EPA Identification Number	NPDES Permit Number	Facility Name
110000569484	WA0024074	City of Mount Vernon

Form Approved 03/05/19
OMB No. 2040-0004

Form 2A NPDES

EPA

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater
NEW AND EXISTING PUBLICLY OWNED TREATMENT WORKS

SECTION 1. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS (40 CFR 122.21(j)(1) and (9))

Facility Information

1.1

Facility name
City of Mount Vernon Wastewater Treatment Plant

Mailing address (street or P.O. box)
1401 Britt Road

City or town	State	ZIP code
Mount Vernon	WA	98273

Contact name (first and last)	Title	Phone number	Email address
Gary Duranceau	Wastewater Division Manager	(360) 336-6219	garyd@mountvernonwa.gov

Location address (street, route number, or other specific identifier) ☑ Same as mailing address

City or town	State	ZIP code

1.2 Is this application for a facility that has yet to commence discharge?

☐ Yes ➔ See instructions on data submission requirements for new dischargers. ☑ No

Applicant Information

1.3 Is applicant different from entity listed under Item 1.1 above?

☐ Yes ☑ No ➔ SKIP to Item 1.4.

Applicant name

Applicant address (street or P.O. box)

City or town	State	ZIP code

Contact name (first and last)	Title	Phone number	Email address

1.4 Is the applicant the facility's owner, operator, or both? (Check only one response.)

☐ Owner ☐ Operator ☑ Both

1.5 To which entity should the NPDES permitting authority send correspondence? (Check only one response.)

☑ Facility ☐ Applicant ☐ Facility and applicant (they are one and the same)

Existing Environmental Permits

1.6 Indicate below any existing environmental permits. (Check all that apply and print or type the corresponding permit number for each.)

Existing Environmental Permits		
☑ NPDES (discharges to surface water) WA0024074	☐ RCRA (hazardous waste)	☐ UIC (underground injection control)
☐ PSD (air emissions)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☑ Other (specify) General Biosolis Permit

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Collection System and Population Served

1.7 Provide the collection system information requested below for the treatment works.

Municipality Served	Population Served	Collection System Type (indicate percentage)	Ownership Status
City of Mount Vernon	36,700	85 % separate sanitary sewer 15 % combined storm and sanitary sewer ☐ Unknown	☑ Own ☑ Maintain ☑ Own ☑ Maintain ☐ Own ☐ Maintain
		____ % separate sanitary sewer ____ % combined storm and sanitary sewer ☐ Unknown	☐ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
		____ % separate sanitary sewer ____ % combined storm and sanitary sewer ☐ Unknown	☐ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
		____ % separate sanitary sewer ____ % combined storm and sanitary sewer ☐ Unknown	☐ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
Total Population Served	36,700		

	Separate Sanitary Sewer System	Combined Storm and Sanitary Sewer
Total percentage of each type of sewer line (in miles)	85 %	15 %

Indian Country

1.8 Is the treatment works located in Indian Country?

☐ Yes ☑ No

1.9 Does the facility discharge to a receiving water that flows through Indian Country?

☐ Yes ☑ No

Design and Actual Flow Rates

1.10 Provide design *and* actual flow rates in the designated spaces.

Design Flow Rate
15.0 mgd

Annual Average Flow Rates (Actual)		
Two Years Ago	Last Year	This Year
3.25 mgd	3.43 mgd	4.02 mgd

Maximum Daily Flow Rates (Actual)		
Two Years Ago	Last Year	This Year
18.77 mgd	19.87 mgd	12.16 mgd

Discharge Points by Type

1.11 Provide the total number of effluent discharge points to waters of the United States by type.

Total Number of Effluent Discharge Points by Type				
Treated Effluent	Untreated Effluent	Combined Sewer Overflows	Bypasses	Constructed Emergency Overflows
1	0	2	0	0

Outfalls and Other Discharge or Disposal Methods

Outfalls Other Than to Waters of the United States

1.12 Does the POTW discharge wastewater to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the United States?

☐ Yes ☑ No ➔ SKIP to Item 1.14.

1.13 Provide the location of each surface impoundment and associated discharge information in the table below.

Surface Impoundment Location and Discharge Data

Location	Average Daily Volume Discharged to Surface Impoundment	Continuous or Intermittent (check one)
	gpd	☐ Continuous ☐ Intermittent
	gpd	☐ Continuous ☐ Intermittent
	gpd	☐ Continuous ☐ Intermittent

1.14 Is wastewater applied to land?

☐ Yes ☑ No ➔ SKIP to Item 1.16.

1.15 Provide the land application site and discharge data requested below.

Land Application Site and Discharge Data

Location	Size	Average Daily Volume Applied	Continuous or Intermittent (check one)
	acres	gpd	☐ Continuous ☐ Intermittent
	acres	gpd	☐ Continuous ☐ Intermittent
	acres	gpd	☐ Continuous ☐ Intermittent

1.16 Is effluent transported to another facility for treatment prior to discharge?

☐ Yes ☑ No ➔ SKIP to Item 1.21.

1.17 Describe the means by which the effluent is transported (e.g., tank truck, pipe).

1.18 Is the effluent transported by a party other than the applicant?

☐ Yes ☐ No ➔ SKIP to Item 1.20.

1.19 Provide information on the transporter below.

Transporter Data

Entity name	Mailing address (street or P.O. box)	
City or town	State	ZIP code
Contact name (first and last)	Title	
Phone number	Email address	

Outfalls and Other Discharge or Disposal Methods Continued

1.20 In the table below, indicate the name, address, contact information, NPDES number, and average daily flow rate of the receiving facility.

Receiving Facility Data		
Facility name	Mailing address (street or P.O. box)	
City or town	State	ZIP code
Contact name (first and last)	Title	
Phone number	Email address	
NPDES number of receiving facility (if any) ☐ None	Average daily flow rate mgd	

1.21 Is the wastewater disposed of in a manner other than those already mentioned in Items 1.14 through 1.21 that do not have outlets to waters of the United States (e.g., underground percolation, underground injection)?

☐ Yes ☑ No ➔ SKIP to Item 1.23.

1.22 Provide information in the table below on these other disposal methods.

Information on Other Disposal Methods				
Disposal Method Description	**Location of Disposal Site**	**Size of Disposal Site**	**Annual Average Daily Discharge Volume**	**Continuous or Intermittent** (check one)
		acres	gpd	☐ Continuous ☐ Intermittent
		acres	gpd	☐ Continuous ☐ Intermittent
		acres	gpd	☐ Continuous ☐ Intermittent

Variance Requests

1.23 Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(n)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)

☐ Discharges into marine waters (CWA Section 301(h))

☐ Water quality related effluent limitation (CWA Section 302(b)(2))

☑ Not applicable

Contractor Information

1.24 Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?

☐ Yes ☑ No ➔SKIP to Section 2.

1.25 Provide location and contact information for each contractor in addition to a description of the contractor's operational and maintenance responsibilities.

Contractor Information			
	Contractor 1	**Contractor 2**	**Contractor 3**
Contractor name (company name)			
Mailing address (street or P.O. box)			
City, state, and ZIP code			
Contact name (first and last)			
Phone number			
Email address			
Operational and maintenance responsibilities of contractor			

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SECTION 2. ADDITIONAL INFORMATION (40 CFR 122.21(j)(1) and (2))

Design Flow

Outfalls to Waters of the United States

2.1 Does the treatment works have a design flow greater than or equal to 0.1 mgd?

☑ Yes ☐ No ➔ SKIP to Section 3.

Inflow and Infiltration

2.2 Provide the treatment works' current average daily volume of inflow and infiltration.

Average Daily Volume of Inflow and Infiltration
850,000 gpd

Indicate the steps the facility is taking to minimize inflow and infiltration.
The City of Mount Vernon has budgeted up to $1,000,000 per year to slip line or replace aging sewer lines that have potential for infiltration.

Topographic Map

2.3 Have you attached a topographic map to this application that contains all the required information? (See instructions for specific requirements.)

☐ Yes ☐ No

Flow Diagram

2.4 Have you attached a process flow diagram or schematic to this application that contains all the required information? (See instructions for specific requirements.)

☐ Yes ☐ No

Scheduled Improvements and Schedules of Implementation

2.5 Are improvements to the facility scheduled?

☐ Yes ☑ No ➔ SKIP to Section 3.

Briefly list and describe the scheduled improvements.

1.

2.

3.

4.

2.6 Provide scheduled or actual dates of completion for improvements.

Scheduled or Actual Dates of Completion for Improvements

Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
1.					
2.					
3.					
4.					

2.7 Have appropriate permits/clearances concerning other federal/state requirements been obtained? Briefly explain your response.

☐ Yes ☐ No ☐ None required or applicable

Explanation:

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SECTION 3. INFORMATION ON EFFLUENT DISCHARGES (40 CFR 122.21(j)(3) to (5))

Description of Outfalls

3.1 Provide the following information for each outfall. (Attach additional sheets if you have more than three outfalls.)

	Outfall Number 004	Outfall Number ____	Outfall Number ____
State	Washington		
County	Skagit		
City or town	Mount Vernon		
Distance from shore	80 ft.	ft.	ft.
Depth below surface	13 ft.	ft.	ft.
Average daily flow rate	3.43 mgd	mgd	mgd
Latitude	48° 24′ 50″ N	° ′ ″ N	° ′ ″
Longitude	122° 20′ 43″ W	° ′ ″ W	° ′ ″

Seasonal or Periodic Discharge Data

3.2 Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges?

☐ Yes ☑ No ➔ SKIP to Item 3.4.

3.3 If so, provide the following information for each applicable outfall.

	Outfall Number ____	Outfall Number ____	Outfall Number ____
Number of times per year discharge occurs			
Average duration of each discharge (specify units)			
Average flow of each discharge	mgd	mgd	mgd
Months in which discharge occurs			

Diffuser Type

3.4 Are any of the outfalls listed under Item 3.1 equipped with a diffuser?

☑ Yes ☐ No ➔ SKIP to Item 3.6.

3.5 Briefly describe the diffuser type at each applicable outfall.

	Outfall Number 004	Outfall Number ____	Outfall Number ____
	36" TideFlex valve		

Waters of the U.S.

3.6 Does the treatment works discharge or plan to discharge wastewater to waters of the United States from one or more discharge points?

☑ Yes ☐ No ➔SKIP to Section 6.

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Receiving Water Description

3.7 Provide the receiving water and related information (if known) for each outfall.

	Outfall Number 004	Outfall Number _____	Outfall Number _____
Receiving water name	Skagit River		
Name of watershed, river, or stream system	Skagit		
U.S. Soil Conservation Service 14-digit watershed code	17110007-050		
Name of state management/river basin	Lower Skagit River		
U.S. Geological Survey 8-digit hydrologic cataloging unit code	12200500		
Critical low flow (acute)	5030 cfs	cfs	cfs
Critical low flow (chronic)	5030 cfs	cfs	cfs
Total hardness at critical low flow	25 mg/L of $CaCO_3$	mg/L of $CaCO_3$	mg/L of $CaCO_3$

Treatment Description

3.8 Provide the following information describing the treatment provided for discharges from each outfall.

	Outfall Number 004	Outfall Number _____	Outfall Number _____
Highest Level of Treatment (check all that apply per outfall)	☑ Primary ☐ Equivalent to secondary ☑ Secondary ☐ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____
Design Removal Rates by Outfall			
BOD_5 or $CBOD_5$	85 %	%	%
TSS	85 %	%	%
Phosphorus	☑ Not applicable %	☐ Not applicable %	☐ Not applicable %
Nitrogen	☑ Not applicable %	☐ Not applicable %	☐ Not applicable %
Other (specify) _____	☑ Not applicable %	☐ Not applicable %	☐ Not applicable %

Treatment Description Continued

3.9 Describe the type of disinfection used for the effluent from each outfall in the table below. If disinfection varies by season, describe below.

	Outfall Number 004	Outfall Number ____	Outfall Number ____
Disinfection type	UV Disinfection		
Seasons used			
Dechlorination used?	☑ Not applicable ☐ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No

Effluent Testing Data

3.10 Have you completed monitoring for all Table A parameters and attached the results to the application package?

☑ Yes ☐ No

3.11 Have you conducted any WET tests during the 4.5 years prior to the date of the application on any of the facility's discharges or on any receiving water near the discharge points?

☑ Yes ☐ No ➔ SKIP to Item 3.13.

3.12 Indicate the number of acute and chronic WET tests conducted since the last permit reissuance of the facility's discharges by outfall number or of the receiving water near the discharge points.

	Outfall Number 004		Outfall Number ____		Outfall Number ____	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Number of tests of discharge water	2	2				
Number of tests of receiving water	0	0				

3.13 Does the treatment works have a design flow greater than or equal to 0.1 mgd?

☑ Yes ☐ No ➔ SKIP to Item 3.16.

3.14 Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent?

☐ Yes ➔ Complete Table B, including chlorine. ☑ No ➔ Complete Table B, omitting chlorine.

3.15 Have you completed monitoring for all applicable Table B pollutants and attached the results to this application package?

☑ Yes ☐ No

3.16 Does one or more of the following conditions apply?

- The facility has a design flow greater than or equal to 1 mgd.
- The POTW has an approved pretreatment program or is required to develop such a program.
- The NPDES permitting authority has informed the POTW that it must sample for the parameters in Table C, must sample other additional parameters (Table D), or submit the results of WET tests for acute or chronic toxicity for each of its discharge outfalls (Table E).

☑ Yes ➔ Complete Tables C, D, and E as applicable. ☐ No ➔ SKIP to Section 4.

3.17 Have you completed monitoring for all applicable Table C pollutants and attached the results to this application package?

☑ Yes ☐ No

3.18 Have you completed monitoring for all applicable Table D pollutants required by your NPDES permitting authority and attached the results to this application package?

☑ Yes ☐ No additional sampling required by NPDES permitting authority.

Effluent Testing Data Continued

3.19	Has the POTW conducted either (1) minimum of four quarterly WET tests for one year preceding this permit application or (2) at least four annual WET tests in the past 4.5 years? ☑ Yes ☐ No ➔ Complete tests and Table E and SKIP to Item 3.26.
3.20	Have you previously submitted the results of the above tests to your NPDES permitting authority? ☑ Yes ☐ No ➔ Provide results in Table E and SKIP to Item 3.26.
3.21	Indicate the dates the data were submitted to your NPDES permitting authority and provide a summary of the results.

Date(s) Submitted (MM/DD/YYYY)	Summary of Results
05/07/2020	PASS

3.22	Regardless of how you provided your WET testing data to the NPDES permitting authority, did any of the tests result in toxicity? ☐ Yes ☑ No ➔ SKIP to Item 3.26.
3.23	Describe the cause(s) of the toxicity:
3.24	Has the treatment works conducted a toxicity reduction evaluation? ☐ Yes ☐ No ➔ SKIP to Item 3.26.
3.25	Provide details of any toxicity reduction evaluations conducted.
3.26	Have you completed Table E for all applicable outfalls and attached the results to the application package? ☑ Yes ☐ Not applicable because previously submitted information to the NPDES permitting authority.

SECTION 4. INDUSTRIAL DISCHARGES AND HAZARDOUS WASTES (40 CFR 122.21(j)(6) and (7))

Industrial Discharges and Hazardous Wastes

4.1	Does the POTW receive discharges from SIUs or NSCIUs? ☑ Yes ☐ No ➔ SKIP to Item 4.7.
4.2	Indicate the number of SIUs and NSCIUs that discharge to the POTW.

Number of SIUs	Number of NSCIUs
1	

4.3	Does the POTW have an approved pretreatment program? ☐ Yes ☑ No
4.4	Have you submitted either of the following to the NPDES permitting authority that contains information substantially identical to that required in Table F: (1) a pretreatment program annual report submitted within one year of the application or (2) a pretreatment program? ☐ Yes ☐ No ➔ SKIP to Item 4.6.
4.5	Identify the title and date of the annual report or pretreatment program referenced in Item 4.4. SKIP to Item 4.7.
4.6	Have you completed and attached Table F to this application package? ☑ Yes ☐ No

Industrial Discharges and Hazardous Wastes Continued

4.7 Does the POTW receive, or has it been notified that it will receive, by truck, rail, or dedicated pipe, any wastes that are regulated as RCRA hazardous wastes pursuant to 40 CFR 261?

☐ Yes ☑ No ➔ SKIP to Item 4.9.

4.8 If yes, provide the following information:

Hazardous Waste Number	Waste Transport Method (check all that apply)	Annual Amount of Waste Received	Units
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____		
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____		
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____		

4.9 Does the POTW receive, or has it been notified that it will receive, wastewaters that originate from remedial activities, including those undertaken pursuant to CERCLA and Sections 3004(7) or 3008(h) of RCRA?

☐ Yes ☑ No ➔ SKIP to Section 5.

4.10 Does the POTW receive (or expect to receive) less than 15 kilograms per month of non-acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e)?

☐ Yes ➔ SKIP to Section 5. ☐ No

4.11 Have you reported the following information in an attachment to this application: identification and description of the site(s) or facility(ies) at which the wastewater originates; the identities of the wastewater's hazardous constituents; and the extent of treatment, if any, the wastewater receives or will receive before entering the POTW?

☐ Yes ☐ No

SECTION 5. COMBINED SEWER OVERFLOWS (40 CFR 122.21(j)(8))

CSO Map and Diagram

5.1 Does the treatment works have a combined sewer system?

☑ Yes ☐ No ➔SKIP to Section 6.

5.2 Have you attached a CSO system map to this application? (See instructions for map requirements.)

☑ Yes ☐ No

5.3 Have you attached a CSO system diagram to this application? (See instructions for diagram requirements.)

☑ Yes ☐ No

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CSO Outfall Description

5.4 For each CSO outfall, provide the following information. (Attach additional sheets as necessary.)

	CSO Outfall Number 002	CSO Outfall Number 003	CSO Outfall Number ____
City or town	Mount V ernon	Mount Vernon	
State and ZIP code	WA, 98273	WA, 98273	
County	Skagit	Skagit	
Latitude	48° 24′ 50″ N	48° 25′ 17″ N	° ′ ″
Longitude	122° 20′ 36″ W	122° 20′ 15″ W	° ′ ″
Distance from shore	0 ft.	0 ft.	ft.
Depth below surface	0 ft.	0 ft.	ft.

CSO Monitoring

5.5 Did the POTW monitor any of the following items in the past year for its CSO outfalls?

	CSO Outfall Number 002	CSO Outfall Number 003	CSO Outfall Number ____
Rainfall	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☐ No
CSO flow volume	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☐ No
CSO pollutant concentrations	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☐ No
Receiving water quality	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☐ No
CSO frequency	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☐ No
Number of storm events	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☐ No

CSO Events in Past Year

5.6 Provide the following information for each of your CSO outfalls.

	CSO Outfall Number 002	CSO Outfall Number 003	CSO Outfall Number ____
Number of CSO events in the past year	00 events	00 events	events
Average duration per event	0 hours ☑ Actual or ☐ Estimated	0 hours ☑ Actual or ☐ Estimated	hours ☐ Actual or ☐ Estimated
Average volume per event	0 million gallons ☑ Actual or ☐ Estimated	0 million gallons ☑ Actual or ☐ Estimated	million gallons ☐ Actual or ☐ Estimated
Minimum rainfall causing a CSO event in last year	N/A inches of rainfall ☐ Actual or ☐ Estimated	N/A inches of rainfall ☐ Actual or ☐ Estimated	inches of rainfall ☐ Actual or ☐ Estimated

CSO Receiving Waters

5.7 Provide the information in the table below for each of your CSO outfalls

	CSO Outfall Number 002	CSO Outfall Number 003	CSO Outfall Number ___
Receiving water name	Skagit River	Skagit River	
Name of watershed/ stream system	Skagit	Skagit	
U.S. Soil Conservation Service 14-digit watershed code (if known)	☐ Unknown	☐ Unknown	☐ Unknown
	17110007-050	17110007-505	
Name of state management/river basin	Lower Skagit River	Lower Skagit Rive	
U.S. Geological Survey 8-Digit Hydrologic Unit Code (if known)	☐ Unknown	☐ Unknown	☐ Unknown
	12200500	12200500	
Description of known water quality impacts on receiving stream by CSO (see instructions for examples)			

SECTION 6. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

6.1 In Column 1 below, mark the sections of Form 2A that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.

Column 1	Column 2	
☑ Section 1: Basic Application Information for All Applicants	☐ w/ variance request(s)	☐ w/ additional attachments
☑ Section 2: Additional Information	☑ w/ topographic map ☐ w/ additional attachments	☑ w/ process flow diagram
☑ Section 3: Information on Effluent Discharges	☑ w/ Table A ☑ w/ Table B ☑ w/ Table C	☑ w/ Table D ☑ w/ Table E ☐ w/ additional attachments
☑ Section 4: Industrial Discharges and Hazardous Wastes	☐ w/ SIU and NSCIU attachments ☐ w/ additional attachments	☑ w/ Table F
☑ Section 5: Combined Sewer Overflows	☑ w/ CSO map ☑ w/ CSO system diagram	☐ w/ additional attachments
☑ Section 6: Checklist and Certification Statement	☑ w/ attachments	

6.2 **Certification Statement**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
Jill Boudreau	Mayor
Signature: Jill Boudreau	Date signed: 8/30/21

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TABLE A. EFFLUENT PARAMETERS FOR ALL POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Biochemical oxygen demand ☑ BOD_5 or ☐ $CBOD_5$ (report one)	37	mg/l	13.6	mg/l	208	SM 5210 B-2011	☐ ML ☐ MDL
Fecal coliform	3200	MPN/100 ml	135.9	MPN/100 ml	260	SM 9222 D(mFC)-06	☐ ML ☐ MDL
Design flow rate	19.87	MGD	3.43	MGD	continuous		
pH (minimum)	6.3	standard units					
pH (maximum)	8.3	standard units					
Temperature (winter)	13.01	degrees celsius	12.98	degrees celsius	continuous		
Temperature (summer)	22.7	degrees celsius	21.1	degrees celsius	continuous		
Total suspended solids (TSS)	19	mg/l	3.2	mg/l	260	SM 2540 D-2011	☑ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE B. EFFLUENT PARAMETERS FOR ALL POTWS WITH A FLOW EQUAL TO OR GREATER THAN 0.1 MGD

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Ammonia (as N)	55.6	mg/l	33.7	mg/l	252	EPA 350_1_2_1993	.034 ☐ ML ☑ MDL
Chlorine (total residual, TRC)[2]							☐ ML ☐ MDL
Dissolved oxygen	3.23	mg/l	2.83	mg/l	4	SM4500 O G	☐ ML ☐ MDL
Nitrate/nitrite	9.41	mg/l	2.7	mg/l	12	SM4500-NO3 F	.023 ☐ ML ☑ MDL
Kjeldahl nitrogen	49.8	mg/l	29.4	mg/l	12	351.2	.585 ☐ ML ☑ MDL
Oil and grease	1.7	mg/l	1.6	mg/l	4	1664	1.3 ☐ ML ☑ MDL
Phosphorus	1.04	mg/l	.567	mg/l	12	SM4500-P	.043 ☐ ML ☑ MDL
Total dissolved solids	289	mg/l	240	mg/l	4	SM2540 C	.10 ☑ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

[2] Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge chlorine in their effluent are not required to report data for chlorine.

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Metals, Cyanide, and Total Phenols							
Hardness (as $CaCO_3$)	74.9	mg/l	68.6	mg/l	4	200.7/3010A	.8 ☐ ML ☑ MDL
Antimony, total recoverable	.00053	mg/l	.0027	mg/l	4	200.8/3010A	.00014 ☐ ML ☑ MDL
Arsenic, total recoverable	.00056	mg/l	.000335	mg/l	4	200.8/3010A	7.93E-5 ☐ ML ☑ MDL
Beryllium, total recoverable	.000016	mg/l	.000016	mg/l	4	200.8/3010A	1.46E-5 ☐ ML ☑ MDL
Cadmium, total recoverable	.00009	mg/l	.00003	mg/l	4	200.8/3010A	2.08E-05 ☐ ML ☑ MDL
Chromium, total recoverable	.0010	mg/l	.000598	mg/l	4	200.8/3010A	.00012 ☐ ML ☑ MDL
Copper, total recoverable	.0121	mg/l	.0267	mg/l	4	200.8/3010A	8.63E-05 ☐ ML ☑ MDL
Lead, total recoverable	.00041	mg/l	.00026	mg/l	4	200.8/3010A	6.66E-06 ☐ ML ☑ MDL
Mercury, total recoverable	.00192	mg/l	.00192	mg/l	4	7470A	1.90E-05 ☐ ML ☑ MDL
Nickel, total recoverable	.0042	mg/l	.00295	mg/l	4	200.8/3010A	4.60E-05 ☐ ML ☑ MDL
Selenium, total recoverable	.0003	mg/l	.0003	mg/l	4	200.8/3010A	.00016 ☐ ML ☑ MDL
Silver, total recoverable	.0002	mg/l	.00028	mg/l	4	200.8/3010A	2.27E-05 ☐ ML ☑ MDL
Thallium, total recoverable	.00021	mg/l	.000055	mg/l	4	200.8/3010A	3.26E-05 ☐ ML ☑ MDL
Zinc, total recoverable	.0223	mg/l	.0188	mg/l	4	200.8/3010A	.00047 ☐ ML ☑ MDL
Cyanide	.014	mg/l	.0309	mg/l	4	D7511-12	.004 ☐ ML ☑ MDL
Total phenolic compounds	.15	mg/l	.15	mg/l	4	420.4	.02 ☐ ML ☑ MDL
Volatile Organic Compounds							
Acrolein	ND	ug/l	ND	ug/l	4	624.1	1.66 ☐ ML ☑ MDL
Acrylonitrile	ND	ug/l	ND	ug/l	4	624.1	.56 ☐ ML ☑ MDL
Benzene	ND	ug/l	ND	ug/l	4	624.1	.23 ☐ ML ☑ MDL
Bromoform	ND	ug/l	ND	ug/l	4	624.1	.26 ☐ ML ☑ MDL

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Carbon tetrachloride	ND	ug/l	ND	ug/l	4	624.1	.24 ☐ ML ☑ MDL
Chlorobenzene	ND	ug/l	ND	ug/l	4	624.1	.28 ☐ ML ☑ MDL
Chlorodibromomethane	ND	ug/l	ND	ug/l	4	624.1	.28 ☐ ML ☑ MDL
Chloroethane	ND	ug/l	ND	ug/l	4	624.1	.34 ☐ ML ☑ MDL
2-chloroethylvinyl ether	ND	ug/l	ND	ug/l	4	624.1	.46 ☐ ML ☑ MDL
Chloroform	1.2	ug/l	.85	ug/l	4	624.1	.25 ☐ ML ☑ MDL
Dichlorobromomethane	ND	ug/l	ND	ug/l	4	624.1	.11 ☐ ML ☑ MDL
1,1-dichloroethane	ND	ug/l	ND	ug/l	4	624.1	.32 ☐ ML ☑ MDL
1,2-dichloroethane	ND	ug/l	ND	ug/l	4	624.1	.38 ☐ ML ☑ MDL
trans-1,2-dichloroethylene	ND	ug/l	ND	ug/l	4	624.1	.34 ☐ ML ☑ MDL
1,1-dichloroethylene	ND	ug/l	ND	ug/l	4	624.1	.25 ☐ ML ☑ MDL
1,2-dichloropropane	ND	ug/l	ND	ug/l	4	624.1	.22 ☐ ML ☑ MDL
1,3-dichloropropylene	ND	ug/l	ND	ug/l	4	624.1	.31 ☐ ML ☑ MDL
Ethylbenzene	ND	ug/l	ND	ug/l	4	624.1	.29 ☐ ML ☑ MDL
Methyl bromide	ND	ug/l	ND	ug/l	4	624.1	.37 ☐ ML ☑ MDL
Methyl chloride	ND	ug/l	ND	ug/l	4	624.1	.28 ☐ ML ☑ MDL
Methylene chloride	ND	ug/l	ND	ug/l	4	624.1	.28 ☐ ML ☑ MDL
1,1,2,2-tetrachloroethane	ND	ug/l	ND	ug/l	4	624.1	.37 ☐ ML ☑ MDL
Tetrachloroethylene	ND	ug/l	ND	ug/l	4	624.1	.24 ☐ ML ☑ MDL
Toluene	ND	ug/l	ND	ug/l	4	624.1	.24 ☐ ML ☑ MDL
1,1,1-trichloroethane	ND	ug/l	ND	ug/l	4	624.1	.26 ☐ ML ☑ MDL
1,1,2-trichloroethane	ND	ug/l	ND	ug/l	4	624.1	.28 ☐ ML ☑ MDL

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Trichloroethylene	ND	ug/l	ND	ug/l	4	624.1	.29 ☐ ML ☑ MDL
Vinyl chloride	ND	ug/l	ND	ug/l	4	624.1	.28 ☐ ML ☑ MDL
Acid-Extractable Compounds							
p-chloro-m-cresol	ND	ug/l	ND	ug/l	4	625	.2 ☐ ML ☑ MDL
2-chlorophenol	ND	ug/l	ND	ug/l	4	625	.1 ☐ ML ☑ MDL
2,4-dichlorophenol	ND	ug/l	ND	ug/l	4	625	.2 ☐ ML ☑ MDL
2,4-dimethylphenol	ND	ug/l	ND	ug/l	4	625	.4 ☐ ML ☑ MDL
4,6-dinitro-o-cresol	ND	ug/l	ND	ug/l	4	625	.3 ☐ ML ☑ MDL
2,4-dinitrophenol	ND	ug/l	ND	ug/l	4	625	.5 ☐ ML ☑ MDL
2-nitrophenol	ND	ug/l	ND	ug/l	4	625	.2 ☐ ML ☑ MDL
4-nitrophenol	ND	ug/l	ND	ug/l	4	625	.3 ☐ ML ☑ MDL
Pentachlorophenol	ND	ug/l	ND	ug/l	4	625	.2 ☐ ML ☑ MDL
Phenol	ND	ug/l	ND	ug/l	4	625	.1 ☐ ML ☑ MDL
2,4,6-trichlorophenol	ND	ug/l	ND	ug/l	4	625	.1 ☐ ML ☑ MDL
Base-Neutral Compounds							
Acenaphthene	ND	ug/l	ND	ug/l	4	625	.04 ☐ ML ☑ MDL
Acenaphthylene	ND	ug/l	ND	ug/l	4	625	.07 ☐ ML ☑ MDL
Anthracene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
Benzidine	ND	ug/l	ND	ug/l	4	625	9. ☐ ML ☑ MDL
Benzo(a)anthracene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
Benzo(a)pyrene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
3,4-benzofluoranthene	ND	ug/l	ND	ug/l	4	625	.08 ☐ ML ☑ MDL

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Benzo(ghi)perylene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
Benzo(k)fluoranthene	ND	ug/l	ND	ug/l	4	625	.08 ☐ ML ☑ MDL
Bis (2-chloroethoxy) methane	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
Bis (2-chloroethyl) ether	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
Bis (2-chloroisopropyl) ether	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
Bis (2-ethylhexyl) phthalate	1.1	ug/l	.68	ug/l	4	625	.1 ☐ ML ☑ MDL
4-bromophenyl phenyl ether	ND	ug/l	ND	ug/l	4	625	.04 ☐ ML ☑ MDL
Butyl benzyl phthalate	ND	ug/l	ND	ug/l	4	625	.03 ☐ ML ☑ MDL
2-chloronaphthalene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
4-chlorophenyl phenyl ether	ND	ug/l	ND	ug/l	4	625	.04 ☐ ML ☑ MDL
Chrysene	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
di-n-butyl phthalate	ND	ug/l	ND	ug/l	4	625	.07 ☐ ML ☑ MDL
di-n-octyl phthalate	ND	ug/l	ND	ug/l	4	625	.02 ☐ ML ☑ MDL
Dibenzo(a,h)anthracene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
1,2-dichlorobenzene	ND	ug/l	ND	ug/l	4	625	.31 ☐ ML ☑ MDL
1,3-dichlorobenzene	ND	ug/l	ND	ug/l	4	625	.29 ☐ ML ☑ MDL
1,4-dichlorobenzene	ND	ug/l	ND	ug/l	4	625	.29 ☐ ML ☑ MDL
3,3-dichlorobenzidine	ND	ug/l	ND	ug/l	4	625	.2 ☐ ML ☑ MDL
Diethyl phthalate	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
Dimethyl phthalate	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
2,4-dinitrotoluene	ND	ug/l	ND	ug/l	4	625	.07 ☐ ML ☑ MDL
2,6-dinitrotoluene	ND	ug/l	ND	ug/l	4	625	.09 ☐ ML ☑ MDL

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
1,2-diphenylhydrazine	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
Fluoranthene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
Fluorene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
Hexachlorobenzene	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
Hexachlorobutadiene	ND	ug/l	ND	ug/l	4	625	.09 ☐ ML ☑ MDL
Hexachlorocyclo-pentadiene	ND	ug/l	ND	ug/l	4	625	.2 ☐ ML ☑ MDL
Hexachloroethane	ND	ug/l	ND	ug/l	4	625	.09 ☐ ML ☑ MDL
Indeno(1,2,3-cd)pyrene	ND	ug/l	ND	ug/l	4	625	.09 ☐ ML ☑ MDL
Isophorone	ND	ug/l	ND	ug/l	4	625	.07 ☐ ML ☑ MDL
Naphthalene	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
Nitrobenzene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
N-nitrosodi-n-propylamine	ND	ug/l	ND	ug/l	4	625	.1 ☐ ML ☑ MDL
N-nitrosodimethylamine	ND	ug/l	ND	ug/l	4	625	.3 ☐ ML ☑ MDL
N-nitrosodiphenylamine	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
Phenanthrene	ND	ug/l	ND	ug/l	4	625	.06 ☐ ML ☑ MDL
Pyrene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL
1,2,4-trichlorobenzene	ND	ug/l	ND	ug/l	4	625	.05 ☐ ML ☑ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

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TABLE D. ADDITIONAL POLLUTANTS AS REQUIRED BY NPDES PERMITTING AUTHORITY

Pollutant (list)	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
☐ No additional sampling is required by NPDES permitting authority.							
Aldrin	ND	ug/l	ND	ug/l	1	608	.013 ☐ ML ☑ MDL
Alpha-BHC	ND	ug/l	ND	ug/l	1	608	.021 ☐ ML ☑ MDL
Beta-BHC	ND	ug/l	ND	ug/l	1	608	.009 ☐ ML ☑ MDL
gamma-BHC(Lindane)	ND	ug/l	ND	ug/l	1	608	.015 ☐ ML ☑ MDL
delta-BHC	ND	ug/l	ND	ug/l	1	608	.013 ☐ ML ☑ MDL
Chlordane	ND	ug/l	ND	ug/l	1	608	.015 ☐ ML ☑ MDL
4,4'-DDT	ND	ug/l	ND	ug/l	1	608	.011 ☐ ML ☑ MDL
4,4'-DDE	ND	ug/l	ND	ug/l	1	608	.025 ☐ ML ☑ MDL
4,4'-DDD	ND	ug/l	ND	ug/l	1	608	.011 ☐ ML ☑ MDL
Dieldrin	ND	ug/l	ND	ug/l	1	608	.017 ☐ ML ☑ MDL
Endosulfan I	ND	ug/l	ND	ug/l	1	608	.022 ☐ ML ☑ MDL
Endosulfan II	ND	ug/l	ND	ug/l	1	608	.023 ☐ ML ☑ MDL
Endosulfan Sulfate	ND	ug/l	ND	ug/l	1	608	.017 ☐ ML ☑ MDL
Endrin	ND	ug/l	ND	ug/l	1	608	.013 ☐ ML ☑ MDL
Endrin Aldehyde	ND	ug/l	ND	ug/l	1	608	.015 ☐ ML ☑ MDL
Heptachlor	ND	ug/l	ND	ug/l	1	608	.024 ☐ ML ☑ MDL
							☐ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

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TABLE D. ADDITIONAL POLLUTANTS AS REQUIRED BY NPDES PERMITTING AUTHORITY

Pollutant (list)	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
☐ No additional sampling is required by NPDES permitting authority.							
Heptachlor Epoxide "B"	ND	ug/l	ND	ug/l	1	608	.014 ☐ ML ☑ MDL
Toxaphene	ND	ug/l	ND	ug/l	1	608	.4 ☐ ML ☑ MDL
PCB-Aroclor 1016	ND	ug/l	ND	ug/l	1	608-Modified	.1 ☐ ML ☑ MDL
PCB-Aroclor 1221	ND	ug/l	ND	ug/l	1	608-Modified	.2 ☐ ML ☑ MDL
PCB-Aroclor 1232	ND	ug/l	ND	ug/l	1	608-Modified	..1 ☐ ML ☑ MDL
PCB-Aroclor 1242	ND	ug/l	ND	ug/l	1	608-Modified	.1 ☐ ML ☑ MDL
PCB-Aroclor 1248	ND	ug/l	ND	ug/l	1	608-Modified	..2 ☐ ML ☑ MDL
PCB-Aroclor 1254	ND	ug/l	ND	ug/l	1	608-Modified	.1 ☐ ML ☑ MDL
PCB-Aroclor 1260	ND	ug/l	ND	ug/l	1	608-Modified	.1 ☐ ML ☑ MDL
(SRP)	1.01	mg/l	.41	mg/l	12	SM4500-PF	.025 ☐ ML ☑ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number 1		Test Number 2		Test Number 3	
Test Information						
Test species	Ceriodaphnia, fathead minnow		Ceriodaphnia, fathead minnow		Ceriodaphnia, fathead minnow	
Age at initiation of test	<24 hours		5 days post hatch		5 days post hatch	
Outfall number	004		004		004	
Date sample collected	02/10/2020		02/12/2020		02/14/2020	
Date test started	02/10/2020		02/12/2020		02/14/2020	
Duration	48 hrs		96 hrs		96 hrs	
Toxicity Test Methods						
Test method number	EPA-821-R-02-012	EPA-821-R-02-013	EPA-821-R-02-012,	EPA-821-R-02-013	EPA-821-R-02-012	EPA-821-R-02-013
Manual title	USEPA 2002a	USEPA 2002b	USEPA 2002a	USEPA 2002b	USEPA 2002a	USEPA 2000b
Edition number and year of publication	Filth addition	Fourth addition	Filth addition	Fourth addition	Filth addition	Fourth addition
Page number(s)	Pg. 51-52,55-56.	Pg.141-196,53-111.	Pg. 51-52,55-56.	Pg. 141-196,53-111.	Pg. 51-52,55-56.	Pg. 141-196, 53-111.
Sample Type						
Check one:	☐ Grab ☑ 24-hour composite		☐ Grab ☑ 24-hour composite		☐ Grab ☑ 24-hour composite	
Sample Location						
Check one:	☐ Before Disinfection ☑ After Disinfection ☐ After Dechlorination		☐ Before Disinfection ☑ After Disinfection ☐ After Dechlorination		☐ Before disinfection ☑ After disinfection ☐ After dechlorination	
Point in Treatment Process						
Describe the point in the treatment process at which the sample was collected for each test.	after ultra violet disinfection		after ultra violet disinfection		after ultra violet disinfection	
Toxicity Type						
Indicate for each test whether the test was performed to asses acute or chronic toxicity, or both. (Check one response.)	☐ Acute ☐ Chronic ☑ Both		☐ Acute ☐ Chronic ☑ Both		☐ Acute ☐ Chronic ☑ Both	

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number 1		Test Number 2		Test Number 3	
Test Information						
Test species	Ceriodaphnia, fathead minnow		Ceriodaphnia, fathead minnow		Ceriodaphnia, fathead minnow	
Age at initiation of test	<24 hours		5 days post hatch		<24 hours	
Outfall number	004		004		004	
Date sample collected	10/12/2020		10/14/2020		10/16/2020	
Date test started	10/12/2020		10/14/2020		10/16/2020	
Duration	48 hrs		96 hrs		7 days	
Toxicity Test Methods						
Test method number	EPA-821-R-02-012	EPA-821-R-02-013	EPA-821-R-02-012,	EPA-821-R-02-013	EPA-821-R-02-012	EPA-821-R-02-013
Manual title	USEPA 2002a	USEPA 2002b	USEPA 2002a	USEPA 2002b	USEPA 2002a	USEPA 2000b
Edition number and year of publication	Filth addition	Fourth addition	Filth addition	Fourth addition	Filth addition	Fourth addition
Page number(s)	Pg. 51-52,55-56.	Pg.141-196,53-111.	Pg. 51-52,55-56.	Pg. 141-196,53-111.	Pg. 51-52,55-56.	Pg. 141-196, 53-111.
Sample Type						
Check one:	☐ Grab ☑ 24-hour composite		☐ Grab ☑ 24-hour composite		☐ Grab ☑ 24-hour composite	
Sample Location						
Check one:	☐ Before Disinfection ☑ After Disinfection ☐ After Dechlorination		☐ Before Disinfection ☑ After Disinfection ☐ After Dechlorination		☐ Before disinfection ☑ After disinfection ☐ After dechlorination	
Point in Treatment Process						
Describe the point in the treatment process at which the sample was collected for each test.	after ultra violet disinfection		after ultra violet disinfection		after ultra violet disinfection	
Toxicity Type						
Indicate for each test whether the test was performed to asses acute or chronic toxicity, or both. (Check one response.)	☐ Acute ☐ Chronic ☑ Both		☐ Acute ☐ Chronic ☑ Both		☐ Acute ☐ Chronic ☑ Both	

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number 1	Test Number 2	Test Number 3
Test Type			
Indicate the type of test performed. (Check one response.)	☐ Static ☑ Static-renewal ☐ Flow-through	☐ Static ☑ Static-renewal ☐ Flow-through	☐ Static ☑ Static-renewal ☐ Flow-through
Source of Dilution Water			
Indicate the source of dilution water. (Check one response.)	☑ Laboratory water ☐ Receiving water	☑ Laboratory water ☐ Receiving water	☑ Laboratory water ☐ Receiving water
If laboratory water, specify type.	moderately hard synthetic	moderately hard synthetic	diluted mineral water
If receiving water, specify source.			
Type of Dilution Water			
Indicate the type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.	☑ Fresh water ☐ Salt water (specify)	☑ Fresh water ☐ Salt water (specify)	☑ Fresh water ☐ Salt water (specify)
Percentage Effluent Used			
Specify the percentage effluent used for all concentrations in the test series.	100% 50%	100% 50%	100% 50%
	25%	25%	25%
	12.5% 7.4%	12.5% 7.4%	7.4% 0.7%
Parameters Tested			
Check the parameters tested.	☑ pH ☐ Salinity ☑ Temperature ☑ Ammonia ☑ Dissolved oxygen	☑ pH ☐ Salinity ☑ Temperature ☑ Ammonia ☑ Dissolved oxygen	☑ pH ☐ Salinity ☑ Temperature ☑ Ammonia ☑ Dissolved oxygen
Acute Test Results			
Percent survival in 100% effluent	97.5% 97.5 %	97.5% 97.5% %	97.5% 97.5% %
LC_{50}	100% 100%	100% 100%	100% 100%
95% confidence interval	%	%	%
Control percent survival	100% !00% %	100% !00% %	100% 100% %

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

Form Approved 03/05/19
OMB No. 2040-0004

TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number 1	Test Number 2	Test Number 3
Test Type			
Indicate the type of test performed. (Check one response.)	☐ Static ☑ Static-renewal ☐ Flow-through	☐ Static ☑ Static-renewal ☐ Flow-through	☐ Static ☑ Static-renewal ☐ Flow-through
Source of Dilution Water			
Indicate the source of dilution water. (Check one response.)	☑ Laboratory water ☐ Receiving water	☑ Laboratory water ☐ Receiving water	☑ Laboratory water ☐ Receiving water
If laboratory water, specify type.	moderately hard synthetic	moderately hard synthetic	diluted mineral water
If receiving water, specify source.			
Type of Dilution Water			
Indicate the type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.	☑ Fresh water ☐ Salt water (specify)	☑ Fresh water ☐ Salt water (specify)	☑ Fresh water ☐ Salt water (specify)
Percentage Effluent Used			
Specify the percentage effluent used for all concentrations in the test series.	100% 50%	100% 50%	100% 50%
	25%	25%	25%
	12.5% 7.4%	12.5% 7.4%	7.4% 0.7%
Parameters Tested			
Check the parameters tested.	☑ pH ☐ Salinity ☑ Temperature ☑ Ammonia ☑ Dissolved oxygen	☑ pH ☐ Salinity ☑ Temperature ☑ Ammonia ☑ Dissolved oxygen	☑ pH ☐ Salinity ☑ Temperature ☑ Ammonia ☑ Dissolved oxygen
Acute Test Results			
Percent survival in 100% effluent	0% 0% %	0% 0% %	0% 0% %
LC_{50}	63.7% 68.9%	63.7% 68.9%	63.7% 68.9%
95% confidence interval	%	%	%
Control percent survival	100% !00% %	100% !00% %	100% 100% %

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

Form Approved 03/05/19
OMB No. 2040-0004

TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number 1		Test Number 2		Test Number 3	
Acute Test Results Continued						
Other (describe)						
Chronic Test Results						
NOEC	100 %		100 %		100 %	
IC_{25}	%		%		%	
Control percent survival	100 %		100 %		100 %	
Other (describe)						
Quality Control/Quality Assurance						
Is reference toxicant data available?	☑ Yes	☐ No	☑ Yes	☐ No	☑ Yes	☐ No
Was reference toxicant test within acceptable bounds?	☑ Yes	☐ No	☑ Yes	☐ No	☑ Yes	☐ No
What date was reference toxicant test run (MM/DD/YYYY)?	02/04/2020		02/04/2020		02/04/2020	
Other (describe)						

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000569484	WA0024074	City of Mount Vernon Wastewater	004

Form Approved 03/05/19
OMB No. 2040-0004

TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number 1		Test Number 2		Test Number 3	
Acute Test Results Continued						
Other (describe)						
Chronic Test Results						
NOEC	100 %		100 %		100 %	
IC_{25}	%		%		%	
Control percent survival	100 %		100 %		100 %	
Other (describe)						
Quality Control/Quality Assurance						
Is reference toxicant data available?	☑ Yes	☐ No	☑ Yes	☐ No	☑ Yes	☐ No
Was reference toxicant test within acceptable bounds?	☑ Yes	☐ No	☑ Yes	☐ No	☑ Yes	☐ No
What date was reference toxicant test run (MM/DD/YYYY)?	10/06/2020		10/06/2020		10/06/2020	
Other (describe)						

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EPA Identification Number	NPDES Permit Number	Facility Name
110000569484	WA0024074	City of Mount Vernon Wastewater

Form Approved 03/05/19
OMB No. 2040-0004

TABLE F. INDUSTRIAL DISCHARGE INFORMATION

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU ____	SIU ____	SIU ____
Name of SIU	Perdue Farms LLC Draper Valley Farms		
Mailing address (street or P.O. box)	1500 E college way suite A pmb 449		
City, state, and ZIP code	Mount Vernon WA 98273		
Description of all industrial processes that affect or contribute to the discharge.	Rendering live chickens for human consumption.		
List the principal products and raw materials that affect or contribute to the SIU's discharge.	Processing of poultry (chickens).		
Indicate the average daily volume of wastewater discharged by the SIU.	.342 gpd	gpd	gpd
How much of the average daily volume is attributable to process flow?	.342 gpd	gpd	gpd
How much of the average daily volume is attributable to non-process flow?	gpd	gpd	gpd
Is the SIU subject to local limits?	☑ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is the SIU subject to categorical standards?	☑ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

EPA Identification Number	NPDES Permit Number	Facility Name
110000569484	WA0024074	City of Mount Vernon Wastewater

Form Approved 03/05/19
OMB No. 2040-0004

TABLE F. INDUSTRIAL DISCHARGE INFORMATION

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU ____	SIU ____	SIU ____
Under what categories and subcategories is the SIU subject?	40CFR Part 413 and 40 CFR Part 471		
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU?	☐ Yes ☑ No	☐ Yes ☐ No	☐ Yes ☐ No
If yes, describe.			

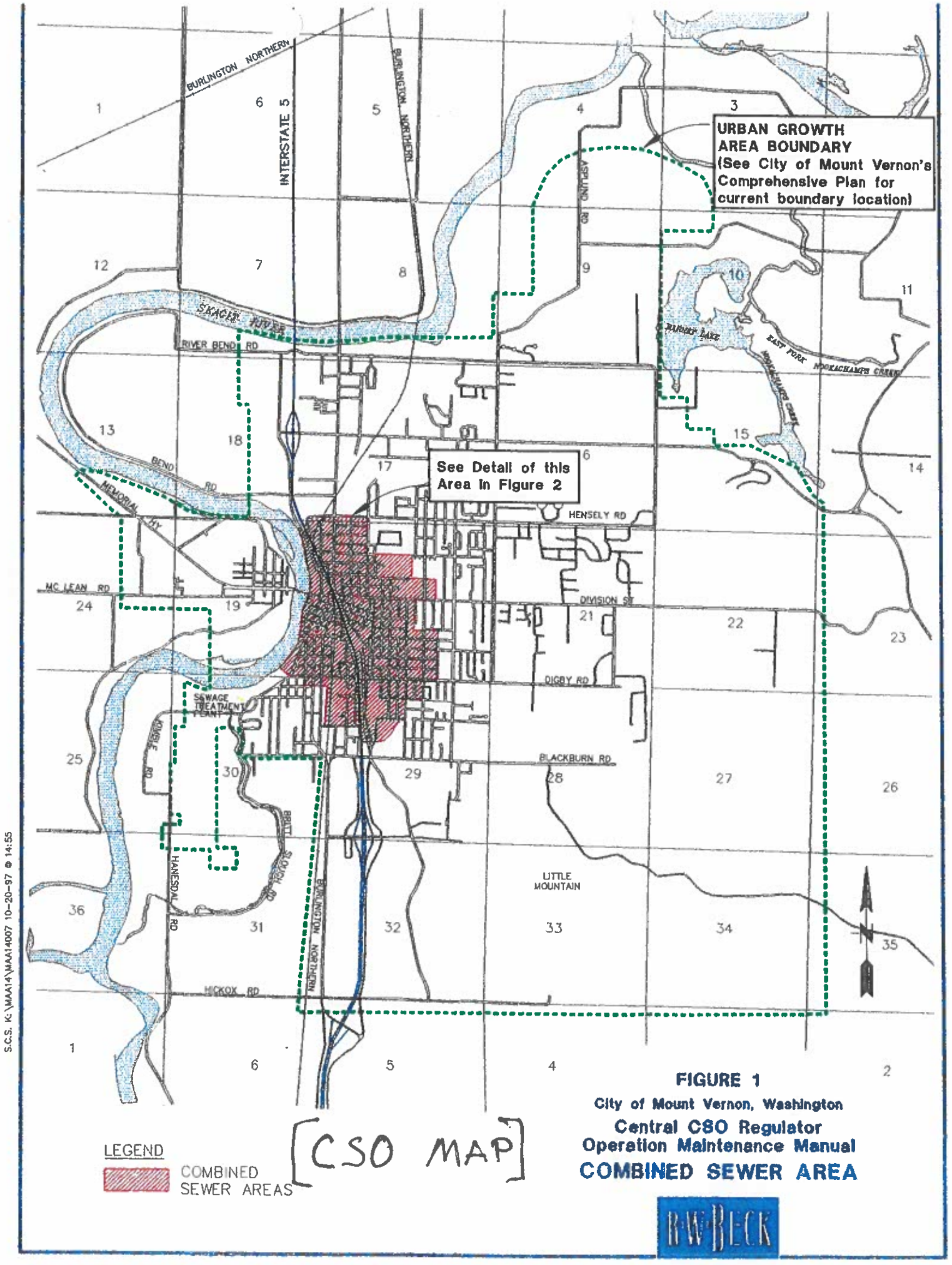


FIGURE 1

City of Mount Vernon, Washington

Central CSO Regulator
Operation Maintenance Manual

COMBINED SEWER AREA

RW BECK

S.C.S. K:\MAA14\MAA14007 10-20-97 @ 14:55

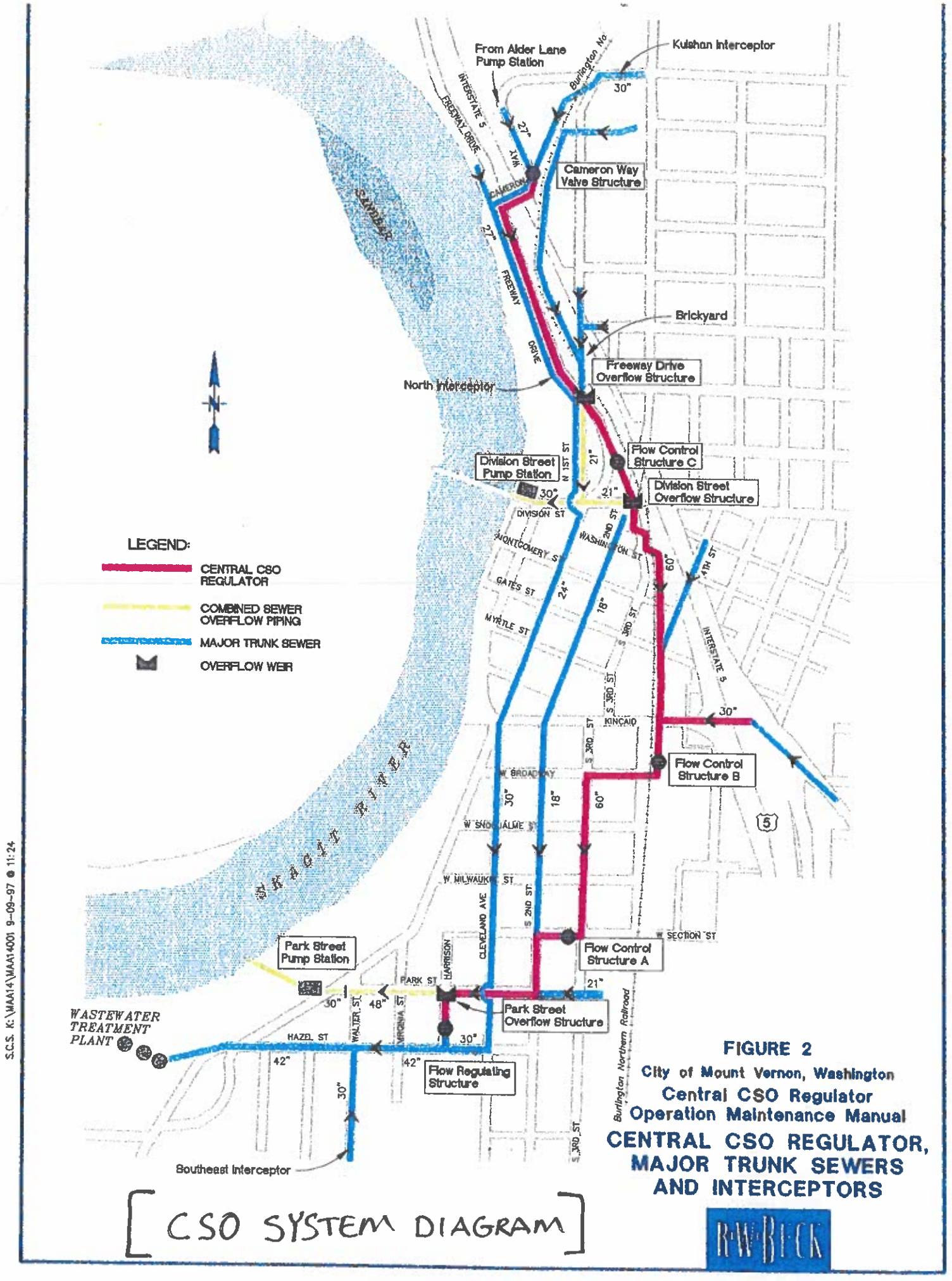


FIGURE 2

City of Mount Vernon, Washington

Central CSO Regulator

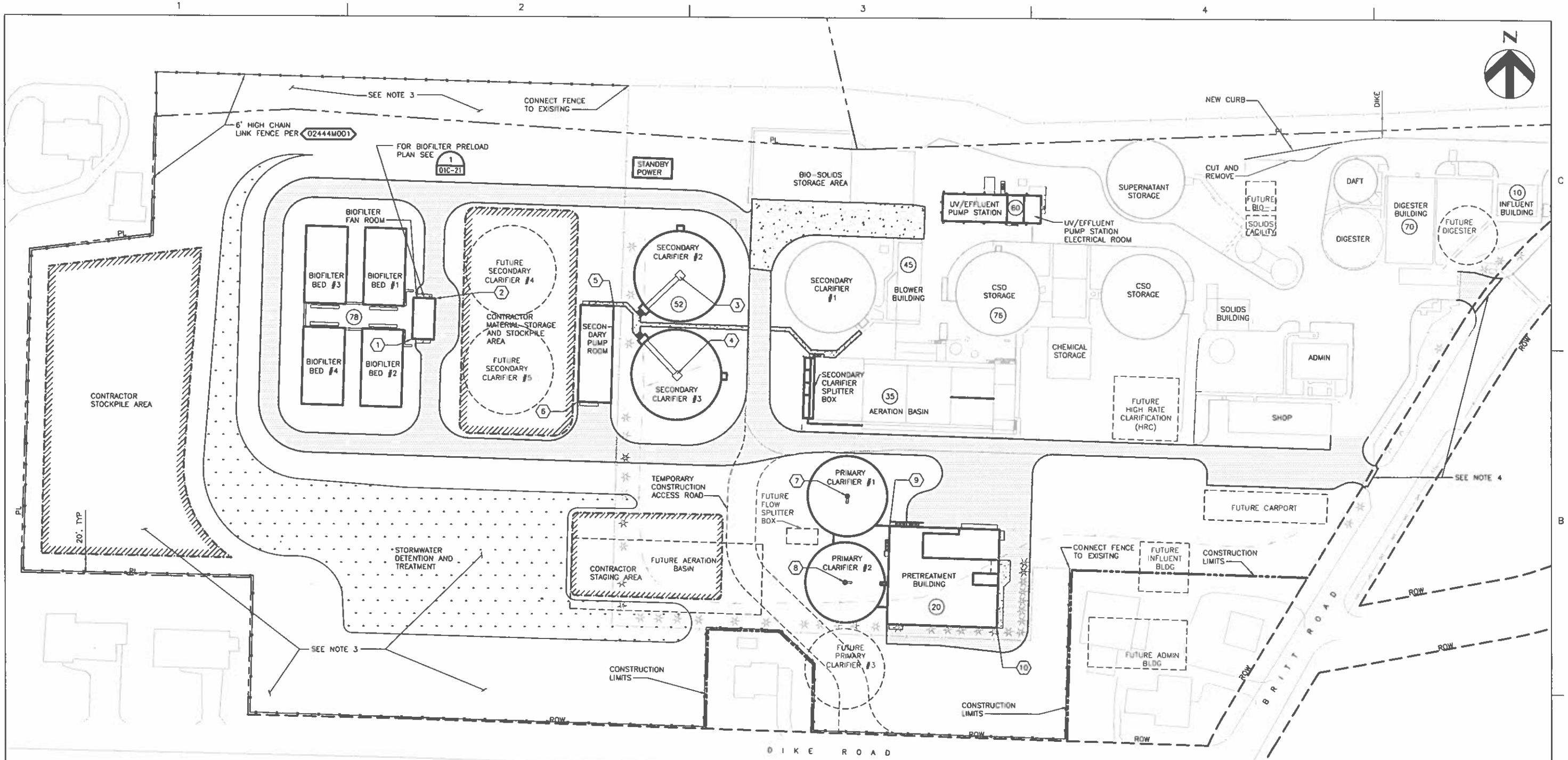
Operation Maintenance Manual

CENTRAL CSO REGULATOR, MAJOR TRUNK SEWERS AND INTERCEPTORS

R·W·BECK

[CSO SYSTEM DIAGRAM]

S.C.S. K:\MAA14\MAA14001 9-09-97 @ 11:24



1 LOCATION POINT

POINT NO.	NORTHING	EASTING	DESCRIPTION
1	518,453.50	1,271,811.84	SW CORNER OF BIOFILTER FAN ROOM
2	518,494.84	1,271,835.07	NE CORNER OF BIOFILTER FAN ROOM
3	518,518.21	1,272,084.78	CENTER OF SECONDARY CLARIFIER #2
4	518,417.92	1,272,081.82	CENTER OF SECONDARY CLARIFIER #3
5	518,487.73	1,272,017.69	NE CORNER OF SECONDARY PUMP ROOM
6	518,390.11	1,271,980.79	SW CORNER OF SECONDARY PUMP ROOM
7	518,294.90	1,272,257.05	CENTER OF PRIMARY CLARIFIER #1
8	518,206.93	1,272,254.50	CENTER OF PRIMARY CLARIFIER #2
9	518,264.62	1,272,300.44	NW CORNER OF PRETREATMENT BUILDING
10	518,161.39	1,272,410.12	SE CORNER OF PRETREATMENT BUILDING

NOTES:

1. HORIZONTAL DATUM-NAD '83.
2. VERTICAL DATUM- NGVD '29.
3. ALL DISTURBED GRASSY AREAS TO BE RESEEDED.
4. LANDSCAPING, PAVING AND CURB, FENCING AND GATES AND OTHER EXISTING IMPROVEMENTS TO BE REPLACED.

XX

CODE	LOCATION
10	INFLUENT BUILDING
20	PRETREATMENT BUILDING
35	AERATION BASIN
45	BLOWER BUILDING
52	SECONDARY COMPLEX (INCLUDES SECONDARY CLARIFIERS)
60	UV/EFFLUENT BUILDING
70	DIGESTER COMPLEX
76	WAS STORAGE
78	ODOR CONTROL

[PLANT LAYOUT]

HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION
1	OCT 2009	AS RECORDED

PROJECT MANAGER	ERIC C. BERGSTROM
DESIGNED	E. C. BERGSTROM
DRAWN	L. L. BRAMLETT
CHECKED	
PROJECT NUMBER	000000000018326

City of Mount Vernon

WASTEWATER TREATMENT PLANT UPGRADE PHASE 1

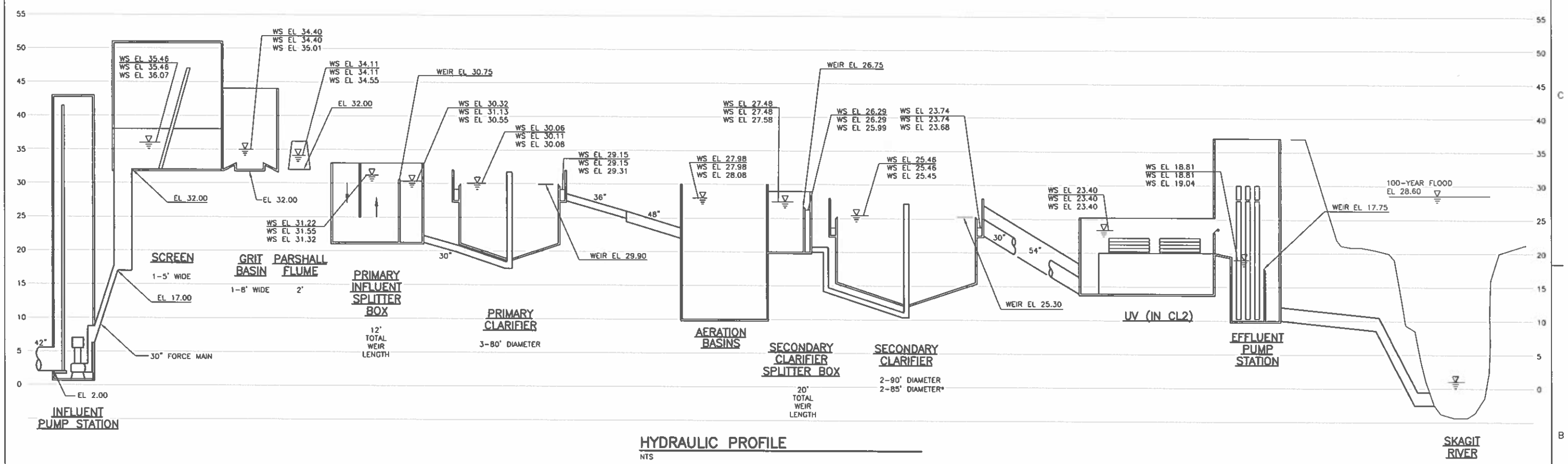
OVERALL SITE PLAN

0 1" 2"

FILENAME	00G-08.dwg
SCALE	1"=50'

SHEET 00G-08

C:\PWWORKING\SEA\dms05111\00G-08.dwg, 9/29/2009 1:56:25 PM, lbramlet, Adobe PDF, 11 x 17, 1:2



HYDRAULIC PROFILE

NTS

LEGEND

WS EL XX.XX
WS EL XX.XX
WS EL XX.XX

ASSUMES: 16.4 MGD
- 1 INFLUENT SCEEN
- 1 GRIT BASIN
- 2 PRIMARY CLARIFIERS
- 2 SECONDARY CLARIFIERS

IF SHOWN ASSUMES: 16.4 MGD
- 1 INFLUENT SCREEN
- 1 GRIT BASIN
- 1 PRIMARY CLARIFIER
- 2 SECONDARY CLARIFIERS

IF SHOWN ASSUMES: 22 MGD
- 1 INFLUENT SCREEN
- 1 GRIT BASIN
- 2 PRIMARY CLARIFIER
- 3 SECONDARY CLARIFIERS

[PROCESS FLOW DIAGRAM]

HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION
1	OCT 2009	AS RECORDED

PROJECT MANAGER	ERIC C. BERGSTROM
DESIGNED	S. CHILUKURI
DRAWN	S. D. GUNDY
CHECKED	
PROJECT NUMBER	000000000018326

City of Mount Vernon

WASTEWATER TREATMENT PLANT UPGRADE PHASE 1

HYDRAULIC PROFILE

0 1" 2"

FILENAME 00G-11.dwg
SCALE NONE

SHEET 00G-11

C:\PWWORKING\SEA\dmd05111\00G-11.dwg, 9/29/2009 1:56:57 PM, lbramlet, Adobe PDF, 11 x 17, 1:2

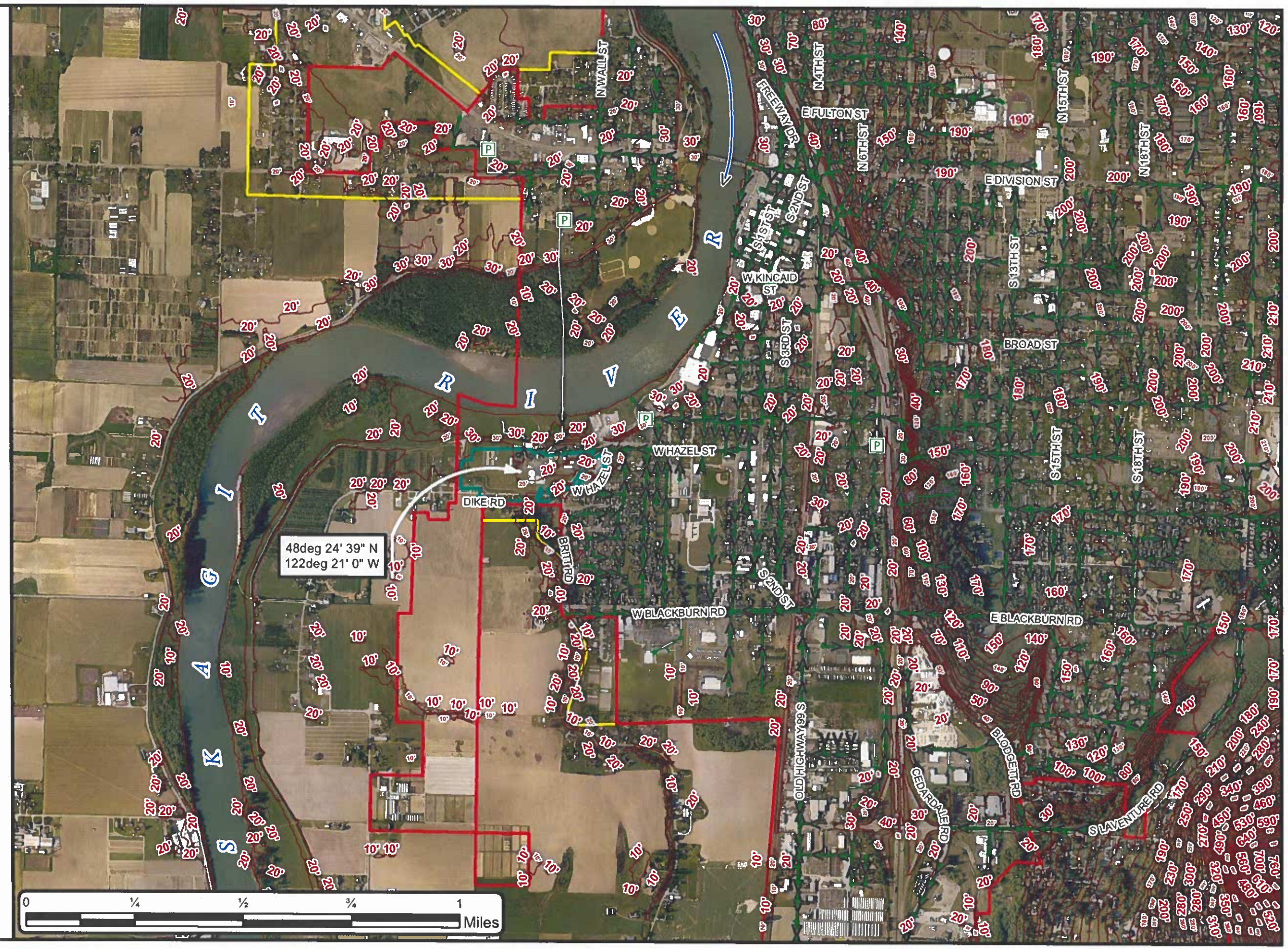
City of MOUNT VERNON

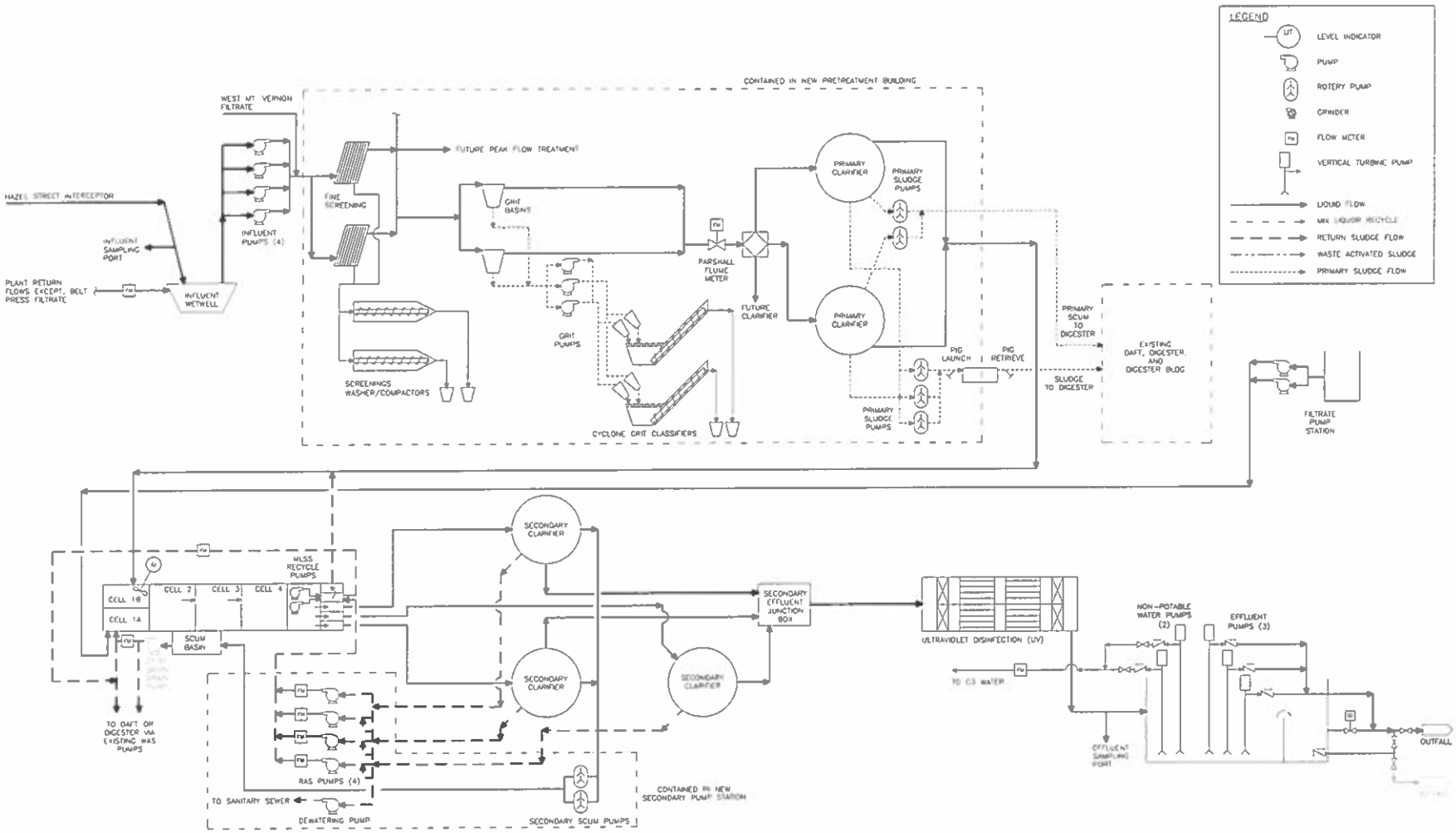
Waste Water Treatment Plant

- WWTP
- Manhole
- Pump Station
- Gravity Main
- Force Main
- Lateral Line
- 10' Contour (NGVD29)
- CITY
- UGA

Map updated 08/16/2021 by MV GIS

N W E S





HDR

ISSUE	DATE	DESCRIPTION
1	OCT 2009	AS RECORDED

PROJECT MANAGER	ERIC C. BERGSTROM
DESIGNED	S. CHILUKURI
DRAWN	S. D. GUNDY
CHECKED	
PROJECT NUMBER	00000000001B326

City of Mount Vernon

WASTEWATER TREATMENT PLANT UPGRADE PHASE 1

PLANT FLOW SCHEMATIC

FILENAME 00G-09.dwg

SCALE NONE

SHEET 00G-09

MOUNT VERNON WWTP TREATMENT PROCESS DESCRIPTION

It is the intent of the City of Mount Vernon Wastewater Utility to operate its treatment plant in the BOD removal mode year round. This will allow for the greatest possible treatment capacity throughout the entire year.

The design criteria developed by HDR Engineering Inc. in 2006, determined the flow and loading influent rates for the facility operating in BOD removal mode to be as follows.

- Maximum Monthly Average Flow = 15.0 MGD
- Maximum Monthly Average BOD Loading = 17,300 lbs./day
- Maximum Monthly Average TSS Loading = 18,300 lbs./day

In the BOD removal mode, WWTP staff will work to maintain a MCRT of about 5 days and the MLSS concentration would be held between 1200 and 1500 mg/l. During this time the targeted DO would be around 1.5 to 2.0 mg/l. There may be times, depending on the process, that the DO set point could be as high as 3.5.

At high flows Plant Staff will check the blanket levels in the Secondary Clarifiers and make sure there is no activated sludge floc escaping over the weirs. If there is floc in the Clarifier effluent Staff will place online the third Secondary Clarifier. If floc continues to be present in the Secondary Clarifier effluent Staff will open the gate valve to the first CSO Storage Unit. After the first CSO storage unit filled, flow would proceed to the second CSO storage unit which was old Secondary Clarifier #1. If the high flow event continued after both of these units were full, Staff would begin throttling down Influent flow using the SCADA system which controls the Influent Pumps.

While in the BOD removal mode, there is an option to have an anoxic cell online. The anoxic cell would be the first cell in the aeration basins that the forward flow enters. There are several benefits of having the anoxic cell online. By using the MLSS recycle pumps, basin discharge can be pumped back into the anoxic cell to help buffer pH drop which in turn will reduce the potential need for chemical addition to maintain the pH level. The MLSS pumps can be run in either a fixed paced mode or a flow paced mode. The anoxic cell also helps control the growth of certain filamentous organisms, and helps promote the formation of firm floc particles thru the denitrification process.

The WWTP Phase 1 Upgrade included a pre-aeration cell (#1A) for treating filtrate with a separate metered, RAS feed line. The detention time in this cell can be adjusted by adjusting the RAS feed rate which is controlled by an automated gate valve. This allows for the conversion of the high concentration of ammonia nitrogen in the filtrate to nitrate nitrogen apart from the forward flow. The normal operating mode for the RAS flow control valve will be flow paced at 50% of the filtrate flow. This pre-aeration cell must be used for filtrate treatment during operation in the Nitrification Mode but can be converted back to treat forward flow in the BOD removal mode. This would also add to the BOD removal capacity in the wetter months.