exhibited as an accumulation of organic matter; bluish-gray, green-gray, or low chroma and high value soil colors; mottling or other concentrations of iron and manganese; and/or hydrogen sulfide odor similar to a rotten egg smell.

The USDA Natural Resources Conservation Service (NRCS) developed official hydric soil indicators as summarized in Field Indicators of Hydric Soils in the United States (Vasilas and others, 2018). These indicators were developed to assist in delineation of hydric soils and are based predominantly on hydric soils near the margins of wetlands. Some hydric soils, including soils within the wettest parts of wetlands, may lack any of the approved hydric soil indicators. If a hydric soil indicator is present, the soil is determined to be hydric. If no hydric soil indicator is present, additional site information is used to assess whether the soil meets the definition of hydric soil.

Identification of hydric soils was aided through observation of surface hydrologic characteristics and indicators of wetland hydrology (e.g., drainage patterns). Soil characteristics were observation at several data points, placed both inside and outside the wetland. Holes were dug with a shovel to the depth needed to document an indicator or to confirm the absence of hydric soil indicators. Soil organic content was estimated visually and texturally. Soil colors were examined in the field immediately after sampling. Dry soils were moistened. Soil colors were determined through analysis of the hue, value, and chroma best represented in the Munsell® Soil Color Chart (Munsell Color, 1992).

A.4 WETLAND HYDROLOGY

Wetland hydrology is determined by observable evidence that inundation or soil saturation have occurred during a significant portion of the growing season repeatedly over a period of years so that wet conditions have been sufficient to produce wetland vegetation and hydric soils. Wetland hydrology indicators give evidence of a continuing wetland hydrologic regime. Wetland hydrology criteria were considered to be satisfied if it appeared that wetland hydrology was present for at least 5 to 12.5 percent (12 to 31 days) of the

growing season. The growing season in Eastern Washington is typically considered to be from March 1 to October 31 (244 days). However, the growing season is considered to have begun when (a) evidence of plant growth has begun on two non-evergreen vascular plants and (b) the soil reaches a temperature of 41 degrees Fahrenheit at 12 inches. The Seattle District Corps requires 14 consecutive days of inundation or saturation for a wetland hydrology to be considered present.

Wetland hydrology was evaluated by direct visual observation of surface inundation or soil saturation in data plots. The area near each data point was examined for indicators of wetland hydrology. Wetland hydrology indicators are categorized as primary or secondary based on their estimated reliability. Wetland hydrology was considered present if there was evidence of one primary indicator or at least two secondary indicators.

Some primary indicators include surface water, a shallow water table or saturated soils observed within 12 inches of the surface, dried watermarks, drift lines, sediment deposits, water-stained leaves, and algal mat/crust. Some secondary indicators include a water table within 12 to 24 inches of the surface during the dry season; drainage patterns; a landscape position in a depression, drainage, or fringe of a water body; and a shallow restrictive layer capable of perching water within 12 inches of the surface

A.5 DISCLAIMER

This methodology was prepared for reference use only and is not intended to replace the 1987 Corps of Engineers Wetland Delineation Manual or the Corps' 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0).

A.6 REFERENCES

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APPENDIX B: WETLAND DETERMINATION DATA FORMS

Appendix B

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Horn Rapids Sewer Line Extension City/County: Benton County Sampling Date: 2022-02-16

Applicant/Owner: City of Richland/Port Commission State: Washington Sampling Point: DP1

Investigator(s): Merci Clinton, Elyse Denkers Section, Township, Range: S16/15/10 T10N R28E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): B Lat: 46.3465144 Long: -119.3030749 Datum: WGS 84

Soil Map Unit Name: FeB-Finley fine sandy loam, 2 to 5 percent slopes NWI classification: None

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Based upon a WETS precip analysis, climatic conditions are drier than normal for this period.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Elaeagnus angustifolia	50	✔	FAC
2.			
3.			
4.			
	50%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Hypochaeris radicata	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	20%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust _____

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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	70 (A)		230 (B)

Prevalence Index = B/A = 3.29

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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 ✔

Remarks:

SOIL

Sampling Point: DP1

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
1 - 15	2.5Y 3/3	100					Loamy 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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Stones/cobble

Depth (inches): 15

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

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

Adjacent to irrigated field, low spot

Remarks:

Moist

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Horn Rapids Sewer Line Extension City/County: Benton County Sampling Date: 2022-02-16

Applicant/Owner: City of Richland/Port Commission State: Washington Sampling Point: DP2

Investigator(s): Merci Clinton, Elyse Denkers Section, Township, Range: S16/15/10 T10N R28E

Landform (hillslope, terrace, etc.): Drainage Pattern Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): B Lat: 46.357403 Long: -119.311317 Datum: WGS 84

Soil Map Unit Name: Not Mapped NWI classification: None

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Based upon a WETS precip analysis, climatic conditions are drier than normal for this period.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Poa secunda	80	✔	FACU
2. Draba verna	5		
3.			
4.			
5.			
6.			
7.			
8.			
	85% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	80 (A)		320 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ 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 ✔

Remarks:

Moss covers 5 to 10% of surface.

SOIL

Sampling Point: DP2

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
1 - 20	2.5Y 4/3	100					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)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

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

Old drainageway/swale

Remarks:

APPENDIX C: SITE PHOTOGRAPHS

Appendix C

Site Photographs

Photographs from the February 16, 2022, Site Investigation

APPENDIX C: SITE PHOTOGRAPHS

Exhibit C-1: Southern Portion of Sewer Alignment, Facing North

Exhibit C-2: Northern Portion of Sewer Alignment, Facing North

APPENDIX C: SITE PHOTOGRAPHS

Exhibit C-3: View of DP-1, Facing North

APPENDIX C: SITE PHOTOGRAPHS

Exhibit C-4: View of DP-2, Facing Northwest

IMPORTANT INFORMATION

Important Information

About Your Wetland Delineation/Mitigation and/or Stream Classification Report

IMPORTANT INFORMATION

A WETLAND/STREAM REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

Wetland delineation/mitigation and stream classification reports are based on a unique set of project-specific factors. These typically include the general nature of the project and property involved, its size and configuration, historical use and practice, the location of the project on the site and its orientation, and the level of additional risk the client assumed by virtue of limitations imposed upon the exploratory program. The jurisdiction of any particular wetland/stream is determined by the regulatory authority(ies) issuing the permit(s). As a result, one or more agencies will have jurisdiction over a particular wetland or stream with sometimes confusing regulations. It is necessary to involve a consultant who understands which agency(ies) has jurisdiction over a particular wetland/stream and what the agency(ies) permitting requirements are for that wetland/stream. To help reduce or avoid potential costly problems, have the consultant determine how any factors or regulations (which can change subsequent to the report) may affect the recommendations.

Unless your consultant indicates otherwise, your report should not be used:

- If the size or configuration of the proposed project is altered.
- If the location or orientation of the proposed project is modified.
- If there is a change of ownership.
- For application to an adjacent site.
- For construction at an adjacent site or on site.
- Following floods, earthquakes, or other acts of nature.

Wetland/stream consultants cannot accept responsibility for problems that may develop if they are not consulted after factors considered in their reports have changed. Therefore, it is incumbent upon you to notify your consultant of any factors that may have changed prior to submission of our final report.

Wetland boundaries identified and stream classifications made by Shannon & Wilson are considered preliminary until validated by the U.S. Army Corps of Engineers (USACE) and/or the local jurisdictional agency. Validation by the regulating agency(ies) provides a certification, usually written, that the wetland boundaries verified are the boundaries that will be regulated by the agency(ies) until a specified date, or until the regulations are modified, and that the stream has been properly classified. Only the regulating agency(ies) can provide this certification.

MOST WETLAND/STREAM "FINDINGS" ARE PROFESSIONAL ESTIMATES.

Site exploration identifies wetland/stream conditions at only those points where samples are taken and when they are taken, but the physical means of obtaining data preclude the determination of precise conditions. Consequently, the information obtained is intended to be sufficiently accurate for design but is subject to interpretation. Additionally, data derived through sampling and subsequent laboratory testing are extrapolated by the consultant who then renders an opinion about overall conditions, the likely reaction to proposed construction activity, and/or appropriate design. Even under optimal circumstances, actual conditions may differ from those thought to exist because no consultant, no matter how qualified, and no exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock, and time. Nothing can be done to prevent the unanticipated, but steps can be taken to help reduce their impacts. For this reason, most experienced owners retain

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their consultants through the construction or wetland mitigation/stream classification stage to identify variances, conduct additional evaluations that may be needed, and recommend solutions to problems encountered on site.

WETLAND/STREAM CONDITIONS CAN CHANGE.

Since natural systems are dynamic systems affected by both natural processes and human activities, changes in wetland boundaries and stream conditions may be expected. Therefore, delineated wetland boundaries and stream classifications cannot remain valid for an indefinite period of time. The Corps typically recognizes the validity of wetland delineations for a period of five years after completion. Some city and county agencies recognize the validity of wetland delineations for a period of two years. If a period of years has passed since the wetland/stream report was completed, the owner is advised to have the consultant reexamine the wetland/stream to determine if the classification is still accurate.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or water fluctuations may also affect conditions and, thus, the continuing adequacy of the wetland/stream report. The consultant should be kept apprised of any such events and consulted to determine if additional evaluation is necessary.

THE WETLAND/STREAM REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when plans are developed based on misinterpretation of a wetland/stream report. To help avoid these problems, the consultant should be retained to work with other appropriate professionals to explain relevant wetland, stream, geological, and other findings, and to review the adequacy of plans and specifications relative to these issues.

DATA FORMS SHOULD NOT BE SEPARATED FROM THE REPORT.

Final data forms are developed by the consultant based on interpretation of field sheets (assembled by site personnel) and laboratory evaluation of field samples. Only final data forms are customarily included in a report. These data forms should not, under any circumstances, be drawn for inclusion in other drawings, because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to reduce the possibility of misinterpreting the forms. When this occurs, delays, disputes, and unanticipated costs are frequently the result.

To reduce the likelihood of data from misinterpretation, contractors, engineers, and planners should be given ready access to the complete report. Those who do not provide such access may proceed under the mistaken impression that simply disclaiming responsibility for the accuracy of information always insulates them from attendant liability. Providing the best available information to contractors, engineers, and planners helps prevent costly problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because a wetland delineation/stream classification is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in written transmittals. These are not exculpatory clauses designed to foist the consultant's liabilities onto someone else; rather, they are definitive clauses that identify where

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the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

THERE MAY BE OTHER STEPS YOU CAN TAKE TO REDUCE RISK.

Your consultant will be pleased to discuss other techniques or designs that can be employed to mitigate the risk of delays and to provide a variety of alternatives that may be beneficial to your project.

Contact your consultant for further information.

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

September 26, 2023

Janéa Stark
CERB
Department of Commerce
PO Box 42525
Olympia, Washington 98504

Re: North Horn Rapids Sewer Project
Log No.: 2023-09-06018-CERB

Dear Janéa Stark:

Thank you for contacting our department pursuant to Executive Order 21-02. We have reviewed the materials you provided for the proposed *North Horn Rapids Sewer Project*, Richland, Benton County, Washington.

We concur with a determination of No adverse cultural resource impacts with the stipulations for a professional archaeological monitoring plan and for an unanticipated find plan. Please provide the plans when available.

Please provide any correspondence or comments from concerned tribes or other parties that you receive.

In the event that archaeological or historic materials are encountered during project activities, work in the immediate vicinity must stop, the area secured, and the concerned tribes and this department notified

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in compliance with Executive Order 21-02. Should additional information become available, our assessment may be revised, including information regarding historic properties that have not yet been identified. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(360) 890-2615
email: *rob.whitlam@dahp.wa.gov*