SEPA¹ 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.

¹ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/Checklist-guidance

A.Background

Find help answering background questions²

1. Name of proposed project, if applicable:

Amos Pond Removal

2. Name of applicant:

Kennewick Irrigation District

3. Address and phone number of applicant and contact person:

Daniel Tissell, P.E.

Engineering Manager

2015 S. Ely Street,

Kennewick, WA 99337

509-586-6012 ext 116

4. Date checklist prepared:

01/09/2024

5. Agency requesting checklist:

Kennewick Irrigation District

6. Proposed timing of schedule (including phasing, if applicable):

This work is planned to be completed before October 2024.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

A previous SEPA and related MDNS has been completed for the adjacent KID canal lining project under file TD 2020-24.

In addition, an Archaeological Survey Report was completed for the Kennewick Irrigation District Title Transfer Project which found no cultural resources identified within the Main Canal Division II Canal Right-Of-Way that is directly adjacent to the existing irrigation pond on the Amos property.

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.

² https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-A-Background

None are known.

10. List any government approvals or permits that will be needed for your proposal, if known.

A grading permit will be obtained from Benton County prior to site grading.

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.)

In exchange for a slope easement, the Kennewick Irrigation District is proposing to fill in an existing, un-used irrigation pond located on parcel 135972011926003 directly adjacent to Kennewick Irrigation District right-of way where the canal lining project under file TD 2020-04 is taking place. The pond will be filled in with the existing embankment that was constructed using material from the excavated pond during the original pond construction.

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.

The proposal location is within Section 35, Township 09, Range 27 of Benton County, WA at 5105 N Canyon View PR NE, Benton City, WA 99320 (Parcel: 135972011926003). Vicinity Map and current site photos provided as Appendix A.

B.Environmental Elements

1. Earth

Find help answering earth questions³

a. General description of the site:

An approximately 6-acre rural residential lot at a general downgradient slope to the north.

Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

Steep slopes on-site are from the existing canal embankment.

b. What is the steepest slope on the site (approximate percent slope)?

³ https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-earth

The existing pond embankment slope is approximately 50%, constructed with the original pond excavation. Upon completion of grading, the pond embankment will be eliminated.

The steepest slope on the Amos property is on the eastern edge of the property near the neighboring pond at a slope of approximately 20% based on LiDAR data & Benton County GIS mapping. This area will remain undisturbed.

The general slope of the area around the existing pond area is approximately 12% based on LiDAR data.

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.

According to the United States Department of Agriculture Natural Resources Conservation Center, the soils on site are Warden Silt Loam and Finley stony fine sandy loam. See Appendix B.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

None are 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.

In exchange for a slope easement, the Kennewick Irrigation District is proposing to fill in an existing, un-used irrigation pond located on parcel 135972011926003 directly adjacent to Kennewick Irrigation District right-of way.

Approximately 1,650 cubic yards will be used to fill the existing pond. This fill will come from the existing pond embankment, which is the material excavated from within the pond during it's original construction. There will be no import or export from the site.

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

Yes. If precipitation occurs during the grading of the site, minor occurrences of rill erosion on bare dirt surfaces could occur. Wind erosion could also occur during construction but will be mitigated with appropriate best management practices.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

None.

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

Appropriate best management practices for erosion control will be employed on the project site as necessary.

2. Air

Find help answering air questions⁴

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.

Fugitive dust could occur because of grading activities for this project. Diesel emissions would occur during the construction activities of the project.

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

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Appropriate dust control measures consistent with the Benton County Clean Air Agency requirements will be followed to reduce and control emissions.

3. Water

Find help answering water questions⁵

a. Surface:

Find help answering surface water questions⁶

 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.

No surface bodies of water are in the immediate vicinity of the project except for man-made irrigation ponds and the Kennewick Irrigation District Canal. The Kennewick Irrigation District Canal eventually drains into the Columbia River.

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.

⁴ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-Air

⁵ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water

⁶ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Surface-water

Yes, construction will fill in the existing irrigation pond on the Amos parcel that is directly adjacent to the Kennewick Irrigation District canal and within 200' of a separate privately owned irrigation pond.

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.

Approximately 1,650 cubic yards will be used to fill the existing pond. This fill will come from the existing pond embankment, constructed with the original pond.

4. Will the proposal require surface water withdrawals or diversions? Give a 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:

Find help answering ground water questions⁷

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 a 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 (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.

None.

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.

⁷ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Groundwater

Any potential runoff (including storm water) will sheet flow and infiltrate across the site downgradient to the north, consistent with the current surrounding parcel topography and runoff patterns.

2. Could waste materials enter ground or surface waters? If so, generally describe.

No.

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:

None. Runoff, including storm water is expected to have negligible changes and impacts post construction.

4. Plants

Find help answering plants questions

a.	Check the types of vegetation found on the site:			
	☑ deciduous tree: alder, maple, <mark>aspen,</mark> other: Russian Olive			
	\square evergreen tree: fir, cedar, pine, other			
	⊠ shrubs			
	⊠ grass			
	□ pasture			
	\square crop or grain			
	$\hfill \Box$ orchards, vineyards, or other permanent crops.			
	\square wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other			
	☐ water plants: water lily, eelgrass, milfoil, other			
	\square other types of vegetation			
b.	What kind and amount of vegetation will be removed or altered?			
	Trees, shrubs sagebrush and grass.			
c.	List threatened and endangered species known to be on or near the site.			
	None known.			
d.	Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.			
	Upon completion of grading, disturbed site area to be hydroseeded.			

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

None known.

5. Animals

Find help answering animal questions⁸

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

Examples include:

- Birds: hawk, heron, eagle, songbirds, other: Herron
- Mammals: deer, bear, elk, beaver, other: Townsend's Ground Squirrel, Domestic Sheep
- Fish: bass, salmon, trout, herring, shellfish, other:
- b. List any threatened and endangered species known to be on or near the site.

None are known.

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

The site is located within the greater Pacific Flyway, a major west coast bird migration route.

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.

None known.

6. Energy and natural resources

Find help answering energy and natural resource questions⁹

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.

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

No.

 $^{^8\} https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-5-Animals$

⁹ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-6-Energy-natural-resou

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

Health Find help with answering environmental health questions¹⁰

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.

None Known.

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

None Known.

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.

None Known.

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.

None will be stored, used or produced.

4. Describe special emergency services that might be required.

None.

Proposed measures to reduce or control environmental health hazards, if any. None.

b. Noise

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Light, rural residential traffic along Canyon View PR NE is expected, as well as rural farming equipment and heavy equipment operation from Kennewick Irrigation District canal lining project under TD 2020-04. None are expected to affect this project.

 $^{^{10}\} https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-7-Environmental-health$

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)?

Noise consistent with heavy equipment operation and construction activities will be produced during normal working hours from approximately 7AM to 5PM. Post construction there will be no additional noise than what is currently occurring.

3. Proposed measures to reduce or control noise impacts, if any:

Work would be occurring during normal working hours during weekdays and occasional Saturdays, eliminating construction noise at night that could disturb area residents.

8. Land and shoreline use

Find help answering land and shoreline use questions¹¹

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.

The parcel is a rural residential lot, surrounded by similar rural residential lots and farmland. The proposed grading will not affect the current parcel land use or the surrounding properties.

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 because 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. The irrigation pond supplied irrigation water to the parcel's irrigable acreage. An alternative irrigation source has been provided, rendering the pond unnecessary.

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?

c. Describe any structures on the site.

No.

There is a residential home and shop on-site in addition to the irrigation pond.

d. Will any structures be demolished? If so, what?

No. Miscellaneous private irrigation piping within the pond area the parcel owner determines not to salvage will be demolished.

e. What is the current zoning classification of the site?

The current zoning of the site is GMA AG.

¹¹ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-8-Land-shoreline-use

f. What is the current comprehensive plan designation of the site?

The current comprehensive plan designation of the site is GMA AG.

- g. If applicable, what is the current shoreline master program designation of the site?
 Not applicable.
- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Portions of the site may be within the Geologically Hazardous Areas classified by Benton County for Combined Erosion Hazard & Steep Slope 15%. Benton County GIS maps appear identify areas that are man-made slopes of canal and neighboring pond embankments.

- i. Approximately how many people would reside or work in the completed project?
 None.
- j. Approximately how many people would the completed project displace?

 None
- k. Proposed measures to avoid or reduce displacement impacts, if any.

None.

I. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

The proposed project will fill in an existing, out of commission irrigation pond consistent with existing and projected land uses and plans.

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

None.

9. Housing

Find help answering housing questions¹²

 a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

¹² https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-9-Housing

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

None.

10. Aesthetics

Find help answering aesthetics questions¹³

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

Not Applicable. Existing irrigation pond embankment to be used to fill in existing pond.

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

None.

c. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. Light and glare

Find help answering light and glare questions¹⁴

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

Some light may be produced by lighting provided if work at dawn/dusk is required to complete the project. Some glare from windows/mirrors on the equipment may be present during the daytime hours.

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

None.

c. What existing off-site sources of light or glare may affect your proposal?
None.

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

None.

12. Recreation

Find help answering recreation questions

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

None are known.

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

¹³ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-10-Aesthetics
¹⁴ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-11-Light-glare

No.

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

None.

13. Historic and cultural preservation

Find help answering historic and cultural preservation questions¹⁵

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.

The Kennewick Irrigation District Canal has been determined eligible for listing.

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.

None known.

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.

Consultation with Department of Archaeology and Historic Preservation Searchable Database.

d. 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.

Stop work in the location that evidence is uncovered and notify proper authorities.

14. Transportation

Find help with answering transportation questions¹⁶

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.

Canyon View PR NE provides access to the site.

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?

¹⁵ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-13-Historic-cultural-p https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-14-Transportation

The site is not served by public transit. The nearest transit stop is approximately 5 miles away.

c. 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).

No.

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

No.

e. 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?

None.

f. 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.

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

None.

15. Public services

Find help answering public service questions¹⁷

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.

None.

16. Utilities

Find help answering utilities questions¹⁸

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

¹⁷ https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-15-public-services ¹⁸ https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-16-utilities

b. 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.

None.

C.Signature

Find help about who should sign¹⁹

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.

Type name of signee: Daniel Tissell, P.E.

Position and agency/organization: Engineering Manager

Date submitted:

 $^{^{19}\} https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-C-Signature$

APPENDIX A



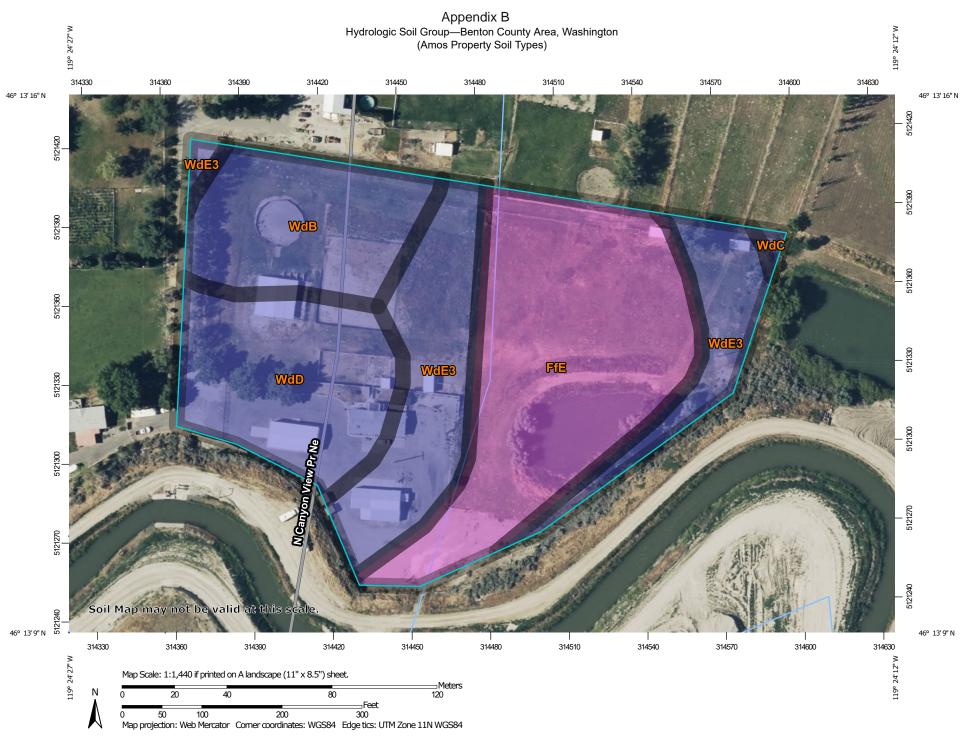
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APPENDIX B



MAP LEGEND MAP INFORMATION The soil surveys that comprise your AOI were mapped at Area of Interest (AOI) С 1:20.000. Area of Interest (AOI) C/D Soils Warning: Soil Map may not be valid at this scale. D **Soil Rating Polygons** Enlargement of maps beyond the scale of mapping can cause Not rated or not available Α misunderstanding of the detail of mapping and accuracy of soil **Water Features** line placement. The maps do not show the small areas of A/D Streams and Canals contrasting soils that could have been shown at a more detailed Transportation B/D Rails ---Please rely on the bar scale on each map sheet for map measurements. Interstate Highways C/D Source of Map: Natural Resources Conservation Service **US Routes** Web Soil Survey URL: D Major Roads Coordinate System: Web Mercator (EPSG:3857) Not rated or not available -Local Roads Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts Soil Rating Lines Background distance and area. A projection that preserves area, such as the Aerial Photography Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. B/D Soil Survey Area: Benton County Area, Washington Survey Area Data: Version 19, Aug 29, 2023 Soil map units are labeled (as space allows) for map scales 1:50.000 or larger. Not rated or not available Date(s) aerial images were photographed: Jun 26, 2022—Jun 27. 2022 **Soil Rating Points** The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background A/D imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident. B/D

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
FfE	Finley stony fine sandy loam, 0 to 30 percent slopes	A	2.4	36.4%
WdB	Warden silt loam, 2 to 5 percent slopes	В	1.1	16.8%
WdC	Warden silt loam, 5 to 8 percent slopes	В	0.0	0.4%
WdD	Warden silt loam, 8 to 15 percent slopes	В	1.3	19.6%
WdE3	Warden silt loam, 15 to 30 percent slopes, severely eroded	В	1.7	26.8%
Totals for Area of Interest			6.5	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher