

Water Pollution Control Plant Stormwater Pollution Prevention Plan



ARLINGTON
VIRGINIA

SWPPP Preparation Date:

7/19/2019

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SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

1.1 Facility Information

The Water Pollution Control Plant is a 40 million gallons per day (MGD) tertiary municipal wastewater treatment plant. Upgrades were completed in 2013. Upgrades included demolition of old buildings, a substantial amount of excavation, and construction of new structures (buildings and roads). The facility is approximately 35 acres in size, adjacent to Four Mile Run in South Arlington, Virginia. The major cross streets are South Glebe Road and South Eads Street.

The topography of the facility is such that all drainage goes to Four Mile Run, either directly overland or by stormwater conveyance systems. Within the facility boundaries, there are four storm drain outlets to Four Mile Run; however, one has been sealed on the property – although the headwall remains in place. In addition to the plant, the stormwater collection system drains portions of South Glebe Road, South Eads Street, a small portion of the neighborhood north of Gate #11 at the west end of the plant, and a small portion of the neighborhood north of Gate #3 at the north end of the plant.

Facility Information

Name of Facility: Water Pollution Control Plant

Street: 3402 South Glebe Road

City: Arlington State: VA ZIP Code: 22202

County or Similar Subdivision: Arlington

Permit Tracking Number: VAR051421 (if covered under a previous permit)

Latitude/Longitude (Use one of three possible formats, and specify method)

Latitude:

Longitude:

1. 38° 50' 46.16" N (degrees, minutes, seconds)

1. 77° 03' 06.42" W (degrees, minutes, seconds)

2. __ ° __ ' __ " N (degrees, minutes, decimal)

2. __ ° __ ' __ " W (degrees, minutes, decimal)

3. __ . __ ° N (decimal)

3. __ . __ ° W (decimal)

Method for determining latitude/longitude (check one):

USGS topographic map (specify scale: _____)

EPA Web site

GPS

Other (please specify): Google Earth

Is the facility located in Indian Country? Yes No

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." _____

Is this facility considered a Federal Facility? Yes No

Estimated area of industrial activity at site exposed to stormwater: 29 (acres)

Discharge Information

Does this facility discharge stormwater into an MS4? Yes No

Name(s) of water(s) that receive stormwater from your facility: Four Mile Run

Are any of your discharges directly into any segment of an "impaired" water? Yes No

If Yes, identify name of the impaired water (and segment, if applicable): Chesapeake Bay

Identify the pollutant(s) causing the impairment: Chlordane

For pollutants identified, which do you have reason to believe will be present in your discharge? None

For pollutants identified, which have a completed TMDL? None

Do you discharge into a receiving water designated as a Tier 2 (or Tier 2.5) water? Yes No

Are any of your stormwater discharges subject to effluent guidelines? Yes No

Primary SIC Code or 2-letter Activity Code: TW

Identify your applicable sector and subsector: Sector T – Treatment Works

1.2 Contact Information / Responsible Parties

Facility Operator(s):

Name: Thomas Broderick
Address: 3402 South Glebe Road
City, State, Zip Code: Arlington, VA 22202
Telephone Number: 703-228-6877
Email address: tbroderick@arlingtonva.us

Facility Owner (s):

Name: Arlington County Board
Address: 2100 Clarendon Blvd
City, State, Zip Code: Arlington, VA 22201
Telephone Number: 703-228-3130
Email address: countyboard@arlingtonva.us

SWPPP Contact:

Name: Wilson "Beau" Dodge
Telephone number: 703-228-6881
Email address: wrdodge@arlingtonva.us

1.3 Stormwater Pollution Prevention Team

The Pollution Prevention Team is responsible for the review of the Stormwater Pollution Prevention Plan, as well as reviewing changes in process, operations or construction that could affect the quality of the stormwater discharged from the facility. The Team is also responsible for conducting the annual compliance evaluation of the facility and ensuring compliance with this document.

The EMS Coordinator is responsible for overall coordination of the SWPPP and associated activities, which includes conducting periodic meetings with SWPPP team members, coordinating the annual comprehensive audit, and track corrective actions required as the result of the annual audit. The EMS Coordinator shall coordinate with staff to provide procedures and policies for the proper storage and handling of chemicals, and coordinates the integration of the SWPPP with the Spill Protection, Control and Countermeasure and Hazardous Materials Management Plans (SPCCP/HMMP). This individual also conducts monthly inspections for compliance with the SWPPP and SPCCP/HMMP; conducts erosion and sediment control (ESC) plant inspections; and conducts annual employee training.

The SWPPP should be reviewed and documented annually by the team members. The SWPPP shall be revised if there are changes in design, operation or maintenance of the treatment plant that would affect the nature of the stormwater runoff. Revisions made prior to the annual review will likewise be documented.

Staff Names	Individual Responsibilities
Beau Dodge	EMS Coordinator – Primary POC for SWPPP; updates SWPPP as necessary; conducts required sampling; conducts periodic inspections; facilitates employee training
David Robinson	Plant Operator – Participates in annual review of the SWPPP; participates in annual Compliance Evaluation
Steven Wilcox	Plant Operator – Participates in annual review of the SWPPP; participates in annual Compliance Evaluation

1.4 Activities at the Facility

Physical, biological, and chemical treatment of wastewater and biosolids from Arlington County and portions of Fairfax County, Alexandria, and Falls Church. Routine activities involve chemical loading/unloading operations, equipment maintenance, solid waste hauling, odor control, and pest control. Non-routine activities include winter deicing operations.

1.5 General Location Map

Included in Appendix A.

1.6 Site Maps

Included in Appendices B1 and B2.

SECTION 2: POTENTIAL POLLUTANT SOURCES

The Water Pollution Control Plant performs a wide variety of operations and processes that may contribute pollutants within its drainage area, such as equipment maintenance, unloading of chemicals and petroleum products, and de-icing. The Plant also stores large volumes of process chemicals and petroleum products on site and operates a Household Hazardous Materials collection site. However, these materials are stored within enclosed areas or tanks and none of these materials are directly exposed to precipitation.

2.1 Industrial Activity and Associated Pollutants

The WPCP has a large number of pumps, valves, and motors - some of which are located outside. All areas surrounding exposed pumps and valves are kept free of oil, grease, or other debris which could contribute pollutants to stormwater. All WPCP oil-containing equipment is serviced on a regular schedule.

During cold weather months, the paved roadways at the WPCP are pre-treated with a brine/water mixture when snow and/or ice is forecasted. Rock salt is also applied on the roadways and walkways during periods of snow and/or ice.

Unloading activities are carried out in the zones of 004, 006, and 008. The unloading of process chemicals; ferric chloride, sodium hypochlorite, sodium bisulfite, lime, sodium hydroxide, hydrochloric acid, methanol, phosphoric acid, and polymer are performed under the supervision of Operations staff and the contractor delivering the chemical. Chemical spill kits are placed near each chemical transfer point and buckets are used to contain drips and leakage from hoses. Drain covers are also available to prevent a release from entering nearby storm drains. Small chemical releases are captured by the appropriate WPCP spill countermeasures outlined in the facilities SPCCP/HMMP. A significant chemical release would require a HAZMAT response from the Arlington County Fire Department.

The WPCP ships approximately 99 wet tons of biosolids for offsite disposal daily. Biosolids are loaded into trucks, inside of the Dewatering Building. Since the trucks are covered with tarps, there is a minimal probability of release of biosolids from the truck and only a minimal release of particulates from the loading bay.

The WPCP has a waste hauler pad adjacent to the Dissolved Air Flootation Thickener (DAFT) Building, which is used to dewater solids collected from the sanitary and storm sewer systems. The area is sloped to prevent liquids from entering into the street, and the drains immediately near the waste pad are connected to the sanitary sewer system. Dewatered solids are placed into a covered waste haul box

The Household Hazardous Materials Facility has four rooms constructed of cinder block with a Fire Department approved fire suppression system. Small quantities of materials are transferred from residential vehicles by trained WPCP staff, and stored in Fire Marshal-approved storage buildings that have internal containment. Materials received are segregated as to chemical reactivity and hazard characteristics by trained WPCP staff. The collection/transfer area is bermed and drains to the sanitary sewer. Outside of the berm is a trench drain that can be isolated from the storm system in the event of a spill outside of the bermed area. Chemicals and process materials are not stored outside, or in a manner that would contribute pollutants to stormwater run-off. The container used to store e-waste is stored within the HHM collection area and drains to the sanitary sewer.

The WPCP does not perform any type of manufacturing outside, nor any form of on-site waste disposal. The WPCP is not an EPCRA 313 facility.

Industrial Activity	Associated Pollutants
Chemical loading/unloading	Sodium hypochlorite, muriatic acid, unhydrated lime, polymer, household hazardous wastes, ferric chloride, sodium hydroxide (caustic), lubricating oil, diesel fuel, glycol, urea, methanol, phosphoric acid, sodium bisulfite, defoamer
Wastewater treatment	Untreated or partially-treated wastewater, plant effluent water (PEW), wastewater sludges, process wastestreams
Waste oil storage	Waste oil
Equipment repair and maintenance	Lubricants
Household hazardous waste collection	Toxic, flammable, and/or corrosive materials
Truck-hauled waste (rolloffs)	Grit, trash, debris, metal wastes
Dewatering dump pad	Emulsifiers, street sweepings, sludges, sediment, trash
Deicing of entryways, sidewalks, and roads	Rock salt

2.2 Spills and Leaks

Areas of Site Where Potential Spills/Leaks Could Occur

Location	Outfalls
Lime silo area	004
Dewatering building (DWB)	004
Bio building chemical transfer areas	004
Preliminary treatment building (PTB)	004
Dewatering dump pad	004
Household hazardous waste area	004
Standby generator building (SGF)	004
Secondary blower building (SBB)	004
East secondary services pump station	004
South ferric facility (SFF)	004
West secondary services pump station	008
Methanol feed facility (MFF)	006
South hypo facility (SHF)	008

Description of Past Significant Spills/Leaks

Date	Description	Outfalls
6/14/2016	840 gallons of sludge from DWB wet well to storm grates	004
7/5/2016	89 gallons of sludge from biosolids truck to storm grate	004
11/27/2018	9375 gallons of partially-treated wastewater overflowed into catch basin on S. Glebe Rd from 72" junction chamber	008
12/3/2018	50 gallons of mixture of wastewater, chlorinated water, and stormwater discharged out of an air release valve and flowed into a stormwater trench drain	008
12/16/2018	2000 gallons of partially-treated wastewater overflowed into catch basin on S. Glebe Rd from 72" junction chamber	008

2.3 Non-Stormwater Discharges Documentation

- Date of evaluation: 12/19/2018
- Description of the evaluation criteria used: Direct observation of the outfalls.
- List of the outfalls or onsite drainage points that were directly observed during the evaluation: 004, 006, 008
- Different types of non-stormwater discharge(s) and source locations: Annual fire hydrant flushing
- Action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge: N/A

2.4 Sampling Data Summary

Included in Appendix C

SECTION 3: STORMWATER CONTROL MEASURES

3.1 Minimize Exposure

There are several refuse dumpsters and rolloffs located at the Plant. All of the dumpsters are covered to prevent the entry of stormwater.

3.2 Good Housekeeping

To assure a safe and clean working environment, housekeeping in the wastewater treatment plant is a high priority. Shift supervisors and operators regularly inspect all portions of the facility, and if any housekeeping deficiencies are found, they are promptly corrected on-the-spot.

Another aspect of good housekeeping is proper trash and recyclable storage and collection, thus minimizing the amount of litter that may be spread by the wind. Trash and recyclables are stored in covered containers (eagle bins) at specific locations within the plant: Operations Control Building, Preliminary Treatment Building, Dewatering Building, Maintenance/Warehouse, and the Post Aeration Facility. Trash is removed by Solids Waste Bureau twice per week, generally Monday and Thursday. Recyclables are also removed by the Solid Waste Bureau twice per month, generally the 2nd and 4th Tuesday.

Additionally, CM personnel periodically perform plant street sweeping with the use of a Bobcat equipped sweeping attachment, to eliminate a significant amount of solids that otherwise might end up in the outfalls.

3.3 Maintenance

All storage tanks and piping are checked daily by Operations personnel and documented in their respective SharePoint station log. If any deficiencies are found, maintenance personnel are contacted via telephone, radio, and/or work order. Based on the severity of the problem, corrective action is planned and scheduled for future maintenance outages. If the maintenance involves equipment subject to precipitation, then appropriate spill countermeasures are preemptively employed. Preventive maintenance responsibilities are scheduled and tracked in the plant's MP2 software.

The facility has two (2) hydrodynamic stormwater control systems: one at Outfall 008, and one at Outfall 004, respectively. Both hydrodynamic structures are a Vortechs® unit, model 1522CIP, manufactured by Stormwater 360. In addition to plant runoff, the unit at Outfall 008 treats approximately 2 million ft² from outside of the facility; and the unit at Outfall 004 treats about 165,000 ft² from outside of the facility. The units are inspected monthly, and cleaned as needed to maintain efficiency.

3.4 Spill Prevention and Response

The facility's combined Spill Prevention Control and Countermeasure Plan and Hazardous Material Management Plan (SPCCP/HMMP) (December 2015) serves as a BMP throughout the plant. The SPCCP/HMMP details where all petroleum and hazardous materials are stored at this facility, and how they are stored and handled. The Plan also specifies how the facility responds to spills, provides appropriate notification requirements, and mitigation requirements. Spill kit locations are identified in Appendix B2. Additionally, each plant vehicle carries a spill kit.

Plant staff is trained annually on their responsibilities in case of a chemical and/or hazardous material spill. This training includes training and education on the information contained in the Safety Data Sheets for all bulk materials used in the plant.

3.5 Erosion and Sediment Controls

Major construction at the Plant has been completed. Any contractor working at the Water Pollution Control Plant is required to obtain all necessary E&S control permits from Arlington County Inspection Services Division, Office of Sustainability and Environmental Management, and if applicable, from the Virginia Department of Environmental Quality (DEQ). Contractors are required to develop and implement an erosion and sediment control plan for their activities. The contractor is also responsible for installing and maintaining stormwater inlet protections, preventing spills, and following their Erosion & Sediment Control plans, as approved by Arlington County Inspection Services Division.

3.6 Employee Training

The EMS Coordinator conducts employee training annually on the SWPPP and the SPCCP/HMMP. Make-up training is scheduled for those employees that missed the annual training.

SECTION 4: SCHEDULES AND PROCEDURES FOR MONITORING

1. **Sample Location(s).** Describe where samples will be collected, including any determination that two or more outfalls are substantially identical.
 - a. **Outfall 004:** Manhole immediately downstream of the Vortechs stormceptor unit located in front of the SFF.
 - b. **Outfall 006:** Manhole located in the asphalt pavement near the southeast corner of the FADF building.
 - c. **Outfall 007:** Manhole located in South Road approximately 100 feet east of the southwest corner of the FADF building. This manhole has been temporarily plugged, and is not discharging to the Four Mile Run.
 - d. **Outfall 008:** Manhole immediately downstream of the Vortechs stormceptor unit located in the asphalt pavement west of the west end of the PAF building.

2. **Pollutant Parameters to be Sampled.** Include a list of the pollutant parameters that will be sampled and the frequency of sampling for each parameter.
 - a. **Quarterly:** For each outfall, a visual analysis performed and documented for solids content, clarity, sheen, and odor. Additionally, plant lab technicians analyze for TKN, NO₃, TP, and TSS.
 - b. **Semi-annually:** For each outfall, analysis performed for chlordane.

3. **Monitoring Schedules.** Include the schedule you will follow for monitoring your stormwater discharge, including where applicable any alternate monitoring periods to be used for facilities in climates with irregular stormwater runoff.
 - a. **Quarterly:** For each outfall, attempt to sample the first qualifying stormwater event of the first month of the quarter that occurs during a daylight workday. If no sample collected during the first month, then closely monitor weather forecasts to sample in the second month of the quarter whenever the event is likely to occur – even if after normal workday hours.
 - b. **Semi-annually:** For each outfall, attempt to sample the first qualifying stormwater event of the first month of the period that occurs during a daylight workday. If no sample collected during the first four months of the period, then closely monitor weather forecasts to sample whenever the event is likely to occur – even if after normal workday hours.

4. **Numeric Limitations.** List here any pollutant parameters subject to numeric limits (effluent limitations guidelines), and which outfalls are subject to such limits. Note that numeric limits are only included for Sectors A, C, D, E, J, K, L, and O. Not applicable.

5. **Procedures.** Describe procedures you will follow for collecting samples, including responsible staff who will be involved, logistics for taking and handling samples, laboratory to be used, etc.
 - a. **Quarterly:** As storm approaches, load van with sample bottles and sampler. When notified by the rain gage/modem that a qualifying event is occurring, proceed to each sampling site and draw samples using the sampler and hose. Discharge the sample into the appropriately marked bottles. Return to the office, visually analyze and document your results on the local form. Turn over labeled sample bottles for lab technicians to analyze for TKN, NO₃, TP, and TSS – including a Chain-of-Custody sheet and a New Work Request form. Sign certification statement for the visual analyses, and have the Bureau Chief certify and sign as well. File with the SWPPP.
 - b. **Semi-annually:** As storm approaches, load van with sample bottles for each outfall, and sampler. When notified by the rain gage that a qualifying event is occurring, proceed to each sampling site and draw samples using the sampler and hose. Discharge the sample into 1 liter amber glass container for each outfall. Label the bottles; complete the Chain-of-Custody sheet; pack the bottles in coolers with ice and bubble wrap. Ship or transport to the contract lab. The contract lab will perform the analysis for chlordane.
 - c. The EMS Coordinator is the primary sample collector. Should he or she be on leave, he or she will coordinate with a plant operator to obtain the samples – if it is critical to obtain the samples before the end of the respective periods.

SECTION 5: INSPECTIONS

For the routine facility inspections and the comprehensive compliance site inspections to be performed at your site, include a description of the following:

- The names of the person(s), or the positions of the person(s), responsible for inspection: The members of the Pollution Prevention Team – as stated in paragraph 1.3 above.
- The schedules to be used for conducting inspections. Include here any tentative schedule that will be used for facilities in climates with irregular stormwater runoff discharges:
 - Routine inspections: These inspections can occur anytime during a month. The EMS Coordinator usually conducts these inspections – which also include inspecting areas covered in the SPCCP/HMMP. Additionally, the operators perform daily station checks that also qualify as routine inspections. At least one of the routine inspections during the year should take place during a rain event.
 - Compliance Evaluation inspections: This annual inspection usually occurs during the months of April, May, or June. The entire Pollution Prevention team participates, and sometimes other employees are brought in to participate as well.
- Specific areas of the facility to be inspected, including schedules for specific outfalls: All areas of the plant subject to spills and/or subject to commingling with precipitation and producing pollution are inspected. This includes all of the areas referenced in paragraph 2.2 above.

SECTION 6: SWPPP CERTIFICATIONS

I have reviewed this document, and based on my personal field observations, work experience, training, and best professional judgment, 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.



Wilson "Beau" Dodge
EMS Coordinator/Pretreatment Program Coordinator

7/19/2019

Date

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 gathered and evaluated 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.



Thomas A. Broderick, P.E.
Water Pollution Control Bureau Chief

7/19/19

Date

SECTION 7: SWPPP REVISIONS

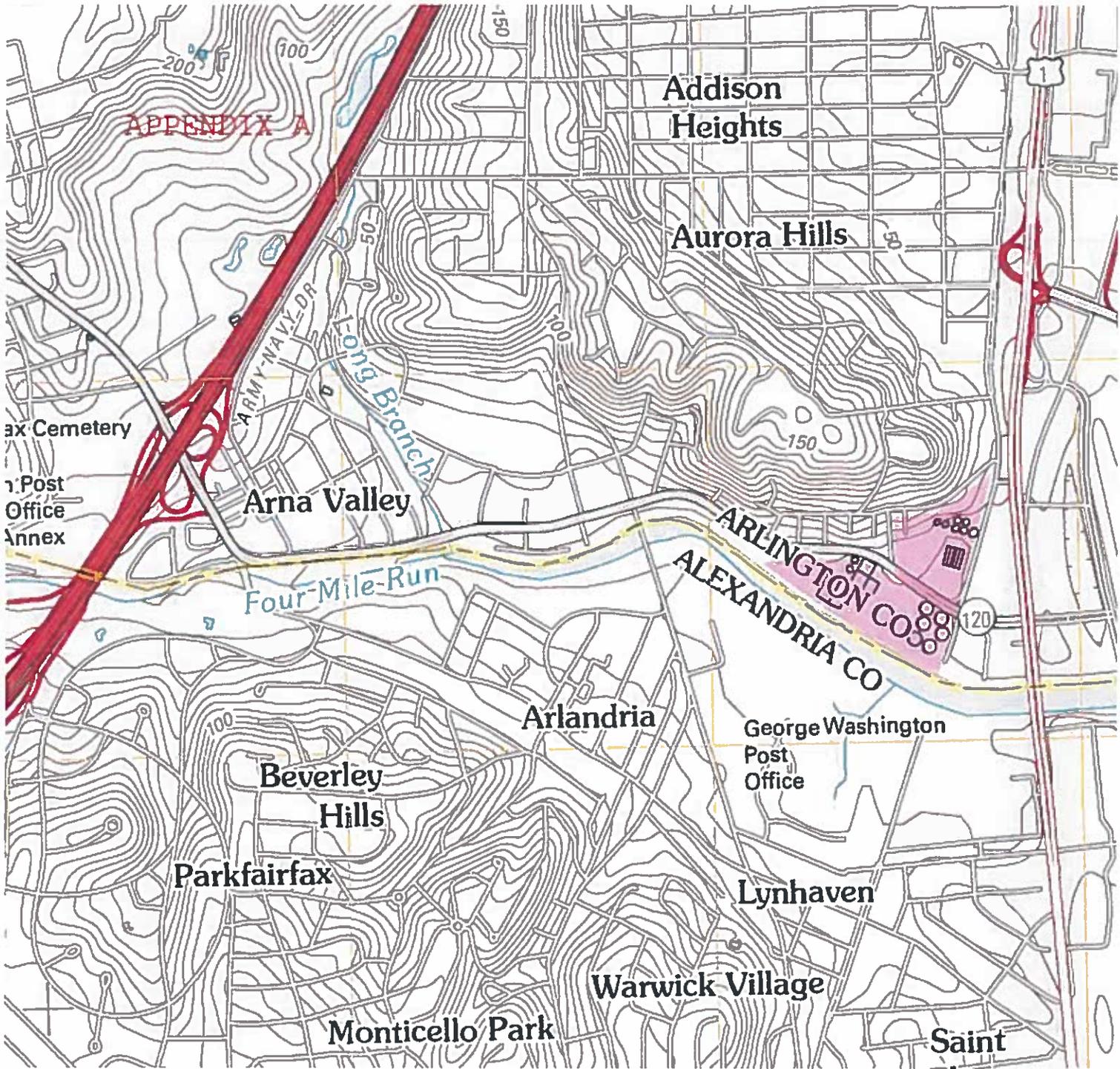
Date of Revision	Revision By	Revision Summary
7/19/2019	Beau Dodge	
10/28/2014	Beau Dodge	
8/28/2012	Beau Dodge	
9/20/2011	Dennis Wisler	

APPENDICES

Appendix A – General Location Map

Appendices B1 and B2 – Site Maps

Appendix C – Sampling Data Summary



Water Pollution Control Plant

1. PROPERTY SIZE: 35 acres
2. IMPERVIOUS AREA: 12.3 acres
3. RECEIVING STREAM: FOUR-MILE RUN, IMPAIRED BY CHLORDAIE
4. THDLs FOR TSS, TH, TP
5. LEGEND

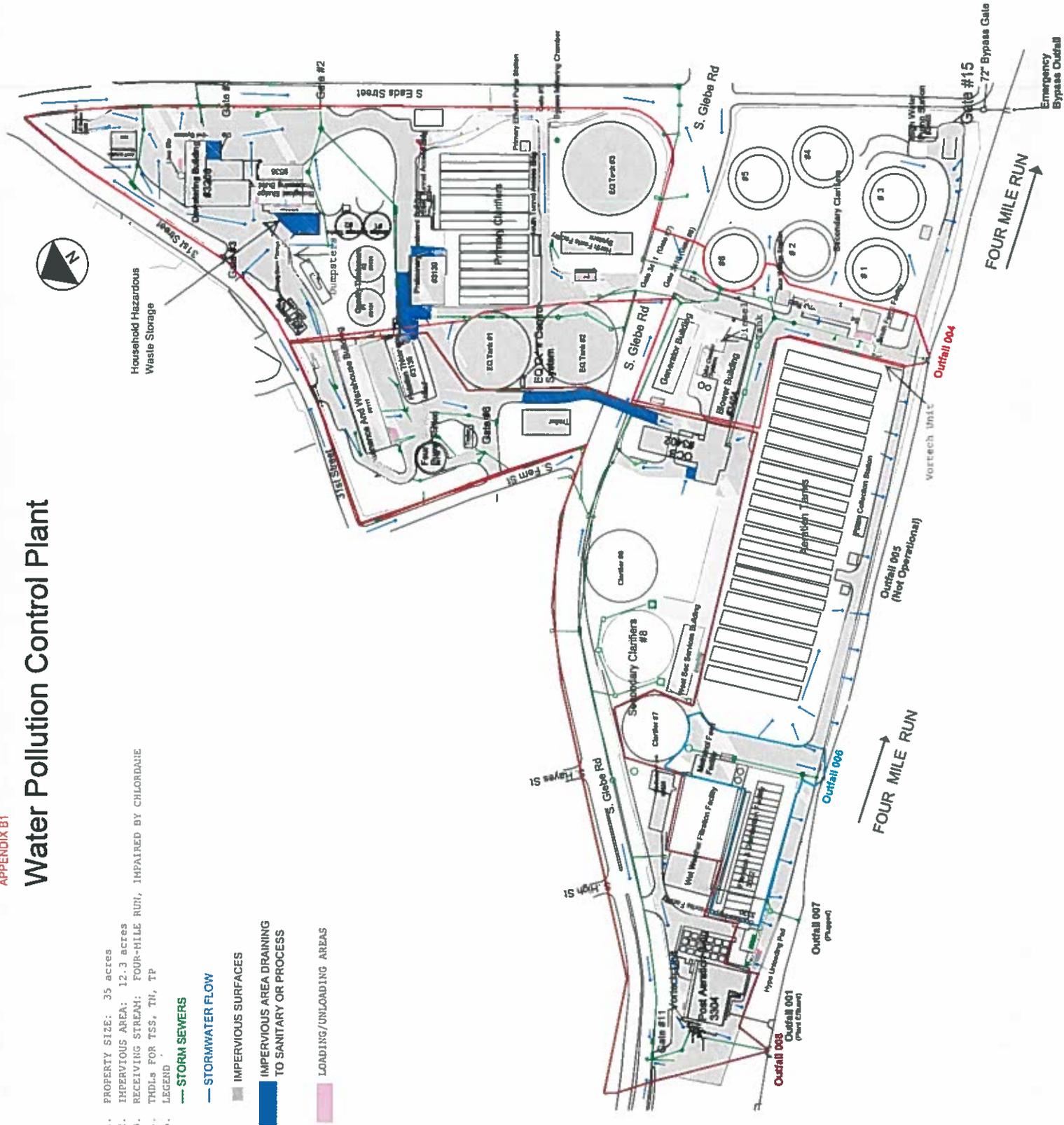
--- STORM SEWERS

— STORMWATER FLOW

■ IMPERVIOUS SURFACES

■ IMPERVIOUS AREA DRAINING TO SANITARY OR PROCESS

■ LOADING/UNLOADING AREAS



Water Pollution Control Plant

- 1) 7/5/16 Biosolids spill
- 2) 8/26/16 PEW leak
- 3) 9/1/16 PEW leak
- 4) 10/10/16 PEW leak
- 5) 10/27/16 PEW leak
- 6) 12/16/16 Fernc spill
- 7) 2/22/17 Fernc spill
- 8) 7/26/17 PEW leak
- 9) 8/1/17 Trash truck leak
- 10) 9/14/17 Polymer spill
- 11) 9/27/17 Motor oil leak
- 12) 12/22/17 PEW leak
- 13) 9/25/18 Glycol spill
- 14) 11/5/18 Diesel fuel leak
- 15) 11/27/18 SSO
- 16) 12/3/18 SSO
- 17) 12/10/18 PEW leak
- 18) 12/16/18 SSO

--- STORM SEWERS

--- STORMWATER FLOW

● STORMWATER MONITORING SITE

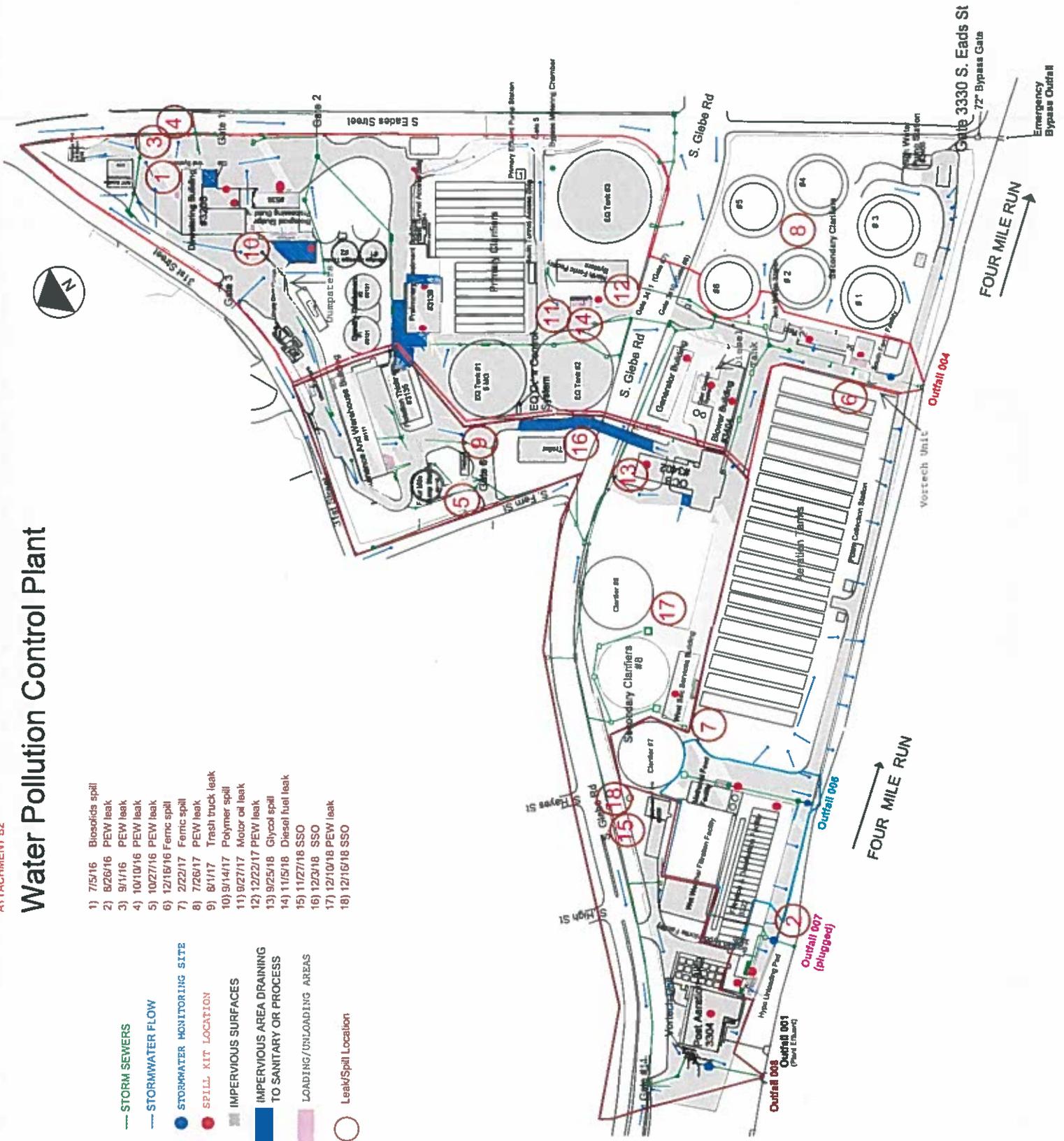
● SPILL KIT LOCATION

■ IMPERVIOUS SURFACES

■ IMPERVIOUS AREA DRAINING TO SANITARY OR PROCESS

■ LOADING/UNLOADING AREAS

○ Leak/Spill Location



Appendix C - Sampling Data Summary

DATE	OUTFALL	CHLORDANE (ug/l)	TKN (mg/l)	NO3 (mg/l)	TN (mg/l)	TN (mg/l) rounded	TP (mg/l)	TSS (mg/l)				
01/12/2015	OFAL4	<0.500	2.06	0.52	2.58	2.58	0.29	85				
01/12/2015	OFAL6	<0.500	4.92	1.43	6.35	6.35	0.56	18.4				
01/12/2015	OFAL8	<0.500	2.21	0.4	2.61	2.21	0.32	84				
04/14/2015	OFAL7	<0.500	0.651	0.74	1.391	1.39	0.04	1.4				
09/21/2015	OFAL4	<0.500	1.95	0.82	2.77	2.77	0.53	19.6		x25	x1	avg
09/21/2015	OFAL6	<0.500	6.38	0.43	6.81	6.38	1.36	78		0.52	0.53	0.53
09/21/2015	OFAL7	<0.500	0.58	0.37	0.95	0.58	0.31	7.2		1.92	0.8	1.36
09/21/2015	OFAL8	<0.500	2.38	0.98	3.36	3.36	0.30	21.2		0.25	0.37	0.31
04/28/2016	OFAL4	<0.500	3.07	0.82	3.89	3.89	0.72	230		0.25	0.34	0.30
04/28/2016	OFAL6	<0.500	0.98	0.93	1.91	1.91	0.04	2.6				
04/28/2016	OFAL7	<0.500	0.59	0.59	1.18	1.18	0.05	0.8				
04/28/2016	OFAL8	<0.500	3.4	1.16	4.56	4.56	0.64	73				
11/30/2016	OFAL4	<0.500	1.43	0.57	2	2	0.46	72.5				
11/30/2016	OFAL6	<0.500	0.7	1.6	2.3	2.3	0.04	1.2				
11/30/2016	OFAL8	<0.500	1.75	0.54	2.29	2.29	0.60	129.5	TSS (run1):	122	TSS (run2):	137
01/23/2017	OFAL4	<0.500	0.756	0.17	0.926	0.76	0.26	68.8				
01/23/2017	OFAL6	<0.500	0.808	1.12	1.928	1.93	0.10	14				
01/23/2017	OFAL8	<0.500	1.69	0.19	1.88	1.69	0.43	174				
05/11/2017	OFAL4		0.6	0.89	1.49	1.49	0.57	2.2				
05/11/2017	OFAL6		0.73	1.45	2.18	2.18	0.11	9.2				
05/11/2017	OFAL8		2.37	0.63	3	3	0.38	42				
07/28/2017	OFAL4	<.500	0.924	0.42	1.344	0.92	0.16	32				
07/28/2017	OFAL6	<.500	0.707	1.05	1.757	1.76	0.02	2.1				
07/28/2017	OFAL8	<.500	1.13	0.45	1.58	1.13	0.16	32				
10/09/2017	OFAL4		1.04	0.37	1.41	1.04	0.30	57				
10/09/2017	OFAL6		1.29	1.64	2.93	2.93	0.08	14.8				
10/09/2017	OFAL8		2.21	0.35	2.56	2.21	0.43	68				
02/07/2018	OFAL4		0.932	0.57	1.502	1.5	0.18	29.2				
02/07/2018	OFAL6		0.793	1.99	2.783	2.78	0.02	9.5				
02/07/2018	OFAL8		1.04	0.48	1.52	1.04	0.22	62				
05/31/2018	OFAL4	<.500	0.79	0.23	1.02	0.79	0.16	23.2				
05/31/2018	OFAL6	<.500	0.79	1.93	2.72	2.72	0.05	5.7				
05/31/2018	OFAL8	<.500	1.01	0.44	1.45	1.01	0.26	58.4				
08/21/2018	OFAL4	<0.500	0.88	0.25	1.13	0.88	0.26	36				
08/21/2018	OFAL6	<0.500	0.88	1.24	2.12	2.12	0.10	10				
08/21/2018	OFAL8	<0.500	1.09	0.25	1.34	1.09	0.42	90				
10/11/2018	OFAL4		3.03	0.98	4.01	4.01	0.51	34				
10/11/2018	OFAL6		1.11	1.44	2.55	2.55	0.06	7				
10/11/2018	OFAL8		2.73	0.98	3.71	3.71	0.56	76				
02/12/2019	OFAL4		1.68	0.28	1.96	1.68	0.60	220				
02/12/2019	OFAL6		0.9	0.91	1.81	1.81	0.11	12				
02/12/2019	OFAL8		1.29	0.34	1.63	1.29	0.40	130				
06/10/2019	OFAL4	<0.20	0.99	0.3	1.29	0.99	0.19	11				
06/10/2019	OFAL6	<0.21	0.75	0.92	1.67	1.67	0.06	2.1				
06/10/2019	OFAL8	<0.20	0.7	0.26	0.96	0.7	0.14	21				
		MAX:	6.38	1.99		6.38	1.36	230				
				AVG (mg/l)		2.16	0.30	48.39				
				LOAD (lb/ac/yr)		7.2	1.0	160				
				TMDL (lb/ac/yr)		12.3	1.5	440				
				PERCENT of TMDL		58.1	66.6	36.4				
				Precip (in/yr)		39.7						
				imperv (ac)		10.37						
				site area (ac)		25.9						