



Pasco Washington – WWTP Outfall The "Long" Journey to a New River Outfall

Mark Cummings, PE October 10, 2024

LEARNING OBJECTIVES

Objective 1 – Discuss the key elements in assessing an existing wastewater treatment plant outfall and planning for a new outfall into the Columbia River.

Objective 2 – Identify key elements in developing a successful permitting process when dealing with multiple regulatory agencies.

Objective 3 - Review the preparation of the contract documents associated with the challenging in-water construction work

Discussion Topics

• Planning and Modeling

///>

- Environmental and
 Regulatory Permitting
- . Design
- Construction



Background

Pasco Washington





WWTP Overview





WWTP Overview



Celebrate PUBLIC WORKS! APWA WA

WWTP Overview



NPDES Permit

Permit No. WA-004496-2 Page 5 of 35

SPECIAL CONDITIONS

In this permit, the word "must" denotes an action that is mandatory and is equivalent to the word "shall" used in previous permits.

S1. DISCHARGE LIMITS

A. Effluent Limits

All discharges and activities authorized by this permit must comply with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit violates the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee may discharge municipal wastewater at the permitted location subject to compliance with the following limits:

EFFLUENT LIMITS: OUTFALL # 1			
Parameter	Average Monthly a	Average Weekly ^b	
Biochemical Oxygen Demand (5-day)	Biochemical Oxygen 30 mg/L, 1131 lbs/day Demand (5-day) 85% removal of influent BOD		
Total Suspended Solids 30 mg/L, 1131 lbs/day 85% removal of influent		45 mg/L, 1696 lbs/day	
Fecal Coliform Bacteria c	200/100 mL	400/100 mL	
pH ^d	4 ^d Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0.		
Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured. See footnote c for fecal coliform calculations.			
^b Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharge" measured during a calendar week divided by the number of "daily discharges" measured during that week. See footnote " for fecal coliform calculations.			
^e To calculate the average monthly and average weekly values for fecal coliforms you must use the geometric mean. Ecology gives directions to calculate this value in publication No. 04-10- 020, <i>Information Manual for Treatment Plant Operators</i> available at: <u>http://www.ccv.wa.gov/pubs/0410020.pdf</u>			
Indicates the range of permitted values. The Permittee must report the instantaneous maximum and minimum pH monthly. Do not average pH values.			

PARAMETER	MONTHLY AVERAGE	WEEKLY AVERAGE
Biochemical Oxygen Demand (BOD5)	30 mg/l 1,131 lb/day 85% removal	45 mg/l 1,696 lb/day
Total Suspended Solids (TSS)	30 mg/l 1,131 lb/day 85% removal ⁽¹⁾	45 mg/l 1,696 lb/day
Fecal Coliform Bacteria ⁽²⁾	200 per 100 ml	400 per 100 ml
рН	6.0 to 9.0	6.0 to 9.0

Population & Flow

HISTORICAL US CENSUS DATA

• 3.4% growth since 1910

PROJECT FORWARD

- 3% growth
- Flow roughly doubles between 2017 and 2040





Existing Outfall

- Installed circa 1951
- Pre-McNary Dam
- 24-inch concrete pipe
- Concrete wing wall below
 ordinary low water
- Open cut construction
- 3-port diffuser installed 1997







Planning & Modeling

2019 Facility Plan

- Identified the existing outfall • was nearing hydraulic capacity
- Antidegradation Study • completed









City of Pasco

July 2019

METHODICALLY STEP THROUGH PLANNING AND DESIGN PROCESS

- Identify Dilution Factor Requirement
- Identify Critical River Condition
- Mixing Zone Modelling
- Design recommendation
- Route and alignment



MEMO: DILUTION FACTOR

- Acute Mixing Zone 33 ft
- Chronic Mixing Zone 330 ft
- Controlling Critical Water Quality Criteria
 (depth), Water Quality Criteria
 - Ammonia



murraysmith

Memorandum

Date:	February 5, 2020
Project:	Outfall Mixing Zone Study - City of Pasco, Washington
То:	Diana Washington – Department of Ecology
Copied:	Neal Schertz – City of Pasco Maria Serra – City of Pasco
From:	Mark Cummings – Murraysmith Craig Anderson – Murraysmith
Re:	Mixing Zone Study – Dilution Factor Goals

Executive Summary

This memorandum has been developed to document the proposed dilution factor goals for the City of Pasco's (City) municipal Wastewater Treatment Plant outfall diffuser. The calculated Minimum Dilution Factor Goals are summarized in **Table ES**. These dilution factors will be utilized in the mixing zone model to determine the required diffuser performance.

Table ES - Dilution Factors

	Minimum Dilution Factor ²		
Constituent			
Ammonia, Criteria as Total NH3-N	14.2	119.7	
Polychlorinated Biphenyls (PCB's)	NA1	NA ¹	
Cadmium	NA1	2.8	
Copper	7.0	10.8	
Cyanide	NA ¹	NA ¹	
Lead	NA1	1.6	
Mercury	NA ¹	2.7	
Selenium	NA1	3.3	
Zinc	1.0	1.1	

1. NA notes the instances when the WWTP effluent concentration is below WQ standard (see Table 6) and therefore does not require dilution in the mixing zone.

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2. Equation 3 used to calculate dilution factors with data shown in Table 1, 5 and 6.

Notes

MEMO: CRITICAL RIVER CONDITION

AMBIENT CONDITIONS

- Velocity
- Depth
- Flow

DATA ANALYSIS

- 7Q10 Often used in river condition
- **7D10** Pasco Controlling Condition Depth due to dam backwater, rivers are typically low flow condition



murraysmith

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Notes:

 NA notes the instances when the WWTP effluent concentration is below WQ standard (see Table 6) and therefore does not require dilution in the mixing zone.

2. Equation 3 used to calculate dilution factors with data shown in Table 1, 5 and 6.

MEMO: OUTFALL STUDY

Recommendation of •

Distance to near shore (left bank)

····· YB1 = 950 ft.

- Pipeline alignment ____
- Diffuser location, ports, sizes, _ duckbill valves





ENVIRONMENTAL AND REGULATORY PERMITTING

Multiple Agencies:

- Federal
- State
- Local
- Tribes

Approximately a Two-year process



CITY

- Environmental Justice
- Shoreline Substantial Development Permit, City of Pasco, August 18, 2022



NOTICE OF PUBLIC MEETING ABOUT UPCOMING PROJECT

PLEASE TAKE NOTICE that the City of Pasco is planning to construct improvements to the City's Municipal Wastewater Treatment Plant (WWTP) beginning in 2023. Some of the planned improvements will consist of work within the WWTP facility itself. Additional work will be performed in the Port of Pasco's property South of Answorth consisting of installing a new river outfall piping and a new diffuser. A public meeting is scheduled to discuss the following:

- Explanation of project scope and need.
- Potential impact during construction.
- Any environmental impacts the project may have along with mitigation measures to offset any environmental impacts.

This public meeting will be a part of a bi-weekly City of Pasco Council Meeting, which is scheduled for Tuesday, July 5th, 2022 at the City of Pasco Council Chambers located at 525 N. Third Ave in Pasco. This meeting will provide an opportunity for everyone to hear about the upcoming project and provide the public an opportunity to comment about the project. The public can attend the meeting in-person, submit written comments prior to the meeting, or attend remotely. Below is a link to the City Council website, where you can find information about the upcoming meeting.

https://www.pasco-wa.gov/122/City-Council



For additional information, please contact the Pasco Project Manager Jon Padvorac at (509) 544-4126.



CITY OF PASCO SHORELINES MASTER PROGRAM

Findings of Fact/Substantial Development

Shoreline Substantial Development Application No. SMP 2022-003

I.INTRODUCTION

APPLICANT: Jon Padvorac, City of Pasco

Pasco, WA 99301

PROPERTY OWNED BY: The Wastewater Treatment Plant (WWTP) is owned by the City of Pasco; easements for the proposed outfall realignment areas are on Port of Pasco properties.

LOCATION OF PROPERTY: Project area is located at 1015 S. Grey Ave. (Parcel No. 112360017) south towards and into the Columbia River along existing and proposal outfall pipe alignments, crossing Port of Pasco property located at 904 E Ainsworth Ave (Parcel Nos. 11240025 and 11240029), in Pasco, WA.

SUBSTANTIAL DEVELOPMENT PERMIT REQUEST: The proposal is to construct Phase 2 of the City of Pasco's Wastewater Treatment Plant (WWTP) Clean Water Preservation (CWP) Project, including improvements to treatment processes at the City's WWTP site and the replacement of a segment of the existing outfall pipe that conveys treated wastewater from the City's WWTP to the Columbia River.

Legal notification was given on 27 July 2022. The community was given the opportunity to comment in favor or in opposition to approval of the proposed Substantial Development Permit.

II.FINDINGS OF FACT

A. Is the proposed use listed for the High Intensity – Mixed Use area within the master plan regulations? Yes

Specify: The shoreline environmental designation at Osprey Pointe is High-Intensity–Mixed Use. Per Pasco Municipal Code (PMC) Table 29.01.200; "Above-ground and underground utilities (parallel and across shoreline) are allowed with a substantial development permit." Per PMC Table 29.15.020, the project's riparian setback is 5 feet.

The WWTP site is developed with City offices, outbuildings, paved vehicle parking and access routes, and various wastewater treatment facilities including clarifiers, aeration basins, drying



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⁵²⁵ N. 3rd Avenue

- Archaeological Investigations and Monitoring
- WA Department of Archaeology and Historic Preservation (DAHP)
- Cultural Resources and Tribe Consultation





US Army Core of Engineer (USACE)

Washington Joint Aquatic Resource Permit Application (JARPA)



ĬĸĬ US Army C of Enginee WASHINGTON STATE **Joint Aquatic Resources Permit** Application (JARPA) Form^{1,2} [help] USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.

- 1	AGENCY USE ONLY
rps s a	Date received: 05 Jun 2022
	Agency reference #: <u>SMP 2022-003</u>
	Tax Parcel #(s): <u>112420025</u>
	112420029

Part 1–Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help] City of Pasco WWTP Clean Water Preservation Project Phase 2

Part 2–Applicant

The person and/or organization responsible for the project. [help]

2a. Name (Last, Firs	t, Middle)		
Padvorac, Jon			
2b. Organization (I	f applicable)		
City of Pasco Publi	ic Works		
2c. Mailing Addres	S (Street or PO Box)		
525 N. 3rd Avenue			
2d. City, State, Zip	1		
Pasco, Washingtor	n 99301		
2e. Phone (1)	2f. Phone (2)	2g. Fax	2h. E-mail
(509) 544-3080			PadvoracJ@pasco-wa.gov

¹Additional forms may be required for the following permits:

- . If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- In Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

²To access an online JARPA form with [help] screens, go to http://www.epermitting.wa.gov/site/alias resourcecenter/jarpa jarpa form/9984/jarpa form.aspx.

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

ORIA-revised 02/2020

Nationwide Permit Verification Letter, United States Army Corps of Engineers (ACOE), November 17, 2022



US Army Corps of Engineers & Seattle District

NATIONWIDE PERMIT 1 Terms and Conditions 2021 NWPs - Final 41: Effective Date: February 25. 2022



A. Description of Authorized Activities

- B. U.S. Army Corps of Engineers (Corps) National General Conditions for All Final 41 NWPs
- C. Seattle District Regional General Conditions
- D. Seattle District Regional Specific Conditions for this Nationwide Permit (NWP)
- E. 401 Water Quality Certification (401 WQC) for this NWP
- F. Coastal Zone Management Consistency Response for this NWP

In addition to any special condition that may be required on a case-by-case basis by the District Engineer, the following terms and conditions must be met, as applicable, for a Nationwide Permit (NWP) authorization to be valid in Washington State.

A. DESCRIPTION OF AUTHORIZED ACTIVITIES

 <u>Aids to Navigation</u>. The placement of aids to navigation and regulatory markers that are approved by and installed in accordance with the requirements of the U.S. Coast Guard (see 33 CFR, chapter I, subchapter C, part 66), (Authority: Section 10 of the Rivers and Harbors Act of 1899 (Section 10))

B. CORPS NATIONAL GENERAL CONDITIONS FOR ALL 2021 NWPs - FINAL 41

<u>Note</u>: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structure low for obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. <u>Acquite Life Movements</u>. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be

Biological Opinion (BO), National Marine Fisheries Service (NMFS), November 17, 2022





UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL MARINE FISHERIES SERVICE West Coast Region 1201 NE Loyd Boulevard, Suite 1100 Portiand, Oregon 97232-1274

Refer to NMFS No: WCRO-2022-01039

DOI: https://doi.org/10.25923/0w8g-xp16

November 17, 2022

Todd N. Tillinger Chief, Regulatory Branch Seattle District U.S. Army Corps of Engineers P.O. Box 3755 Seattle, WA 98124-3755

Re: Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion and Magnuson– Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the City of Pasco Waste Water Treatment Plant Clean Water Preservation Project Phase 2, Franklin County, Washington.

Dear Mr. Tillinger:

This letter responds to your April 20, 2022, request for initiation of consultation with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) for the subject action. Your request qualified for our expedited review and analysis because it met our screening criteria and contained all required information on, and analysis of, your proposed action and its potential effects to ESA-listed species and designated critical habitat.

NMFS also reviewed the likely effects of the proposed action on essential fish habitat (EFH), pursuant to section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act (16 U.S.C. 1855(b)), and concluded that the action would adversely affect the EFH of Pacific coast salmon. Therefore, we have included the results of that review in this document.

On July 5, 2022, the U.S. District Court for the Northern District of California issued an order vacating the 2019 regulations that were revised or added to 50 CFR part 402 in 2019 ("2019 Regulations," see 84 FR 44976, August 27, 2019) without making a finding on the merits. On September 21, 2022, the U.S. Court of Appeals for the Ninth Circuit granted a temporary stay of the district court's July 5 order. As a result, the 2019 regulations are once again in effect, and we are applying the 2019 regulations here. For purposes of this consultation, we considered whether the substantive analysis and conclusions articulated in the biological opinion and incidental take statement would be any different under the pre-2019 regulations. We have determined that our analysis and conclusions would not be any different.



Letter of Concurrence (LOC), United States Fish & Wildlife Service (USFWS), September 27, 2022





United States Department of the Interior

FISH AND WILDLIFE SERVICE

Central Washington Field Office 215 Melody Lane, Suite 103 Wenatchee, Washington 98801

In Reply Refer to: FWS/R1/2022-0036919

Todd Tillinger, Chief, Regulatory Branch U.S. Army Corps of Engineers, Seattle District ATTN: David Moore 4735 East Marginal Way South, Building 1202 Seattle, Washington 98134-2388

Dear Mr. Tillinger:

Subject: City of Pasco WWTP Clean Water Preservation Project Phase 2 (NWS-2022-223)

This letter is in response to your April 20, 2022, request for informal consultation with the U.S. Fish and Wildlife Service (Service) on Phase 2 of the City of Pasco's proposed Wastewater Treatment Plant (WWTP) Clean Water Preservation Project (Pasco WWTP Project) located in Franklin County, Washington. We received the request for informal consultation and the biological assessment (BA) by email on April 20, 2022. The U.S. Army Corps of Engineers' (Corps) has requested the Service's concurrence that the Pasco WWTP Project may affect buil s not likely to adversely affect buil trout (*Salvelinus confluentus*) or designated bull trout critical habitat. It was also determined that the Pasco WWTP Project will have no effect on yellow-billed cuckoo (*Coccyzus americanus*) or its designated critical habitat. There is no regulatory or statutory authority for the Service to concur with "no effect" determinations; therefore, these determinations rest with the action agency. This informal consultation has been conducted in accordance with section 7(a)(2) of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*).

On July 5, 2022, the U.S. District Court of the Northern District Court of California (the Court) vacated the 2019 regulations implementing section 7 of the Act. On September 21, 2022 the Ninth Circuit Court of Appeals stayed the lower court's decision, thereby reinstating the 2019 regulations. Because of the possibility of changes in which regulations are in place pending future court decisions, we considered whether our substantive analyses and conclusions for

PACIFIC REGION 1

Idaho. Oregon*, Washington, American Samoa, Guam, Hawaii, Northern Mariana Islands "partial



Hydraulic Project Approval (HPA), Washington Department of Fish & Wildlife, November 15, 2022



HYDRAULIC PROJECT APPROVAL

Washington Department of Fish & Wildlife PO Box 43234 Olympia, WA 98504-3234 (360) 902-2200

Issued Date: November 15, 2022 Project End Date: November 14, 2027 Permit Number: 2022-3-53+01 FPA/Public Notice Number: N/A Application ID: 28151

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
City of Pasco Public Works	Environmental Science Associates
ATTENTION: Jon Padvorac	ATTENTION: John Vlastelicia
525 N. 3rd Avenue	819 SE Morrison St, Ste 310
Pasco, WA 99301	Portland, OR 97214

Project Name:

City of Pasco WWTP Clean Water Preservation Project Phase 2

Project Description: The overall project addressed in this application consists of Phase 2 of the City of Pasco's Wastewater

Treatment Plant (WWTP) Clean Water Preservation (CWP) Project. It involves improvements to treatment processes at the City's WWTP site and the replacement of a segment of the existing outfall pipe that conveys treated wastewater from the City's WWTP to the Columbia River. The outfall portion of the project involves work within and adjacent to the Columbia River and is the primary focus of this application.

The proposed Phase 2 outfall pipe consists of a buried 42-inch diameter high-density polyethylene

(HÓPE) pipe. Approximately 360 linear feet of the pipe would be on land, on Port of Pasco property above the Columbia River ordinary high water (OHW) elevation, and approximately 1,200 linear feet of the pipe would be within the Columbia River. The outfall pipe would terminate in an approximately 150-loot-long diffuser section that would include 10 vertical discharge ports with duckbill valves.

The existing 24-inch diameter outfall pipe, which currently discharges treated effluent to the Columbia River in the same area as the proposed pipe, would be removed. Areas of shoreline vegetation temporarily disturbed by construction of the new outfall pipe would be restored with vegetation after the outfall pipe is installed.

PROVISIONS

1. TIMING LIMITATION: Work below the ordinary high water line must only occur between August 1 and February 28th of a given year.

NOTIFICATION REQUIREMENTS

2. APPROVED PLANS: You must accomplish the work per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, except as modified by this Hydraulic Project Approval. You must have a copy of these plans available on site during all phases of the project construction.

3. NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by email at troy.maiki@dtw.wa.gov; mail to Troy Maikis, 2620 N Commercial Ave, Pasco, WA 99301; or contact via phone or text message at 509-312-8117 at least three business days before starting work and at least 48-hours before equipment is operated in the watercourse. The notification must include the permittee's name, project location, starting date, and the Hydraulic Project Approval permit number.

4. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and



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Private Aids to Navigation (PATON) Permit, United States Coast Guard, October 25, 2022



U.S. Department of Homeland Security United States Coast Guard	Commander United States Coast Guard Thirteenth District	915 Second Ave. Rm 3510 Seattle, WA. 98174-1067 Staff Symbol: dpw Phone: (206) 220-7270 16518
City of Pasco Attn: Mr. Dan Dotta, Facilities		10/25/22
525 North 3 rd Ave Pasco, WA 99301 dottad@pasco-wa.gov		
Dear Mr. Dotta,		

Your Private Aids to Navigation (PATON) Application (CG-2554) is enclosed for the following:

 Pasco Wastewater Outfall Pipe Lighted Warning Buov LLNR 13050.5 Class II

Please reference the following enclosure:

Approved Private Aids to Navigation Application (CG-2554)

Please remember that your PATON application is a legal document. Further regulations concerning your responsibilities can be found in Title 33 Code of Federal Regulations (CFR) Subchapter C Parts 62 and 66, which can be found on our website at http://www.pacificarea.uscg.mil/Our-Organization/District-13/District-Staff/-dpw/. Listed below are some specific points of which you should be aware;

- After receiving your approved application, you are required to notify this office immediately at the phone number or e-mail listed below once the work has been completed on your PATON.
- If your PATON has not been installed within six months of the approval date on your application. the approved application is void. To keep your application from being cancelled you need to notify me in writing and request an extension.
- · Any discrepancy in the operation of your PATON must be immediately reported to Coast Guard Sector Columbia River at (503) 861-6211, 24 hours a day, and my representative listed below.
- All classes of PATON shall be maintained in proper condition. They are subject to inspection by the Coast Guard at any time and without prior notice to the owner and/or maintainer.
- If you need to make changes to, transfer ownership of or discontinue your PATON, or update your application, contact my representative no less than two weeks prior to making these changes.

If you have any questions contact my representative Mr. Timothy Westcott at (206) 220-7285 or by email at D13-SMB-D13-PATON@uscg.mil.

Sincerely,

B I HARRIS Commander, U.S. Coast Guard Chief, Waterways Management Branch

Encl: Approved Private Aids to Navigation application (CG-2554)

State Environmental Policy Act (SEPA) Mitigated Determination of Non-Significance (MDNS), City of Pasco, July 27, 2022





Community Development Department PO Box 293, 525 N 3rd Ave, Pasco, WA 99301 P: 509.545.3441 / F: 509.545.3499

MITIGATED DETERMINATION OF NON-SIGNIFICANCE (Optional DNS Process)

Issuance Date: July 27, 2022

Project Name: City of Pasco Zone 3 Reservoir

Project Number: SEPA 2022-069/SMP 2022-003

Proponent: City of Pasco Public Works 525 North 3rd Avenue Pasco, WA 99301

Applicant: City of Pasco Public Works c/o Jon Padvorac 525 North 3rd Avenue Pasco, WA 99301

Description of Proposal: The proposal is to construct Phase 2 of the City of Pasco's Wastewater Treatment Plant (WWTP) Clean Water Preservation (CWP) Project, including improvements to treatment processes at the City's WWTP site and the replacement of a segment of the existing outfall pipe that conveys treated wastewater from the City's WWTP to the Columbia River.

Location of Proposal: Located at 1015 S. Grey Ave. (Parcel No. 112360017) south towards and into the Columbia River along existing and proposal outfall pipe alignments, crossing Port of Pasco property located at 904 E Ainsworth Ave (Parcel Nos. 11240025 and 11240029), in Pasco, WA.

Mitigation:

- The proposed outfall pipe alignment shall closely follow the existing outfall alignment. The proposed outfall alignment shall enter the Columbia River where the established vegetated riparian corridor is narrow, and the alignment shall avoid impacts to mature riparian trees.
- All vegetated areas temporarily disturbed by construction activities shall be replanted after construction. Native plantings suitable for the site conditions shall be used in the revegetation to restore disturbance areas to equal or better condition.
- The proposed outfall design would bury the in-water portion of the pipe in a trench, with backfill cover matching existing adjacent grades. The offshore portion of the pipe and its recessed protective rock cover would be overlain by a layer of fish mix gravels

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Department of Natural Resources





Phase 1 Design

COORDINATION WITH PROPERTY OWNER AND WASHINGTON DEPARTMENT OF TRANSPORTATION

- Temporary Construction Easement
- Permanent Pipeline Easement
- Crossing State Route WA 397







Phase 2 Design

COORDINATION WITH PROPERTY OWNER

- Temporary Construction Easement
- Permanent Pipeline Easement
- Timing of construction
- Coordination of details







Design, Bid & Build



Design

Design Hurdles

- Pipeline Inland and In-water
- Regulatory and Permitting
- WWTP Flow Meter Compliance meter; Headloss: Flume or magmeter
- Coordination with property owner and Washington Department of Transportation



Connections and phasing – Upstream Phase 1,
 Downstream Phase 1 and Upstream Connection Phase 2

Design Items

- Geotechnical investigation
 - Inland only
- Survey
 - Inland topographic and in-water bathymetry
- In-water Anchoring
- Scour
 - Armor rock size with the fish mix
- Excavation
- Pipeline
 - Coordination needed on the pipeline alignment with WSDOT and Port of Pasco
 - Backfill and protection
 - The fish mix might something to highlight since we went from a defined gradation that was in WSDOT but not available locally to using native backfill)




Phase 1

Pipeline





Phase 1 Design













CONSTRUCTION \leftarrow PHASE





Upstream Connection

Phase 1 Design









Downstream Connection for Phasing





Phase 1 Design





WWTP Flow Meter - Vault - Krohne

Phase 1 Design

CONSTRUCTION ш PHASI



JCTION CONSTRU \mathbf{H} PHASI







Phase 2

City of Pasco, WA Wastewater Treatment Plant Outfall Replacement

Project Cost: ____

5.1 M Dollars

consor FJR SEPA

Engineer: <u>Consor North America Inc.</u> Contractor: <u>Advanced American Construction</u> Estimated Completion: <u>May 2024</u>



Funded in part by the Washington State Department of Ecology: 2021-0020 Clean Water Preservation Project Phase 2



DEPARTMENT OF ECOLOGY State of Washington

Financial Assistance provided by United States Environmental Protection Agency

Phase 2 Design

PIPELINE – 42-INCH FUSED HDPE

• Excavation, bedding, backfill, river restoration



Phase 2 Design

DIFFUSER

PUBLIC WORKS

APWA WA 😂 🔥 🛚

- Ten ports evenly spaced over 150 ft
- Duckbill valves





Anchors: 1 - Sandwich | 2 - Coffin



Phase 2 Design





Planting and Landscaping – Native Species





Phase 2 Design

Demolition of Existing – Requirement of Department of Natural Resources





Phase 2 Design
















PHASE 2 CONSTRUCTION

















CONSTRUCTION \sim PHASE





Future

- Inspection 5-year interval
- Remove duckbill valves at a future flow to reduce headloss and increase capacity





City

· 2016 to present

Design

- · Consor
- · MixZon
- \cdot ESA
- Peterson Structural Engineers
- · Cosmopolitan

Construction Management

0

· HDR

Contractors

IN

- Clearwater Construction and Management
- Advanced American
 Construction



Questions?

