APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): May 14, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Portland, WM3, Inc, NWP-2008-445-2

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Oregon County/parish/borough: Wasco City: The Dalles
Center coordinates of site (lat/long in degree decimal format): Lat. 45°37'44.77" **N**, Long 121°12'35.43"W.
Universal Transverse Mercator:
Name of nearest waterbody: Chenoweth Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Columbia River
Name of watershed or Hydrologic Unit Code (HUC): 17070105

- ☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
- ☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- ☒ Office (Desk) Determination. Date: May 14, 2015
- ☒ Field Determination. Date(s): February 11, 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

- ☐ Waters subject to the ebb and flow of the tide.
- ☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   - ☐ TNWs, including territorial seas
   - ☐ Wetlands adjacent to TNWs
   - ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   - ☐ Non-RPWs that flow directly or indirectly into TNWs
   - ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   - ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   - ☐ Impoundments of jurisdictional waters
   - ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: approximately 600 linear feet: approximately 30 width (ft) and/or acres.
   Wetlands: approximately 9.0 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   - ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: .

SECTION III: CWA ANALYSIS

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: 18,270 **acres**
Drainage area: **Pick List**
Average annual rainfall: 14.4 inches
Average annual snowfall: 15.4 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☒ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **1 (or less)** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **1 (or less)** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: Chenoweth Creek (RPW, perennial flows) which flows to Columbia River (TNW).
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: approx. 30 feet
Average depth: approx. 2-6 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☒ Gravel ☐ Muck
☒ Bedrock ☒ Vegetation. Type/% cover: blackberry, alder, popular, approx. 75%.
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable conditions. Defined bed and banks with wetland fringe connectivity.
Presence of run/riffle/pool complexes. Explain: riffles and pool present.
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): approx. 1-3 %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **1**
Describe flow regime: Flow in the waterways with prolonged seasonal flow (i.e., the RPWs perennial) is provided by precipitation, water movement from adjacent wetlands during the wet season.
Other information on duration and volume: During high flows in the winter/spring months the water flows out of the banks in some areas. There is a high volume of water during this time which carries sediment and nutrients to the Columbia River.

Surface flow is: **Discrete and confined.** Characteristics: Chenoweth Creek is a perennial stream.

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☒ clear, natural line impressed on the bank ☒ the presence of litter and debris
☒ changes in the character of soil ☒ destruction of terrestrial vegetation
☒ shelving ☒ the presence of wrack line
☒ vegetation matted down, bent, or absent ☒ sediment sorting
☒ leaf litter disturbed or washed away ☒ scour
☒ sediment deposition ☒ multiple observed or predicted flow events
☒ water staining ☒ abrupt change in plant community wetland fringe with alders.
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☒ High Tide Line indicated by: ☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Chenoweth Creek is on the 303(d) list for concerns related to water temperature. Total Maximum Daily Loads (TMDLs) are needed to attain water quality goals for salmon and trout rearing and migration. (http://www.deq.state.or.us/wq/assessment/rpt2010/results.asp).

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

☒ Riparian corridor. Characteristics (type, average width): Chenoweth Creek supports riparian shrub/tree communities comprised of alder, cottonwood, invasive blackberry, etc.

☒ Wetland fringe. Characteristics: Alder and grasses.

☒ Habitat for:

☒ Federally Listed species. Explain findings: Lower Columbia River Coho salmon (Oncorhynchus kisutch) and Middle Columbia steelhead (Oncorhynchus mykiss) (http://www.westcoast.fisheries.noaa.gov/maps_data/endangered_species_act_critical_habitat.html).

☒ Fish/spawn areas. Explain findings: Middle Columbia River Steelhead (http://www.dfw.state.or.us/agency/commission/minutes/10/02_feb/Exhibit%20A_Draft%20Minutes_Jan%208%202010_OFW%20Commission.pdf) , (http://www.dfw.state.or.us/fish/crp/docs/mid_columbia_river/Oregon_Mid-C_Recovery_Plan_Feb2010.pdf). Coho Salmon spawn and rear in Chenoweth Creek (Oregon Department of Fish and Wildlife Service(ODFW), Rod French, Fish Biologist email letter dated February 4, 2009.

☐ Other environmentally-sensitive species. Explain findings:

☐ Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: approximately 9.0 acres

Wetland type. Explain: Palustrine Emergent.

Wetland quality. Explain: Many of the wetlands are dominated by native plant communities. The wetlands that have been deepened (through excavation or impoundment) tend to have more non-native weed species.

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: The volume of precipitation each year dictates how much the wetlands fill up and flow into one another and eventually flow to Chenoweth Creek (RPW) and then on to the Columbia River (TNW).

Surface flow is**: Overland sheetflow**

Characteristics: The site has a complex of 50 wetlands. Wetlands in the area have surface flow into other wetlands on site which flow via three different culverts on the north end of the property, which flow northeast to Chenoweth Creek (RPW perennial), which flows to Columbia River (TNW). One of the wetlands on this site abuts the RPW in the review area . The wetlands in the review area are located approximately 2,000 feet from the Columbia River. The site slopes moderately from southeast to northwest from approximately 145 feet to approximately 125 feet. During and after periods of heavy precipitation water flows across the site through wetlands and intervening upland swales and then discharges to Chenoweth Creek.

Subsurface flow: **Unknown**. Explain findings: The wetlands generally have saturation and/or free water within the upper 12 inches with shallow pockets of standing water in the lowest areas of the wetlands. This hydrology was observed in late March and early April 2009 and late March and April of 2014. At the end of April 2009, hydrology in the upper 12 inches was no longer present. In April 2014, there were a couple of data plots that still had hydrology within the upper 12 inches of the soil profile. Other signs of hydrology included water marks, hummocky topography, and surface soil cracks.

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: Wetlands in the northwest section of the review area have a contiuous surface hydrologic connection (page 9, Wetland delineation report May 2009) and flowing water was observed by the Corps during a February 26, 2009 site visit. Photographs of the hydrology of the wetlands are located in the Corps database under Corps project number NWP-2008-445 and NWP-2008-445-2.

☒ Ecological connection. Explain: The wetlands support aquatic species. The wetlands contain copepods, giant water beetles, cladocerans, and ostracods. The wetlands support fairy shrimp which evolve and go through various stages of their life cycle because of the availability of the pools. They provide a food source for tadpole shrimp, backswimmers, aquatic beetles, aquatic insect larvae, tadpoles, toads, salamanders, killdeer, migratory birds and waterfowl. These organisms interact together and contribute to the ecosystem, which is important to regional biodiversity, essential as food for fish, amphibians, and birds. Waterfowl use this site during breeding season for nesting, feeding, and refuge, therefore supporting some of the life requirements of several waterbird species that time in the local area.

☒ Separated by berm/barrier. Explain: In the review area there has been fill material added to create roads which have disconnected some of the wetlands' hydrology.

(d) Proximity (Relationship) to TNW
Project wetlands are **1 (or less)** river miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters.**
Estimate approximate location of wetland as within the **100 - 500-year** floodplain.

(ii) Chemical Characteristics:
Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Clear water with algae mats and other aquatic wetland plants.
Identify specific pollutants, if known: unknown

(iii) Biological Characteristics. Wetland supports (check all that apply):
☒ Riparian buffer. Characteristics (type, average width): There is a riparian buffer zone along Chenoweth Creek and along the northwest and southwest complex of wetlands.
☒ Vegetation type/percent cover. Explain: The dominant species found in shallow hydrology wetlands included common camas Camassia quamash (FACW), (Camas is a traditional native plant food for the local Tribes in Oregon and Washington).

Other plants on the site are Scouler's popcornflower (Plagiobothrys scouleri, FACW), neckweed (Veronica peregrina, OBL), and tiny mouse tail (Myosurus minimus, OBL). These species were generally found in all the wetlands of this type with varying degrees of dominance. Other observed species commonly found but did not normally have dominant presence include narrowleaf onion (Allium amplectens, NL), slender phlox (Microstaris gracilis, FACU), and curly dock (Rumex crispus, FAC).

Some of the deep hydrology wetlands are dominated by hardstem bulrush (Scirpus acutus, OBL) with other species that included scattered Oregon ash saplings (Fraxinus latifolia, FACW), Pacific willow (Salix lasiandra, FACW), curly dock (Rumex crispus, FAC+), reed canarygrass (Phalaris arundinacea, FACW), teasel (Dipsacus sylvestris, FAC), foxtail barley (Hordeum jubatum, FAC), spikerush (Eleocharis sp. OBL), cattail (Typha latifolia, OBL) and green bristlegrass (Setaria viridis, NL).

On April 29, 2007, Jess Jordan (at that time with the Department of State Lands) observed the following plants on-site: Amsinckia lycopsordes, Amsinckia menziesii, Plagiobothrys nothoflavus, Plagiobothrys scouleri, Orthocarpus spp., Myosurus minimus, Alopecurus geniculatus, Alopecurus pratensis, Phlox gracilis, Grindelia nana, Saxifraga occidentalis. The only plant on this list that was present in The Dalles Wetland delineation report (Environment Science and Assessment, LCC, May 2009) was Plagiobothrys scouleri, the other plants probably did not survive the fire in 2008. In addition, a Long-toed salamander (Ambystoma macrodactylum) was found in the area.

The Jurisdictional Boundary Verification Report, prepared by Terra Science, Inc., dated June 2014, which was submitted with a request for a new approved JD (since the July 2009 JD expired in July 2014) identified the following species as dominants in the pools: Camassia quamash, Hordeum marinum, Phalarus arundinacea, Scirpus validus, Rumex crispus, Plagiobothrys scouleri, Eleocharis palustris, Bromus tectorum, Polygonum spp., Poa bulbosa, Alopecurus saccatus, Ventenata dubia, Poa annua, Schedonorus arundinaceus and Downingia elegans.
.

☒ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings: salamanders, frogs, ostracods, and fairy shrimp. Keith Kohl, ODFW Wildlife Biologist stated these wetlands provide food source and habitat for waterfowl and migratory birds (e-mail dated February 4, 2009). Nesting songbirds may also use the vegetation associated with the wetlands for cover and food.

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: **30 (or more)**
Approximately (14) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Shallow hydrology wetlands vary in size from 90 square feet to 1.1 acres. The wetlands in this category occur in depressional areas and swales and are the dominant wetland type within the review area.
Data Plots 26, 27 28, 29, 30, 31, 32, 33, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 55, 56, 60, 61, 62, and 63 (see map, figure 6 in the May 2009 ESA Wetland Delineation Report).

Deep hydrology wetlands vary in size from 90 square feet to 1.1 acres. The wetlands in this category occur in deeper depressional areas where the dominant feature in the wetland is standing water for extended periods of time.

Data Plots 1, 2, 3, , 4, 5, 6, 7, 11, 12, 13 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 34, 35, 36, 37, 38, 39, 40, 41, 58, 59, 60, 61, 62, & 63 (see map, figure 6 in the May 2009 ESA Wetland Delineation Report).

The "relevant reach" for this analysis includes approximately 2 miles of Chenoweth Creek from the confluence of Badger Creek to the Columbia River. Additional wetlands are adjacent to the relevant reach of Chenoweth Creek outside the review area. These were identified on the National Wetland Inventory map ("The Dalles North") and confirmed on recent air photos. The approximate extent of these additional PFO and PSS wetlands is on the order of 5 acres.

Summarize overall biological, chemical and physical functions being performed:

Biological functions: The wetlands support aquatic species. The wetlands contain copepods, giant water beetles, cladocerans, and ostracods. The wetlands support fairy shrimp which evolve and go through various stages of their life cycle because of the availability of the pools. They provide a food source for tadpole shrimp, backswimmers, aquatic beetles, aquatic insect larvae, tadpoles, toads, salamanders, killdeer, migratory birds and waterfowl. These organisms interact together and contribute to the ecosystem, which is important to regional biodiversity, essential as food for fish, amphibians, and birds. Waterfowl use this site during breeding season for nesting, feeding, and refuge, therefore supporting some of the life requirements of several waterbird species at that time of year. Chenoweth Creek provides habitat for anadromous salmon and steelhead.

Chemical functions: The onsite wetlands absorb and filter sediment, contaminants and nutrients, which could otherwise degrade the quality of Chenoweth Creek and the Columbia River. The wetland vegetation absorbs phosphorous and nitrate by incorporating them into plant tissue and then incorporating the plant tissue into the buildup of organic soils.

Physical functions: The wetlands provide water storage and delay functions during low to moderate intensity storm events. When heavy precipitation fills the wetlands to their maximum capacity, there is an overflow of water from one wetland to another.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to

Section III.D: Chenoweth Creek and its adjacent wetlands provide functions that affect the biological, physical, and chemical character of the TNW Columbia River at the mouth of Chenoweth Creek. These functions include providing habitat for anadromous fish species that migrate though the Columbia River before entering Chenoweth Creek, providing water quality functions that affect both the anadromous fish and the Columbia River, providing food chain support for downstream animal communities, and providing breeding habitat for amphibians and invertebrates and resting sites for birds and/or land species that utilize both the Columbia River and Chenoweth Creek or the adjacent wetlands.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   ☐ TNWs: linear feet width (ft), Or, acres.
   ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Chenoweth Creek is a relatively permanent water which flows year around. Chenoweth Creek flows approximately 1000 feet to the Columbia River (TNW).
   ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   ☒ Tributary waters: **600** linear feet **30** width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   ☐ Tributary waters: linear feet width (ft).
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters: **.**

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: One wetland in the review area is located within the OHW of Chenoweth Creek**.**

   ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: **0.4** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: **approximately 8.6** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

[8]See Footnote # 3.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.**[9]
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .
Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: **.**
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: **.**
☐ Other: (explain, if not covered above): **.**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland delineation report, Chenoweth Station Subdivision, Wasco County, Oregon prepared for Mark McCavic and prepared by Environmental Sceince & Assessment, LLC, May 2009 and the Jurisdictional Boundary Verification Report, prepared by Terra Science for WM3, Inc., dated June 2014 (update since previous AJD expired). Terra Science evaluated whether site conditions had changed in the 5 yrs.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☒ Corps navigable waters' study: Portland District Navigable Riverways within the State of Oregon June 1994.
☒ U.S. Geological Survey Hydrologic Atlas: The Dalles West and The Dalles South, 1:24000.
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: The Dalles South.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Soil Survey Map, Web Soil survey 2.2. Wasco County, Oregon, Northern Part. Accessed, 2009 #36 Quincy loamy fine sand, wet and #39 Rock Outcrop-Xeropsamments complex.
☒ National wetlands inventory map(s). Cite name: NWI Map, USFWS, Wetlands on-line mapper, The Dalles North/The Dalles South Quadrangles, OR-WA, National Wetlands Inventory, 2009.
☒ State/Local wetland inventory map(s):http://or.water.usgs.gov/pubs/Online/Html/WSP2425/.
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):US Army Corps of Engineers aerial photographs: July 1939, May 1979, October 1989, 2005.
or ☒ Other (Name & Date): Corps photographs of the wetlands and Chenoweth Creek; photographs included in the Wetland Delineation Report and update report.
☒ Previous determination(s). File no. and date of response letter: NWP-2008-445; July 15, 2009 .
☐ Applicable/supporting case law: .
☒ Applicable/supporting scientific literature: US Fish and Wildlife Service April 7, 2009 Site Visit/Trip Inspection Record.
☒ Other information (please specify): OWRD hydrologic basin maps.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

All boundaries of wetlands and waterways were determined using the methodology provided in the 1987 Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE, 2008). The study area for the proposed project is approximately 67 acres and consists of approximately nine acres of wetlands. The property is located near the intersection of Interstate 84 and River Road in the northeast part of The Dalles, Oregon (Township 2 North, Range 13 East, Section 28) (Enclosure 1). Report states the study site is approximately 3,500 feet from the Columbia River when actually the study site is approximately 2,000 feet south of the Columbia River a traditional navigable water of the United States.

Chenoweth Watershed includes Chenoweth and Brown's Creeks, each of which have a number of small tributaries. Chenoweth Creek flows generally east and north from Wasco Butte and empties into the Columbia River at the north edge of The Dalles. Tributaries of Chenoweth include Badger Creek, which flows south and east from Sevenmile Hill to its confluence near Foley Lakes and a few small drainages that flow north from Government Flats. Brown's Creek flows to the northeast from the Seward Flat area until it joins Chenoweth Creek just east of Chenoweth Air Park. Brown's Creek has a few small tributaries that flow in from Government Flats to the west and one that joins from the southwest. Chenoweth Watershed is bounded by Mosier Creek Watershed on the west, Mill Creek Watershed on the south and east, and the Columbia River and Rowena Creek Watershed on the north, (http://wascoswcd.org/linked/tdws_assessment.pdf).

The Dalles average total precipitation is 14.02 inches and the average total snow fall is 19.8 inches. (http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?or8407). The wetlands on-site are generally located within small to large naturally occurring depressions. The only source of hydrology is from precipitation and/or snow freshet and the wetlands have shallow soils underlain with bedrock. Soil depths were commonly less than one foot. Water does not infiltrate readily into the ground but sheet flows through the site settles in the depressional areas. Soil texture varies throughout the site, with some soils being classified as clayey, while others are classified as sandy. Some of the hydric soils contained redoximorphic features.

The 2008 Wetland Delineation described the wetlands as "shallow hydrology" and "deep hydrology", those distinctions are descriptive only and not relevant to the wetland delineation as a wetland types.

The "shallow hydrology" wetlands have a distinct wet meadow plant community that grows within the shallow swales and depressional areas. The dominant species found in these wetlands included common camas Camassia quamash (FACW), Scouler's popcornflower (Plagiobothrys scouleri, FACW), neckweed (Veronica peregrina, OBL), and tiny mouse tail (Myosurus minimus, OBL). These species were generally found in all the wetlands of this type with varying degrees of dominance. Other observed species commonly found but did not normally have dominant presence include narrowleaf onion (Allium amplectens, NL), slender phlox (Microstaris gracilis, FACU), and curly dock (Rumex crispus, FAC).

Four wetlands that lacked substantial vegetation were included because the morphology closely matched the other wetlands of this type. The area was burned in summer 2008 and the vegetation was slow to recover from the burn in some areas.

The "deep hydrology" wetlands generally had saturation and or free water within the upper 12 inches with shallow pockets of standing water in the lowest areas of the wetlands. This hydrology was observed in late March and early April 2009 and in again in March and April of 2014. In 2009, by the end of April hydrology in the upper 12 inches was no longer present. Other signs of hydrology included water marks, hummocky topography, and surface soil cracks. In 2014, there was excessive rainfall in March 2014, which created elevated water tables and saturation. Terra Science noted this in their data sheets to explain why wetland hydrology was met in some upland areas, but those areas did not have hydric soils or a dominance of hydrophytic vegetation.

Some of these wetlands are dominated by hardstem bulrush (Scirpus acutus or Schoenoplectus acutus, OBL) with other species that included scattered Oregon ash saplings (Fraxinus latifolia, FACW), Pacific willow (Salix lasiandra, FACW), curly dock (Rumex crispus, FAC), reed canarygrass (Phalaris arundinacea, FACW), teasel (Dipsacus sylvestris, NL), foxtail barley (Hordeum jubatum, FAC), spikerush (Eleocharis sp. OBL), cattail (Typha latifolia, OBL) and green bristlegrass (Setaria viridis, NL). The persistent vegetation in these wetlands was primarily visible during the November 2007 site visit. After the 2008 fire some of the wetlands with this vegetation community appeared to have a decrease in vegetative cover.

During times of heavy precipitation, flows between wetland areas occur and water exits the site via culverts beneath River Road and ultimately reaches Chenoweth Creek which is an Essential Salmonid Habitat for ESA-listed coho salmon and steelhead. Rod French (Oregon Department of Fish and Wildlife, Fish Biologist) (ODFW) stated coho salmon and winter steelhead spawn and rear in Chenoweth Creek. Keith Kohl (ODFW Wildlife Biologist) stated that many migratory birds feed in the pools, deer and other mammals use the area as well. Jess Jordan (Department of State Lands) observed several species of frogs and amphibians during a site visit.

These wetlands are saturated with water November to early April. They are dry from late April to October. During the dry time of the year, wetland hydrology indicators are present; ponding-remnant biotic crusts, benthic microflora, and the dried remains of free-floating algae left on or near the soil surface after dewatering. Surface soil cracks and algal mats were observed on the study site during the April 2009 site visit. Shells of aquatic snails were observed in several of the wetlands as well.

Steve Wille, Aquatic Biologist with US Fish and Wildlife Service conducted a site visit on April 7 2009 and submitted a Site Visit/Trip Inspection Record to the Corps on May 5, 2009. He recorded the location of eight different pools that were plotted by GPS. In his report he states an accepted (primarily west coast) description defining vernal pools includes the occurrence of: 1) a well-indurated duripan layer, 2) patterned ground, and 3) a seasonal hydrology/climate that results in the three distinct annual stages (aquatic, flowering, and drought phases). Descriptions from California support that a basalt bedrock layer can define a duripan (or hardpan) layer; therefore based on observations from this day, several of the pools observed meet the definition of a vernal pool.

In site 1, Steve Wille found an invertebrate and two male fairy shrimp which were identified as Eubranchipus oregonus. In Site 2, a scoop with the net brought up cyclops, daphnia, and numerous large copepods. He also found fairy shrimp identified as E. oregonus. At site 3 he found fairy shrimp identified as E. bundyi. No fairy shrimp were found in Site 4. Site 5 was a large pool which did not have any fairy shrimp; however, copepods, giant water beetle, cladocerans, or ostracods was observed. Site 6, 7, and 8, had a dense population of fairy shrimp (E. oregonus) and nearly all of them were female. Of the over 200 worldwide known species of fairy shrimp 15 have been found in Oregon. Of the species known to occur in Oregon, only B. lynchi is federally listed. Mr. Wille's report is available in file number NWP-2008-445.

Photos are available in the electronic file from February 26, 2009 (documented overflow of water from one wetland to another) and from a February 11, 2015 site visit to determine if conditions on-site had changed. Wetland boundaries have not changed on-site since 2009. There have been small changes to the indicator statuses of a couple of plants since 2009, but those changes did not change previous vegetation determinations (i.e. dominance of hydrophytic vegetation or not).