



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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July 31, 2019

Mike Olden, P.E.
City of Montesano
112 N. Main Street
Montesano, WA 98563

Re: Technical Memorandum and Plans and Specifications for the City of Montesano 2019
Wastewater Treatment Plant Improvements

Dear Mike Olden:

Pursuant to RCW 90.48.110 and WAC 173-240-030, the *2019 Wastewater Treatment Plant Improvements Technical Memorandum* (April 2019) and the *2019 Wastewater Treatment Plant Improvements Contract Documents* (April 2019) have been reviewed and are hereby approved. One copy of the cover page of the approved document is being returned for your records. The improvements include biosolids lagoon modification and relocation, UV disinfection, and effluent pumping.

This approval is given on the basis that the documents were prepared by a professional engineer licensed in the State of Washington, and that the documents are in conformance with Chapter 173-240 WAC, State of Washington, and the Criteria for Sewage Works Design.

This approval shall not relieve the owners of this facility from any responsibilities or liabilities as a result of noncompliance with the discharge permit during construction or in operation of facilities approved herein.

Upon completion of the above-referenced project or portions thereof, the enclosed Declaration of Construction of Water Pollution Control Facilities shall be completed and returned with one complete set of as-builts by the professional engineer in responsible charge of inspection of construction of the project.

If you have any questions concerning this approval, please contact Dave Dougherty, P.E. by email at david.dougherty@ecy.wa.gov or (360) 407-6278.

Sincerely,

Richard Doenges
Southwest Region Manager
Water Quality Program

Enclosures

The Technical Memorandum and Plans & Specifications describe improvements at the Montesano WWTP to shift the location of the biosolids lagoon away from the river, reducing the size of the biosolids lagoon and installing a new HDPE liner system; relocating the disinfection process and upgrading to UV; and new effluent pumps.

Montesano has funding to proceed with the relocation of the biosolids lagoon and effluent pumps. The UV system described in the plans is presently not funded. Besides the work described in these documents, the city plans to install more log jacks to protect the WWTP from the Winochee River.

With the relocation of the biosolids lagoon away from the river, the continued river migration should not cause a catastrophic release of stored biosolids anytime soon.

TECHNICAL MEMORANDUM

DATE: April 10, 2019
TO: Mike Olden, PE, City of Montesano
FROM: Brandon Moss, EIT; Will Smythe, EIT;
Connor Wittman, PE; Matt Austin, PE
SUBJECT: Basis of Design Memorandum
CC: Kevin Hegel, City of Montesano
Doug Berschauer, PE, Parametrix; JC Hungerford, PE, Parametrix
PROJECT NUMBER: 217-1678-044
PROJECT NAME: 2019 Wastewater Treatment Plant Improvements



INTRODUCTION

The primary objectives of the City of Montesano (City) Wastewater Treatment Plant (WWTP) Improvements project are to move crucial infrastructure away from the migration path of the Wynoochee River. Key aspects of the improvements include:

- Shifting the location of the biosolids holding lagoon away from river.
- Reducing the size of the biosolids lagoon and installing a new HDPE liner system.
- Relocating disinfection processes and upgrading to a more compact ultraviolet (UV) light treatment system.
- Various I&C improvements to accommodate the UV system and update annunciator and alarm capabilities.

The WWTP improvements are part of a multi-faceted project to protect the treatment plant from Wynoochee River migration. The river has meandered east toward the plant and has eroded the river bank such that it is nearly touching the treatment plant. Continued river migration could breach the WWTP causing catastrophic failure and allowing stored biosolids to spill into the river. The project not only includes WWTP improvements, but also in-river work to help divert the flow path away from the WWTP. The purpose of this memorandum is to summarize design criteria for the WWTP modifications.

LAGOON MODIFICATIONS (BIOSOLIDS RELOCATION)

The WWTP has an existing 2.5-million-gallon biosolids lagoon which accepts waste activated sludge (WAS) from the treatment process for storage and additional facultative treatment. The western portion of the lagoon is currently within the path of the Wynoochee River migration and therefore is at an increased risk for failure. Thus, the WWTP modifications include reducing the lagoon size by approximately half, effectively relocating the lagoon away from the western corner of the plant.

REVIEWED BY:	DATE:
<i>Dave Douglas</i>	<i>7/24/19</i>
<i>JC Hungerford</i>	<i>7/30/19</i>
DEPARTMENT OF ECOLOGY WATER QUALITY PROGRAM SOUTHWEST REGIONAL OFFICE	

RECEIVED

JUN 03 2019

WA State Department
of Ecology (SWRO)

2019 Wastewater Treatment Plant Improvements Contract Documents

REVIEWED BY: <i>P. Day</i>	APPROVED BY: <i>Reese</i>
7/24/19	DNCS 7/30/19
DEPARTMENT OF ECOLOGY WATER QUALITY PROGRAM SOUTHWEST REGIONAL OFFICE	

Prepared for



April 2019

Prepared by
Parametrix

REVIEWED BY: *De Dought* APPROVED BY: *De J...*
 7/24/19 DATE 7/30/19

DEPARTMENT OF ECOLOGY
 WATER QUALITY PROGRAM
 SOUTHWEST REGIONAL OFFICE

CITY OF MONTESANO

SCHEDULE 1 - WWTP IMPROVEMENTS

MONTESANO, WASHINGTON

WA State Department
 of Ecology (SWRO)

CITY COUNCIL

MAYOR: VINI SAMUEL
 COUNCIL: CLINT BRYSON
 IAN COPE
 KIM CRISTOBAL
 DAVE SKARAMUCA
 TYLER TRIMBLE
 DAN WOOD
 PUBLIC WORKS DIRECTOR: MIKE OLDEN

SHEET INDEX

SHEET NUMBER	DRAWING NUMBER	DRAWING NAME
1	G1	TITLE SHEET, VICINITY MAP, LOCATION MAP, AND SHEET INDEX
2	G2	STAGING PLAN

GENERAL

3	P1	P&ID PROCESS LEGEND AND ABBREVIATIONS
4	P2	P&ID ANOXIC BASIN, AERATOR BASIN AND BLOWER BUILDING
5	P3	P&ID CLARIFIERS, RAS/WAS STATION AND DRAIN STATION
6	P4	P&ID UV DISINFECTION BASIN
7	P5	P&ID EFFLUENT PUMPS AND ON-SITE PUMP STATION
8	P6	P&ID Mg(OH) ₂ SLURRY AND SLUDGE HOLDING LAGOONS

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10	D2	LIME SYSTEM DEMOLITION
11	D3	EFFLUENT PUMPS DEMOLITION
12	D4	DEMOLITION - ELECTRICAL

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15	C3	CONSTRUCTION SEQUENCING PLAN
16	C4	CIVIL IMPROVEMENTS PLAN
17	C5	CIVIL LAGOON MODIFICATIONS PLAN
18	C6	CIVIL LAGOON SECTIONS AND DETAILS
19	C7	CIVIL LAGOON DETAILS
20	C8	CIVIL DETAILS

STRUCTURAL

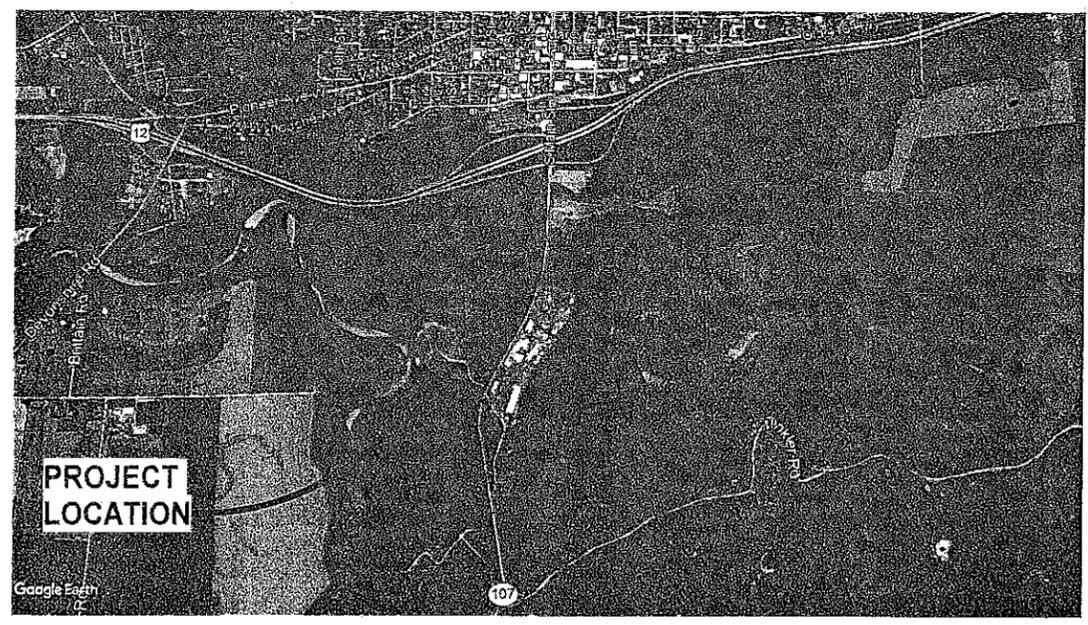
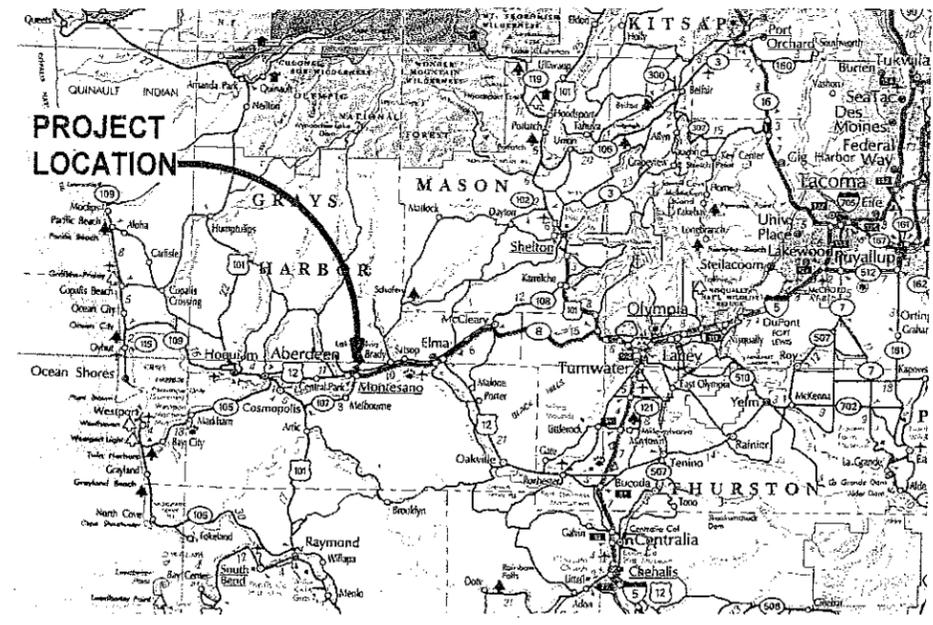
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23	S3	POLISHING POND STRUCTURAL ROOF PLAN
24	S4	STRUCTURAL SECTION
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44	E9	ELECTRICAL SCHEDULES
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46	E20	CONTROL PANEL CP-100 WIRING DIAGRAM
47	E21	CONTROL PANEL CP-100 DIGITAL INPUT CARD 1
48	E22	CONTROL PANEL CP-100 DIGITAL INPUT CARD 2
49	E23	CONTROL PANEL CP-100 DIGITAL INPUT CARD 3
50	E24	CONTROL PANEL CP-100 DIGITAL INPUT CARD 4
51	E25	CONTROL PANEL CP-100 DIGITAL INPUT CARD 5
52	E26	CONTROL PANEL CP-100 DIGITAL OUTPUT CARD 1
53	E27	CONTROL PANEL CP-100 ANALOG INPUT CARD 1
54	E30	GO/NO-GO PANEL CP-104 WIRING DIAGRAM



CONFORMED SET

THIS DRAWING IS A CONFORMED DRAWING AND IS NOT PART OF THE CONTRACT DOCUMENTS. THIS DRAWING IS PROVIDED AS A COURTESY TO THE CONTRACTOR. IN THE EVENT OF A DISCREPANCY BETWEEN THE CONFORMED DRAWING AND THE CONTRACT DOCUMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN.

REVISIONS	DATE	BY	DESIGNED	CHECKED	APPROVED
1	3/30/19	JH	B. MOSS	D. BERSCHAUER	J. HUNGERFORD
			A. PETERSON		

ONE INCH AT FULL SCALE.
 IF NOT, SCALE ACCORDINGLY

FILE NAME: WWTP Upgrade Design.rvt
 JOB No: 217-1678-044 PH3
 DATE: APRIL 2019



Parametrix
 ENGINEERING, PLANNING, ENVIRONMENTAL SCIENCES

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 P. 253.604.6800
 WWW.PARAMETRIX.COM

PROJECT NAME
 CITY OF MONTESANO
 SCHEDULE 1 - WWTP IMPROVEMENTS
 MONTESANO, WASHINGTON

**TITLE SHEET, VICINITY MAP,
 LOCATION MAP, AND SHEET INDEX**

DRAWING NO.
 1 OF 54
G1