



Fact Sheet

The U.S. Environmental Protection Agency (EPA)

Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES) Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) to:

Washington Beef LLC
Toppenish Plant

Public Comment Start Date: February 10, 2023

Public Comment Expiration Date: March 27, 2023

Technical Contact: Brian Nickel
800-424-4372, ext. (within Alaska, Idaho, Oregon, and Washington)

EPA PROPOSES TO REISSUE THE NPDES PERMIT

EPA proposes to reissue the NPDES permit for the facility referenced above. The draft permit places conditions on the discharge of pollutants from Washington Beef to waters of the United States. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged from the facility.

This Fact Sheet (FS) includes:

- information on public comment, public hearing, and appeal procedures
- a listing of proposed effluent limitations and other conditions for the facility
- a map and description of the discharge location
- technical material supporting the conditions in the permit

CWA § 401 CERTIFICATION

Since this facility discharges to tribal waters and the Tribe does not have Treatment as a State (TAS), EPA is the certifying authority for the permit. See FS Section VI.C. Comments regarding the intent to certify should be directed to the EPA technical contact listed above.

CLEAN WATER ACT §401(A)(2) REVIEW

CWA Section 401(a)(2) requires that, upon receipt of an application and 401 certification, EPA notify a neighboring State or Tribe with TAS when EPA determines that the discharge may affect the quality of the neighboring State/Tribe's waters. As stated above, EPA is the certifying authority and is accepting comment regarding the intent to certify this permit. Once EPA reviews any comments received regarding the intent to certify and has signed a

final certification, EPA will determine whether the discharge may affect a neighboring jurisdiction's waters. 33 U.S.C. § 1341(a)(2).

PUBLIC COMMENT

Persons wishing to comment on, or request a Public Hearing for, the draft permit may do so in writing by the expiration date of the Public Comment period. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester's name, address, and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to EPA as described below.

We request that all comments on EPA's proposed permits or requests for a public hearing be submitted via email to Brian Nickel (Nickel.Brian@epa.gov). If you are unable to submit comments via email, please call 206-553-6251.

After the Public Notice expires, and all comments have been considered, EPA's regional Director for the Water Division will make a final decision regarding permit issuance. If no substantive comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If substantive comments are received, EPA will address the comments and issue the permit. The permit will become effective no less than 30 days after the issuance date, unless an appeal is submitted to the Environmental Appeals Board within 30 days pursuant to 40 CFR 124.19.

DOCUMENTS ARE AVAILABLE FOR REVIEW

The draft NPDES permit, fact sheet and other information can be downloaded from the internet at <https://www.epa.gov/npdes-permits/about-region-10s-npdes-permit-program>.

The draft Administrative Record for this action contains any documents listed in the References section. The Administrative Record or documents from it are available electronically upon request by contacting Brian Nickel.

For technical questions regarding the fact sheet, contact Brian Nickel at 206-553-6251 or Nickel.Brian@epa.gov. Services can be made available to persons with disabilities by contacting Audrey Washington at (206) 553-0523.

TABLE OF CONTENTS

ACRONYMS.....	7
I. BACKGROUND INFORMATION.....	9
A. GENERAL INFORMATION	9
B. PERMIT HISTORY	9
C. TRIBAL CONSULTATION.....	9
II. FACILITY INFORMATION	9
A. GENERAL FACILITY INFORMATION	9
B. OUTFALL DESCRIPTION.....	10
C. EFFLUENT CHARACTERIZATION.....	10
D. COMPLIANCE HISTORY	11
III. RECEIVING WATER.....	11
A. WATER QUALITY STANDARDS (WQS).....	12
1. <i>Designated Beneficial Uses</i>	12
B. RECEIVING WATER QUALITY.....	13
1. <i>Water Quality Limited Waters</i>	14
2. <i>Low Flow Conditions</i>	15
IV. EFFLUENT LIMITATIONS AND MONITORING	16
A. BASIS FOR EFFLUENT LIMITS	20
1. <i>Pollutants of Concern</i>	21
2. <i>Technology-Based Effluent Limits (TBELs)</i>	21
3. <i>Water Quality-Based Effluent Limits (WQBELs)</i>	24
B. MONITORING REQUIREMENTS.....	35
1. <i>Effluent Monitoring</i>	35
2. <i>Surface Water Monitoring</i>	36
3. <i>Electronic Submission of Discharge Monitoring Reports</i>	37
V. OTHER PERMIT CONDITIONS.....	38
A. COMPLIANCE SCHEDULES	38
B. QUALITY ASSURANCE PLAN	40
C. BEST MANAGEMENT PRACTICES PLAN	40
D. ENVIRONMENTAL JUSTICE	40
E. STANDARD PERMIT PROVISIONS	41
VI. OTHER LEGAL REQUIREMENTS.....	41
A. ENDANGERED SPECIES ACT	41
B. ESSENTIAL FISH HABITAT	41
C. CWA § 401 CERTIFICATION.....	42
D. ANTIDegradation	42
E. PERMIT EXPIRATION	44
VII. REFERENCES	44
APPENDIX A. FACILITY INFORMATION	47
APPENDIX B. WATER QUALITY DATA.....	50
TREATMENT PLANT EFFLUENT DATA.....	50
RECEIVING WATER DATA.....	115
<i>Chemistry</i>	115
<i>Stream Flow</i>	167
APPENDIX C. REASONABLE POTENTIAL AND WQBEL FORMULAE	168

APPENDIX D. REASONABLE POTENTIAL AND WQBEL CALCULATIONS	173
APPENDIX E. REASONABLE POTENTIAL AND EFFLUENT LIMIT CALCULATIONS FOR NUTRIENTS 179	
OVERVIEW	179
DUAL NUTRIENT CONTROL	179
STATUS OF WATER QUALITY	179
<i>Status of Water Quality in Wanity Slough.....</i>	<i>179</i>
<i>Status of Water Quality in Spencer Lateral.....</i>	<i>180</i>
APPLICABLE WATER QUALITY CRITERIA	180
<i>Narrative Criterion</i>	<i>180</i>
<i>Use of Narrative Criteria in NPDES Permits</i>	<i>180</i>
REASONABLE POTENTIAL TO CAUSE OR CONTRIBUTE TO WQS VIOLATIONS	181
<i>Nutrient Concentrations and Loads</i>	<i>181</i>
EFFLUENT LIMIT CALCULATION	183
APPENDIX F. ESSENTIAL FISH HABITAT ASSESSMENT	185
A. LISTING OF EFH SPECIES IN THE FACILITY AREA	185
B. DESCRIPTION OF THE FACILITY AND DISCHARGE LOCATION	185
C. EPA’S EVALUATION OF POTENTIAL EFFECTS TO EFH.....	185
APPENDIX G. CWA § 401 CERTIFICATION	187

LIST OF TABLES

Table 1: General Facility Information	9
Table 2: Effluent Characterization.....	10
Table 3: Receiving Water Data for Wanity Slough.....	13
Table 4: Receiving Water Quality Data for Spencer Lateral (Irrigation Season).....	14
Table 5: Critical Low Flows in Wanity Slough.....	15
Table 6: Existing Permit - Effluent Limits and Monitoring Requirements for Outfall 002	17
Table 7: Existing Permit - Effluent Limits and Monitoring Requirements for Outfall 008	17
Table 8: Draft Permit - Effluent Limits and Monitoring Requirements for Outfall 002	18
Table 9: Draft Permit - Effluent Limits and Monitoring Requirements for Outfall 008	19
Table 10: Effluent Limit Guidelines	22
Table 11: Production-normalized Effluent Limits.....	22
Table 12: Technology-based Effluent Limits	23
Table 13: Mixing Zones for Wanity Slough.....	25
Table 14: Mixing Zones for Spencer Lateral (Irrigation Season).....	25
Table 15: Applicable Water Quality Criteria.....	26
Table 16: Performance-based Monitoring Reductions	36
Table 17: Surface Water Monitoring for Wanity Slough in Draft Permit	37
Table 18: Surface Water Monitoring for Spencer Lateral in Draft Permit (irrigation season)....	37
Table 19: New WQBEL Comparison to Performance	38
Table 20: Effluent Data for Total Nitrogen, Ammonia, Dissolved Oxygen, and Turbidity	50
Table 21: E. coli Geometric Mean, Effluent.....	80
Table 22: Flow, Effluent, Monthly Average.....	83
Table 23: Oil and Grease Concentration, Effluent, Daily Maximum	86
Table 24: Oil and Grease Load, Effluent, Daily Maximum	89
Table 25: Oil and Grease Concentration, Effluent, Monthly Average	91

Table 26: Oil and Grease Load, Monthly Average, Effluent.....	94
Table 27: pH, Minimum, Effluent	96
Table 28: pH, Maximum, Effluent.....	99
Table 29: Salinity, Effluent.....	101
Table 30: Total Suspended Solids Concentration, Effluent, Maximum	102
Table 31: Total Suspended Solids Concentration, Effluent, Monthly Average	105
Table 32: Total Suspended Solids Load, Maximum, Effluent.....	108
Table 33: Total Suspended Solids Load, Effluent, Monthly Average.....	111
Table 34: Whole Effluent Toxicity	113
Table 35: Upstream Ammonia in Wanity Slough.....	115
Table 36: Upstream BOD ₅ in Wanity Slough.....	116
Table 37: Upstream Turbidity in Wanity Slough	117
Table 38: Upstream Dissolved Oxygen in Wanity Slough May - September	118
Table 39: Upstream Dissolved Oxygen in Wanity Slough October - April	119
Table 40: Downstream Dissolved Oxygen in Wanity Slough May – September, Permittee Data	121
Table 41: Downstream Dissolved Oxygen in Wanity Slough October – April, Permittee Data.....	122
Table 42: Downstream DO from the Water Quality Portal	124
Table 43: Upstream E. coli in Wanity Slough.....	125
Table 44: Upstream Nitrate plus Nitrite in Wanity Slough	128
Table 45: Downstream pH in Wanity Slough May – September	128
Table 46: Downstream pH in Wanity Slough October - April	129
Table 47: Upstream pH in Wanity Slough May - September.....	129
Table 48: Upstream pH in Wanity Slough October - April	131
Table 49: Upstream Temperature in Wanity Slough in April.....	132
Table 50: Upstream Temperature in Wanity Slough May - September	133
Table 51: Downstream Temperature in Wanity Slough May - September	140
Table 52: Downstream Temperature in Wanity Slough October - April.....	148
Table 53: Upstream Total Dissolved Solids in Wanity Slough.....	149
Table 54: Upstream Total Nitrogen in Wanity Slough.....	150
Table 55: Upstream Total Phosphorus in Wanity Slough	150
Table 56: Downstream Total Phosphorus in Wanity Slough, Zero Outfall 002 Flow	150
Table 57: Downstream Total Phosphorus in Wanity Slough, Nonzero Outfall 002 Flow	151
Table 58: Downstream Total Nitrogen in Wanity Slough, Nonzero Outfall 002 Flow.....	151
Table 59: Downstream Total Nitrogen in Wanity Slough, Zero Outfall 002 Flow	152
Table 60: Upstream Turbidity in Wanity Slough	153
Table 61: Upstream Ammonia, BOD ₅ and Turbidity in Spencer Lateral.....	153
Table 62: Upstream pH in Spencer Lateral.....	154
Table 63: Upstream Temperature in Spencer Lateral, May - September	155
Table 64: Upstream Temperature in Spencer Lateral in April	162
Table 65: Upstream Dissolved Oxygen in Spencer Lateral, May - September	163
Table 66: Wanity Slough Flow Data from Legacy STORET.....	167
Table 67: Wanity Slough Flow Data from USGS NWIS	167
Table 68: Reasonable Potential and WQBEL Calculations for Outfall 002 May - September.	173
Table 69: Reasonable Potential and WQBEL Calculations for Outfall 002, Ammonia, October - April	174

Table 70: Reasonable Potential and WQBEL Calculations for Outfall 008 May - September. 175
 Table 71: Reasonable Potential and WQBEL Calculations for Outfall 008, October - April... 176
 Table 72: Reasonable Potential and WQBEL Calculations for Temperature for Outfall 002... 177
 Table 73: Reasonable Potential Calculations for Temperature for Outfall 008..... 178

LIST OF FIGURES

Figure 1: Acute Total Ammonia Criteria..... 28
 Figure 2: Chronic Unionized Ammonia Criteria 29
 Figure 3: Location Map 47
 Figure 4: Aerial Photo with Approximate Outfall Locations 48
 Figure 5: Flow Diagram..... 49

Acronyms

1Q10	1 day, 10-year low flow
7Q10	7-day, 10-year low flow
AML	Average Monthly Limit
ASR	Alternative State Requirement
AWL	Average Weekly Limit
BA	Biological Assessment
BAT	Best Available Technology economically achievable
BCT	Best Conventional pollutant control Technology
BE	Biological Evaluation
BO or BiOp	Biological Opinion
BOD ₅	Biochemical oxygen demand, five-day
BMP	Best Management Practices
BPT	Best Practicable Treatment
°C	Degrees Celsius
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CV	Coefficient of Variation
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved oxygen
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
HUC	Hydrologic Unit Code
IC	Inhibition Concentration
ICIS	Integrated Compliance Information System
lbs/day	Pounds per day
LTA	Long Term Average
mg/L	Milligrams per liter
mL	Milliliters
ML	Minimum Level
µg/L	Micrograms per liter
mgd	Million gallons per day
MDL	Maximum Daily Limit or Method Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number

N	Nitrogen
NOAA	National Oceanic and Atmospheric Administration
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and maintenance
POTW	Publicly owned treatment works
QAP	Quality assurance plan
RP	Reasonable Potential
RPM	Reasonable Potential Multiplier
RWC	Receiving Water Concentration
SIC	Standard Industrial Classification
SS	Suspended Solids
s.u.	Standard Units
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TRC	Total Residual Chlorine
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001)
TSS	Total suspended solids
TU _c	Toxic Units, Chronic
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
UV	Ultraviolet
WD	Water Division
WET	Whole Effluent Toxicity
WLA	Wasteload allocation
WQBEL	Water quality-based effluent limit
WQS	Water Quality Standards
WWTP	Wastewater treatment plant

I. BACKGROUND INFORMATION

A. GENERAL INFORMATION

This fact sheet provides information on the draft NPDES permit for the following entity:

Table 1: General Facility Information

NPDES Permit #:	WA0050202
Applicant:	Washington Beef LLC Toppenish Plant
Type of Ownership	Private
Physical Address:	201 Elmwood Road Toppenish, WA 98948
Mailing Address:	P.O. Box 832 Toppenish, WA 98948
Facility Contact:	Sherry R. Byers-Eddy, WWTP Manager Sherry.Byers@abfoodsusa.com 509-865-0664
Facility Location:	46.374194°N 120.320806°W
Receiving Waters	Wanity Slough (Outfall 002) Spencer Lateral (Outfall 008)
Facility Outfall	002: 46.369883°N 120.320567°W 008: 46.370789°N 120.324994°W

B. PERMIT HISTORY

The most recent NPDES permit for the Toppenish Plant was issued on December 12, 2009, became effective on February 1, 2010, and expired on January 31, 2015. An NPDES application for permit issuance was submitted by the permittee on July 16, 2014. EPA determined that the application was timely and complete. Therefore, pursuant to Title 40 Code of Federal Regulations (CFR) 122.6, the permit has been administratively continued and remains fully effective and enforceable.

C. TRIBAL CONSULTATION

EPA is offering government-to-government consultation with the Yakama Nation. EPA has also shared a preliminary draft of the permit and fact sheet with the Yakama Nation on October 28, 2022.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Washington Beef LLC owns and operates the Toppenish Plant located in Toppenish, WA, on the Yakama Nation (YN) Reservation. The Toppenish Plant is a complex slaughterhouse, which includes a live animal holding area, rendering, meat processing, hide brining, blood drying, and boxed meat warehousing and shipping.

A block diagram of the treatment process is shown in Figure 5, in Appendix A. The headworks of the treatment process includes a rotary drum screen and two primary dissolved air flotation (DAF) units. This portion of the treatment process receives wastewater from the facility’s slaughtering, rendering, fabrication processing, and value-added products processing operations. Wastewater treated by the two primary DAFs is combined with sanitary wastewater and wastewater from the hide brining process and flows to the anaerobic basin and then to the barrier basin. Following the barrier basin, the wastewater is subjected to aerobic treatment in two sequencing batch reactors, which provide biochemical oxygen demand (BOD) removal, nitrification, and denitrification of the wastewater. Following the sequencing batch reactors, wastewater flows to an aerated surge basin, then to a tertiary dissolved air flotation unit, ultraviolet disinfection (with chlorine disinfection as a backup) and then to discharge through Outfalls 002 or 008.

Some treated wastewater is re-used internally. The fact sheet dated September 30, 2009 stated that the facility had the capability to land-apply its effluent, but Washington Beef is not currently doing so.

B. OUTFALL DESCRIPTION

Outfall 002 discharges to Wanity Slough, downstream of Fort Road and upstream of U.S. Highway 97 (near the intersection with Larue Road).

Outfall 008 discharges to Spencer Lateral just west of U.S. Highway 97 between Fort Road and East Elm Street (State Route 22).

C. EFFLUENT CHARACTERIZATION

To characterize the effluent, EPA evaluated the facility’s application form, discharge monitoring report (DMR) data, and additional data provided by Washington Beef. The effluent quality is summarized in Table 2. Effluent data for both outfalls are combined because there are no differences in the wastewater sources or treatment process for wastewater discharged through either outfall. Data are provided in Appendix B.

Table 2: Effluent Characterization

Parameter	Units	Minimum	Average	Maximum	Standard Deviation	Source
Alkalinity	mg/L as CaCO ₃	120	152	184	22	3
Ammonia, total as N	mg/L	0.07	0.33	8.18	0.63	1
Ammonia, total as N	lb/day	0.19	1.89	51.8	3.93	1
Dissolved Oxygen	mg/L	6.80	7.35	9.30	0.46	1
E. coli (monthly geometric mean)	#/100 ml	1	19.1	108	21.3	2
Flow (monthly average)	mgd	0.084	0.684	0.916	0.093	2
Nitrate-Nitrite as N	mg/L	5.40	44.2	126	23.4	1
Oil and grease (daily maximum)	mg/L	1.40	2.70	9.10	1.30	2
Oil and grease (daily maximum)	lb/day	1.60	15.9	39.5	7.59	2
Oil and grease (monthly average)	mg/L	1.40	1.78	3.30	0.41	2
Oil and grease (monthly average)	lb/day	1.00	9.97	20.4	2.92	2
pH	s.u.	6.5	—	8.42	—	2
Salinity ^a	mg/L	2000	2290	2700	172	3

Parameter	Units	Minimum	Average	Maximum	Standard Deviation	Source
Temperature (May – September)	°C	23.1	29.3	36.0	1.7	1
Temperature (April 1 – 15)	°C	22.9	28.0	31.0	1.6	2
Temperature (Winter)	°C	—	22.4	25.8	—	4
Total Nitrogen	mg/L	8.91	60.8	141	28.7	1
Total Nitrogen	lb/day	44.6	339	981	164	1
TSS (daily maximum)	mg/L	4.70	28.0	77.1	17.6	2
TSS (daily maximum)	lb/day	11.0	167	564	113	2
TSS (monthly average)	mg/L	2.20	12.3	36.0	6.84	2
TSS (monthly average)	lb/day	4.00	71.9	217	42.4	2
Turbidity	NTU	1.11	5.73	29.4	3.59	1
Whole Effluent Toxicity	TUc	1.0	4.6	16	5.3	3
Sources:						
1. Data from permittee 2017 – 2022						
2. Discharge monitoring report data 2010 – 2022						
3. Whole effluent toxicity test reports March 2012 – June 2014						
4. NPDES permit application (July 2014)						
Notes:						
a. For most purposes, the terms total dissolved salt content and salinity are equivalent (USEPA, 1986a).						

D. COMPLIANCE HISTORY

Overall, the facility has had a good compliance record. The most recent effluent limit violation was for the percentage of E. coli samples exceeding 200 colonies per 100 ml. The prior permit requires that no more than 10% of all samples collected for the month shall exceed 200 colonies/100 ml. This limit was exceeded in July 2022, when 17% of the samples exceeded 200 colonies per 100 ml.

EPA inspected the facility on August 23, 2022. Areas of concern noted during the inspection were the E. coli limit exceedance discussed above; monitoring and recordkeeping for the permit’s narrative requirement prohibiting discharge of floating solids, visible foam or oily wastes; annual review and certification of the BMP Plan, effluent sample preservation and holding times for E. coli samples; and the facility’s quality assurance plan. By September 23, 2022, the facility had made several changes to address the concerns identified in during the inspection, including plans to conduct and document visual monitoring of the outfalls, changes to its E. coli sample collection and preservation procedures, revisions to the quality assurance plan.

Additional compliance information for this facility, including compliance with other environmental statutes, is available on Enforcement and Compliance History Online (ECHO). The ECHO web address for this facility is: <https://echo.epa.gov/detailed-facility-report?fid=110000576430>

III. RECEIVING WATER

In drafting permit conditions, EPA must analyze the effect of the facility’s discharge on the receiving water. The details of that analysis are provided in the Water Quality-Based Effluent Limits (WQBEL) section below. This section summarizes characteristics of the receiving water that impact that analysis.

This facility discharges to Wanity Slough through Outfall 002 and to Spencer Lateral through Outfall 008 near the City of Toppenish, WA.

Although Spencer Lateral is an irrigation conveyance, field reconnaissance by an EPA inspector on May 26, 2009 demonstrated Spencer Lateral is a tributary to Wanity Slough via a piped connection. Field reconnaissance by an EPA inspector on July 6, 2005 demonstrated that, during the irrigation season, water in Spencer Lateral that is not used for irrigation drains to the Yakima River via Subdrain 35.

Wanity Slough is a tributary to Marion Drain, which is a tributary to the Yakima River. The Yakima River is a tributary to the Columbia River, which is an interstate river. Therefore, since Wanity Slough and Spencer Lateral are tributaries to an interstate waterbody, they are waters of the United States.¹

A. WATER QUALITY STANDARDS (WQS)

CWA § 301(b)(1)(C) requires the development of limitations in permits necessary to meet WQS. 40 CFR 122.4(d) requires that the conditions in NPDES permits ensure compliance with the WQS of all affected States. A State's WQS are composed of use classifications, numeric and/or narrative water quality criteria and an anti-degradation policy. The use classification system designates the beneficial uses that each water body is expected to achieve, such as drinking water supply, contact recreation, and aquatic life. The numeric and narrative water quality criteria are the criteria deemed necessary to support the beneficial use classification of each water body. The anti-degradation policy represents a three-tiered approach to maintain and protect various levels of water quality and uses.

The facility is located near the City of Toppenish and discharges to tribal waters on the YN Reservation. The YN applied for the status of Treatment as a State (TAS) in 1994 from EPA for purposes of the CWA, and the current permit used YN WQS as a basis for permit limits. However, to date, EPA has not acted on the TAS submission nor does the Tribe have EPA-approved WQS. If the YN is granted TAS, and when it has WQS approved by EPA, those tribal WQS will be used to determine effluent limitations in the permit.

In the meantime, the Washington WQS were used as reference for setting permit limits and to protect downstream uses in the Yakima River, which is part of the waters of the State of Washington. The Yakima River is about 10.2 stream miles downstream of the discharges via Wanity Slough and Marion Drain.

1. Designated Beneficial Uses

This facility discharges to Wanity Slough and Spencer Lateral in the Lower Yakima watershed (HUC 17030003).

Neither Wanity Slough nor Spencer Lateral has specific use designations in the Washington WQS (WAC 173-201A-602, Table 602). The WQS state that all surface waters of the state not named in Table 602 are to be protected for the designated uses of: salmonid spawning, rearing, and migration; primary contact recreation; domestic, industrial, and agricultural water supply; stock watering; wildlife habitat; harvesting; commerce and navigation; boating; and aesthetic values (WAC 173-201A-600).

¹ <https://www.epa.gov/wotus/current-implementation-waters-united-states>

The Yakima River is designated for these same uses in Table 602 of the WQS.

B. RECEIVING WATER QUALITY

The water quality for the receiving waters is summarized in Table 3 and Table 4. All available water quality data for Spencer Lateral (Table 4) were provided by the permittee.

Table 3: Receiving Water Data for Wanity Slough

Parameter	Units	Minimum	Average	Maximum	Standard Deviation	Count	Source
Alkalinity, upstream	mg/L as CaCO ₃	56	—	97	—	2	3
Ammonia, upstream	mg/L	0.01	0.08	0.35	0.05	41	1,2
BOD ₅ , upstream	mg/L	2	2.2	5.3	0.74	36	1
Dissolved oxygen, May – Sep., AM, downstream	mg/L	6.09	8.15	10.95	1.11	65	1
Dissolved oxygen, May – Sep., AM, upstream	mg/L	5.4	8.0	11.0	1.2	65	1
Dissolved oxygen, May – Sep., PM, downstream	mg/L	5.70	8.68	12.40	1.47	61	1
Dissolved oxygen, May – Sep., PM, upstream	mg/L	5.6	8.6	11.3	1.3	62	1
Dissolved oxygen, October – April, AM, downstream	mg/L	4.99	7.94	11.40	1.54	91	1
Dissolved oxygen, October – April, AM, upstream	mg/L	4.6	7.9	11.8	1.4	91	1
Dissolved oxygen, October – April, PM, downstream	mg/L	4.95	8.64	11.10	1.17	89	1
Dissolved oxygen, October – April, PM, upstream	mg/L	5.2	8.5	11.5	1.2	89	1
E. coli, upstream ^a	#/100 ml	1	53.1 (median)	>200.5	149 (IQR)	155	1
Nitrate + Nitrite, upstream	mg/L	0.144	0.310	0.440	0.129	6	2
pH, downstream, May – September	s.u.	7.08	8.04	11.5	1.05	41	2
pH, downstream, October – April	s.u.	6.40	7.70	10.2	0.90	26	2
pH, upstream, May – September	s.u.	5.62	6.66 (median)	8.12	0.72 (IQR)	71	1,2
pH, upstream, October – April	s.u.	5.20	7.07 (median)	7.67	0.60 (IQR)	87	1
Temperature, April, upstream	°C	10.1	14.0	18.9	2.3	42	1
Temperature, May – Sep., downstream	°C	11.0	18.4	23.4	2.2	489	1,2
Temperature, May – Sep., upstream	°C	12.0	18.3	23.1	2.1	451	1,2
Temperature, October - April., downstream	°C	1.3	12.5	20.9	3.0	74	1,2
Total dissolved solids, upstream	mg/L	85	—	141	—	2	3
Total Nitrogen, upstream	mg/L	0.510	0.613	0.690	0.076	4	2
Total Phosphorus, upstream	µg/L	47	65	85	13	6	2
Turbidity, upstream	NTU	0.81	3.76	15.4	3.00	37	1,2

Parameter	Units	Minimum	Average	Maximum	Standard Deviation	Count	Source
Sources: 1. Data from permittee 2. Water quality portal 3. USGS NWIS Station #12505470							
Notes: a. 28 of 155 E. coli results were reported as “greater than” values. Thus, an accurate average and standard deviation cannot be calculated. The median value has been reported instead the average, and the interquartile range has been reported instead of the standard deviation.							

Table 4: Receiving Water Quality Data for Spencer Lateral (Irrigation Season)

Parameter	Units	Minimum	Average	Maximum	Standard Deviation	Count
Ammonia, upstream	mg/L	0.07	0.13	0.79	0.17	18
Turbidity, upstream	NTU	1.54	8.64	46.1	10.7	19
BOD ₅ , upstream	mg/L	2.0	2.0	2.9	0.74	19
pH, upstream	s.u.	5.57	6.97 (median)	10.09	0.71 (IQR)	78
Temperature, May – Sep., upstream	°C	12.0	18.9	26.5	2.5	445
Temperature, April., upstream	°C	9.3	14.0	19.0	2.4	38
Dissolved oxygen, October and April, AM, upstream	mg/L	7.00	8.55	9.90	0.81	13
Dissolved oxygen, October and April, PM, upstream	mg/L	7.80	9.25	11.28	1.10	12
Dissolved oxygen, May – Sep., AM, upstream	mg/L	5.20	8.24	10.70	1.18	65
Dissolved oxygen, May – Sep., PM, upstream	mg/L	6.40	9.03	11.65	1.12	64
E. coli, upstream ¹	#/100 ml	4.2	109.1 (median)	490	99.3 (IQR)	77
Notes: 1. 10 of 77 E. coli results were reported as “greater than” values. Thus, an accurate average and standard deviation cannot be calculated. The median value has been reported instead the average, and the interquartile range (IQR) is reported instead of the standard deviation. The true maximum may be greater than 490 organisms per 100 ml.						

1. Water Quality Limited Waters

Neither Wanity Slough nor Spencer Lateral have been assessed under a 303(d)/305(b) assessment program. Wanity Slough flows to Marion Drain, which flows into the Yakima River about 10.2 miles downstream of the facility. Water in Spencer Lateral reaches the Yakima River either via Wanity Slough or via Subdrain 35.

At the point where Subdrain 35 enters the Yakima River near Granger, the Yakima River is listed as impaired for polychlorinated biphenyl congeners (PCBs), dioxin, and certain pesticides (4,4'-DDE, 4,4'-DDT). At the point where Marion Drain enters the Yakima River near Granger, the Yakima River is listed as impaired for polychlorinated biphenyl congeners (PCBs), dioxin, and certain pesticides (4,4'-DDE, 4,4'-DDT, dieldrin). Further downstream, the Lower Yakima River is impaired for bacteria and dissolved oxygen (DO).

The only total maximum daily load (TMDL) applicable to the Yakima River downstream of Marion Drain to address these impairments is a TMDL for the

target parameter of total DDT using the surrogate parameter of total suspended solids (TSS). This TMDL did not impose wasteload allocations (WLAs) on point source discharges since agricultural practices were identified as the principal source of sediment loading to the river and its tributaries.

The Toppenish Plant may in the future receive WLAs in TMDLs to address the impairments discussed above. However, currently, there are no WLAs applicable to the Toppenish Plant.

2. Low Flow Conditions

Critical low flows for Wanity Slough are summarized in Table 5. Low flows are defined in Appendix D.

To account for seasonal variations in flow, temperature, and the receiving waters’ sensitivity to nutrient discharges, EPA has chosen to calculate seasonal water quality-based effluent limits for both outfalls for the irrigation season (May – September) and the non-irrigation season (October – April). In Spencer Lateral, there is no flow upstream of the discharge during the non-irrigation season, therefore, seasonal limits were used to account for the lack of dilution during the non-irrigation season. Water temperatures are warmer during the irrigation season, which make the receiving waters more vulnerable to discharges of heat, ammonia and nutrients. Seasonal limits are used to account for this.

Since limited flow data were available for Wanity Slough (72 flow measurements taken between 1974 and 1989, see Table 67 and Table 68) and since the seasonal flow differences are small, EPA is using the annual flows for Wanity Slough for all water quality-based permitting calculations. However, there are seasonal limits in the permit for Outfall 002 which are due to factors other than flow, such as pH and temperature.

Table 5: Critical Low Flows in Wanity Slough

Flows	Annual Flows (cfs)	Irrigation Season Flows (May – Sep)	Non-Irrigation Season Flows (Oct. – April)
1Q10	15	15	19
7Q10	25	26	24
30Q5	28	29	27
Harmonic Mean	57	57	56

Source: Legacy STORET station YAV131 (operated by U.S. Bureau of Reclamation, 1974 – 1981, n = 68) and USGS NWIS stations 12505480 and 12505482 (1986 – 1989, n = 4)

The only flow information EPA could locate for Spencer Lateral was in *Habitat Limiting Factors: Yakima River Watershed: Water Resource Inventory Areas 37 – 39 Final Report* (Haring, 2001), which stated that Spencer Lateral withdraws 41 CFS from Wanity Slough. EPA will assume the harmonic mean flow rate of Spencer Lateral during the irrigation season (roughly May – September) is 41 CFS.

The *Technical Support Document for Water Quality-based Toxics Control* (USEPA, 1991)(TSD) states, on Page 88, that 54 of 60 streams analyzed had a

harmonic mean flow that was greater than or equal to 2.5 times the 7Q10 flow and 40 of 60 streams had a harmonic mean flow equal to or greater than 3.5 times the 7Q10. The TSD concludes that the harmonic mean flow can be estimated as 3 times the 7Q10.

Since the irrigation flow in Spencer Lateral is from a man-made diversion, EPA assumes that the flow rate in Spencer Lateral is relatively consistent during the irrigation season. Thus, EPA will estimate the 7Q10 flow of Spencer Lateral by dividing the 41 CFS withdrawal rate by 2.5. This is close to the ratio of the harmonic mean to the estimated 7Q10 Wanity Slough (57:25 or 2.28:1, Table 5). Thus, the estimated 7Q10 flow rate in Spencer Lateral is:

$$41 \text{ CFS} \div 2.5 = 16.4 \text{ CFS}$$

The 1Q10 is estimated as the 7Q10 divided by 1.3 (USEPA, 1986b), or 12.6 CFS, and the 30Q5 is estimated as the 7Q10 multiplied by 1.1, or 18 CFS (USEPA, 1991).

According to surface water monitoring data submitted with the permit application, during the non-irrigation season (roughly October – April), there is no flow in Spencer Lateral upstream from the Toppenish Plant discharge.

IV. EFFLUENT LIMITATIONS AND MONITORING

Table 6 and Table 7 below present the existing effluent limits and monitoring requirements in the current Permit. Table 8 and Table 9 below, present the effluent limits and monitoring requirements proposed in the draft permit.

The draft permit includes several changes to the effluent limitations and monitoring requirements, which are as follows:

- New effluent limits for total phosphorus for Outfall 002 from April – October.
- New effluent limits for temperature for Outfall 002 for June, July, and August.
- New effluent limits for whole effluent toxicity (WET).
- New effluent limits for nitrate + nitrite for Outfall 008.
- A new minimum effluent limit for dissolved oxygen saturation (the prior effluent limit for dissolved oxygen concentration is retained and applies in addition to the saturation limit).
- More stringent effluent limits for total nitrogen for Outfall 002 from April – October.
- The *E. coli* limits now require that no more than 10% of samples exceed 320 CFU or MPN per 100 mL, instead of 200 colonies per 100 mL, consistent with Washington's *E. coli* criteria.

Table 6: Existing Permit - Effluent Limits and Monitoring Requirements for Outfall 002

Parameter	Units	Effluent Limitations				Monitoring Requirements	
		Average Monthly	Maximum Daily	Minimum Daily	Range	Sample Frequency	Sample Type
Outfall Flow	mgd	—	—	—	—	Daily	Recording
Biochemical Oxygen Demand (BOD ₅)	mg/l	30	45	—	—	3/week	24-hour composite
	lbs/day	400.3	600.5	—	—		
Total Suspended Solids (TSS)	mg/l	39	78	—	—	3/week	24-hour composite
	lbs/day	520	1040	—	—		
Oil and Grease	mg/L	10	15	—	—	2/week	Grab
	lbs/day	133.4	200.2	—	—		
<i>E. coli</i> Bacteria ¹	# / 100ml	100	see note 2	—	—	3/week	Grab
pH	s.u.	—	—	—	6.5-8.5	3/week	Grab
Dissolved Oxygen ³	mg/l	—	—	6.8	—	3/week	Grab
Total Nitrogen	mg/L	134	194	—	—	3/week	24-hour composite
	lbs/day	1788	2587.5	—	—		
Total Ammonia as N ^{3,4}	mg/L	2.9	11.2	—	—	3/week	24-hour composite
	lbs/day	38.7	149.5	—	—		
Turbidity ³	NTU	12.4	50.3	—	—	3/week	Grab
Total Residual Chlorine ⁵	µg/L	9.5	19.0	—	—	Daily	Grab
Temperature April 15 – September 30 each year	°C	—	—	—	—	Daily	Grab
Whole Effluent Toxicity (WET) – Chronic ⁶	TU _c	—	—	—	—	Quarterly	24-hour composite

1. The average monthly limit for *E. coli* is expressed as a geometric mean.
2. No more than 10% of all samples collected for the month shall exceed 200 colonies/100 ml.
3. See Part I.A.5 for compliance schedule for turbidity and dissolved oxygen, and the average monthly limit for ammonia.
4. Reporting is required within 24-hours if the maximum daily limit is violated.
5. EPA test methods can accurately measure total residual chlorine to 20 µg/L, therefore the permittee will be considered in compliance with the permit limits as long as the sample result is less than 20 µg/L. Chlorine only needs to be monitored when the chlorination/dechlorination unit is being used by the facility.
6. Quarterly testing shall start two years from the effective date of the permit, and continue until 10 valid samples are collected. One test shall occur in each of the following quarters: January – March; April – June; July –September; and October - December. See Part I. B. for additional information.

Table 7: Existing Permit - Effluent Limits and Monitoring Requirements for Outfall 008

Parameter	Units	Effluent Limitations				Monitoring Requirements	
		Average Monthly	Maximum Daily	Minimum Daily	Range	Sample Frequency	Sample Type
Outfall Flow	mgd	—	—	—	—	Daily	Recording
Biochemical Oxygen Demand (BOD ₅)	mg/l	30	45	—	—	3/week	24-hour composite
	lbs/day	400.3	600.5	—	—		
Total Suspended Solids (TSS)	mg/l	39	78	—	—	3/week	24-hour composite
	lbs/day	520	1040	—	—		
Oil and Grease	mg/L	10	15	—	—	2/week	Grab
	lbs/day	133.4	200.2	—	—		
<i>E. coli</i> Bacteria ¹	# / 100ml	100	see note 2	—	—	3/week	Grab

Parameter	Units	Effluent Limitations				Monitoring Requirements	
		Average Monthly	Maximum Daily	Minimum Daily	Range	Sample Frequency	Sample Type
pH	s.u.	—	—	—	6.5-8.5	3/week	Grab
Dissolved Oxygen ³	mg/l	—	—	6.8	—	3/week	Grab
Total Nitrogen	mg/L	134	194	—	—	3/week	24-hour composite
	lbs/day	1788	2587.5	—	—		
Total Ammonia as N ^{3,4}	mg/L	2.3	9.1	—	—	3/week	24-hour composite
	lbs/day	30.7	121.4	—	—		
Total Residual Chlorine ⁵	µg/L	9.0	18.0	—	—	Daily	Grab
Turbidity ³	NTU	12.4	44.2	—	—	3/week	Grab
Temperature April 15 – September 30 each year	°C	—	—	—	—	Daily	Grab
Whole Effluent Toxicity (WET) – Chronic ⁶	TU _c	—	—	—	—	Quarterly	24-hour composite

1. The average monthly limit for E. coli is expressed as a geometric mean.
2. No more than 10% of all samples collected for the month shall exceed 200 colonies/100 ml.
3. See Part I.A.5 for compliance schedule for turbidity and dissolved oxygen, and the average monthly limit for ammonia.
4. Reporting is required within 24-hours if the maximum daily limit is violated.
5. EPA test methods can accurately measure total residual chlorine to 20 µg/L, therefore the permittee will be considered in compliance with its effluent limits as long as the sample result is less than 20 µg/L. Chlorine only needs to be monitored when the chlorination/dechlorination unit is being used by the facility.
6. Quarterly testing shall start two years from the effective date of the permit, and continue until 10 valid samples are collected. One test shall occur in each of the following quarters: January – March; April – June; July –September; and October - December. See Part I. B. for additional information.

Table 8: Draft Permit - Effluent Limits and Monitoring Requirements for Outfall 002

Parameter	Units	Effluent Limitations				Monitoring Requirements	
		Average Monthly	Maximum Daily	Minimum Daily	Range	Sample Frequency	Sample Type
Outfall Flow	mgd	—	—	—	—	Daily	Recording
Biochemical Oxygen Demand (BOD ₅)	mg/l	30	45	—	—	1/week	24-hour composite
	lbs/day	400.3	600.5	—	—		
Total Suspended Solids (TSS)	mg/l	42.8	85.7	—	—	1/week	24-hour composite
	lbs/day	572	1143	—	—		
Oil and Grease	mg/L	10	15	—	—	1/month	Grab
	lbs/day	133.4	200.2	—	—		
E. coli Bacteria	# / 100ml	100	Note 1	—	—	3/week	Grab
pH	s.u.	—	—	—	6.5-8.5	3/week	Grab
Dissolved Oxygen	mg/l	—	—	6.8	—	3/week	Grab
	% of saturation	—	—	90	—		
Total Nitrogen (April 1 – October 31, final)	mg/L	3.80	9.05	—	—	3/week	24-hour composite
	lbs/day	24.3	57.8	—	—		
Total Nitrogen (April 1 – October 31, interim)	mg/L	134	194	—	—	3/week	24-hour composite
	lbs/day	1788	2587.5	—	—		
Total Nitrogen (November 1 – March 31)	mg/L	134	194	—	—	3/week	24-hour composite
	lbs/day	1788	2587.5	—	—		
	mg/L	0.547	1.30	—	—	3/week	24-hour composite

Parameter	Units	Effluent Limitations				Monitoring Requirements	
		Average Monthly	Maximum Daily	Minimum Daily	Range	Sample Frequency	Sample Type
Total Phosphorus (April 1 – October 31, final)	lbs/day	3.54	8.32	—	—		
Total Phosphorus (November 1– March 31)	mg/L	Report	Report	—	—	1/month	24-hour composite
Total Ammonia as N (May 1– September 30)	mg/L	1.27	5.16	—	—	3/week	24-hour composite
	lbs/day	9.70	39.4	—	—		
Total Ammonia as N (October 1– April 30)	mg/L	2.90	8.0	—	—	3/week	24-hour composite
	lbs/day	22.1	89.8	—	—		
Nitrate + Nitrite	mg/L	Report	Report	—	—	3/week	24-hour composite
Total Residual Chlorine	µg/L	9.5	19.0	—	—	Daily	Grab
	lbs/day	0.13	0.25	—	—		
Turbidity	NTU	12.4	50.3	—	—	1/week	Grab
Floating solids, visible foam, oily wastes	—	See permit Part I.B.2.				1/week	Visual
Chloride	mg/L	—	Report	—	—	1/quarter	24-hour composite
Sulfate	mg/L	—	Report	—	—	1/quarter	24-hour composite
Temperature (June 1 – 30)	°C	—	31.2	—	—	Continuous	Recording
Temperature (July 1 – 31)	°C	—	23.6	—	—	Continuous	Recording
Temperature (August 1 – 31)	°C	—	23.6	—	—	Continuous	Recording
Temperature (September 1 – May 31)	°C	—	Report	—	—	Continuous	Recording
Whole Effluent Toxicity (WET) – Chronic (final)	TU _c	5.3	10.0	—	—	1/quarter	24-hour composite
Whole Effluent Toxicity (WET) – Chronic (interim)	TU _c	13.4	25.9	—	—	1/quarter	24-hour composite
Notes:							
1. No more than 10 percent of all samples obtained within the month shall exceed 320 CFU or MPN per 100 mL.							

Table 9: Draft Permit - Effluent Limits and Monitoring Requirements for Outfall 008

Parameter	Units	Effluent Limitations				Monitoring Requirements	
		Average Monthly	Maximum Daily	Minimum Daily	Range	Sample Frequency	Sample Type
Outfall Flow	mgd	—	—	—	—	Daily	Recording
Biochemical Oxygen Demand (BOD ₅)	mg/l	30	45	—	—	1/week	24-hour composite
	lbs/day	400.3	600.5	—	—		
Total Suspended Solids (TSS)	mg/l	42.8	85.7	—	—	1/week	24-hour composite
	lbs/day	572	1143	—	—		
Total Dissolved Solids (TDS) (May – September, final)	mg/l	1742	1995	—	—	3/week	24-hour composite
	lbs/day	13308	15240	—	—		
Total Dissolved Solids (TDS) (October – April, final)	mg/l	500	558	—	—	3/week	24-hour composite
	lbs/day	3820	4263	—	—		
Total Dissolved Solids (TDS) (interim)	mg/l	2371	2714	—	—	3/week	24-hour composite
	lbs/day	18113	20733	—	—		

Parameter	Units	Effluent Limitations				Monitoring Requirements	
		Average Monthly	Maximum Daily	Minimum Daily	Range	Sample Frequency	Sample Type
Oil and Grease	mg/L	10	15	—	—	2/week	Grab
	lbs/day	133.4	200.2	—	—		
<i>E. coli</i> Bacteria	# / 100ml	100		—	—	3/week	Grab
pH	s.u.	—	—	—	6.5-8.5	3/week	Grab
Dissolved Oxygen	mg/l	—	—	6.8	—	3/week	Grab
	% of saturation	—	—	90	—		
Total Nitrogen	mg/L	134	194	—	—	3/week	24-hour composite
	lbs/day	1788	2587.5	—	—		
Total Phosphorus	mg/L	Report	Report	—	—	1/month	24-hour composite
Total Ammonia as N (May – September)	mg/L	3.21	7.65	—	—	3/week	24-hour composite
	lbs/day	24.5	58.4	—	—		
Total Ammonia as N (October – April)	mg/L	0.211	0.855	—	—	3/week	24-hour composite
	lbs/day	1.61	6.53	—	—		
Nitrate + Nitrite (May – September, final)	mg/L	40.4	89.4	—	—	3/week	24-hour composite
	lbs/day	309	682	—	—		
Nitrate + Nitrite (October – April, final)	mg/L	10.0	22.1	—	—	3/week	24-hour composite
	lbs/day	76.4	169	—	—		
Nitrate + Nitrite (interim)	mg/L	59	154	—	—	3/week	24-hour composite
	lbs/day	451	1176	—	—		
Total Residual Chlorine	µg/L	9.0	18.0	—	—	Daily	Grab
	lbs/day	0.12	0.24	—	—		
Turbidity	NTU	12.4	44.2	—	—	1/week	Grab
Floating solids, visible foam, oily wastes	—	See permit Part I.B.2.				1/week	Visual
Chloride	mg/L	—	Report	—	—	1/quarter	24-hour composite
Sulfate	mg/L	—	Report	—	—	1/quarter	24-hour composite
Temperature	°C	Report	Report	—	—	Continuous	Recording
Whole Effluent Toxicity (WET) – Chronic (May – September, final)	TU _c	3.8	7.2	—	—	2/season	24-hour composite
WET – Chronic (October – April, final)	TU _c	1.0	1.8	—	—	2/season	24-hour composite
Whole Effluent Toxicity (WET) – Chronic (interim)	TU _c	13.4	25.9	—	—	1/quarter	24-hour composite

Notes:
1. No more than 10 percent of all samples obtained within the month shall exceed 320 CFU or MPN per 100 mL.

A. BASIS FOR EFFLUENT LIMITS

In general, the CWA requires that the effluent limits for a particular pollutant be the more stringent of either technology-based effluent limits (TBELs) or WQBELs. TBELs are set according to the level of treatment that is achievable using available technology. A WQBEL is designed to ensure that the WQS applicable to a waterbody are being met and may be more stringent than TBELs.

1. Pollutants of Concern

Pollutants of concern are those that either have TBELs or may need WQBELs. EPA identifies pollutants of concern for the discharge based on those which:

- Have a TBEL
- Have an assigned wasteload allocation (WLA) from a TMDL
- Had an effluent limit in the previous permit
- Are present in the effluent monitoring. Monitoring data are reported in the application and DMR and any special studies
- Are expected to be in the discharge based on the nature of the discharge

Based on this analysis, pollutants of concern are as follows:

- BOD₅
- DO
- TSS
- E. coli bacteria
- Total residual chlorine (TRC)
- pH
- Temperature
- Nitrogen compounds:
 - Total Nitrogen
 - Ammonia
 - Nitrate-Nitrite
- Total Phosphorus
- Oil and grease
- Turbidity
- Whole effluent toxicity (WET)
- Total dissolved solids (TDS)
 - Chloride
 - Sulfate

2. Technology-Based Effluent Limits (TBELs)

a. Federal Effluent Limit Guidelines

For dischargers other than publicly owned treatment works (POTWs), for conventional pollutants, the CWA requires effluent limits based on the best conventional pollutant control technology (BCT), and, for toxic and non-conventional pollutants, effluent limits based on the best available technology economically achievable (BAT) (CWA Section 301(b) and 40 CFR 125.3(a)(2)).

Technology-based effluent limits may be established through application of EPA-promulgated effluent limitation guidelines (ELGs), or on a case-by-case basis under Section 402(a)(1) of the CWA (these are referred to as best professional judgment or BPJ effluent limitations), or through a combination of these methods (40 CFR 125.3(c)).

EPA has promulgated ELGs for the meat and poultry products point source category in 40 CFR Part 432. The complex slaughterhouse subcategory (subpart B) is applicable to the Toppenish Plant. For BAT, 40 CFR Part 432 Subpart B references the BAT ELGs for simple slaughterhouses in 40 CFR 432 Subpart A, specifically 40 CFR 432.13. The ELGs for BOD₅, TSS, and oil and grease are production-normalized based on the production rate in live weight killed (LWK) per day.

The ELGs applicable to the Toppenish Plant are summarized in Table 10.

Table 10: Effluent Limit Guidelines

Regulated Parameter	Maximum Daily	Maximum Monthly Average	Citation (40 CFR)
BOD ₅	0.42 pounds/1000 pounds LWK	0.21 pounds/1000 pounds LWK	432.22
TSS	0.50 pounds/1000 pounds LWK	0.25 pounds/1000 pounds LWK	432.22
Fecal Coliform	400 CFU	N/A	432.22
Oil and Grease	0.16 pounds/1000 pounds LWK	0.08 pounds/1000 pounds LWK	432.22
Ammonia as N	8.0 mg/L	4.0 mg/L	432.13, 432.22, 432.23
Total Nitrogen	194 mg/L	134 mg/L	432.13, 432.23
pH	Within the pH range of 6 to 9.		432.3

As explained in the U.S. EPA NPDES Permit Writers' Manual (USEPA, 2010) on Page 5-30, production-normalized effluent limits should be calculated using an average production level that is likely to prevail during the next term of the permit.

Washington Beef stated that their 5-year average production rate has been 2,085,161 lb/day LWK, which is within 1% of the production basis for the 2009 permit (2,080,000 lb/day LWK).

Washington Beef expects a 10% increase in production to 2,286,391 lb/day LWK during the term of the next permit. The production-normalized technology-based effluent limits based on the anticipated increased production rate of 2,286,391 lb/day are listed in Table 11.

Table 11: Production-normalized Effluent Limits

Regulated Parameter	Maximum Daily (lb/day)	Maximum Monthly Average (lb/day)
BOD ₅	960	480
TSS	1143	572
Oil and Grease	366	183

40 CFR 122.45(f) generally requires permit limits to be expressed in terms of mass. 40 CFR 122.45(f)(2) states that pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations. In Section 5.7.1, the TSD recommends limits on both mass and concentration when there is less than 100-fold dilution. All of the dilution factors are less than 100:1 for

this facility (Table 13, Table 14), thus, EPA has calculated equivalent concentration limits for all of the technology-based effluent limits that are expressed in terms of mass and equivalent mass limits for the ammonia and total nitrogen technology-based effluent limits which are expressed in terms of concentration.

Calculations of mass limits from technology-based concentration limits and concentration limits from technology-based mass limits used the maximum projected flow of 1.6 mgd from the July 2014 permit application, which was the same flow used for these types of calculations in the 2009 fact sheet.

b. Chlorine TBEL

Chlorine is often used to disinfect municipal and industrial wastewater prior to discharge. The Toppenish Plant uses chlorine disinfection as a backup to UV disinfection. A 0.5 mg/L technology-based average monthly limit for chlorine is derived from standard operating practices. The Water Pollution Control Federation’s Chlorination of Wastewater (Federation, 1976) states that a properly designed and maintained wastewater treatment plant can achieve adequate disinfection if a 0.5 mg/L chlorine residual is maintained after 15 minutes of contact time. Therefore, a wastewater treatment plant that provides adequate chlorine contact time can meet a 0.5 mg/L total residual chlorine limit on a monthly average basis. In addition to average monthly limits (AMLs), NPDES regulations require effluent limits for continuous discharges from sources other than publicly owned treatment works (POTWs) to be expressed as maximum daily limits (MDLs), unless impracticable. For TBELs, the MDL is calculated to be 2 times the AML, consistent with the ratio between the technology-based average monthly and maximum daily effluent limits for BOD₅, TSS, oil and grease, ammonia as N, and Total Nitrogen, in 40 CFR 432.

40 CFR 122.45(f) generally requires effluent limits to be expressed in terms of mass. Mass limits for chlorine are calculated as follows:

$$\text{Monthly avg. limit} = 0.5 \text{ mg/L} \times 1.6 \text{ mgd} \times 8.34 \text{ lb/gallon} = 6.67 \text{ lbs/day}$$

$$\text{Max. daily limit} = 1.0 \text{ mg/L} \times 1.6 \text{ mgd} \times 8.34 \text{ lb/gallon} = 13.3 \text{ lbs/day}$$

As explained below, more stringent WQBELs were calculated for chlorine; therefore, the technology-based limits were not applied in the permit.

c. Summary

The technology-based effluent limits applicable to the Toppenish Plant are listed in Table 12.

Table 12: Technology-based Effluent Limits

Regulated Parameter	Units	Maximum Daily	Maximum Monthly Average
BOD ₅	mg/L	72	36
	lb/day	960	480
TSS	mg/L	85.7	42.8

Regulated Parameter	Units	Maximum Daily	Maximum Monthly Average
	lb/day	1143	572
Fecal Coliform		400 CFU	N/A
Oil and Grease	mg/L	27	14
	lb/day	366	183
Ammonia as N	mg/L	8.0	4.0
	lb/day	107	53
Total Nitrogen	mg/L	194	134
	lb/day	2589	1788
Chlorine, total residual	mg/L	1.0	0.5
	lb/day	13.3	6.67
pH	s.u.	Within the pH range of 6 to 9.	

3. Water Quality-Based Effluent Limits (WQBELs)

a. Statutory and Regulatory Basis

CWA § 301(b)(1)(C) requires the development of limitations in permits necessary to meet WQS. Discharges to State or Tribal waters must also comply with conditions imposed by the State or Tribe as part of its certification of NPDES permits under CWA § 401. 40 CFR 122.44(d)(1) implementing CWA § 301(b)(1)(C) requires that permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State or Tribal WQS, including narrative criteria for water quality. Effluent limits must also meet the applicable water quality requirements of affected States other than the State in which the discharge originates, which may include downstream States (40 CFR 122.4(d), 122.44(d)(4), see also CWA § 401(a)(2)).

The regulations require the permitting authority to make this evaluation using procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and where appropriate, dilution in the receiving water. The limits must be stringent enough to ensure that WQS are met and must be consistent with any available wasteload allocation for the discharge in an approved TMDL. If there are no approved TMDLs that specify wasteload allocations for this discharge; all of the WQBELs are calculated directly from the applicable WQS.

b. Reasonable Potential Analysis and Need for WQBELs

EPA uses the process described in the TSD to determine reasonable potential. To determine if there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria for a given pollutant, EPA compares the maximum projected receiving water concentration to the water quality criteria for that pollutant. If the projected receiving water concentration exceeds the criteria, there is reasonable potential, and a WQBEL must be included in the permit.

In some cases, a dilution allowance or mixing zone is permitted. A mixing zone is a limited area or volume of water where initial dilution of a discharge takes place and within which certain water quality criteria may be exceeded (USEPA, 2014). While the criteria may be exceeded within the mixing zone, the use and size of the mixing zone must be limited such that the waterbody as a whole will not be impaired, all designated uses are maintained, and acutely toxic conditions are prevented.

The Washington WQS at WAC 173-201A-400 provides Washington’s mixing zone policy for point source discharges. EPA proposes to use chronic and human health mixing zones of 25% of the critical flows and an acute mixing zone of 2.5% of the 1Q10 flow per Washington WQS.

For temperature, EPA proposes a mixing zone encompassing 50% of the 7Q10 flow at Outfall 002 and a mixing zone encompassing 100% of the harmonic mean flow at Outfall 008.

Consistent with Table C-1 in Appendix C to Ecology’s *Water Quality Program Permit Writers’ Manual*, the effluent flow rates used to calculate dilution factors are as follows. See also Table 13 and Table 14.

- The maximum daily effluent flow for acute aquatic life criteria,
- The maximum monthly average flow for chronic aquatic life criteria and human health criteria for non-carcinogens, and
- The maximum annual average flow for human health criteria for carcinogens.

These effluent flows were also used to calculate water quality-based mass limits.

The reasonable potential analysis and WQBEL calculations were based on mixing zones shown in Table 13 and Table 14. During the non-irrigation season, there is no flow upstream of Outfall 008 in Spencer Lateral. Thus, no mixing zone is authorized during the non-irrigation season in Spencer Lateral and water quality criteria are applied at the end-of-pipe.

Table 13: Mixing Zones for Wanity Slough

Criteria Type	Critical Low Stream Flow (cfs)	Critical Effluent flow (cfs)	Mixing Zone (% of Critical Low Flow)	Dilution Factor
Acute Aquatic Life	15	2.33	2.5%	1.16
Chronic Aquatic Life	25	1.42	25%	5.59
Temperature	25	1.42	50%	9.8
Human Health Noncarcinogen	28	1.42	25%	6.12
Human Health Carcinogen	57	1.18	25%	13.0

Table 14: Mixing Zones for Spencer Lateral (Irrigation Season)

Criteria Type	Critical Low Flow (cfs)	Critical Effluent flow (cfs)	Mixing Zone (% of Critical Low Flow)	Dilution Factor
Acute Aquatic Life	12.6	2.33	2.5%	1.14

Criteria Type	Critical Low Flow (cfs)	Critical Effluent flow (cfs)	Mixing Zone (% of Critical Low Flow)	Dilution Factor
Chronic Aquatic Life	16.4	1.42	25%	3.89
Temperature	41	1.42	100%	29.9
Human Health Noncarcinogen	18	1.42	25%	4.18
Human Health Carcinogen	41	1.18	25%	9.65

As discussed in Part IV.A.1, the pollutants of concern in the discharge are BOD₅, DO, TSS, E. coli bacteria, total residual chlorine (TRC), pH, temperature, ammonia, total nitrogen, nitrate-nitrite, total phosphorus, oil and grease, turbidity, total dissolved solids, and whole effluent toxicity (WET). Each parameter is summarized in Part IV.A.4.c and the equations used to conduct the reasonable potential analysis and calculate the WQBELs are provided in Appendix D. The relevant water quality standards are shown in Table 15, below.

Table 15: Applicable Water Quality Criteria

Pollutant	Designated Use	Criteria	Citation (WAC 173-201A)	
Ammonia	Salmonid spawning, rearing, and migration	002 May – Sep.	Acute: 4.465 mg/L	240
			Chronic: 0.669 mg/L	
		002 Oct. – April	Acute: 10.14 mg/L	
			Chronic: 1.872 mg/L	
		008 May – Sep.	Acute: 13.09 mg/L	
			Chronic: 1.293 mg/L	
		008 Oct. – April	Acute: 4.552 mg/L	
			Chronic: 0.485 mg/L	
Chlorine (total residual)	Salmonid spawning, rearing, and migration	Acute: 19 µg/L Chronic: 11 µg/L	240	
Dissolved Oxygen (DO)	Salmonid spawning, rearing, and migration	EPA-approved: 8.0 mg/L (1-day minimum) State-adopted: 10 mg/L or 90% saturation (1-day minimum)	200(1)(d)	

Pollutant	Designated Use	Criteria	Citation (WAC 173-201A)
E. coli	Primary contact recreation	E. coli organism levels within an averaging period must not exceed a geometric mean value of 100 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than 10 sample points exist) obtained within the averaging period exceeding 320 CFU or MPN per 100 mL. (i) A minimum of three samples is required to calculate a geometric mean for comparison to the geometric mean criteria. Sample collection dates shall be well distributed throughout the averaging period so as not to mask noncompliance periods. (A) Effluent bacteria samples: When averaging effluent bacteria sample values for comparison to the geometric mean criteria, or for determining permit compliance, the averaging period shall be 30 days or less.	200(2)(b)
Nitrate+nitrite	Domestic water supply	10 mg/L	260(2)(a), interpreted using EPA 440/5-86-001
pH	Salmonid spawning, rearing, and migration	pH shall be within the range of 6.5 to 8.5 with a human-caused variation within the above range of less than 0.5 unit.	200(1)(g)
Solids, total dissolved	Agricultural water supply and domestic water supply	500 mg/L	260(2)(a), interpreted using EPA 440/5-86-001 and EPA secondary drinking water standards
Temperature	Spawning/rearing	Temperature shall not exceed a 1-DMax of 21.0°C due to human activities. When natural conditions exceed a 1-DMax of 21.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed $t = 34/(T + 9)$.	Table 602: WRIA 37 – Lower Yakima
Total nitrogen and total phosphorus (Wanity Slough)	Aesthetics	Total nitrogen: 857 µg/L Total phosphorus: 102 µg/L	260(2)(b), interpreted using reference site data. See Appendix E.
Turbidity	Salmonid spawning, rearing, and migration	Turbidity shall not exceed: • 5 NTU over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.	200(1)(e)

Pollutant	Designated Use	Criteria	Citation (WAC 173-201A)
Whole effluent toxicity	Salmonid spawning, rearing, and migration	Chronic: 1.0 TUc	260(2)(a), interpreted using EPA/505/2-90-001

c. *Reasonable Potential and WQBELs*

The reasonable potential and WQBEL for specific parameters are summarized below. The calculations are provided in Appendix D.

Ammonia

Ammonia criteria are based on a formula which relies on the pH and temperature of the receiving water, because the fraction of ammonia present as the toxic, un-ionized form increases with increasing pH and temperature. Therefore, the criteria become more stringent as pH and temperature increase. EPA generally uses the 90th percentile receiving water pH and temperature to calculate the value of the ammonia criteria.

Available data indicate that the pH in Wanity Slough downstream from Outfall 002 is higher than the upstream pH and sometimes exceeds the upper bound pH criterion of 8.5 standard units (Table 3). These downstream pH measurements are not representative of edge-of-mixing zone conditions and are therefore not appropriate for use in calculating the value of the ammonia criteria in this permit. However, EPA believes it is reasonable to be more conservative in selecting the pH value for calculating ammonia criteria due to observed high pH downstream from Outfall 002. Thus, EPA has used the maximum upstream pH instead of the 90th percentile, for Wanity Slough.

For Spencer Lateral, during the non-irrigation season, there is no flow upstream from the discharge from Outfall 008, thus, the 90th percentile of the monthly maximum effluent pH and temperature have been used to calculate the value of the ammonia criteria.

The calculated ammonia criteria are listed in Table 15. Figure 1 and Figure 2, below, detail the equations used to determine water quality criteria for ammonia.

$$\frac{0.275}{1 + 10^{7.204-pH}} + \frac{39.0}{1 + 10^{pH-7.204}}$$

Figure 1: Acute Total Ammonia Criteria

$$0.80 \div (FT)(FPH)(RATIO)$$

where:

RATIO	=	13.5; 7.7 ≤ pH ≤ 9
RATIO	=	$\frac{20.25 \times 10^{(7.7-pH)}}{7.7} \div (1 + 10^{(7.4-pH)})$; 6.5 ≤ pH ≤ 7.7
FT	=	1.4; 15 ≤ T ≤ 30
FT	=	$10^{[0.03(20-T)]}$; 0 ≤ T ≤ 15
FPH	=	1; 8 ≤ pH ≤ 9
FPH	=	$(1 + 10^{(7.4-pH)}) \div 1.25$; 6.5 ≤ pH ≤ 8.0

Figure 2: Chronic Unionized Ammonia Criteria

Water quality-based effluent limits for ammonia, based on the criteria in Table 15 and the mixing zones in Table 13 and Table 14, generally resulted in ammonia limits more stringent than the technology-based ammonia effluent limits in Table 10. The exception was the maximum daily limit for Outfall 002, from October – April. The more stringent technology-based effluent limit was used in this case.

Chlorine (total residual)

Washington’s chlorine criteria are listed in Table 15.

The Toppenish Plant generally uses ultraviolet disinfection and therefore there is generally no source of residual chlorine in the discharge. However, the Toppenish Plant can use chlorine for disinfection as a backup if the ultraviolet disinfection system is inoperative. If chlorine is used for disinfection and dechlorination is not used to reduce the effluent chlorine concentration, the effluent chlorine concentrations would be consistent with the technology-based effluent limits above. The technology-based effluent limits would not ensure compliance with water quality standards. Thus, more stringent water quality-based effluent limits for chlorine are necessary to ensure compliance with water quality standards.

The draft permit carries forward the water quality-based effluent limits for chlorine that were in the 2009 permit. These effluent limits will ensure compliance with water quality criteria for chlorine. Although the chlorine limits in the 2009 permit were based on the Yakama WQS, the freshwater chlorine criteria in the Yakama WQS are identical to the freshwater chlorine criteria in the Washington WQS (Table 15). Effluent limits and monitoring requirements for chlorine apply only when the facility is using chlorine for disinfection.

However, the 2009 permit did not include mass limits for total residual chlorine. Consistent with 40 CFR 122.45(f), the draft permit proposes mass limits for chlorine. The mass limits are calculated from the concentration limits using the maximum projected flow of 1.6 mgd from the July 2014 permit application.

Dissolved Oxygen (DO) and BOD₅

Natural decomposition of organic material in wastewater effluent impacts dissolved oxygen in the receiving water at distances far outside of the regulated mixing zone. The BOD₅ of an effluent sample indicates the amount of biodegradable material in the wastewater and estimates the magnitude of oxygen consumption the wastewater will generate in the receiving water.

The 2009 permit included water quality-based BOD₅ limits that had been carried forward from the 1994 permit. These are an average monthly limit of 30 mg/L and an average weekly limit of 45 mg/L. The Toppenish Plant has consistently complied with the water quality-based BOD₅ effluent limits from the 2009 permit (Table 2). These effluent limits have been included in the draft permit in compliance with the anti-backsliding provisions of the Clean Water Act and implementing regulations.

Washington's EPA-approved DO water quality criterion is a 1-day minimum of 8.0 mg/L in waters designated for salmonid spawning, rearing, and migration (WAC 173-201A-200(1)(d)). On April 22, 2022, the State of Washington adopted a revised DO criterion of 10 mg/L or 90% of saturation for such waters. See Table 15.

The 2009 permit also included a minimum DO effluent limit of 6.8 mg/L. The derivation of the 6.8 mg/L DO effluent limit in the 2009 permit was based in part on an assumption that the DO concentration upstream of the discharge was 7.9 mg/L. Data collected by the permittee during the term of the 2009 permit show that the DO concentrations in both Wanity Slough and Spencer Lateral are sometimes substantially lower than 7.9 mg/L (Table 3, Table 4). The minimum DO limit in the 2009 permit was also based on ensuring that the discharge did not lower the DO concentration in the receiving water by more than 0.2 mg/L. At that time, Washington's water quality standards included a provision which states that, "When a water body's D.O. is lower than the criteria in Table 200(1)(d) (or within 0.2 mg/L of the criteria) and that condition is due to natural conditions, then human actions considered cumulatively may not cause the D.O. of that water body to decrease more than 0.2 mg/L" (WAC-173-201A-200(1)(d)(i)). However, this provision was disapproved by EPA in November 2021.² Therefore, it is no longer in effect for CWA purposes.

Due to the low ambient DO concentrations and the disapproval of the 0.2 mg/L allowable DO decrease resulting from human actions, an effluent minimum limit of 6.8 mg/L DO will not ensure compliance with either the state-adopted (10 mg/L or 90% of saturation) or EPA-approved (8 mg/L) DO criteria.

However, relatively high effluent temperatures and salinity (Table 2) sometimes preclude achievement of the 8 mg/L EPA-approved criterion in the effluent, because such concentrations are sometimes higher than the DO

² <https://www.epa.gov/system/files/documents/2022-01/wawqs-action-letter-11-19-2021.pdf>

saturation concentration. Toppenish, Washington is at an elevation of 759 feet above sea level. At this elevation and at the average effluent salinity of 2.3 parts per thousand, DO saturation is 8.0 mg/L at a temperature of 24.6 °C. The maximum effluent temperature is 36 °C (Table 2), and at this temperature, DO saturation is only 6.57 mg/L.

In order to ensure protection of the receiving water DO within the constraints of the effluent's temperature and salinity, EPA proposes to include a DO effluent limit of 90% of saturation, based on the state-adopted DO criterion.

DO saturation is less than 11.1 mg/L (and therefore 90% of DO saturation is less than 10 mg/L) when the effluent temperature is above 8.9 °C. The effluent is consistently warmer than 8.9 °C (Table 2), thus, 90% of saturation is the only portion of the state-adopted DO criterion that is applicable to the discharge.

When the effluent temperature is 27.7 °C or cooler, DO saturation concentration is greater than 7.55 mg/L, and therefore the 90% of saturation limit will require the effluent DO concentration to be at least as high as the 2009 permit's effluent limit of 6.8 mg/L under those conditions.

When the effluent is warmer than 27.7 °C, the DO saturation concentration is less than 7.55 mg/L and therefore the 90% of saturation limit would allow the effluent to have a DO concentration less than the 6.8 mg/L minimum DO limit in the prior permit. Therefore, in compliance with the anti-backsliding provisions of the Clean Water Act, the draft permit retains the 6.8 mg/L minimum DO limit, and the permit requires compliance with both the concentration and percent-of-saturation DO limits.

E. coli

Washington's *E. coli* criteria are listed in Table 15.

Regulations at 40 CFR 122.45(d)(1) require that effluent limitations for continuous discharges from dischargers other than POTWs be expressed as average monthly and maximum daily limits, unless impracticable. The "average monthly discharge limitation" is defined as an arithmetic mean (40 CFR 122.2).

It is impracticable to properly implement a 30-day geometric mean criterion in a permit using a monthly arithmetic average limit. The geometric mean of a given data set is equal to the arithmetic mean of that data set if and only if all of the values in that data set are equal. Otherwise, the geometric mean is always less than the arithmetic mean. In order to ensure that the effluent limits are "derived from and comply with" the geometric mean water quality criterion, as required by 40 CFR 122.44(d)(1)(vii)(A), it is necessary to express the effluent limits as a monthly geometric mean and a maximum daily limit.

The permit requires *E. coli* monitoring three times per week, which will result in 12-13 samples per month. The WQS state that not more than 10 percent of all samples obtained within the averaging period shall exceed 320 CFU or

MPN per 100 mL. Since more than 10 samples will be collected, this provision of the WQS is implemented in the permit by a footnote to the effluent limit table.

Nitrate+Nitrite

The Washington WQS at WAC 173-201A-260(2)(a) state that “toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health.”

EPA’s recommended criterion for nitrates is 10 mg/L for consumption of water and organisms is 10 mg/L (USEPA, 1986a). This criterion is based on preventing methemoglobinemia in bottle-fed infants. The Yakama Nation water quality standards (Section 20.1.6.2.4) apply this criterion to Class IV waters, which are irrigation conveyances such as Spencer Lateral. EPA is using this recommended criterion to interpret Washington’s narrative criterion for toxic materials, based on 40 CFR 122.44(d)(1)(vi)(B).

EPA has determined that the discharges of nitrate+nitrite from Outfall 008 have the reasonable potential to cause or contribute to excursions above the EPA-recommended criterion for nitrates. Therefore, the draft permit proposes water quality-based effluent limits for nitrate + nitrite for Outfall 008. Effluent data indicate that the permittee cannot comply with the new water quality-based effluent limits for nitrate+nitrite immediately on the effective date of the final permit. Therefore, the draft permit proposes a compliance schedule for these limits. See Compliance Schedules, below.

Nutrients (Total Phosphorus and Total Nitrogen)

As explained in Appendix E, EPA has determined that discharges of total nitrogen and total phosphorus from Outfall 002 at the Toppenish Plant to Wanity Slough have the reasonable potential to cause or contribute to excursions above water quality standards from April – October, and therefore effluent limits are necessary. Effluent data indicate that the permittee cannot comply with the new water quality-based effluent limits for total nitrogen and total phosphorus immediately on the effective date of the final permit. Therefore, the draft permit proposes a compliance schedule for these limits. See Compliance Schedules, below.

pH

Washington’s pH criteria are listed in Table 15. The minimum effluent pH measured between March 2010 and March 2022 was 6.5 standard units and the maximum effluent pH was 8.42 standard units.

Mixing zones are generally not granted for pH, therefore the most stringent water quality criterion must be met before the effluent is discharged to the receiving water. The proposed permit requires that the effluent have a pH of

no less than 6.5 and no greater than 8.5 standard units. Effluent data indicate that the Toppenish Plant can comply with these effluent limits.

Solids, Total Dissolved

The Washington WQS at WAC 173-201A-260(2)(a) state that “toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health.” The WQS state at WAC 173-201A-206(2)(b) that “Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.” Effluent data are available for salinity (Table 2), which, for most purposes, is equivalent to total dissolved salt content (USEPA, 1986a).

Excess dissolved solids can affect both domestic and agricultural water supply uses. *Quality Criteria for Water 1986* states that irrigation water with a dissolved solids concentration greater than 500 mg/L can have detrimental effects on sensitive crops. EPA’s secondary drinking water standards include a criterion of 500 mg/L total dissolved solids to prevent deposits, color, staining and a salty taste. Therefore, EPA is interpreting Washington’s narrative criteria for toxic, radioactive or deleterious materials and aesthetics as a concentration of 500 mg/L total dissolved solids.

Quality Criteria for Water 1986 also recommends a concentration of 250 mg/L sulfate to protect against laxative effects and 250 mg/L chlorides to prevent undesirable mineral taste. In addition, EPA has published recommended criteria for chloride for aquatic life, which are a chronic criterion of 230 mg/L and an acute criterion of 860 mg/L (Benoit, Prothro, & Stephan, 1988). However, EPA cannot apply the chloride or sulfate criteria to the Toppenish Plant due to a lack of data for sulfate and chloride. The draft permit proposes quarterly effluent monitoring for chloride and sulfate so that reasonable potential to exceed these recommended criteria can be evaluated when the permit is reissued.

EPA has determined that discharges of total dissolved solids from Outfall 008 have the reasonable potential to cause or contribute to excursions above water quality standards for total dissolved solids, therefore water quality-based effluent limits are proposed in the draft permit. Effluent data indicate that the permittee cannot comply with the new water quality-based effluent limits for total dissolved solids immediately on the effective date of the final permit. Therefore, the draft permit proposes a compliance schedule for these limits. See Compliance Schedules, below.

Residues

The Washington WQS state that “aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.” This criterion is

implemented, in part, in the draft permit by a narrative prohibition stating that, “there shall be no discharge from Outfalls 002 or 008 of floating solids, visible foam, or oily wastes which produce a sheen on the surface of the receiving water.” The draft permit also proposes weekly visual monitoring to determine compliance with this prohibition.

Temperature

The site-specific temperature criterion applicable to the Yakima River is listed in Table 15. EPA is applying this temperature criterion to the receiving waters because the portion of the Yakima River to which this site-specific criterion is applicable is the first water of the State of Washington that is downstream from the discharges.

EPA has determined that the discharge of heat from Outfall 002 has the reasonable potential to cause or contribute to excursions above water quality standards from June through August. Effluent limits are proposed for temperature for this outfall and season.

Turbidity

Washington’s turbidity criteria are listed in Table 15. EPA has determined that the turbidity effluent limits in the prior permit will ensure compliance with water quality criteria. Thus, the prior permit’s turbidity effluent limits have been carried forward under the anti-backsliding provisions of the Clean Water Act.

Whole Effluent Toxicity

The Washington WQS at WAC 173-201A-260(2)(a) state that “toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health.”

EPA’s recommended criterion for chronic whole effluent toxicity (WET) appears in Sections 2.3.3 and 2.3.4 of the TSD, and it is 1.0 chronic toxic units (TU_c) to the most sensitive of at least three test species, with an averaging period of 4 days.

EPA has determined based on WET data collected during the term of the 2009 permit (Table 2) that the discharge from the Toppenish Plant has the reasonable potential to cause or contribute to excursions above water quality standards for WET. Therefore, the draft permit proposes water quality-based effluent limits for whole effluent toxicity. Effluent data indicate that the permittee cannot comply with the new water quality-based effluent limits for WET immediately on the effective date of the final permit. Therefore, the draft permit proposes a compliance schedule for these limits. See Compliance Schedules, below.

d. Antibacksliding

CWA § 402(o) and 40 CFR § 122.44 (l) generally prohibit the renewal, reissuance, or modification of an existing NPDES permit that contains effluent limits, permit conditions or standards that are less stringent than those established in the previous permit (i.e., anti-backsliding) but provides limited exceptions. For explanation of the antibacksliding exceptions refer to Chapter 7 of the Permit Writers Manual, “Final Effluent Limitations and Anti-backsliding.”

The effluent limits for TSS are less stringent than those in the prior permit. In addition, for E. coli, the prior permit stated that “No more than 10% of all samples collected for the month shall exceed 200 colonies/100 ml,” whereas the draft permit states that “No more than 10 percent of all samples obtained within the month shall exceed 320 CFU or MPN per 100 mL.”

The TSS limits are production-normalized technology-based effluent limits which implement the applicable effluent limit guidelines for this industry (see Federal Effluent Limit Guidelines, above). The limits have increased because the production rate has increased.

Since the TSS limits were not based on a state standard, the applicable anti-backsliding requirements are those in 40 CFR 122.44(l) (EPA, 2010). The increased production rate is a material and substantial change, which would constitute cause for permit modification (40 CFR 122.44(l)(1), 40 CFR 122.62(a)(2)). See also CWA section 402(o)(2)(A).

The E. coli limits are water quality based effluent limits, therefore, the anti-backsliding requirements in Clean Water Act section 303(d)(4) are applicable. Clean Water Act section 303(d)(4)(B) states that effluent limits may be revised only if such revision is subject to and consistent with the antidegradation policy. As explained in the Antidegradation section, below, the revised effluent limits for E. coli are consistent with the antidegradation policy; therefore, the permits limits can be made less stringent than the previous permit.

B. MONITORING REQUIREMENTS

CWA section 308 and 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limitations are required and/or to monitor effluent impacts on receiving water quality.

1. Effluent Monitoring

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility’s performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples must be used for averaging if they are conducted using EPA-approved test methods (generally found in 40 CFR 136) or as specified in the permit.

Monitoring Changes from the Previous Permit

Some of the monitoring requirements have been reduced based on the *Interim Guidance for Performance - Based Reductions of NPDES Permit Monitoring Frequencies* (USEPA, 1996). These monitoring reductions are summarized in Table 16.

Table 16: Performance-based Monitoring Reductions

Parameter	Outfall(s)	Average of monthly averages	Draft permit average monthly limit	Ratio	Prior monitoring frequency	Draft permit monitoring frequency
BOD ₅	002 & 008	6.02	30	20%	3/week	1/week
Oil and Grease	002 & 008	1.78	10	18%	2/week	1/month
TSS	002 & 008	12.3	42.8	29%	3/week	1/week
Turbidity	002 & 008	5.73	12.4	46%	3/week	1/week

The draft permit proposes monitoring for total dissolved solids 3 times per week at Outfall 008 to determine compliance with the new water quality-based effluent limits for this parameter. The draft permit proposes monitoring for total phosphorus 3 times per week at Outfall 002 from April – October, when effluent limits are in effect, 1/month for November – March at Outfall 002 and year-round for Outfall 008.

The draft permit proposes monitoring for nitrate+nitrite 3 times per week to determine compliance with the new water quality-based effluent limits for this parameter. In some cases, the Toppenish Plant would otherwise be eligible for reductions in monitoring frequency for ammonia and total nitrogen, however, EPA has chosen to require the same monitoring frequency (3/week) for all nitrogen compounds with monitoring requirements: nitrate+nitrite, ammonia, and total nitrogen.

2. Surface Water Monitoring

In general, surface water monitoring may be required for pollutants of concern to assess the assimilative capacity of the receiving water for the pollutant. In addition, surface water monitoring may be required for pollutants for which the water quality criteria are dependent and to collect data for TMDL development if the facility discharges to an impaired water body. Table 17 and Table 18 present the proposed surface water monitoring requirements for the draft permit. Surface water monitoring results must be submitted to EPA and the YN in annual reports, which may be submitted as an attachment the DMR.

Surface water monitoring in Spencer Lateral is required only during the irrigation season, when there is flow in the lateral upstream from Outfall 008. Surface water monitoring in Wanity Slough is required year-round.

Although EPA has determined that the discharge of total nitrogen, nitrate + nitrate, total phosphorus, and total dissolved solids from have the reasonable potential to cause or contribute to excursions above water quality standards, there are limited data available for these parameters in Wanity Slough upstream from Outfall 002 (Table 3). Thus, EPA is proposing to require upstream monitoring for total

nitrogen and total phosphorus in Wanity Slough and total dissolved solids and nitrate + nitrite in both Wanity Slough and Spencer Lateral.

EPA proposes continuous monitoring for pH and temperature in both receiving waters for one year, or one irrigation season in Spencer Lateral. The continuous pH and temperature monitoring will allow for more accurate calculation of ammonia criteria. The continuous pH monitoring will also demonstrate when primary producers are causing diurnal pH swings that may violate water quality standards. This will verify whether the April – October season currently proposed for water quality-based effluent limits for total nitrogen and total phosphorus for Outfall 002 is appropriate.

Table 17: Surface Water Monitoring for Wanity Slough in Draft Permit

Parameter	Units	Monitoring Location(s)	Monitoring Frequency	Sample Type
Total Nitrogen	mg/L	Upstream	1/quarter	Grab
Nitrate + Nitrite	mg/L	Upstream	1/quarter	Grab
pH ¹	s.u.	Downstream	Continuous	Recording
Total Ammonia as N	mg/L	Upstream	1/quarter	Grab
Total Phosphorus	µg/L	Upstream	1/quarter	Grab
Total Dissolved Solids	mg/L	Upstream	1/quarter	Grab
Temperature ¹	°C	Upstream and downstream	Continuous	Recording
Notes: 1. Continuous monitoring for pH and temperature is required for the final full calendar year of the permit term.				

Table 18: Surface Water Monitoring for Spencer Lateral in Draft Permit (irrigation season)

Parameter	Units	Monitoring Location(s)	Monitoring Frequency	Sample Type
Nitrate + Nitrite	mg/L	Upstream	1/quarter	Grab
pH ¹	s.u.	Downstream	Continuous	Recording
Total Ammonia as N	mg/L	Upstream	1/quarter	Grab
Total Dissolved Solids	mg/L	Upstream	1/quarter	Grab
Temperature ¹	°C	Upstream and downstream	Continuous	Recording
Notes: 1. Continuous monitoring for pH and temperature is required for the final full calendar year of the permit term.				

3. Electronic Submission of Discharge Monitoring Reports

The draft permit requires that the permittee submit DMR data electronically using NetDMR. NetDMR is a national web-based tool that allows DMR data to be submitted electronically via a secure Internet application.

EPA currently conducts free training on the use of NetDMR. Further information about NetDMR, including upcoming trainings and contacts, is provided on the following website: <https://netdmr.epa.gov>. The permittee may use NetDMR after requesting and receiving permission from EPA Region 10.

Permit Part III.C requires that the Permittee submit a copy of the DMR to the YN. Currently, the permittee may submit a copy to the YN in one of three ways: 1) a

paper copy may be mailed; 2) The email address for the YN may be added to the electronic submittal through NetDMR; or 3) The permittee may provide the YN viewing rights through NetDMR.

V. OTHER PERMIT CONDITIONS

A. COMPLIANCE SCHEDULES

Compliance schedules are authorized by federal NPDES regulations at 40 CFR 122.47 and Washington WQS at WAC 173-201A-510(4).

To determine if compliance schedules are appropriate, EPA calculated performance-based effluent limits for all parameters and outfalls for which new or more stringent water quality-based effluent limits are proposed and compared the performance-based limits to the proposed water quality-based effluent limits. Total phosphorus and nitrate + nitrite were not routinely monitored under the prior permit, so the limits were compared to the average and maximum concentrations reported on the application. The dissolved oxygen saturation limit is a minimum limit; EPA has compared it to the 1st percentile dissolved oxygen saturation measured in the effluent during the past permit cycle.

In general, if the performance-based effluent limits in Table 19 were more stringent than the proposed water quality-based effluent limits, then EPA determined that immediate compliance is possible, and therefore no compliance schedule is proposed. If the performance-based effluent limits were less stringent than the proposed water quality-based effluent limits, then EPA determined that the permittee could not comply with the new water quality-based effluent limits immediately, and compliance schedules are proposed for such limits. Specifically, compliance schedules are proposed for new water quality-based effluent limits for nitrate + nitrite, total dissolved solids (for Outfall 008), total nitrogen (for Outfall 002), total phosphorus (for Outfall 002), and whole effluent toxicity.

The exceptions are the temperature limits for June, July, and August for Outfall 002 and the ammonia limits for October – April for Outfall 008. No compliance schedules are proposed for these limits. The permittee can avoid the need to comply with the June – August temperature limits for Outfall 002 by discharging to Outfall 008, which does not have temperature limits, and the permittee can avoid the need to comply with the ammonia limits for October – April for Outfall 008 by discharging to Outfall 002, which has achievable ammonia effluent limits. Results are summarized in Table 19.

Table 19: New WQBEL Comparison to Performance

Parameter	Outfall	Season	Units	Performance-based AML	Performance-based MDL	Water quality-based AML	Water Quality-based MDL	Achievable?
Ammonia	002	May – Sep.	mg/L	0.424	1.427	1.27	5.16	Yes
Ammonia	002	Oct. – April	mg/L	0.424	1.427	2.90	8.0 (TBEL)	Yes
Ammonia	008	May – Sep.	mg/L	0.424	1.427	3.21	7.65	Yes

Parameter	Outfall	Season	Units	Performance-based AML	Performance-based MDL	Water quality-based AML	Water Quality-based MDL	Achievable?
Ammonia	008	Oct. – April	mg/L	0.424	1.427	0.211	0.855	No
DO Saturation	Both	Year-round	%	1 st Percentile: 91		90 (minimum)		Yes
Nitrate + Nitrite	008	May – Sep.	mg/L	59	154	40.4	99.1	No
Nitrate + Nitrite	008	Oct. – April	mg/L	59	154	10.0	24.5	No
TDS	008	May – Sep.	mg/L	2371	2714	1742	1995	No
TDS	008	Oct. – April	mg/L	2371	2714	500	558	No
Temperature	002	August	°C	—	33.1	—	23.6	No
Temperature	002	July	°C	—	33.6	—	23.6	No
Temperature	002	June	°C	—	33.9	—	31.2	No
Total Nitrogen	002	April – Oct.	mg/L	80	198	3.80	9.05	No
Total Phosphorus	002	April – Oct.	mg/L	Average: 39.3 Max. 41.1		0.547	1.30	No
WET	002	Year-round	TUc	13.4	25.9	5.3	10.0	No
WET	008	May – Sep.	TUc	13.4	25.9	3.8	7.2	No
WET	008	Oct. – April	TUc	13.4	25.9	1.0	1.8	No

40 CFR 122.47(a)(1) states that “any schedules of compliance under this section shall require compliance as soon as possible.” WAC 173-201A-510(4)(b) states that “Schedules of compliance shall be developed to ensure final compliance with all water quality-based effluent limits and the water quality standards as soon as possible.” WAC 173-201A-510(4)(d) state that “Compliance schedules shall generally not exceed the term of any permit unless the department determines that a longer time period is needed to come into compliance with the applicable water quality standards.”

The draft permit proposes a 4-year and 11-month schedule of compliance for the new water quality-based effluent limits that the permittee cannot comply with immediately on the effective date of the final permit (Table 19). EPA is specifically requesting comments on the length of time necessary to achieve compliance with new or more stringent water quality-based effluent limits.

40 CFR 122.47(a)(3) states that, “if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.” WAC 17-301A-510(4)(c) states that, “for the period of time during which compliance with water quality standards is deferred, interim effluent limits shall be formally established, based on the best professional judgment of the department. Interim effluent limits may be numeric or nonnumeric (e.g., construction of necessary facilities by a specified date as contained in an order or permit), or both.” 40 CFR 122.44(l)(1) states that, in general, “interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit.” Consistent with

these regulations, interim effluent limits have been established for those effluent limits with compliance schedules.

If the pollutant is subject to technology-based effluent limits (Table 12) or was subject to effluent limits in the prior permit (Table 6 and Table 7), the interim limits are the more stringent of the technology-based limits or the limits in the prior permit.

Otherwise, the interim limits are generally the performance-based limits in Table 19. For total phosphorus, there were no effluent limits in the prior permit and there are insufficient data to calculate performance-based interim limits. Thus, there are no interim effluent limits in the draft permit for total phosphorus.

B. QUALITY ASSURANCE PLAN

The permittee is required to update the Quality Assurance Plan (QAP) within 60 days of the effective date of the permit. The QAP must consist of standard operating procedures the permittee must follow for collecting, handling, storing, and shipping samples, laboratory analysis, and data reporting. The plan must be retained on site and made available to EPA and the YN upon request.

C. BEST MANAGEMENT PRACTICES PLAN

Section 402 of the Clean Water Act and federal regulation 40 CFR 122.44(k) authorize EPA to require BMPs in NPDES permits, when applicable. BMPs are measures for controlling the generation of pollutants and their release to waterways. These measures are typically included in the facility Operation & Maintenance (O&M) plans and are important tools for waste minimization and pollution prevention.

The draft permit requires that the permittee develop a BMP plan and implement BMPs within 60 days of the effective date of the draft permit. EPA has a guidance manual (USEPA, 1993) that may provide some assistance in the development of BMPs. Specifically, the permittee must consider spill prevention and control, optimization of chemical use and water conservation. Furthermore, it is considered a good management practice to maintain a log of daily plant operations and observations. To the extent that any of these issues have already been addressed, the permittee need only reference the appropriate document/section in its O&M plan. Additionally, the BMP plan must be amended whenever there is a change in the facility or in the operation of the facility which materially increases the potential for an increased discharge of pollutants.

D. ENVIRONMENTAL JUSTICE

As part of the permit development process, EPA Region 10 conducted a screening analysis to determine whether this permit action could affect overburdened communities. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. EPA used a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify permits for which enhanced outreach may be warranted.

The Toppenish Plant is located within or near a Census block group that is potentially overburdened because of lead paint, air toxics cancer risk, air toxics respiratory hazard,

national priorities list cleanup sites, Clean Air Act Risk Management Program (RMP) facilities, ozone level in air, and PM 2.5 level in air. In order to ensure that individuals near the facility are able to participate meaningfully in the permit process, EPA is conducting the following enhanced outreach. EPA has notified Yakima Valley Libraries of the availability of the draft permit, and they have agreed to help library patrons access the draft documents. EPA will also work collaboratively with the YN to conduct enhanced outreach activities such as posting the proposed permit and fact sheet in public places, the YN website, and other media the YN feels is necessary to ensure membership are able to participate in the review and comment period.

Regardless of whether a facility is located near a potentially overburdened community, EPA encourages permittees to review (and to consider adopting, where appropriate) Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways To Engage Neighboring Communities (see <https://www.federalregister.gov/d/2013-10945>). Examples of promising practices include: thinking ahead about community's characteristics and the effects of the permit on the community, engaging the right community leaders, providing progress or status reports, inviting members of the community for tours of the facility, providing informational materials translated into different languages, setting up a hotline for community members to voice concerns or request information, follow up, etc.

For more information, please visit <https://www.epa.gov/environmentaljustice> and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

E. STANDARD PERMIT PROVISIONS

Permit Parts III, IV and V contain standard regulatory language that must be included in all NPDES permits. The standard regulatory language covers requirements such as monitoring, recording, and reporting requirements, compliance responsibilities, and other general requirements.

VI. OTHER LEGAL REQUIREMENTS

A. ENDANGERED SPECIES ACT

The Endangered Species Act requires federal agencies to consult with National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any threatened or endangered species.

EPA has determined that the issuance of this permit will have no effect on gray wolf, yellow-billed cuckoo or bull trout, and is not likely to adversely affect Middle Columbia River steelhead.

B. ESSENTIAL FISH HABITAT

Essential fish habitat (EFH) is the waters and substrate (sediments, etc.) necessary for fish to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires EPA to consult with NOAA Fisheries when a proposed discharge has the potential to adversely affect EFH (i.e., reduce quality and/or quantity of EFH). A review of the Essential Fish Habitat

documents shows that Chinook and Coho Salmon in the Lower Yakima River, and all streams, estuaries, marine waters, and other waterbodies historically accessible to Chinook and Coho in the Lower Yakima (see 73 FR 60991).

The EFH regulations define an adverse effect as any impact which reduces quality and/or quantity of EFH and may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. EPA has prepared an EFH assessment which appears in Appendix F.

EPA has determined that issuance of this permit will not affect any EFH species.

C. CWA § 401 CERTIFICATION

CWA § 401 requires a Certification that any permit requirements comply with the appropriate sections of the CWA, as well as any appropriate requirements of Tribal Law. See 33 USC § 1341(d). Since this facility discharges to tribal waters and the Yakama Nation has not been approved for TAS under the CWA, EPA is the certifying authority. EPA is taking comment on EPA's intent to certify this permit. See the draft certification in Appendix G.

D. ANTIDEGRADATION

EPA is required under Section 301(b)(1)(C) of the CWA and implementing regulations (40 CFR 122.4(d) and 122.44(d)) to establish conditions in NPDES permits that ensure protection of the downstream State water quality standards, including antidegradation requirements. Since the receiving waters are located within the Yakama Reservation, but the YN does not have approved WQS, this permit is based on Ecology's WQS, including antidegradation. Therefore, EPA has prepared an antidegradation analysis consistent with Ecology's antidegradation implementation procedures. EPA referred to Washington's antidegradation policy (WAC 173-201A-300) and Ecology's 2011 *Supplemental Guidance on Implementing Tier II Antidegradation* ("Washington Tier II Guidance") (Ecology, 2011).³

Washington's antidegradation policy has three tiers of protection (WAC 173-201A-300(e)):

- i. Tier I is used to ensure existing and designated uses are maintained and protected and applies to all waters and all sources of pollution.
- ii. Tier II is used to ensure that waters of a higher quality than the criteria assigned in this chapter are not degraded unless such lowering of water quality is necessary and in the overriding public interest. Tier II applies only to a specific list of polluting activities.
- iii. Tier III is used to prevent the degradation of waters formally listed in this chapter as "outstanding resource waters," and applies to all sources of pollution to those waters. The receiving waters for this permit are not listed as "outstanding resource waters." Therefore, Tier III antidegradation requirements are not applicable to this permit.

³ Available at: <https://apps.ecology.wa.gov/publications/SummaryPages/1110073.html>

1. Tier I

All facilities must meet Tier I requirements. Existing and designated uses must be maintained and protected. No degradation may be allowed that would interfere with, or become injurious to, existing or designated uses, except as provided for in Chapter 173-201A WAC. The designated uses of the receiving waters are discussed under Designated Beneficial Uses above.

The effluent limits in the draft permit ensure compliance with applicable numeric and narrative water quality criteria. The numeric and narrative water quality criteria are set at levels that ensure protection of the designated uses. As there is no information indicating the presence of existing beneficial uses other than those that are designated, the draft permit ensures a level of water quality necessary to protect the designated uses and, in compliance with WAC 173-201A-310 and 40 CFR 131.12(a)(1), also ensures that the level of water quality necessary to protect existing uses is maintained and protected.

If EPA receives information during the public comment period demonstrating that there are existing uses for which Wanity Slough or Spencer Lateral are not designated, EPA will consider this information before issuing a final permit and will establish additional or more stringent permit conditions if necessary to ensure protection of existing uses.

2. Tier II

Whenever a water quality constituent is of a higher quality than a criterion designated for that water under the Washington WQS, new or expanded actions within certain categories, including NPDES permits, that are expected to cause a measurable change in the quality of the water may not be allowed unless Ecology determines that the lowering of water quality is necessary and in the overriding public interest.

As explained under Antibacksliding, above, with the exceptions of TSS and the no more than 10% exceedance threshold for E. coli, all the effluent limits in the reissued permit are as stringent as or more stringent than the corresponding limits in the current permit. For those parameters with limits that are as stringent or more stringent than the corresponding limits in the current permit, the proposed permit will not allow lower water quality.

Washington's antidegradation policy states that Tier II reviews will only be conducted for new or expanded actions conducted under certain authorizations, including NPDES permits (WAC 173-201A-320(2)). The Washington Tier II Guidance defines the actions that are considered "expanded" in the context of its Tier II antidegradation requirements (Ecology, 2011). The Washington Tier II Guidance states that "Expanded" means:

- A physical expansion of the facility (production or wastewater system expansions with a potential to allow an increase of the volume of wastewater or the amount of pollution) or activity;
- An increase (either monthly average or annual average) to an existing permitted concentration or permitted effluent mass limit (loading) to a water body greater than 10%; or,

- The act of re-rating the capacity of an existing plant greater than 10%.

The revised effluent limits for TSS are increased by 10% relative to those in the prior permit. Since the increase is not greater than 10%, the increased limits are not an expansion as defined by the Washington Tier II guidance, and the increased TSS limits are therefore not subject to a Tier II review.

The revised limit for E. coli is not a monthly average or annual average limit; it is a threshold that no more than 10% of samples taken during the month may exceed. The monthly geometric mean limit for E. coli is the same as the corresponding limit in the prior permit. Thus, the revised E. coli limit is not an expansion as defined by the Washington Tier II guidance, and the revised E. coli limit is therefore not subject to a Tier II review.

E. PERMIT EXPIRATION

The permit will expire five years from the effective date.

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Appendix A. Facility Information

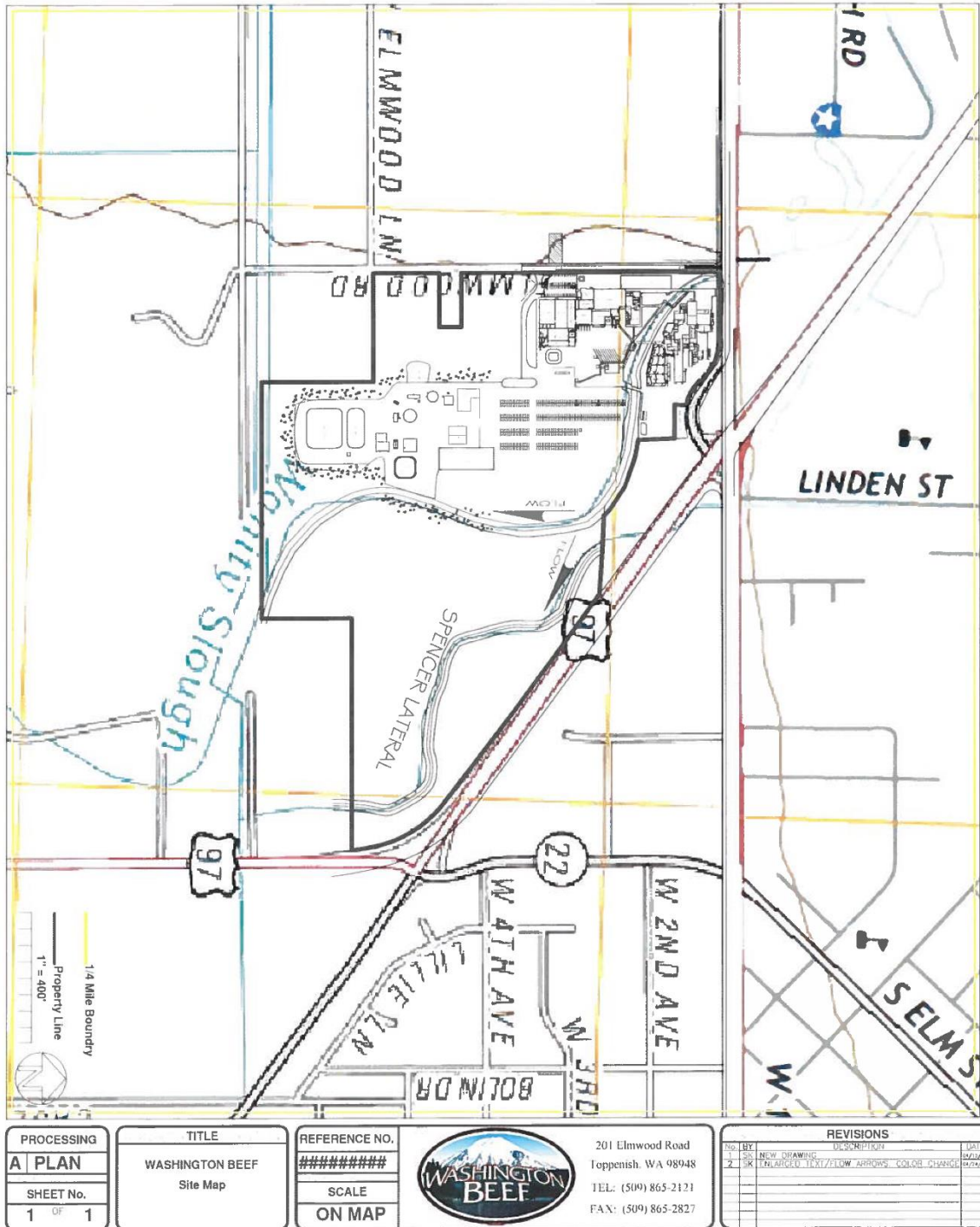


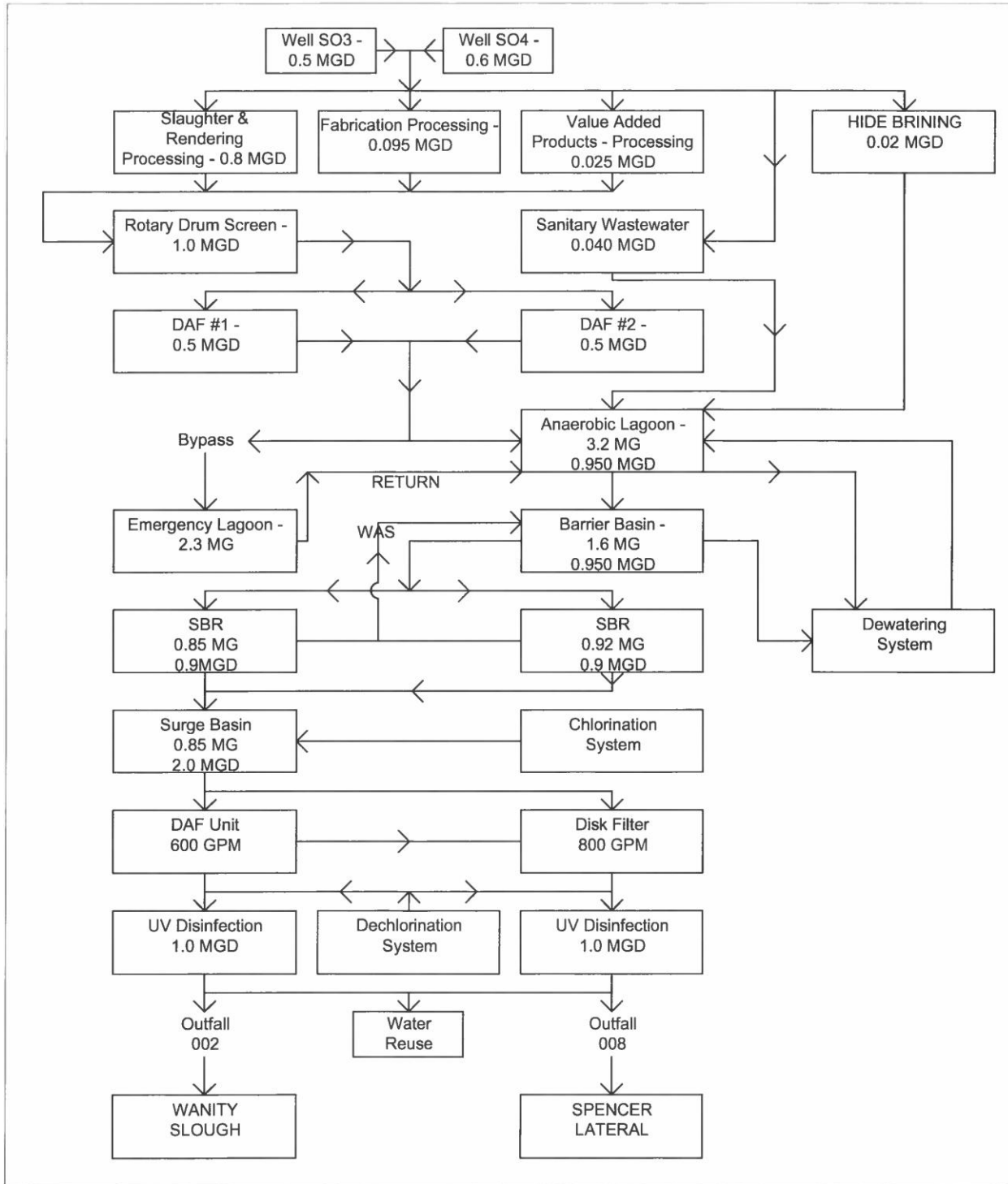
Figure 3: Location Map

Washington Beef Outfalls




Maxar | Esri Community Maps Contributors, City of Yakima, WA State Parks GIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

Figure 4: Aerial Photo with Approximate Outfall Locations



PROCESSING
A PLAN
SHEET No.
1 OF 1

TITLE
Schematic Water Flow

	201 Elmwood Rd.	Phone: 509-865-2121
	Toppenish WA 98948	Fax: 509-865-2827

DRAWN ON:
04-30-14

Figure 5: Flow Diagram

Appendix B. Water Quality Data

Treatment Plant Effluent Data

Table 20: Effluent Data for Total Nitrogen, Ammonia, Dissolved Oxygen, and Turbidity

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
1-Jun-17	75.98	389.08	0.07	0.36	7.4	1.96	28.4	008
2-Jun-17	67.73	379.55	0.07	0.39	7.2	2.25	28.4	008
3-Jun-17							28.7	008
4-Jun-17							27.6	008
5-Jun-17	67.19	360.31	0.11	0.59	7.5	2.06	27.0	008
6-Jun-17	76.07	405.27	0.16	0.85	7.5	2.85	28.1	008
7-Jun-17	78.71	419.47	0.20	1.07	7.5	1.98	29.1	008
8-Jun-17							29.4	008
9-Jun-17							28.9	008
10-Jun-17							27.4	008
11-Jun-17							24.5	008
12-Jun-17	75.15	204.52	0.07	0.19	7.9	1.79	23.7	008
13-Jun-17	96.60	452.05	0.18	0.84	7.8	3.44	27.0	008
14-Jun-17	106.41	675.36	0.10	0.63	7.8	1.65	26.8	008
15-Jun-17							27.1	008
16-Jun-17							27.7	008
17-Jun-17							27.3	008
18-Jun-17							28.3	008
19-Jun-17	86.63	480.46	0.15	0.83	7.0	1.63	28.8	008
20-Jun-17	101.79	427.01	0.08	0.34	7.0	1.71	29.8	008
21-Jun-17	102.31	688.59	0.10	0.67	7.0	1.40	28.6	008
22-Jun-17							27.9	008
23-Jun-17							27.7	008
24-Jun-17							29.0	008
25-Jun-17							30.8	008
26-Jun-17	97.41	511.29	0.19	1.00	6.9	1.90	30.0	008
27-Jun-17	120.98	625.16	0.47	2.43	6.8	1.86	29.3	008
28-Jun-17	122.09	630.28	0.07	0.36	7.0	2.33	28.5	008
29-Jun-17							28.2	008
30-Jun-17							29.7	008
1-Jul-17							30.1	008
2-Jul-17							29.9	008
3-Jul-17							29.7	008
4-Jul-17							28.4	008
5-Jul-17	97.42	346.52	0.07	0.25	7.1	2.57	27.1	008
6-Jul-17	107.83	549.47	0.08	0.41	6.8	3.52	29.6	008
7-Jul-17	105.03	507.27	0.16	0.77	6.8	3.2	30.4	008
8-Jul-17							30.0	008
9-Jul-17							29.4	008
10-Jul-17	68.05	386.46	0.18	1.02	7	1.65	29.8	008
11-Jul-17	75.32	408.25	0.15	0.81	7.2	1.9	28.9	008
12-Jul-17	64.02	345.88	0.07	0.38	7.3	1.86	29.8	008
13-Jul-17							29.9	008
14-Jul-17							29.8	008
15-Jul-17							29.2	008
16-Jul-17							29.0	008
17-Jul-17	76.65	344.50	0.07	0.31	7.4	2.2	28.5	008
18-Jul-17	95.56	528.31	0.10	0.55	7.5	1.77	29.0	008
19-Jul-17	94.71	525.67	0.08	0.44	7.3	2	29.2	008
20-Jul-17							29.5	008
21-Jul-17							29.2	008
22-Jul-17							29.0	008
23-Jul-17							30.9	008
24-Jul-17	69.75	405.84	0.17	0.99	7	1.25	29.7	008
25-Jul-17	82.18	458.87	0.10	0.56	7	1.57	30.1	008
26-Jul-17	79.60	444.63	0.08	0.45	7.1	1.49	30.2	008
27-Jul-17							31.0	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
28-Jul-17							30.3	008
29-Jul-17							30.5	008
30-Jul-17							30.1	008
31-Jul-17	86.32	480.95	0.32	1.78	7.3	1.18	31.0	008
1-Aug-17	106.99	493.52	0.27	1.25	7.2	1.66	30.0	008
2-Aug-17	107.76	512.86	0.21	1.00	7.3	2.70	30.4	008
3-Aug-17							30.6	008
4-Aug-17							31.0	008
5-Aug-17							30.3	008
6-Aug-17							30.1	008
7-Aug-17	77.38	366.48	0.20	0.95	7.0	3.80	30.5	008
8-Aug-17	95.33	489.61	0.31	1.59	7.1	1.19	30.5	008
9-Aug-17	94.74	509.49	0.10	0.54	6.9	1.46	30.8	008
10-Aug-17							30.8	008
11-Aug-17							30.6	008
12-Aug-17							31.0	008
13-Aug-17							30.2	008
14-Aug-17	91.89	440.66	0.17	0.82	7.2	1.29	28.8	008
15-Aug-17	103.64	512.36	0.07	0.35	7.2	3.39	28.7	008
16-Aug-17	107.97	620.81	0.11	0.63	7.1	1.35	28.6	008
17-Aug-17							28.7	008
18-Aug-17							29.3	008
19-Aug-17							29.2	008
20-Aug-17							29.4	008
21-Aug-17	79.21	404.57	0.10	0.51	7.5	2.50	28.9	008
22-Aug-17	96.59	577.28	0.07	0.42	7.1	1.94	28.7	008
23-Aug-17	96.59	521.98	0.07	0.38	7.5	1.66	29.3	008
24-Aug-17							29.7	008
25-Aug-17							29.0	008
26-Aug-17							29.2	008
27-Aug-17							29.4	008
28-Aug-17	81.30	460.32	0.11	0.62	6.9	2.32	29.7	008
29-Aug-17	92.70	531.80	0.12	0.69	7.0	3.40	29.7	008
30-Aug-17	97.36	577.94	0.07	0.42	6.9	3.56	30.2	008
31-Aug-17							29.9	008
1-Sep-17							30.1	008
2-Sep-17							30.6	008
3-Sep-17							29.4	008
4-Sep-17							28.7	008
5-Sep-17	74.68	209.00	0.09	0.25	7.0	3.89	29.0	008
6-Sep-17	99.37	649.68	0.07	0.46	7.3	9.11	29.4	008
7-Sep-17	113.50	597.66	0.07	0.37	7.4	10.50	29.2	008
8-Sep-17							29.8	008
9-Sep-17							29.9	008
10-Sep-17							29.8	008
11-Sep-17	90.09	578.54	0.07	0.45	7.8	15.60	29.9	008
12-Sep-17	102.07	636.09	0.07	0.44	7.3	7.22	29.4	008
13-Sep-17	103.64	645.64	0.07	0.44	7.2	2.28	29.5	008
14-Sep-17							29.3	008
15-Sep-17							29.0	008
16-Sep-17							28.9	008
17-Sep-17							28.8	008
18-Sep-17	93.21	475.80	1.00	5.10	7.4	2.16	28.1	008
19-Sep-17	113.76	634.43	0.07	0.39	7.2	2.00	27.2	008
20-Sep-17	113.76	634.65	0.07	0.39	7.4	2.23	27.2	008
21-Sep-17							27.0	008
22-Sep-17							27.3	008
23-Sep-17							27.0	008
24-Sep-17							27.1	008
25-Sep-17	72.55	381.59	0.08	0.42	6.9	1.79	27.8	008
26-Sep-17	82.57	384.46	0.07	0.33	7.8	1.77	27.6	008
27-Sep-17	76.95	388.14	0.07	0.35	7.4	1.84	27.2	008
28-Sep-17							28.5	008
29-Sep-17							27.6	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
30-Sep-17							28.5	008
1-Oct-17							NA	002
2-Oct-17	52.27	271.63	0.07	0.36	8.3	2.01	NA	002
3-Oct-17	80.48	424.64	0.08	0.42	7.8	1.78	NA	002
4-Oct-17	86.10	490.10	0.07	0.40	7.3	2.05	NA	002
5-Oct-17							NA	002
6-Oct-17							NA	002
7-Oct-17							NA	002
8-Oct-17							NA	002
9-Oct-17	84.96	484.95	0.20	1.14	7.4	1.96	NA	002
10-Oct-17	97.44	556.06	0.07	0.40	7.6	3.52	NA	002
11-Oct-17	91.94	520.50	0.12	0.68	7.4	4.01	NA	002
12-Oct-17							NA	002
13-Oct-17							NA	002
14-Oct-17							NA	002
15-Oct-17							NA	002
16-Oct-17	81.74	451.52	0.11	0.61	7.2	1.56	NA	002
17-Oct-17	90.39	417.07	0.07	0.32	7.1	1.19	NA	002
18-Oct-17	81.34	367.79	0.07	0.32	7.1	1.11	NA	002
19-Oct-17							NA	002
20-Oct-17							NA	002
21-Oct-17							NA	002
22-Oct-17							NA	002
23-Oct-17	81.50	453.01	0.08	0.44	7.2	1.41	NA	002
24-Oct-17	91.14	464.69	0.07	0.36	7.0	1.41	NA	002
25-Oct-17	92.16	526.29	0.51	2.91	7.0	1.26	NA	002
26-Oct-17							NA	002
27-Oct-17							NA	002
28-Oct-17							NA	002
29-Oct-17							NA	002
30-Oct-17	55.18	342.91	0.12	0.75	6.8	1.77	NA	002
31-Oct-17	61.28	343.94	0.07	0.39	8.2	1.63	NA	002
1-Nov-17	66.94	381.94	0.07	0.40	7.7	2.59	NA	002
2-Nov-17							NA	002
3-Nov-17							NA	002
4-Nov-17							NA	002
5-Nov-17							NA	002
6-Nov-17	64.22	303.22	0.22	1.04	6.8	3.71	NA	002
7-Nov-17	83.04	451.94	0.22	1.20	6.9	2.34	NA	002
8-Nov-17	87.22	475.30	0.14	0.76	7.8	2.87	NA	002
9-Nov-17							NA	002
10-Nov-17							NA	002
11-Nov-17							NA	002
12-Nov-17							NA	002
13-Nov-17	60.93	337.87	0.28	1.55	7.5	3.36	NA	002
14-Nov-17	70.98	328.96	0.15	0.70	7.7	2.83	NA	002
15-Nov-17	74.12	315.88	0.14	0.60	7.8	2.30	NA	002
16-Nov-17							NA	002
17-Nov-17							NA	002
18-Nov-17							NA	002
19-Nov-17							NA	002
20-Nov-17	54.84	212.03	0.14	0.54	7.5	3.17	NA	002
21-Nov-17	70.62	271.87	0.14	0.54	7.6	3.30	NA	002
22-Nov-17	75.96	256.63	0.07	0.24	7.5	2.93	NA	002
23-Nov-17							NA	002
24-Nov-17							NA	002
25-Nov-17							NA	002
26-Nov-17							NA	002
27-Nov-17	82.05	408.11	0.18	0.90	7.7	4.41	NA	002
28-Nov-17	95.14	509.80	0.16	0.86	7.6	4.34	NA	002
29-Nov-17	102.45	535.30	0.13	0.68	7.8	4.24	NA	002
30-Nov-17							NA	002
1-Dec-17							NA	002
2-Dec-17							NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
3-Dec-17							NA	002
4-Dec-17	67.40	413.83	0.07	0.43	7.8	5.38	NA	002
5-Dec-17	76.66	451.38	0.07	0.41	7.7	7.52	NA	002
6-Dec-17	81.44	451.67	0.07	0.39	7.9	6.34	NA	002
7-Dec-17							NA	002
8-Dec-17							NA	002
9-Dec-17							NA	002
10-Dec-17							NA	002
11-Dec-17	48.47	256.67	0.07	0.37	8.2	6.78	NA	002
12-Dec-17	61.66	346.70	0.11	0.62	7.8	7.71	NA	002
13-Dec-17	72.72	406.97	0.55	3.08	6.8	6.77	NA	002
14-Dec-17							NA	002
15-Dec-17							NA	002
16-Dec-17							NA	002
17-Dec-17							NA	002
18-Dec-17	56.04	348.94	0.20	1.25	8.0	5.97	NA	002
19-Dec-17	81.27	493.16	0.24	1.46	7.4	6.50	NA	002
20-Dec-17	77.69	443.30	0.11	0.63	7.9	5.09	NA	002
21-Dec-17							NA	002
22-Dec-17							NA	002
23-Dec-17							NA	002
24-Dec-17							NA	002
25-Dec-17							NA	002
26-Dec-17	66.52	286.41	0.16	0.69	7.2	5.18	NA	002
27-Dec-17	86.17	345.09	0.16	0.64	8.0	5.49	NA	002
28-Dec-17	92.66	385.11	0.19	0.79	8.1	5.26	NA	002
29-Dec-17							NA	002
30-Dec-17							NA	002
31-Dec-17							NA	002
1-Jan-18							NA	002
2-Jan-18	67.46	270.53	0.24	0.96	8.8	4.99	NA	002
3-Jan-18	88.42	425.29	2.34	11.25	9.3	6.63	NA	002
4-Jan-18	96.42	497.47	1.19	6.14	8.3	4.49	NA	002
5-Jan-18							NA	002
6-Jan-18							NA	002
7-Jan-18							NA	002
8-Jan-18	46.12	264.59	0.16	0.92	7.4	5.12	NA	002
9-Jan-18	55.29	295.13	0.18	0.96	8.5	5.15	NA	002
10-Jan-18	53.74	290.14	0.17	0.92	9.1	5.75	NA	002
11-Jan-18							NA	002
12-Jan-18							NA	002
13-Jan-18							NA	002
14-Jan-18							NA	002
15-Jan-18	69.13	396.66	0.15	0.86	8.1	5.26	NA	002
16-Jan-18	79.72	468.84	0.12	0.71	9.1	5.62	NA	002
17-Jan-18	81.28	518.88	0.16	1.02	9.0	6.77	NA	002
18-Jan-18							NA	002
19-Jan-18							NA	002
20-Jan-18							NA	002
21-Jan-18							NA	002
22-Jan-18	62.06	324.28	0.15	0.78	7.5	5.59	NA	002
23-Jan-18	83.16	434.31	0.21	1.10	8.7	3.94	NA	002
24-Jan-18	80.82	423.64	0.13	0.68	8.5	3.87	NA	002
25-Jan-18							NA	002
26-Jan-18							NA	002
27-Jan-18							NA	002
28-Jan-18							NA	002
29-Jan-18	70.14	346.44	0.34	1.68	8.2	5.22	NA	002
30-Jan-18	86.18	468.78	0.26	1.41	8.2	4.92	NA	002
31-Jan-18	83.24	473.89	0.28	1.59	8.2	4.02	NA	002
1-Feb-18							N/A	002
2-Feb-18							N/A	002
3-Feb-18							N/A	002
4-Feb-18							N/A	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
5-Feb-18	77.79	476.96	0.35	2.15	8.5	4.57	N/A	002
6-Feb-18	85.34	506.79	0.30	1.78	8.3	3.97	N/A	002
7-Feb-18	91.21	539.29	0.17	1.01	8.4	4.08	N/A	002
8-Feb-18							N/A	002
9-Feb-18							N/A	002
10-Feb-18							N/A	002
11-Feb-18							N/A	002
12-Feb-18	47.96	228.26	0.07	0.33	7.9	3.81	N/A	002
13-Feb-18	65.56	302.93	0.08	0.37	9.1	3.90	N/A	002
14-Feb-18	66.34	322.66	0.07	0.34	8.5	3.28	N/A	002
15-Feb-18							N/A	002
16-Feb-18							N/A	002
17-Feb-18							N/A	002
18-Feb-18							N/A	002
19-Feb-18	60.13	321.08	0.18	0.96	7.8	7.22	N/A	002
20-Feb-18	74.18	383.52	0.16	0.83	8.2	5.13	N/A	002
21-Feb-18	75.77	388.78	0.08	0.41	8.5	4.73	N/A	002
22-Feb-18							N/A	002
23-Feb-18							N/A	002
24-Feb-18							N/A	002
25-Feb-18							N/A	002
26-Feb-18	49.64	231.43	0.20	0.93	9.0	5.22	N/A	002
27-Feb-18	65.55	326.70	0.21	1.05	7.7	6.73	N/A	002
28-Feb-18	76.29	382.69	0.17	0.85	9.0	6.30	N/A	002
1-Mar-18							NA	002
2-Mar-18							NA	002
3-Mar-18							NA	002
4-Mar-18							NA	002
5-Mar-18	66.63	312.47	0.18	0.84	8.3	5.09	NA	002
6-Mar-18	88.76	414.73	0.28	1.31	9.0	5.96	NA	002
7-Mar-18	93.84	472.33	0.18	0.91	8.5	3.97	NA	002
8-Mar-18							NA	002
9-Mar-18							NA	002
10-Mar-18							NA	002
11-Mar-18							NA	002
12-Mar-18	60.61	371.06	0.29	1.78	6.8	7.50	NA	002
13-Mar-18	81.27	489.77	0.24	1.45	7.8	8.57	NA	002
14-Mar-18	88.77	538.75	0.27	1.64	7.1	12.40	NA	002
15-Mar-18							NA	002
16-Mar-18							NA	002
17-Mar-18							NA	002
18-Mar-18							NA	002
19-Mar-18	76.10	440.99	0.18	1.04	7.8	5.86	NA	002
20-Mar-18	102.13	561.53	0.22	1.21	8.0	6.07	NA	002
21-Mar-18	95.74	518.73	0.20	1.08	8.5	6.71	NA	002
22-Mar-18							NA	002
23-Mar-18							NA	002
24-Mar-18							NA	002
25-Mar-18							NA	002
26-Mar-18	59.62	323.92	0.31	1.68	9.2	8.77	NA	002
27-Mar-18	77.20	393.05	0.36	1.83	7.8	6.05	NA	002
28-Mar-18	81.51	409.36	0.33	1.66	7.8	7.24	NA	002
29-Mar-18							NA	002
30-Mar-18							NA	002
31-Mar-18							NA	002
1-Apr-18							NA	002
1-Apr-18								008
2-Apr-18	50.63	288.43	0.25	1.42	8.0	8.22	NA	002
3-Apr-18								008
4-Apr-18	64.12	355.80	0.22	1.22	8.2	5.21	NA	002
5-Apr-18								008
6-Apr-18	64.90	344.96	0.16	0.85	8.2	7.65	NA	002
7-Apr-18								008
8-Apr-18							NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
9-Apr-18								008
10-Apr-18							NA	002
11-Apr-18								008
12-Apr-18							NA	002
13-Apr-18								008
14-Apr-18							NA	002
15-Apr-18								008
16-Apr-18	51.59	340.68	0.15	0.99	7.2	5.42	NA	002
17-Apr-18								008
18-Apr-18	69.46	416.70	0.40	2.40	8.3	5.48	NA	002
19-Apr-18								008
20-Apr-18	60.61	371.00	0.15	0.92	8.3	3.58	NA	002
21-Apr-18								008
22-Apr-18							NA	002
23-Apr-18								008
24-Apr-18							NA	002
25-Apr-18								008
26-Apr-18							NA	002
27-Apr-18								008
28-Apr-18							25.3	002
29-Apr-18								008
30-Apr-18	60.83	348.50	0.16	0.92	8.3	3.97	26.5	002
1-May-18								008
2-May-18	66.55	305.78	0.28	1.29	8.2	4.93	25.8	002
3-May-18								008
4-May-18	56.98	309.04	0.08	0.43	7.8	7.55	24.7	002
5-May-18								008
6-May-18							24.6	002
7-May-18								008
8-May-18								002
9-May-18							25.3	008
10-May-18								002
11-May-18							24.7	008
12-May-18								002
13-May-18							24.7	008
14-May-18								002
15-May-18	45.10	226.63	0.11	0.55	8.6	6.02	25.8	008
16-May-18								002
17-May-18	63.50	317.85	0.11	0.55	8.5	6.88	25.4	008
18-May-18								002
19-May-18	72.30	420.35	0.17	0.99	8.0	6.77	27.7	008
20-May-18								002
21-May-18							27.6	008
22-May-18								002
23-May-18							28.4	008
24-May-18								002
25-May-18							28.4	008
26-May-18								002
27-May-18							27.4	008
28-May-18								002
29-May-18	60.60	344.74	0.20	1.14	7.1	4.67	26.3	008
1-May-18	79.88	396.82	0.19	0.94	7.4	3.65	26.3	008
2-May-18	82.32	269.87	0.16	0.52	7.4	6.54	25.1	008
3-May-18							27.6	008
4-May-18							27.4	008
5-May-18							27.7	008
6-May-18							27.1	008
7-May-18	78.13	454.04	0.34	1.98	7.4	3.85	27.9	008
8-May-18	93.50	532.86	0.39	2.22	7.7	4.49	27.2	008
9-May-18	88.56	499.19	0.28	1.58	6.8	5.42	26.9	008
10-May-18							26.5	008
11-May-18							25.7	008
12-May-18							26.6	008
13-May-18							27.3	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
14-May-18	77.47	416.87	0.20	1.08	7.6	5.07	27.9	008
15-May-18					7.3		28.7	008
16-May-18					7.6		29.2	008
17-May-18	12.01	73.24	0.24	1.46	7.6	5.75	28.2	008
18-May-18	73.65	437.64	0.24	1.43	7.4	5.44	29.5	008
19-May-18							28.7	008
20-May-18							27.7	008
21-May-18	81.08	472.30	0.32	1.86	7.2	5.09	28.1	008
22-May-18	95.59	533.33	0.23	1.28	7.1	4.75	28.8	008
23-May-18	99.12	566.91	0.30	1.72	7.1	4.48	29.2	008
24-May-18							29.6	008
25-May-18							29.9	008
26-May-18							28.3	008
27-May-18							27.4	008
28-May-18							28.4	008
29-May-18	83.91	359.00	2.52	10.78	7.3	5.54	26.3	008
30-May-18	99.96	515.89	1.03	5.32	7.2	20.10	28.1	008
31-May-18	105.92	581.83	0.32	1.76	7.2	3.30	27.1	008
1-Jun-18							27.1	008
2-Jun-18							27.6	008
3-Jun-18							28.6	008
4-Jun-18	71.51	435.21	0.15	0.91	7.2	2.83	28.7	008
5-Jun-18	73.64	391.66	1.77	9.41	7.3	2.35	28.1	008
6-Jun-18	72.16	443.74	0.28	1.72	7.5	2.15	28.1	008
7-Jun-18							28.3	008
8-Jun-18							28.2	008
9-Jun-18							28.6	008
10-Jun-18							28.6	008
11-Jun-18	66.76	404.19	0.07	0.42	7.2	20.80	28.2	008
12-Jun-18	91.31	522.84	0.21	1.20	7.0	18.40	28.2	008
13-Jun-18	98.62	500.59	0.19	0.96	7.0	4.29	28.6	008
14-Jun-18							28.4	008
15-Jun-18							28.5	008
16-Jun-18							28.0	008
17-Jun-18							29.3	008
18-Jun-18	69.93	391.44	0.07	0.39	7.4	4.33	28.5	008
19-Jun-18	79.43	472.66	0.07	0.42	7.1	4.93	29.3	008
20-Jun-18	79.12	461.71	0.12	0.70	7.2	3.62	29.5	008
21-Jun-18							29.3	008
22-Jun-18							29.4	008
23-Jun-18							29.4	008
24-Jun-18							29.3	008
25-Jun-18	52.71	249.44	0.13	0.62	7.5	4.80	29.6	008
26-Jun-18	71.77	335.92	0.19	0.89	7.3	4.40	27.7	008
27-Jun-18	80.37	372.89	0.14	0.65	7.0	3.72	28.2	008
28-Jun-18							28.2	008
29-Jun-18							28.5	008
30-Jun-18							28.5	008
1-Jul-18	68.73	406.95	0.24	1.42	7.4	8.42	28.7	008
2-Jul-18	79.94	489.08	0.34	2.08	7.8	8	28.9	008
3-Jul-18					7.5		29.0	008
4-Jul-18							28.7	008
5-Jul-18	94.00	510.78	0.54	2.93		6.21	29.0	008
6-Jul-18							28.8	008
7-Jul-18							28.0	008
8-Jul-18							27.8	008
9-Jul-18	91.81	353.44	0.35	1.35	7.4	11.2	28.4	008
10-Jul-18	105.96	554.10	0.22	1.15	7.3	6.06	29.0	008
11-Jul-18	96.60	590.42	0.12	0.73	7	4.37	28.7	008
12-Jul-18							29.0	008
13-Jul-18							29.3	008
14-Jul-18							29.6	008
15-Jul-18							30.0	008
16-Jul-18	38.60	234.06	0.16	0.97	7.1	4.93	31.2	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
17-Jul-18	49.79	339.05	0.12	0.82	7.2	4.32	30.4	008
18-Jul-18	42.81	289.64	0.25	1.69	6.9	4.08	28.9	008
19-Jul-18							30.4	008
20-Jul-18							30.2	008
21-Jul-18							30.4	008
22-Jul-18							30.6	008
23-Jul-18	43.68	273.42	0.37	2.32	7.2	5.85	29.1	008
24-Jul-18	57.61	291.32	0.27	1.37	7.8	6.69	28.8	008
25-Jul-18	58.25	298.46	0.18	0.92	7.6	5.67	28.8	008
26-Jul-18							29.8	008
27-Jul-18							29.5	008
28-Jul-18							29.5	008
29-Jul-18							30.7	008
30-Jul-18	56.46	336.80	0.27	1.61	7	5.19	30.1	008
31-Jul-18	69.05	436.56	0.33	2.09	7.1	4.59	29.8	008
1-Aug-18	73.86	468.07	0.27	1.71	6.9	8.03	29.7	008
2-Aug-18							29.6	008
3-Aug-18							28.5	008
4-Aug-18							29.7	008
5-Aug-18							29.4	008
6-Aug-18	95.71	521.89	0.20	1.09	6.9	5.95	29.2	008
7-Aug-18	107.99	700.32	0.13	0.84	7.0	3.55	29.7	008
8-Aug-18	99.50	706.49	0.17	1.21	6.9	2.70	30.2	008
9-Aug-18							30.5	008
10-Aug-18							31.8	008
11-Aug-18							30.1	008
12-Aug-18							30.0	008
13-Aug-18					6.8		30.2	008
14-Aug-18	51.24	270.24	0.25	1.32	6.9	12.40	29.6	008
15-Aug-18	56.31	386.09	0.22	1.51	7.1	4.58	30.2	008
16-Aug-18	49.78	302.90	0.18	1.10	6.9	3.37	30.0	008
17-Aug-18							30.0	008
18-Aug-18							31.0	008
19-Aug-18							29.7	008
20-Aug-18	88.15	476.34	0.51	2.76	6.8	11.20	30.2	008
21-Aug-18	97.25	593.80	0.21	1.28	6.9	9.55	30.4	008
22-Aug-18	80.00	526.35	0.20	1.32	6.9	5.25	29.2	008
23-Aug-18							29.5	008
24-Aug-18							29.0	008
25-Aug-18							28.7	008
26-Aug-18							28.8	008
27-Aug-18	83.09	538.49	0.47	3.05	7.4	12.20	29.6	008
28-Aug-18	91.98	555.05	1.18	7.12	7.1	8.18	28.0	008
29-Aug-18	84.14	425.31	0.37	1.87	6.9	8.40	28.2	008
30-Aug-18							28.5	008
31-Aug-18							28.5	008
1-Sep-18	96.33	381.83	0.18	0.71	6.9	4.87	28.5	008
2-Sep-18	115.51	568.14	0.09	0.44	7.3	6.95	28.8	008
3-Sep-18							29.3	008
4-Sep-18	110.80	698.47	0.15	0.95	7.1	9.12	28.7	008
5-Sep-18							29.0	008
6-Sep-18							28.7	008
7-Sep-18	82.80	511.31	0.07	0.43	7.2	4.41	29.0	008
8-Sep-18	93.40	583.10	0.07	0.44	7.7	3.61	28.7	008
9-Sep-18	96.55	604.41	0.07	0.44	7.8	3.16	28.7	008
10-Sep-18							29.2	008
11-Sep-18							27.5	008
12-Sep-18							27.3	008
13-Sep-18							26.6	008
14-Sep-18	99.96	537.83	0.72	3.87	6.9	3.02	26.7	008
15-Sep-18	109.50	441.59	0.40	1.61	7.1	4.16	26.8	008
16-Sep-18	110.75	684.12	0.18	1.11	7.4	5.55	27.0	008
17-Sep-18							26.8	008
18-Sep-18							27.8	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
19-Sep-18							28.1	008
20-Sep-18							29.1	008
21-Sep-18	65.47	400.47	0.10	0.61	7.2	7.04	29.5	008
22-Sep-18	84.58	520.27	0.17	1.05	7.1	7.15	29.3	008
23-Sep-18	80.23	465.67	0.07	0.41	7.1	5.17	28.8	008
24-Sep-18							29.2	008
25-Sep-18							29.5	008
26-Sep-18							29.6	008
27-Sep-18							28.8	008
28-Sep-18							28.1	008
29-Sep-18							27.6	008
30-Sep-18							27.2	008
1-Oct-18	43.80	213.74	0.07	0.34	7.6	4.18	NA	002
2-Oct-18					7.5		NA	002
3-Oct-18	72.48	397.46	0.18	0.99	7.6	4.58	NA	002
4-Oct-18	71.46	393.81	0.15	0.83	7.3	4.25	NA	002
5-Oct-18							NA	002
6-Oct-18							NA	002
7-Oct-18							NA	002
8-Oct-18	83.42	349.64	0.40	1.68	6.8	6.87	NA	002
9-Oct-18	100.83	581.69	0.52	3.00	7.4	7.23	NA	002
10-Oct-18	106.09	622.24	0.24	1.41	7.4	6.24	NA	002
11-Oct-18							NA	002
12-Oct-18							NA	002
13-Oct-18							NA	002
14-Oct-18							NA	002
15-Oct-18	64.03	309.90	0.26	1.26	7.0	6.68	NA	002
16-Oct-18	83.06	503.78	0.34	2.06	7.5	6.45	NA	002
17-Oct-18	87.85	520.06	0.22	1.30	7.4	6.22	NA	002
18-Oct-18							NA	002
19-Oct-18							NA	002
20-Oct-18							NA	002
21-Oct-18							NA	002
22-Oct-18	84.60	371.86	0.14	0.62	7.2	4.88	NA	002
23-Oct-18	95.11	550.38	0.25	1.45	7.3	4.75	NA	002
24-Oct-18	100.70	578.43	0.24	1.38	7.3	4.12	NA	002
25-Oct-18							NA	002
26-Oct-18							NA	002
27-Oct-18							NA	002
28-Oct-18							NA	002
29-Oct-18	104.15	361.48	0.59	2.05	7.1	4.81	NA	002
30-Oct-18	70.29	349.62	0.25	1.24	7.3	4.26	NA	002
31-Oct-18	115.45	571.23	0.17	0.84	7.1	4.84	NA	002
1-Nov-18							NA	002
2-Nov-18							NA	002
3-Nov-18							NA	002
4-Nov-18							NA	002
5-Nov-18	115.41	661.53	0.83	4.76	7.6	4.44	NA	002
6-Nov-18	131.08	658.11	0.23	1.15	6.9	4.59	NA	002
7-Nov-18	133.14	884.56	0.24	1.59	7.0	6.55	NA	002
8-Nov-18							NA	002
9-Nov-18							NA	002
10-Nov-18							NA	002
11-Nov-18							NA	002
12-Nov-18	122.33	726.11	0.12	0.71	7.2	4.66	NA	002
13-Nov-18	134.40	798.05	0.34	2.02	7.4	10.00	NA	002
14-Nov-18	138.64	794.30	0.21	1.20	7.4	7.76	NA	002
15-Nov-18							NA	002
16-Nov-18							NA	002
17-Nov-18							NA	002
18-Nov-18							NA	002
19-Nov-18	113.67	653.93	0.20	1.15	7.7	10.10	NA	002
20-Nov-18	130.55	681.82	0.56	2.92	7.1	9.61	NA	002
21-Nov-18	130.32	702.79	0.46	2.48	7.5	3.77	NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
22-Nov-18							NA	002
23-Nov-18							NA	002
24-Nov-18							NA	002
25-Nov-18							NA	002
26-Nov-18	109.60	421.67	0.15	0.58	7.8	5.38	NA	002
27-Nov-18	128.15	673.88	0.10	0.53	7.8	10.20	NA	002
28-Nov-18	125.45	981.47	0.13	1.02	7.0	4.75	NA	002
29-Nov-18							NA	002
30-Nov-18							NA	002
1-Dec-18	93.12	595.72	1.38	8.83	7.6	3.87	NA	002
2-Dec-18	110.54	709.84	4.16	26.71	7.5	3.26	NA	002
3-Dec-18	114.11	729.57	2.58	16.50	7.0	3.39	NA	002
4-Dec-18							NA	002
5-Dec-18							NA	002
6-Dec-18							NA	002
7-Dec-18							NA	002
8-Dec-18	94.88	619.89	0.10	0.65	7.4	7.73	NA	002
9-Dec-18	109.49	716.86	0.13	0.85	7.2	5.87	NA	002
10-Dec-18	114.66	744.07	0.21	1.36	7.0	6.55	NA	002
11-Dec-18							NA	002
12-Dec-18							NA	002
13-Dec-18							NA	002
14-Dec-18							NA	002
15-Dec-18	79.70	526.05	0.15	0.99	7.3	6.05	NA	002
16-Dec-18	101.07	674.40	0.54	3.60	7.0	6.76	NA	002
17-Dec-18	101.25	681.70	0.26	1.75	7.1	9.27	NA	002
18-Dec-18							NA	002
19-Dec-18							NA	002
20-Dec-18							NA	002
21-Dec-18							NA	002
22-Dec-18							NA	002
23-Dec-18							NA	002
24-Dec-18	106.52	550.43	0.26	1.34	6.9	7.37	NA	002
25-Dec-18	122.08	611.25	0.15	0.75	7.0	5.48	NA	002
26-Dec-18	120.74	670.39	0.07	0.39	7.2	5.01	NA	002
27-Dec-18							NA	002
28-Dec-18							NA	002
29-Dec-18							NA	002
30-Dec-18							NA	002
31-Dec-18							NA	002
1-Jan-19							NA	002
2-Jan-19	96.29	554.20	0.17	0.98	8.3	5.32	NA	002
3-Jan-19	108.44	629.70	0.18	1.05	8.8	4.44	NA	002
4-Jan-19	112.08	658.80	0.20	1.18	8.6	4.41	NA	002
5-Jan-19							NA	002
6-Jan-19							NA	002
7-Jan-19	102.83	447.33	0.07	0.30	7.8	6.36	NA	002
8-Jan-19	110.43	630.37	0.45	2.57	7.2	5.57	NA	002
9-Jan-19	116.92	511.64	0.14	0.61	7.8	4.66	NA	002
10-Jan-19							NA	002
11-Jan-19							NA	002
12-Jan-19							NA	002
13-Jan-19							NA	002
14-Jan-19	113.63	679.75	0.44	2.63	7.1	5.09	NA	002
15-Jan-19	131.88	745.28	0.75	4.24	7.7	4.03	NA	002
16-Jan-19	131.12	725.26	0.07	0.39	7.0	3.46	NA	002
17-Jan-19							NA	002
18-Jan-19							NA	002
19-Jan-19							NA	002
20-Jan-19							NA	002
21-Jan-19	121.98	689.57	0.20	1.13	7.8	9.70	NA	002
22-Jan-19	138.65	789.88	0.18	1.03	7.6	6.47	NA	002
23-Jan-19	140.75	807.26	0.38	2.18	7.1	4.31	NA	002
24-Jan-19							NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
25-Jan-19							NA	002
26-Jan-19							NA	002
27-Jan-19							NA	002
28-Jan-19	66.62	360.74	0.23	1.25	7.8	5.52	NA	002
29-Jan-19	128.82	588.89	0.41	1.87	7.3	5.55	NA	002
30-Jan-19	133.34	631.65	0.18	0.85	7.9	5.61	NA	002
31-Jan-19							NA	002
1-Feb-19							N/A	002
2-Feb-19							N/A	002
3-Feb-19							N/A	002
4-Feb-19	75.50	344.08	0.16	0.73	7.8	2.97	N/A	002
5-Feb-19	97.05	455.13	0.18	0.84	7.9	4.00	N/A	002
6-Feb-19	99.10	489.15	0.07	0.35	7.7	6.04	N/A	002
7-Feb-19							N/A	002
8-Feb-19							N/A	002
9-Feb-19							N/A	002
10-Feb-19							N/A	002
11-Feb-19	57.97	336.16	0.18	1.04	7.8	4.68	N/A	002
12-Feb-19	80.96	473.39	0.15	0.88	8.1	4.56	N/A	002
13-Feb-19	83.20	489.05	0.19	1.12	7.9	4.03	N/A	002
14-Feb-19							N/A	002
15-Feb-19							N/A	002
16-Feb-19							N/A	002
17-Feb-19							N/A	002
18-Feb-19	56.38	296.51	0.20	1.05	8.1	2.86	N/A	002
19-Feb-19	75.63	393.76	0.22	1.15	7.3	4.79	N/A	002
20-Feb-19	73.44	406.21	0.17	0.94	7.7	2.61	N/A	002
21-Feb-19							N/A	002
22-Feb-19							N/A	002
23-Feb-19							N/A	002
24-Feb-19							N/A	002
25-Feb-19	43.33	251.95	0.08	0.47	8.8	2.69	N/A	002
26-Feb-19	67.34	377.84	0.07	0.39	8.3	3.66	N/A	002
27-Feb-19	74.66	438.31	0.07	0.41	8.8	2.32	N/A	002
28-Feb-19							N/A	002
1-Mar-19							NA	002
2-Mar-19							NA	002
3-Mar-19							NA	002
4-Mar-19	55.97	360.50	0.13	0.84	7.8	4.19	NA	002
5-Mar-19	73.40	413.10	0.07	0.39	8.1	7.02	NA	002
6-Mar-19	90.29	418.69	0.09	0.42	8.5	4.59	NA	002
7-Mar-19							NA	002
8-Mar-19							NA	002
9-Mar-19							NA	002
10-Mar-19							NA	002
11-Mar-19	36.67	194.42	0.12	0.64	7.8	3.63	NA	002
12-Mar-19	53.15	287.93	0.09	0.49	8.1	6.48	NA	002
13-Mar-19	57.62	308.89	0.08	0.43	8.1	2.90	NA	002
14-Mar-19							NA	002
15-Mar-19							NA	002
16-Mar-19							NA	002
17-Mar-19							NA	002
18-Mar-19	31.48	183.69	0.09	0.53	7.4	3.63	NA	002
19-Mar-19	43.72	250.89	0.20	1.15	7.3	4.24	NA	002
20-Mar-19	51.29	290.50	0.10	0.57	7.3	3.39	NA	002
21-Mar-19							NA	002
22-Mar-19							NA	002
23-Mar-19							NA	002
24-Mar-19							NA	002
25-Mar-19	21.58	147.33	0.11	0.75	7.0	3.24	NA	002
26-Mar-19	28.62	192.74	0.09	0.61	8.3	3.01	NA	002
27-Mar-19	30.40	202.97	0.09	0.60	7.6	3.42	NA	002
28-Mar-19							NA	002
29-Mar-19							NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
30-Mar-19							NA	002
31-Mar-19							NA	002
1-Apr-19	31.55	188.23	0.50	2.98	6.8	3.39	NA	002
2-Apr-19	46.50	291.15	0.09	0.56	7.9	4.89	NA	002
3-Apr-19	41.30	248.71	0.08	0.48	7.1	5.81	NA	002
4-Apr-19							NA	002
5-Apr-19							NA	002
6-Apr-19							NA	002
7-Apr-19							NA	002
8-Apr-19	40.02	223.28	0.53	2.96	6.9	7.75	NA	002
9-Apr-19	54.98	241.50	0.14	0.61	7.2	9.53	NA	002
10-Apr-19	53.80	348.68	0.07	0.45	7.0	4.67	NA	002
11-Apr-19							NA	002
12-Apr-19							NA	002
13-Apr-19							NA	002
14-Apr-19							NA	002
15-Apr-19	38.60	234.79	0.07	0.43	7.0	4.77	26.6	002
16-Apr-19	59.30	356.64	0.07	0.42	7.1	4.33	28.3	002
17-Apr-19	64.90	388.47	0.07	0.42	7.0	5.25	28.2	002
18-Apr-19							28.2	002
19-Apr-19							30.3	002
20-Apr-19							30.0	002
21-Apr-19							29.3	002
22-Apr-19	68.19	419.01	0.10	0.61	7.1	5.42	29.4	002
23-Apr-19	80.40	471.36	0.11	0.64	7.3	5.55	29.4	002
24-Apr-19	77.97	454.18	0.07	0.41	7.0	5.19	29.3	002
25-Apr-19							29.5	002
26-Apr-19							30.1	002
27-Apr-19							29.5	002
28-Apr-19							28.0	002
29-Apr-19	53.20	309.43	0.10	0.58	7.1	4.38	28.2	002
30-Apr-19	62.40	361.35	0.10	0.58	7.0	5.32	28.2	002
1-May-19	51.90	298.09	0.07	0.40	7.0	4.40	28.4	008
2-May-19							28.8	008
3-May-19							29.1	008
4-May-19							29.7	008
5-May-19							29.7	008
6-May-19	34.98	187.47	0.12	0.64	6.8	4.86	29.8	008
7-May-19	48.61	246.05	0.24	1.21	6.9	4.82	29.4	008
8-May-19	47.06	257.30	0.10	0.55	7.3	4.75	29.5	008
9-May-19							29.7	008
10-May-19							30.0	008
11-May-19							30.2	008
12-May-19							30.9	008
13-May-19							31.1	008
14-May-19	69.10	376.86	0.15	0.82	6.9	3.56	30.5	008
15-May-19	69.45	375.23	0.09	0.49	7.0	4.10	29.7	008
16-May-19	58.05	314.13	0.22	1.19	6.9	4.20	30.0	008
17-May-19							29.5	008
18-May-19							29.8	008
19-May-19							30.4	008
20-May-19	59.95	326.06	0.23	1.25	7.1	7.64	30.1	008
21-May-19	72.98	387.49	0.46	2.44	6.9	19.40	28.9	008
22-May-19	54.49	250.08	0.14	0.64	6.8	2.75	29.3	008
23-May-19							29.4	008
24-May-19							30.3	008
25-May-19							29.8	008
26-May-19							29.7	008
27-May-19							29.8	008
28-May-19	54.41	172.08	0.07	0.22	6.8	2.47	30.0	008
29-May-19	72.86	230.40	0.07	0.22	6.9	3.83	29.3	008
30-May-19	68.50	299.95	0.07	0.31	6.8	4.11	30.8	008
31-May-19							30.8	008
1-Jun-19							30.7	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
2-Jun-19							30.8	008
3-Jun-19	58.21	373.53	0.31	1.99	6.9	6.52	32.0	008
4-Jun-19	74.46	421.18	0.41	2.32	6.8	5.58	32.1	008
5-Jun-19	73.99	399.84	0.15	0.81	6.8	3.64	30.5	008
6-Jun-19							31.1	008
7-Jun-19							30.2	008
8-Jun-19							30.5	008
9-Jun-19							30.2	008
10-Jun-19	71.98	383.90	0.28	1.49	6.9	5.94	31.1	008
11-Jun-19	91.42	476.52	0.56	2.92	6.8	5.67	31.2	008
12-Jun-19	96.46	519.62	0.35	1.89	6.8	4.24	32.2	008
13-Jun-19							33.0	008
14-Jun-19							33.0	008
15-Jun-19							32.0	008
16-Jun-19							32.0	008
17-Jun-19	79.02	390.35	0.31	1.53	7.0	4.88	32.0	008
18-Jun-19	106.64	515.76	0.26	1.26	6.8	4.87	32.1	008
19-Jun-19	101.22	532.91	0.32	1.68	7.1	5.45	30.0	008
20-Jun-19							30.0	008
21-Jun-19							29.8	008
22-Jun-19							31.3	008
23-Jun-19							31.2	008
24-Jun-19	93.36	520.28	0.51	2.84	7.0	5.41	30.5	008
25-Jun-19	103.92	555.51	3.22	17.21	7.3	5.93	31.8	008
26-Jun-19	109.25	582.14	0.84	4.48	7.5	3.38	32.0	008
27-Jun-19							31.1	008
28-Jun-19							29.9	008
29-Jun-19							29.7	008
30-Jun-19	76.41	432.13	0.63	3.56	7.1	4.30	31.5	008
1-Jul-19	102.43	615.22	0.47	2.82	7.0	4.25	31.6	008
2-Jul-19	114.32	694.02	0.60	3.64	7.1	4.53	31.4	008
3-Jul-19							29.8	008
4-Jul-19							29.7	008
5-Jul-19							30.0	008
6-Jul-19							30.8	008
7-Jul-19							29.1	008
8-Jul-19	80.80	415.74	0.20	1.03	6.8	4.11	29.1	008
9-Jul-19					6.8		30.3	008
10-Jul-19	79.74	446.57	0.14	0.78	7.0	4.45	29.7	008
11-Jul-19	53.95	322.66	0.08	0.48		5.18	29.7	008
12-Jul-19							29.7	008
13-Jul-19							30.1	008
14-Jul-19							30.0	008
15-Jul-19	50.17	292.38	0.35	2.04	6.8	4.48	30.1	008
16-Jul-19	81.10	458.24	2.51	14.18	6.9	4.84	30.0	008
17-Jul-19	81.04	428.40	0.34	1.80	7.1	3.49	30.4	008
18-Jul-19							30.3	008
19-Jul-19							29.0	008
20-Jul-19							28.6	008
21-Jul-19							30.0	008
22-Jul-19	82.49	442.08	0.11	0.59	7.0	3.41	30.5	008
23-Jul-19	99.50	557.90	0.32	1.79	7.1	3.84	31.0	008
24-Jul-19	87.04	490.97	1.14	6.43	7.0	3.12	30.6	008
25-Jul-19							30.5	008
26-Jul-19							30.5	008
27-Jul-19							31.0	008
28-Jul-19							30.5	008
29-Jul-19	84.50	451.01	0.26	1.39	7.1	4.21	30.5	008
30-Jul-19	99.80	556.16	0.65	3.62	7.0	3.76	31.0	008
31-Jul-19	102.10	575.82	0.39	2.20	7.2	4.18	31.6	008
1-Aug-19							30.7	008
2-Aug-19							30.0	008
3-Aug-19							31.0	008
4-Aug-19							31.3	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
5-Aug-19	72.35	359.58	0.13	0.65	7.0	3.30	31.0	008
6-Aug-19	83.82	483.46	1.01	5.83	7.0	4.25	31.0	008
7-Aug-19	80.54	350.11	0.23	1.00	6.9	3.68	31.4	008
8-Aug-19							31.8	008
9-Aug-19							30.2	008
10-Aug-19							36.0	008
11-Aug-19							30.9	008
12-Aug-19	54.57	333.86	0.07	0.43	7.1	3.29	30.8	008
13-Aug-19	70.01	435.67	1.07	6.66	6.8	6.48	31.5	008
14-Aug-19	72.45	468.21	0.09	0.58	6.8	5.97	32.1	008
15-Aug-19							31.8	008
16-Aug-19							31.6	008
17-Aug-19							31.1	008
18-Aug-19							31.2	008
19-Aug-19	66.43	486.98	0.07	0.51	7.0	6.08	31.0	008
20-Aug-19	83.63	599.08	0.07	0.50	6.8	5.64	30.6	008
21-Aug-19	86.01	576.11	0.07	0.47	6.9	3.42	30.8	008
22-Aug-19							30.9	008
23-Aug-19							30.8	008
24-Aug-19							31.6	008
25-Aug-19							30.3	008
26-Aug-19	58.40	363.80	0.10	0.62	6.9	3.68	30.3	008
27-Aug-19	76.18	311.17	0.10	0.41	7.2	3.78	29.3	008
28-Aug-19	85.18	346.04	0.07	0.28	7.0	3.17	29.1	008
29-Aug-19							29.1	008
30-Aug-19							31.6	008
31-Aug-19							31.4	008
1-Sep-19							31.0	008
2-Sep-19							30.7	008
3-Sep-19	79.45	347.31	0.10	0.44	6.9	3.35	29.4	008
4-Sep-19	82.94	357.68	0.17	0.73	6.9	2.69	29.6	008
5-Sep-19	84.75	372.90	0.07	0.31	6.8	2.52	29.6	008
6-Sep-19							30.8	008
7-Sep-19							31.1	008
8-Sep-19							30.6	008
9-Sep-19	31.83	180.72	1.90	10.79	7.0	3.70	31.0	008
10-Sep-19	36.77	236.03	0.07	0.45	6.8	3.02	30.2	008
11-Sep-19	43.26	266.91	0.07	0.43	6.9	3.53	30.7	008
12-Sep-19							30.5	008
13-Sep-19							31.2	008
14-Sep-19							31.1	008
15-Sep-19							30.6	008
16-Sep-19					6.8		30.6	008
17-Sep-19	65.40	395.91	0.07	0.42	7.0	2.67	30.9	008
18-Sep-19	55.65	350.29	0.07	0.44	6.8	2.96	29.3	008
19-Sep-19	47.80	256.89	0.08	0.43	6.9	2.91	29.6	008
20-Sep-19							28.8	008
21-Sep-19							28.6	008
22-Sep-19							28.6	008
23-Sep-19	55.89	369.48	0.17	1.12	6.9	2.89	30.0	008
24-Sep-19	74.13	477.13	0.16	1.03	6.8	3.93	30.6	008
25-Sep-19	88.59	576.07	0.14	0.91	7.0	2.82	29.8	008
26-Sep-19							29.8	008
27-Sep-19							29.5	008
28-Sep-19							28.9	008
29-Sep-19							28.4	008
30-Sep-19	62.70	397.37	0.12	0.76	6.8	2.96	27.8	008
1-Oct-19	79.07	560.73	0.07	0.50	6.9	3.62	NA	002
2-Oct-19	85.38	519.18	0.07	0.43	7.1	8.43	NA	002
3-Oct-19							NA	002
4-Oct-19							NA	002
5-Oct-19							NA	002
6-Oct-19							NA	002
7-Oct-19	71.53	474.47	5.11	33.90	6.9	8.75	NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
8-Oct-19	79.06	490.94	1.79	11.12	6.9	14.90	NA	002
9-Oct-19	90.14	583.26	0.44	2.85	7.0	11.00	NA	002
10-Oct-19							NA	002
11-Oct-19							NA	002
12-Oct-19							NA	002
13-Oct-19							NA	002
14-Oct-19	104.02	740.96	0.37	2.64	7.1	17.90	NA	002
15-Oct-19	117.09	745.23	0.37	2.35	7.1	19.60	NA	002
16-Oct-19	114.37	762.46	0.30	2.00	7.0	14.70	NA	002
17-Oct-19							NA	002
18-Oct-19							NA	002
19-Oct-19							NA	002
20-Oct-19							NA	002
21-Oct-19	83.37	429.06	0.14	0.72	7.3	8.04	NA	002
22-Oct-19	89.36	301.03	0.16	0.54	7.3	7.85	NA	002
23-Oct-19	109.17	629.77	0.19	1.10	7.3	10.10	NA	002
24-Oct-19							NA	002
25-Oct-19							NA	002
26-Oct-19							NA	002
27-Oct-19							NA	002
28-Oct-19	78.62	493.98	0.57	3.58	7.0	4.08	NA	002
29-Oct-19	97.51	622.65	1.97	12.58	7.0	4.83	NA	002
30-Oct-19							NA	002
31-Oct-19							NA	002
1-Nov-19	64	427.7	0.07	0.5	7.0	6.84	NA	002
2-Nov-19							NA	002
3-Nov-19							NA	002
4-Nov-19	48	316.6	0.09	0.6	7.3	8.57	NA	002
5-Nov-19	61	391.1	0.07	0.4	7.3	5.95	NA	002
6-Nov-19	61	392.9	0.11	0.7	7.5	9.92	NA	002
7-Nov-19							NA	002
8-Nov-19							NA	002
9-Nov-19							NA	002
10-Nov-19							NA	002
11-Nov-19	67	460.5	0.26	1.8	6.9	10.10	NA	002
12-Nov-19	51	350.7	0.20	1.4	6.9	13.00	NA	002
13-Nov-19	63	406.7	0.25	1.6	7.1	8.83	NA	002
14-Nov-19							NA	002
15-Nov-19							NA	002
16-Nov-19							NA	002
17-Nov-19							NA	002
18-Nov-19	35	248.6	0.20	1.4	6.8	5.19	NA	002
19-Nov-19					6.9		NA	002
20-Nov-19	50	386.3	0.57	4.4	6.9	3.51	NA	002
21-Nov-19	32	228.0	0.54	3.9	6.9	3.37	NA	002
22-Nov-19							NA	002
23-Nov-19							NA	002
24-Nov-19							NA	002
25-Nov-19	39	281.7	0.23	1.7	7.0	3.62	NA	002
26-Nov-19							NA	002
27-Nov-19	52	388.9	0.17	1.3	7.2	5.01	NA	002
28-Nov-19							NA	002
29-Nov-19							NA	002
30-Nov-19							NA	002
1-Dec-19							NA	002
2-Dec-19	38.32	159.78	0.07	0.29	6.9	3.60	NA	002
3-Dec-19	52.03	275.55	0.58	3.07	6.8	3.83	NA	002
4-Dec-19	46.16	289.50	0.56	3.51	6.8	5.55	NA	002
5-Dec-19							NA	002
6-Dec-19							NA	002
7-Dec-19							NA	002
8-Dec-19							NA	002
9-Dec-19	55.26	341.99	0.29	1.79	6.9	7.82	NA	002
10-Dec-19	76.32	451.50	0.28	1.66	6.8	7.06	NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
11-Dec-19	75.94	352.30	0.23	1.07	6.8	5.32	NA	002
12-Dec-19							NA	002
13-Dec-19							NA	002
14-Dec-19							NA	002
15-Dec-19							NA	002
16-Dec-19	54.18	350.51	0.24	1.55	7.0	6.64	NA	002
17-Dec-19	78.49	456.27	0.92	5.35	7.0	5.76	NA	002
18-Dec-19	78.19	522.13	0.35	2.34	7.0	8.78	NA	002
19-Dec-19							NA	002
20-Dec-19							NA	002
21-Dec-19							NA	002
22-Dec-19	27.60	106.85	0.82	3.17	6.9	5.13	NA	002
23-Dec-19	36.70	129.25	1.16	4.09	6.8	7.47	NA	002
24-Dec-19							NA	002
25-Dec-19							NA	002
26-Dec-19	42.90	146.69	0.31	1.06	6.8	7.86	NA	002
27-Dec-19							NA	002
28-Dec-19							NA	002
29-Dec-19	55.90	250.29	0.25	1.12	6.9	7.31	NA	002
30-Dec-19	70.50	249.89	0.26	0.92	6.8	6.48	NA	002
31-Dec-19							NA	002
1-Jan-20							NA	002
2-Jan-20	84.57	292.00	0.15	0.52	6.8	3.82	NA	002
3-Jan-20							NA	002
4-Jan-20							NA	002
5-Jan-20							NA	002
6-Jan-20	29.52	216.39	0.30	2.20	7.3	9.15	NA	002
7-Jan-20	38.19	286.02	0.31	2.32	7.2	7.95	NA	002
8-Jan-20	34.15	238.39	0.17	1.19	7.2	7.61	NA	002
9-Jan-20							NA	002
10-Jan-20							NA	002
11-Jan-20							NA	002
12-Jan-20							NA	002
13-Jan-20	46.39	242.59	0.41	2.14	7.3	11.70	NA	002
14-Jan-20	55.06	261.29	0.38	1.80	7.2	9.10	NA	002
15-Jan-20	41.07	229.80	0.30	1.68	6.9	9.70	NA	002
16-Jan-20							NA	002
17-Jan-20							NA	002
18-Jan-20							NA	002
19-Jan-20							NA	002
20-Jan-20	56.03	342.72	0.34	2.08	6.9	6.97	NA	002
21-Jan-20	76.10	421.53	1.26	6.98	7.0	10.40	NA	002
22-Jan-20	68.94	432.06	0.68	4.26	6.9	7.49	NA	002
23-Jan-20							NA	002
24-Jan-20							NA	002
25-Jan-20							NA	002
26-Jan-20							NA	002
27-Jan-20	55.70	294.58	0.26	1.38	6.9	5.34	NA	002
28-Jan-20	65.30	302.43	0.14	0.65	7.0	5.40	NA	002
29-Jan-20	65.30	359.55	0.07	0.39	7.0	4.74	NA	002
30-Jan-20							NA	002
31-Jan-20							NA	002
1-Feb-20							N/A	002
2-Feb-20							N/A	002
3-Feb-20	49.57	331.49	0.16	1.07	6.9	8.05	N/A	002
4-Feb-20	58.27	364.47	0.16	1.00	6.8	5.58	N/A	002
5-Feb-20	49.22	315.06	0.13	0.83	7.3	5.86	N/A	002
6-Feb-20							N/A	002
7-Feb-20							N/A	002
8-Feb-20							N/A	002
9-Feb-20							N/A	002
10-Feb-20	39.10	237.88	0.30	1.83	6.8	6.71	N/A	002
11-Feb-20	46.30	290.25	0.25	1.57	6.9	6.33	N/A	002
12-Feb-20	47.27	310.41	0.22	1.44	7.0	6.21	N/A	002

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	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
13-Feb-20							N/A	002
14-Feb-20							N/A	002
15-Feb-20							N/A	002
16-Feb-20							N/A	002
17-Feb-20	33.51	186.95	0.22	1.23	7.0	7.34	N/A	002
18-Feb-20	64.05	352.28	0.15	0.83	7.3	6.83	N/A	002
19-Feb-20	49.30	291.48	0.12	0.71	7.0	6.62	N/A	002
20-Feb-20							N/A	002
21-Feb-20							N/A	002
22-Feb-20							N/A	002
23-Feb-20							N/A	002
24-Feb-20	41.18	193.72	0.17	0.80	6.9	6.55	N/A	002
25-Feb-20	69.48	326.38	0.16	0.75	6.9	7.51	N/A	002
26-Feb-20	74.40	437.56	0.08	0.47	6.9	8.77	N/A	002
27-Feb-20							N/A	002
28-Feb-20							N/A	002
29-Feb-20							N/A	002
1-Mar-20							NA	002
2-Mar-20	22.27	139.37	0.23	1.44	7.0	6.16	NA	002
3-Mar-20	29.17	173.49	0.19	1.13	6.9	5.49	NA	002
4-Mar-20	29.47	189.71	0.17	1.09	6.8	6.91	NA	002
5-Mar-20							NA	002
6-Mar-20							NA	002
7-Mar-20							NA	002
8-Mar-20							NA	002
9-Mar-20	35.94	226.62	0.46	2.90	6.9	11.90	NA	002
10-Mar-20	63.40	259.30	0.21	0.86	6.9	6.48	NA	002
11-Mar-20	58.67	308.79	0.27	1.42	7.0	8.11	NA	002
12-Mar-20							NA	002
13-Mar-20							NA	002
14-Mar-20							NA	002
15-Mar-20							NA	002
16-Mar-20	38.57	266.65	0.16	1.11	7.1	9.72	NA	002
17-Mar-20	47.87	348.79	0.07	0.51	6.9	7.89	NA	002
18-Mar-20	52.87	372.69	0.15	1.06	7.0	7.28	NA	002
19-Mar-20							NA	002
20-Mar-20							NA	002
21-Mar-20							NA	002
22-Mar-20							NA	002
23-Mar-20					7.1		NA	002
24-Mar-20	65.32	460.76	0.11	0.78	6.9	7.92	NA	002
25-Mar-20	58.82	371.67	0.07	0.44	6.9	5.30	NA	002
26-Mar-20	45.00	284.57	0.25	1.58	7.0	5.67	NA	002
27-Mar-20							NA	002
28-Mar-20							NA	002
29-Mar-20							NA	002
30-Mar-20	52.49	254.96	0.18	0.87	6.9	6.88	NA	002
31-Mar-20	73.65	420.18	0.42	2.40	6.8	6.32	NA	002
1-Apr-20	74.71	455.20	0.13	0.79	6.9	6.31	NA	002
2-Apr-20							NA	002
3-Apr-20							NA	002
4-Apr-20							NA	002
5-Apr-20							NA	002
6-Apr-20	45.27	271.79	0.23	1.38	7.0	8.98	NA	002
7-Apr-20	64.87	357.28	0.07	0.39	6.9	6.01	NA	002
8-Apr-20	65.80	377.76	0.09	0.52	6.9	5.20	NA	002
9-Apr-20							NA	002
10-Apr-20							NA	002
11-Apr-20							NA	002
12-Apr-20							NA	002
13-Apr-20	31.27	172.79	0.07	0.39	6.9	4.88	NA	002
14-Apr-20	46.07	276.05	0.15	0.90	6.8	8.44	NA	002
15-Apr-20	42.50	283.01	0.07	0.47	6.8	6.30	28.8	002
16-Apr-20							28.0	002

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	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
17-Apr-20							28.1	002
18-Apr-20							28.2	002
19-Apr-20							28.1	002
20-Apr-20	54.48	329.91	0.10	0.61	7.0	6.13	30.1	002
21-Apr-20	71.21	348.26	0.11	0.54	6.9	5.39	30.0	002
22-Apr-20	67.22	410.36	0.14	0.85	7.0	7.60	31.0	002
23-Apr-20							30.8	002
24-Apr-20							31.0	002
25-Apr-20							30.2	002
26-Apr-20							26.5	002
27-Apr-20	47.97	322.53	0.12	0.81	7.1	7.57	26.5	002
28-Apr-20	66.14	350.72	0.19	1.01	7.0	4.48	28.5	002
29-Apr-20	68.89	396.09	0.17	0.98	7.2	5.08	29.0	002
30-Apr-20							28.9	002
1-May-20							29.2	008
2-May-20							29.3	008
3-May-20							26.5	008
4-May-20	40.00	204.55	0.22	1.13	7.6	3.86	26.0	008
5-May-20	54.83	237.16	0.10	0.43	7.7	3.52	26.2	008
6-May-20	51.56	257.73	0.14	0.70	7.2	3.66	28.2	008
7-May-20							26.3	008
8-May-20							26.7	008
9-May-20							26.7	008
10-May-20							26.6	008
11-May-20	36.98	154.54	0.07	0.29	7.1	5.99	26.6	008
12-May-20	52.84	221.42	0.25	1.05	7.2	5.92	26.7	008
13-May-20	47.21	205.30	0.28	1.22	7.6	7.09	25.7	008
14-May-20							25.8	008
15-May-20							25.4	008
16-May-20							26.2	008
17-May-20							26.1	008
18-May-20	31.15	165.33	0.14	0.74	7.4	5.69	27.3	008
19-May-20	44.63	241.41	0.09	0.49	7.4	5.25	26.5	008
20-May-20	45.29	273.92	0.07	0.42	7.6	5.09	27.2	008
21-May-20							27.1	008
22-May-20							27.0	008
23-May-20							27.0	008
24-May-20							27.3	008
25-May-20							27.0	008
26-May-20	23.80	69.76	0.07	0.21	6.8	5.38	27.0	008
27-May-20	32.30	215.47	0.07	0.47	7.3	5.30	27.3	008
28-May-20	36.50	256.76	0.12	0.84	7.5	4.82	27.7	008
29-May-20							26.3	008
30-May-20							26.9	008
31-May-20							26.8	008
1-Jun-20	27.27	159.13	0.19	1.11	7.4	8.56	26.7	008
2-Jun-20	33.30	207.37	0.11	0.69	7.3	3.55	27.2	008
3-Jun-20	25.53	166.72	0.14	0.91	7.2	3.17	26.8	008
4-Jun-20							27.0	008
5-Jun-20							26.3	008
6-Jun-20							26.3	008
7-Jun-20							26.7	008
8-Jun-20	32.71	211.35	0.13	0.84	7.1	7.52	26.0	008
9-Jun-20	42.90	257.57	0.07	0.42	7.1	6.48	26.2	008
10-Jun-20	30.92	156.01	0.80	4.04	7.2	5.33	27.4	008
11-Jun-20							27.0	008
12-Jun-20							27.5	008
13-Jun-20							27.0	008
14-Jun-20							26.8	008
15-Jun-20	47.81	185.14	0.26	1.01	7.3	13.50	26.4	008
16-Jun-20	79.94	427.84	0.28	1.50	7.2	9.60	27.0	008
17-Jun-20	87.17	431.41	0.26	1.29	7.8	18.30	26.7	008
18-Jun-20							27.7	008
19-Jun-20							28.4	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
20-Jun-20							29.4	008
21-Jun-20							28.0	008
22-Jun-20	105.00	599.64	0.23	1.31	7.3	7.34	28.1	008
23-Jun-20	127.83	716.06	0.26	1.46	7.4	3.83	28.6	008
24-Jun-20	117.65	676.76	0.17	0.98	7.2	5.95	30.4	008
25-Jun-20							29.9	008
26-Jun-20							30.8	008
27-Jun-20							31.5	008
28-Jun-20							31.0	008
29-Jun-20	30.30	110.44	0.33	1.20	7.3	4.19	27.5	008
30-Jun-20	37.50	189.28	0.20	1.01	7.2	3.09	28.5	008
1-Jul-20	39.28	179.53	0.84	3.84	7.2	6.32	28.5	008
2-Jul-20							29.4	008
3-Jul-20							29.8	008
4-Jul-20							29.7	008
5-Jul-20							28.9	008
6-Jul-20	49.23	262.55	0.48	2.56	7.3	6.53	29.2	008
7-Jul-20	67.92	360.83	0.13	0.69	7.2	9.70	29.2	008
8-Jul-20	50.30	283.92	0.27	1.52	7.4	8.03	28.5	008
9-Jul-20							29.5	008
10-Jul-20							29.0	008
11-Jul-20							30.1	008
12-Jul-20							29.6	008
13-Jul-20	35.16	213.74	0.46	2.80	7.0	18.00	29.2	008
14-Jul-20	47.65	297.65	0.44	2.75	7.3	16.10	29.6	008
15-Jul-20	38.07	220.98	0.38	2.21	7.2	7.31	29.5	008
16-Jul-20							30.6	008
17-Jul-20							31.2	008
18-Jul-20							30.2	008
19-Jul-20							30.6	008
20-Jul-20	49.79	238.08	0.48	2.30	6.9	23.20	30.9	008
21-Jul-20	75.63	345.02	0.60	2.74	6.8	27.30	31.4	008
22-Jul-20	68.93	324.23	0.44	2.07	7.0	9.70	31.5	008
23-Jul-20							30.9	008
24-Jul-20							30.5	008
25-Jul-20							29.7	008
26-Jul-20							29.9	008
27-Jul-20	59.30	325.21	0.76	4.17	6.9	7.00	30.7	008
28-Jul-20	81.00	435.72	0.53	2.85	7.0	7.08	31.0	008
29-Jul-20	83.20	498.21	0.41	2.46	6.8	8.78	31.2	008
30-Jul-20							31.8	008
31-Jul-20							32.9	008
1-Aug-20							32.9	008
2-Aug-20							32.2	008
3-Aug-20	65.86	374.60	5.34	30.37	7.0	9.09	31.7	008
4-Aug-20	91.51	510.33	3.86	21.53	6.8	5.48	30.8	008
5-Aug-20	94.00	520.64	0.31	1.72	7.0	7.60	31.0	008
6-Aug-20							31.9	008
7-Aug-20							30.4	008
8-Aug-20							31.1	008
9-Aug-20							30.5	008
10-Aug-20	56.37	306.52	0.45	2.45	6.8	7.33	30.5	008
11-Aug-20	76.83	396.02	0.24	1.24	7.0	8.35	30.6	008
12-Aug-20	69.92	419.73	0.30	1.80	7.4	7.56	30.6	008
13-Aug-20							29.9	008
14-Aug-20							30.3	008
15-Aug-20							31.1	008
16-Aug-20							31.1	008
17-Aug-20	38.09	214.43	0.23	1.29	7.0	5.98	31.6	008
18-Aug-20	47.30	265.74	0.17	0.96	6.8	5.59	31.7	008
19-Aug-20	23.83	151.04	0.12	0.76	7.0	9.50	31.1	008
20-Aug-20							31.5	008
21-Aug-20							31.6	008
22-Aug-20							30.9	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
23-Aug-20							30.3	008
24-Aug-20	27.90	157.76	0.24	1.36	7.1	4.34	30.5	008
25-Aug-20	37.70	213.14	0.33	1.87	6.9	5.63	29.8	008
26-Aug-20	35.04	224.54	0.14	0.90	7.0	5.11	29.8	008
27-Aug-20							29.8	008
28-Aug-20							29.6	008
29-Aug-20							30.0	008
30-Aug-20							28.8	008
31-Aug-20	35.35	196.94	0.21	1.17	7.2	4.68	28.0	008
1-Sep-20	42.26	190.85	0.21	0.95	7.5	5.73	28.4	008
2-Sep-20	45.16	244.59	0.20	1.08	7.0	4.82	29.2	008
3-Sep-20							29.8	008
4-Sep-20							30.2	008
5-Sep-20							30.6	008
6-Sep-20							29.7	008
7-Sep-20							29.0	008
8-Sep-20	38.91	162.66	0.19	0.79	8.0	4.46	28.5	008
9-Sep-20	43.27	232.79	0.18	0.97	8.1	5.66	26.8	008
10-Sep-20	50.92	317.31	0.22	1.37	7.7	4.67	27.2	008
11-Sep-20							27.7	008
12-Sep-20							27.6	008
13-Sep-20							28.3	008
14-Sep-20	36.01	203.96	0.19	1.08	7.2	3.11	28.6	008
15-Sep-20					7.5		28.4	008
16-Sep-20	32.44	216.71	0.17	1.14	7.6	5.62	28.5	008
17-Sep-20	25.14	171.53	0.11	0.75	7.6	6.86	28.1	008
18-Sep-20							29.6	008
19-Sep-20							29.5	008
20-Sep-20							29.3	008
21-Sep-20	37.32	240.95	0.11	0.71	7.2	3.40	28.9	008
22-Sep-20	37.22	212.54	0.18	1.03	7.8	3.13	28.9	008
23-Sep-20							28.3	008
24-Sep-20	36.92	224.61	0.20	1.22	8.1	3.56	28.9	008
25-Sep-20							28.1	008
26-Sep-20							28.6	008
27-Sep-20							28.2	008
28-Sep-20	23.58	135.60	0.31	1.78	7.9	3.25	28.5	008
29-Sep-20	26.38	151.78	0.26	1.50	7.2	2.89	29.0	008
30-Sep-20	22.42	137.30	0.42	2.57	8.1	2.77	28.7	008
1-Oct-20							NA	002
2-Oct-20							NA	002
3-Oct-20							NA	002
4-Oct-20							NA	002
5-Oct-20	39.57	235.63	0.13	0.77	7.4	2.72	NA	002
6-Oct-20	53.11	291.90	0.09	0.49	7.3	4.10	NA	002
7-Oct-20	41.09	236.63	0.08	0.46	7.4	4.90	NA	002
8-Oct-20							NA	002
9-Oct-20							NA	002
10-Oct-20							NA	002
11-Oct-20							NA	002
12-Oct-20	40.00	219.86	0.20	1.10	7.8	3.41	NA	002
13-Oct-20	49.10	282.33	0.28	1.61	7.7	2.60	NA	002
14-Oct-20	52.10	307.34	0.15	0.88	7.8	2.66	NA	002
15-Oct-20							NA	002
16-Oct-20							NA	002
17-Oct-20							NA	002
18-Oct-20							NA	002
19-Oct-20					8.1		NA	002
20-Oct-20	51.30	262.71	0.10	0.51	8.1	2.74	NA	002
21-Oct-20	54.60	275.70	0.12	0.61	8.0	2.75	NA	002
22-Oct-20	57.28	309.97	0.12	0.65		3.00	NA	002
23-Oct-20							NA	002
24-Oct-20							NA	002
25-Oct-20							NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
26-Oct-20							NA	002
27-Oct-20	63.60	400.24	0.10	0.63	8.2	4.63	NA	002
28-Oct-20	73.70	416.67	0.07	0.40	7.8	4.19	NA	002
29-Oct-20	67.30	423.96	7.40	46.62	7.9	19.90	NA	002
30-Oct-20							NA	002
31-Oct-20							NA	002
1-Nov-20							NA	002
2-Nov-20	48.90	252.68	0.07	0.36	7.2	4.03	NA	002
3-Nov-20	60.19	274.08	0.07	0.32	7.8	3.60	NA	002
4-Nov-20	60.91	285.53	0.08	0.38	7.8	4.52	NA	002
5-Nov-20							NA	002
6-Nov-20							NA	002
7-Nov-20							NA	002
8-Nov-20							NA	002
9-Nov-20	27.74	122.15	0.26	1.14	7.9	10.40	NA	002
10-Nov-20	35.16	199.08	0.12	0.68	8.0	6.46	NA	002
11-Nov-20	29.69	148.19	0.07	0.35	8.0	4.20	NA	002
12-Nov-20							NA	002
13-Nov-20							NA	002
14-Nov-20							NA	002
15-Nov-20							NA	002
16-Nov-20	48.10	281.21	0.16	0.94	8.0	6.56	NA	002
17-Nov-20	65.80	426.41	0.19	1.23	7.9	13.40	NA	002
18-Nov-20							NA	002
19-Nov-20	30.08	167.23	0.07	0.39	7.5	15.80	NA	002
20-Nov-20							NA	002
21-Nov-20							NA	002
22-Nov-20	29.50	179.11	0.08	0.49	7.8	6.37	NA	002
23-Nov-20	36.40	223.43	0.11	0.68	7.3	5.55	NA	002
24-Nov-20	46.50	252.84	0.14	0.76	7.5	5.10	NA	002
25-Nov-20							NA	002
26-Nov-20							NA	002
27-Nov-20							NA	002
28-Nov-20							NA	002
29-Nov-20							NA	002
30-Nov-20	27.40	143.86	0.14	0.74	7.3	4.45	NA	002
1-Dec-20	36.22	188.49	0.08	0.42	7.9	5.57	NA	002
2-Dec-20	32.97	161.41	0.07	0.34	8.0	3.81	NA	002
3-Dec-20							NA	002
4-Dec-20							NA	002
5-Dec-20							NA	002
6-Dec-20							NA	002
7-Dec-20	31.05	165.13	0.07	0.37	7.0	12.50	NA	002
8-Dec-20	57.87	287.14	0.07	0.35	7.9	8.19	NA	002
9-Dec-20	53.78	265.53	0.07	0.35	8.0	6.45	NA	002
10-Dec-20							NA	002
11-Dec-20							NA	002
12-Dec-20							NA	002
13-Dec-20							NA	002
14-Dec-20	32.77	170.43	0.07	0.36	6.9	13.00	NA	002
15-Dec-20	46.84	237.51	0.07	0.35	7.8	6.33	NA	002
16-Dec-20	51.72	280.37	0.07	0.38	7.8	4.99	NA	002
17-Dec-20							NA	002
18-Dec-20							NA	002
19-Dec-20							NA	002
20-Dec-20							NA	002
21-Dec-20	29.69	117.28	0.07	0.28	7.2	12.30	NA	002
22-Dec-20	39.68	159.18	0.07	0.28	7.9	5.88	NA	002
23-Dec-20	28.18	117.51	0.42	1.75	8.0	4.15	NA	002
24-Dec-20							NA	002
25-Dec-20							NA	002
26-Dec-20							NA	002
27-Dec-20							NA	002
28-Dec-20	45.18	190.54	0.17	0.72	7.3	7.59	NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
29-Dec-20	61.57	273.58	0.25	1.11	7.7	6.42	NA	002
30-Dec-20	72.53	335.43	0.22	1.02	7.4	5.86	NA	002
31-Dec-20							NA	002
1-Jan-21							NA	002
2-Jan-21							NA	002
3-Jan-21							NA	002
4-Jan-21	53.18	250.34	0.11	0.52	7.9	5.59	NA	002
5-Jan-21	63.33	304.44	0.64	3.08	7.4	6.14	NA	002
6-Jan-21	42.14	216.76	0.24	1.23	7.2	4.84	NA	002
7-Jan-21							NA	002
8-Jan-21							NA	002
9-Jan-21							NA	002
10-Jan-21							NA	002
11-Jan-21	24.31	95.27	0.18	0.71	7.3	5.36	NA	002
12-Jan-21	35.22	169.83	0.14	0.68	7.3	2.94	NA	002
13-Jan-21	24.85	122.84	0.16	0.79	7.5	3.19	NA	002
14-Jan-21							NA	002
15-Jan-21							NA	002
16-Jan-21							NA	002
17-Jan-21							NA	002
18-Jan-21	27.02	133.99	0.07	0.35	7.7	3.61	NA	002
19-Jan-21	40.42	195.70	0.18	0.87	7.5	2.75	NA	002
20-Jan-21	38.60	186.77	0.07	0.34	7.2	3.18	NA	002
21-Jan-21							NA	002
22-Jan-21							NA	002
23-Jan-21							NA	002
24-Jan-21							NA	002
25-Jan-21	28.90	144.10	0.19	0.95	7.4	3.60	NA	002
26-Jan-21	42.20	202.06	0.20	0.96	7.3	3.86	NA	002
27-Jan-21	31.60	152.00	0.17	0.82	7.3	4.72	NA	002
28-Jan-21							NA	002
29-Jan-21							NA	002
30-Jan-21							NA	002
31-Jan-21							NA	002
1-Feb-21	25.27	123.36	0.28	1.37	7.0	3.46	N/A	002
2-Feb-21	33.46	170.66	0.22	1.12	7.0	5.15	N/A	002
3-Feb-21	26.86	136.87	0.16	0.82	7.2	2.86	N/A	002
4-Feb-21							N/A	002
5-Feb-21							N/A	002
6-Feb-21							N/A	002
7-Feb-21							N/A	002
8-Feb-21	34.15	173.80	0.40	2.04	7.1	7.09	N/A	002
9-Feb-21	45.37	224.31	0.42	2.08	7.3	8.73	N/A	002
10-Feb-21	81.25	425.18	0.53	2.77	7.1	8.88	N/A	002
11-Feb-21							N/A	002
12-Feb-21							N/A	002
13-Feb-21							N/A	002
14-Feb-21							N/A	002
15-Feb-21	35.61	189.66	0.42	2.24	7.0	12.30	N/A	002
16-Feb-21	45.11	286.22	0.07	0.44	6.9	13.10	N/A	002
17-Feb-21	50.27	346.14	0.37	2.55	6.9	12.80	N/A	002
18-Feb-21							N/A	002
19-Feb-21							N/A	002
20-Feb-21							N/A	002
21-Feb-21							N/A	002
22-Feb-21	59.59	322.54	0.16	0.87	7.2	7.80	N/A	002
23-Feb-21	76.15	391.85	0.37	1.90	7.4	8.11	N/A	002
24-Feb-21	57.84	321.75	0.25	1.39	7.4	8.60	N/A	002
25-Feb-21							N/A	002
26-Feb-21							N/A	002
27-Feb-21							N/A	002
28-Feb-21							N/A	002
1-Mar-21	46.14	248.40	0.23	1.24	7.2	5.85	NA	002
2-Mar-21	56.97	338.55	0.26	1.55	7.0	8.29	NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
3-Mar-21	40.17	232.19	0.30	1.73	7.4	9.64	NA	002
4-Mar-21							NA	002
5-Mar-21							NA	002
6-Mar-21							NA	002
7-Mar-21							NA	002
8-Mar-21	56.21	323.47	0.17	0.98	7.6	6.73	NA	002
9-Mar-21	69.70	381.91	0.19	1.04	7.4	7.66	NA	002
10-Mar-21	48.17	267.16	0.13	0.72	7.2	8.62	NA	002
11-Mar-21							NA	002
12-Mar-21							NA	002
13-Mar-21							NA	002
14-Mar-21							NA	002
15-Mar-21	43.21	269.56	0.40	2.50	7.2	10.90	NA	002
16-Mar-21	57.36	343.79	0.50	3.00	7.4	29.40	NA	002
17-Mar-21							NA	002
18-Mar-21	29.36	176.10	0.52	3.12	7.3	17.40	NA	002
19-Mar-21							NA	002
20-Mar-21							NA	002
21-Mar-21							NA	002
22-Mar-21	45.53	260.87	0.54	3.09	7.1	10.40	NA	002
23-Mar-21	60.40	336.93	0.07	0.39	7.0	8.14	NA	002
24-Mar-21	56.20	318.68	0.20	1.13	7.0	6.28	NA	002
25-Mar-21							NA	002
26-Mar-21							NA	002
27-Mar-21							NA	002
28-Mar-21							NA	002
29-Mar-21	47.30	289.94	0.43	2.64	7.4	7.97	NA	002
30-Mar-21	65.30	396.05	0.07	0.42	7.3	7.98	NA	002
31-Mar-21	52.40	314.59	0.43	2.58	7.0	8.82	NA	002
1-Apr-21							NA	002
2-Apr-21							NA	002
3-Apr-21							NA	002
4-Apr-21							NA	002
5-Apr-21	53.20	329.22	0.47	2.91	7.3	9.59	NA	002
6-Apr-21	68.10	429.37	0.38	2.40	7.1	11.40	NA	002
7-Apr-21	67.00	418.84	0.07	0.44	7.0	12.70	NA	002
8-Apr-21							NA	002
9-Apr-21							NA	002
10-Apr-21							NA	002
11-Apr-21							NA	002
12-Apr-21	48.18	298.15	0.46	2.85	7.2	7.80	NA	002
13-Apr-21	57.37	348.80	0.15	0.91	7.5	8.71	NA	002
14-Apr-21	43.50	253.98	0.23	1.34	7.4	7.03	NA	002
15-Apr-21							27.2	002
16-Apr-21							26.9	002
17-Apr-21							27.1	002
18-Apr-21							27.8	002
19-Apr-21	39.12	234.91	0.44	2.64	7.1	17.40	28.3	002
20-Apr-21	53.80	310.78	0.40	2.31	7.4	17.50	27.1	002
21-Apr-21	38.80	211.70	0.64	3.49	7.1	20.20	27.4	002
22-Apr-21							28.6	002
23-Apr-21							28.2	002
24-Apr-21							28.7	002
25-Apr-21							28.4	002
26-Apr-21	43.20	272.38	0.38	2.40	7.3	10.40	28.2	002
27-Apr-21	58.80	348.93	0.43	2.55	7.1	10.30	27.3	002
28-Apr-21	51.00	291.68	0.40	2.29	7.1	14.40	28.3	002
29-Apr-21							29.2	002
30-Apr-21							29.2	002
1-May-21							29.4	008
2-May-21							28.5	008
3-May-21	43.73	240.57	0.42	2.31	7.3	6.86	28.5	008
4-May-21	58.36	326.79	0.31	1.74	7.0	6.90	28.3	008
5-May-21	59.74	359.72	0.46	2.77	7.2	14.50	28.3	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
6-May-21							29.1	008
7-May-21							27.9	008
8-May-21							26.9	008
9-May-21							27.1	008
10-May-21	49.82	307.50	1.00	6.17	7.2	9.43	28.2	008
11-May-21	59.58	369.02	0.90	5.57	7.3	10.10	28.3	008
12-May-21	63.94	407.94	1.03	6.57	7.3	12.80	28.1	008
13-May-21							28.8	008
14-May-21							28.9	008
15-May-21							28.9	008
16-May-21							28.8	008
17-May-21	53.79	237.16	1.61	7.10	7.4	8.83	30.1	008
18-May-21	68.78	430.75	1.14	7.14	7.2	12.40	28.7	008
19-May-21	58.60	378.54	0.56	3.62	7.4	12.10	29.3	008
20-May-21							28.9	008
21-May-21							27.4	008
22-May-21							28.6	008
23-May-21							28.5	008
24-May-21	47.80	256.36	0.64	3.43	7.3	14.00	28.3	008
25-May-21	67.30	385.56	0.72	4.12	7.1	17.80	27.7	008
26-May-21	66.40	468.97	0.60	4.24	7.3	17.00	27.9	008
27-May-21							28.2	008
28-May-21							27.6	008
29-May-21							27.4	008
30-May-21							27.3	008
31-May-21							27.6	008
1-Jun-21	21.80	120.09	0.91	5.01	7.1	7.86	29.6	008
2-Jun-21	80.48	466.70	1.51	8.76	7.1	9.90	30.1	008
3-Jun-21	72.63	443.52	2.02	12.34	7.3	7.76	29.9	008
4-Jun-21							30.5	008
5-Jun-21							30.2	008
6-Jun-21							30.0	008
7-Jun-21	70.00	443.07	8.18	51.78	7.2	17.10	28.8	008
8-Jun-21	74.94	470.11	0.29	1.82	6.9	4.80	29.5	008
9-Jun-21	63.14	400.47	0.44	2.79	7.5	21.10	29.6	008
10-Jun-21							29.8	008
11-Jun-21							30.2	008
12-Jun-21							30.1	008
13-Jun-21							30.0	008
14-Jun-21	43.45	266.17	0.61	3.74	7.2	5.48	30.6	008
15-Jun-21	52.62	313.66	0.53	3.16	7.0	7.67	30.4	008
16-Jun-21	34.40	179.40	0.35	1.83	7.2	4.58	30.0	008
17-Jun-21							29.8	008
18-Jun-21							30.8	008
19-Jun-21							30.6	008
20-Jun-21							30.2	008
21-Jun-21	26.30	162.21	3.11	19.18	7.3	4.94	30.7	008
22-Jun-21	34.10	198.22	1.12	6.51	7.3	4.96	30.9	008
23-Jun-21	32.00	145.36	0.39	1.77	7.3	5.65	30.9	008
24-Jun-21							31.2	008
25-Jun-21							31.0	008
26-Jun-21							34.7	008
27-Jun-21							34.6	008
28-Jun-21	36.61	182.41	0.64	3.19	6.9	7.12	34.4	008
29-Jun-21	50.00	261.17	0.37	1.93	7.1	8.60	34.6	008
30-Jun-21	35.10	191.45	0.39	2.13	7.0	5.45	35.4	008
1-Jul-21							33.8	008
2-Jul-21							33.2	008
3-Jul-21							32.9	008
4-Jul-21							32.7	008
5-Jul-21							33.0	008
6-Jul-21	59.61	215.70	1.51	5.46	6.9	3.95	32.4	008
7-Jul-21	74.16	481.08	0.73	4.74	7.1	4.09	32.8	008
8-Jul-21	68.10	439.81	0.17	1.10	7.1	3.61	31.8	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
9-Jul-21							32.1	008
10-Jul-21							33.0	008
11-Jul-21							32.6	008
12-Jul-21	35.43	216.00	0.50	3.05	7.1	9.34	33.0	008
13-Jul-21	48.79	283.21	0.51	2.96	7.0	7.90	32.5	008
14-Jul-21	47.20	248.39	0.54	2.84	7.3	8.58	32.8	008
15-Jul-21							32.2	008
16-Jul-21							32.2	008
17-Jul-21							32.2	008
18-Jul-21							32.8	008
19-Jul-21	57.06	342.16	0.66	3.96	7.2	7.78	32.8	008
20-Jul-21	70.85	423.08	0.59	3.52	7.1	6.53	32.0	008
21-Jul-21	51.90	300.03	0.30	1.73	6.9	6.75	31.6	008
22-Jul-21							31.0	008
23-Jul-21							31.0	008
24-Jul-21							32.2	008
25-Jul-21							33.0	008
26-Jul-21	34.90	185.70	0.41	2.18	7.0	7.60	32.4	008
27-Jul-21	44.60	261.86	0.53	3.11	7.1	8.49	32.3	008
28-Jul-21	31.30	196.56	0.61	3.83	7.0	9.07	32.3	008
29-Jul-21							31.6	008
30-Jul-21							32.4	008
31-Jul-21							32.2	008
1-Aug-21	36.60	217.33	0.35	2.08	6.9	6.43	32.5	008
2-Aug-21	51.03	300.47	0.32	1.88	7.2	6.69	32.3	008
3-Aug-21	41.32	241.52	0.55	3.21	6.9	6.19	32.0	008
4-Aug-21							31.8	008
5-Aug-21							32.3	008
6-Aug-21							31.8	008
7-Aug-21							31.2	008
8-Aug-21	51.18	317.14	0.53	3.28	7.0	11.90	30.8	008
9-Aug-21	69.24	442.34	0.31	1.98	7.0	16.40	29.9	008
10-Aug-21	43.52	283.72	0.32	2.09	7.1	10.90	30.3	008
11-Aug-21							31.2	008
12-Aug-21							31.1	008
13-Aug-21							31.8	008
14-Aug-21							32.1	008
15-Aug-21	45.14	328.28	0.59	4.29	6.9	5.84	32.1	008
16-Aug-21	55.75	399.86	0.40	2.87	7.0	5.04	31.3	008
17-Aug-21	33.40	242.86	0.33	2.40	6.9	6.99	30.0	008
18-Aug-21							29.1	008
19-Aug-21							29.0	008
20-Aug-21							29.3	008
21-Aug-21							29.2	008
22-Aug-21	29.30	211.62	0.41	2.96	7.1	8.39	29.2	008
23-Aug-21	37.40	272.03	0.28	2.04	7.0	20.40	28.5	008
24-Aug-21	28.40	191.00	0.41	2.76	6.9	10.40	28.0	008
25-Aug-21							28.7	008
26-Aug-21							29.1	008
27-Aug-21							29.8	008
28-Aug-21							29.6	008
29-Aug-21	40.80	240.91	0.35	2.07	7.3	3.99	29.6	008
30-Aug-21	44.60	236.94	0.30	1.59	7.3	3.24	29.1	008
31-Aug-21							27.7	008
1-Sep-21	28.02	147.05	0.18	0.94	7.0	3.85	27.6	008
2-Sep-21							27.4	008
3-Sep-21							28.4	008
4-Sep-21							28.9	008
5-Sep-21							28.3	008
6-Sep-21							29.7	008
7-Sep-21	31.12	149.83	0.07	0.34	7.2	10.20	28.5	008
8-Sep-21	26.06	126.67	0.42	2.04	7.2	10.60	28.3	008
9-Sep-21	17.24	80.74	0.73	3.42	7.1	6.23	28.7	008
10-Sep-21							29.7	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
11-Sep-21							29.3	008
12-Sep-21							28.4	008
13-Sep-21	18.04	125.63	0.48	3.34	7.0	6.14	29.4	008
14-Sep-21	18.90	132.93	0.43	3.02	7.3	3.40	28.7	008
15-Sep-21	16.90	132.20	0.29	2.27	7.1	3.65	28.9	008
16-Sep-21							28.7	008
17-Sep-21							28.8	008
18-Sep-21							29.2	008
19-Sep-21							28.3	008
20-Sep-21	27.90	168.11	0.50	3.01	7.0	2.82	27.3	008
21-Sep-21	28.90	208.63	0.46	3.32	7.4	1.92	27.7	008
22-Sep-21	20.30	141.78	0.36	2.51	7.1	1.77	28.2	008
23-Sep-21							28.8	008
24-Sep-21							28.4	008
25-Sep-21							28.4	008
26-Sep-21							29.0	008
27-Sep-21	21.50	149.71	0.44	3.06	7.3	2.11	28.9	008
28-Sep-21	28.80	200.05	0.46	3.20	7.4	2.68	27.6	008
29-Sep-21	19.60	138.50	0.34	2.40	7.4	1.83	27.8	008
30-Sep-21							28.2	008
1-Oct-21	25.96	162.17	0.40	2.50	7.2	2.57	NA	002
2-Oct-21	27.87	184.47	0.33	2.18	7.3	2.67	NA	002
3-Oct-21	17.58	109.31	0.08	0.50	7.2	2.34	NA	002
4-Oct-21							NA	002
5-Oct-21							NA	002
6-Oct-21							NA	002
7-Oct-21							NA	002
8-Oct-21	25.79	138.56	0.21	1.13	7.3	2.51	NA	002
9-Oct-21	34.95	190.20	0.14	0.76	7.1	2.20	NA	002
10-Oct-21	35.20	212.08	0.10	0.60	7.3	3.45	NA	002
11-Oct-21							NA	002
12-Oct-21							NA	002
13-Oct-21							NA	002
14-Oct-21							NA	002
15-Oct-21	24.78	146.91	0.18	1.07	7.5	2.40	NA	002
16-Oct-21	41.09	247.44	0.24	1.45	7.8	2.59	NA	002
17-Oct-21	29.51	174.61	0.14	0.83	7.8	2.41	NA	002
18-Oct-21							NA	002
19-Oct-21							NA	002
20-Oct-21							NA	002
21-Oct-21							NA	002
22-Oct-21	56.60	311.08	0.24	1.32	7.8	4.02	NA	002
23-Oct-21	64.30	342.28	0.24	1.28	7.9	3.81	NA	002
24-Oct-21	59.00	329.02	0.25	1.39	7.8	3.53	NA	002
25-Oct-21							NA	002
26-Oct-21							NA	002
27-Oct-21							NA	002
28-Oct-21							NA	002
29-Oct-21							NA	002
30-Oct-21							NA	002
31-Oct-21							NA	002
1-Nov-21					7.0		NA	002
2-Nov-21	66.18	358.98	0.26	1.41	7.1	9.74	NA	002
3-Nov-21	55.57	299.39	0.26	1.40	7.2	6.59	NA	002
4-Nov-21	39.80	221.07	0.28	1.56	7.1	8.06	NA	002
5-Nov-21							NA	002
6-Nov-21							NA	002
7-Nov-21							NA	002
8-Nov-21	53.80	319.03	0.30	1.78	7.0	5.10	NA	002
9-Nov-21	67.36	396.66	0.07	0.41	7.2	4.75	NA	002
10-Nov-21	54.88	328.17	0.26	1.55	7.2	4.36	NA	002
11-Nov-21							NA	002
12-Nov-21							NA	002
13-Nov-21							NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
14-Nov-21							NA	002
15-Nov-21	37.00	235.63	0.10	0.64	6.9	3.19	NA	002
16-Nov-21					7.0		NA	002
17-Nov-21	49.90	313.37	0.15	0.94	7.0	3.50	NA	002
18-Nov-21	21.26	129.08	0.11	0.67	7.0	3.12	NA	002
19-Nov-21							NA	002
20-Nov-21							NA	002
21-Nov-21	23.17	131.50	0.21	1.19	7.0	2.76	NA	002
22-Nov-21	31.02	175.26	0.17	0.96	7.0	3.71	NA	002
23-Nov-21	43.50	249.27	0.24	1.38	7.0	2.15	NA	002
24-Nov-21							NA	002
25-Nov-21							NA	002
26-Nov-21							NA	002
27-Nov-21							NA	002
28-Nov-21							NA	002
29-Nov-21	26.20	178.30	0.12	0.82	7.0	3.02	NA	002
30-Nov-21	21.50	143.27	0.10	0.67	7.2	3.39	NA	002
1-Dec-21	16.67	108.30	0.07	0.45	7.5	2.11	NA	002
2-Dec-21							NA	002
3-Dec-21							NA	002
4-Dec-21							NA	002
5-Dec-21							NA	002
6-Dec-21	53.39	226.64	0.47	2.00	7.1	2.82	NA	002
7-Dec-21	41.91	142.96	0.28	0.96	7.1	6.46	NA	002
8-Dec-21	25.13	107.94	0.07	0.30	6.9	4.17	NA	002
9-Dec-21							NA	002
10-Dec-21							NA	002
11-Dec-21							NA	002
12-Dec-21							NA	002
13-Dec-21	52.57	280.16	0.45	2.40	7.1	4.70	NA	002
14-Dec-21	57.10	384.78	0.07	0.47	7.2	2.48	NA	002
15-Dec-21	42.87	286.00	0.07	0.47	7.3	4.46	NA	002
16-Dec-21							NA	002
17-Dec-21							NA	002
18-Dec-21							NA	002
19-Dec-21	26.36	107.50	0.47	1.92	7.0	2.20	NA	002
20-Dec-21	47.49	299.43	0.46	2.90	7.0	2.31	NA	002
21-Dec-21	51.30	270.82	0.07	0.37	7.4	4.24	NA	002
22-Dec-21							NA	002
23-Dec-21							NA	002
24-Dec-21							NA	002
25-Dec-21							NA	002
26-Dec-21	32.40	160.10	0.09	0.44	8.1	4.32	NA	002
27-Dec-21	31.20	160.57	0.07	0.36	7.2	4.57	NA	002
28-Dec-21	38.60	177.64	0.07	0.32	7.9	14.80	NA	002
29-Dec-21							NA	002
30-Dec-21							NA	002
31-Dec-21							NA	002
1-Jan-22							NA	002
2-Jan-22							NA	002
3-Jan-22	22.51	130.34	0.07	0.41	7.7	2.85	NA	002
4-Jan-22	15.43	86.91	0.07	0.39	8.1	3.27	NA	002
5-Jan-22	12.10	67.39	0.22	1.23	8.0	2.40	NA	002
6-Jan-22							NA	002
7-Jan-22							NA	002
8-Jan-22							NA	002
9-Jan-22							NA	002
10-Jan-22	28.04	177.26	0.21	1.33	7.9	1.98	NA	002
11-Jan-22							NA	002
12-Jan-22	18.13	111.75	0.11	0.68	7.8	4.63	NA	002
13-Jan-22	14.77	86.09	0.13	0.76	7.8	4.34	NA	002
14-Jan-22							NA	002
15-Jan-22							NA	002
16-Jan-22							NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
17-Jan-22	38.09	221.10	0.60	3.48	7.6	4.55	NA	002
18-Jan-22	24.06	136.85	0.24	1.37	7.7	3.94	NA	002
19-Jan-22	18.77	114.17	0.09	0.55	7.7	1.99	NA	002
20-Jan-22							NA	002
21-Jan-22							NA	002
22-Jan-22							NA	002
23-Jan-22							NA	002
24-Jan-22	27.31	158.30	0.42	2.43	7.8	2.46	NA	002
25-Jan-22	27.02	157.52	0.07	0.41	7.6	3.35	NA	002
26-Jan-22	17.50	102.31	0.16	0.94	7.8	2.38	NA	002
27-Jan-22							NA	002
28-Jan-22							NA	002
29-Jan-22							NA	002
30-Jan-22							NA	002
31-Jan-22	21.60	93.00	0.16	0.69	7.8	5.87	NA	002
1-Feb-22	24.02	120.46	0.42	2.11	8.1	3.80	N/A	002
2-Feb-22	9.56	54.38	0.26	1.48	8.1	3.97	N/A	002
3-Feb-22							N/A	002
4-Feb-22							N/A	002
5-Feb-22							N/A	002
6-Feb-22							N/A	002
7-Feb-22	22.07	134.28	0.19	1.16	7.8	4.88	N/A	002
8-Feb-22	18.30	117.83	1.35	8.69	7.8	3.97	N/A	002
9-Feb-22	10.88	62.34	0.08	0.46	7.7	3.41	N/A	002
10-Feb-22							N/A	002
11-Feb-22							N/A	002
12-Feb-22							N/A	002
13-Feb-22							N/A	002
14-Feb-22	23.98	126.60	0.13	0.69	7.9	3.98	N/A	002
15-Feb-22	20.37	112.54	0.30	1.66	7.6	3.24	N/A	002
16-Feb-22	10.97	62.58	0.17	0.97	7.3	4.07	N/A	002
17-Feb-22							N/A	002
18-Feb-22							N/A	002
19-Feb-22							N/A	002
20-Feb-22							N/A	002
21-Feb-22	21.11	103.82	0.07	0.34	7.0	7.38	N/A	002
22-Feb-22	23.91	127.13	0.10	0.54	7.2	4.43	N/A	002
23-Feb-22	17.87	111.92	0.07	0.44	8.1	4.65	N/A	002
24-Feb-22							N/A	002
25-Feb-22							N/A	002
26-Feb-22							N/A	002
27-Feb-22							N/A	002
28-Feb-22							N/A	002
1-Mar-22	13.60	86.29	0.22	1.37	7.2	3.41	NA	002
2-Mar-22	9.83	64.54	0.19	1.27	7.9	3.30	NA	002
3-Mar-22	8.91	58.88	0.56	3.68	7.9	3.01	NA	002
4-Mar-22							NA	002
5-Mar-22							NA	002
6-Mar-22							NA	002
7-Mar-22	22.00	142.36	0.07	0.45	7.3	6.93	NA	002
8-Mar-22	22.80	120.11	0.35	1.86	7.2	2.86	NA	002
9-Mar-22	12.40	76.76	0.07	0.43	7.7	2.27	NA	002
10-Mar-22							NA	002
11-Mar-22							NA	002
12-Mar-22							NA	002
13-Mar-22							NA	002
14-Mar-22	21.90	124.31	0.12	0.68	7.1	4.51	NA	002
15-Mar-22	18.70	125.46	0.12	0.81	7.2	3.75	NA	002
16-Mar-22	9.15	62.48	0.07	0.48	8.2	4.26	NA	002
17-Mar-22							NA	002
18-Mar-22							NA	002
19-Mar-22							NA	002
20-Mar-22							NA	002
21-Mar-22	16.40	86.75	0.11	0.58	7.7	4.21	NA	002

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
22-Mar-22	9.70	47.99	0.07	0.35	7.6	3.86	NA	002
23-Mar-22	9.04	44.63	0.07	0.35	7.3	3.33	NA	002
24-Mar-22							NA	002
25-Mar-22							NA	002
26-Mar-22							NA	002
27-Mar-22							NA	002
28-Mar-22	18.60	65.02	0.07	0.24	8.2	4.60	NA	002
29-Mar-22	11.20	64.97	0.08	0.46	7.8	3.61	NA	002
30-Mar-22	12.30	84.63	0.08	0.57	7.7	3.40	NA	002
31-Mar-22							NA	002
1-Apr-22							NA	002
2-Apr-22							NA	002
3-Apr-22							NA	002
4-Apr-22	34.90	192.99	0.07	0.39	7.6	2.79	NA	002
5-Apr-22	29.20	166.45	0.07	0.40	8.0	3.09	NA	002
6-Apr-22	21.50	129.28	0.13	0.75	8.0	2.14	NA	002
7-Apr-22							NA	002
8-Apr-22							NA	002
9-Apr-22							NA	002
10-Apr-22							NA	002
11-Apr-22	24.80	147.62	0.17	1.02	7.9	2.14	NA	002
12-Apr-22	27.10	164.94	0.13	0.80	7.8	2.27	NA	002
13-Apr-22	14.00	87.10	0.10	0.63	8.1	8.46	NA	002
14-Apr-22							NA	002
15-Apr-22							25.1	002
16-Apr-22							25.3	002
17-Apr-22							25.8	002
18-Apr-22	19.80	86.86	0.07	0.31	8.3	4.47	22.9	002
19-Apr-22	22.30	112.52	0.07	0.35	8.3	2.06	25.2	002
20-Apr-22	15.80	99.73	0.09	0.60	8.5	3.17	25.3	002
21-Apr-22							25.1	002
22-Apr-22							26.9	002
23-Apr-22							27.3	002
24-Apr-22							27.8	002
25-Apr-22	21.50	144.17	0.07	0.47	7.9	2.16	27.9	002
26-Apr-22	19.30	102.69	0.17	0.90	8.3	3.02	26.1	002
27-Apr-22	10.20	71.08	0.13	0.89	7.9	3.06	26.7	002
28-Apr-22							27.2	002
29-Apr-22							27.3	002
30-Apr-22							28.2	002
1-May-22							27.6	008
2-May-22	21.40	143.14	0.25	1.69	7.7	3.75	28.2	008
3-May-22	19.70	117.64	0.16	0.96	7.7	2.02	27.3	008
4-May-22	11.30	71.17	0.16	0.98	7.6	2.10	28.5	008
5-May-22							29.2	008
6-May-22							27.8	008
7-May-22							24.3	008
8-May-22							23.1	008
9-May-22	19.00	110.92	0.11	0.64	7.8	2.53	26.6	008
10-May-22	22.50	153.69	0.10	0.69	8.0	5.39	26.6	008
11-May-22	12.30	73.65	0.57	3.41	7.8	3.35	27.3	008
12-May-22							27.5	008
13-May-22							26.9	008
14-May-22							28.0	008
15-May-22							27.6	008
16-May-22							28.0	008
17-May-22	15.50	69.00	0.07	0.32	7.1	3.96	27.4	008
18-May-22	11.50	64.07	0.13	0.72	7.7	2.32	28.0	008
19-May-22	11.00	70.46	0.11	0.70	7.5	5.42	26.3	008
20-May-22							26.9	008
21-May-22							28.7	008
22-May-22							29.4	008
23-May-22	18.70	116.52	0.17	1.05	7.4	3.78	29.0	008
24-May-22	15.40	87.18	0.60	3.41	7.4	3.69	29.1	008

Date	Total Nitrogen		Total Ammonia as N		Dissolved Oxygen	Turbidity	Temperature	Outfall Used
	mg/L	lbs/day	mg/L	lbs/day	mg/L	NTU	°C	
25-May-22	13.00	89.23	1.06	7.28	7.2	2.94	28.0	008
26-May-22							30.5	008
27-May-22							30.7	008
28-May-22							29.4	008
29-May-22							30.1	008
30-May-22							30.8	008
31-May-22	14.70	44.63	0.20	0.60	7.4	7.96	26.4	008
1-Jun-22	16.40	109.15	1.04	6.92	7.7	5.40	29.9	008
2-Jun-22	24.20	182.45	6.17	46.52	7.5	3.89	30.7	008
3-Jun-22							31.1	008
4-Jun-22							30.4	008
5-Jun-22							29.2	008
6-Jun-22					7.2		29.8	008
7-Jun-22	18.50	124.67	0.10	0.67	7.5	3.14	29.0	008
8-Jun-22	14.60	93.64	0.13	0.84	7.4	3.09	30.2	008
9-Jun-22	14.60	98.39	0.10	0.65	7.5	1.87	30.7	008
10-Jun-22							31.0	008
11-Jun-22							30.9	008
12-Jun-22							28.9	008
13-Jun-22	24.90	168.83	0.11	0.73	7.8	2.18	27.4	008
14-Jun-22	26.30	174.10	0.09	0.60	7.5	1.93	27.7	008
15-Jun-22	15.60	103.27	0.37	2.46	7.3	2.19	28.3	008
16-Jun-22							28.0	008
17-Jun-22							28.0	008
18-Jun-22							28.3	008
19-Jun-22							29.4	008
20-Jun-22	25.80	140.07	0.07	0.38	7.6	1.73	28.2	008
21-Jun-22	22.90	124.41	0.10	0.52	7.4	2.15	29.0	008
22-Jun-22	12.70	69.75	0.14	0.79	7.0	2.27	29.4	008
23-Jun-22							29.3	008
24-Jun-22							29.0	008
25-Jun-22							29.0	008
26-Jun-22							30.4	008
27-Jun-22	20.30	113.80	0.07	0.39	7.1	1.98	31.0	008
28-Jun-22	19.20	115.03	0.09	0.54	7.2	1.50	31.3	008
29-Jun-22	16.30	94.97	0.09	0.50	7.2	1.88	30.3	008
30-Jun-22							30.6	008
Minimum	8.91	44.6	0.07	0.19	6.80	1.11	22.90	
Average	60.8	339	0.33	1.89	7.35	5.73	29.24	
Maximum	141	981	8.18	51.8	9.30	29.4	36.00	
Standard dev.	28.7	164	0.63	3.93	0.46	3.59	1.73	
CV	0.472	0.485	1.911	2.083	0.063	0.627	0.059	
Count	796	796	796	796	807	796	875	

Table 21: E. coli Geometric Mean, Effluent

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2010	31648	002	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean		
04/30/2010	31648	002	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean		
05/31/2010	31648	002	E. coli, MTEC-MF	6.	#/100 ml	Monthly Geometric Mean		
05/31/2010	31648	008	E. coli, MTEC-MF	48.	#/100 ml	Monthly Geometric Mean		
06/30/2010	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean		
07/31/2010	31648	002	E. coli, MTEC-MF	11.	#/100 ml	Monthly Geometric Mean		
08/31/2010	31648	002	E. coli, MTEC-MF	8.	#/100 ml	Monthly Geometric Mean		
09/30/2010	31648	002	E. coli, MTEC-MF	15.	#/100 ml	Monthly Geometric Mean		
10/31/2010	31648	002	E. coli, MTEC-MF	11.	#/100 ml	Monthly Geometric Mean		
11/30/2010	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean		
12/31/2010	31648	002	E. coli, MTEC-MF	23.	#/100 ml	Monthly Geometric Mean		
01/31/2011	31648	002	E. coli, MTEC-MF	17.	#/100 ml	Monthly Geometric Mean		
02/28/2011	31648	002	E. coli, MTEC-MF	15.	#/100 ml	Monthly Geometric Mean		
02/28/2011	31648	008	E. coli, MTEC-MF	15.	#/100 ml	Monthly Geometric Mean		
03/31/2011	31648	002	E. coli, MTEC-MF	5.	#/100 ml	Monthly Geometric Mean		
03/31/2011	31648	008	E. coli, MTEC-MF	5.	#/100 ml	Monthly Geometric Mean		
04/30/2011	31648	002	E. coli, MTEC-MF	48.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2011	31648	002	E. coli, MTEC-MF	9.	#/100 ml	Monthly Geometric Mean		
05/31/2011	31648	008	E. coli, MTEC-MF	5.	#/100 ml	Monthly Geometric Mean		
06/30/2011	31648	002	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean		
06/30/2011	31648	008	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean		
07/31/2011	31648	002	E. coli, MTEC-MF	13.	#/100 ml	Monthly Geometric Mean		
07/31/2011	31648	008	E. coli, MTEC-MF	13.	#/100 ml	Monthly Geometric Mean		
08/31/2011	31648	002	E. coli, MTEC-MF	19.	#/100 ml	Monthly Geometric Mean		
08/31/2011	31648	008	E. coli, MTEC-MF	19.	#/100 ml	Monthly Geometric Mean		
09/30/2011	31648	002	E. coli, MTEC-MF	69.	#/100 ml	Monthly Geometric Mean		
09/30/2011	31648	008	E. coli, MTEC-MF	69.	#/100 ml	Monthly Geometric Mean		
10/31/2011	31648	002	E. coli, MTEC-MF	43.	#/100 ml	Monthly Geometric Mean		
11/30/2011	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean		
12/31/2011	31648	002	E. coli, MTEC-MF	13.	#/100 ml	Monthly Geometric Mean		
01/31/2012	31648	002	E. coli, MTEC-MF	16.	#/100 ml	Monthly Geometric Mean		
02/29/2012	31648	002	E. coli, MTEC-MF	41.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2012	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean		
04/30/2012	31648	002	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean		
05/31/2012	31648	002	E. coli, MTEC-MF	10.	#/100 ml	Monthly Geometric Mean		
06/30/2012	31648	002	E. coli, MTEC-MF	3.	#/100 ml	Monthly Geometric Mean		
07/31/2012	31648	002	E. coli, MTEC-MF	1.	#/100 ml	Monthly Geometric Mean		
08/31/2012	31648	002	E. coli, MTEC-MF	3.	#/100 ml	Monthly Geometric Mean		
09/30/2012	31648	002	E. coli, MTEC-MF	6.	#/100 ml	Monthly Geometric Mean		
10/31/2012	31648	002	E. coli, MTEC-MF	7.	#/100 ml	Monthly Geometric Mean		
11/30/2012	31648	002	E. coli, MTEC-MF	30.	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2012	31648	002	E. coli, MTEC-MF	22.	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2013	31648	002	E. coli, MTEC-MF	12.	#/100 ml	Monthly Geometric Mean	=	Equals
02/28/2013	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2013	31648	002	E. coli, MTEC-MF	10.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2013	31648	002	E. coli, MTEC-MF	14.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2013	31648	002	E. coli, MTEC-MF	36.	#/100 ml	Monthly Geometric Mean	=	Equals
06/30/2013	31648	002	E. coli, MTEC-MF	30.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2013	31648	002	E. coli, MTEC-MF	3.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2013	31648	002	E. coli, MTEC-MF	1.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2013	31648	002	E. coli, MTEC-MF	5.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2013	31648	002	E. coli, MTEC-MF	3.	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2013	31648	002	E. coli, MTEC-MF	28.	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2013	31648	002	E. coli, MTEC-MF	69.	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2014	31648	002	E. coli, MTEC-MF	30.	#/100 ml	Monthly Geometric Mean	=	Equals
02/28/2014	31648	002	E. coli, MTEC-MF	79.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2014	31648	002	E. coli, MTEC-MF	11.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2014	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2014	31648	002	E. coli, MTEC-MF	8.	#/100 ml	Monthly Geometric Mean	=	Equals
06/30/2014	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
07/31/2014	31648	002	E. coli, MTEC-MF	3.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2014	31648	002	E. coli, MTEC-MF	3.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2014	31648	002	E. coli, MTEC-MF	28.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2014	31648	002	E. coli, MTEC-MF	108.	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2014	31648	002	E. coli, MTEC-MF	33.	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2014	31648	002	E. coli, MTEC-MF	13.	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2015	31648	002	E. coli, MTEC-MF	23.	#/100 ml	Monthly Geometric Mean	=	Equals
02/28/2015	31648	002	E. coli, MTEC-MF	23.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2015	31648	002	E. coli, MTEC-MF	42.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2015	31648	002	E. coli, MTEC-MF	13.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2015	31648	002	E. coli, MTEC-MF	36.	#/100 ml	Monthly Geometric Mean	=	Equals
06/30/2015	31648	002	E. coli, MTEC-MF	17.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2015	31648	002	E. coli, MTEC-MF	40.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2015	31648	002	E. coli, MTEC-MF	11.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2015	31648	002	E. coli, MTEC-MF	9.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2015	31648	002	E. coli, MTEC-MF	8.	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2015	31648	002	E. coli, MTEC-MF	42.	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2015	31648	002	E. coli, MTEC-MF	58.	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2016	31648	002	E. coli, MTEC-MF	88.	#/100 ml	Monthly Geometric Mean	=	Equals
02/29/2016	31648	002	E. coli, MTEC-MF	84.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2016	31648	002	E. coli, MTEC-MF	21.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2016	31648	002	E. coli, MTEC-MF	7.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2016	31648	002	E. coli, MTEC-MF	14.	#/100 ml	Monthly Geometric Mean	=	Equals
06/30/2016	31648	002	E. coli, MTEC-MF	31.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2016	31648	002	E. coli, MTEC-MF	21.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2016	31648	008	E. coli, MTEC-MF	29.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2016	31648	002	E. coli, MTEC-MF	32.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2016	31648	002	E. coli, MTEC-MF	42.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2016	31648	002	E. coli, MTEC-MF	8.	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2016	31648	002	E. coli, MTEC-MF	59.	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2016	31648	002	E. coli, MTEC-MF	26.	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2017	31648	002	E. coli, MTEC-MF	24.	#/100 ml	Monthly Geometric Mean	=	Equals
02/28/2017	31648	002	E. coli, MTEC-MF	49.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2017	31648	002	E. coli, MTEC-MF	38.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2017	31648	002	E. coli, MTEC-MF	12.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2017	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2017	31648	008	E. coli, MTEC-MF	15.	#/100 ml	Monthly Geometric Mean	=	Equals
06/30/2017	31648	008	E. coli, MTEC-MF	16.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2017	31648	008	E. coli, MTEC-MF	31.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2017	31648	008	E. coli, MTEC-MF	14.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2017	31648	008	E. coli, MTEC-MF	32.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2017	31648	002	E. coli, MTEC-MF	6.	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2017	31648	002	E. coli, MTEC-MF	11.	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2017	31648	002	E. coli, MTEC-MF	21.	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2018	31648	002	E. coli, MTEC-MF	37.	#/100 ml	Monthly Geometric Mean	=	Equals
02/28/2018	31648	002	E. coli, MTEC-MF	86.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2018	31648	002	E. coli, MTEC-MF	82.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2018	31648	002	E. coli, MTEC-MF	12.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2018	31648	008	E. coli, MTEC-MF	19.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2018	31648	008	E. coli, MTEC-MF	24.	#/100 ml	Monthly Geometric Mean	=	Equals
06/30/2018	31648	008	E. coli, MTEC-MF	32.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2018	31648	008	E. coli, MTEC-MF	6.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2018	31648	008	E. coli, MTEC-MF	79.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2018	31648	008	E. coli, MTEC-MF	8.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2018	31648	002	E. coli, MTEC-MF	5.	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2018	31648	002	E. coli, MTEC-MF	6.	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2018	31648	002	E. coli, MTEC-MF	7.	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2019	31648	002	E. coli, MTEC-MF	12.	#/100 ml	Monthly Geometric Mean	=	Equals
02/28/2019	31648	002	E. coli, MTEC-MF	31.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2019	31648	002	E. coli, MTEC-MF	59.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2019	31648	002	E. coli, MTEC-MF	3.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2019	31648	008	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
06/30/2019	31648	008	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2019	31648	008	E. coli, MTEC-MF	3.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2019	31648	008	E. coli, MTEC-MF	7.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2019	31648	008	E. coli, MTEC-MF	7.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2019	31648	002	E. coli, MTEC-MF	7.	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2019	31648	002	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2019	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2020	31648	002	E. coli, MTEC-MF	21.	#/100 ml	Monthly Geometric Mean	=	Equals
02/29/2020	31648	002	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2020	31648	002	E. coli, MTEC-MF	6.	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2020	31648	002	E. coli, MTEC-MF	1.	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2020	31648	008	E. coli, MTEC-MF	4.	#/100 ml	Monthly Geometric Mean	=	Equals
06/30/2020	31648	008	E. coli, MTEC-MF	11.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2020	31648	008	E. coli, MTEC-MF	16.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2020	31648	008	E. coli, MTEC-MF	8.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2020	31648	008	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2020	31648	002	E. coli, MTEC-MF	1.4	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2020	31648	002	E. coli, MTEC-MF	1.2	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2020	31648	002	E. coli, MTEC-MF	1.7	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2021	31648	002	E. coli, MTEC-MF	2.	#/100 ml	Monthly Geometric Mean	=	Equals
02/28/2021	31648	002	E. coli, MTEC-MF	6.3	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2021	31648	002	E. coli, MTEC-MF	9.5	#/100 ml	Monthly Geometric Mean	=	Equals
04/30/2021	31648	002	E. coli, MTEC-MF	12.5	#/100 ml	Monthly Geometric Mean	=	Equals
05/31/2021	31648	008	E. coli, MTEC-MF	10.	#/100 ml	Monthly Geometric Mean	=	Equals
06/30/2021	31648	008	E. coli, MTEC-MF	10.	#/100 ml	Monthly Geometric Mean	=	Equals
07/31/2021	31648	008	E. coli, MTEC-MF	27.	#/100 ml	Monthly Geometric Mean	=	Equals
08/31/2021	31648	008	E. coli, MTEC-MF	6.	#/100 ml	Monthly Geometric Mean	=	Equals
09/30/2021	31648	008	E. coli, MTEC-MF	1.	#/100 ml	Monthly Geometric Mean	=	Equals
10/31/2021	31648	002	E. coli, MTEC-MF	1.1	#/100 ml	Monthly Geometric Mean	=	Equals
11/30/2021	31648	002	E. coli, MTEC-MF	4.2	#/100 ml	Monthly Geometric Mean	=	Equals
12/31/2021	31648	002	E. coli, MTEC-MF	2.7	#/100 ml	Monthly Geometric Mean	=	Equals
01/31/2022	31648	002	E. coli, MTEC-MF	1.6	#/100 ml	Monthly Geometric Mean	=	Equals
02/28/2022	31648	002	E. coli, MTEC-MF	2.7	#/100 ml	Monthly Geometric Mean	=	Equals
03/31/2022	31648	002	E. coli, MTEC-MF	1.1	#/100 ml	Monthly Geometric Mean	=	Equals

Table 22: Flow, Effluent, Monthly Average

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2010	74076	002	Flow	.487	Million Gallons per Day	Monthly Average		
04/30/2010	74076	002	Flow	.466	Million Gallons per Day	Monthly Average		
05/31/2010	74076	002	Flow	.514	Million Gallons per Day	Monthly Average		
05/31/2010	74076	008	Flow	.656	Million Gallons per Day	Monthly Average		
06/30/2010	74076	002	Flow	.592	Million Gallons per Day	Monthly Average		
07/31/2010	74076	002	Flow	.623	Million Gallons per Day	Monthly Average		
08/31/2010	74076	002	Flow	.509	Million Gallons per Day	Monthly Average		
09/30/2010	74076	002	Flow	.648	Million Gallons per Day	Monthly Average		
10/31/2010	74076	002	Flow	.767	Million Gallons per Day	Monthly Average		
11/30/2010	74076	002	Flow	.719	Million Gallons per Day	Monthly Average		
12/31/2010	74076	002	Flow	.731	Million Gallons per Day	Monthly Average		
01/31/2011	74076	002	Flow	.708	Million Gallons per Day	Monthly Average		
02/28/2011	74076	002	Flow	.704	Million Gallons per Day	Monthly Average		
02/28/2011	74076	008	Flow	.704	Million Gallons per Day	Monthly Average		
03/31/2011	74076	002	Flow	.715	Million Gallons per Day	Monthly Average		
03/31/2011	74076	008	Flow	.715	Million Gallons per Day	Monthly Average		
04/30/2011	74076	002	Flow	.656	Million Gallons per Day	Monthly Average		
05/31/2011	74076	002	Flow	.754	Million Gallons per Day	Monthly Average		
05/31/2011	74076	008	Flow	.754	Million Gallons per Day	Monthly Average		
06/30/2011	74076	002	Flow	.821	Million Gallons per Day	Monthly Average		
06/30/2011	74076	008	Flow	.821	Million Gallons per Day	Monthly Average		
07/31/2011	74076	002	Flow	.837	Million Gallons per Day	Monthly Average		
07/31/2011	74076	008	Flow	.837	Million Gallons per Day	Monthly Average		
08/31/2011	74076	002	Flow	.79	Million Gallons per Day	Monthly Average		
08/31/2011	74076	008	Flow	.79	Million Gallons per Day	Monthly Average		
09/30/2011	74076	002	Flow	.77	Million Gallons per Day	Monthly Average		
09/30/2011	74076	008	Flow	.77	Million Gallons per Day	Monthly Average		
10/31/2011	74076	002	Flow	.803	Million Gallons per Day	Monthly Average		
11/30/2011	74076	002	Flow	.559	Million Gallons per Day	Monthly Average		
12/31/2011	74076	002	Flow	.742	Million Gallons per Day	Monthly Average		
01/31/2012	74076	002	Flow	.773	Million Gallons per Day	Monthly Average		
02/29/2012	74076	002	Flow	.758	Million Gallons per Day	Monthly Average	=	Equals
03/31/2012	74076	002	Flow	.794	Million Gallons per Day	Monthly Average		
04/30/2012	74076	002	Flow	.752	Million Gallons per Day	Monthly Average		
05/31/2012	74076	002	Flow	.843	Million Gallons per Day	Monthly Average		
06/30/2012	74076	002	Flow	.916	Million Gallons per Day	Monthly Average		
07/31/2012	74076	002	Flow	.692	Million Gallons per Day	Monthly Average		
08/31/2012	74076	002	Flow	.733	Million Gallons per Day	Monthly Average		
09/30/2012	74076	002	Flow	.724	Million Gallons per Day	Monthly Average		
10/31/2012	74076	002	Flow	.795	Million Gallons per Day	Monthly Average		
11/30/2012	74076	002	Flow	.717	Million Gallons per Day	Monthly Average	=	Equals
12/31/2012	74076	002	Flow	.692	Million Gallons per Day	Monthly Average	=	Equals
01/31/2013	74076	002	Flow	.719	Million Gallons per Day	Monthly Average	=	Equals
02/28/2013	74076	002	Flow	.686	Million Gallons per Day	Monthly Average	=	Equals
03/31/2013	74076	002	Flow	.679	Million Gallons per Day	Monthly Average	=	Equals
04/30/2013	74076	002	Flow	.649	Million Gallons per Day	Monthly Average	=	Equals
05/31/2013	74076	002	Flow	.77	Million Gallons per Day	Monthly Average	=	Equals
06/30/2013	74076	002	Flow	.747	Million Gallons per Day	Monthly Average	=	Equals
07/31/2013	74076	002	Flow	.741	Million Gallons per Day	Monthly Average	=	Equals
08/31/2013	74076	002	Flow	.76	Million Gallons per Day	Monthly Average	=	Equals
09/30/2013	74076	002	Flow	.73	Million Gallons per Day	Monthly Average	=	Equals
10/31/2013	74076	002	Flow	.762	Million Gallons per Day	Monthly Average	=	Equals
11/30/2013	74076	002	Flow	.723	Million Gallons per Day	Monthly Average	=	Equals
12/31/2013	74076	002	Flow	.673	Million Gallons per Day	Monthly Average	=	Equals
01/31/2014	74076	002	Flow	.662	Million Gallons per Day	Monthly Average	=	Equals
02/28/2014	74076	002	Flow	.706	Million Gallons per Day	Monthly Average	=	Equals
03/31/2014	74076	002	Flow	.675	Million Gallons per Day	Monthly Average	=	Equals
04/30/2014	74076	002	Flow	.708	Million Gallons per Day	Monthly Average	=	Equals
05/31/2014	74076	002	Flow	.686	Million Gallons per Day	Monthly Average	=	Equals
06/30/2014	74076	002	Flow	.764	Million Gallons per Day	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
07/31/2014	74076	002	Flow	.696	Million Gallons per Day	Monthly Average	=	Equals
08/31/2014	74076	002	Flow	.753	Million Gallons per Day	Monthly Average	=	Equals
09/30/2014	74076	002	Flow	.701	Million Gallons per Day	Monthly Average	=	Equals
10/31/2014	74076	002	Flow	.691	Million Gallons per Day	Monthly Average	=	Equals
11/30/2014	74076	002	Flow	.674	Million Gallons per Day	Monthly Average	=	Equals
12/31/2014	74076	002	Flow	.667	Million Gallons per Day	Monthly Average	=	Equals
01/31/2015	74076	002	Flow	.68	Million Gallons per Day	Monthly Average	=	Equals
02/28/2015	74076	002	Flow	.665	Million Gallons per Day	Monthly Average	=	Equals
03/31/2015	74076	002	Flow	.648	Million Gallons per Day	Monthly Average	=	Equals
04/30/2015	74076	002	Flow	.645	Million Gallons per Day	Monthly Average	=	Equals
05/31/2015	74076	002	Flow	.624	Million Gallons per Day	Monthly Average	=	Equals
06/30/2015	74076	002	Flow	.696	Million Gallons per Day	Monthly Average	=	Equals
07/31/2015	74076	002	Flow	.614	Million Gallons per Day	Monthly Average	=	Equals
08/31/2015	74076	002	Flow	.663	Million Gallons per Day	Monthly Average	=	Equals
09/30/2015	74076	002	Flow	.621	Million Gallons per Day	Monthly Average	=	Equals
10/31/2015	74076	002	Flow	.677	Million Gallons per Day	Monthly Average	=	Equals
11/30/2015	74076	002	Flow	.651	Million Gallons per Day	Monthly Average	=	Equals
12/31/2015	74076	002	Flow	.638	Million Gallons per Day	Monthly Average	=	Equals
01/31/2016	74076	002	Flow	.718	Million Gallons per Day	Monthly Average	=	Equals
02/29/2016	74076	002	Flow	.682	Million Gallons per Day	Monthly Average	=	Equals
03/31/2016	74076	002	Flow	.68	Million Gallons per Day	Monthly Average	=	Equals
04/30/2016	74076	002	Flow	.633	Million Gallons per Day	Monthly Average	=	Equals
05/31/2016	74076	002	Flow	.651	Million Gallons per Day	Monthly Average	=	Equals
06/30/2016	74076	002	Flow	.666	Million Gallons per Day	Monthly Average	=	Equals
07/31/2016	74076	002	Flow	.556	Million Gallons per Day	Monthly Average	=	Equals
07/31/2016	74076	008	Flow	.084	Million Gallons per Day	Monthly Average	=	Equals
08/31/2016	74076	002	Flow	.704	Million Gallons per Day	Monthly Average	=	Equals
09/30/2016	74076	002	Flow	.665	Million Gallons per Day	Monthly Average	=	Equals
10/31/2016	74076	002	Flow	.589	Million Gallons per Day	Monthly Average	=	Equals
11/30/2016	74076	002	Flow	.558	Million Gallons per Day	Monthly Average	=	Equals
12/31/2016	74076	002	Flow	.635	Million Gallons per Day	Monthly Average	=	Equals
01/31/2017	74076	002	Flow	.556	Million Gallons per Day	Monthly Average	=	Equals
02/28/2017	74076	002	Flow	.757	Million Gallons per Day	Monthly Average	=	Equals
03/31/2017	74076	002	Flow	.669	Million Gallons per Day	Monthly Average	=	Equals
04/30/2017	74076	002	Flow	.763	Million Gallons per Day	Monthly Average	=	Equals
05/31/2017	74076	002	Flow	.23	Million Gallons per Day	Monthly Average	=	Equals
05/31/2017	74076	008	Flow	.634	Million Gallons per Day	Monthly Average	=	Equals
06/30/2017	74076	008	Flow	.645	Million Gallons per Day	Monthly Average	=	Equals
07/31/2017	74076	008	Flow	.649	Million Gallons per Day	Monthly Average	=	Equals
08/31/2017	74076	008	Flow	.648	Million Gallons per Day	Monthly Average	=	Equals
09/30/2017	74076	008	Flow	.63	Million Gallons per Day	Monthly Average	=	Equals
10/31/2017	74076	002	Flow	.662	Million Gallons per Day	Monthly Average	=	Equals
11/30/2017	74076	002	Flow	.591	Million Gallons per Day	Monthly Average	=	Equals
12/31/2017	74076	002	Flow	.636	Million Gallons per Day	Monthly Average	=	Equals
01/31/2018	74076	002	Flow	.646	Million Gallons per Day	Monthly Average	=	Equals
02/28/2018	74076	002	Flow	.644	Million Gallons per Day	Monthly Average	=	Equals
03/31/2018	74076	002	Flow	.65	Million Gallons per Day	Monthly Average	=	Equals
04/30/2018	74076	002	Flow	.692	Million Gallons per Day	Monthly Average	=	Equals
04/30/2018	74076	008	Flow	.645	Million Gallons per Day	Monthly Average	=	Equals
05/31/2018	74076	008	Flow	.65	Million Gallons per Day	Monthly Average	=	Equals
06/30/2018	74076	008	Flow	.671	Million Gallons per Day	Monthly Average	=	Equals
07/31/2018	74076	008	Flow	.695	Million Gallons per Day	Monthly Average	=	Equals
08/31/2018	74076	008	Flow	.747	Million Gallons per Day	Monthly Average	=	Equals
09/30/2018	74076	008	Flow	.665	Million Gallons per Day	Monthly Average	=	Equals
10/31/2018	74076	002	Flow	.635	Million Gallons per Day	Monthly Average	=	Equals
11/30/2018	74076	002	Flow	.701	Million Gallons per Day	Monthly Average	=	Equals
12/31/2018	74076	002	Flow	.748	Million Gallons per Day	Monthly Average	=	Equals
01/31/2019	74076	002	Flow	.656	Million Gallons per Day	Monthly Average	=	Equals
02/28/2019	74076	002	Flow	.659	Million Gallons per Day	Monthly Average	=	Equals
03/31/2019	74076	002	Flow	.71	Million Gallons per Day	Monthly Average	=	Equals
04/30/2019	74076	002	Flow	.717	Million Gallons per Day	Monthly Average	=	Equals
05/31/2019	74076	008	Flow	.592	Million Gallons per Day	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
06/30/2019	74076	008	Flow	.625	Million Gallons per Day	Monthly Average	=	Equals
07/31/2019	74076	008	Flow	.669	Million Gallons per Day	Monthly Average	=	Equals
08/31/2019	74076	008	Flow	.709	Million Gallons per Day	Monthly Average	=	Equals
09/30/2019	74076	008	Flow	.701	Million Gallons per Day	Monthly Average	=	Equals
10/31/2019	74076	002	Flow	.753	Million Gallons per Day	Monthly Average	=	Equals
11/30/2019	74076	002	Flow	.841	Million Gallons per Day	Monthly Average	=	Equals
12/31/2019	74076	002	Flow	.644	Million Gallons per Day	Monthly Average	=	Equals
01/31/2020	74076	002	Flow	.742	Million Gallons per Day	Monthly Average	=	Equals
02/29/2020	74076	002	Flow	.725	Million Gallons per Day	Monthly Average	=	Equals
03/31/2020	74076	002	Flow	.764	Million Gallons per Day	Monthly Average	=	Equals
04/30/2020	74076	002	Flow	.687	Million Gallons per Day	Monthly Average	=	Equals
05/31/2020	74076	008	Flow	.625	Million Gallons per Day	Monthly Average	=	Equals
06/30/2020	74076	008	Flow	.677	Million Gallons per Day	Monthly Average	=	Equals
07/31/2020	74076	008	Flow	.658	Million Gallons per Day	Monthly Average	=	Equals
08/31/2020	74076	008	Flow	.685	Million Gallons per Day	Monthly Average	=	Equals
09/30/2020	74076	008	Flow	.691	Million Gallons per Day	Monthly Average	=	Equals
10/31/2020	74076	002	Flow	.661	Million Gallons per Day	Monthly Average	=	Equals
11/30/2020	74076	002	Flow	.646	Million Gallons per Day	Monthly Average	=	Equals
12/31/2020	74076	002	Flow	.573	Million Gallons per Day	Monthly Average	=	Equals
01/31/2021	74076	002	Flow	.575	Million Gallons per Day	Monthly Average	=	Equals
02/28/2021	74076	002	Flow	.675	Million Gallons per Day	Monthly Average	=	Equals
03/31/2021	74076	002	Flow	.701	Million Gallons per Day	Monthly Average	=	Equals
04/30/2021	74076	002	Flow	.717	Million Gallons per Day	Monthly Average	=	Equals
05/31/2021	74076	008	Flow	.713	Million Gallons per Day	Monthly Average	=	Equals
06/30/2021	74076	008	Flow	.714	Million Gallons per Day	Monthly Average	=	Equals
07/31/2021	74076	008	Flow	.686	Million Gallons per Day	Monthly Average	=	Equals
08/31/2021	74076	008	Flow	.791	Million Gallons per Day	Monthly Average	=	Equals
09/30/2021	74076	008	Flow	.77	Million Gallons per Day	Monthly Average	=	Equals
10/31/2021	74076	002	Flow	.695	Million Gallons per Day	Monthly Average	=	Equals
11/30/2021	74076	002	Flow	.714	Million Gallons per Day	Monthly Average	=	Equals
12/31/2021	74076	002	Flow	.668	Million Gallons per Day	Monthly Average	=	Equals
01/31/2022	74076	002	Flow	.698	Million Gallons per Day	Monthly Average	=	Equals
02/28/2022	74076	002	Flow	.707	Million Gallons per Day	Monthly Average	=	Equals
03/31/2022	74076	002	Flow	.735	Million Gallons per Day	Monthly Average	=	Equals

Table 23: Oil and Grease Concentration, Effluent, Daily Maximum

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
04/30/2010	00556	002	Oil & Grease	3.5	Milligrams per Liter	Daily Maximum		
05/31/2010	00556	002	Oil & Grease	2.9	Milligrams per Liter	Daily Maximum		
05/31/2010	00556	008	Oil & Grease	2.3	Milligrams per Liter	Daily Maximum		
06/30/2010	00556	002	Oil & Grease	2.9	Milligrams per Liter	Daily Maximum		
07/31/2010	00556	002	Oil & Grease	2.5	Milligrams per Liter	Daily Maximum		
08/31/2010	00556	002	Oil & Grease	7.	Milligrams per Liter	Daily Maximum		
09/30/2010	00556	002	Oil & Grease	2.5	Milligrams per Liter	Daily Maximum		
10/31/2010	00556	002	Oil & Grease	2.1	Milligrams per Liter	Daily Maximum		
11/30/2010	00556	002	Oil & Grease	3.1	Milligrams per Liter	Daily Maximum		
12/31/2010	00556	002	Oil & Grease	4.3	Milligrams per Liter	Daily Maximum		
01/31/2011	00556	002	Oil & Grease	3.6	Milligrams per Liter	Daily Maximum		
02/28/2011	00556	002	Oil & Grease	4.	Milligrams per Liter	Daily Maximum		
02/28/2011	00556	008	Oil & Grease	4.	Milligrams per Liter	Daily Maximum		
03/31/2011	00556	002	Oil & Grease	3.5	Milligrams per Liter	Daily Maximum		
03/31/2011	00556	008	Oil & Grease	3.5	Milligrams per Liter	Daily Maximum		
04/30/2011	00556	002	Oil & Grease	2.3	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2011	00556	002	Oil & Grease	3.4	Milligrams per Liter	Daily Maximum		
05/31/2011	00556	008	Oil & Grease	3.4	Milligrams per Liter	Daily Maximum		
06/30/2011	00556	002	Oil & Grease	3.8	Milligrams per Liter	Daily Maximum		
06/30/2011	00556	008	Oil & Grease	3.8	Milligrams per Liter	Daily Maximum		
07/31/2011	00556	002	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum		
07/31/2011	00556	008	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum		
08/31/2011	00556	002	Oil & Grease	5.4	Milligrams per Liter	Daily Maximum		
08/31/2011	00556	008	Oil & Grease	5.4	Milligrams per Liter	Daily Maximum		
09/30/2011	00556	002	Oil & Grease	5.8	Milligrams per Liter	Daily Maximum		
09/30/2011	00556	008	Oil & Grease	5.8	Milligrams per Liter	Daily Maximum		
10/31/2011	00556	002	Oil & Grease	3.	Milligrams per Liter	Daily Maximum		
11/30/2011	00556	002	Oil & Grease	3.9	Milligrams per Liter	Daily Maximum		
12/31/2011	00556	002	Oil & Grease	3.1	Milligrams per Liter	Daily Maximum		
01/31/2012	00556	002	Oil & Grease	5.1	Milligrams per Liter	Daily Maximum		
02/29/2012	00556	002	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2012	00556	002	Oil & Grease	3.6	Milligrams per Liter	Daily Maximum		
04/30/2012	00556	002	Oil & Grease	3.5	Milligrams per Liter	Daily Maximum		
05/31/2012	00556	002	Oil & Grease	2.4	Milligrams per Liter	Daily Maximum		
06/30/2012	00556	002	Oil & Grease	2.9	Milligrams per Liter	Daily Maximum		
07/31/2012	00556	002	Oil & Grease	3.8	Milligrams per Liter	Daily Maximum		
08/31/2012	00556	002	Oil & Grease	3.	Milligrams per Liter	Daily Maximum		
09/30/2012	00556	002	Oil & Grease	3.9	Milligrams per Liter	Daily Maximum		
10/31/2012	00556	002	Oil & Grease	2.3	Milligrams per Liter	Daily Maximum		
01/31/2014	00556	002	Oil & Grease	4.5	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2014	00556	002	Oil & Grease	2.3	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2014	00556	002	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2014	00556	002	Oil & Grease	2.4	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2014	00556	002	Oil & Grease	1.6	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2014	00556	002	Oil & Grease	3.6	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2014	00556	002	Oil & Grease	2.1	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2014	00556	002	Oil & Grease	1.7	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2014	00556	002	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2014	00556	002	Oil & Grease	1.6	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2014	00556	002	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2014	00556	002	Oil & Grease	2.1	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2015	00556	002	Oil & Grease	2.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2015	00556	002	Oil & Grease	2.3	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2015	00556	002	Oil & Grease	5.6	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2015	00556	002	Oil & Grease	1.6	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2015	00556	002	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2015	00556	002	Oil & Grease	2.3	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2015	00556	002	Oil & Grease	1.7	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2015	00556	002	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2015	00556	002	Oil & Grease	2.7	Milligrams per Liter	Daily Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
10/31/2015	00556	002	Oil & Grease	1.8	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2015	00556	002	Oil & Grease	2.9	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2015	00556	002	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2016	00556	002	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum	=	Equals
02/29/2016	00556	002	Oil & Grease	2.2	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2016	00556	002	Oil & Grease	3.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2016	00556	002	Oil & Grease	2.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2016	00556	002	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2016	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2016	00556	002	Oil & Grease	2.3	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2016	00556	008	Oil & Grease	2.3	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2016	00556	002	Oil & Grease	1.5	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2016	00556	002	Oil & Grease	2.1	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2016	00556	002	Oil & Grease	4.2	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2016	00556	002	Oil & Grease	1.5	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2016	00556	002	Oil & Grease	1.7	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2017	00556	002	Oil & Grease	2.4	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2017	00556	002	Oil & Grease	2.4	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2017	00556	002	Oil & Grease	2.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2017	00556	002	Oil & Grease	2.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2017	00556	002	Oil & Grease	2.5	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2017	00556	008	Oil & Grease	2.5	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2017	00556	008	Oil & Grease	9.1	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2017	00556	008	Oil & Grease	4.5	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2017	00556	008	Oil & Grease	3.4	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2017	00556	008	Oil & Grease	3.5	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2017	00556	002	Oil & Grease	3.4	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2017	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2017	00556	002	Oil & Grease	1.6	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2018	00556	002	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2018	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2018	00556	002	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2018	00556	002	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2018	00556	008	Oil & Grease	3.8	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2018	00556	008	Oil & Grease	2.2	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2018	00556	008	Oil & Grease	2.8	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2018	00556	008	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2018	00556	008	Oil & Grease	3.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2018	00556	008	Oil & Grease	2.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2018	00556	002	Oil & Grease	2.5	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2018	00556	002	Oil & Grease	2.5	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2018	00556	002	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2019	00556	002	Oil & Grease	1.5	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2019	00556	002	Oil & Grease	1.5	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2019	00556	002	Oil & Grease	1.7	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2019	00556	002	Oil & Grease	1.5	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2019	00556	008	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2019	00556	008	Oil & Grease	1.6	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2019	00556	008	Oil & Grease	1.5	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2019	00556	008	Oil & Grease	7.8	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2019	00556	008	Oil & Grease	2.2	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2019	00556	002	Oil & Grease	2.6	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2019	00556	002	Oil & Grease	1.7	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2019	00556	002	Oil & Grease	1.8	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2020	00556	002	Oil & Grease	1.8	Milligrams per Liter	Daily Maximum	=	Equals
02/29/2020	00556	002	Oil & Grease	2.	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2020	00556	002	Oil & Grease	2.9	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2020	00556	002	Oil & Grease	5.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2020	00556	008	Oil & Grease	1.7	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2020	00556	008	Oil & Grease	1.7	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2020	00556	008	Oil & Grease	2.4	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2020	00556	008	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
09/30/2020	00556	008	Oil & Grease	2.1	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2020	00556	002	Oil & Grease	1.8	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2020	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2020	00556	002	Oil & Grease	5.3	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2021	00556	002	Oil & Grease	1.6	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2021	00556	002	Oil & Grease	2.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2021	00556	002	Oil & Grease	2.7	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2021	00556	008	Oil & Grease	1.7	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2021	00556	008	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2021	00556	008	Oil & Grease	2.9	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2021	00556	008	Oil & Grease	1.8	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2021	00556	008	Oil & Grease	1.9	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2022	00556	002	Oil & Grease	2.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2022	00556	002	Oil & Grease	1.4	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2022	00556	002	Oil & Grease	2.2	Milligrams per Liter	Daily Maximum	=	Equals

Table 24: Oil and Grease Load, Effluent, Daily Maximum

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
04/30/2010	00556	002	Oil & Grease	13.6	Pounds per Day	Daily Maximum		
05/31/2010	00556	002	Oil & Grease	12.6	Pounds per Day	Daily Maximum		
05/31/2010	00556	008	Oil & Grease	12.	Pounds per Day	Daily Maximum		
06/30/2010	00556	002	Oil & Grease	14.6	Pounds per Day	Daily Maximum		
07/31/2010	00556	002	Oil & Grease	13.5	Pounds per Day	Daily Maximum		
08/31/2010	00556	002	Oil & Grease	36.	Pounds per Day	Daily Maximum		
09/30/2010	00556	002	Oil & Grease	13.2	Pounds per Day	Daily Maximum		
10/31/2010	00556	002	Oil & Grease	14.9	Pounds per Day	Daily Maximum		
11/30/2010	00556	002	Oil & Grease	18.9	Pounds per Day	Daily Maximum		
12/31/2010	00556	002	Oil & Grease	28.8	Pounds per Day	Daily Maximum		
01/31/2011	00556	002	Oil & Grease	26.2	Pounds per Day	Daily Maximum		
02/28/2011	00556	002	Oil & Grease	21.2	Pounds per Day	Daily Maximum		
02/28/2011	00556	008	Oil & Grease	21.2	Pounds per Day	Daily Maximum		
03/31/2011	00556	002	Oil & Grease	24.1	Pounds per Day	Daily Maximum		
03/31/2011	00556	008	Oil & Grease	24.1	Pounds per Day	Daily Maximum		
04/30/2011	00556	002	Oil & Grease	12.	Pounds per Day	Daily Maximum	=	Equals
05/31/2011	00556	002	Oil & Grease	30.1	Pounds per Day	Daily Maximum		
05/31/2011	00556	008	Oil & Grease	30.1	Pounds per Day	Daily Maximum		
06/30/2011	00556	002	Oil & Grease	28.3	Pounds per Day	Daily Maximum		
06/30/2011	00556	008	Oil & Grease	28.3	Pounds per Day	Daily Maximum		
07/31/2011	00556	002	Oil & Grease	19.5	Pounds per Day	Daily Maximum		
07/31/2011	00556	008	Oil & Grease	19.5	Pounds per Day	Daily Maximum		
08/31/2011	00556	002	Oil & Grease	34.9	Pounds per Day	Daily Maximum		
08/31/2011	00556	008	Oil & Grease	34.9	Pounds per Day	Daily Maximum		
09/30/2011	00556	002	Oil & Grease	39.5	Pounds per Day	Daily Maximum		
09/30/2011	00556	008	Oil & Grease	39.5	Pounds per Day	Daily Maximum		
10/31/2011	00556	002	Oil & Grease	24.2	Pounds per Day	Daily Maximum		
11/30/2011	00556	002	Oil & Grease	16.2	Pounds per Day	Daily Maximum		
12/31/2011	00556	002	Oil & Grease	21.	Pounds per Day	Daily Maximum		
01/31/2012	00556	002	Oil & Grease	37.1	Pounds per Day	Daily Maximum		
02/29/2012	00556	002	Oil & Grease	14.7	Pounds per Day	Daily Maximum	=	Equals
03/31/2012	00556	002	Oil & Grease	21.2	Pounds per Day	Daily Maximum		
04/30/2012	00556	002	Oil & Grease	20.	Pounds per Day	Daily Maximum		
05/31/2012	00556	002	Oil & Grease	24.5	Pounds per Day	Daily Maximum		
06/30/2012	00556	002	Oil & Grease	22.2	Pounds per Day	Daily Maximum		
07/31/2012	00556	002	Oil & Grease	22.7	Pounds per Day	Daily Maximum		
08/31/2012	00556	002	Oil & Grease	15.9	Pounds per Day	Daily Maximum		
09/30/2012	00556	002	Oil & Grease	23.2	Pounds per Day	Daily Maximum		
10/31/2012	00556	002	Oil & Grease	16.4	Pounds per Day	Daily Maximum		
01/31/2014	00556	002	Oil & Grease	24.4	Pounds per Day	Daily Maximum	=	Equals
02/28/2014	00556	002	Oil & Grease	11.6	Pounds per Day	Daily Maximum	=	Equals
03/31/2014	00556	002	Oil & Grease	10.8	Pounds per Day	Daily Maximum	=	Equals
04/30/2014	00556	002	Oil & Grease	12.8	Pounds per Day	Daily Maximum	=	Equals
05/31/2014	00556	002	Oil & Grease	11.1	Pounds per Day	Daily Maximum	=	Equals
06/30/2014	00556	002	Oil & Grease	23.1	Pounds per Day	Daily Maximum	=	Equals
07/31/2014	00556	002	Oil & Grease	13.3	Pounds per Day	Daily Maximum	=	Equals
08/31/2014	00556	002	Oil & Grease	12.	Pounds per Day	Daily Maximum	=	Equals
09/30/2014	00556	002	Oil & Grease	12.3	Pounds per Day	Daily Maximum	=	Equals
10/31/2014	00556	002	Oil & Grease	11.5	Pounds per Day	Daily Maximum	=	Equals
11/30/2014	00556	002	Oil & Grease	11.	Pounds per Day	Daily Maximum	=	Equals
12/31/2014	00556	002	Oil & Grease	12.3	Pounds per Day	Daily Maximum	=	Equals
01/31/2015	00556	002	Oil & Grease	10.7	Pounds per Day	Daily Maximum	=	Equals
02/28/2015	00556	002	Oil & Grease	12.5	Pounds per Day	Daily Maximum	=	Equals
03/31/2015	00556	002	Oil & Grease	18.3	Pounds per Day	Daily Maximum	=	Equals
04/30/2015	00556	002	Oil & Grease	10.2	Pounds per Day	Daily Maximum	=	Equals
05/31/2015	00556	002	Oil & Grease	11.8	Pounds per Day	Daily Maximum	=	Equals
06/30/2015	00556	002	Oil & Grease	16.4	Pounds per Day	Daily Maximum	=	Equals
07/31/2015	00556	002	Oil & Grease	9.9	Pounds per Day	Daily Maximum	=	Equals
08/31/2015	00556	002	Oil & Grease	16.1	Pounds per Day	Daily Maximum	=	Equals
09/30/2015	00556	002	Oil & Grease	13.4	Pounds per Day	Daily Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
10/31/2015	00556	002	Oil & Grease	11.	Pounds per Day	Daily Maximum	=	Equals
11/30/2015	00556	002	Oil & Grease	19.1	Pounds per Day	Daily Maximum	=	Equals
12/31/2015	00556	002	Oil & Grease	14.7	Pounds per Day	Daily Maximum	=	Equals
01/31/2016	00556	002	Oil & Grease	17.7	Pounds per Day	Daily Maximum	=	Equals
02/29/2016	00556	002	Oil & Grease	12.2	Pounds per Day	Daily Maximum	=	Equals
03/31/2016	00556	002	Oil & Grease	15.2	Pounds per Day	Daily Maximum	=	Equals
04/30/2016	00556	002	Oil & Grease	9.6	Pounds per Day	Daily Maximum	=	Equals
05/31/2016	00556	002	Oil & Grease	13.9	Pounds per Day	Daily Maximum	=	Equals
06/30/2016	00556	002	Oil & Grease	9.1	Pounds per Day	Daily Maximum	=	Equals
07/31/2016	00556	002	Oil & Grease	11.6	Pounds per Day	Daily Maximum	=	Equals
07/31/2016	00556	008	Oil & Grease	1.6	Pounds per Day	Daily Maximum	=	Equals
08/31/2016	00556	002	Oil & Grease	11.7	Pounds per Day	Daily Maximum	=	Equals
09/30/2016	00556	002	Oil & Grease	10.8	Pounds per Day	Daily Maximum	=	Equals
10/31/2016	00556	002	Oil & Grease	23.8	Pounds per Day	Daily Maximum	=	Equals
11/30/2016	00556	002	Oil & Grease	8.2	Pounds per Day	Daily Maximum	=	Equals
12/31/2016	00556	002	Oil & Grease	11.6	Pounds per Day	Daily Maximum	=	Equals
01/31/2017	00556	002	Oil & Grease	13.3	Pounds per Day	Daily Maximum	=	Equals
02/28/2017	00556	002	Oil & Grease	14.3	Pounds per Day	Daily Maximum	=	Equals
03/31/2017	00556	002	Oil & Grease	10.5	Pounds per Day	Daily Maximum	=	Equals
04/30/2017	00556	002	Oil & Grease	11.5	Pounds per Day	Daily Maximum	=	Equals
05/31/2017	00556	002	Oil & Grease	8.	Pounds per Day	Daily Maximum	=	Equals
05/31/2017	00556	008	Oil & Grease	12.7	Pounds per Day	Daily Maximum	=	Equals
06/30/2017	00556	008	Oil & Grease	38.2	Pounds per Day	Daily Maximum	=	Equals
07/31/2017	00556	008	Oil & Grease	20.2	Pounds per Day	Daily Maximum	=	Equals
08/31/2017	00556	008	Oil & Grease	17.4	Pounds per Day	Daily Maximum	=	Equals
09/30/2017	00556	008	Oil & Grease	22.9	Pounds per Day	Daily Maximum	=	Equals
10/31/2017	00556	002	Oil & Grease	21.1	Pounds per Day	Daily Maximum	=	Equals
11/30/2017	00556	002	Oil & Grease	7.8	Pounds per Day	Daily Maximum	=	Equals
12/31/2017	00556	002	Oil & Grease	9.3	Pounds per Day	Daily Maximum	=	Equals
01/31/2018	00556	002	Oil & Grease	11.2	Pounds per Day	Daily Maximum	=	Equals
02/28/2018	00556	002	Oil & Grease	8.6	Pounds per Day	Daily Maximum	=	Equals
03/31/2018	00556	002	Oil & Grease	8.9	Pounds per Day	Daily Maximum	=	Equals
04/30/2018	00556	002	Oil & Grease	14.8	Pounds per Day	Daily Maximum	=	Equals
04/30/2018	00556	008	Oil & Grease	21.6	Pounds per Day	Daily Maximum	=	Equals
05/31/2018	00556	008	Oil & Grease	11.4	Pounds per Day	Daily Maximum	=	Equals
06/30/2018	00556	008	Oil & Grease	17.	Pounds per Day	Daily Maximum	=	Equals
07/31/2018	00556	008	Oil & Grease	9.6	Pounds per Day	Daily Maximum	=	Equals
08/31/2018	00556	008	Oil & Grease	19.5	Pounds per Day	Daily Maximum	=	Equals
09/30/2018	00556	008	Oil & Grease	8.7	Pounds per Day	Daily Maximum	=	Equals
10/31/2018	00556	002	Oil & Grease	12.1	Pounds per Day	Daily Maximum	=	Equals
11/30/2018	00556	002	Oil & Grease	14.4	Pounds per Day	Daily Maximum	=	Equals
12/31/2018	00556	002	Oil & Grease	12.4	Pounds per Day	Daily Maximum	=	Equals
01/31/2019	00556	002	Oil & Grease	8.7	Pounds per Day	Daily Maximum	=	Equals
02/28/2019	00556	002	Oil & Grease	8.2	Pounds per Day	Daily Maximum	=	Equals
03/31/2019	00556	002	Oil & Grease	10.9	Pounds per Day	Daily Maximum	=	Equals
04/30/2019	00556	002	Oil & Grease	9.4	Pounds per Day	Daily Maximum	=	Equals
05/31/2019	00556	008	Oil & Grease	7.6	Pounds per Day	Daily Maximum	=	Equals
06/30/2019	00556	008	Oil & Grease	9.1	Pounds per Day	Daily Maximum	=	Equals
07/31/2019	00556	008	Oil & Grease	8.7	Pounds per Day	Daily Maximum	=	Equals
08/31/2019	00556	008	Oil & Grease	31.9	Pounds per Day	Daily Maximum	=	Equals
09/30/2019	00556	008	Oil & Grease	12.5	Pounds per Day	Daily Maximum	=	Equals
10/31/2019	00556	002	Oil & Grease	13.4	Pounds per Day	Daily Maximum	=	Equals
11/30/2019	00556	002	Oil & Grease	11.6	Pounds per Day	Daily Maximum	=	Equals
12/31/2019	00556	002	Oil & Grease	11.6	Pounds per Day	Daily Maximum	=	Equals
01/31/2020	00556	002	Oil & Grease	10.5	Pounds per Day	Daily Maximum	=	Equals
02/29/2020	00556	002	Oil & Grease	13.4	Pounds per Day	Daily Maximum	=	Equals
03/31/2020	00556	002	Oil & Grease	20.5	Pounds per Day	Daily Maximum	=	Equals
04/30/2020	00556	002	Oil & Grease	26.5	Pounds per Day	Daily Maximum	=	Equals
05/31/2020	00556	008	Oil & Grease	9.3	Pounds per Day	Daily Maximum	=	Equals
06/30/2020	00556	008	Oil & Grease	10.2	Pounds per Day	Daily Maximum	=	Equals
07/31/2020	00556	008	Oil & Grease	15.	Pounds per Day	Daily Maximum	=	Equals
08/31/2020	00556	008	Oil & Grease	9.8	Pounds per Day	Daily Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
09/30/2020	00556	008	Oil & Grease	12.	Pounds per Day	Daily Maximum	=	Equals
10/31/2020	00556	002	Oil & Grease	9.9	Pounds per Day	Daily Maximum	=	Equals
11/30/2020	00556	002	Oil & Grease	9.1	Pounds per Day	Daily Maximum	=	Equals
12/31/2020	00556	002	Oil & Grease	27.6	Pounds per Day	Daily Maximum	=	Equals
01/31/2021	00556	002	Oil & Grease	7.9	Pounds per Day	Daily Maximum	=	Equals
02/28/2021	00556	002	Oil & Grease	8.9	Pounds per Day	Daily Maximum	=	Equals
03/31/2021	00556	002	Oil & Grease	12.	Pounds per Day	Daily Maximum	=	Equals
04/30/2021	00556	002	Oil & Grease	16.4	Pounds per Day	Daily Maximum	=	Equals
05/31/2021	00556	008	Oil & Grease	10.5	Pounds per Day	Daily Maximum	=	Equals
06/30/2021	00556	008	Oil & Grease	8.9	Pounds per Day	Daily Maximum	=	Equals
07/31/2021	00556	008	Oil & Grease	17.	Pounds per Day	Daily Maximum	=	Equals
08/31/2021	00556	008	Oil & Grease	13.1	Pounds per Day	Daily Maximum	=	Equals
09/30/2021	00556	008	Oil & Grease	11.1	Pounds per Day	Daily Maximum	=	Equals
10/31/2021	00556	002	Oil & Grease	9.3	Pounds per Day	Daily Maximum	=	Equals
11/30/2021	00556	002	Oil & Grease	9.5	Pounds per Day	Daily Maximum	=	Equals
12/31/2021	00556	002	Oil & Grease	9.4	Pounds per Day	Daily Maximum	=	Equals
01/31/2022	00556	002	Oil & Grease	11.6	Pounds per Day	Daily Maximum	=	Equals
02/28/2022	00556	002	Oil & Grease	9.	Pounds per Day	Daily Maximum	=	Equals
03/31/2022	00556	002	Oil & Grease	11.6	Pounds per Day	Daily Maximum	=	Equals

Table 25: Oil and Grease Concentration, Effluent, Monthly Average

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
04/30/2010	00556	002	Oil & Grease	2.5	Milligrams per Liter	Monthly Average		
05/31/2010	00556	002	Oil & Grease	1.9	Milligrams per Liter	Monthly Average		
05/31/2010	00556	008	Oil & Grease	1.9	Milligrams per Liter	Monthly Average		
06/30/2010	00556	002	Oil & Grease	2.1	Milligrams per Liter	Monthly Average		
07/31/2010	00556	002	Oil & Grease	1.9	Milligrams per Liter	Monthly Average		
08/31/2010	00556	002	Oil & Grease	3.3	Milligrams per Liter	Monthly Average		
09/30/2010	00556	002	Oil & Grease	1.7	Milligrams per Liter	Monthly Average		
10/31/2010	00556	002	Oil & Grease	1.7	Milligrams per Liter	Monthly Average		
11/30/2010	00556	002	Oil & Grease	2.1	Milligrams per Liter	Monthly Average		
12/31/2010	00556	002	Oil & Grease	2.4	Milligrams per Liter	Monthly Average		
01/31/2011	00556	002	Oil & Grease	2.1	Milligrams per Liter	Monthly Average		
02/28/2011	00556	002	Oil & Grease	2.7	Milligrams per Liter	Monthly Average		
02/28/2011	00556	008	Oil & Grease	2.7	Milligrams per Liter	Monthly Average		
03/31/2011	00556	002	Oil & Grease	2.4	Milligrams per Liter	Monthly Average		
03/31/2011	00556	008	Oil & Grease	2.4	Milligrams per Liter	Monthly Average		
04/30/2011	00556	002	Oil & Grease	1.9	Milligrams per Liter	Monthly Average	=	Equals
05/31/2011	00556	002	Oil & Grease	2.	Milligrams per Liter	Monthly Average		
05/31/2011	00556	008	Oil & Grease	2.	Milligrams per Liter	Monthly Average		
06/30/2011	00556	002	Oil & Grease	2.8	Milligrams per Liter	Monthly Average		
06/30/2011	00556	008	Oil & Grease	2.8	Milligrams per Liter	Monthly Average		
07/31/2011	00556	002	Oil & Grease	2.2	Milligrams per Liter	Monthly Average		
07/31/2011	00556	008	Oil & Grease	2.2	Milligrams per Liter	Monthly Average		
08/31/2011	00556	002	Oil & Grease	2.	Milligrams per Liter	Monthly Average		
08/31/2011	00556	008	Oil & Grease	2.	Milligrams per Liter	Monthly Average		
09/30/2011	00556	002	Oil & Grease	2.6	Milligrams per Liter	Monthly Average		
09/30/2011	00556	008	Oil & Grease	2.6	Milligrams per Liter	Monthly Average		
10/31/2011	00556	002	Oil & Grease	2.4	Milligrams per Liter	Monthly Average		
11/30/2011	00556	002	Oil & Grease	2.5	Milligrams per Liter	Monthly Average		
12/31/2011	00556	002	Oil & Grease	2.	Milligrams per Liter	Monthly Average		
01/31/2012	00556	002	Oil & Grease	2.2	Milligrams per Liter	Monthly Average		
02/29/2012	00556	002	Oil & Grease	1.9	Milligrams per Liter	Monthly Average	=	Equals
03/31/2012	00556	002	Oil & Grease	2.4	Milligrams per Liter	Monthly Average		
04/30/2012	00556	002	Oil & Grease	2.	Milligrams per Liter	Monthly Average		
05/31/2012	00556	002	Oil & Grease	2.5	Milligrams per Liter	Monthly Average		
06/30/2012	00556	002	Oil & Grease	2.1	Milligrams per Liter	Monthly Average		

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
07/31/2012	00556	002	Oil & Grease	2.7	Milligrams per Liter	Monthly Average		
08/31/2012	00556	002	Oil & Grease	1.8	Milligrams per Liter	Monthly Average		
09/30/2012	00556	002	Oil & Grease	2.2	Milligrams per Liter	Monthly Average		
10/31/2012	00556	002	Oil & Grease	1.9	Milligrams per Liter	Monthly Average		
01/31/2014	00556	002	Oil & Grease	2.3	Milligrams per Liter	Monthly Average	=	Equals
02/28/2014	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
03/31/2014	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
04/30/2014	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
05/31/2014	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
06/30/2014	00556	002	Oil & Grease	1.7	Milligrams per Liter	Monthly Average	=	Equals
07/31/2014	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
08/31/2014	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
09/30/2014	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
10/31/2014	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
11/30/2014	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
12/31/2014	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
01/31/2015	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
02/28/2015	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
03/31/2015	00556	002	Oil & Grease	2.6	Milligrams per Liter	Monthly Average	=	Equals
04/30/2015	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
05/31/2015	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
06/30/2015	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
07/31/2015	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
08/31/2015	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
09/30/2015	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
10/31/2015	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
11/30/2015	00556	002	Oil & Grease	1.7	Milligrams per Liter	Monthly Average	=	Equals
12/31/2015	00556	002	Oil & Grease	1.9	Milligrams per Liter	Monthly Average	=	Equals
01/31/2016	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
02/29/2016	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
03/31/2016	00556	002	Oil & Grease	1.9	Milligrams per Liter	Monthly Average	=	Equals
04/30/2016	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
05/31/2016	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
06/30/2016	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
07/31/2016	00556	002	Oil & Grease	1.7	Milligrams per Liter	Monthly Average	=	Equals
07/31/2016	00556	008	Oil & Grease	1.7	Milligrams per Liter	Monthly Average	=	Equals
08/31/2016	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
09/30/2016	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
10/31/2016	00556	002	Oil & Grease	1.8	Milligrams per Liter	Monthly Average	=	Equals
11/30/2016	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
12/31/2016	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
01/31/2017	00556	002	Oil & Grease	1.7	Milligrams per Liter	Monthly Average	=	Equals
02/28/2017	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
03/31/2017	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
04/30/2017	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
05/31/2017	00556	002	Oil & Grease	1.7	Milligrams per Liter	Monthly Average	=	Equals
05/31/2017	00556	008	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
06/30/2017	00556	008	Oil & Grease	2.5	Milligrams per Liter	Monthly Average	=	Equals
07/31/2017	00556	008	Oil & Grease	2.	Milligrams per Liter	Monthly Average	=	Equals
08/31/2017	00556	008	Oil & Grease	2.2	Milligrams per Liter	Monthly Average	=	Equals
09/30/2017	00556	008	Oil & Grease	1.8	Milligrams per Liter	Monthly Average	=	Equals
10/31/2017	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
11/30/2017	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
12/31/2017	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
01/31/2018	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
02/28/2018	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
03/31/2018	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
04/30/2018	00556	002	Oil & Grease	1.8	Milligrams per Liter	Monthly Average	=	Equals
04/30/2018	00556	008	Oil & Grease	2.9	Milligrams per Liter	Monthly Average	=	Equals
05/31/2018	00556	008	Oil & Grease	1.7	Milligrams per Liter	Monthly Average	=	Equals
06/30/2018	00556	008	Oil & Grease	1.8	Milligrams per Liter	Monthly Average	=	Equals
07/31/2018	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
08/31/2018	00556	008	Oil & Grease	2.	Milligrams per Liter	Monthly Average	=	Equals
09/30/2018	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
10/31/2018	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
11/30/2018	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
12/31/2018	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
01/31/2019	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
02/28/2019	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
03/31/2019	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
04/30/2019	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
05/31/2019	00556	008	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
06/30/2019	00556	008	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
07/31/2019	00556	008	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
08/31/2019	00556	008	Oil & Grease	2.2	Milligrams per Liter	Monthly Average	=	Equals
09/30/2019	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
10/31/2019	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
11/30/2019	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
12/31/2019	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
01/31/2020	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
02/29/2020	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
03/31/2020	00556	002	Oil & Grease	1.7	Milligrams per Liter	Monthly Average	=	Equals
04/30/2020	00556	002	Oil & Grease	1.9	Milligrams per Liter	Monthly Average	=	Equals
05/31/2020	00556	008	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
06/30/2020	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
07/31/2020	00556	008	Oil & Grease	2.1	Milligrams per Liter	Monthly Average	=	Equals
08/31/2020	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
09/30/2020	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
10/31/2020	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
11/30/2020	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
12/31/2020	00556	002	Oil & Grease	1.8	Milligrams per Liter	Monthly Average	=	Equals
01/31/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
02/28/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
03/31/2021	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
04/30/2021	00556	002	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
05/31/2021	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
06/30/2021	00556	008	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
07/31/2021	00556	008	Oil & Grease	1.6	Milligrams per Liter	Monthly Average	=	Equals
08/31/2021	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
09/30/2021	00556	008	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
10/31/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
11/30/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
12/31/2021	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
01/31/2022	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals
02/28/2022	00556	002	Oil & Grease	1.4	Milligrams per Liter	Monthly Average	=	Equals
03/31/2022	00556	002	Oil & Grease	1.5	Milligrams per Liter	Monthly Average	=	Equals

Table 26: Oil and Grease Load, Monthly Average, Effluent

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
04/30/2010	00556	002	Oil & Grease	9.1	Pounds per Day	Monthly Average		
05/31/2010	00556	002	Oil & Grease	8.3	Pounds per Day	Monthly Average		
05/31/2010	00556	008	Oil & Grease	9.8	Pounds per Day	Monthly Average		
06/30/2010	00556	002	Oil & Grease	9.5	Pounds per Day	Monthly Average		
07/31/2010	00556	002	Oil & Grease	10.1	Pounds per Day	Monthly Average		
08/31/2010	00556	002	Oil & Grease	15.3	Pounds per Day	Monthly Average		
09/30/2010	00556	002	Oil & Grease	9.1	Pounds per Day	Monthly Average		
10/31/2010	00556	002	Oil & Grease	9.8	Pounds per Day	Monthly Average		
11/30/2010	00556	002	Oil & Grease	12.5	Pounds per Day	Monthly Average		
12/31/2010	00556	002	Oil & Grease	15.3	Pounds per Day	Monthly Average		
01/31/2011	00556	002	Oil & Grease	13.5	Pounds per Day	Monthly Average		
02/28/2011	00556	002	Oil & Grease	15.3	Pounds per Day	Monthly Average		
02/28/2011	00556	008	Oil & Grease	15.3	Pounds per Day	Monthly Average		
03/31/2011	00556	002	Oil & Grease	15.9	Pounds per Day	Monthly Average		
03/31/2011	00556	008	Oil & Grease	15.9	Pounds per Day	Monthly Average		
04/30/2011	00556	002	Oil & Grease	9.8	Pounds per Day	Monthly Average	=	Equals
05/31/2011	00556	002	Oil & Grease	13.8	Pounds per Day	Monthly Average		
05/31/2011	00556	008	Oil & Grease	13.8	Pounds per Day	Monthly Average		
06/30/2011	00556	002	Oil & Grease	20.1	Pounds per Day	Monthly Average		
06/30/2011	00556	008	Oil & Grease	20.4	Pounds per Day	Monthly Average		
07/31/2011	00556	002	Oil & Grease	16.	Pounds per Day	Monthly Average		
07/31/2011	00556	008	Oil & Grease	16.	Pounds per Day	Monthly Average		
08/31/2011	00556	002	Oil & Grease	12.4	Pounds per Day	Monthly Average		
08/31/2011	00556	008	Oil & Grease	12.4	Pounds per Day	Monthly Average		
09/30/2011	00556	002	Oil & Grease	14.8	Pounds per Day	Monthly Average		
09/30/2011	00556	008	Oil & Grease	14.8	Pounds per Day	Monthly Average		
10/31/2011	00556	002	Oil & Grease	16.7	Pounds per Day	Monthly Average		
11/30/2011	00556	002	Oil & Grease	13.2	Pounds per Day	Monthly Average		
12/31/2011	00556	002	Oil & Grease	12.	Pounds per Day	Monthly Average		
01/31/2012	00556	002	Oil & Grease	13.6	Pounds per Day	Monthly Average		
02/29/2012	00556	002	Oil & Grease	10.	Pounds per Day	Monthly Average	=	Equals
03/31/2012	00556	002	Oil & Grease	12.4	Pounds per Day	Monthly Average		
04/30/2012	00556	002	Oil & Grease	10.9	Pounds per Day	Monthly Average		
05/31/2012	00556	002	Oil & Grease	15.3	Pounds per Day	Monthly Average		
06/30/2012	00556	002	Oil & Grease	13.7	Pounds per Day	Monthly Average		
07/31/2012	00556	002	Oil & Grease	15.2	Pounds per Day	Monthly Average		
08/31/2012	00556	002	Oil & Grease	10.5	Pounds per Day	Monthly Average		
09/30/2012	00556	002	Oil & Grease	12.5	Pounds per Day	Monthly Average		
10/31/2012	00556	002	Oil & Grease	12.9	Pounds per Day	Monthly Average		
01/31/2014	00556	002	Oil & Grease	12.5	Pounds per Day	Monthly Average	=	Equals
02/28/2014	00556	002	Oil & Grease	8.9	Pounds per Day	Monthly Average	=	Equals
03/31/2014	00556	002	Oil & Grease	8.4	Pounds per Day	Monthly Average	=	Equals
04/30/2014	00556	002	Oil & Grease	9.3	Pounds per Day	Monthly Average	=	Equals
05/31/2014	00556	002	Oil & Grease	8.3	Pounds per Day	Monthly Average	=	Equals
06/30/2014	00556	002	Oil & Grease	10.6	Pounds per Day	Monthly Average	=	Equals
07/31/2014	00556	002	Oil & Grease	8.7	Pounds per Day	Monthly Average	=	Equals
08/31/2014	00556	002	Oil & Grease	8.9	Pounds per Day	Monthly Average	=	Equals
09/30/2014	00556	002	Oil & Grease	8.8	Pounds per Day	Monthly Average	=	Equals
10/31/2014	00556	002	Oil & Grease	8.7	Pounds per Day	Monthly Average	=	Equals
11/30/2014	00556	002	Oil & Grease	8.6	Pounds per Day	Monthly Average	=	Equals
12/31/2014	00556	002	Oil & Grease	9.1	Pounds per Day	Monthly Average	=	Equals
01/31/2015	00556	002	Oil & Grease	8.2	Pounds per Day	Monthly Average	=	Equals
02/28/2015	00556	002	Oil & Grease	8.6	Pounds per Day	Monthly Average	=	Equals
03/31/2015	00556	002	Oil & Grease	12.	Pounds per Day	Monthly Average	=	Equals
04/30/2015	00556	002	Oil & Grease	7.7	Pounds per Day	Monthly Average	=	Equals
05/31/2015	00556	002	Oil & Grease	7.5	Pounds per Day	Monthly Average	=	Equals
06/30/2015	00556	002	Oil & Grease	8.1	Pounds per Day	Monthly Average	=	Equals
07/31/2015	00556	002	Oil & Grease	7.9	Pounds per Day	Monthly Average	=	Equals
08/31/2015	00556	002	Oil & Grease	9.	Pounds per Day	Monthly Average	=	Equals
09/30/2015	00556	002	Oil & Grease	8.2	Pounds per Day	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
10/31/2015	00556	002	Oil & Grease	8.7	Pounds per Day	Monthly Average	=	Equals
11/30/2015	00556	002	Oil & Grease	9.5	Pounds per Day	Monthly Average	=	Equals
12/31/2015	00556	002	Oil & Grease	10.7	Pounds per Day	Monthly Average	=	Equals
01/31/2016	00556	002	Oil & Grease	9.6	Pounds per Day	Monthly Average	=	Equals
02/29/2016	00556	002	Oil & Grease	9.2	Pounds per Day	Monthly Average	=	Equals
03/31/2016	00556	002	Oil & Grease	9.5	Pounds per Day	Monthly Average	=	Equals
04/30/2016	00556	002	Oil & Grease	8.1	Pounds per Day	Monthly Average	=	Equals
05/31/2016	00556	002	Oil & Grease	8.1	Pounds per Day	Monthly Average	=	Equals
06/30/2016	00556	002	Oil & Grease	7.5	Pounds per Day	Monthly Average	=	Equals
07/31/2016	00556	002	Oil & Grease	7.8	Pounds per Day	Monthly Average	=	Equals
07/31/2016	00556	008	Oil & Grease	1.	Pounds per Day	Monthly Average	=	Equals
08/31/2016	00556	002	Oil & Grease	8.5	Pounds per Day	Monthly Average	=	Equals
09/30/2016	00556	002	Oil & Grease	8.4	Pounds per Day	Monthly Average	=	Equals
10/31/2016	00556	002	Oil & Grease	9.3	Pounds per Day	Monthly Average	=	Equals
11/30/2016	00556	002	Oil & Grease	6.3	Pounds per Day	Monthly Average	=	Equals
12/31/2016	00556	002	Oil & Grease	8.	Pounds per Day	Monthly Average	=	Equals
01/31/2017	00556	002	Oil & Grease	8.	Pounds per Day	Monthly Average	=	Equals
02/28/2017	00556	002	Oil & Grease	9.9	Pounds per Day	Monthly Average	=	Equals
03/31/2017	00556	002	Oil & Grease	8.1	Pounds per Day	Monthly Average	=	Equals
04/30/2017	00556	002	Oil & Grease	9.3	Pounds per Day	Monthly Average	=	Equals
05/31/2017	00556	002	Oil & Grease	3.7	Pounds per Day	Monthly Average	=	Equals
05/31/2017	00556	008	Oil & Grease	8.4	Pounds per Day	Monthly Average	=	Equals
06/30/2017	00556	008	Oil & Grease	11.9	Pounds per Day	Monthly Average	=	Equals
07/31/2017	00556	008	Oil & Grease	10.	Pounds per Day	Monthly Average	=	Equals
08/31/2017	00556	008	Oil & Grease	11.7	Pounds per Day	Monthly Average	=	Equals
09/30/2017	00556	008	Oil & Grease	9.6	Pounds per Day	Monthly Average	=	Equals
10/31/2017	00556	002	Oil & Grease	9.	Pounds per Day	Monthly Average	=	Equals
11/30/2017	00556	002	Oil & Grease	6.7	Pounds per Day	Monthly Average	=	Equals
12/31/2017	00556	002	Oil & Grease	8.	Pounds per Day	Monthly Average	=	Equals
01/31/2018	00556	002	Oil & Grease	7.9	Pounds per Day	Monthly Average	=	Equals
02/28/2018	00556	002	Oil & Grease	7.3	Pounds per Day	Monthly Average	=	Equals
03/31/2018	00556	002	Oil & Grease	7.9	Pounds per Day	Monthly Average	=	Equals
04/30/2018	00556	002	Oil & Grease	10.3	Pounds per Day	Monthly Average	=	Equals
04/30/2018	00556	008	Oil & Grease	15.4	Pounds per Day	Monthly Average	=	Equals
05/31/2018	00556	008	Oil & Grease	9.	Pounds per Day	Monthly Average	=	Equals
06/30/2018	00556	008	Oil & Grease	10.	Pounds per Day	Monthly Average	=	Equals
07/31/2018	00556	008	Oil & Grease	8.6	Pounds per Day	Monthly Average	=	Equals
08/31/2018	00556	008	Oil & Grease	12.	Pounds per Day	Monthly Average	=	Equals
09/30/2018	00556	008	Oil & Grease	7.8	Pounds per Day	Monthly Average	=	Equals
10/31/2018	00556	002	Oil & Grease	7.5	Pounds per Day	Monthly Average	=	Equals
11/30/2018	00556	002	Oil & Grease	8.7	Pounds per Day	Monthly Average	=	Equals
12/31/2018	00556	002	Oil & Grease	9.	Pounds per Day	Monthly Average	=	Equals
01/31/2019	00556	002	Oil & Grease	7.8	Pounds per Day	Monthly Average	=	Equals
02/28/2019	00556	002	Oil & Grease	7.6	Pounds per Day	Monthly Average	=	Equals
03/31/2019	00556	002	Oil & Grease	8.9	Pounds per Day	Monthly Average	=	Equals
04/30/2019	00556	002	Oil & Grease	8.2	Pounds per Day	Monthly Average	=	Equals
05/31/2019	00556	008	Oil & Grease	6.7	Pounds per Day	Monthly Average	=	Equals
06/30/2019	00556	008	Oil & Grease	7.8	Pounds per Day	Monthly Average	=	Equals
07/31/2019	00556	008	Oil & Grease	7.8	Pounds per Day	Monthly Average	=	Equals
08/31/2019	00556	008	Oil & Grease	11.6	Pounds per Day	Monthly Average	=	Equals
09/30/2019	00556	008	Oil & Grease	9.	Pounds per Day	Monthly Average	=	Equals
10/31/2019	00556	002	Oil & Grease	9.3	Pounds per Day	Monthly Average	=	Equals
11/30/2019	00556	002	Oil & Grease	10.4	Pounds per Day	Monthly Average	=	Equals
12/31/2019	00556	002	Oil & Grease	7.4	Pounds per Day	Monthly Average	=	Equals
01/31/2020	00556	002	Oil & Grease	8.5	Pounds per Day	Monthly Average	=	Equals
02/29/2020	00556	002	Oil & Grease	8.5	Pounds per Day	Monthly Average	=	Equals
03/31/2020	00556	002	Oil & Grease	10.6	Pounds per Day	Monthly Average	=	Equals
04/30/2020	00556	002	Oil & Grease	10.7	Pounds per Day	Monthly Average	=	Equals
05/31/2020	00556	008	Oil & Grease	6.8	Pounds per Day	Monthly Average	=	Equals
06/30/2020	00556	008	Oil & Grease	8.1	Pounds per Day	Monthly Average	=	Equals
07/31/2020	00556	008	Oil & Grease	11.2	Pounds per Day	Monthly Average	=	Equals
08/31/2020	00556	008	Oil & Grease	8.4	Pounds per Day	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
09/30/2020	00556	008	Oil & Grease	8.3	Pounds per Day	Monthly Average	=	Equals
10/31/2020	00556	002	Oil & Grease	8.1	Pounds per Day	Monthly Average	=	Equals
11/30/2020	00556	002	Oil & Grease	7.7	Pounds per Day	Monthly Average	=	Equals
12/31/2020	00556	002	Oil & Grease	8.8	Pounds per Day	Monthly Average	=	Equals
01/31/2021	00556	002	Oil & Grease	6.7	Pounds per Day	Monthly Average	=	Equals
02/28/2021	00556	002	Oil & Grease	7.4	Pounds per Day	Monthly Average	=	Equals
03/31/2021	00556	002	Oil & Grease	8.9	Pounds per Day	Monthly Average	=	Equals
04/30/2021	00556	002	Oil & Grease	9.7	Pounds per Day	Monthly Average	=	Equals
05/31/2021	00556	008	Oil & Grease	8.2	Pounds per Day	Monthly Average	=	Equals
06/30/2021	00556	008	Oil & Grease	8.2	Pounds per Day	Monthly Average	=	Equals
07/31/2021	00556	008	Oil & Grease	9.	Pounds per Day	Monthly Average	=	Equals
08/31/2021	00556	008	Oil & Grease	9.4	Pounds per Day	Monthly Average	=	Equals
09/30/2021	00556	008	Oil & Grease	9.4	Pounds per Day	Monthly Average	=	Equals
10/31/2021	00556	002	Oil & Grease	8.1	Pounds per Day	Monthly Average	=	Equals
11/30/2021	00556	002	Oil & Grease	8.4	Pounds per Day	Monthly Average	=	Equals
12/31/2021	00556	002	Oil & Grease	7.	Pounds per Day	Monthly Average	=	Equals
01/31/2022	00556	002	Oil & Grease	8.8	Pounds per Day	Monthly Average	=	Equals
02/28/2022	00556	002	Oil & Grease	7.7	Pounds per Day	Monthly Average	=	Equals
03/31/2022	00556	002	Oil & Grease	8.4	Pounds per Day	Monthly Average	=	Equals

Table 27: pH, Minimum, Effluent

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2010	00400	002	pH	7.72	Standard Units	Instantaneous Minimum		
04/30/2010	00400	002	pH	7.84	Standard Units	Instantaneous Minimum		
05/31/2010	00400	002	pH	7.7	Standard Units	Instantaneous Minimum		
05/31/2010	00400	008	pH	7.29	Standard Units	Instantaneous Minimum		
06/30/2010	00400	002	pH	7.22	Standard Units	Instantaneous Minimum		
07/31/2010	00400	002	pH	7.53	Standard Units	Instantaneous Minimum		
08/31/2010	00400	002	pH	7.79	Standard Units	Instantaneous Minimum		
09/30/2010	00400	002	pH	7.16	Standard Units	Instantaneous Minimum		
10/31/2010	00400	002	pH	6.73	Standard Units	Instantaneous Minimum		
11/30/2010	00400	002	pH	7.13	Standard Units	Instantaneous Minimum		
12/31/2010	00400	002	pH	7.29	Standard Units	Instantaneous Minimum		
01/31/2011	00400	002	pH	7.43	Standard Units	Instantaneous Minimum		
02/28/2011	00400	002	pH	7.09	Standard Units	Instantaneous Minimum		
02/28/2011	00400	008	pH	7.09	Standard Units	Instantaneous Minimum		
03/31/2011	00400	002	pH	7.25	Standard Units	Instantaneous Minimum		
03/31/2011	00400	008	pH	7.25	Standard Units	Instantaneous Minimum		
04/30/2011	00400	002	pH	7.29	Standard Units	Instantaneous Minimum	=	Equals
05/31/2011	00400	002	pH	7.5	Standard Units	Instantaneous Minimum		
05/31/2011	00400	008	pH	7.5	Standard Units	Instantaneous Minimum		
06/30/2011	00400	002	pH	7.62	Standard Units	Instantaneous Minimum		
06/30/2011	00400	008	pH	7.62	Standard Units	Instantaneous Minimum		
07/31/2011	00400	002	pH	7.41	Standard Units	Instantaneous Minimum		
07/31/2011	00400	008	pH	7.41	Standard Units	Instantaneous Minimum		
08/31/2011	00400	002	pH	7.21	Standard Units	Instantaneous Minimum		
08/31/2011	00400	008	pH	7.21	Standard Units	Instantaneous Minimum		
09/30/2011	00400	002	pH	7.08	Standard Units	Instantaneous Minimum		
09/30/2011	00400	008	pH	7.08	Standard Units	Instantaneous Minimum		
10/31/2011	00400	002	pH	7.06	Standard Units	Instantaneous Minimum		
11/30/2011	00400	002	pH	7.45	Standard Units	Instantaneous Minimum		
12/31/2011	00400	002	pH	7.34	Standard Units	Instantaneous Minimum		
01/31/2012	00400	002	pH	7.26	Standard Units	Instantaneous Minimum		
02/29/2012	00400	002	pH	7.49	Standard Units	Instantaneous Minimum	=	Equals
03/31/2012	00400	002	pH	7.36	Standard Units	Instantaneous Minimum		
04/30/2012	00400	002	pH	7.76	Standard Units	Instantaneous Minimum		
05/31/2012	00400	002	pH	6.95	Standard Units	Instantaneous Minimum		

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
06/30/2012	00400	002	pH	6.92	Standard Units	Instantaneous Minimum		
07/31/2012	00400	002	pH	7.67	Standard Units	Instantaneous Minimum		
08/31/2012	00400	002	pH	7.3	Standard Units	Instantaneous Minimum		
09/30/2012	00400	002	pH	7.45	Standard Units	Instantaneous Minimum		
10/31/2012	00400	002	pH	7.22	Standard Units	Instantaneous Minimum		
11/30/2012	00400	002	pH	7.15	Standard Units	Instantaneous Minimum	=	Equals
12/31/2012	00400	002	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
01/31/2013	00400	002	pH	7.05	Standard Units	Instantaneous Minimum	=	Equals
02/28/2013	00400	002	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
03/31/2013	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
04/30/2013	00400	002	pH	7.16	Standard Units	Instantaneous Minimum	=	Equals
05/31/2013	00400	002	pH	7.27	Standard Units	Instantaneous Minimum	=	Equals
06/30/2013	00400	002	pH	7.41	Standard Units	Instantaneous Minimum	=	Equals
07/31/2013	00400	002	pH	7.44	Standard Units	Instantaneous Minimum	=	Equals
08/31/2013	00400	002	pH	7.42	Standard Units	Instantaneous Minimum	=	Equals
09/30/2013	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
10/31/2013	00400	002	pH	7.3	Standard Units	Instantaneous Minimum	=	Equals
11/30/2013	00400	002	pH	7.23	Standard Units	Instantaneous Minimum	=	Equals
12/31/2013	00400	002	pH	7.22	Standard Units	Instantaneous Minimum	=	Equals
01/31/2014	00400	002	pH	7.16	Standard Units	Instantaneous Minimum	=	Equals
02/28/2014	00400	002	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
03/31/2014	00400	002	pH	6.89	Standard Units	Instantaneous Minimum	=	Equals
04/30/2014	00400	002	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
05/31/2014	00400	002	pH	7.38	Standard Units	Instantaneous Minimum	=	Equals
06/30/2014	00400	002	pH	7.07	Standard Units	Instantaneous Minimum	=	Equals
07/31/2014	00400	002	pH	7.04	Standard Units	Instantaneous Minimum	=	Equals
08/31/2014	00400	002	pH	6.8	Standard Units	Instantaneous Minimum	=	Equals
09/30/2014	00400	002	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
10/31/2014	00400	002	pH	7.22	Standard Units	Instantaneous Minimum	=	Equals
11/30/2014	00400	002	pH	7.58	Standard Units	Instantaneous Minimum	=	Equals
12/31/2014	00400	002	pH	7.35	Standard Units	Instantaneous Minimum	=	Equals
01/31/2015	00400	002	pH	7.19	Standard Units	Instantaneous Minimum	=	Equals
02/28/2015	00400	002	pH	7.15	Standard Units	Instantaneous Minimum	=	Equals
03/31/2015	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
04/30/2015	00400	002	pH	7.15	Standard Units	Instantaneous Minimum	=	Equals
05/31/2015	00400	002	pH	6.83	Standard Units	Instantaneous Minimum	=	Equals
06/30/2015	00400	002	pH	6.5	Standard Units	Instantaneous Minimum	=	Equals
07/31/2015	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
08/31/2015	00400	002	pH	6.63	Standard Units	Instantaneous Minimum	=	Equals
09/30/2015	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
10/31/2015	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
11/30/2015	00400	002	pH	6.5	Standard Units	Instantaneous Minimum	=	Equals
12/31/2015	00400	002	pH	6.6	Standard Units	Instantaneous Minimum	=	Equals
01/31/2016	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
02/29/2016	00400	002	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
03/31/2016	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
04/30/2016	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
05/31/2016	00400	002	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
06/30/2016	00400	002	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
07/31/2016	00400	002	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
07/31/2016	00400	008	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
08/31/2016	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
09/30/2016	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
10/31/2016	00400	002	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
11/30/2016	00400	002	pH	7.5	Standard Units	Instantaneous Minimum	=	Equals
12/31/2016	00400	002	pH	7.6	Standard Units	Instantaneous Minimum	=	Equals
01/31/2017	00400	002	pH	7.7	Standard Units	Instantaneous Minimum	=	Equals
02/28/2017	00400	002	pH	7.7	Standard Units	Instantaneous Minimum	=	Equals
03/31/2017	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
04/30/2017	00400	002	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
05/31/2017	00400	002	pH	7.4	Standard Units	Instantaneous Minimum	=	Equals
05/31/2017	00400	008	pH	7.5	Standard Units	Instantaneous Minimum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
06/30/2017	00400	008	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
07/31/2017	00400	008	pH	7.5	Standard Units	Instantaneous Minimum	=	Equals
08/31/2017	00400	008	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
09/30/2017	00400	008	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
10/31/2017	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
11/30/2017	00400	002	pH	6.8	Standard Units	Instantaneous Minimum	=	Equals
12/31/2017	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
01/31/2018	00400	002	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
02/28/2018	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
03/31/2018	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
04/30/2018	00400	002	pH	6.6	Standard Units	Instantaneous Minimum	=	Equals
04/30/2018	00400	008	pH	7.3	Standard Units	Instantaneous Minimum	=	Equals
05/31/2018	00400	008	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
06/30/2018	00400	008	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
07/31/2018	00400	008	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
08/31/2018	00400	008	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
09/30/2018	00400	008	pH	7.4	Standard Units	Instantaneous Minimum	=	Equals
10/31/2018	00400	002	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
11/30/2018	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
12/31/2018	00400	002	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
01/31/2019	00400	002	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
02/28/2019	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
03/31/2019	00400	002	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
04/30/2019	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
05/31/2019	00400	008	pH	6.8	Standard Units	Instantaneous Minimum	=	Equals
06/30/2019	00400	008	pH	6.8	Standard Units	Instantaneous Minimum	=	Equals
07/31/2019	00400	008	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
08/31/2019	00400	008	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
09/30/2019	00400	008	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
10/31/2019	00400	002	pH	6.8	Standard Units	Instantaneous Minimum	=	Equals
11/30/2019	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
12/31/2019	00400	002	pH	6.6	Standard Units	Instantaneous Minimum	=	Equals
01/31/2020	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
02/29/2020	00400	002	pH	6.8	Standard Units	Instantaneous Minimum	=	Equals
03/31/2020	00400	002	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
04/30/2020	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
05/31/2020	00400	008	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
06/30/2020	00400	008	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
07/31/2020	00400	008	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
08/31/2020	00400	008	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals
09/30/2020	00400	008	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
10/31/2020	00400	002	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
11/30/2020	00400	002	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
12/31/2020	00400	002	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
01/31/2021	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
02/28/2021	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
03/31/2021	00400	002	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
04/30/2021	00400	002	pH	7.3	Standard Units	Instantaneous Minimum	=	Equals
05/31/2021	00400	008	pH	7.	Standard Units	Instantaneous Minimum	=	Equals
06/30/2021	00400	008	pH	6.7	Standard Units	Instantaneous Minimum	=	Equals
07/31/2021	00400	008	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
08/31/2021	00400	008	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
09/30/2021	00400	008	pH	7.2	Standard Units	Instantaneous Minimum	=	Equals
10/31/2021	00400	002	pH	7.3	Standard Units	Instantaneous Minimum	=	Equals
11/30/2021	00400	002	pH	6.9	Standard Units	Instantaneous Minimum	=	Equals
12/31/2021	00400	002	pH	7.4	Standard Units	Instantaneous Minimum	=	Equals
01/31/2022	00400	002	pH	7.3	Standard Units	Instantaneous Minimum	=	Equals
02/28/2022	00400	002	pH	7.6	Standard Units	Instantaneous Minimum	=	Equals
03/31/2022	00400	002	pH	7.1	Standard Units	Instantaneous Minimum	=	Equals

Table 28: pH, Maximum, Effluent

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2010	00400	002	pH	8.25	Standard Units	Instantaneous Maximum		
04/30/2010	00400	002	pH	8.39	Standard Units	Instantaneous Maximum		
05/31/2010	00400	002	pH	8.1	Standard Units	Instantaneous Maximum		
05/31/2010	00400	008	pH	8.02	Standard Units	Instantaneous Maximum		
06/30/2010	00400	002	pH	8.08	Standard Units	Instantaneous Maximum		
07/31/2010	00400	002	pH	8.27	Standard Units	Instantaneous Maximum		
08/31/2010	00400	002	pH	8.28	Standard Units	Instantaneous Maximum		
09/30/2010	00400	002	pH	8.42	Standard Units	Instantaneous Maximum		
10/31/2010	00400	002	pH	8.42	Standard Units	Instantaneous Maximum		
11/30/2010	00400	002	pH	8.26	Standard Units	Instantaneous Maximum		
12/31/2010	00400	002	pH	8.21	Standard Units	Instantaneous Maximum		
01/31/2011	00400	002	pH	8.19	Standard Units	Instantaneous Maximum		
02/28/2011	00400	002	pH	8.04	Standard Units	Instantaneous Maximum		
02/28/2011	00400	008	pH	8.04	Standard Units	Instantaneous Maximum		
03/31/2011	00400	002	pH	8.07	Standard Units	Instantaneous Maximum		
03/31/2011	00400	008	pH	8.07	Standard Units	Instantaneous Maximum		
04/30/2011	00400	002	pH	8.02	Standard Units	Instantaneous Maximum	=	Equals
05/31/2011	00400	002	pH	8.11	Standard Units	Instantaneous Maximum		
05/31/2011	00400	008	pH	8.11	Standard Units	Instantaneous Maximum		
06/30/2011	00400	002	pH	8.02	Standard Units	Instantaneous Maximum		
06/30/2011	00400	008	pH	8.02	Standard Units	Instantaneous Maximum		
07/31/2011	00400	002	pH	8.04	Standard Units	Instantaneous Maximum		
07/31/2011	00400	008	pH	8.04	Standard Units	Instantaneous Maximum		
08/31/2011	00400	002	pH	8.06	Standard Units	Instantaneous Maximum		
08/31/2011	00400	008	pH	8.06	Standard Units	Instantaneous Maximum		
09/30/2011	00400	002	pH	7.85	Standard Units	Instantaneous Maximum		
09/30/2011	00400	008	pH	7.85	Standard Units	Instantaneous Maximum		
10/31/2011	00400	002	pH	7.92	Standard Units	Instantaneous Maximum		
11/30/2011	00400	002	pH	7.85	Standard Units	Instantaneous Maximum		
12/31/2011	00400	002	pH	7.82	Standard Units	Instantaneous Maximum		
01/31/2012	00400	002	pH	7.84	Standard Units	Instantaneous Maximum		
02/29/2012	00400	002	pH	8.02	Standard Units	Instantaneous Maximum	=	Equals
03/31/2012	00400	002	pH	8.02	Standard Units	Instantaneous Maximum		
04/30/2012	00400	002	pH	7.97	Standard Units	Instantaneous Maximum		
05/31/2012	00400	002	pH	8.13	Standard Units	Instantaneous Maximum		
06/30/2012	00400	002	pH	8.	Standard Units	Instantaneous Maximum		
07/31/2012	00400	002	pH	7.98	Standard Units	Instantaneous Maximum		
08/31/2012	00400	002	pH	8.11	Standard Units	Instantaneous Maximum		
09/30/2012	00400	002	pH	8.08	Standard Units	Instantaneous Maximum		
10/31/2012	00400	002	pH	7.85	Standard Units	Instantaneous Maximum		
11/30/2012	00400	002	pH	7.98	Standard Units	Instantaneous Maximum	=	Equals
12/31/2012	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
01/31/2013	00400	002	pH	7.94	Standard Units	Instantaneous Maximum	=	Equals
02/28/2013	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
03/31/2013	00400	002	pH	7.83	Standard Units	Instantaneous Maximum	=	Equals
04/30/2013	00400	002	pH	8.14	Standard Units	Instantaneous Maximum	=	Equals
05/31/2013	00400	002	pH	8.06	Standard Units	Instantaneous Maximum	=	Equals
06/30/2013	00400	002	pH	8.09	Standard Units	Instantaneous Maximum	=	Equals
07/31/2013	00400	002	pH	7.88	Standard Units	Instantaneous Maximum	=	Equals
08/31/2013	00400	002	pH	7.91	Standard Units	Instantaneous Maximum	=	Equals
09/30/2013	00400	002	pH	7.98	Standard Units	Instantaneous Maximum	=	Equals
10/31/2013	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
11/30/2013	00400	002	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
12/31/2013	00400	002	pH	7.53	Standard Units	Instantaneous Maximum	=	Equals
01/31/2014	00400	002	pH	7.63	Standard Units	Instantaneous Maximum	=	Equals
02/28/2014	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
03/31/2014	00400	002	pH	7.59	Standard Units	Instantaneous Maximum	=	Equals
04/30/2014	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
05/31/2014	00400	002	pH	7.75	Standard Units	Instantaneous Maximum	=	Equals
06/30/2014	00400	002	pH	7.91	Standard Units	Instantaneous Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
07/31/2014	00400	002	pH	7.85	Standard Units	Instantaneous Maximum	=	Equals
08/31/2014	00400	002	pH	7.69	Standard Units	Instantaneous Maximum	=	Equals
09/30/2014	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
10/31/2014	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
11/30/2014	00400	002	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
12/31/2014	00400	002	pH	8.14	Standard Units	Instantaneous Maximum	=	Equals
01/31/2015	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
02/28/2015	00400	002	pH	7.84	Standard Units	Instantaneous Maximum	=	Equals
03/31/2015	00400	002	pH	7.81	Standard Units	Instantaneous Maximum	=	Equals
04/30/2015	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
05/31/2015	00400	002	pH	7.83	Standard Units	Instantaneous Maximum	=	Equals
06/30/2015	00400	002	pH	7.76	Standard Units	Instantaneous Maximum	=	Equals
07/31/2015	00400	002	pH	7.76	Standard Units	Instantaneous Maximum	=	Equals
08/31/2015	00400	002	pH	7.55	Standard Units	Instantaneous Maximum	=	Equals
09/30/2015	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
10/31/2015	00400	002	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
11/30/2015	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
12/31/2015	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
01/31/2016	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
02/29/2016	00400	002	pH	8.1	Standard Units	Instantaneous Maximum	=	Equals
03/31/2016	00400	002	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
04/30/2016	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
05/31/2016	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
06/30/2016	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
07/31/2016	00400	002	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
07/31/2016	00400	008	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
08/31/2016	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
09/30/2016	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
10/31/2016	00400	002	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
11/30/2016	00400	002	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
12/31/2016	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
01/31/2017	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
02/28/2017	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
03/31/2017	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
04/30/2017	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
05/31/2017	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
05/31/2017	00400	008	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
06/30/2017	00400	008	pH	8.2	Standard Units	Instantaneous Maximum	=	Equals
07/31/2017	00400	008	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
08/31/2017	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
09/30/2017	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
10/31/2017	00400	002	pH	7.4	Standard Units	Instantaneous Maximum	=	Equals
11/30/2017	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
12/31/2017	00400	002	pH	7.2	Standard Units	Instantaneous Maximum	=	Equals
01/31/2018	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
02/28/2018	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
03/31/2018	00400	002	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
04/30/2018	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
04/30/2018	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
05/31/2018	00400	008	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
06/30/2018	00400	008	pH	7.5	Standard Units	Instantaneous Maximum	=	Equals
07/31/2018	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
08/31/2018	00400	008	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
09/30/2018	00400	008	pH	8.4	Standard Units	Instantaneous Maximum	=	Equals
10/31/2018	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
11/30/2018	00400	002	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
12/31/2018	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
01/31/2019	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
02/28/2019	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
03/31/2019	00400	002	pH	7.5	Standard Units	Instantaneous Maximum	=	Equals
04/30/2019	00400	002	pH	7.5	Standard Units	Instantaneous Maximum	=	Equals
05/31/2019	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
06/30/2019	00400	008	pH	7.5	Standard Units	Instantaneous Maximum	=	Equals
07/31/2019	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
08/31/2019	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
09/30/2019	00400	008	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
10/31/2019	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
11/30/2019	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
12/31/2019	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
01/31/2020	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
02/29/2020	00400	002	pH	7.3	Standard Units	Instantaneous Maximum	=	Equals
03/31/2020	00400	002	pH	7.5	Standard Units	Instantaneous Maximum	=	Equals
04/30/2020	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
05/31/2020	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
06/30/2020	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
07/31/2020	00400	008	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
08/31/2020	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
09/30/2020	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
10/31/2020	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
11/30/2020	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
12/31/2020	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
01/31/2021	00400	002	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
02/28/2021	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
03/31/2021	00400	002	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
04/30/2021	00400	002	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
05/31/2021	00400	008	pH	7.5	Standard Units	Instantaneous Maximum	=	Equals
06/30/2021	00400	008	pH	7.6	Standard Units	Instantaneous Maximum	=	Equals
07/31/2021	00400	008	pH	7.8	Standard Units	Instantaneous Maximum	=	Equals
08/31/2021	00400	008	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
09/30/2021	00400	008	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
10/31/2021	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
11/30/2021	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals
12/31/2021	00400	002	pH	8.	Standard Units	Instantaneous Maximum	=	Equals
01/31/2022	00400	002	pH	8.2	Standard Units	Instantaneous Maximum	=	Equals
02/28/2022	00400	002	pH	7.9	Standard Units	Instantaneous Maximum	=	Equals
03/31/2022	00400	002	pH	7.7	Standard Units	Instantaneous Maximum	=	Equals

Table 29: Salinity, Effluent

Sample Date	Salinity (ppm)
3/19/2012	2600
3/21/2012	2400
3/23/2012	2300
6/25/2012	2500
6/27/2012	2600
6/29/2012	2300
9/17/2012	2300
9/19/2012	2300
9/21/2012	2200
12/10/2012	2100
12/12/2012	2000
12/14/2012	2100
3/25/2013	2400
3/27/2013	2100
3/29/2013	2200
6/17/2013	2400
6/19/2013	2200
6/21/2013	2400
10/7/2013	2200
10/9/2013	2300
10/11/2013	2400
12/9/2013	2300
12/11/2013	2300

Sample Date	Salinity (ppm)
12/13/2013	2000
3/10/2014	2200
3/12/2014	2200
3/14/2014	2100
6/2/2014	2700
6/4/2014	2300
Minimum	2000
Median	2300
Average	2290
Maximum	2700
Standard Deviation	172
CV	0.075
Count	29

Table 30: Total Suspended Solids Concentration, Effluent, Maximum

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2010	00530	002	Solids, total suspended	25.3	Milligrams per Liter	Daily Maximum		
04/30/2010	00530	002	Solids, total suspended	20.	Milligrams per Liter	Daily Maximum		
05/31/2010	00530	002	Solids, total suspended	16.	Milligrams per Liter	Daily Maximum		
05/31/2010	00530	008	Solids, total suspended	77.1	Milligrams per Liter	Daily Maximum		
06/30/2010	00530	002	Solids, total suspended	16.	Milligrams per Liter	Daily Maximum		
07/31/2010	00530	002	Solids, total suspended	15.	Milligrams per Liter	Daily Maximum		
08/31/2010	00530	002	Solids, total suspended	36.	Milligrams per Liter	Daily Maximum		
09/30/2010	00530	002	Solids, total suspended	47.	Milligrams per Liter	Daily Maximum		
10/31/2010	00530	002	Solids, total suspended	30.	Milligrams per Liter	Daily Maximum		
11/30/2010	00530	002	Solids, total suspended	25.	Milligrams per Liter	Daily Maximum		
12/31/2010	00530	002	Solids, total suspended	44.	Milligrams per Liter	Daily Maximum		
01/31/2011	00530	002	Solids, total suspended	39.	Milligrams per Liter	Daily Maximum		
02/28/2011	00530	002	Solids, total suspended	37.	Milligrams per Liter	Daily Maximum		
02/28/2011	00530	008	Solids, total suspended	37.	Milligrams per Liter	Daily Maximum		
03/31/2011	00530	002	Solids, total suspended	20.	Milligrams per Liter	Daily Maximum		
03/31/2011	00530	008	Solids, total suspended	20.	Milligrams per Liter	Daily Maximum		
04/30/2011	00530	002	Solids, total suspended	77.1	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2011	00530	002	Solids, total suspended	17.	Milligrams per Liter	Daily Maximum		
05/31/2011	00530	008	Solids, total suspended	17.	Milligrams per Liter	Daily Maximum		
06/30/2011	00530	002	Solids, total suspended	16.	Milligrams per Liter	Daily Maximum		
06/30/2011	00530	008	Solids, total suspended	16.	Milligrams per Liter	Daily Maximum		
07/31/2011	00530	002	Solids, total suspended	22.	Milligrams per Liter	Daily Maximum		
07/31/2011	00530	008	Solids, total suspended	22.	Milligrams per Liter	Daily Maximum		
08/31/2011	00530	002	Solids, total suspended	34.	Milligrams per Liter	Daily Maximum		
08/31/2011	00530	008	Solids, total suspended	34.	Milligrams per Liter	Daily Maximum		
09/30/2011	00530	002	Solids, total suspended	69.3	Milligrams per Liter	Daily Maximum		
09/30/2011	00530	008	Solids, total suspended	69.3	Milligrams per Liter	Daily Maximum		
10/31/2011	00530	002	Solids, total suspended	52.	Milligrams per Liter	Daily Maximum		
11/30/2011	00530	002	Solids, total suspended	32.	Milligrams per Liter	Daily Maximum		
12/31/2011	00530	002	Solids, total suspended	31.	Milligrams per Liter	Daily Maximum		
01/31/2012	00530	002	Solids, total suspended	52.	Milligrams per Liter	Daily Maximum		
02/29/2012	00530	002	Solids, total suspended	57.5	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2012	00530	002	Solids, total suspended	19.	Milligrams per Liter	Daily Maximum		
04/30/2012	00530	002	Solids, total suspended	17.	Milligrams per Liter	Daily Maximum		
05/31/2012	00530	002	Solids, total suspended	16.	Milligrams per Liter	Daily Maximum		
06/30/2012	00530	002	Solids, total suspended	8.	Milligrams per Liter	Daily Maximum		
07/31/2012	00530	002	Solids, total suspended	5.	Milligrams per Liter	Daily Maximum		
08/31/2012	00530	002	Solids, total suspended	11.	Milligrams per Liter	Daily Maximum		
09/30/2012	00530	002	Solids, total suspended	15.	Milligrams per Liter	Daily Maximum		
10/31/2012	00530	002	Solids, total suspended	4.7	Milligrams per Liter	Daily Maximum		
11/30/2012	00530	002	Solids, total suspended	28.	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2012	00530	002	Solids, total suspended	43.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2013	00530	002	Solids, total suspended	24.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2013	00530	002	Solids, total suspended	12.	Milligrams per Liter	Daily Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2013	00530	002	Solids, total suspended	14.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2013	00530	002	Solids, total suspended	13.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2013	00530	002	Solids, total suspended	25.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2013	00530	002	Solids, total suspended	16.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2013	00530	002	Solids, total suspended	15.	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2013	00530	002	Solids, total suspended	7.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2013	00530	002	Solids, total suspended	55.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2013	00530	002	Solids, total suspended	8.5	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2013	00530	002	Solids, total suspended	8.5	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2013	00530	002	Solids, total suspended	13.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2014	00530	002	Solids, total suspended	11.5	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2014	00530	002	Solids, total suspended	23.	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2014	00530	002	Solids, total suspended	34.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2014	00530	002	Solids, total suspended	24.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2014	00530	002	Solids, total suspended	17.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2014	00530	002	Solids, total suspended	15.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2014	00530	002	Solids, total suspended	8.5	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2014	00530	002	Solids, total suspended	9.5	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2014	00530	002	Solids, total suspended	13.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2014	00530	002	Solids, total suspended	19.	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2014	00530	002	Solids, total suspended	25.	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2014	00530	002	Solids, total suspended	35.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2015	00530	002	Solids, total suspended	48.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2015	00530	002	Solids, total suspended	21.3	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2015	00530	002	Solids, total suspended	69.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2015	00530	002	Solids, total suspended	31.4	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2015	00530	002	Solids, total suspended	17.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2015	00530	002	Solids, total suspended	19.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2015	00530	002	Solids, total suspended	33.8	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2015	00530	002	Solids, total suspended	19.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2015	00530	002	Solids, total suspended	25.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2015	00530	002	Solids, total suspended	8.	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2015	00530	002	Solids, total suspended	36.	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2015	00530	002	Solids, total suspended	40.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2016	00530	002	Solids, total suspended	52.	Milligrams per Liter	Daily Maximum	=	Equals
02/29/2016	00530	002	Solids, total suspended	31.	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2016	00530	002	Solids, total suspended	24.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2016	00530	002	Solids, total suspended	15.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2016	00530	002	Solids, total suspended	19.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2016	00530	002	Solids, total suspended	25.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2016	00530	002	Solids, total suspended	16.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2016	00530	008	Solids, total suspended	16.	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2016	00530	002	Solids, total suspended	23.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2016	00530	002	Solids, total suspended	15.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2016	00530	002	Solids, total suspended	73.	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2016	00530	002	Solids, total suspended	46.	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2016	00530	002	Solids, total suspended	72.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2017	00530	002	Solids, total suspended	17.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2017	00530	002	Solids, total suspended	71.	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2017	00530	002	Solids, total suspended	30.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2017	00530	002	Solids, total suspended	20.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2017	00530	002	Solids, total suspended	5.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2017	00530	008	Solids, total suspended	6.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2017	00530	008	Solids, total suspended	9.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2017	00530	008	Solids, total suspended	5.	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2017	00530	008	Solids, total suspended	8.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2017	00530	008	Solids, total suspended	68.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2017	00530	002	Solids, total suspended	24.	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2017	00530	002	Solids, total suspended	14.	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2017	00530	002	Solids, total suspended	25.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2018	00530	002	Solids, total suspended	19.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2018	00530	002	Solids, total suspended	26.	Milligrams per Liter	Daily Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2018	00530	002	Solids, total suspended	37.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2018	00530	002	Solids, total suspended	24.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2018	00530	008	Solids, total suspended	7.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2018	00530	008	Solids, total suspended	28.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2018	00530	008	Solids, total suspended	27.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2018	00530	008	Solids, total suspended	17.	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2018	00530	008	Solids, total suspended	72.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2018	00530	008	Solids, total suspended	18.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2018	00530	002	Solids, total suspended	23.	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2018	00530	002	Solids, total suspended	47.	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2018	00530	002	Solids, total suspended	23.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2019	00530	002	Solids, total suspended	37.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2019	00530	002	Solids, total suspended	5.	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2019	00530	002	Solids, total suspended	18.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2019	00530	002	Solids, total suspended	15.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2019	00530	008	Solids, total suspended	34.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2019	00530	008	Solids, total suspended	24.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2019	00530	008	Solids, total suspended	36.	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2019	00530	008	Solids, total suspended	28.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2019	00530	008	Solids, total suspended	15.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2019	00530	002	Solids, total suspended	33.	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2019	00530	002	Solids, total suspended	57.	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2019	00530	002	Solids, total suspended	23.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2020	00530	002	Solids, total suspended	77.	Milligrams per Liter	Daily Maximum	=	Equals
02/29/2020	00530	002	Solids, total suspended	22.	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2020	00530	002	Solids, total suspended	40.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2020	00530	002	Solids, total suspended	23.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2020	00530	008	Solids, total suspended	13.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2020	00530	008	Solids, total suspended	31.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2020	00530	008	Solids, total suspended	56.	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2020	00530	008	Solids, total suspended	31.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2020	00530	008	Solids, total suspended	22.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2020	00530	002	Solids, total suspended	44.	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2020	00530	002	Solids, total suspended	32.	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2020	00530	002	Solids, total suspended	62.	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2021	00530	002	Solids, total suspended	26.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2021	00530	002	Solids, total suspended	19.	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2021	00530	002	Solids, total suspended	60.	Milligrams per Liter	Daily Maximum	=	Equals
04/30/2021	00530	002	Solids, total suspended	42.	Milligrams per Liter	Daily Maximum	=	Equals
05/31/2021	00530	008	Solids, total suspended	30.	Milligrams per Liter	Daily Maximum	=	Equals
06/30/2021	00530	008	Solids, total suspended	43.	Milligrams per Liter	Daily Maximum	=	Equals
07/31/2021	00530	008	Solids, total suspended	24.	Milligrams per Liter	Daily Maximum	=	Equals
08/31/2021	00530	008	Solids, total suspended	37.	Milligrams per Liter	Daily Maximum	=	Equals
09/30/2021	00530	008	Solids, total suspended	21.	Milligrams per Liter	Daily Maximum	=	Equals
10/31/2021	00530	002	Solids, total suspended	10.	Milligrams per Liter	Daily Maximum	=	Equals
11/30/2021	00530	002	Solids, total suspended	20.4	Milligrams per Liter	Daily Maximum	=	Equals
12/31/2021	00530	002	Solids, total suspended	8.5	Milligrams per Liter	Daily Maximum	=	Equals
01/31/2022	00530	002	Solids, total suspended	20.	Milligrams per Liter	Daily Maximum	=	Equals
02/28/2022	00530	002	Solids, total suspended	9.	Milligrams per Liter	Daily Maximum	=	Equals
03/31/2022	00530	002	Solids, total suspended	15.1	Milligrams per Liter	Daily Maximum	=	Equals

Table 31: Total Suspended Solids Concentration, Effluent, Monthly Average

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2010	00530	002	Solids, total suspended	12.	Milligrams per Liter	Monthly Average		
04/30/2010	00530	002	Solids, total suspended	7.4	Milligrams per Liter	Monthly Average		
05/31/2010	00530	002	Solids, total suspended	8.5	Milligrams per Liter	Monthly Average		
05/31/2010	00530	008	Solids, total suspended	19.6	Milligrams per Liter	Monthly Average		
06/30/2010	00530	002	Solids, total suspended	7.8	Milligrams per Liter	Monthly Average		
07/31/2010	00530	002	Solids, total suspended	8.6	Milligrams per Liter	Monthly Average		
08/31/2010	00530	002	Solids, total suspended	14.1	Milligrams per Liter	Monthly Average		
09/30/2010	00530	002	Solids, total suspended	17.9	Milligrams per Liter	Monthly Average		
10/31/2010	00530	002	Solids, total suspended	12.9	Milligrams per Liter	Monthly Average		
11/30/2010	00530	002	Solids, total suspended	9.9	Milligrams per Liter	Monthly Average		
12/31/2010	00530	002	Solids, total suspended	17.2	Milligrams per Liter	Monthly Average		
01/31/2011	00530	002	Solids, total suspended	24.2	Milligrams per Liter	Monthly Average		
02/28/2011	00530	002	Solids, total suspended	21.5	Milligrams per Liter	Monthly Average		
02/28/2011	00530	008	Solids, total suspended	21.5	Milligrams per Liter	Monthly Average		
03/31/2011	00530	002	Solids, total suspended	9.7	Milligrams per Liter	Monthly Average		
03/31/2011	00530	008	Solids, total suspended	9.7	Milligrams per Liter	Monthly Average		
04/30/2011	00530	002	Solids, total suspended	19.6	Milligrams per Liter	Monthly Average	=	Equals
05/31/2011	00530	002	Solids, total suspended	7.	Milligrams per Liter	Monthly Average		
05/31/2011	00530	008	Solids, total suspended	7.	Milligrams per Liter	Monthly Average		
06/30/2011	00530	002	Solids, total suspended	7.4	Milligrams per Liter	Monthly Average		
06/30/2011	00530	008	Solids, total suspended	7.4	Milligrams per Liter	Monthly Average		
07/31/2011	00530	002	Solids, total suspended	11.9	Milligrams per Liter	Monthly Average		
07/31/2011	00530	008	Solids, total suspended	11.9	Milligrams per Liter	Monthly Average		
08/31/2011	00530	002	Solids, total suspended	16.6	Milligrams per Liter	Monthly Average		
08/31/2011	00530	008	Solids, total suspended	16.6	Milligrams per Liter	Monthly Average		
09/30/2011	00530	002	Solids, total suspended	14.9	Milligrams per Liter	Monthly Average		
09/30/2011	00530	008	Solids, total suspended	14.9	Milligrams per Liter	Monthly Average		
10/31/2011	00530	002	Solids, total suspended	20.7	Milligrams per Liter	Monthly Average		
11/30/2011	00530	002	Solids, total suspended	18.	Milligrams per Liter	Monthly Average		
12/31/2011	00530	002	Solids, total suspended	16.3	Milligrams per Liter	Monthly Average		
01/31/2012	00530	002	Solids, total suspended	27.3	Milligrams per Liter	Monthly Average		
02/29/2012	00530	002	Solids, total suspended	29.6	Milligrams per Liter	Monthly Average	=	Equals
03/31/2012	00530	002	Solids, total suspended	14.3	Milligrams per Liter	Monthly Average		
04/30/2012	00530	002	Solids, total suspended	10.	Milligrams per Liter	Monthly Average		
05/31/2012	00530	002	Solids, total suspended	6.5	Milligrams per Liter	Monthly Average		
06/30/2012	00530	002	Solids, total suspended	4.	Milligrams per Liter	Monthly Average		
07/31/2012	00530	002	Solids, total suspended	3.2	Milligrams per Liter	Monthly Average		
08/31/2012	00530	002	Solids, total suspended	3.2	Milligrams per Liter	Monthly Average		
09/30/2012	00530	002	Solids, total suspended	4.3	Milligrams per Liter	Monthly Average		
10/31/2012	00530	002	Solids, total suspended	2.2	Milligrams per Liter	Monthly Average		
11/30/2012	00530	002	Solids, total suspended	6.	Milligrams per Liter	Monthly Average	=	Equals
12/31/2012	00530	002	Solids, total suspended	10.8	Milligrams per Liter	Monthly Average	=	Equals
01/31/2013	00530	002	Solids, total suspended	9.3	Milligrams per Liter	Monthly Average	=	Equals
02/28/2013	00530	002	Solids, total suspended	5.8	Milligrams per Liter	Monthly Average	=	Equals
03/31/2013	00530	002	Solids, total suspended	6.7	Milligrams per Liter	Monthly Average	=	Equals
04/30/2013	00530	002	Solids, total suspended	4.2	Milligrams per Liter	Monthly Average	=	Equals
05/31/2013	00530	002	Solids, total suspended	12.4	Milligrams per Liter	Monthly Average	=	Equals
06/30/2013	00530	002	Solids, total suspended	8.2	Milligrams per Liter	Monthly Average	=	Equals
07/31/2013	00530	002	Solids, total suspended	5.7	Milligrams per Liter	Monthly Average	=	Equals
08/31/2013	00530	002	Solids, total suspended	4.3	Milligrams per Liter	Monthly Average	=	Equals
09/30/2013	00530	002	Solids, total suspended	27.	Milligrams per Liter	Monthly Average	=	Equals
10/31/2013	00530	002	Solids, total suspended	5.5	Milligrams per Liter	Monthly Average	=	Equals
11/30/2013	00530	002	Solids, total suspended	4.1	Milligrams per Liter	Monthly Average	=	Equals
12/31/2013	00530	002	Solids, total suspended	4.7	Milligrams per Liter	Monthly Average	=	Equals
01/31/2014	00530	002	Solids, total suspended	4.5	Milligrams per Liter	Monthly Average	=	Equals
02/28/2014	00530	002	Solids, total suspended	6.4	Milligrams per Liter	Monthly Average	=	Equals
03/31/2014	00530	002	Solids, total suspended	10.	Milligrams per Liter	Monthly Average	=	Equals
04/30/2014	00530	002	Solids, total suspended	10.1	Milligrams per Liter	Monthly Average	=	Equals
05/31/2014	00530	002	Solids, total suspended	5.7	Milligrams per Liter	Monthly Average	=	Equals
06/30/2014	00530	002	Solids, total suspended	7.1	Milligrams per Liter	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
07/31/2014	00530	002	Solids, total suspended	4.5	Milligrams per Liter	Monthly Average	=	Equals
08/31/2014	00530	002	Solids, total suspended	5.1	Milligrams per Liter	Monthly Average	=	Equals
09/30/2014	00530	002	Solids, total suspended	7.3	Milligrams per Liter	Monthly Average	=	Equals
10/31/2014	00530	002	Solids, total suspended	12.5	Milligrams per Liter	Monthly Average	=	Equals
11/30/2014	00530	002	Solids, total suspended	14.2	Milligrams per Liter	Monthly Average	=	Equals
12/31/2014	00530	002	Solids, total suspended	13.1	Milligrams per Liter	Monthly Average	=	Equals
01/31/2015	00530	002	Solids, total suspended	20.4	Milligrams per Liter	Monthly Average	=	Equals
02/28/2015	00530	002	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
03/31/2015	00530	002	Solids, total suspended	33.7	Milligrams per Liter	Monthly Average	=	Equals
04/30/2015	00530	002	Solids, total suspended	19.3	Milligrams per Liter	Monthly Average	=	Equals
05/31/2015	00530	002	Solids, total suspended	10.6	Milligrams per Liter	Monthly Average	=	Equals
06/30/2015	00530	002	Solids, total suspended	8.1	Milligrams per Liter	Monthly Average	=	Equals
07/31/2015	00530	002	Solids, total suspended	14.3	Milligrams per Liter	Monthly Average	=	Equals
08/31/2015	00530	002	Solids, total suspended	10.5	Milligrams per Liter	Monthly Average	=	Equals
09/30/2015	00530	002	Solids, total suspended	7.	Milligrams per Liter	Monthly Average	=	Equals
10/31/2015	00530	002	Solids, total suspended	4.	Milligrams per Liter	Monthly Average	=	Equals
11/30/2015	00530	002	Solids, total suspended	15.	Milligrams per Liter	Monthly Average	=	Equals
12/31/2015	00530	002	Solids, total suspended	21.	Milligrams per Liter	Monthly Average	=	Equals
01/31/2016	00530	002	Solids, total suspended	35.	Milligrams per Liter	Monthly Average	=	Equals
02/29/2016	00530	002	Solids, total suspended	20.	Milligrams per Liter	Monthly Average	=	Equals
03/31/2016	00530	002	Solids, total suspended	15.	Milligrams per Liter	Monthly Average	=	Equals
04/30/2016	00530	002	Solids, total suspended	9.	Milligrams per Liter	Monthly Average	=	Equals
05/31/2016	00530	002	Solids, total suspended	6.	Milligrams per Liter	Monthly Average	=	Equals
06/30/2016	00530	002	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
07/31/2016	00530	002	Solids, total suspended	6.	Milligrams per Liter	Monthly Average	=	Equals
07/31/2016	00530	008	Solids, total suspended	6.	Milligrams per Liter	Monthly Average	=	Equals
08/31/2016	00530	002	Solids, total suspended	9.	Milligrams per Liter	Monthly Average	=	Equals
09/30/2016	00530	002	Solids, total suspended	9.	Milligrams per Liter	Monthly Average	=	Equals
10/31/2016	00530	002	Solids, total suspended	23.	Milligrams per Liter	Monthly Average	=	Equals
11/30/2016	00530	002	Solids, total suspended	22.	Milligrams per Liter	Monthly Average	=	Equals
12/31/2016	00530	002	Solids, total suspended	24.	Milligrams per Liter	Monthly Average	=	Equals
01/31/2017	00530	002	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
02/28/2017	00530	002	Solids, total suspended	25.	Milligrams per Liter	Monthly Average	=	Equals
03/31/2017	00530	002	Solids, total suspended	10.	Milligrams per Liter	Monthly Average	=	Equals
04/30/2017	00530	002	Solids, total suspended	5.	Milligrams per Liter	Monthly Average	=	Equals
05/31/2017	00530	002	Solids, total suspended	4.	Milligrams per Liter	Monthly Average	=	Equals
05/31/2017	00530	008	Solids, total suspended	4.	Milligrams per Liter	Monthly Average	=	Equals
06/30/2017	00530	008	Solids, total suspended	5.	Milligrams per Liter	Monthly Average	=	Equals
07/31/2017	00530	008	Solids, total suspended	3.	Milligrams per Liter	Monthly Average	=	Equals
08/31/2017	00530	008	Solids, total suspended	4.	Milligrams per Liter	Monthly Average	=	Equals
09/30/2017	00530	008	Solids, total suspended	18.	Milligrams per Liter	Monthly Average	=	Equals
10/31/2017	00530	002	Solids, total suspended	5.	Milligrams per Liter	Monthly Average	=	Equals
11/30/2017	00530	002	Solids, total suspended	8.	Milligrams per Liter	Monthly Average	=	Equals
12/31/2017	00530	002	Solids, total suspended	15.	Milligrams per Liter	Monthly Average	=	Equals
01/31/2018	00530	002	Solids, total suspended	13.	Milligrams per Liter	Monthly Average	=	Equals
02/28/2018	00530	002	Solids, total suspended	12.	Milligrams per Liter	Monthly Average	=	Equals
03/31/2018	00530	002	Solids, total suspended	14.	Milligrams per Liter	Monthly Average	=	Equals
04/30/2018	00530	002	Solids, total suspended	15.	Milligrams per Liter	Monthly Average	=	Equals
04/30/2018	00530	008	Solids, total suspended	5.	Milligrams per Liter	Monthly Average	=	Equals
05/31/2018	00530	008	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
06/30/2018	00530	008	Solids, total suspended	13.	Milligrams per Liter	Monthly Average	=	Equals
07/31/2018	00530	008	Solids, total suspended	9.	Milligrams per Liter	Monthly Average	=	Equals
08/31/2018	00530	008	Solids, total suspended	23.	Milligrams per Liter	Monthly Average	=	Equals
09/30/2018	00530	008	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
10/31/2018	00530	002	Solids, total suspended	13.	Milligrams per Liter	Monthly Average	=	Equals
11/30/2018	00530	002	Solids, total suspended	16.	Milligrams per Liter	Monthly Average	=	Equals
12/31/2018	00530	002	Solids, total suspended	13.	Milligrams per Liter	Monthly Average	=	Equals
01/31/2019	00530	002	Solids, total suspended	13.	Milligrams per Liter	Monthly Average	=	Equals
02/28/2019	00530	002	Solids, total suspended	3.	Milligrams per Liter	Monthly Average	=	Equals
03/31/2019	00530	002	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
04/30/2019	00530	002	Solids, total suspended	8.	Milligrams per Liter	Monthly Average	=	Equals
05/31/2019	00530	008	Solids, total suspended	13.	Milligrams per Liter	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
06/30/2019	00530	008	Solids, total suspended	12.	Milligrams per Liter	Monthly Average	=	Equals
07/31/2019	00530	008	Solids, total suspended	13.	Milligrams per Liter	Monthly Average	=	Equals
08/31/2019	00530	008	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
09/30/2019	00530	008	Solids, total suspended	7.	Milligrams per Liter	Monthly Average	=	Equals
10/31/2019	00530	002	Solids, total suspended	16.	Milligrams per Liter	Monthly Average	=	Equals
11/30/2019	00530	002	Solids, total suspended	24.	Milligrams per Liter	Monthly Average	=	Equals
12/31/2019	00530	002	Solids, total suspended	14.	Milligrams per Liter	Monthly Average	=	Equals
01/31/2020	00530	002	Solids, total suspended	36.	Milligrams per Liter	Monthly Average	=	Equals
02/29/2020	00530	002	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
03/31/2020	00530	002	Solids, total suspended	19.	Milligrams per Liter	Monthly Average	=	Equals
04/30/2020	00530	002	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
05/31/2020	00530	008	Solids, total suspended	10.	Milligrams per Liter	Monthly Average	=	Equals
06/30/2020	00530	008	Solids, total suspended	16.	Milligrams per Liter	Monthly Average	=	Equals
07/31/2020	00530	008	Solids, total suspended	22.	Milligrams per Liter	Monthly Average	=	Equals
08/31/2020	00530	008	Solids, total suspended	18.	Milligrams per Liter	Monthly Average	=	Equals
09/30/2020	00530	008	Solids, total suspended	11.	Milligrams per Liter	Monthly Average	=	Equals
10/31/2020	00530	002	Solids, total suspended	14.	Milligrams per Liter	Monthly Average	=	Equals
11/30/2020	00530	002	Solids, total suspended	17.	Milligrams per Liter	Monthly Average	=	Equals
12/31/2020	00530	002	Solids, total suspended	26.	Milligrams per Liter	Monthly Average	=	Equals
01/31/2021	00530	002	Solids, total suspended	10.7	Milligrams per Liter	Monthly Average	=	Equals
02/28/2021	00530	002	Solids, total suspended	12.6	Milligrams per Liter	Monthly Average	=	Equals
03/31/2021	00530	002	Solids, total suspended	15.9	Milligrams per Liter	Monthly Average	=	Equals
04/30/2021	00530	002	Solids, total suspended	16.1	Milligrams per Liter	Monthly Average	=	Equals
05/31/2021	00530	008	Solids, total suspended	20.	Milligrams per Liter	Monthly Average	=	Equals
06/30/2021	00530	008	Solids, total suspended	17.	Milligrams per Liter	Monthly Average	=	Equals
07/31/2021	00530	008	Solids, total suspended	16.	Milligrams per Liter	Monthly Average	=	Equals
08/31/2021	00530	008	Solids, total suspended	19.	Milligrams per Liter	Monthly Average	=	Equals
09/30/2021	00530	008	Solids, total suspended	12.	Milligrams per Liter	Monthly Average	=	Equals
10/31/2021	00530	002	Solids, total suspended	5.6	Milligrams per Liter	Monthly Average	=	Equals
11/30/2021	00530	002	Solids, total suspended	9.4	Milligrams per Liter	Monthly Average	=	Equals
12/31/2021	00530	002	Solids, total suspended	3.9	Milligrams per Liter	Monthly Average	=	Equals
01/31/2022	00530	002	Solids, total suspended	6.7	Milligrams per Liter	Monthly Average	=	Equals
02/28/2022	00530	002	Solids, total suspended	5.7	Milligrams per Liter	Monthly Average	=	Equals
03/31/2022	00530	002	Solids, total suspended	5.2	Milligrams per Liter	Monthly Average	=	Equals

Table 32: Total Suspended Solids Load, Maximum, Effluent

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2010	00530	002	Solids, total suspended	91.7	Pounds per Day	Daily Maximum		
04/30/2010	00530	002	Solids, total suspended	84.6	Pounds per Day	Daily Maximum		
05/31/2010	00530	002	Solids, total suspended	66.1	Pounds per Day	Daily Maximum		
05/31/2010	00530	008	Solids, total suspended	390.6	Pounds per Day	Daily Maximum		
06/30/2010	00530	002	Solids, total suspended	95.8	Pounds per Day	Daily Maximum		
07/31/2010	00530	002	Solids, total suspended	80.1	Pounds per Day	Daily Maximum		
08/31/2010	00530	002	Solids, total suspended	156.2	Pounds per Day	Daily Maximum		
09/30/2010	00530	002	Solids, total suspended	95.3	Pounds per Day	Daily Maximum		
10/31/2010	00530	002	Solids, total suspended	195.	Pounds per Day	Daily Maximum		
11/30/2010	00530	002	Solids, total suspended	182.1	Pounds per Day	Daily Maximum		
12/31/2010	00530	002	Solids, total suspended	319.8	Pounds per Day	Daily Maximum		
01/31/2011	00530	002	Solids, total suspended	255.8	Pounds per Day	Daily Maximum		
02/28/2011	00530	002	Solids, total suspended	300.	Pounds per Day	Daily Maximum		
02/28/2011	00530	008	Solids, total suspended	300.	Pounds per Day	Daily Maximum		
03/31/2011	00530	002	Solids, total suspended	137.6	Pounds per Day	Daily Maximum		
03/31/2011	00530	008	Solids, total suspended	137.6	Pounds per Day	Daily Maximum		
04/30/2011	00530	002	Solids, total suspended	390.6	Pounds per Day	Daily Maximum	=	Equals
05/31/2011	00530	002	Solids, total suspended	97.2	Pounds per Day	Daily Maximum		
05/31/2011	00530	008	Solids, total suspended	97.2	Pounds per Day	Daily Maximum		
06/30/2011	00530	002	Solids, total suspended	112.9	Pounds per Day	Daily Maximum		
06/30/2011	00530	008	Solids, total suspended	112.9	Pounds per Day	Daily Maximum		
07/31/2011	00530	002	Solids, total suspended	196.8	Pounds per Day	Daily Maximum		
07/31/2011	00530	008	Solids, total suspended	196.8	Pounds per Day	Daily Maximum		
08/31/2011	00530	002	Solids, total suspended	240.8	Pounds per Day	Daily Maximum		
08/31/2011	00530	008	Solids, total suspended	240.8	Pounds per Day	Daily Maximum		
09/30/2011	00530	002	Solids, total suspended	444.3	Pounds per Day	Daily Maximum		
09/30/2011	00530	008	Solids, total suspended	444.3	Pounds per Day	Daily Maximum		
10/31/2011	00530	002	Solids, total suspended	418.4	Pounds per Day	Daily Maximum		
11/30/2011	00530	002	Solids, total suspended	187.4	Pounds per Day	Daily Maximum		
12/31/2011	00530	002	Solids, total suspended	208.7	Pounds per Day	Daily Maximum		
01/31/2012	00530	002	Solids, total suspended	271.6	Pounds per Day	Daily Maximum		
02/29/2012	00530	002	Solids, total suspended	350.2	Pounds per Day	Daily Maximum	=	Equals
03/31/2012	00530	002	Solids, total suspended	127.4	Pounds per Day	Daily Maximum		
04/30/2012	00530	002	Solids, total suspended	133.4	Pounds per Day	Daily Maximum		
05/31/2012	00530	002	Solids, total suspended	98.6	Pounds per Day	Daily Maximum		
06/30/2012	00530	002	Solids, total suspended	71.	Pounds per Day	Daily Maximum		
07/31/2012	00530	002	Solids, total suspended	29.9	Pounds per Day	Daily Maximum		
08/31/2012	00530	002	Solids, total suspended	66.	Pounds per Day	Daily Maximum		
09/30/2012	00530	002	Solids, total suspended	105.4	Pounds per Day	Daily Maximum		
10/31/2012	00530	002	Solids, total suspended	31.9	Pounds per Day	Daily Maximum		
11/30/2012	00530	002	Solids, total suspended	36.7	Pounds per Day	Daily Maximum	=	Equals
12/31/2012	00530	002	Solids, total suspended	310.4	Pounds per Day	Daily Maximum	=	Equals
01/31/2013	00530	002	Solids, total suspended	147.8	Pounds per Day	Daily Maximum	=	Equals
02/28/2013	00530	002	Solids, total suspended	63.8	Pounds per Day	Daily Maximum	=	Equals
03/31/2013	00530	002	Solids, total suspended	71.1	Pounds per Day	Daily Maximum	=	Equals
04/30/2013	00530	002	Solids, total suspended	26.8	Pounds per Day	Daily Maximum	=	Equals
05/31/2013	00530	002	Solids, total suspended	175.2	Pounds per Day	Daily Maximum	=	Equals
06/30/2013	00530	002	Solids, total suspended	102.6	Pounds per Day	Daily Maximum	=	Equals
07/31/2013	00530	002	Solids, total suspended	101.9	Pounds per Day	Daily Maximum	=	Equals
08/31/2013	00530	002	Solids, total suspended	43.9	Pounds per Day	Daily Maximum	=	Equals
09/30/2013	00530	002	Solids, total suspended	350.8	Pounds per Day	Daily Maximum	=	Equals
10/31/2013	00530	002	Solids, total suspended	54.7	Pounds per Day	Daily Maximum	=	Equals
11/30/2013	00530	002	Solids, total suspended	63.8	Pounds per Day	Daily Maximum	=	Equals
12/31/2013	00530	002	Solids, total suspended	79.6	Pounds per Day	Daily Maximum	=	Equals
01/31/2014	00530	002	Solids, total suspended	62.7	Pounds per Day	Daily Maximum	=	Equals
02/28/2014	00530	002	Solids, total suspended	159.6	Pounds per Day	Daily Maximum	=	Equals
03/31/2014	00530	002	Solids, total suspended	254.9	Pounds per Day	Daily Maximum	=	Equals
04/30/2014	00530	002	Solids, total suspended	190.6	Pounds per Day	Daily Maximum	=	Equals
05/31/2014	00530	002	Solids, total suspended	104.6	Pounds per Day	Daily Maximum	=	Equals
06/30/2014	00530	002	Solids, total suspended	92.8	Pounds per Day	Daily Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
07/31/2014	00530	002	Solids, total suspended	44.4	Pounds per Day	Daily Maximum	=	Equals
08/31/2014	00530	002	Solids, total suspended	67.3	Pounds per Day	Daily Maximum	=	Equals
09/30/2014	00530	002	Solids, total suspended	85.1	Pounds per Day	Daily Maximum	=	Equals
10/31/2014	00530	002	Solids, total suspended	147.3	Pounds per Day	Daily Maximum	=	Equals
11/30/2014	00530	002	Solids, total suspended	180.2	Pounds per Day	Daily Maximum	=	Equals
12/31/2014	00530	002	Solids, total suspended	205.6	Pounds per Day	Daily Maximum	=	Equals
01/31/2015	00530	002	Solids, total suspended	262.3	Pounds per Day	Daily Maximum	=	Equals
02/28/2015	00530	002	Solids, total suspended	115.7	Pounds per Day	Daily Maximum	=	Equals
03/31/2015	00530	002	Solids, total suspended	461.	Pounds per Day	Daily Maximum	=	Equals
04/30/2015	00530	002	Solids, total suspended	157.3	Pounds per Day	Daily Maximum	=	Equals
05/31/2015	00530	002	Solids, total suspended	78.1	Pounds per Day	Daily Maximum	=	Equals
06/30/2015	00530	002	Solids, total suspended	144.5	Pounds per Day	Daily Maximum	=	Equals
07/31/2015	00530	002	Solids, total suspended	135.3	Pounds per Day	Daily Maximum	=	Equals
08/31/2015	00530	002	Solids, total suspended	105.1	Pounds per Day	Daily Maximum	=	Equals
09/30/2015	00530	002	Solids, total suspended	106.	Pounds per Day	Daily Maximum	=	Equals
10/31/2015	00530	002	Solids, total suspended	41.	Pounds per Day	Daily Maximum	=	Equals
11/30/2015	00530	002	Solids, total suspended	187.	Pounds per Day	Daily Maximum	=	Equals
12/31/2015	00530	002	Solids, total suspended	226.	Pounds per Day	Daily Maximum	=	Equals
01/31/2016	00530	002	Solids, total suspended	314.	Pounds per Day	Daily Maximum	=	Equals
02/29/2016	00530	002	Solids, total suspended	203.	Pounds per Day	Daily Maximum	=	Equals
03/31/2016	00530	002	Solids, total suspended	138.	Pounds per Day	Daily Maximum	=	Equals
04/30/2016	00530	002	Solids, total suspended	87.	Pounds per Day	Daily Maximum	=	Equals
05/31/2016	00530	002	Solids, total suspended	68.	Pounds per Day	Daily Maximum	=	Equals
06/30/2016	00530	002	Solids, total suspended	127.	Pounds per Day	Daily Maximum	=	Equals
07/31/2016	00530	002	Solids, total suspended	82.	Pounds per Day	Daily Maximum	=	Equals
07/31/2016	00530	008	Solids, total suspended	11.	Pounds per Day	Daily Maximum	=	Equals
08/31/2016	00530	002	Solids, total suspended	147.	Pounds per Day	Daily Maximum	=	Equals
09/30/2016	00530	002	Solids, total suspended	82.	Pounds per Day	Daily Maximum	=	Equals
10/31/2016	00530	002	Solids, total suspended	256.	Pounds per Day	Daily Maximum	=	Equals
11/30/2016	00530	002	Solids, total suspended	251.	Pounds per Day	Daily Maximum	=	Equals
12/31/2016	00530	002	Solids, total suspended	449.	Pounds per Day	Daily Maximum	=	Equals
01/31/2017	00530	002	Solids, total suspended	98.	Pounds per Day	Daily Maximum	=	Equals
02/28/2017	00530	002	Solids, total suspended	495.	Pounds per Day	Daily Maximum	=	Equals
03/31/2017	00530	002	Solids, total suspended	187.	Pounds per Day	Daily Maximum	=	Equals
04/30/2017	00530	002	Solids, total suspended	109.	Pounds per Day	Daily Maximum	=	Equals
05/31/2017	00530	002	Solids, total suspended	17.	Pounds per Day	Daily Maximum	=	Equals
05/31/2017	00530	008	Solids, total suspended	34.	Pounds per Day	Daily Maximum	=	Equals
06/30/2017	00530	008	Solids, total suspended	45.	Pounds per Day	Daily Maximum	=	Equals
07/31/2017	00530	008	Solids, total suspended	28.	Pounds per Day	Daily Maximum	=	Equals
08/31/2017	00530	008	Solids, total suspended	46.	Pounds per Day	Daily Maximum	=	Equals
09/30/2017	00530	008	Solids, total suspended	358.	Pounds per Day	Daily Maximum	=	Equals
10/31/2017	00530	002	Solids, total suspended	136.	Pounds per Day	Daily Maximum	=	Equals
11/30/2017	00530	002	Solids, total suspended	66.	Pounds per Day	Daily Maximum	=	Equals
12/31/2017	00530	002	Solids, total suspended	153.	Pounds per Day	Daily Maximum	=	Equals
01/31/2018	00530	002	Solids, total suspended	121.	Pounds per Day	Daily Maximum	=	Equals
02/28/2018	00530	002	Solids, total suspended	139.	Pounds per Day	Daily Maximum	=	Equals
03/31/2018	00530	002	Solids, total suspended	225.	Pounds per Day	Daily Maximum	=	Equals
04/30/2018	00530	002	Solids, total suspended	158.	Pounds per Day	Daily Maximum	=	Equals
04/30/2018	00530	008	Solids, total suspended	35.	Pounds per Day	Daily Maximum	=	Equals
05/31/2018	00530	008	Solids, total suspended	156.	Pounds per Day	Daily Maximum	=	Equals
06/30/2018	00530	008	Solids, total suspended	155.	Pounds per Day	Daily Maximum	=	Equals
07/31/2018	00530	008	Solids, total suspended	106.	Pounds per Day	Daily Maximum	=	Equals
08/31/2018	00530	008	Solids, total suspended	494.	Pounds per Day	Daily Maximum	=	Equals
09/30/2018	00530	008	Solids, total suspended	113.	Pounds per Day	Daily Maximum	=	Equals
10/31/2018	00530	002	Solids, total suspended	130.	Pounds per Day	Daily Maximum	=	Equals
11/30/2018	00530	002	Solids, total suspended	246.	Pounds per Day	Daily Maximum	=	Equals
12/31/2018	00530	002	Solids, total suspended	119.	Pounds per Day	Daily Maximum	=	Equals
01/31/2019	00530	002	Solids, total suspended	209.	Pounds per Day	Daily Maximum	=	Equals
02/28/2019	00530	002	Solids, total suspended	26.	Pounds per Day	Daily Maximum	=	Equals
03/31/2019	00530	002	Solids, total suspended	100.	Pounds per Day	Daily Maximum	=	Equals
04/30/2019	00530	002	Solids, total suspended	99.	Pounds per Day	Daily Maximum	=	Equals
05/31/2019	00530	008	Solids, total suspended	181.	Pounds per Day	Daily Maximum	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
06/30/2019	00530	008	Solids, total suspended	154.	Pounds per Day	Daily Maximum	=	Equals
07/31/2019	00530	008	Solids, total suspended	210.	Pounds per Day	Daily Maximum	=	Equals
08/31/2019	00530	008	Solids, total suspended	205.	Pounds per Day	Daily Maximum	=	Equals
09/30/2019	00530	008	Solids, total suspended	98.	Pounds per Day	Daily Maximum	=	Equals
10/31/2019	00530	002	Solids, total suspended	220.	Pounds per Day	Daily Maximum	=	Equals
11/30/2019	00530	002	Solids, total suspended	387.	Pounds per Day	Daily Maximum	=	Equals
12/31/2019	00530	002	Solids, total suspended	142.	Pounds per Day	Daily Maximum	=	Equals
01/31/2020	00530	002	Solids, total suspended	564.	Pounds per Day	Daily Maximum	=	Equals
02/29/2020	00530	002	Solids, total suspended	129.	Pounds per Day	Daily Maximum	=	Equals
03/31/2020	00530	002	Solids, total suspended	233.	Pounds per Day	Daily Maximum	=	Equals
04/30/2020	00530	002	Solids, total suspended	131.	Pounds per Day	Daily Maximum	=	Equals
05/31/2020	00530	008	Solids, total suspended	80.	Pounds per Day	Daily Maximum	=	Equals
06/30/2020	00530	008	Solids, total suspended	155.	Pounds per Day	Daily Maximum	=	Equals
07/31/2020	00530	008	Solids, total suspended	350.	Pounds per Day	Daily Maximum	=	Equals
08/31/2020	00530	008	Solids, total suspended	176.	Pounds per Day	Daily Maximum	=	Equals
09/30/2020	00530	008	Solids, total suspended	108.	Pounds per Day	Daily Maximum	=	Equals
10/31/2020	00530	002	Solids, total suspended	277.	Pounds per Day	Daily Maximum	=	Equals
11/30/2020	00530	002	Solids, total suspended	170.	Pounds per Day	Daily Maximum	=	Equals
12/31/2020	00530	002	Solids, total suspended	330.	Pounds per Day	Daily Maximum	=	Equals
01/31/2021	00530	002	Solids, total suspended	125.1	Pounds per Day	Daily Maximum	=	Equals
02/28/2021	00530	002	Solids, total suspended	102.8	Pounds per Day	Daily Maximum	=	Equals
03/31/2021	00530	002	Solids, total suspended	359.6	Pounds per Day	Daily Maximum	=	Equals
04/30/2021	00530	002	Solids, total suspended	229.2	Pounds per Day	Daily Maximum	=	Equals
05/31/2021	00530	008	Solids, total suspended	194.	Pounds per Day	Daily Maximum	=	Equals
06/30/2021	00530	008	Solids, total suspended	272.	Pounds per Day	Daily Maximum	=	Equals
07/31/2021	00530	008	Solids, total suspended	151.	Pounds per Day	Daily Maximum	=	Equals
08/31/2021	00530	008	Solids, total suspended	247.	Pounds per Day	Daily Maximum	=	Equals
09/30/2021	00530	008	Solids, total suspended	131.	Pounds per Day	Daily Maximum	=	Equals
10/31/2021	00530	002	Solids, total suspended	66.2	Pounds per Day	Daily Maximum	=	Equals
11/30/2021	00530	002	Solids, total suspended	109.9	Pounds per Day	Daily Maximum	=	Equals
12/31/2021	00530	002	Solids, total suspended	43.7	Pounds per Day	Daily Maximum	=	Equals
01/31/2022	00530	002	Solids, total suspended	123.3	Pounds per Day	Daily Maximum	=	Equals
02/28/2022	00530	002	Solids, total suspended	44.3	Pounds per Day	Daily Maximum	=	Equals
03/31/2022	00530	002	Solids, total suspended	85.7	Pounds per Day	Daily Maximum	=	Equals

Table 33: Total Suspended Solids Load, Effluent, Monthly Average

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
03/31/2010	00530	002	Solids, total suspended	78.5	Pounds per Day	Monthly Average		
04/30/2010	00530	002	Solids, total suspended	27.3	Pounds per Day	Monthly Average		
05/31/2010	00530	002	Solids, total suspended	37.8	Pounds per Day	Monthly Average		
05/31/2010	00530	008	Solids, total suspended	106.3	Pounds per Day	Monthly Average		
06/30/2010	00530	002	Solids, total suspended	39.1	Pounds per Day	Monthly Average		
07/31/2010	00530	002	Solids, total suspended	46.8	Pounds per Day	Monthly Average		
08/31/2010	00530	002	Solids, total suspended	66.	Pounds per Day	Monthly Average		
09/30/2010	00530	002	Solids, total suspended	205.9	Pounds per Day	Monthly Average		
10/31/2010	00530	002	Solids, total suspended	80.3	Pounds per Day	Monthly Average		
11/30/2010	00530	002	Solids, total suspended	60.3	Pounds per Day	Monthly Average		
12/31/2010	00530	002	Solids, total suspended	106.4	Pounds per Day	Monthly Average		
01/31/2011	00530	002	Solids, total suspended	148.4	Pounds per Day	Monthly Average		
02/28/2011	00530	002	Solids, total suspended	128.7	Pounds per Day	Monthly Average		
02/28/2011	00530	008	Solids, total suspended	128.7	Pounds per Day	Monthly Average		
03/31/2011	00530	002	Solids, total suspended	60.	Pounds per Day	Monthly Average		
03/31/2011	00530	008	Solids, total suspended	60.	Pounds per Day	Monthly Average		
04/30/2011	00530	002	Solids, total suspended	106.3	Pounds per Day	Monthly Average	=	Equals
05/31/2011	00530	002	Solids, total suspended	43.4	Pounds per Day	Monthly Average		
05/31/2011	00530	008	Solids, total suspended	43.4	Pounds per Day	Monthly Average		
06/30/2011	00530	002	Solids, total suspended	52.7	Pounds per Day	Monthly Average		
06/30/2011	00530	008	Solids, total suspended	52.7	Pounds per Day	Monthly Average		
07/31/2011	00530	002	Solids, total suspended	92.1	Pounds per Day	Monthly Average		
07/31/2011	00530	008	Solids, total suspended	92.1	Pounds per Day	Monthly Average		
08/31/2011	00530	002	Solids, total suspended	105.3	Pounds per Day	Monthly Average		
08/31/2011	00530	008	Solids, total suspended	105.3	Pounds per Day	Monthly Average		
09/30/2011	00530	002	Solids, total suspended	94.5	Pounds per Day	Monthly Average		
09/30/2011	00530	008	Solids, total suspended	94.5	Pounds per Day	Monthly Average		
10/31/2011	00530	002	Solids, total suspended	159.2	Pounds per Day	Monthly Average		
11/30/2011	00530	002	Solids, total suspended	97.3	Pounds per Day	Monthly Average		
12/31/2011	00530	002	Solids, total suspended	91.	Pounds per Day	Monthly Average		
01/31/2012	00530	002	Solids, total suspended	165.2	Pounds per Day	Monthly Average		
02/29/2012	00530	002	Solids, total suspended	159.6	Pounds per Day	Monthly Average	=	Equals
03/31/2012	00530	002	Solids, total suspended	83.	Pounds per Day	Monthly Average		
04/30/2012	00530	002	Solids, total suspended	61.7	Pounds per Day	Monthly Average		
05/31/2012	00530	002	Solids, total suspended	41.8	Pounds per Day	Monthly Average		
06/30/2012	00530	002	Solids, total suspended	27.7	Pounds per Day	Monthly Average		
07/31/2012	00530	002	Solids, total suspended	18.2	Pounds per Day	Monthly Average		
08/31/2012	00530	002	Solids, total suspended	19.3	Pounds per Day	Monthly Average		
09/30/2012	00530	002	Solids, total suspended	25.5	Pounds per Day	Monthly Average		
10/31/2012	00530	002	Solids, total suspended	14.8	Pounds per Day	Monthly Average		
11/30/2012	00530	002	Solids, total suspended	118.5	Pounds per Day	Monthly Average	=	Equals
12/31/2012	00530	002	Solids, total suspended	66.2	Pounds per Day	Monthly Average	=	Equals
01/31/2013	00530	002	Solids, total suspended	56.2	Pounds per Day	Monthly Average	=	Equals
02/28/2013	00530	002	Solids, total suspended	32.4	Pounds per Day	Monthly Average	=	Equals
03/31/2013	00530	002	Solids, total suspended	35.9	Pounds per Day	Monthly Average	=	Equals
04/30/2013	00530	002	Solids, total suspended	15.4	Pounds per Day	Monthly Average	=	Equals
05/31/2013	00530	002	Solids, total suspended	83.1	Pounds per Day	Monthly Average	=	Equals
06/30/2013	00530	002	Solids, total suspended	51.4	Pounds per Day	Monthly Average	=	Equals
07/31/2013	00530	002	Solids, total suspended	35.2	Pounds per Day	Monthly Average	=	Equals
08/31/2013	00530	002	Solids, total suspended	24.9	Pounds per Day	Monthly Average	=	Equals
09/30/2013	00530	002	Solids, total suspended	159.9	Pounds per Day	Monthly Average	=	Equals
10/31/2013	00530	002	Solids, total suspended	35.3	Pounds per Day	Monthly Average	=	Equals
11/30/2013	00530	002	Solids, total suspended	25.8	Pounds per Day	Monthly Average	=	Equals
12/31/2013	00530	002	Solids, total suspended	26.8	Pounds per Day	Monthly Average	=	Equals
01/31/2014	00530	002	Solids, total suspended	25.2	Pounds per Day	Monthly Average	=	Equals
02/28/2014	00530	002	Solids, total suspended	38.2	Pounds per Day	Monthly Average	=	Equals
03/31/2014	00530	002	Solids, total suspended	62.	Pounds per Day	Monthly Average	=	Equals
04/30/2014	00530	002	Solids, total suspended	64.4	Pounds per Day	Monthly Average	=	Equals
05/31/2014	00530	002	Solids, total suspended	34.4	Pounds per Day	Monthly Average	=	Equals
06/30/2014	00530	002	Solids, total suspended	44.5	Pounds per Day	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
07/31/2014	00530	002	Solids, total suspended	25.4	Pounds per Day	Monthly Average	=	Equals
08/31/2014	00530	002	Solids, total suspended	32.9	Pounds per Day	Monthly Average	=	Equals
09/30/2014	00530	002	Solids, total suspended	43.4	Pounds per Day	Monthly Average	=	Equals
10/31/2014	00530	002	Solids, total suspended	80.1	Pounds per Day	Monthly Average	=	Equals
11/30/2014	00530	002	Solids, total suspended	74.1	Pounds per Day	Monthly Average	=	Equals
12/31/2014	00530	002	Solids, total suspended	76.9	Pounds per Day	Monthly Average	=	Equals
01/31/2015	00530	002	Solids, total suspended	120.2	Pounds per Day	Monthly Average	=	Equals
02/28/2015	00530	002	Solids, total suspended	56.2	Pounds per Day	Monthly Average	=	Equals
03/31/2015	00530	002	Solids, total suspended	186.	Pounds per Day	Monthly Average	=	Equals
04/30/2015	00530	002	Solids, total suspended	104.6	Pounds per Day	Monthly Average	=	Equals
05/31/2015	00530	002	Solids, total suspended	52.	Pounds per Day	Monthly Average	=	Equals
06/30/2015	00530	002	Solids, total suspended	45.7	Pounds per Day	Monthly Average	=	Equals
07/31/2015	00530	002	Solids, total suspended	73.3	Pounds per Day	Monthly Average	=	Equals
08/31/2015	00530	002	Solids, total suspended	60.	Pounds per Day	Monthly Average	=	Equals
09/30/2015	00530	002	Solids, total suspended	37.	Pounds per Day	Monthly Average	=	Equals
10/31/2015	00530	002	Solids, total suspended	21.	Pounds per Day	Monthly Average	=	Equals
11/30/2015	00530	002	Solids, total suspended	84.	Pounds per Day	Monthly Average	=	Equals
12/31/2015	00530	002	Solids, total suspended	113.	Pounds per Day	Monthly Average	=	Equals
01/31/2016	00530	002	Solids, total suspended	209.	Pounds per Day	Monthly Average	=	Equals
02/29/2016	00530	002	Solids, total suspended	116.	Pounds per Day	Monthly Average	=	Equals
03/31/2016	00530	002	Solids, total suspended	75.	Pounds per Day	Monthly Average	=	Equals
04/30/2016	00530	002	Solids, total suspended	49.	Pounds per Day	Monthly Average	=	Equals
05/31/2016	00530	002	Solids, total suspended	31.	Pounds per Day	Monthly Average	=	Equals
06/30/2016	00530	002	Solids, total suspended	58.	Pounds per Day	Monthly Average	=	Equals
07/31/2016	00530	002	Solids, total suspended	31.	Pounds per Day	Monthly Average	=	Equals
07/31/2016	00530	008	Solids, total suspended	4.	Pounds per Day	Monthly Average	=	Equals
08/31/2016	00530	002	Solids, total suspended	54.	Pounds per Day	Monthly Average	=	Equals
09/30/2016	00530	002	Solids, total suspended	51.	Pounds per Day	Monthly Average	=	Equals
10/31/2016	00530	002	Solids, total suspended	101.	Pounds per Day	Monthly Average	=	Equals
11/30/2016	00530	002	Solids, total suspended	104.	Pounds per Day	Monthly Average	=	Equals
12/31/2016	00530	002	Solids, total suspended	141.	Pounds per Day	Monthly Average	=	Equals
01/31/2017	00530	002	Solids, total suspended	52.	Pounds per Day	Monthly Average	=	Equals
02/28/2017	00530	002	Solids, total suspended	159.	Pounds per Day	Monthly Average	=	Equals
03/31/2017	00530	002	Solids, total suspended	56.	Pounds per Day	Monthly Average	=	Equals
04/30/2017	00530	002	Solids, total suspended	31.	Pounds per Day	Monthly Average	=	Equals
05/31/2017	00530	002	Solids, total suspended	8.	Pounds per Day	Monthly Average	=	Equals
05/31/2017	00530	008	Solids, total suspended	20.	Pounds per Day	Monthly Average	=	Equals
06/30/2017	00530	008	Solids, total suspended	28.	Pounds per Day	Monthly Average	=	Equals
07/31/2017	00530	008	Solids, total suspended	15.	Pounds per Day	Monthly Average	=	Equals
08/31/2017	00530	008	Solids, total suspended	20.	Pounds per Day	Monthly Average	=	Equals
09/30/2017	00530	008	Solids, total suspended	102.	Pounds per Day	Monthly Average	=	Equals
10/31/2017	00530	002	Solids, total suspended	25.	Pounds per Day	Monthly Average	=	Equals
11/30/2017	00530	002	Solids, total suspended	38.	Pounds per Day	Monthly Average	=	Equals
12/31/2017	00530	002	Solids, total suspended	84.	Pounds per Day	Monthly Average	=	Equals
01/31/2018	00530	002	Solids, total suspended	71.	Pounds per Day	Monthly Average	=	Equals
02/28/2018	00530	002	Solids, total suspended	60.	Pounds per Day	Monthly Average	=	Equals
03/31/2018	00530	002	Solids, total suspended	80.	Pounds per Day	Monthly Average	=	Equals
04/30/2018	00530	002	Solids, total suspended	87.	Pounds per Day	Monthly Average	=	Equals
04/30/2018	00530	008	Solids, total suspended	29.	Pounds per Day	Monthly Average	=	Equals
05/31/2018	00530	008	Solids, total suspended	60.	Pounds per Day	Monthly Average	=	Equals
06/30/2018	00530	008	Solids, total suspended	73.	Pounds per Day	Monthly Average	=	Equals
07/31/2018	00530	008	Solids, total suspended	50.	Pounds per Day	Monthly Average	=	Equals
08/31/2018	00530	008	Solids, total suspended	139.	Pounds per Day	Monthly Average	=	Equals
09/30/2018	00530	008	Solids, total suspended	63.	Pounds per Day	Monthly Average	=	Equals
10/31/2018	00530	002	Solids, total suspended	67.	Pounds per Day	Monthly Average	=	Equals
11/30/2018	00530	002	Solids, total suspended	89.	Pounds per Day	Monthly Average	=	Equals
12/31/2018	00530	002	Solids, total suspended	80.	Pounds per Day	Monthly Average	=	Equals
01/31/2019	00530	002	Solids, total suspended	71.	Pounds per Day	Monthly Average	=	Equals
02/28/2019	00530	002	Solids, total suspended	17.	Pounds per Day	Monthly Average	=	Equals
03/31/2019	00530	002	Solids, total suspended	64.	Pounds per Day	Monthly Average	=	Equals
04/30/2019	00530	002	Solids, total suspended	45.	Pounds per Day	Monthly Average	=	Equals
05/31/2019	00530	008	Solids, total suspended	67.	Pounds per Day	Monthly Average	=	Equals

Monitoring Period End Date	Parameter Code	Perm Feature ID	Parameter Desc	DMR Value	Limit Unit Desc	Statistical Base Long Desc	DMR Value Qualifier Code	DMR Value Qualifier Desc
06/30/2019	00530	008	Solids, total suspended	67.	Pounds per Day	Monthly Average	=	Equals
07/31/2019	00530	008	Solids, total suspended	75.	Pounds per Day	Monthly Average	=	Equals
08/31/2019	00530	008	Solids, total suspended	71.	Pounds per Day	Monthly Average	=	Equals
09/30/2019	00530	008	Solids, total suspended	43.	Pounds per Day	Monthly Average	=	Equals
10/31/2019	00530	002	Solids, total suspended	99.	Pounds per Day	Monthly Average	=	Equals
11/30/2019	00530	002	Solids, total suspended	163.	Pounds per Day	Monthly Average	=	Equals
12/31/2019	00530	002	Solids, total suspended	72.	Pounds per Day	Monthly Average	=	Equals
01/31/2020	00530	002	Solids, total suspended	217.	Pounds per Day	Monthly Average	=	Equals
02/29/2020	00530	002	Solids, total suspended	64.	Pounds per Day	Monthly Average	=	Equals
03/31/2020	00530	002	Solids, total suspended	115.	Pounds per Day	Monthly Average	=	Equals
04/30/2020	00530	002	Solids, total suspended	64.	Pounds per Day	Monthly Average	=	Equals
05/31/2020	00530	008	Solids, total suspended	48.	Pounds per Day	Monthly Average	=	Equals
06/30/2020	00530	008	Solids, total suspended	85.	Pounds per Day	Monthly Average	=	Equals
07/31/2020	00530	008	Solids, total suspended	120.	Pounds per Day	Monthly Average	=	Equals
08/31/2020	00530	008	Solids, total suspended	103.	Pounds per Day	Monthly Average	=	Equals
09/30/2020	00530	008	Solids, total suspended	64.	Pounds per Day	Monthly Average	=	Equals
10/31/2020	00530	002	Solids, total suspended	84.	Pounds per Day	Monthly Average	=	Equals
11/30/2020	00530	002	Solids, total suspended	95.	Pounds per Day	Monthly Average	=	Equals
12/31/2020	00530	002	Solids, total suspended	124.	Pounds per Day	Monthly Average	=	Equals
01/31/2021	00530	002	Solids, total suspended	51.	Pounds per Day	Monthly Average	=	Equals
02/28/2021	00530	002	Solids, total suspended	68.9	Pounds per Day	Monthly Average	=	Equals
03/31/2021	00530	002	Solids, total suspended	94.	Pounds per Day	Monthly Average	=	Equals
04/30/2021	00530	002	Solids, total suspended	96.	Pounds per Day	Monthly Average	=	Equals
05/31/2021	00530	008	Solids, total suspended	118.	Pounds per Day	Monthly Average	=	Equals
06/30/2021	00530	008	Solids, total suspended	97.	Pounds per Day	Monthly Average	=	Equals
07/31/2021	00530	008	Solids, total suspended	91.	Pounds per Day	Monthly Average	=	Equals
08/31/2021	00530	008	Solids, total suspended	123.	Pounds per Day	Monthly Average	=	Equals
09/30/2021	00530	008	Solids, total suspended	75.	Pounds per Day	Monthly Average	=	Equals
10/31/2021	00530	002	Solids, total suspended	33.1	Pounds per Day	Monthly Average	=	Equals
11/30/2021	00530	002	Solids, total suspended	54.5	Pounds per Day	Monthly Average	=	Equals
12/31/2021	00530	002	Solids, total suspended	19.8	Pounds per Day	Monthly Average	=	Equals
01/31/2022	00530	002	Solids, total suspended	38.6	Pounds per Day	Monthly Average	=	Equals
02/28/2022	00530	002	Solids, total suspended	31.7	Pounds per Day	Monthly Average	=	Equals
03/31/2022	00530	002	Solids, total suspended	28.8	Pounds per Day	Monthly Average	=	Equals

Table 34: Whole Effluent Toxicity

Date (1st sample)	Endpoint	TUc
3/19/2012	Survival	2
3/19/2012	Reproduction	2
6/25/2012	Survival	2
6/25/2012	Reproduction	16
9/17/2012	Survival	1
9/17/2012	Reproduction	2
12/10/2012	Survival	1
12/10/2012	Reproduction	2
3/25/2013	Survival	1
3/25/2013	Reproduction	2
6/17/2013	Survival	2
6/17/2013	Reproduction	4
10/7/2013	Survival	1
10/7/2013	Reproduction	8
12/9/2013	Survival	1
12/9/2013	Reproduction	8
3/10/2014	Survival	2
3/10/2014	Reproduction	16
6/2/2014	Survival	2
6/2/2014	Reproduction	16
	Minimum	1
	Average	4.6
	Maximum	16

Date (1st sample)	Endpoint	TUc
	Standard Deviation	5.3
	CV	1.17
	Count	20

Receiving Water Data

Chemistry

Table 35: Upstream Ammonia in Wanity Slough

Date	Source	Ammonia (mg/L)
2/7/2012	Permittee	0.07
3/5/2012	Permittee	0.07
4/2/2012	Permittee	0.07
6/5/2012	Permittee	0.07
7/2/2012	Permittee	0.07
7/23/2012	Permittee	0.07
9/4/2012	Permittee	0.09
10/1/2012	Permittee	0.13
11/5/2012	Permittee	0.07
12/3/2012	Permittee	0.13
1/2/2013	Permittee	0.07
2/4/2013	Permittee	0.07
3/4/2013	Permittee	0.07
4/1/2013	Permittee	0.1
5/6/2013	Permittee	0.09
6/3/2013	Permittee	0.09
7/1/2013	Permittee	0.07
8/5/2013	Permittee	0.07
9/3/2013	Permittee	0.07
10/21/2013	Permittee	0.07
11/4/2013	Permittee	0.07
12/2/2013	Permittee	0.09
1/6/2014	Permittee	0.08
2/3/2014	Permittee	0.07
3/3/2014	Permittee	0.07
4/7/2014	Permittee	0.07
5/5/2014	Permittee	0.07
6/2/2014	Permittee	0.07
7/7/2014	Permittee	0.13
8/4/2014	Permittee	0.35
9/8/2014	Permittee	0.07
10/6/2014	Permittee	0.14
11/3/2014	Permittee	0.1
12/1/2014	Permittee	0.07
1/5/2015	Permittee	0.18
8/12/2014	NARS_WQX-WASS-1139	0.008
6/26/2018	NARS_WQX-NRS_WA-10410	0.007
8/16/2011	1119USBR_WQX-YAV349	0.04
7/19/2011	1119USBR_WQX-YAV349	0.02
7/19/2011	1119USBR_WQX-YAV348	0.03
8/16/2011	1119USBR_WQX-YAV348	0.02
	Minimum	0.007
	5th Percentile	0.020
	Average	0.082
	95th Percentile	0.140
	Maximum	0.350
	Standard Deviation	0.055
	Count	41

Table 36: Upstream BOD₅ in Wanity Slough

Date	BOD ₅ (mg/L)
2/7/2012	2
3/5/2012	2
4/2/2012	2
5/7/2012	2
6/5/2012	2
7/2/2012	2
7/23/2012	2
9/4/2012	2
10/1/2012	3.5
11/5/2012	2
12/3/2012	2
1/2/2013	2
2/4/2013	2
3/4/2013	2
4/1/2013	2
5/6/2013	2
6/3/2013	2.3
7/1/2013	2.1
8/5/2013	2
9/3/2013	2
10/21/2013	2
11/4/2013	2
12/2/2013	2
1/6/2014	5.3
2/3/2014	2
3/3/2014	2
4/7/2014	2
5/5/2014	2
6/2/2014	2
7/7/2014	2
8/4/2014	2
9/8/2014	2
10/6/2014	2
11/3/2014	2
12/1/2014	2
1/5/2015	4.8
Minimum	2.0
5th Percentile	2.0
Average	2.2
95th Percentile	3.8
Maximum	5.3
Standard Deviation	0.74
Count	36

Table 37: Upstream Turbidity in Wanity Slough

Date	Source	Turbidity (NTU)
3/5/2012	Permittee	1.15
4/2/2012	Permittee	1.28
5/7/2012	Permittee	3.84
6/5/2012	Permittee	6.92
7/2/2012	Permittee	5.5
7/23/2012	Permittee	4.23
9/4/2012	Permittee	1.13
10/1/2012	Permittee	2.3
11/5/2012	Permittee	3.5
12/3/2012	Permittee	0.91
1/2/2013	Permittee	0.81
2/4/2013	Permittee	1.54
3/4/2013	Permittee	1.35
4/1/2013	Permittee	0.82
5/6/2013	Permittee	4.06
6/3/2013	Permittee	15.4
7/1/2013	Permittee	5.8
8/5/2013	Permittee	4.66
9/3/2013	Permittee	2.29
10/21/2013	Permittee	2.85
11/4/2013	Permittee	1.94
12/2/2013	Permittee	4.98
1/6/2014	Permittee	4.05
2/3/2014	Permittee	3.38
3/3/2014	Permittee	2.45
4/7/2014	Permittee	6.15
5/5/2014	Permittee	6.35
6/2/2014	Permittee	11.7
7/7/2014	Permittee	5.03
8/4/2014	Permittee	2.83
9/8/2014	Permittee	0.91
10/6/2014	Permittee	4.49
11/3/2014	Permittee	3.6
12/1/2014	Permittee	1.93
1/5/2015	Permittee	5.56
6/26/2018	NARS_WQX-NRS_WA-10410	1.9
8/12/2014	NARS_WQX-WASS-1139	1.38
	Minimum	0.81
	5th Percentile	0.89
	Average	3.76
	95th Percentile	7.88
	Maximum	15.4
	Standard Deviation	3.00
	Count	37

Table 38: Upstream Dissolved Oxygen in Wanity Slough May - September

Date	AM DO (mg/L)	PM DO (mg/L)
5/7/2012	6.99	9.96
5/14/2012	7.91	9.6
5/21/2012	8.28	8.85
5/29/2012	8.08	8.3
6/5/2012	8.1	9.75
6/11/2012	9.68	9.2
6/18/2012	7.32	9.75
6/25/2012	8.79	10.15
7/2/2012	7.12	10.8
7/9/2012	6.8	10.07
7/16/2012	6.36	11.25
7/23/2012	11.03	10.55
7/30/2012	7.69	10.2
8/6/2012	5.43	10.98
8/13/2012	6.56	9.95
8/20/2012	7.38	
8/27/2012	7.35	8.08
9/4/2012	6.1	8.72
9/10/2012	5.8	8.54
9/17/2012	7.3	8.06
9/24/2012	8.59	9.38
5/6/2013	7.54	6.88
5/13/2013	9.96	9.9
5/20/2013	10.11	9.06
5/28/2013	8.65	
6/3/2013	9.28	10.06
6/10/2013	8.61	8.65
6/17/2013	7.9	9.98
6/24/2013	8.85	9.35
7/1/2013	8.53	8.2
7/8/2013	8.19	9.95
7/15/2013	9.64	5.6
7/22/2013	6.91	
7/29/2013	6.93	6.1
8/5/2013	6.9	7.01
8/12/2013	6.3	5.9
8/19/2013	8.5	8.5
8/26/2013	7.46	7.9
9/3/2013	8.9	8.5
9/9/2013	9.1	8.9
9/16/2013	9	7.1
9/23/2013	7.9	9
9/30/2013	9.85	7.6
5/5/2014	7.05	7.8
5/12/2014	7.4	7.9
5/19/2014	7.8	8.6
5/27/2014	6.8	8.7
6/2/2014	7.11	6.9
6/9/2014	8.8	7.9
6/16/2014	9.4	9
6/23/2014	7.4	6.5
6/30/2014	9.8	6.9
7/7/2014	8.6	7.8
7/14/2014	9.6	6.9
7/21/2014	8.6	8.5
7/28/2014	8.9	9.6
8/4/2014	8.9	6.8
8/12/2014	8.9	7.8
8/18/2014	8.6	7.6
8/25/2014	5.9	8
9/2/2014	7.3	7.1
9/8/2014	6.7	7.7
9/15/2014	8	9.5

Date	AM DO (mg/L)	PM DO (mg/L)
9/22/2014	7.1	8.4
9/29/2014	7.2	8.3
Minimum	5.4	5.6
5th Percentile	6.1	6.5
10th Percentile	6.6	6.9
Average	8.0	8.6
Maximum	11.0	11.3
Standard Deviation	1.2	1.3
Count	65	62

Table 39: Upstream Dissolved Oxygen in Wanity Slough October - April

Date	AM DO (mg/L)	PM DO (mg/L)
2/7/2012	5.41	5.15
2/13/2012	6.49	7.72
2/20/2012	5.66	5.38
2/27/2012	4.96	7.76
3/5/2012	5.43	
3/12/2012	6.31	7.92
3/19/2012	5.81	9.93
3/26/2012	6.49	9.82
4/2/2012	5.84	8.15
4/9/2012	8.43	10.54
4/16/2012	10.55	10.98
4/23/2012	9.56	7.01
4/30/2012	5.97	7.9
10/1/2012	9.31	9.21
10/8/2012	8.61	9.37
10/15/2012	7.12	8.15
10/22/2012	7.93	8.27
10/29/2012	11.76	8.96
11/5/2012	9.31	8.88
11/12/2012	8.68	8.95
11/19/2012	9.16	8.61
11/26/2012	7.67	9.08
12/3/2012	8.66	9.61
12/10/2012	8.75	8.3
12/17/2012	7.76	8.8
12/26/2012	7.3	9
1/2/2013	6.49	
1/7/2013	7.09	9.26
1/14/2013	6.73	8.98
1/21/2013	7.32	8.1
1/28/2013	6.87	8.2
2/4/2013	7.48	8.15
2/11/2013	7.86	8.6
2/18/2013	7.11	8.35
2/25/2013	8.02	10.15
3/4/2013	8.48	9.65
3/11/2013	7.02	9.76
3/18/2013	7.8	11.5
3/25/2013	5.3	9.82
4/1/2013	4.57	10.11
4/8/2013	9.72	9.92
4/15/2013	8.3	10.45
4/22/2013	7.21	9.79
4/29/2013	5.75	9.69
10/7/2013	7.4	7.7
10/14/2013	7.7	10.1
10/21/2013	8.8	8.6
10/28/2013	7.3	8.1
11/4/2013	11.5	9.6
11/11/2013	10	9.1
11/19/2013	10.3	9.7

Date	AM DO (mg/L)	PM DO (mg/L)
11/24/2013	9.7	9.9
12/2/2013	9.4	9.8
12/9/2013	10.1	9.9
12/16/2013	8.8	9.9
12/23/2013	8.9	9.2
12/30/2013	9.3	9.6
1/6/2014	8.2	8.8
1/13/2014	9.2	8.1
1/20/2014	8.6	8.1
1/27/2014	8.9	8
2/3/2014	6.9	8.1
2/10/2014	9.9	8.6
2/18/2014	8.6	7.9
2/24/2014	8.2	8.21
3/3/2014	10.6	7.9
3/10/2014	9.6	8.4
3/17/2014	8.5	9.9
3/24/2014	8.1	7.4
3/31/2014	8.3	8.5
4/7/2014	7.5	7.8
4/14/2014	9	8.2
4/21/2014	7.6	7.6
4/28/2014	6.9	7.1
10/6/2014	7.8	8.1
10/13/2014	8.6	8.2
10/20/2014	7.6	8.2
10/27/2014	7	9
11/3/2014	6.89	6.9
11/10/2014	6.6	6.9
11/17/2014	6.7	8
11/24/2014	7.6	7.1
12/1/2014	7.9	7.2
12/8/2014	6.8	7.2
12/15/2014	6.8	8.1
12/22/2014	6.7	7.2
12/29/2014	6.5	7.1
1/5/2015	7.2	6.9
1/12/2015	7.3	7.3
1/19/2015	7	6.7
1/26/2015	7.9	7
Minimum	4.6	5.2
5th Percentile	5.5	6.9
10th Percentile	6.0	7.1
Average	7.9	8.5
Maximum	11.8	11.5
Standard Deviation	1.4	1.2
Count	91	89

Table 40: Downstream Dissolved Oxygen in Wanity Slough May – September, Permittee Data

Date	AM DO (mg/L)	PM DO (mg/L)
5/7/2012	6.68	10.12
5/14/2012	7.59	9.79
5/21/2012	8.01	9.58
5/29/2012	8.51	9.25
6/4/2012	7.80	10.72
6/11/2012	9.65	9.63
6/18/2012	8.85	9.82
6/25/2012	8.91	12.40
7/2/2012	8.12	11.73
7/9/2012	7.92	9.88
7/16/2012	7.33	9.61
7/23/2012	10.85	9.90
7/30/2012	8.98	11.60
8/6/2012	6.83	9.67
8/13/2012	7.01	9.36
8/20/2012	6.52	NA
8/27/2012	7.53	8.42
9/3/2012	7.42	9.12
9/10/2012	6.67	8.42
9/17/2012	6.60	9.10
9/24/2012	8.04	9.26
5/6/2013	9.40	6.96
5/13/2013	10.95	10.38
5/20/2013	8.92	10.45
5/27/2013	8.88	Holiday
6/3/2013	8.94	10.14
6/10/2013	8.58	9.25
6/17/2013	8.42	10.02
6/24/2013	8.98	10.11
7/1/2013	8.69	8.78
7/8/2013	8.26	10.92
7/15/2013	8.16	5.98
7/22/2013	7.18	NA
7/29/2013	6.09	5.80
8/5/2013	6.45	6.71
8/12/2013	6.66	5.70
8/19/2013	8.90	8.30
8/26/2013	6.69	7.10
9/2/2013	9.10	8.60
9/9/2013	8.80	9.10
9/16/2013	9.10	8.00
9/23/2013	8.70	8.70
9/30/2013	9.80	8.80
5/5/2014	7.20	8.00
5/12/2014	7.00	8.50
5/19/2014	8.70	8.90
5/27/2014	6.90	8.90
6/2/2014	8.20	8.10
6/9/2014	9.10	7.50
6/16/2014	9.40	8.50
6/23/2014	8.20	6.90
6/30/2014	9.70	6.80
7/7/2014	8.80	8.20
7/14/2014	9.40	6.90
7/21/2014	9.10	8.30
7/28/2014	8.60	6.80
8/4/2014	8.70	
8/11/2014	8.60	7.30
8/18/2014	8.00	7.20
8/25/2014	6.20	8.30
9/2/2014	6.20	6.70
9/8/2014	7.10	7.20

Date	AM DO (mg/L)	PM DO (mg/L)
9/15/2014	7.90	8.40
9/22/2014	7.70	7.70
9/29/2014	7.80	7.50
Minimum	6.09	5.70
5th Percentile	6.46	6.70
10th Percentile	6.46	6.70
Average	8.15	8.68
Maximum	10.95	12.40
Standard Deviation	1.11	1.47
Count	65	61

Table 41: Downstream Dissolved Oxygen in Wanity Slough October – April, Permittee Data

Date	AM DO (mg/L)	PM DO (mg/L)
2/7/2012	5.35	4.95
2/13/2012	5.85	8.62
2/20/2012	6.75	5.53
2/27/2012	5.01	6.82
3/5/2012	5.50	NA
3/12/2012	5.86	8.35
3/19/2012	5.43	10.72
3/26/2012	7.92	10.46
4/2/2012	6.37	9.90
4/9/2012	9.28	9.65
4/16/2012	10.23	11.04
4/23/2012	8.54	6.96
4/30/2012	5.94	8.10
10/1/2012	8.69	9.09
10/8/2012	8.93	9.10
10/15/2012	6.50	8.20
10/22/2012	8.01	8.47
10/29/2012	11.28	8.78
11/5/2012	9.06	8.68
11/12/2012	8.79	8.84
11/19/2012	9.27	8.72
11/26/2012	7.82	9.08
12/3/2012	8.78	9.69
12/10/2012	8.76	8.89
12/17/2012	7.56	8.91
12/26/2012	8.65	9.02
1/2/2013	6.25	
1/7/2013	7.45	9.43
1/14/2013	6.50	8.98
1/21/2013	6.79	8.10
1/28/2013	6.70	8.05
2/4/2013	7.29	8.51
2/11/2013	7.49	8.03
2/18/2013	6.89	8.60
2/25/2013	7.25	9.08
3/4/2013	7.89	9.58
3/11/2013	6.92	9.20
3/18/2013	7.19	10.05
3/25/2013	5.86	9.48
4/1/2013	4.99	11.10
4/8/2013	11.25	9.63
4/15/2013	7.98	10.77
4/22/2013	6.98	9.85
4/29/2013	5.60	9.92
10/7/2013	7.90	7.70
10/14/2013	7.40	9.80
10/21/2013	7.90	9.30
10/28/2013	8.40	8.20
11/4/2013	11.20	9.20

Date	AM DO (mg/L)	PM DO (mg/L)
11/11/2013	10.70	9.60
11/18/2013	11.40	9.90
11/25/2013	10.30	10.10
12/2/2013	9.70	9.40
12/9/2013	10.60	10.30
12/16/2013	9.50	10.40
12/23/2013	9.30	9.40
12/30/2013	8.70	9.90
1/6/2014	8.40	8.80
1/13/2014	9.50	8.60
1/20/2014	9.60	8.20
1/27/2014	8.70	8.30
2/3/2014	7.30	8.00
2/10/2014	10.00	8.70
2/17/2014	8.80	7.90
2/24/2014	8.30	8.90
3/3/2014	11.40	7.70
3/10/2014	10.00	8.60
3/17/2014	8.90	9.30
3/24/2014	8.40	8.90
3/31/2014	8.80	9.40
4/7/2014	7.80	7.90
4/14/2014	9.00	8.90
4/21/2014	8.10	8.70
4/28/2014	7.10	8.30
10/6/2014	7.90	8.10
10/13/2014	9.00	7.90
10/20/2014	7.20	7.20
10/27/2014	8.00	8.80
11/3/2014	7.21	6.70
11/10/2014	6.80	7.20
11/17/2014	6.60	7.90
11/24/2014	7.00	6.90
12/1/2014	7.00	6.90
12/8/2014	7.80	7.30
12/15/2014	7.00	8.10
12/22/2014	6.50	7.50
12/29/2014	6.33	7.30
1/5/2015	6.90	6.80
1/12/2015	7.40	7.40
1/19/2015	6.20	6.80
1/26/2015	7.20	7.10
Minimum	4.99	4.95
5 th Percentile	5.55	6.81
10 th Percentile	5.94	7.07
Average	7.94	8.64
Maximum	11.40	11.10
Standard Deviation	1.54	1.17
Count	91	89

Table 42: Downstream DO from the Water Quality Portal

Row Labels	DO (mg/L)
12/12/2006	3.6
1/23/2007	10.8
2/20/2007	7.1
3/20/2007	10.5
4/3/2007	15.2
4/17/2007	13.5
5/1/2007	11.7
5/15/2007	11.5
5/29/2007	11.4
6/12/2007	11.6
6/26/2007	11.3
7/10/2007	8.6
8/7/2007	8.6
8/22/2007	7.7
9/4/2007	8.3
9/18/2007	1.1
10/16/2007	9.8
10/30/2007	7.8
11/27/2007	10.2
1/7/2008	8
2/5/2008	8.7
3/4/2008	6.3
4/1/2008	12.7
4/29/2008	12.8
5/27/2008	13
6/24/2008	10.8
7/22/2008	9.8
8/19/2008	9.4
10/14/2008	7.5
4/28/2009	12.7
5/26/2009	9.6
6/23/2009	10.2
8/18/2009	8.7
9/15/2009	9.3
10/13/2009	9.6
1/5/2010	7.2
2/2/2010	7.6
4/27/2010	8.6
6/8/2010	6.6
7/20/2010	1.9
8/31/2010	0.8
9/28/2010	0.7
10/12/2010	0.6
5/24/2011	12.3
6/21/2011	10.2
7/19/2011	12.65
8/2/2011	10
8/30/2011	7
9/27/2011	8.7
7/23/2013	3
8/20/2013	1.6
9/17/2013	1.4
4/22/2014	1.8
5/20/2014	1.4
12/2/2014	4.8
5/12/2015	3.1
6/9/2015	2.6
9/29/2015	3.1
12/15/2015	9.2
4/19/2016	4.5

5/3/2016	4.4
5/17/2016	2.3
8/9/2016	0.7
4/18/2017	1.9

Table 43: Upstream E. coli in Wanity Slough

Date	E. coli (#/100 ml)
2/7/2012	22.2
2/13/2012	16.4
2/20/2012	23.8
2/27/2012	>200
3/5/2012	165
3/12/2012	56
3/19/2012	15
3/26/2012	40.6
4/2/2012	16.4
4/9/2012	25.4
4/16/2012	34.4
4/23/2012	101
4/30/2012	101
5/7/2012	78.2
5/14/2012	>200
5/21/2012	>200
5/29/2012	>200
6/5/2012	>200
6/11/2012	165
6/18/2012	>200
6/25/2012	>200
7/2/2012	>200
7/9/2012	>200
7/16/2012	1
7/23/2012	>200
7/30/2012	118
8/6/2012	>200
8/13/2012	>200
8/20/2012	144
8/27/2012	144
9/4/2012	40.6
9/10/2012	40.6
9/17/2012	30.6
9/24/2012	200
10/1/2012	38.4
10/8/2012	38.4
10/15/2012	118.4
10/22/2012	59.1
10/29/2012	30.6
11/5/2012	11.1
11/12/2012	53.1
11/19/2012	34.4
11/26/2012	34.4
12/3/2012	35.4
12/10/2012	13.7
12/17/2012	>200.5
12/26/2012	17.8
1/2/2013	6.4
1/7/2013	32.4
1/14/2013	38.4
1/21/2013	73.8
1/28/2013	2
2/4/2013	5.3
2/11/2013	>200.5
2/18/2013	>200.5
2/25/2013	>200.5
3/4/2013	>200.5

Date	E. coli (#/100 ml)
3/11/2013	200.5
3/18/2013	8.7
3/25/2013	13.7
4/1/2013	>200.5
4/8/2013	62.4
4/15/2013	83.1
4/22/2013	35.4
4/29/2013	109.1
5/6/2013	94.5
5/13/2013	>200.5
5/20/2013	129.8
5/28/2013	>200.5
6/3/2013	129.8
6/10/2013	65.9
6/17/2013	59.1
6/24/2013	>200.5
7/1/2013	40.6
7/8/2013	>200.5
7/15/2013	129.8
7/22/2013	109.1
7/29/2013	129.8
8/5/2013	78.2
8/12/2013	56
8/19/2013	>200.5
8/26/2013	1
9/3/2013	34.4
9/9/2013	88.5
9/16/2013	38.4
9/23/2013	45.3
9/30/2013	3.1
10/7/2013	42.9
10/14/2013	1
10/21/2013	20.7
10/28/2013	4.2
11/4/2013	6.4
11/11/2013	13.7
11/19/2013	9.9
11/24/2013	4.2
12/2/2013	9.9
12/9/2013	8.7
12/16/2013	9.9
12/23/2013	15
12/30/2013	16.4
1/6/2014	50.4
1/13/2014	13.7
1/20/2014	3.1
1/27/2014	5.3
2/3/2014	118.4
2/10/2014	32.4
2/18/2014	>200.5
2/24/2014	8.7
3/3/2014	12.4
3/10/2014	8.7
3/17/2014	7.5
3/24/2014	8.7
3/31/2014	1
4/7/2014	62.4
4/14/2014	65.9
4/28/2014	78.2
5/5/2014	34.4
5/12/2014	165.2
5/19/2014	200.5
5/27/2014	101.3
6/2/2014	200.5
6/9/2014	200.5

Date	E. coli (#/100 ml)
6/16/2014	200.5
6/23/2014	144.5
6/30/2014	200.5
7/7/2014	>200.5
7/14/2014	>200.5
7/21/2014	129.8
7/28/2014	56
8/4/2014	34.4
8/12/2014	200.5
8/18/2014	200.5
8/25/2014	129.8
9/2/2014	83.1
9/8/2014	>200.5
9/15/2014	>200.5
9/22/2014	62.4
9/29/2014	109.1
10/6/2014	23.8
10/13/2014	45.3
10/20/2014	22.2
10/27/2014	27.1
11/3/2014	13.7
11/10/2014	38.4
11/17/2014	27.1
11/24/2014	15
12/1/2014	9.9
12/8/2014	56
12/15/2014	11.1
12/22/2014	32.4
12/29/2014	17.8
1/5/2015	27.1
1/12/2015	6.4
1/19/2015	16.4
1/26/2015	12.4
Greater Than Values	28
Minimum	1
25th Percentile	16.4
Median	53.1
75th Percentile	165
IQR	148.6
Maximum	200.5
Count	155

Table 44: Upstream Nitrate plus Nitrite in Wanity Slough

Location	Date	NO2 + NO3 (mg/L)
1119USBR_WQX-YAV348	7/19/2011	0.41
1119USBR_WQX-YAV348	8/16/2011	0.44
1119USBR_WQX-YAV349	7/19/2011	0.36
1119USBR_WQX-YAV349	8/16/2011	0.35
NARS_WQX-NRS_WA-10410	6/26/2018	0.144
NARS_WQX-WASS-1139	8/12/2014	0.155
	Minimum	0.144
	Average	0.310
	Maximum	0.440
	Standard Deviation	0.129
	Count	6

Table 45: Downstream pH in Wanity Slough May – September

Activity Start Date	Activity Start Time	Time Zone	Monitoring Location Name	Characteristic Name	Result Measure Value
5/1/2007	11:44:00 AM	PDT	Wanity Slough at Highway97	pH	7.3
5/15/2007	11:35:00 AM	PDT	Wanity Slough at Highway97	pH	7.3
5/29/2007	12:39:00 PM	PDT	Wanity Slough at Highway97	pH	7.84
5/29/2007	12:32:00 PM	PDT	Wanity Slough at Highway97	pH	7.8
6/12/2007	12:30:00 PM	PDT	Wanity Slough at Highway97	pH	7.86
6/26/2007	11:22:00 AM	PDT	Wanity Slough at Highway97	pH	7.43
7/10/2007	9:17:00 AM	PDT	Wanity Slough at Highway97	pH	7.15
8/7/2007	11:23:00 AM	PDT	Wanity Slough at Highway97	pH	7.3
8/22/2007	11:19:00 AM	PDT	Wanity Slough at Highway97	pH	7.45
9/4/2007	11:25:00 AM	PDT	Wanity Slough at Highway97	pH	7.31
9/18/2007	9:45:00 AM	PDT	Wanity Slough at Highway97	pH	7.4
5/27/2008	11:05:00 AM	PDT	Wanity Slough at Highway97	pH	7.17
5/27/2008	10:59:00 AM	PDT	Wanity Slough at Highway97	pH	7.17
6/24/2008	10:50:00 AM	PDT	Wanity Slough at Highway97	pH	7.13
7/22/2008	10:30:00 AM	PDT	Wanity Slough at Highway97	pH	7.12
8/19/2008	11:07:00 AM	PDT	Wanity Slough at Highway97	pH	7.12
9/16/2008	10:15:00 AM	PDT	Wanity Slough at Highway97	pH	7.08
5/26/2009	9:25:00 AM	PDT	Wanity Slough at Highway97	pH	7.41
5/26/2009	9:38:00 AM	PDT	Wanity Slough at Highway97	pH	7.41
6/23/2009	11:48:00 AM	PDT	Wanity Slough at Highway97	pH	8
8/18/2009	1:24:00 PM	PDT	Wanity Slough at Highway97	pH	7.64
9/15/2009	12:27:00 PM	PDT	Wanity Slough at Highway97	pH	7.71
6/8/2010	12:33:00 PM	PDT	Wanity Slough at Highway97	pH	8.65
7/20/2010	10:10:00 AM	PDT	Wanity Slough at Highway97	pH	8.56
8/31/2010	12:10:00 PM	PDT	Wanity Slough at Highway97	pH	8.85
9/28/2010	10:05:00 AM	PDT	Wanity Slough at Highway97	pH	9.13
9/28/2010	10:12:00 AM	PDT	Wanity Slough at Highway97	pH	9.13
5/24/2011	10:53:00 AM	PDT	Wanity Slough at Highway97	pH	7.67
6/21/2011	10:29:00 AM	PDT	Wanity Slough at Highway97	pH	7.91
7/19/2011	2:00:00 PM	PDT	Wanity Slough at Meyers Rd	pH	8.42
7/19/2011	1:20:00 PM	PDT	Wanity Slough near Case Rd	pH	8.03
8/2/2011	2:00:00 PM	PDT	Wanity Slough at Highway97	pH	8.25
8/30/2011	10:49:00 AM	PDT	Wanity Slough at Highway97	pH	7.12
9/27/2011	10:30:00 AM	PDT	Wanity Slough at Highway97	pH	7.9
9/27/2011	10:27:00 AM	PDT	Wanity Slough at Highway97	pH	7.9
7/23/2013	11:38:00 AM	PDT	Wanity Slough at Highway97	pH	8.71
8/20/2013	12:50:00 PM	PDT	Wanity Slough at Highway97	pH	8.66
9/17/2013	12:38:00 PM	PDT	Wanity Slough at Highway97	pH	8.53
6/9/2015	12:04:00 PM	PDT	Wanity Slough at Highway97	pH	11.2
5/3/2016	1:37:00 PM	MST	Wanity Slough at Highway97	pH	11.5
5/17/2016	12:49:00 PM	MST	Wanity Slough at Highway97	pH	10.4
				percent rank 8.5	0.743
				90th Percentile	9.13
				Minimum	7.08
				Average	8.04

Activity Start Date	Activity Start Time	Time Zone	Monitoring Location Name	Characteristic Name	Result Measure Value
				Maximum	11.50
				Standard Deviation	1.05
				Count	41

Table 46: Downstream pH in Wanity Slough October - April

Activity Start Date	Activity Start Time	Monitoring Location Name	Characteristic Name	Result Measure Value
12/12/2006	10:30:00 AM	Wanity Slough at Highway97	pH	7.51
1/23/2007	9:35:00 AM	Wanity Slough at Highway97	pH	7.37
2/20/2007	9:10:00 AM	Wanity Slough at Highway97	pH	7.27
2/20/2007	9:20:00 AM	Wanity Slough at Highway97	pH	7.24
3/20/2007	11:15:00 AM	Wanity Slough at Highway97	pH	7.05
4/3/2007	12:30:00 PM	Wanity Slough at Highway97	pH	7.9
4/17/2007	11:50:00 AM	Wanity Slough at Highway97	pH	7.73
10/2/2007	10:44:00 AM	Wanity Slough at Highway97	pH	7.5
10/16/2007	11:21:00 AM	Wanity Slough at Highway97	pH	7.41
10/30/2007	8:00:00 AM	Wanity Slough at Highway97	pH	7.24
11/27/2007	11:00:00 AM	Wanity Slough at Highway97	pH	7.17
1/7/2008	8:30:00 AM	Wanity Slough at Highway97	pH	7
2/5/2008	12:45:00 PM	Wanity Slough at Highway97	pH	7.2
3/4/2008	9:30:00 AM	Wanity Slough at Highway97	pH	6.94
4/1/2008	11:30:00 AM	Wanity Slough at Highway97	pH	7.66
4/29/2008	10:15:00 AM	Wanity Slough at Highway97	pH	7.59
10/14/2008	10:25:00 AM	Wanity Slough at Highway97	pH	6.4
4/28/2009	1:15:00 PM	Wanity Slough at Highway97	pH	9.03
10/13/2009	9:20:00 AM	Wanity Slough at Highway97	pH	7.67
10/13/2009	9:30:00 AM	Wanity Slough at Highway97	pH	7.67
1/5/2010	12:00:00 PM	Wanity Slough at Highway97	pH	7
2/2/2010	12:03:00 PM	Wanity Slough at Highway97	pH	7.15
4/27/2010	12:45:00 PM	Wanity Slough at Highway97	pH	8.62
10/12/2010	10:48:00 AM	Wanity Slough at Highway97	pH	9.29
4/22/2014	11:00:00 AM	Wanity Slough at Highway97	pH	9.51
4/19/2016	9:50:00 AM	Wanity Slough at Highway97	pH	10.2
			percent rank 8.5	0.833
			90th Percentile	9.16
			Minimum	6.40
			Average	7.70
			Maximum	10.2
			Standard Deviation	0.90
			Count	26

Table 47: Upstream pH in Wanity Slough May - September

Date	Source	pH
5/7/2012	Permittee	6.96
5/14/2012	Permittee	7.1
5/21/2012	Permittee	7.3
5/29/2012	Permittee	6.67
6/5/2012	Permittee	7.1
6/11/2012	Permittee	7.08
6/18/2012	Permittee	6.85
6/25/2012	Permittee	7.68
7/2/2012	Permittee	6.85
7/9/2012	Permittee	6.59
7/16/2012	Permittee	6.8
7/23/2012	Permittee	6.05
7/30/2012	Permittee	6
8/6/2012	Permittee	6.49
8/13/2012	Permittee	6.18
8/20/2012	Permittee	6.58
8/27/2012	Permittee	6.3

Date	Source	pH
9/4/2012	Permittee	6.55
9/10/2012	Permittee	7.45
9/17/2012	Permittee	6.1
9/24/2012	Permittee	6.69
5/6/2013	Permittee	6.48
5/13/2013	Permittee	6.62
5/20/2013	Permittee	6.32
5/28/2013	Permittee	6.35
6/3/2013	Permittee	6.41
6/10/2013	Permittee	6.45
6/17/2013	Permittee	6.51
6/24/2013	Permittee	6.6
7/1/2013	Permittee	6.66
7/8/2013	Permittee	6.64
7/15/2013	Permittee	6.13
7/22/2013	Permittee	6.73
7/29/2013	Permittee	6.65
8/5/2013	Permittee	6.35
8/12/2013	Permittee	6.32
8/19/2013	Permittee	6.4
8/26/2013	Permittee	6.49
9/3/2013	Permittee	7.33
9/9/2013	Permittee	7.05
9/16/2013	Permittee	7.2
9/23/2013	Permittee	7.23
9/30/2013	Permittee	7.2
5/5/2014	Permittee	5.62
5/12/2014	Permittee	6.81
5/19/2014	Permittee	6.98
5/27/2014	Permittee	6.35
6/2/2014	Permittee	7.09
6/9/2014	Permittee	6.03
6/16/2014	Permittee	6
6/23/2014	Permittee	6.72
6/30/2014	Permittee	6.14
7/7/2014	Permittee	6.24
7/14/2014	Permittee	6.25
7/21/2014	Permittee	6.72
7/28/2014	Permittee	6.5
8/4/2014	Permittee	6.2
8/12/2014	Permittee	6.3
8/18/2014	Permittee	6.7
8/25/2014	Permittee	6.81
9/2/2014	Permittee	6.68
9/8/2014	Permittee	6.66
9/15/2014	Permittee	7.08
9/22/2014	Permittee	6.89
9/29/2014	Permittee	6.9
6/26/2018	NARS_WQX-NRS_WA-10410	7.92
6/26/2018	NARS_WQX-NRS_WA-10410	7.77
8/12/2014	NARS_WQX-WASS-1139	7.7
8/12/2014	NARS_WQX-WASS-1139	7.24
7/19/2011	1119USBR_WQX-YAV348	8.1
7/19/2011	1119USBR_WQX-YAV349	8.12
	Minimum	5.62
	5th percentile	6.04
	Average	6.73
	90th percentile	7.33
	95th percentile	7.74
	Maximum	8.12
	Standard Deviation	0.51
	Count	71

Table 48: Upstream pH in Wanity Slough October - April

Date	Source	pH
2/7/2012	Permittee	6.34
2/27/2012	Permittee	6.55
3/12/2012	Permittee	6.61
3/19/2012	Permittee	6.48
3/26/2012	Permittee	6.39
4/2/2012	Permittee	6.62
4/9/2012	Permittee	6.5
4/16/2012	Permittee	6.18
4/23/2012	Permittee	7.07
4/30/2012	Permittee	6.55
10/1/2012	Permittee	7.16
10/8/2012	Permittee	6.61
10/15/2012	Permittee	7.51
10/22/2012	Permittee	6.25
10/29/2012	Permittee	6.79
11/5/2012	Permittee	7.19
11/12/2012	Permittee	6.87
11/19/2012	Permittee	7.15
11/26/2012	Permittee	6.88
12/3/2012	Permittee	6.92
12/10/2012	Permittee	7.4
12/17/2012	Permittee	7.15
12/26/2012	Permittee	6.57
1/2/2013	Permittee	7.6
1/7/2013	Permittee	7.35
1/14/2013	Permittee	7.15
1/21/2013	Permittee	7.1
1/28/2013	Permittee	7.22
2/4/2013	Permittee	7.13
2/11/2013	Permittee	7.3
2/18/2013	Permittee	6.98
2/25/2013	Permittee	7.11
3/4/2013	Permittee	6.98
3/11/2013	Permittee	7.03
3/18/2013	Permittee	6.9
3/25/2013	Permittee	7.62
4/1/2013	Permittee	7.41
4/8/2013	Permittee	5.48
4/15/2013	Permittee	5.2
4/22/2013	Permittee	7.32
4/29/2013	Permittee	5.9
10/7/2013	Permittee	7.23
10/14/2013	Permittee	7.36
10/21/2013	Permittee	7.1
10/28/2013	Permittee	7.24
11/4/2013	Permittee	7.24
11/11/2013	Permittee	6.75
11/19/2013	Permittee	6.86
11/24/2013	Permittee	7.3
12/2/2013	Permittee	7.25
12/9/2013	Permittee	7.45
12/16/2013	Permittee	7.43
12/23/2013	Permittee	7.2
12/30/2013	Permittee	7.55
1/6/2014	Permittee	7.38
1/13/2014	Permittee	6.58
1/20/2014	Permittee	6.92
1/27/2014	Permittee	7.51
2/3/2014	Permittee	7.19
2/10/2014	Permittee	6.39
2/18/2014	Permittee	7.62
2/24/2014	Permittee	6.79
3/3/2014	Permittee	5.66

Date	Source	pH
3/10/2014	Permittee	6.86
3/17/2014	Permittee	7.51
3/24/2014	Permittee	7.02
3/31/2014	Permittee	5.7
4/7/2014	Permittee	
4/14/2014	Permittee	6.09
4/21/2014	Permittee	6.69
4/28/2014	Permittee	6.88
10/6/2014	Permittee	6.86
10/13/2014	Permittee	6.84
10/20/2014	Permittee	7.18
10/27/2014	Permittee	6.9
11/3/2014	Permittee	7.01
11/10/2014	Permittee	6.8
11/17/2014	Permittee	7.41
11/24/2014	Permittee	7.39
12/1/2014	Permittee	7.67
12/8/2014	Permittee	7.54
12/15/2014	Permittee	6.72
12/22/2014	Permittee	7.58
12/29/2014	Permittee	6.85
1/5/2015	Permittee	7.63
1/12/2015	Permittee	7.47
1/19/2015	Permittee	7.39
1/26/2015	Permittee	7.32
	Minimum	5.20
	5th percentile	5.96
	Average	6.96
	90th percentile	7.51
	95th percentile	7.59
	Maximum	7.67
	Standard Deviation	0.51
	Count	87

Table 49: Upstream Temperature in Wanity Slough in April

Date	002 US T (°C)
4/16/2012	11.6
4/19/2012	11
4/20/2012	12.3
4/21/2012	16.1
4/22/2012	17.8
4/23/2012	18.9
4/24/2012	16.5
4/25/2012	14.3
4/26/2012	14.5
4/27/2012	13
4/28/2012	14.6
4/29/2012	15.1
4/30/2012	13.5
4/15/2013	10.2
4/16/2013	10.1
4/17/2013	10.8
4/20/2013	14.9
4/21/2013	15.4
4/22/2013	14.9
4/23/2013	15.7
4/24/2013	16.1
4/25/2013	16.5
4/26/2013	17
4/27/2013	16.2
4/28/2013	16.9
4/29/2013	15.7
4/30/2013	15.2

4/15/2014	11
4/16/2014	10.5
4/17/2014	11.4
4/18/2014	11.2
4/19/2014	11.4
4/21/2014	12.6
4/22/2014	13.3
4/23/2014	12.1
4/24/2014	11.1
4/25/2014	13.4
4/26/2014	13.3
4/27/2014	13.6
4/28/2014	15
4/29/2014	15.6
4/30/2014	17
Minimum	10.1
Average	14.0
90 th Percentile	16.9
95 th Percentile	17.0
Maximum	18.9
Standard Deviation	2.3
Count	42

Table 50: Upstream Temperature in Wanity Slough May - September

Date	Source	002 US T (°C)
5/1/2012	Permittee	14.3
5/2/2012	Permittee	14
5/3/2012	Permittee	12.3
5/4/2012	Permittee	14.1
5/5/2012	Permittee	15.4
5/6/2012	Permittee	17.2
5/7/2012	Permittee	16.7
5/8/2012	Permittee	16.6
5/9/2012	Permittee	15.1
5/10/2012	Permittee	15.2
5/11/2012	Permittee	14.6
5/12/2012	Permittee	16.9
5/13/2012	Permittee	17.2
5/14/2012	Permittee	17.7
5/15/2012	Permittee	17.9
5/16/2012	Permittee	18
5/17/2012	Permittee	17.1
5/18/2012	Permittee	17.4
5/19/2012	Permittee	17.2
5/20/2012	Permittee	16.8
5/21/2012	Permittee	14.2
5/22/2012	Permittee	13.5
5/23/2012	Permittee	12.2
5/24/2012	Permittee	12
5/25/2012	Permittee	14.2
5/26/2012	Permittee	14.6
5/27/2012	Permittee	17.4
5/28/2012	Permittee	19.8
5/29/2012	Permittee	14.6
5/30/2012	Permittee	16.1
5/31/2012	Permittee	14.4
6/1/2012	Permittee	16.3
6/2/2012	Permittee	19.2
6/3/2012	Permittee	19
6/4/2012	Permittee	13.1
6/5/2012	Permittee	13.5
6/6/2012	Permittee	14.7
6/7/2012	Permittee	15.01
6/8/2012	Permittee	13.8

Date	Source	002 US T (°C)
6/9/2012	Permittee	13.8
6/10/2012	Permittee	16.6
6/11/2012	Permittee	16.3
6/12/2012	Permittee	16.7
6/13/2012	Permittee	18.4
6/14/2012	Permittee	18.8
6/15/2012	Permittee	17.8
6/16/2012	Permittee	18.5
6/17/2012	Permittee	19.2
6/18/2012	Permittee	17.2
6/19/2012	Permittee	17.3
6/20/2012	Permittee	18.1
6/21/2012	Permittee	20.3
6/22/2012	Permittee	17
6/23/2012	Permittee	18.1
6/24/2012	Permittee	17.5
6/25/2012	Permittee	17.4
6/26/2012	Permittee	15.1
6/27/2012	Permittee	17.5
6/28/2012	Permittee	18.5
6/29/2012	Permittee	19.1
6/30/2012	Permittee	18.6
7/1/2012	Permittee	19.7
7/2/2012	Permittee	20.3
7/3/2012	Permittee	19.5
7/4/2012	Permittee	18.4
7/5/2012	Permittee	18.9
7/6/2012	Permittee	18.9
7/7/2012	Permittee	19.9
7/8/2012	Permittee	20.2
7/9/2012	Permittee	23.1
7/10/2012	Permittee	20.1
7/11/2012	Permittee	20.5
7/12/2012	Permittee	20.2
7/13/2012	Permittee	20.4
7/14/2012	Permittee	18.7
7/15/2012	Permittee	18.8
7/16/2012	Permittee	19.5
7/17/2012	Permittee	20.7
7/18/2012	Permittee	21.7
7/19/2012	Permittee	20.4
7/20/2012	Permittee	20.9
7/21/2012	Permittee	19.8
7/22/2012	Permittee	20.1
7/23/2012	Permittee	18.9
7/24/2012	Permittee	19.3
7/25/2012	Permittee	19.8
7/26/2012	Permittee	20.2
7/27/2012	Permittee	21
7/28/2012	Permittee	22.6
7/29/2012	Permittee	20.1
7/30/2012	Permittee	21.8
7/31/2012	Permittee	19.8
8/1/2012	Permittee	19.8
8/2/2012	Permittee	20.3
8/3/2012	Permittee	20.2
8/4/2012	Permittee	19.5
8/5/2012	Permittee	19.4
8/6/2012	Permittee	22.3
8/7/2012	Permittee	20.7
8/8/2012	Permittee	21.4
8/9/2012	Permittee	19.5
8/10/2012	Permittee	20.4
8/11/2012	Permittee	19.5
8/12/2012	Permittee	22.2

Date	Source	002 US T (°C)
8/13/2012	Permittee	19.1
8/14/2012	Permittee	21.8
8/15/2012	Permittee	19.7
8/16/2012	Permittee	19.9
8/17/2012	Permittee	20.2
8/18/2012	Permittee	19.67
8/19/2012	Permittee	20.3
8/21/2012	Permittee	20
8/22/2012	Permittee	20.2
8/23/2012	Permittee	20.1
8/24/2012	Permittee	18.9
8/25/2012	Permittee	19.1
8/26/2012	Permittee	18.9
8/27/2012	Permittee	18.6
8/28/2012	Permittee	17.9
8/29/2012	Permittee	17.8
8/30/2012	Permittee	17.8
8/31/2012	Permittee	17.4
9/1/2012	Permittee	17.1
9/2/2012	Permittee	17.4
9/4/2012	Permittee	17.9
9/5/2012	Permittee	18.2
9/6/2012	Permittee	18.6
9/7/2012	Permittee	18.7
9/8/2012	Permittee	17.7
9/9/2012	Permittee	17.7
9/10/2012	Permittee	17.4
9/11/2012	Permittee	16.4
9/12/2012	Permittee	16.4
9/13/2012	Permittee	16.3
9/14/2012	Permittee	17
9/15/2012	Permittee	16.5
9/16/2012	Permittee	17.5
9/17/2012	Permittee	17.4
9/18/2012	Permittee	17.5
9/19/2012	Permittee	17.9
9/20/2012	Permittee	17.6
9/21/2012	Permittee	17.5
9/22/2012	Permittee	17.4
9/23/2012	Permittee	17.4
9/24/2012	Permittee	17
9/25/2012	Permittee	16.9
9/26/2012	Permittee	16.9
9/27/2012	Permittee	16.6
9/28/2012	Permittee	16.8
9/29/2012	Permittee	16.6
5/1/2013	Permittee	15.6
5/2/2013	Permittee	16.3
5/3/2013	Permittee	17.7
5/4/2013	Permittee	18.1
5/5/2013	Permittee	18.8
5/6/2013	Permittee	20.7
5/7/2013	Permittee	20.3
5/8/2013	Permittee	19.8
5/9/2013	Permittee	19.9
5/10/2013	Permittee	20.5
5/11/2013	Permittee	19.2
5/12/2013	Permittee	15.5
5/13/2013	Permittee	15
5/14/2013	Permittee	15
5/15/2013	Permittee	13.1
5/16/2013	Permittee	13.8
5/17/2013	Permittee	15.3
5/18/2013	Permittee	15.3
5/19/2013	Permittee	17.7

Date	Source	002 US T (°C)
5/20/2013	Permittee	17.4
5/21/2013	Permittee	16.2
5/22/2013	Permittee	13
5/23/2013	Permittee	13
5/24/2013	Permittee	13.8
5/25/2013	Permittee	15.4
5/26/2013	Permittee	15.9
5/28/2013	Permittee	15.8
5/29/2013	Permittee	14.9
5/30/2013	Permittee	15.3
5/31/2013	Permittee	15.6
6/1/2013	Permittee	16.9
6/2/2013	Permittee	16.5
6/3/2013	Permittee	16.3
6/4/2013	Permittee	16.3
6/5/2013	Permittee	19
6/6/2013	Permittee	20.7
6/7/2013	Permittee	21.5
6/8/2013	Permittee	20
6/9/2013	Permittee	19.5
6/10/2013	Permittee	18.2
6/11/2013	Permittee	17.1
6/12/2013	Permittee	17.5
6/13/2013	Permittee	16.6
6/14/2013	Permittee	18.4
6/15/2013	Permittee	18.9
6/16/2013	Permittee	18.7
6/17/2013	Permittee	22
6/18/2013	Permittee	17.3
6/19/2013	Permittee	17.8
6/20/2013	Permittee	16.2
6/21/2013	Permittee	16.6
6/22/2013	Permittee	18.3
6/23/2013	Permittee	17.4
6/24/2013	Permittee	17.2
6/25/2013	Permittee	15.1
6/26/2013	Permittee	16.1
6/27/2013	Permittee	17
6/28/2013	Permittee	17.4
6/29/2013	Permittee	20.3
6/30/2013	Permittee	21.4
7/1/2013	Permittee	21.9
7/2/2013	Permittee	21.8
7/3/2013	Permittee	21.6
7/5/2013	Permittee	19.9
7/6/2013	Permittee	19.8
7/7/2013	Permittee	20.3
7/8/2013	Permittee	20
7/9/2013	Permittee	21.6
7/10/2013	Permittee	20.8
7/11/2013	Permittee	19.9
7/12/2013	Permittee	17.9
7/13/2013	Permittee	18.2
7/14/2013	Permittee	18.6
7/15/2013	Permittee	19.2
7/16/2013	Permittee	18.7
7/17/2013	Permittee	20.1
7/18/2013	Permittee	20
7/19/2013	Permittee	19.9
7/20/2013	Permittee	20
7/21/2013	Permittee	19.1
7/22/2013	Permittee	22.1
7/23/2013	Permittee	20
7/24/2013	Permittee	20.3
7/25/2013	Permittee	20.1

Date	Source	002 US T (°C)
7/27/2013	Permittee	21.6
7/28/2013	Permittee	19.7
7/29/2013	Permittee	19.9
7/30/2013	Permittee	20
7/31/2013	Permittee	18.6
8/1/2013	Permittee	18.4
8/2/2013	Permittee	18.1
8/3/2013	Permittee	19.2
8/4/2013	Permittee	19.3
8/5/2013	Permittee	20
8/6/2013	Permittee	20.5
8/7/2013	Permittee	20.6
8/8/2013	Permittee	20.3
8/9/2013	Permittee	20.9
8/10/2013	Permittee	21.6
8/11/2013	Permittee	20.8
8/12/2013	Permittee	20.6
8/13/2013	Permittee	20.3
8/14/2013	Permittee	19.9
8/15/2013	Permittee	20.1
8/16/2013	Permittee	19.8
8/17/2013	Permittee	20
8/18/2013	Permittee	20.2
8/19/2013	Permittee	20.8
8/20/2013	Permittee	20.2
8/21/2013	Permittee	20
8/22/2013	Permittee	19
8/23/2013	Permittee	19.2
8/24/2013	Permittee	19.7
8/25/2013	Permittee	19.6
8/26/2013	Permittee	19.1
8/27/2013	Permittee	19.5
8/28/2013	Permittee	20
8/29/2013	Permittee	20.1
8/30/2013	Permittee	19.5
8/31/2013	Permittee	19.4
9/1/2013	Permittee	19.6
9/3/2013	Permittee	19.8
9/4/2013	Permittee	19.8
9/5/2013	Permittee	19.3
9/6/2013	Permittee	18.7
9/7/2013	Permittee	19
9/8/2013	Permittee	18.8
9/9/2013	Permittee	19
9/10/2013	Permittee	19.8
9/11/2013	Permittee	20.1
9/12/2013	Permittee	20
9/13/2013	Permittee	20.3
9/14/2013	Permittee	21
9/15/2013	Permittee	20
9/16/2013	Permittee	21
9/17/2013	Permittee	18.5
9/18/2013	Permittee	17.8
9/19/2013	Permittee	17.3
9/20/2013	Permittee	17.1
9/21/2013	Permittee	17
9/22/2013	Permittee	17.1
9/23/2013	Permittee	16
9/24/2013	Permittee	16.2
9/25/2013	Permittee	15.9
9/26/2013	Permittee	15.3
9/27/2013	Permittee	14.5
9/28/2013	Permittee	14.8
9/29/2013	Permittee	13.8
9/30/2013	Permittee	14.1

Date	Source	002 US T (°C)
5/1/2014	Permittee	17.4
5/2/2014	Permittee	15.9
5/3/2014	Permittee	16.1
5/4/2014	Permittee	14.2
5/5/2014	Permittee	15.2
5/6/2014	Permittee	14.2
5/7/2014	Permittee	15.8
5/8/2014	Permittee	13.8
5/9/2014	Permittee	13.2
5/10/2014	Permittee	14.7
5/11/2014	Permittee	14.8
5/12/2014	Permittee	16.1
5/13/2014	Permittee	17
5/14/2014	Permittee	17.3
5/15/2014	Permittee	17.8
5/16/2014	Permittee	17.9
5/17/2014	Permittee	16.8
5/18/2014	Permittee	15.2
5/19/2014	Permittee	16.1
5/20/2014	Permittee	17.6
5/21/2014	Permittee	17.6
5/22/2014	Permittee	18.6
5/23/2014	Permittee	16.3
5/24/2014	Permittee	16.9
5/25/2014	Permittee	16.5
5/27/2014	Permittee	16.9
5/28/2014	Permittee	15.4
5/29/2014	Permittee	16.8
5/30/2014	Permittee	17
5/31/2014	Permittee	18.6
6/1/2014	Permittee	18.3
6/2/2014	Permittee	19
6/3/2014	Permittee	19.5
6/4/2014	Permittee	19.1
6/5/2014	Permittee	18.6
6/6/2014	Permittee	17.9
6/7/2014	Permittee	18.6
6/8/2014	Permittee	19.6
6/9/2014	Permittee	19.9
6/10/2014	Permittee	19.1
6/11/2014	Permittee	18.6
6/12/2014	Permittee	19
6/13/2014	Permittee	15.8
6/14/2014	Permittee	17.2
6/15/2014	Permittee	17.5
6/16/2014	Permittee	15
6/17/2014	Permittee	16.1
6/18/2014	Permittee	18
6/19/2014	Permittee	18.4
6/20/2014	Permittee	18.1
6/21/2014	Permittee	18.4
6/22/2014	Permittee	18.4
6/23/2014	Permittee	18.9
6/24/2014	Permittee	18.7
6/25/2014	Permittee	18.6
6/26/2014	Permittee	18.2
6/27/2014	Permittee	18.3
6/28/2014	Permittee	19
6/29/2014	Permittee	18.9
6/30/2014	Permittee	19.2
7/1/2014	Permittee	19
7/2/2014	Permittee	18.8
7/3/2014	Permittee	19.6
7/4/2014	Permittee	19
7/6/2014	Permittee	19.2

Date	Source	002 US T (°C)
7/7/2014	Permittee	20.3
7/8/2014	Permittee	21.2
7/9/2014	Permittee	20.3
7/10/2014	Permittee	20.2
7/11/2014	Permittee	21.7
7/12/2014	Permittee	21.5
7/13/2014	Permittee	19.3
7/14/2014	Permittee	22.6
7/15/2014	Permittee	21
7/16/2014	Permittee	20.9
7/17/2014	Permittee	20.3
7/18/2014	Permittee	19.2
7/19/2014	Permittee	20.1
7/20/2014	Permittee	18.3
7/21/2014	Permittee	18.6
7/22/2014	Permittee	18.7
7/23/2014	Permittee	18.6
7/24/2014	Permittee	18.3
7/25/2014	Permittee	18.6
7/26/2014	Permittee	19.7
7/27/2014	Permittee	19.6
7/28/2014	Permittee	20.8
7/29/2014	Permittee	21.3
7/30/2014	Permittee	20.7
7/31/2014	Permittee	21.2
8/1/2014	Permittee	20.8
8/2/2014	Permittee	19.9
8/3/2014	Permittee	20.5
8/4/2014	Permittee	20.8
8/5/2014	Permittee	21
8/6/2014	Permittee	21.1
8/7/2014	Permittee	20.8
8/8/2014	Permittee	21.3
8/9/2014	Permittee	20.1
8/11/2014	Permittee	21.1
8/12/2014	Permittee	20.8
8/15/2014	Permittee	20.1
8/17/2014	Permittee	19.7
8/18/2014	Permittee	21.6
8/19/2014	Permittee	21.2
8/20/2014	Permittee	20.4
8/21/2014	Permittee	19.8
8/22/2014	Permittee	19.6
8/23/2014	Permittee	19.8
8/24/2014	Permittee	19.6
8/25/2014	Permittee	20.2
8/26/2014	Permittee	20
8/27/2014	Permittee	20.6
8/28/2014	Permittee	19.7
8/29/2014	Permittee	20.6
8/30/2014	Permittee	18.7
8/31/2014	Permittee	18.2
9/2/2014	Permittee	18.4
9/3/2014	Permittee	17.8
9/4/2014	Permittee	18
9/5/2014	Permittee	18.1
9/6/2014	Permittee	18.3
9/7/2014	Permittee	19
9/8/2014	Permittee	18
9/9/2014	Permittee	18.1
9/10/2014	Permittee	18.6
9/11/2014	Permittee	17.3
9/12/2014	Permittee	16.7
9/13/2014	Permittee	17.2
9/14/2014	Permittee	17

Date	Source	002 US T (°C)
9/15/2014	Permittee	17.4
9/16/2014	Permittee	18.3
9/17/2014	Permittee	17.6
9/18/2014	Permittee	18.3
9/19/2014	Permittee	18.2
9/20/2014	Permittee	18.3
9/21/2014	Permittee	18.2
9/22/2014	Permittee	18.4
9/23/2014	Permittee	17.4
9/24/2014	Permittee	16.8
9/25/2014	Permittee	16.5
9/26/2014	Permittee	17
9/27/2014	Permittee	17.3
9/28/2014	Permittee	17.8
9/29/2014	Permittee	17.4
9/30/2014	Permittee	16.7
6/26/2018	NARS_WQX-NRS_WA-10410	16.4
8/12/2014	NARS_WQX-WASS-1139	20.7
8/16/2011	1119USBR_WQX-YAV348	17.3
7/19/2011	1119USBR_WQX-YAV348	16.6
7/19/2011	1119USBR_WQX-YAV349	16.5
8/16/2011	1119USBR_WQX-YAV349	16.8
	Minimum	12.0
	Average	18.3
	60th percentile	19.1
	85th percentile	20.3
	90th Percentile	20.7
	95th Percentile	21.3
	Maximum	23.1
	Standard Deviation	2.1
	Count	451

Table 51: Downstream Temperature in Wanity Slough May - September

Date	Source	002 DS T (°C)
5/1/2007	1119USBR_WQX-YAV380	11
5/15/2007	1119USBR_WQX-YAV380	14
5/29/2007	1119USBR_WQX-YAV380	15.6
6/12/2007	1119USBR_WQX-YAV380	15.4
6/26/2007	1119USBR_WQX-YAV380	15.2
7/10/2007	1119USBR_WQX-YAV380	18.3
8/7/2007	1119USBR_WQX-YAV380	19
8/22/2007	1119USBR_WQX-YAV380	17.9
9/4/2007	1119USBR_WQX-YAV380	17.8
9/18/2007	1119USBR_WQX-YAV380	14.8
5/27/2008	1119USBR_WQX-YAV380	13
6/24/2008	1119USBR_WQX-YAV380	14.6
7/22/2008	1119USBR_WQX-YAV380	18.4
8/19/2008	1119USBR_WQX-YAV380	19.1
9/16/2008	1119USBR_WQX-YAV380	15
5/26/2009	1119USBR_WQX-YAV380	13.4
6/23/2009	1119USBR_WQX-YAV380	15.1
8/18/2009	1119USBR_WQX-YAV380	19.6
9/15/2009	1119USBR_WQX-YAV380	17.7
6/8/2010	1119USBR_WQX-YAV380	14.8
7/20/2010	1119USBR_WQX-YAV380	17.5
8/31/2010	1119USBR_WQX-YAV380	14.5
9/28/2010	1119USBR_WQX-YAV380	16.5
5/24/2011	1119USBR_WQX-YAV380	11.4
6/21/2011	1119USBR_WQX-YAV380	15.1
7/19/2011	1119USBR_WQX-YAV347	16.8
7/19/2011	1119USBR_WQX-YAV346	17.9
8/2/2011	1119USBR_WQX-YAV380	19.9
8/16/2011	1119USBR_WQX-YAV380	17.2

Date	Source	002 DS T (°C)
8/16/2011	1119USBR_WQX-YAV347	17.5
8/16/2011	1119USBR_WQX-YAV346	18.8
8/30/2011	1119USBR_WQX-YAV380	17.9
9/27/2011	1119USBR_WQX-YAV380	15.6
5/1/2012	Permittee	14.7
5/2/2012	Permittee	14.2
5/3/2012	Permittee	12.9
5/4/2012	Permittee	15.4
5/5/2012	Permittee	16.1
5/6/2012	Permittee	18.9
5/7/2012	Permittee	17.7
5/8/2012	Permittee	16.9
5/9/2012	Permittee	15.4
5/10/2012	Permittee	15.4
5/11/2012	Permittee	15.2
5/12/2012	Permittee	17.9
5/13/2012	Permittee	18.1
5/14/2012	Permittee	18.3
5/15/2012	Permittee	18.5
5/16/2012	Permittee	18.4
5/17/2012	Permittee	17.4
5/18/2012	Permittee	17.5
5/19/2012	Permittee	17.9
5/20/2012	Permittee	16.9
5/21/2012	Permittee	14.8
5/22/2012	Permittee	14
5/23/2012	Permittee	13
5/24/2012	Permittee	12.5
5/25/2012	Permittee	14.4
5/26/2012	Permittee	16.2
5/27/2012	Permittee	18.2
5/28/2012	Permittee	20.8
5/29/2012	Permittee	15
5/30/2012	Permittee	16.3
5/31/2012	Permittee	15.2
6/1/2012	Permittee	17.7
6/2/2012	Permittee	20.6
6/3/2012	Permittee	19.9
6/4/2012	Permittee	13.6
6/5/2012	Permittee	14.7
6/6/2012	Permittee	14.9
6/7/2012	Permittee	16
6/8/2012	Permittee	14.3
6/9/2012	Permittee	14.3
6/10/2012	Permittee	17.9
6/11/2012	Permittee	17.5
6/12/2012	Permittee	17.7
6/13/2012	Permittee	18.9
6/14/2012	Permittee	19.8
6/15/2012	Permittee	18.1
6/16/2012	Permittee	19
6/17/2012	Permittee	18.6
6/18/2012	Permittee	17.2
6/19/2012	Permittee	17.2
6/20/2012	Permittee	19.1
6/21/2012	Permittee	19.4
6/22/2012	Permittee	16.8
6/23/2012	Permittee	17.8
6/24/2012	Permittee	17.4
6/25/2012	Permittee	18.5
6/26/2012	Permittee	14.9
6/27/2012	Permittee	17.8
6/28/2012	Permittee	18.2
6/29/2012	Permittee	19.4
6/30/2012	Permittee	18.4

Date	Source	002 DS T (°C)
7/1/2012	Permittee	19.5
7/2/2012	Permittee	20.1
7/3/2012	Permittee	18.9
7/4/2012	Permittee	18.5
7/5/2012	Permittee	19.2
7/6/2012	Permittee	19.5
7/7/2012	Permittee	19.8
7/8/2012	Permittee	20
7/9/2012	Permittee	23
7/10/2012	Permittee	19.5
7/11/2012	Permittee	19.7
7/12/2012	Permittee	19.4
7/13/2012	Permittee	20.8
7/14/2012	Permittee	18.9
7/15/2012	Permittee	18.7
7/16/2012	Permittee	19.3
7/17/2012	Permittee	20.6
7/18/2012	Permittee	21.2
7/19/2012	Permittee	20.9
7/20/2012	Permittee	20.6
7/21/2012	Permittee	19.9
7/22/2012	Permittee	19.9
7/23/2012	Permittee	19.1
7/24/2012	Permittee	19.3
7/25/2012	Permittee	19.7
7/26/2012	Permittee	20.2
7/27/2012	Permittee	20.9
7/28/2012	Permittee	22.8
7/29/2012	Permittee	20
7/30/2012	Permittee	21.7
7/31/2012	Permittee	19.6
8/1/2012	Permittee	19.5
8/2/2012	Permittee	19.8
8/3/2012	Permittee	19.8
8/4/2012	Permittee	19.8
8/5/2012	Permittee	19.3
8/6/2012	Permittee	21
8/7/2012	Permittee	19.8
8/8/2012	Permittee	20.2
8/9/2012	Permittee	18.8
8/10/2012	Permittee	19.9
8/11/2012	Permittee	19.6
8/12/2012	Permittee	19.5
8/13/2012	Permittee	19.9
8/14/2012	Permittee	22.3
8/15/2012	Permittee	19.9
8/16/2012	Permittee	20.1
8/17/2012	Permittee	20.7
8/18/2012	Permittee	19.86
8/19/2012	Permittee	20.3
8/21/2012	Permittee	20.2
8/22/2012	Permittee	20.9
8/23/2012	Permittee	20.6
8/24/2012	Permittee	19.1
8/25/2012	Permittee	19.7
8/26/2012	Permittee	19.3
8/27/2012	Permittee	19.1
8/28/2012	Permittee	18.8
8/29/2012	Permittee	18.9
8/30/2012	Permittee	18
8/31/2012	Permittee	18.3
9/1/2012	Permittee	18.1
9/2/2012	Permittee	18
9/4/2012	Permittee	18.4
9/5/2012	Permittee	18.8

Date	Source	002 DS T (°C)
9/6/2012	Permittee	19.1
9/7/2012	Permittee	19.2
9/8/2012	Permittee	18.8
9/9/2012	Permittee	18.5
9/10/2012	Permittee	17.8
9/11/2012	Permittee	16.6
9/12/2012	Permittee	16.7
9/13/2012	Permittee	16.8
9/14/2012	Permittee	17.2
9/15/2012	Permittee	16.5
9/16/2012	Permittee	17.5
9/17/2012	Permittee	17.5
9/18/2012	Permittee	17.5
9/19/2012	Permittee	17.9
9/20/2012	Permittee	17.7
9/21/2012	Permittee	17.5
9/22/2012	Permittee	17.6
9/23/2012	Permittee	17.6
9/24/2012	Permittee	17.4
9/25/2012	Permittee	17
9/26/2012	Permittee	17
9/27/2012	Permittee	16.8
9/28/2012	Permittee	17
9/29/2012	Permittee	16.7
5/1/2013	Permittee	16
5/2/2013	Permittee	16.9
5/3/2013	Permittee	18.3
5/4/2013	Permittee	17.8
5/5/2013	Permittee	18.5
5/6/2013	Permittee	21.3
5/7/2013	Permittee	21.5
5/8/2013	Permittee	20.2
5/9/2013	Permittee	20.4
5/10/2013	Permittee	20.9
5/11/2013	Permittee	18.9
5/12/2013	Permittee	16.1
5/13/2013	Permittee	15.8
5/14/2013	Permittee	15.6
5/15/2013	Permittee	13.3
5/16/2013	Permittee	13.9
5/17/2013	Permittee	15.5
5/18/2013	Permittee	15.6
5/19/2013	Permittee	17.3
5/20/2013	Permittee	17.5
5/21/2013	Permittee	16.2
5/22/2013	Permittee	13.3
5/23/2013	Permittee	12.9
5/24/2013	Permittee	14
5/25/2013	Permittee	15.9
5/26/2013	Permittee	15.7
5/28/2013	Permittee	16.3
5/29/2013	Permittee	15.3
5/30/2013	Permittee	15.9
5/31/2013	Permittee	15.9
6/1/2013	Permittee	16.7
6/2/2013	Permittee	16.9
6/3/2013	Permittee	16.9
6/4/2013	Permittee	16.8
6/5/2013	Permittee	20.3
6/6/2013	Permittee	20.7
6/7/2013	Permittee	21.5
6/8/2013	Permittee	19.8
6/9/2013	Permittee	19.4
6/10/2013	Permittee	18.8
6/11/2013	Permittee	17.5

Date	Source	002 DS T (°C)
6/12/2013	Permittee	17.8
6/13/2013	Permittee	16.6
6/14/2013	Permittee	18.4
6/15/2013	Permittee	18.8
6/16/2013	Permittee	18.6
6/17/2013	Permittee	20.2
6/18/2013	Permittee	18
6/19/2013	Permittee	18.1
6/20/2013	Permittee	17.1
6/21/2013	Permittee	16.8
6/22/2013	Permittee	18.4
6/23/2013	Permittee	17.5
6/24/2013	Permittee	17.5
6/25/2013	Permittee	16.1
6/26/2013	Permittee	16.3
6/27/2013	Permittee	17.8
6/28/2013	Permittee	17.6
6/29/2013	Permittee	19.4
6/30/2013	Permittee	21.7
7/1/2013	Permittee	22
7/2/2013	Permittee	21.8
7/3/2013	Permittee	21.8
7/5/2013	Permittee	19.7
7/6/2013	Permittee	19.6
7/7/2013	Permittee	20.6
7/8/2013	Permittee	21.4
7/9/2013	Permittee	22.3
7/10/2013	Permittee	20.9
7/11/2013	Permittee	20.1
7/12/2013	Permittee	18.3
7/13/2013	Permittee	18.6
7/14/2013	Permittee	18.8
7/15/2013	Permittee	19.3
7/16/2013	Permittee	19
7/17/2013	Permittee	19.8
7/18/2013	Permittee	19.9
7/19/2013	Permittee	19.8
7/20/2013	Permittee	21.3
7/21/2013	Permittee	20.6
7/22/2013	Permittee	22.7
7/23/2013	1119USBR_WQX-YAV380	19.1
7/23/2013	Permittee	20.1
7/24/2013	Permittee	20.1
7/25/2013	Permittee	20.1
7/27/2013	Permittee	21.8
7/28/2013	Permittee	20.1
7/29/2013	Permittee	20.7
7/30/2013	Permittee	20.9
7/31/2013	Permittee	18.7
8/1/2013	Permittee	18.5
8/2/2013	Permittee	18.4
8/3/2013	Permittee	20.6
8/4/2013	Permittee	20.6
8/5/2013	Permittee	19.8
8/6/2013	Permittee	20.4
8/7/2013	Permittee	20.2
8/8/2013	Permittee	20
8/9/2013	Permittee	20.6
8/10/2013	Permittee	22.2
8/11/2013	Permittee	22.6
8/12/2013	Permittee	20.9
8/13/2013	Permittee	20.4
8/14/2013	Permittee	19.8
8/15/2013	Permittee	20.1
8/16/2013	Permittee	19.7

Date	Source	002 DS T (°C)
8/17/2013	Permittee	20.8
8/18/2013	Permittee	20.9
8/19/2013	Permittee	20.5
8/20/2013	1119USBR_WQX-YAV380	19.9
8/20/2013	Permittee	20.5
8/21/2013	Permittee	20
8/22/2013	Permittee	19.2
8/23/2013	Permittee	19.3
8/24/2013	Permittee	19.8
8/25/2013	Permittee	19.8
8/26/2013	Permittee	19.4
8/27/2013	Permittee	19.4
8/28/2013	Permittee	19.9
8/29/2013	Permittee	20.1
8/30/2013	Permittee	19.7
8/31/2013	Permittee	19.8
9/1/2013	Permittee	19.8
9/3/2013	Permittee	19.8
9/4/2013	Permittee	19.5
9/5/2013	Permittee	19.4
9/6/2013	Permittee	18.4
9/7/2013	Permittee	18.7
9/8/2013	Permittee	18.8
9/9/2013	Permittee	18.6
9/10/2013	Permittee	19.6
9/11/2013	Permittee	19.8
9/12/2013	Permittee	19.9
9/13/2013	Permittee	20.1
9/14/2013	Permittee	21.3
9/15/2013	Permittee	20.8
9/16/2013	Permittee	19.9
9/17/2013	1119USBR_WQX-YAV380	17.7
9/17/2013	Permittee	18.3
9/18/2013	Permittee	17.8
9/19/2013	Permittee	17.4
9/20/2013	Permittee	17
9/21/2013	Permittee	17
9/22/2013	Permittee	17.4
9/23/2013	Permittee	16.8
9/24/2013	Permittee	16.1
9/25/2013	Permittee	15.9
9/26/2013	Permittee	15.5
9/27/2013	Permittee	14.6
9/28/2013	Permittee	14.8
9/29/2013	Permittee	14
9/30/2013	Permittee	14.5
5/1/2014	Permittee	16.7
5/2/2014	Permittee	16.1
5/3/2014	Permittee	16
5/4/2014	Permittee	14.8
5/5/2014	Permittee	15.2
5/6/2014	Permittee	14.4
5/7/2014	Permittee	16
5/8/2014	Permittee	14.8
5/9/2014	Permittee	13.4
5/10/2014	Permittee	14.3
5/11/2014	Permittee	14.6
5/12/2014	Permittee	16
5/13/2014	Permittee	16.8
5/14/2014	Permittee	17
5/15/2014	Permittee	17.5
5/16/2014	Permittee	17.7
5/17/2014	Permittee	16.6
5/18/2014	Permittee	15.2
5/19/2014	Permittee	16

Date	Source	002 DS T (°C)
5/20/2014	1119USBR_WQX-YAV380	16.4
5/20/2014	Permittee	17.7
5/21/2014	Permittee	17.8
5/22/2014	Permittee	18.5
5/23/2014	Permittee	16.3
5/24/2014	Permittee	16.8
5/25/2014	Permittee	16
5/27/2014	Permittee	16.9
5/28/2014	Permittee	15.4
5/29/2014	Permittee	16.7
5/30/2014	Permittee	17
5/31/2014	Permittee	18.1
6/1/2014	Permittee	18.9
6/2/2014	Permittee	18.7
6/3/2014	Permittee	19
6/4/2014	Permittee	19
6/5/2014	Permittee	18.3
6/6/2014	Permittee	17.9
6/7/2014	Permittee	19.7
6/8/2014	Permittee	19.1
6/9/2014	Permittee	19.3
6/10/2014	Permittee	18.8
6/11/2014	Permittee	18.4
6/12/2014	Permittee	18.8
6/13/2014	Permittee	15.7
6/14/2014	Permittee	17.2
6/15/2014	Permittee	17.5
6/16/2014	Permittee	16.3
6/17/2014	Permittee	16.4
6/18/2014	Permittee	18.2
6/19/2014	Permittee	18.5
6/20/2014	Permittee	18.2
6/21/2014	Permittee	18.9
6/22/2014	Permittee	19.8
6/23/2014	Permittee	19.6
6/24/2014	Permittee	19.3
6/25/2014	Permittee	19.2
6/26/2014	Permittee	18.9
6/27/2014	Permittee	18.6
6/28/2014	Permittee	19.2
6/29/2014	Permittee	18.9
6/30/2014	Permittee	20.1
7/1/2014	Permittee	19.6
7/2/2014	Permittee	18.8
7/3/2014	Permittee	20.2
7/4/2014	Permittee	19
7/6/2014	Permittee	19.4
7/7/2014	Permittee	22.3
7/8/2014	Permittee	22.6
7/9/2014	Permittee	20.3
7/10/2014	Permittee	20.3
7/11/2014	Permittee	22.7
7/12/2014	Permittee	21.8
7/13/2014	Permittee	19.2
7/14/2014	Permittee	23.4
7/15/2014	Permittee	21.3
7/16/2014	Permittee	23.4
7/17/2014	Permittee	20.9
7/18/2014	Permittee	20
7/19/2014	Permittee	20.3
7/20/2014	Permittee	18.5
7/21/2014	Permittee	18.8
7/22/2014	Permittee	19.1
7/23/2014	Permittee	18.8
7/24/2014	Permittee	19.1

Date	Source	002 DS T (°C)
7/25/2014	Permittee	19.2
7/26/2014	Permittee	19.8
7/27/2014	Permittee	19.8
7/28/2014	Permittee	22
7/29/2014	Permittee	22
7/30/2014	Permittee	21.7
7/31/2014	Permittee	21.7
8/1/2014	Permittee	21.2
8/2/2014	Permittee	20
8/3/2014	Permittee	20.8
8/4/2014	Permittee	21.8
8/5/2014	Permittee	22.2
8/6/2014	Permittee	21.5
8/7/2014	Permittee	21.5
8/8/2014	Permittee	21.8
8/9/2014	Permittee	20.2
8/11/2014	Permittee	20.1
8/12/2014	Permittee	20.8
8/15/2014	Permittee	20.5
8/17/2014	Permittee	20.1
8/18/2014	Permittee	21
8/19/2014	Permittee	21
8/20/2014	Permittee	20.3
8/21/2014	Permittee	19.6
8/22/2014	Permittee	19.6
8/23/2014	Permittee	20.2
8/24/2014	Permittee	20.2
8/25/2014	Permittee	20.5
8/26/2014	Permittee	20.1
8/27/2014	Permittee	20.5
8/28/2014	Permittee	19.8
8/29/2014	Permittee	20.2
8/30/2014	Permittee	18.7
8/31/2014	Permittee	18.6
9/2/2014	Permittee	18.8
9/3/2014	Permittee	18
9/4/2014	Permittee	17.9
9/5/2014	Permittee	18.5
9/6/2014	Permittee	18.5
9/7/2014	Permittee	19.1
9/8/2014	Permittee	18.5
9/9/2014	Permittee	18.7
9/10/2014	Permittee	18.4
9/11/2014	Permittee	17.7
9/12/2014	Permittee	17
9/13/2014	Permittee	17.6
9/14/2014	Permittee	17.1
9/15/2014	Permittee	17.4
9/16/2014	Permittee	18.3
9/17/2014	Permittee	17.7
9/18/2014	Permittee	19.3
9/19/2014	Permittee	19.8
9/20/2014	Permittee	19.5
9/21/2014	Permittee	19.5
9/22/2014	Permittee	19.4
9/23/2014	Permittee	17.6
9/24/2014	Permittee	17
9/25/2014	Permittee	16.8
9/26/2014	Permittee	17.2
9/27/2014	Permittee	17.4
9/28/2014	Permittee	18.3
9/29/2014	Permittee	17.3
9/30/2014	Permittee	16.8
5/12/2015	1119USBR_WQX-YAV380	16.9
6/9/2015	1119USBR_WQX-YAV380	21.7

Date	Source	002 DS T (°C)
9/29/2015	1119USBR_WQX-YAV380	14.3
5/3/2016	1119USBR_WQX-YAV380	15.8
5/17/2016	1119USBR_WQX-YAV380	15.9
8/9/2016	1119USBR_WQX-YAV380	18.6
8/8/2017	1119USBR_WQX-YAV380	17.5
	Minimum	11.0
	Average	18.4
	90th Percentile	20.9
	95th Percentile	21.7
	Maximum	23.4
	Standard Deviation	2.2
	Count	489

Table 52: Downstream Temperature in Wanity Slough October - April

Date	Month	002 DS T (°C)
12/12/2006	1119USBR_WQX-YAV380	9.4
1/23/2007	1119USBR_WQX-YAV380	7.6
2/20/2007	1119USBR_WQX-YAV380	9.4
3/20/2007	1119USBR_WQX-YAV380	8.8
4/3/2007	1119USBR_WQX-YAV380	8.4
4/17/2007	1119USBR_WQX-YAV380	9.2
10/2/2007	1119USBR_WQX-YAV380	13.5
10/16/2007	1119USBR_WQX-YAV380	14.3
10/30/2007	1119USBR_WQX-YAV380	12.4
11/27/2007	1119USBR_WQX-YAV380	10.3
1/7/2008	1119USBR_WQX-YAV380	9.7
2/5/2008	1119USBR_WQX-YAV380	11.2
3/4/2008	1119USBR_WQX-YAV380	10.5
4/1/2008	1119USBR_WQX-YAV380	6.8
4/29/2008	1119USBR_WQX-YAV380	10.7
10/14/2008	1119USBR_WQX-YAV380	11.4
4/28/2009	1119USBR_WQX-YAV380	10.9
10/13/2009	1119USBR_WQX-YAV380	9.3
1/5/2010	1119USBR_WQX-YAV380	10.3
2/2/2010	1119USBR_WQX-YAV380	11.8
4/27/2010	1119USBR_WQX-YAV380	11.3
10/12/2010	1119USBR_WQX-YAV380	12.9
12/28/2010	1119USBR_WQX-YAV380	10.2
1/25/2011	1119USBR_WQX-YAV380	10.7
2/22/2011	1119USBR_WQX-YAV380	11.6
4/26/2011	1119USBR_WQX-YAV380	1.3
4/16/2012	Permittee	11.6
4/19/2012	Permittee	11
4/20/2012	Permittee	12.3
4/21/2012	Permittee	15.8
4/22/2012	Permittee	17
4/23/2012	Permittee	20.9
4/24/2012	Permittee	16.5
4/25/2012	Permittee	14.3
4/26/2012	Permittee	14.7
4/27/2012	Permittee	13
4/28/2012	Permittee	14.8
4/29/2012	Permittee	15.5
4/30/2012	Permittee	13.7
4/15/2013	Permittee	11
4/16/2013	Permittee	10.6
4/17/2013	Permittee	11.6
4/20/2013	Permittee	15.6
4/21/2013	Permittee	16.1
4/22/2013	Permittee	15.1
4/23/2013	Permittee	16
4/24/2013	Permittee	16.8
4/25/2013	Permittee	17.2

Date	Month	002 DS T (°C)
4/26/2013	Permittee	17.6
4/27/2013	Permittee	16.1
4/28/2013	Permittee	16.2
4/29/2013	Permittee	16
4/30/2013	Permittee	15.6
4/15/2014	Permittee	10.2
4/16/2014	Permittee	10.6
4/17/2014	Permittee	11
4/18/2014	Permittee	11.5
4/19/2014	Permittee	11.8
4/21/2014	Permittee	12.4
4/22/2014	Permittee	13.7
4/22/2014	1119USBR_WQX-YAV380	10.3
4/23/2014	Permittee	12.6
4/24/2014	Permittee	12.5
4/25/2014	Permittee	13.4
4/26/2014	Permittee	13.2
4/27/2014	Permittee	13.5
4/28/2014	Permittee	15.1
4/29/2014	Permittee	15.6
4/30/2014	Permittee	16.7
12/2/2014	1119USBR_WQX-YAV380	9.4
1/6/2015	1119USBR_WQX-YAV380	12.1
12/15/2015	1119USBR_WQX-YAV380	10.4
4/19/2016	1119USBR_WQX-YAV380	11.8
4/18/2017	1119USBR_WQX-YAV380	11
	Minimum	1.3
	Average	12.5
	90th Percentile	16.2
	95th Percentile	16.9
	Maximum	20.9
	Standard Deviation	3.0
	Count	74

Table 53: Upstream Total Dissolved Solids in Wanity Slough

Agency Code	Station number	Begin date	Begin time	Time datum	Medium code	Remark code for P70301	P70301 - Dissolved solids, water, filtered, sum of constituents, milligrams per liter
USGS	12505470	7/18/1987	7:10	PDT	WS		85
USGS	12505470	11/3/1987	10:00	PST	WS		141

Table 54: Upstream Total Nitrogen in Wanity Slough

Station and Date	Inorganic nitrogen (nitrate and nitrite) (mg/L)	Kjeldahl nitrogen (mg/L)	Total N (mg/L)
1119USBR_WQX-YAV348			
7/19/2011	0.41	0.28	0.69
8/16/2011	0.44	0.17	0.61
1119USBR_WQX-YAV349			
7/19/2011	0.36	0.28	0.64
8/16/2011	0.35	0.16	0.51
		Minimum	0.510
		Average	0.613
		Maximum	0.690
		Standard Deviation	0.076
		Count	4

Table 55: Upstream Total Phosphorus in Wanity Slough

Activity Start Date	Monitoring Location Identifier	Monitoring Location Name	Characteristic Name	Result Sample Fraction Text	Result Measure Value	Result Measure Unit Code
7/19/2011	1119USBR_WQX-YAV349	Wanity Slough at Mc Donald Rd	Phosphorus	Total	0.074	mg/l
8/16/2011	1119USBR_WQX-YAV348	Wanity Slough at YN RV Park Footbridge	Phosphorus	Total	0.057	mg/l
8/16/2011	1119USBR_WQX-YAV349	Wanity Slough at Mc Donald Rd	Phosphorus	Total	0.068	mg/l
7/19/2011	1119USBR_WQX-YAV348	Wanity Slough at YN RV Park Footbridge	Phosphorus	Total	0.085	mg/l
6/26/2018	NARS_WQX-NRS_WA-10410	Wanity Slough	Total Phosphorus, mixed forms	Total Recoverable	0.047	mg/l
8/12/2014	NARS_WQX-WASS-1139	Wanity Slough	Total Phosphorus, mixed forms	Total Recoverable	0.062	mg/l
				Minimum	0.047	
				Average	0.065	
				Maximum	0.085	
				Standard deviation	0.013	
				Count	6	

Table 56: Downstream Total Phosphorus in Wanity Slough, Zero Outfall 002 Flow

Activity Start Date	Result Measure Value
6/13/2017	0.082
7/11/2017	0.076
8/8/2017	0.061
9/5/2017	0.093
Minimum	0.061
Average	0.078
Maximum	0.093
Standard Deviation	0.013341664
Count	4

Table 57: Downstream Total Phosphorus in Wanity Slough, Nonzero Outfall 002 Flow

Activity Start Date	Average of Result Measure Value
4/27/2010	0.195
6/8/2010	0.166
7/20/2010	0.28
8/31/2010	0.2
9/28/2010	0.202
10/12/2010	0.31
12/28/2010	1.6
1/25/2011	3
2/22/2011	3.59
4/26/2011	0.095
5/24/2011	0.24
6/21/2011	0.31
7/19/2011	0.34
8/2/2011	0.35
8/16/2011	0.193333333
8/30/2011	0.1705
9/27/2011	0.29
7/23/2013	0.38
8/20/2013	0.32
9/17/2013	0.29
12/17/2013	1.2
1/14/2014	2.3
4/22/2014	0.33
5/20/2014	0.31
12/2/2014	2
1/6/2015	1.4
5/12/2015	0.645
6/9/2015	0.7
9/29/2015	0.52
12/15/2015	2.7
4/19/2016	0.45
5/3/2016	0.65
5/17/2016	0.43
8/9/2016	0.19
9/6/2016	0.605
10/4/2016	0.47
4/18/2017	0.409
5/16/2017	0.188
Minimum	0.095
Average	0.737
Maximum	3.59
Standard Deviation	0.87
Count	38

Table 58: Downstream Total Nitrogen in Wanity Slough, Nonzero Outfall 002 Flow

Station	Date	Inorganic nitrogen (nitrate and nitrite) (mg/L)	Kjeldahl nitrogen (mg/L)	Outfall 002 Flow (mgd)	Outfall 008 Flow (mgd)	Total Nitrogen (mg/L)
1119USBR_WQX-YAV380	4/27/2010	0.29	0.32	0.466	0	0.61
1119USBR_WQX-YAV380	6/8/2010	0.4	0.19	0.592	0	0.59
1119USBR_WQX-YAV380	7/20/2010	0.57	0.2	0.623	0	0.77
1119USBR_WQX-YAV380	8/31/2010	0.66	0.21	0.509	0	0.87
1119USBR_WQX-YAV380	9/28/2010	0.785	0.2	0.648	0	0.985
1119USBR_WQX-YAV380	10/12/2010	1.36	0.37	0.767	0	1.73
1119USBR_WQX-YAV380	12/28/2010	4.33	0.41	0.731	0	4.74
1119USBR_WQX-YAV380	1/25/2011	5.14	0.33	0.708	0	5.47
1119USBR_WQX-YAV380	2/22/2011	13.55	0.71	0.704	0.704	14.26
1119USBR_WQX-YAV380	4/26/2011	0.05	0.38	0.656	0	0.43

Station	Date	Inorganic nitrogen (nitrate and nitrite) (mg/L)	Kjeldahl nitrogen (mg/L)	Outfall 002 Flow (mgd)	Outfall 008 Flow (mgd)	Total Nitrogen (mg/L)
1119USBR_WQX-YAV380	5/24/2011	0.25	0.36	0.754	0.754	0.61
1119USBR_WQX-YAV380	6/21/2011	0.39	0.27	0.821	0.821	0.66
1119USBR_WQX-YAV346	7/19/2011	1.36	0.32	0.837	0.837	1.68
1119USBR_WQX-YAV347	7/19/2011	1.38	0.26	0.837	0.837	1.64
1119USBR_WQX-YAV380	8/2/2011	1.29	0.22	0.79	0.79	1.51
1119USBR_WQX-YAV346	8/16/2011	0.81	0.25	0.79	0.79	1.06
1119USBR_WQX-YAV347	8/16/2011	0.96	0.2	0.79	0.79	1.16
1119USBR_WQX-YAV380	8/16/2011	0.68	0.23	0.79	0.79	0.91
1119USBR_WQX-YAV380	8/30/2011	0.6	0.23	0.79	0.79	0.83
1119USBR_WQX-YAV380	9/27/2011	1.24	0.175	0.77	0.77	1.415
1119USBR_WQX-YAV380	7/23/2013	0.85	0.14	0.741	0	0.99
1119USBR_WQX-YAV380	8/20/2013	1.02	0.21	0.76	0	1.23
1119USBR_WQX-YAV380	9/17/2013	1.2	0.25	0.73	0	1.45
1119USBR_WQX-YAV380	12/17/2013	2.84	0.2	0.673	0	3.04
1119USBR_WQX-YAV380	1/14/2014	2.52	0.33	0.662	0	2.85
1119USBR_WQX-YAV380	4/22/2014	0.62	0.29	0.708	0	0.91
1119USBR_WQX-YAV380	5/20/2014	0.56	0.21	0.686	0	0.77
1119USBR_WQX-YAV380	12/2/2014	3.19	0.165	0.667	0	3.355
1119USBR_WQX-YAV380	1/6/2015	3.79	0.26	0.68	0	4.05
1119USBR_WQX-YAV380	5/12/2015	1.755	0.33	0.624	0	2.085
1119USBR_WQX-YAV380	6/9/2015	2.03	0.1	0.696	0	2.13
1119USBR_WQX-YAV380	9/29/2015	2.01	0.085	0.621	0	2.095
1119USBR_WQX-YAV380	12/15/2015	9.995	0.385	0.638	0	10.38
1119USBR_WQX-YAV380	4/19/2016	1.5	0.22	0.633	0	1.72
1119USBR_WQX-YAV380	5/3/2016	0.88	0.27	0.651	0	1.15
1119USBR_WQX-YAV380	5/17/2016	1.45	0.15	0.651	0	1.6
1119USBR_WQX-YAV380	8/9/2016	1.56	0.14	0.704	0	1.7
1119USBR_WQX-YAV380	9/6/2016	2.33	0.88	0.665	0	3.21
1119USBR_WQX-YAV380	4/18/2017	0.84	0.36	0.763	0	1.2
1119USBR_WQX-YAV380	5/16/2017	0.59	0.27	0.23	0.634	0.86
					Minimum	0.43
					Average	2.22
					Maximum	14.26
					Standard Deviation	2.65
					Count	40

Table 59: Downstream Total Nitrogen in Wanity Slough, Zero Outfall 002 Flow

Station	Date	Inorganic nitrogen (nitrate and nitrite) (mg/L)	Kjeldahl nitrogen (mg/L)	Outfall 002 Flow	Outfall 008 Flow	Total Nitrogen (mg/L)
1119USBR_WQX-YAV380	6/13/2017	0.48	0.15	0	0.645	0.63
1119USBR_WQX-YAV380	7/11/2017	0.71	0.24	0	0.649	0.95
1119USBR_WQX-YAV380	8/8/2017	0.82	0.24	0	0.648	1.06
1119USBR_WQX-YAV380	9/5/2017	1.68	0.23	0	0.63	1.91
					Minimum	0.63
					Average	1.14
					Maximum	1.91
					Standard Deviation	0.55
					Count	4

Table 60: Upstream Turbidity in Wanity Slough

Date	Source	Turbidity
3/5/2012	Permittee	1.15
4/2/2012	Permittee	1.28
5/7/2012	Permittee	3.84
6/5/2012	Permittee	6.92
7/2/2012	Permittee	5.5
7/23/2012	Permittee	4.23
9/4/2012	Permittee	1.13
10/1/2012	Permittee	2.3
11/5/2012	Permittee	3.5
12/3/2012	Permittee	0.91
1/2/2013	Permittee	0.81
2/4/2013	Permittee	1.54
3/4/2013	Permittee	1.35
4/1/2013	Permittee	0.82
5/6/2013	Permittee	4.06
6/3/2013	Permittee	15.4
7/1/2013	Permittee	5.8
8/5/2013	Permittee	4.66
9/3/2013	Permittee	2.29
10/21/2013	Permittee	2.85
11/4/2013	Permittee	1.94
12/2/2013	Permittee	4.98
1/6/2014	Permittee	4.05
2/3/2014	Permittee	3.38
3/3/2014	Permittee	2.45
4/7/2014	Permittee	6.15
5/5/2014	Permittee	6.35
6/2/2014	Permittee	11.7
7/7/2014	Permittee	5.03
8/4/2014	Permittee	2.83
9/8/2014	Permittee	0.91
10/6/2014	Permittee	4.49
11/3/2014	Permittee	3.6
12/1/2014	Permittee	1.93
1/5/2015	Permittee	5.56
6/26/2018	NARS_WQX-NRS_WA-10410	1.9
8/12/2014	NARS_WQX-WASS-1139	1.38
	Minimum	0.81
	5th Percentile	0.89
	Average	3.76
	95th Percentile	7.88
	Maximum	15.4
	Standard Deviation	3.00
	Count	37

Table 61: Upstream Ammonia, BOD₅ and Turbidity in Spencer Lateral

Date	Turbidity	BOD	Ammonia
10/2/2012	1.54	2	0.09
9/5/2012	1.63	2	0.22
8/7/2012	2.08	2	0.79
9/4/2013	2.59	2.9	0.07
8/6/2013	2.62	2	0.12
10/7/2014	2.89	2	0.07
6/26/2012	3.06	2	0.07
9/2/2014	3.12	2	
7/1/2014	4.34	2	0.11
7/2/2013	4.48	2	0.07
4/23/2013	5.43	2	0.09
5/7/2013	6.11	2	0.1
6/4/2013	7.79	2	0.07
7/3/2012	8.69	2	0.07

Date	Turbidity	BOD	Ammonia
5/6/2014	9.84	2	0.07
6/3/2014	11.3	2	0.09
5/1/2012	20.1	2	0.07
4/22/2014	20.5	2	0.07
10/1/2013	46.1	2	0.07
Minimum	1.54	2	0.07
5th percentile	1.62	2	0.07
Average	8.64	2.0	0.13
95th percentile	23.1	2.1	0.31
Maximum	46.1	2.9	0.79
Standard Deviation	10.7	0.2	0.17
Count	19	19	18

Table 62: Upstream pH in Spencer Lateral

Date	pH
4/24/2012	7.6
5/1/2012	5.57
5/8/2012	6.65
5/15/2012	6.85
5/22/2012	6.68
5/29/2012	6.52
6/5/2012	6.5
6/12/2012	6.65
6/19/2012	10.09
6/26/2012	9.2
7/3/2012	8.94
7/17/2012	7.02
7/24/2012	6.1
7/31/2012	6.61
8/7/2012	6.96
8/14/2012	7.15
8/21/2012	7.51
8/28/2012	6.99
9/5/2012	6.57
9/11/2012	6.84
9/18/2012	7.35
9/25/2012	7.05
10/2/2012	7.44
10/9/2012	6.75
10/16/2012	7.01
4/6/2013	6.04
4/23/2013	7.58
4/30/2013	7.51
5/7/2013	6.94
5/14/2013	6.86
5/21/2013	7.1
5/28/2013	6.7
6/4/2013	7
6/11/2013	7
6/18/2013	7.3
6/25/2013	6.75
7/2/2013	7.33
7/9/2013	7.34
7/16/2013	7.16
7/23/2013	7.28
7/30/2013	7.4
8/6/2013	6.61
8/13/2013	7.51
8/20/2013	7.45
8/27/2013	7.62
9/4/2013	7.3
9/10/2013	7.73
9/17/2013	7.47

Date	pH
9/24/2013	7.43
10/1/2013	7.38
10/8/2013	7.49
4/22/2014	6.82
4/29/2014	6.79
5/6/2014	6.6
5/13/2014	6.46
5/20/2014	7.1
5/27/2014	6.64
6/3/2014	6.79
6/10/2014	6.98
6/12/2014	5.79
6/17/2014	6.12
6/24/2014	6.34
7/1/2014	6.39
7/8/2014	6.24
7/15/2014	6.3
7/22/2014	6.35
7/29/2014	6.5
8/5/2014	6.45
8/12/2014	6.5
8/19/2014	6.65
8/26/2014	6.83
9/2/2014	6.8
9/9/2014	7.1
9/16/2014	6.99
9/23/2014	7.02
9/30/2014	6.8
10/7/2014	7.13
10/14/2014	7.21
Minimum	5.57
5th Percentile	6.12
Average	6.99
90th Percentile	7.51
95th Percentile	7.64
Maximum	10.09
Standard Deviation	0.67
Count	78

Table 63: Upstream Temperature in Spencer Lateral, May - September

Date	008 RW T (°C)
5/24/2012	12
5/3/2012	12.1
5/23/2012	12.1
5/22/2013	12.9
5/22/2012	13
5/15/2013	13
5/4/2014	13.2
5/21/2012	13.3
6/1/2012	16.6
5/23/2013	13.3
5/9/2014	13.3
6/2/2012	19
6/3/2012	18.6
5/16/2013	13.6
5/8/2014	13.6
5/10/2014	13.7
5/4/2012	13.8
6/4/2012	13.3
5/24/2013	13.8
5/2/2012	14
6/5/2012	13.8
5/6/2014	14

Date	008 RW T (°C)
6/6/2012	14.6
5/5/2014	14.1
5/25/2012	14.3
5/29/2012	14.3
6/7/2012	15.8
5/26/2012	14.4
5/31/2012	14.4
5/1/2012	14.5
5/29/2013	14.5
6/8/2012	13.5
6/9/2012	13.4
5/6/2012	14.8
5/11/2012	14.9
5/13/2013	14.9
5/11/2014	15
5/5/2012	15.1
5/1/2013	15.1
5/10/2012	15.2
6/10/2012	15.9
5/28/2014	15.4
6/11/2012	16.5
5/7/2012	15.6
5/9/2012	15.6
5/25/2013	15.6
5/18/2013	15.7
5/3/2014	15.7
5/7/2014	15.7
6/12/2012	16.7
5/2/2013	15.8
5/17/2013	15.8
5/30/2013	15.8
6/13/2012	18.8
6/14/2012	18.8
6/15/2012	17.3
6/16/2012	17.9
6/17/2012	19.2
5/31/2013	15.9
5/18/2014	15.9
5/12/2012	16
5/12/2013	16
5/28/2013	16
5/30/2012	16.1
5/26/2013	16.1
6/18/2012	18.1
6/19/2012	18.3
6/20/2012	18.5
5/12/2014	16.1
6/21/2012	18.7
5/21/2013	16.2
6/22/2012	17.8
6/23/2012	18
6/24/2012	17.3
5/13/2012	16.4
5/27/2012	16.4
6/25/2012	17.8
5/2/2014	16.5
5/25/2014	16.5
5/20/2012	16.6
6/26/2012	15.9
6/27/2012	17.8
6/28/2012	18.1
6/29/2012	19.8
5/8/2012	16.7
6/30/2012	17.9
7/1/2012	20.4

Date	008 RW T (°C)
7/2/2012	19.9
7/3/2012	19.9
5/19/2012	16.8
7/4/2012	19.2
7/5/2012	19.7
5/14/2013	16.8
7/6/2012	19.9
5/1/2014	16.8
5/23/2014	16.8
7/7/2012	22
7/8/2012	23.2
7/9/2012	23.4
5/29/2014	16.9
7/10/2012	26.5
7/11/2012	22.5
7/12/2012	22.4
7/13/2012	23.4
7/14/2012	22.1
7/15/2012	21.8
7/16/2012	20.8
7/17/2012	22.5
5/13/2014	17.1
5/17/2014	17.1
5/19/2014	17.1
5/24/2014	17.1
7/18/2012	23.6
5/17/2012	17.2
7/19/2012	20.9
7/20/2012	22.2
7/21/2012	21.2
5/30/2014	17.2
7/22/2012	21
7/23/2012	20.5
7/24/2012	20.8
7/25/2012	20.5
7/26/2012	22.4
5/18/2012	17.4
7/27/2012	22.1
7/28/2012	21.9
5/27/2014	17.4
7/29/2012	21.8
7/30/2012	22
7/31/2012	21.9
5/3/2013	17.6
8/1/2012	21.5
8/2/2012	21.1
8/3/2012	21.1
8/4/2012	21.1
8/5/2012	21.5
8/6/2012	23
8/7/2012	24.9
5/15/2012	17.8
8/8/2012	23.6
8/9/2012	20.3
8/10/2012	21.7
8/11/2012	22
8/12/2012	22.3
8/13/2012	21.1
5/19/2013	17.8
5/20/2013	17.8
8/14/2012	22.4
5/14/2014	17.8
5/20/2014	17.8
5/14/2012	17.9
8/15/2012	20.6

Date	008 RW T (°C)
8/16/2012	21.2
8/17/2012	20.9
8/18/2012	21.8
8/19/2012	22.6
8/21/2012	22.1
8/22/2012	22.8
5/16/2012	18
8/23/2012	21.4
8/24/2012	19.4
8/25/2012	19.5
8/26/2012	18.7
8/27/2012	19.9
8/28/2012	19.6
8/29/2012	19.1
5/21/2014	18.1
8/30/2012	18.4
8/31/2012	18.5
9/1/2012	17.5
9/2/2012	17.7
5/4/2013	18.2
9/4/2012	18.6
9/5/2012	19.1
9/6/2012	18.9
9/7/2012	19.1
9/8/2012	18.3
9/9/2012	18.3
9/10/2012	17.8
9/11/2012	17.2
9/12/2012	16.6
9/13/2012	16.2
9/14/2012	16.8
9/15/2012	17
9/16/2012	17.4
9/17/2012	17.8
9/18/2012	17.7
5/15/2014	18.4
5/22/2014	18.4
9/19/2012	17.9
9/20/2012	17.9
9/21/2012	17.7
9/22/2012	18
9/23/2012	17.8
9/24/2012	17.2
9/25/2012	17.1
9/26/2012	17.1
9/27/2012	16.8
9/28/2012	16.9
9/29/2012	16.7
6/1/2013	16.8
6/2/2013	16.7
6/3/2013	16.3
6/4/2013	16.7
6/5/2013	20.1
6/6/2013	21.5
6/7/2013	21.5
5/16/2014	18.8
5/31/2014	18.8
6/8/2013	20.7
6/9/2013	20.3
6/10/2013	18.9
6/11/2013	18
6/12/2013	17.5
5/5/2013	18.9
6/13/2013	16.6
6/14/2013	18.9

Date	008 RW T (°C)
6/15/2013	20.3
6/16/2013	19.4
6/17/2013	21.4
6/18/2013	17.1
6/19/2013	17.9
6/20/2013	16.1
6/21/2013	16.6
6/22/2013	19
6/23/2013	18.2
6/24/2013	17.6
6/25/2013	15.3
6/26/2013	16.1
6/27/2013	17.7
6/28/2013	17.4
6/29/2013	21.5
5/28/2012	19.1
6/30/2013	23.8
7/1/2013	21.8
7/2/2013	21.8
7/3/2013	21.7
7/5/2013	21.4
7/6/2013	21.4
5/11/2013	19.2
7/7/2013	21.7
7/8/2013	20.1
7/9/2013	21.6
7/10/2013	20.6
7/11/2013	19.9
7/12/2013	17.9
7/13/2013	18
7/14/2013	18.2
7/15/2013	20.2
7/16/2013	20.3
7/17/2013	21.7
7/18/2013	21.8
7/19/2013	21.1
7/20/2013	19.9
7/21/2013	19
5/9/2013	19.8
7/22/2013	22
7/23/2013	21.6
7/24/2013	22.2
7/25/2013	22
7/27/2013	20.6
7/28/2013	20.5
5/8/2013	19.9
7/29/2013	20.4
7/30/2013	20.8
7/31/2013	19.5
8/1/2013	19.3
8/2/2013	19
8/3/2013	20.2
8/4/2013	19.9
5/6/2013	20
8/5/2013	21.7
8/6/2013	22.2
8/7/2013	21.4
8/8/2013	21.3
5/7/2013	20.1
5/10/2013	20.1
8/9/2013	21.9
8/10/2013	22
8/11/2013	21.4
8/12/2013	21.9
8/13/2013	21.5

Date	008 RW T (°C)
8/14/2013	21.1
8/15/2013	21.1
8/16/2013	20.6
8/17/2013	21.4
8/18/2013	21.5
8/19/2013	21.4
8/20/2013	21
8/21/2013	20.7
8/22/2013	19.8
8/23/2013	19.7
8/24/2013	20.3
8/25/2013	20.1
8/26/2013	19.9
8/27/2013	20.3
8/28/2013	20.9
8/29/2013	21
8/30/2013	20.8
8/31/2013	20.3
9/1/2013	20.1
9/3/2013	20.9
9/4/2013	20.8
9/5/2013	20.6
9/6/2013	19.1
9/7/2013	19.5
9/8/2013	18.7
9/9/2013	18.4
9/10/2013	20.6
9/11/2013	20.6
9/12/2013	20.7
9/13/2013	21.3
9/14/2013	21.3
9/15/2013	20.3
9/16/2013	20.6
9/17/2013	19.8
9/18/2013	18.3
9/19/2013	17.8
9/20/2013	17.2
9/21/2013	17
9/22/2013	17.1
9/23/2013	15.8
9/24/2013	16.1
9/25/2013	15.8
9/26/2013	15.5
9/27/2013	14.1
9/28/2013	14.5
9/29/2013	14
9/30/2013	14.3
6/1/2014	19
6/2/2014	20.2
6/3/2014	20.2
6/4/2014	20
6/5/2014	19.2
6/6/2014	18.9
6/7/2014	18.7
6/8/2014	20.6
6/9/2014	21.1
6/10/2014	20.5
6/11/2014	20.4
6/12/2014	20
6/13/2014	15.8
6/14/2014	17.5
6/15/2014	18
6/16/2014	16.3
6/17/2014	16.9
6/18/2014	18.1

Date	008 RW T (°C)
6/19/2014	18.3
6/20/2014	18.2
6/21/2014	18.4
6/22/2014	19.7
6/23/2014	19.9
6/24/2014	18.9
6/25/2014	18.8
6/26/2014	18.2
6/27/2014	18.3
6/28/2014	20.5
6/29/2014	20.1
6/30/2014	18.9
7/1/2014	19
7/2/2014	18.8
7/3/2014	20
7/4/2014	20.2
7/6/2014	20.5
7/7/2014	23.8
7/8/2014	22.2
7/9/2014	22.3
7/10/2014	22.6
7/11/2014	22.3
7/12/2014	22.6
7/13/2014	20.8
7/14/2014	23.4
7/15/2014	21
7/16/2014	21.4
7/17/2014	20.3
7/18/2014	21.7
7/19/2014	21.9
7/20/2014	19.6
7/21/2014	20.1
7/22/2014	18.8
7/23/2014	18.7
7/24/2014	18.7
7/25/2014	18.7
7/26/2014	20.7
7/27/2014	20.5
7/28/2014	21
7/29/2014	21.2
7/30/2014	20.5
7/31/2014	21.2
8/1/2014	20.6
8/2/2014	21.2
8/3/2014	22.1
8/4/2014	20.8
8/5/2014	22.8
8/6/2014	21
8/7/2014	20.8
8/8/2014	21.5
8/9/2014	22
8/11/2014	21.8
8/12/2014	21.9
8/15/2014	20
8/17/2014	20.1
8/18/2014	22.4
8/19/2014	22.5
8/20/2014	21.7
8/21/2014	20.7
8/22/2014	20.7
8/23/2014	19.9
8/24/2014	20.2
8/25/2014	21.2
8/26/2014	20.9
8/27/2014	21.6

Date	008 RW T (°C)
8/28/2014	21.2
8/29/2014	22.2
8/30/2014	19.6
8/31/2014	19.9
9/2/2014	18.1
9/3/2014	18.1
9/4/2014	18.3
9/5/2014	18.2
9/6/2014	18.3
9/7/2014	19
9/8/2014	18.4
9/9/2014	18.6
9/10/2014	18.7
9/11/2014	17.3
9/12/2014	16.9
9/13/2014	17.3
9/14/2014	17.3
9/15/2014	18.5
9/16/2014	19
9/17/2014	18.1
9/18/2014	18.9
9/19/2014	19
9/20/2014	19
9/21/2014	18.8
9/22/2014	19.7
9/23/2014	19
9/24/2014	16.8
9/25/2014	16.3
9/26/2014	17.1
9/27/2014	17.6
9/28/2014	17.9
9/29/2014	17.6
9/30/2014	16.8
Minimum	12.0
Average	18.9
60th Percentile	19.9
75th Percentile	20.8
90th Percentile	21.9
95th Percentile	22.4
99th Percentile	23.6
Maximum	26.5
Standard Deviation	2.5
Count	445

Table 64: Upstream Temperature in Spencer Lateral in April

Date	008 RW T (°C)
4/20/2012	11.9
4/21/2012	15.5
4/22/2012	17.3
4/23/2012	19
4/24/2012	18.8
4/25/2012	14.3
4/26/2012	15.01
4/27/2012	13.8
4/28/2012	14.5
4/29/2012	15
4/30/2012	13.5
4/15/2013	9.4
4/16/2013	9.3
4/17/2013	10
4/20/2013	13.9
4/21/2013	14.1
4/22/2013	14.3

Date	008 RW T (°C)
4/23/2013	14.6
4/24/2013	15.2
4/25/2013	15.9
4/26/2013	16
4/27/2013	16.4
4/28/2013	16.6
4/29/2013	15
4/30/2013	14.9
4/17/2014	11
4/18/2014	11.2
4/19/2014	11.2
4/21/2014	12
4/22/2014	13.4
4/23/2014	11.9
4/24/2014	11.4
4/25/2014	13.1
4/26/2014	13.1
4/27/2014	13.3
4/28/2014	14.8
4/29/2014	15.7
4/30/2014	16.7
Minimum	9.3
Average	14.0
90th Percentile	16.6
Maximum	19.0
Standard Deviation	2.4
Count	38

Table 65: Upstream Dissolved Oxygen in Spencer Lateral, May - September

Date	DO, AM (mg/L)	DO, PM (mg/L)
5/1/2012	6.85	7.5
5/8/2012	10.38	9.1
5/15/2012	10.65	9.55
5/22/2012	10.6	8.01
5/29/2012	8.63	8.5
6/5/2012	9.5	9.59
6/12/2012	10.7	9.88
6/19/2012	8.42	10.4
6/26/2012	9.31	9.65
7/3/2012	9.41	10.75
7/11/2012		8.6
7/17/2012	6.31	11.65
7/24/2012	7.78	9.88
7/31/2012	6.88	11.52
8/7/2012	6.9	11.18
8/14/2012	7.98	8.62
8/21/2012	7.22	9.11
8/28/2012	7.24	10.92
9/5/2012	7.45	9.98
9/11/2012	7.69	10.51
9/18/2012	7.05	10.43
9/25/2012	8.32	10.23
5/7/2013	9.38	8.91
5/14/2013	7.75	9.78
5/21/2013	9.7	8.99
5/28/2013	8.7	9.83
6/4/2013	8.5	9.97
6/11/2013	8.64	9.93
6/18/2013	7.92	9.87
6/25/2013	7.55	9.23
7/2/2013	8.61	9.45
7/9/2013	7.72	8.45
7/16/2013	9.04	9.89

Date	DO, AM (mg/L)	DO, PM (mg/L)
7/23/2013	7.58	8.49
7/30/2013	8.6	8.1
8/6/2013	9.2	8.34
8/13/2013	7.02	8.3
8/20/2013	9.2	8.7
8/27/2013	9.1	9.2
9/4/2013	8.1	
9/10/2013	8.3	8.1
9/17/2013	9	8.6
9/24/2013	8	9
5/6/2014	9.1	8.5
5/13/2014	8.6	8.7
5/20/2014	9.1	8.6
5/27/2014	7.1	8.8
6/3/2014	7	8.2
6/10/2014	8.7	8.5
6/12/2014	8.7	
6/17/2014	7.4	9.1
6/24/2014	9.7	6.9
7/1/2014	7.5	6.8
7/8/2014	8.6	7.6
7/15/2014	8.6	7.2
7/22/2014	8.7	9.7
7/29/2014	8.8	9.3
8/5/2014	9.8	7.7
8/12/2014	8.8	8.3
8/19/2014	8.2	7.9
8/26/2014	5.2	7
9/2/2014	6.2	6.4
9/9/2014	5.9	8.7
9/16/2014	7.8	9.1
9/23/2014	6.9	9.3
9/30/2014	6.1	9.2
Minimum	5.20	6.40
5th Percentile	6.22	7.03
10th Percentile	6.89	7.63
Average	8.24	9.03
Maximum	10.70	11.65
Standard Deviation	1.18	1.12
Count	65	64

Table 66: E. Coli, Spencer Lateral, Upstream

Date	E. coli
7/1/2014	4.2
10/16/2012	17.8
4/29/2014	17.8
10/9/2012	20.7
10/2/2012	22.2
4/23/2013	34.4
9/24/2013	34.4
10/8/2013	35.4
10/7/2014	35.4
9/4/2013	40.6
5/13/2014	40.6
7/29/2014	42.9
7/15/2014	47.8
7/24/2012	56
6/18/2013	56
5/20/2014	56
7/31/2012	62.4
10/1/2013	62.4
9/30/2014	62.4
8/7/2012	65.9

Date	E. coli
5/7/2013	78.2
6/4/2013	78.2
7/2/2013	78.2
6/3/2014	78.2
7/11/2012	83.1
9/9/2014	83.1
6/19/2012	88.5
8/19/2014	88.5
9/5/2012	94.5
9/25/2012	94.5
9/17/2013	94.5
8/12/2014	94.5
9/2/2014	94.5
4/24/2012	101
6/12/2014	101.3
9/11/2012	109
4/6/2013	109.1
5/21/2013	109.1
6/11/2013	109.1
6/17/2014	109.1
8/26/2014	109.1
5/1/2012	118
5/8/2012	118
8/28/2012	118
7/22/2014	118.4
8/5/2014	118.4
9/23/2014	118.4
9/18/2012	130
6/12/2012	144
7/16/2013	144.5
5/6/2014	144.5
6/24/2014	144.5
9/16/2014	144.5
5/15/2012	165
5/22/2012	165
6/26/2012	165
8/14/2012	165
8/27/2013	165.2
5/27/2014	165.2
7/8/2014	165.2
5/29/2012	>200
6/5/2012	>200
7/3/2012	200
7/17/2012	>200
8/21/2012	200
4/30/2013	>200.5
5/14/2013	200.5
5/28/2013	>200.5
6/25/2013	>200.5
7/9/2013	200.5
7/23/2013	200.5
7/30/2013	>200.5
8/6/2013	>200.5
8/13/2013	>200.5
8/20/2013	>200.5
4/22/2014	200.5
9/10/2013	490
Minimum	4.2
25th Percentile	65.9
Median	109.1
75th Percentile	165.2
Maximum	490
IQR	99.3
Count	77
Greater than values	10

Appendix C. Reasonable Potential and WQBEL Formulae

A. Reasonable Potential Analysis

EPA uses the process described in the *Technical Support Document for Water Quality-based Toxics Control* (USEPA, 1991) to determine reasonable potential. To determine if there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria for a given pollutant, EPA compares the maximum projected receiving water concentration to the water quality criteria for that pollutant. If the projected receiving water concentration exceeds the criteria, there is reasonable potential, and a WQBEL must be included in the permit.

1. Mass Balance

For discharges to flowing water bodies, the maximum projected receiving water concentration is determined using the following mass balance equation:

$$C_d Q_d = C_e Q_e + C_u Q_u \quad \text{Equation 1}$$

where,

C_d	=	Receiving water concentration downstream of the effluent discharge (that is, the concentration at the edge of the mixing zone)
C_e	=	Maximum projected effluent concentration
C_u	=	95th percentile measured receiving water upstream concentration
Q_d	=	Receiving water flow rate downstream of the effluent discharge = $Q_e + Q_u$
Q_e	=	Effluent flow rate
Q_u	=	Receiving water low flow rate upstream of the discharge (1Q10, 7Q10 or 30B3)

When the mass balance equation is solved for C_d , it becomes:

$$C_d = \frac{C_e \times Q_e + C_u \times Q_u}{Q_e + Q_u} \quad \text{Equation 2}$$

The above form of the equation is based on the assumption that the discharge is rapidly and completely mixed with 100% of the receiving stream.

If the mixing zone is based on less than complete mixing with the receiving water, the equation becomes:

$$C_d = \frac{C_e \times Q_e + C_u \times (Q_u \times \%MZ)}{Q_e + (Q_u \times \%MZ)} \quad \text{Equation 3}$$

Where:

% MZ = the percentage of the receiving water flow available for mixing.

If a mixing zone is not allowed, dilution is not considered when projecting the receiving water concentration and,

$$C_d = C_e \quad \text{Equation 4}$$

A dilution factor (D) can be introduced to describe the allowable mixing. Where the dilution factor is expressed as:

$$D = \frac{Q_e + Q_u \times \%MZ}{Q_e} \quad \text{Equation 5}$$

After the dilution factor simplification, the mass balance equation becomes:

$$C_d = \frac{C_e - C_u}{D} + C_u \quad \text{Equation 6}$$

If the criterion is expressed as dissolved metal, the effluent concentrations are measured in total recoverable metal and must be converted to dissolved metal as follows:

$$C_d = \frac{CF \times C_e - C_u}{D} + C_u \quad \text{Equation 7}$$

Where C_e is expressed as total recoverable metal, C_u and C_d are expressed as dissolved metal, and CF is a conversion factor used to convert between dissolved and total recoverable metal.

The above equations for C_d are the forms of the mass balance equation which were used to determine reasonable potential and calculate wasteload allocations.

2. Maximum Projected Effluent Concentration

When determining the projected receiving water concentration downstream of the effluent discharge, EPA's Technical Support Document for Water Quality-based Toxics Controls (USEPA, 1991) recommends using the maximum projected effluent concentration (C_e) in the mass balance calculation (see equation 3, page C-5). To determine the maximum projected effluent concentration (C_e) EPA has developed a statistical approach to better characterize the effects of effluent variability. The approach combines knowledge of effluent variability as estimated by a coefficient of variation (CV) with the uncertainty due to a limited number of data to project an estimated maximum concentration for the effluent. Once the CV for each pollutant parameter has been calculated, the reasonable potential multiplier (RPM) used to derive the maximum projected effluent concentration (C_e) can be calculated using the following equations:

First, the percentile represented by the highest reported concentration is calculated.

$$p_n = (1 - \text{confidence level})^{1/n} \quad \text{Equation 8}$$

where,

p_n = the percentile represented by the highest reported concentration

n = the number of samples
 confidence level = 99% = 0.99

and

$$RPM = \frac{C_{99}}{C_{P_n}} = \frac{e^{Z_{99} \times \sigma - 0.5 \times \sigma^2}}{e^{Z_{P_n} \times \sigma - 0.5 \times \sigma^2}} \quad \text{Equation 9}$$

Where,

σ^2 = $\ln(CV^2 + 1)$
 Z_{99} = 2.326 (z-score for the 99th percentile)
 Z_{P_n} = z-score for the P_n percentile (inverse of the normal cumulative distribution function at a given percentile)
 CV = coefficient of variation (standard deviation ÷ mean)

The maximum projected effluent concentration is determined by simply multiplying the maximum reported effluent concentration by the RPM:

$$C_e = (RPM)(MRC) \quad \text{Equation 10}$$

where MRC = Maximum Reported Concentration

3. Maximum Projected Effluent Concentration at the Edge of the Mixing Zone

Once the maximum projected effluent concentration is calculated, the maximum projected effluent concentration at the edge of the acute and chronic mixing zones is calculated using the mass balance equations presented previously.

4. Reasonable Potential

The discharge has reasonable potential to cause or contribute to an exceedance of water quality criteria if the maximum projected concentration of the pollutant at the edge of the mixing zone exceeds the most stringent criterion for that pollutant.

B. WQBEL Calculations

1. Calculate the Wasteload Allocations (WLAs)

Wasteload allocations (WLAs) are calculated using the same mass balance equations used to calculate the concentration of the pollutant at the edge of the mixing zone in the reasonable potential analysis. To calculate the wasteload allocations, C_d is set equal to the acute or chronic criterion and the equation is solved for C_e . The calculated C_e is the acute or chronic WLA. Equation 6 is rearranged to solve for the WLA, becoming:

$$C_e = WLA = D \times (C_d - C_u) + C_u \quad \text{Equation 11}$$

Washington's water quality criteria for some metals are expressed as the dissolved fraction, but the Federal regulation at 40 CFR 122.45(c) requires that effluent limits be expressed as total recoverable metal. Therefore, EPA must calculate a wasteload allocation in total recoverable metal that will be protective of the

dissolved criterion. This is accomplished by dividing the WLA expressed as dissolved by the criteria translator, as shown in equation 12. The criteria translator (CT) is equal to the conversion factor, because site-specific translators are not available for this discharge.

$$C_e = WLA = \frac{D \times (C_d - C_u) + C_u}{CT} \quad \text{Equation 12}$$

The next step is to compute the “long term average” concentrations which will be protective of the WLAs. This is done using the following equations from EPA’s *Technical Support Document for Water Quality-based Toxics Control (TSD)*:

$$LTA_a = WLA_a \times e^{(0.5\sigma^2 - z\sigma)} \quad \text{Equation 13}$$

$$LTA_c = WLA_c \times e^{(0.5\sigma_4^2 - z\sigma_4)} \quad \text{Equation 14}$$

where,

$$\sigma^2 = \ln(CV^2 + 1)$$

$$Z_{99} = 2.326 \text{ (z-score for the 99}^{\text{th}} \text{ percentile probability basis)}$$

$$CV = \text{coefficient of variation (standard deviation } \div \text{ mean)}$$

$$\sigma_4^2 = \ln(CV^2/4 + 1)$$

The LTAs are compared and the more stringent is used to develop the daily maximum and monthly average permit limits as shown below.

2. Derive the maximum daily and average monthly effluent limits

Using the TSD equations, the MDL and AML effluent limits are calculated as follows:

$$MDL = LTA \times e^{(z_m\sigma - 0.5\sigma^2)} \quad \text{Equation 15}$$

$$AML = LTA \times e^{(z_a\sigma_n - 0.5\sigma_n^2)} \quad \text{Equation 16}$$

where σ , and σ^2 are defined as they are for the LTA equations above, and,

$$\sigma_n^2 = \ln(CV^2/n + 1)$$

$$z_a = 1.645 \text{ (z-score for the 95}^{\text{th}} \text{ percentile probability basis)}$$

$$z_m = 2.326 \text{ (z-score for the 99}^{\text{th}} \text{ percentile probability basis)}$$

$$n = \begin{array}{l} \text{number of sampling events required per month. With the} \\ \text{exception of ammonia, if the AML is based on the } LTA_c, \text{ i.e.,} \\ \text{ } LTA_{\text{minimum}} = LTA_c, \text{ the value of “n” should be set at a} \\ \text{minimum of 4. For ammonia, In the case of ammonia, if the} \\ \text{AML is based on the } LTA_c, \text{ i.e., } LTA_{\text{minimum}} = LTA_c, \text{ the} \\ \text{value of “n” should be set at a minimum of 30.} \end{array}$$

C. Critical Low Flow Conditions

The low flow conditions of a water body are used to determine WQBELs. Low flow conditions for the Toppenish Plant are discussed under Low Flow Conditions on page 15.

Appendix D. Reasonable Potential and WQBEL Calculations

Table 69: Reasonable Potential and WQBEL Calculations for Outfall 002 May - September

Reasonable Potential Calculation

Facility	Washington Beef 002
Water Body Type	Freshwater
Rec. Water Hardness	60.4 mg/L

Dilution Factors:		
Acute	Chronic	
Aquatic Life	1.2	5.4
Human Health Carcinogenic		13.0
Human Health Non-Carcinogenic		5.9

Pollutant, CAS No. & NPDES Application Ref. No.		AMMONIA, Criteria as Total NH3	NITRATE/NITRITE (N)	Whole Effluent Toxicity	CHLORINE (Total Residual) 7782505	SOLIDS,SUSPENDED AND TURBIDITY	SOLIDS,DISSOLVED AND SALINITY						
Effluent Data	# of Samples (n)	796	482	20	25	796	29						
	Coeff of Variation (Cv)	1.91	0.529	1.17	0.6	0.6	0.075	0.6	0.6	0.6	0.6	0.6	0.6
	Effluent Concentration, ug/L (Max. or 95th Percentile)	8,180		16	19	29.4							
	Calculated 50th percentile Effluent Conc. (when n>10)		41555				2300000						
Receiving Water Data	90th Percentile Conc., ug/L	130				8.35							
	Geo Mean, ug/L		425				109000						
Water Quality Criteria	Aquatic Life Criteria, Acute ug/L	4,465	-	-	19	-	-						
	Chronic ug/L	669	-	1	11	13.35	See Gold Book						
	WQ Criteria for Protection of Human Health, ug/L	-	10000	#N/A	-	-	500000						
	Metal Criteria Acute	-	-	1	-	-	-						
	Translator, decimal Chronic	-	-	1	-	-	-						
	Carcinogen?	N	N	#N/A	N	N	N						

Aquatic Life Reasonable Potential

Effluent percentile value		0.990	0.950	0.950	0.950	0.950
s	$s^2 = \ln(CV^2 + 1)$	1.240	0.929	0.555	0.555	0.075
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.994	0.861	0.887	0.996	0.902
Multiplier		0.78	1.68	1.00	1.00	1.00
Max concentration (ug/L) at edge of...	Acute	5,518	23,192	16,364	26,480	0.000
	Chronic	1,286	4,977	3,512	12,241	0.000
Reasonable Potential? Limit Required?		YES	YES	NO	NO	#VALUE!

Aquatic Life Limit Calculation

# of Compliance Samples Expected per month		12	1
LTA Coeff. Var. (CV), decimal		1.9113	1.17
Permit Limit Coeff. Var. (CV), decimal		1.9113	1.17
Waste Load Allocations, ug/L	Acute	5163.7	-
	Chronic	3045.4	5.4106
Long Term Averages, ug/L	Acute	622.65	-
	Chronic	646.91	1.7747
Limiting LTA, ug/L		622.65	1.7747
Metal Translator or 1?		1.00	1.00
Average Monthly Limit (AML), ug/L		1273	5.3
Maximum Daily Limit (MDL), ug/L		5164	10.0

Human Health Reasonable Potential

s	$s^2 = \ln(CV^2 + 1)$	0.4967	0.9287	0.074894851
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.994	0.861	0.902
Multiplier		0.2887	0.3653	0.907756751
Dilution Factor		5.9398	#N/A	5.939832836
Max Conc. at edge of Chronic Zone, ug/L		7349.4	#N/A	477866
Reasonable Potential? Limit Required?		NO	#N/A	NO

Table 70: Reasonable Potential and QBEL Calculations for Outfall 002, Ammonia, October - April

Pollutant, CAS No. & NPDES Application Ref. No.		AMMONIA, Criteria as Total NH3
Effluent Data	# of Samples (n)	796
	Coeff of Variation (Cv)	1.91
	Effluent Concentration, ug/L (Max. or 95th Percentile)	8.18
	Calculated 50th percentile Effluent Conc. (when n>10)	
Receiving Water Data	90th Percentile Conc., ug/L	152
	Geo Mean, ug/L	
Water Quality Criteria	Aquatic Life Criteria, Acute ug/L	10,143
	Chronic	1,872
	WQ Criteria for Protection of Human Health, ug/L	-
	Metal Criteria Acute	-
	Translator, decimal Chronic	-
	Carcinogen?	N

Aquatic Life Reasonable Potential

Effluent percentile value		0.990
s	$s^2 = \ln(CV^2 + 1)$	1.240
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.994
Multiplier		0.78
Max concentration (ug/L) at edge of...	Acute	27
	Chronic	125
Reasonable Potential? Limit Required?		NO

Aquatic Life Limit Calculation

# of Compliance Samples Expected per month		12
LTA Coeff. Var. (CV), decimal		1.91
Permit Limit Coeff. Var. (CV), decimal		1.91
Waste Load Allocations, ug/L	Acute	11753
	Chronic	9457
Long Term Averages, ug/L	Acute	1417.8
	Chronic	2010.1
Limiting LTA, ug/L		1417.8
Metal Translator or 1?		1.00
Average Monthly Limit (AML), ug/L		2898
Maximum Daily Limit (MDL), ug/L		11753

Table 71: Reasonable Potential and QBEL Calculations for Outfall 008 May - September

Reasonable Potential Calculation

Facility		Washington Beef 008									
Water Body Type		Freshwater									
Rec. Water Hardness		60.4 mg/L									

Dilution Factors:		Acute	Chronic
Aquatic Life		1.14	3.89
Human Health Carcinogenic			9.7
Human Health Non-Carcinogenic			4.18

Pollutant, CAS No. & NPDES Application Ref. No.		AMMONIA, Criteria as Total NH3	NITRATE/NITRITE (N)	Whole Effluent Toxicity	CHLORINE (Total Residual) 7782505	SOLIDS,SUSPENDED AND TURBIDITY	SOLIDS,DISSOLVED AND SALINITY					
		796	378	20	25	796	29					
Effluent Data	# of Samples (n)	796	378	20	25	796	29					
	Coeff of Variation (Cv)	0.6	0.529	1.17	0.6	0.627	0.075	0.6	0.6	0.6	0.6	0.6
	Effluent Concentration, ug/L (Max. or 95th Percentile)	8,180		16	19	29.4						
	Calculated 50th percentile Effluent Conc. (when n>10)		41555				2300000					
Receiving Water Data	90th Percentile Conc., ug/L	130				23.1						
	Geo Mean, ug/L		425				109000					
Water Quality Criteria	Aquatic Life Criteria, Acute ug/L	13,085	-	-	19	-	-					
	Chronic ug/L	1,293	-	1	11	28.1	See Gold Book					
	WQ Criteria for Protection of Human Health, ug/L	-	10000	#N/A	-	-	500000					
	Metal Criteria Acute	-	-	1	-	-	-					
	Translator, decimal Chronic	-	-	1	-	-	-					
	Carcinogen?	N	N	#N/A	N	N	N					

Aquatic Life Reasonable Potential												
Effluent percentile value		0.990	0.990	0.990	0.990	0.990						
s	$s^2=\ln(CV^2+1)$	0.555	0.929	0.555	0.576	0.075						
Pn	$Pn=(1-\text{confidence level})^{1/n}$	0.994	0.794	0.832	0.994	0.853						
Multiplier		0.90	4.04	1.00	1.00	1.00						
Max concentration (ug/L) at edge of...	Acute	6,466	57,007	16,736	28,649	0,000						
	Chronic	1,977	16,623	4,880	24,718	0,000						
Reasonable Potential? Limit Required?		YES	YES	NO	NO	#VALUE!						

Aquatic Life Limit Calculation												
# of Compliance Samples Expected per month		12	1									
LTA Coeff. Var. (CV), decimal		0.6	1.17									
Permit Limit Coeff. Var. (CV), decimal		0.6	1.17									
Waste Load Allocations, ug/L	Acute	14838	-									
	Chronic	4656.5	3,8933									
Long Term Averages, ug/L	Acute	4764.2	-									
	Chronic	2456	1,277									
Limiting LTA, ug/L		2456	1,277									
Metal Translator or 1?		1.00	1.00									
Average Monthly Limit (AML), ug/L		3211	3.8									
Maximum Daily Limit (MDL), ug/L		7649	7.2									

Human Health Reasonable Potential												
s	$s^2=\ln(CV^2+1)$	0.4967	0.9287			0.074894851						
Pn	$Pn=(1-\text{confidence level})^{1/n}$	0.992	0.861			0.902						
Multiplier		0.3015	0.3653			0.907756751						
Dilution Factor		4.1756	#N/A			4.175606823						
Max Conc. at edge of Chronic Zone, ug/L		10275	#N/A			633714						
Reasonable Potential? Limit Required?		YES	#N/A			YES						

Human Health Limit Calculation												
# of Compliance Samples Expected per month		12				12						
Average Monthly Effluent Limit, ug/L		40406				1741662						
Maximum Daily Effluent Limit, ug/L		89369				1995439						

Table 72: Reasonable Potential and WQBEL Calculations for Outfall 008, October - April

Reasonable Potential Calculation

Facility	Washington Beef 008
Water Body Type	Freshwater
Rec. Water Hardness	60.4 mg/L

Dilution Factors:		Acute	Chronic
Aquatic Life		1.0	1.0
Human Health Carcinogenic			1.0
Human Health Non-Carcinogenic			1.0

Pollutant, CAS No. & NPDES Application Ref. No.		AMMONIA, Criteria as Total NH3	NITRATE/NITRITE (N)	Whole Effluent Toxicity	SOLIDS,SUSPENDED AND TURBIDITY	SOLIDS DISSOLVED AND SALINITY	CHLORINE (Total Residual) 7782505						
		796	796	20			29	25					
Effluent Data	# of Samples (n)	796	796	20									
	Coeff of Variation (Cv)	1.91	0.529	1.17	0.6	0.075	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	Effluent Concentration, ug/L (Max. or 95th Percentile)	8,180		16				19					
	Calculated 50th percentile Effluent Conc. (when n>10)			41555		23000000							
Receiving Water Data	90th Percentile Conc., ug/L	130											
	Geo Mean, ug/L		425										
Water Quality Criteria	Aquatic Life Criteria, Acute ug/L	4,552	-	-	-	-	19						
	Chronic ug/L	485	-	1	WAC 173-201A	See Gold Book	11						
	WQ Criteria for Protection of Human Health, ug/L	-	10000	#N/A	-	500000							
	Metal Criteria Acute	-	-	1	-	-							
	Translator, decimal Chronic	-	-	1	-	-							
	Carcinogen?	N	N	#N/A	N	N	N						

Aquatic Life Reasonable Potential						
Effluent percentile value		0.990	0.950	0.950	0.950	0.950
s	$s^2 = \ln(CV^2 + 1)$	1.240	0.929	0.555	0.075	0.555
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.994	0.861	#DIV/0!	0.902	0.887
Multiplier		0.78	1.68	#DIV/0!	1.00	1.00
Max concentration (ug/L) at edge of...	Acute	6,386.8	26,927	#DIV/0!	0.000	19,000
	Chronic	6,386.8	26,927	#DIV/0!	0.000	19,000
Reasonable Potential? Limit Required?		YES	YES	#VALUE!	#VALUE!	YES

Aquatic Life Limit Calculation				
# of Compliance Samples Expected per month		12	1	4
LTA Coeff. Var. (CV), decimal		1.91	1.17	0.6
Permit Limit Coeff. Var. (CV), decimal		1.91	1.17	0.6
Waste Load Allocations, ug/L	Acute	4552.216934	-	19
	Chronic	485.2249982	1	11
Long Term Averages, ug/L	Acute	549.1818811	-	6.100581062
	Chronic	103.137695	0.328	5.801767885
Limiting LTA, ug/L		103.137695	0.328	5.801767885
Metal Translator or 1?		1.00	1.00	1.00
Average Monthly Limit (AML), ug/L		211	1.0	9.0
Maximum Daily Limit (MDL), ug/L		855	1.8	18.1

Human Health Reasonable Potential				
s	$s^2 = \ln(CV^2 + 1)$	0.4967	0.9287	0.074894851
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.996	0.861	0.902
Multiplier		0.265	0.3653	0.907756751
Dilution Factor		1	#N/A	1
Max Conc. at edge of Chronic Zone, ug/L		41555	#N/A	23000000
Reasonable Potential? Limit Required?		YES	#N/A	YES

Human Health Limit Calculation			
# of Compliance Samples Expected per month		12	4
Average Monthly Effluent Limit, ug/L		10000	500000
Maximum Daily Effluent Limit, ug/L		22117	558383

Table 73: Reasonable Potential and WQBEL Calculations for Temperature for Outfall 002

Freshwater Temperature Reasonable Potential and Limit Calculation

Based on WAC 173-201A-200(1)(c)(i)--(ii) and the Water Quality Program Guidance. All data inputs must meet WQ guidelines. The Water Quality temperature guidance document may be found at: <https://fortress.wa.gov/ecy/publications/summarypages/0610100.html>

INPUT	May	June	July	August	September	October - April
1. Chronic Dilution Factor at Mixing Zone Boundary	9.8	9.8	9.8	9.8	9.8	9.8
2. 7DADMax Ambient Temperature (T) (Upstream Background 90th percentile)	18.6 °C	19.5 °C	21.6 °C	21.1 °C	19.7 °C	16.9 °C
3. 7DADMax Effluent Temperature (95th percentile)	30.4 °C	32.1 °C	32.8 °C	32.1 °C	30.7 °C	25.8 °C
4. Aquatic Life Temperature WQ Criterion in Fresh Water	21.0 °C	21.0 °C	21.0 °C	21.0 °C	21.0 °C	21.0 °C
OUTPUT						
5. Temperature at Chronic Mixing Zone Boundary:	19.8 °C	20.8 °C	22.7 °C	22.2 °C	20.8 °C	17.8 °C
6. Incremental Temperature Increase or decrease:	1.2 °C	1.3 °C	1.1 °C	1.1 °C	1.1 °C	0.9 °C
7. Maximum Allowable Incremental Temperature Increase:	1.2 °C	1.2 °C	0.3 °C	0.3 °C	1.2 °C	1.3 °C
8. Maximum Allowable Temperature at Mixing Zone Boundary:	19.8 °C	20.7 °C	21.9 °C	21.4 °C	20.9 °C	18.2 °C
A. If ambient temp is warmer than WQ criterion						
9. Does temp fall within this warmer temp range?	NO	NO	YES	YES	NO	NO
10. Temperature Limit if Required:	---	---	0.3	0.3	---	---
B. If ambient temp is cooler than WQ criterion but within 34/(T_{amb}+9) and within 0.3 °C of the criterion						
11. Does temp fall within this incremental temp. range?	NO	NO	---	---	NO	NO
12. Temp increase allowed at mixing zone boundary, if required:	---	---	---	---	---	---
C. If ambient temp is cooler than (WQ criterion-0.3) but within 34/(T_{amb}+9) of the criterion						
13. Does temp fall within this Incremental temp. range?	NO	NO	---	---	NO	NO
14. Temp increase allowed at mixing zone boundary, if required:	---	---	---	---	---	---
D. If ambient temp is cooler than (WQ criterion - 34/(T_{amb}+9))						
15. Does temp fall within this Incremental temp. range?	YES	YES	---	---	YES	YES
16. Temp increase allowed at mixing zone boundary, if required:	NO LIMIT	1.19 °C	---	---	NO LIMIT	NO LIMIT
RESULTS						
17. Do any of the above cells show a temp increase?	NO	YES	YES	YES	NO	NO
18. Temperature Limit if Required?	NO LIMIT	31.2 °C	23.6 °C	23.6 °C	NO LIMIT	NO LIMIT

Table 74: Reasonable Potential Calculations for Temperature for Outfall 008

Freshwater Temperature Reasonable Potential and Limit Calculation

Based on WAC 173-201A-200(1)(c)(i)–(ii) and the Water Quality Program Guidance. All data inputs must meet WQ guidelines. The Water Quality temperature guidance document may be found at: <https://fortress.wa.gov/ecy/publications/summarypages/0610100.html>

INPUT	May	June	July	August	September	October - April
1. Chronic Dilution Factor at Mixing Zone Boundary	29.9	29.9	29.9	29.9	29.9	1.0
2. 7DADMax Ambient Temperature (T) (Upstream Background 90th percentile)	18.8 °C	20.5 °C	22.5 °C	22.3 °C	20.5 °C	30.3 °C
3. 7DADMax Effluent Temperature (95th percentile)	30.4 °C	32.1 °C	32.8 °C	32.1 °C	30.7 °C	30.3 °C
4. Aquatic Life Temperature WQ Criterion in Fresh Water	21.0 °C	21.0 °C	21.0 °C	21.0 °C	21.0 °C	21.0 °C
OUTPUT						
5. Temperature at Chronic Mixing Zone Boundary:	19.2 °C	20.9 °C	22.9 °C	22.6 °C	20.8 °C	30.3 °C
6. Incremental Temperature Increase or decrease:	0.39 °C	0.39 °C	0.35 °C	0.33 °C	0.34 °C	0.0 °C
7. Maximum Allowable Incremental Temperature Increase:	1.22 °C	1.15 °C	0.30 °C	0.30 °C	1.15 °C	0.3 °C
8. Maximum Allowable Temperature at Mixing Zone Boundary:	20.0 °C	21.0 °C	22.8 °C	22.6 °C	21.0 °C	30.6 °C
A. If ambient temp is warmer than WQ criterion						
9. Does temp fall within this warmer temp range?	NO	NO	YES	YES	NO	YES
10. Temperature Limit if Required:	---	---	NO LIMIT	NO LIMIT	---	NO LIMIT
B. If ambient temp is cooler than WQ criterion but within 34/(T_{amb}+9) and within 0.3 °C of the criterion						
11. Does temp fall within this incremental temp. range?	NO	NO	---	---	NO	---
12. Temp increase allowed at mixing zone boundary, if required:	---	---	---	---	---	---
C. If ambient temp is cooler than (WQ criterion-0.3) but within 34/(T_{amb}+9) of the criterion						
13. Does temp fall within this Incremental temp. range?	NO	YES	---	---	YES	---
14. Temp increase allowed at mixing zone boundary, if required:	---	NO LIMIT	---	---	NO LIMIT	---
D. If ambient temp is cooler than (WQ criterion - 34/(T_{amb}+9))						
15. Does temp fall within this Incremental temp. range?	YES	NO	---	---	NO	---
16. Temp increase allowed at mixing zone boundary, if required:	NO LIMIT	---	---	---	---	---
RESULTS						
17. Do any of the above cells show a temp increase?	NO	NO	NO	NO	NO	NO
18. Temperature Limit if Required?	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT

Appendix E. Reasonable Potential and Effluent Limit Calculations for Nutrients

Overview

As explained below, EPA has performed a reasonable potential analysis for nutrients (i.e., total phosphorus and total nitrogen) discharged by the Toppenish Plant. EPA has determined that discharges of total nitrogen and total phosphorus from Outfall 002 at the Toppenish Plant to Wanity Slough have the reasonable potential to cause or contribute to excursions above water quality standards from April – October, and therefore effluent limits are necessary.

Dual Nutrient Control

Both nitrogen and phosphorus can contribute to violations of WQS that result from excess nutrients (i.e., nuisance algae or aesthetics, DO, and pH). Liebig’s Law of the Minimum states that the nutrient that is less abundant relative to the biological requirements of algae is the limiting nutrient (i.e., the nutrient that controls primary productivity) (EPA 1972). However, in this case, EPA believes it is necessary to evaluate the Toppenish Plant’s discharges of both nitrogen and phosphorus for the reasonable potential to cause or contribute to excursions above water quality standards and establish effluent limits for both if reasonable potential is found.

Phosphorus is often the limiting nutrient in freshwaters because blue-green algae can “fix” elemental nitrogen from the air as a nutrient source or utilize nitrogen in the water column at very low concentrations and thereby grow in a low-nitrogen environment. However, in the Lower Yakima River, the USGS found that periphytic algal growth was generally not limited by either nitrogen or phosphorus in the Zillah reach, which is the reach affected by the discharge from the Toppenish Plant (via Wanity Slough and Marion Drain) (Wise, Zuroske, Carpenter, & Kiesling, 2009) That is to say, the Zillah reach of the Lower Yakima River had an excess of both nitrogen and phosphorus. The Lower Yakima watershed is part of ecoregion 10 (Columbia Plateau), and TetraTech found that, in ecoregion 10 (as well as ecoregions 3 and 11), diatom metrics were more sensitive to total nitrogen than total phosphorus (USEPA, 2018). Because of this evidence that nitrogen is an important factor for water quality in addition to phosphorus in the Lower Yakima watershed, EPA is analyzing reasonable potential for both nitrogen and phosphorus.

Status of Water Quality

Status of Water Quality in Wanity Slough

Available water quality data for Wanity Slough show violations of water quality criteria that are likely caused, at least in part, by excess nutrients.

pH in Wanity Slough at downstream from the facility exceeds the upper bound criterion of 8.5 standard units from April – October (Table 45 and Table 46). The lower bound criterion of 6.5 standard units is also violated in October. The minimum DO concentration in Wanity Slough downstream from the facility is below the criterion of 8.0 mg/L every month except November. The most severe DO violations, when DO was less than 2 mg/L, occurred from April – October (Table 42).

The average concentrations of total nitrogen and total phosphorus downstream from the facility exceed the interpretations of the narrative criteria above. Average concentrations of total nitrogen and total phosphorus in Wanity Slough were higher at times when the Toppenish Plant was discharging to Wanity Slough through Outfall 002 than when it was discharging to Spencer Lateral through outfall 008 (Table 56, Table 57, Table 58, Table 59).

Status of Water Quality in Spencer Lateral

The only water quality data available for Spencer Lateral were collected by the permittee as a condition of the current permit. The permit required monitoring for BOD₅, dissolved oxygen, pH, temperature, total ammonia as N, turbidity, and E. coli bacteria. All of the monitoring was required only upstream from the discharge except for dissolved oxygen and temperature. Downstream monitoring was not required when the facility was not discharging to Outfall 008, and no downstream data were submitted. Data were only collected during the irrigation season, when there was flow in Spencer Lateral upstream from Outfall 008.

Upstream of the facility, violations of the lower bound pH criterion were observed from April – August, and violations of the 8 mg/L criterion for DO were observed May – October.

Applicable Water Quality Criteria

Narrative Criterion

The State of Washington has a narrative water quality criterion which reads “Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste” (WAC 173-201A-260(2)(b)). Excess nutrients can cause nuisance algae growth that would violate this criterion. The State of Washington does not have numeric water quality criteria for TP or total nitrogen (TN).

Use of Narrative Criteria in NPDES Permits

Where a State or Tribe has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State or Tribal water quality standard, the permitting authority must establish effluent limits using one or more of the options provided in 40 CFR 122.44(d)(1)(vi).

In this case, EPA is performing its reasonable potential and effluent limit calculations based on 40 CFR 122.44(d)(1)(vi)(A), which states that EPA may “establish effluent limits using a calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use.”

EPA’s *Nutrient Criteria Technical Guidance Manual: Rivers and Streams* (USEPA, 2000b) states that nutrient criteria may be developed based on an upper percentile of the nutrient concentrations observed in reference reaches, which are relatively undisturbed stream segments that exemplify a region’s natural biological integrity. The manual recommends using the 75th percentile of the frequency distribution of reference streams, however, other percentiles can be used. In this case, EPA has used the 90th percentile of the total nitrogen and total phosphorus.

Reference sites were identified in the Nutrient Scientific Technical Exchange Partnership Support (N-STEPS) analysis of nutrient and biological data for Washington. EPA analyzed the

nutrient data used in the N-STEPS report. Total nitrogen and total phosphorus data were first reduced to an average concentration for each reference station in ecoregion 10 (Columbia Plateau) to avoid over-representing stations with more data. EPA then calculated the 90th percentile of the average total nitrogen and total phosphorus concentrations at reference stations in ecoregion 10. These were:

- 102 µg/L total phosphorus, and
- 857 µg/L total nitrogen

EPA is only applying these numeric interpretations of Washington's narrative criterion for aesthetics to Wanity Slough from April – October, which is when pH violations and DO concentrations less than 2 mg/L have been observed in Wanity Slough downstream from the facility. The EPA's *Ambient Water Quality Criteria Recommendations for Rivers and Streams in Nutrient Ecoregion III* (USEPA, 2000a) states that EPA recommends a seasonal or annual averaging period for nutrient criteria. Thus, EPA is applying these numeric translations as April – October seasonal averages.

In general, EPA is applying Washington water quality standards to both Spencer Lateral and Wanity Slough as a reference. However, EPA is not translating Washington's narrative water quality criterion for aesthetics into numeric nutrient concentrations for Spencer Lateral. As stated above, average concentrations of total phosphorus and nitrate+nitrite were lower at times when the Toppenish Plant was discharging to Spencer Lateral via outfall 008 relative to times when it was discharging to Wanity Slough via Outfall 002. Although Spencer Lateral is tributary to Wanity Slough via a piped connection and to the Yakima River via Subdrain 35, during the irrigation season, some of the water flowing in Spencer Lateral is used for irrigation. Nutrients in water that is used for irrigation would not directly contribute to excess nutrients in downstream waters. The lower concentrations of nutrients in Wanity Slough when the Toppenish Plant is discharging through outfall 008 indicate that a significant portion of the nutrients discharged to Spencer Lateral are used in the irrigation water and not discharged back to Wanity Slough. Nutrients in irrigation water are generally a benefit to irrigation uses (USEPA, 1972). In addition, there are no downstream water quality data available for Spencer Lateral demonstrating that beneficial uses of Spencer Lateral are impaired due to excess nutrients.

Because available data do not demonstrate that nutrients discharged to Spencer Lateral significantly affect downstream waters and because there is no known impairment of beneficial uses within Spencer Lateral due to excess nutrients, EPA is not translating Washington's narrative criterion for aesthetics into numeric nutrient concentrations for Spencer Lateral.

Reasonable Potential to Cause or Contribute to WQS Violations

Nutrient Concentrations and Loads

Total Phosphorus

After consolidating duplicates, EPA located 6 results for total phosphorus collected between July 2011 and June 2016 in Wanity Slough upstream from the facility in the Water Quality Portal (Table 55). All samples were collected during the irrigation season. The average upstream phosphorus concentration is 65 µg/L. At Wanity Slough's harmonic mean flow of 57 CFS, this is an upstream load of 20 lb/day total phosphorus.

The Toppenish Plant does not routinely monitor total phosphorus, but total phosphorus effluent data were reported on the July 2014 application. The average effluent concentration was 39.3 mg/L, and the average effluent load was 217 lb/day (n = 9).

The effluent loading of total phosphorus (217 lb/day) is large relative to the total phosphorus loading in Wanity Slough upstream from the discharge (20 lb/day).

Downstream from the facility, at times when the Toppenish Plant was discharging exclusively from Outfall 002 to Wanity Slough, the average total phosphorus concentration in Wanity Slough was 737 µg/L (Table 57). At times when the Toppenish Plant was discharging exclusively from Outfall 008 to Spencer Lateral, the average total phosphorus concentration in Wanity Slough downstream from the facility was 78 µg/L (Table 56).

Total Nitrogen

EPA located 4 paired results for total Kjeldahl nitrogen and nitrate-nitrite collected during July and August 2011 in Wanity Slough upstream from the facility in the Water Quality Portal. Total nitrogen is the sum of total Kjeldahl nitrogen and nitrate-nitrite. The average upstream total nitrogen concentration is 613 µg/L (Table 54). At Wanity Slough's harmonic mean flow of 57 CFS, this is an upstream load of 188 lb/day total nitrogen. The average total nitrogen load reported by the Toppenish Plant for outfall 002 is 395 lb/day.

The effluent loading of total nitrogen (395 lb/day) is large relative to the total nitrogen loading in Wanity Slough upstream from the discharge (188 lb/day).

Downstream from the facility, at times when the Toppenish Plant was discharging from Outfall 002 to Wanity Slough, the average total nitrogen concentration in Wanity Slough was 2,220 µg/. At times when the Toppenish Plant was discharging exclusively from Outfall 008 to Spencer Lateral, the average total nitrogen concentration in Wanity Slough was 1,140 µg/L (Table 59).

Reasonable Potential Calculations

Downstream concentrations of total nitrogen and total phosphorus at the edge of a mixing zone encompassing 25% of the harmonic mean flow of Wanity Slough are as follows:

$$C_d = \frac{C_e - C_u}{D} + C_u$$

- D = 13.0
- For total nitrogen:
 - $C_e = 69,173 \mu\text{g/L}$
 - $C_u = 613 \mu\text{g/L}$
- For total phosphorus:
 - $C_e = 39,300 \mu\text{g/L}$
 - $C_u = 65 \mu\text{g/L}$

This results in downstream concentrations (C_d) of:

- Total nitrogen: $C_d = 5,887 \mu\text{g/L}$
- Total phosphorus: $C_d = 3,083 \mu\text{g/L}$

The downstream concentrations of total nitrogen and total phosphorus exceed the interpreted narrative criterion for aesthetics. In addition, the effluent loads of total nitrogen and total phosphorus are large relative to the upstream loads, and downstream monitoring data in Wanity

Slough show excursions above the interpreted narrative criterion, particularly when the Toppenish Plant is discharging through Outfall 002 to Wanity Slough.

Effluent Limit Calculation

Seasonal water quality-based effluent limits for total nitrogen and total phosphorus, for April - October are calculated as follows:

$$C_e = WLA = D \times (C_d - C_u) + C_u$$

- $D = 13.0$
- For total nitrogen:
 - $C_d = 857 \mu\text{g/L}$
 - $C_u = 613 \mu\text{g/L}$
- For total phosphorus:
 - $C_d = 102 \mu\text{g/L}$
 - $C_u = 65 \mu\text{g/L}$

This results wasteload allocations or effluent concentrations (C_e) of:

- Total nitrogen: $C_e = WLA = 3,798 \mu\text{g/L}$
- Total phosphorus: $C_e = WLA = 547 \mu\text{g/L}$

The narrative criterion for aesthetics is interpreted using seasonal average concentrations. 40 CFR 122.45(d) requires effluent limits for continuous discharges from sources other than POTWs to be stated as average monthly limits and maximum daily limits. EPA will implement the wasteload allocation as an average monthly limit. This is conservative because the averaging period for the limit is shorter than the averaging period for the criterion.

Maximum daily limits are calculated from the average monthly limits based on the following equation from Table 5-3 of the TSD (USEPA, 1991):

$$\frac{\text{MDL}}{\text{AML}} = \frac{\exp [z_m \sigma - 0.5 \sigma^2]}{\exp [z_a \sigma_n - 0.5 \sigma_n^2]}$$

where

- $\sigma_n^2 = \ln (CV^2/n + 1)$
- $\sigma^2 = \ln (CV^2 + 1)$
- CV = the coefficient of variation of the effluent concentration
- n = the number of samples per month
- z_m = the percentile exceedance probability for the MDL
- z_a = the percentile exceedance probability for the AML

EPA uses the 95th percentile for the AML and the 99th percentile for the MDL, resulting in the following z-scores:

- $z_m = 1.645$
- $z_a = 2.326$
- $n = 12$
- $CV = 0.6$ (assumed since the Toppenish Plant does not routinely monitor for total phosphorus and the variability of total nitrogen after upgrades is unknown)

This results in an MDL:AML ratio of 2.38:1. This ratio results in the following seasonal (April – October) maximum daily limits:

- Total nitrogen: $3,798 \mu\text{g/L} \times 2.38 = 9,049 \mu\text{g/L}$

- Total phosphorus: $547 \mu\text{g/L} \times 2.38 = 1,303 \mu\text{g/L}$

In general, effluent limits in NPDES permits must be expressed in terms of mass (40 CFR 122.45(f)). Mass limits are calculated from the concentration limits as follows:

- Total nitrogen:
 - $\text{AML} = 3.798 \text{ mg/L} \times 8.34 \text{ lb/gallon} \times 0.766 \text{ mgd} = 24.3 \text{ lb/day}$
 - $\text{MDL} = 9.049 \text{ mg/L} \times 8.34 \text{ lb/gallon} \times 0.766 \text{ mgd} = 57.8 \text{ lb/day}$
- Total phosphorus:
 - $\text{AML} = 0.547 \text{ mg/L} \times 8.34 \text{ lb/gallon} \times 0.766 \text{ mgd} = 3.54 \text{ lb/day}$
 - $\text{MDL} = 1.303 \text{ mg/L} \times 8.34 \text{ lb/gallon} \times 0.766 \text{ mgd} = 8.32 \text{ lb/day}$

Consistent with Section 5.7.1 of the TSD, since the dilution factor is less than 100:1, the draft permit proposes both mass and concentration limits.

Appendix F. Essential Fish Habitat Assessment

Pursuant to the requirements for Essential Fish Habitat (EFH) assessments, this appendix contains the following information:

- Listing of EFH Species in the Facility Area
- Description of the Facility and Discharge Location
- EPA's Evaluation of Potential Effects to EFH

A. Listing of EFH Species in the Facility Area

According to NOAA Fisheries' EFH Mapper, the Lower Yakima basin is EFH for Chinook and coho salmon.

B. Description of the Facility and Discharge Location

The activities and sources of wastewater at the Toppenish Plant are described in detail in Part II and Appendix A of this fact sheet. The location of the outfall is described in Part III ("Receiving Water").

C. EPA's Evaluation of Potential Effects to EFH

Water quality is an important component of aquatic life habitat. NPDES permits are developed to protect water quality in accordance with WQS. The standards protect the beneficial uses of the waterbody, including all life stages of aquatic life. The development of permit limits for an NPDES discharger includes the basic elements of ecological risk analysis. The underlying technical process leading to NPDES permit requirements incorporates the following elements of risk analysis:

Effluent Characterization

Characterization of the Toppenish Plant's effluent was accomplished using a variety of sources, including:

- Permit application monitoring
- Permit compliance monitoring
- Statistical evaluation of effluent variability
- Quality assurance plans and evaluations

Identification of Pollutants of Concern and Threshold Concentrations

The pollutants of concern include pollutants with aquatic life criteria in the Washington WQS. Threshold concentrations are equal to the numeric water quality criteria for the protection of aquatic life. No other pollutants of concern were identified by NOAA Fisheries.

Exposure and Wasteload Allocation

Analysis of the transport of pollutants near the discharge point with respect to the following:

- Mixing zone policies in the Washington WQS

- Dilution modeling and analysis
- Exposure considerations (e.g., prevention of lethality to passing organisms)
- Consideration of multiple sources and background concentrations

Statistical Evaluation for Permit Limit Development

Calculation of permit limits using statistical procedures addressing the following:

- Effluent variability and non-continuous sampling
- Fate/transport variability
- Duration and frequency thresholds identified in the water quality criteria

Monitoring Programs

Development of monitoring requirements, including:

- Compliance monitoring of the effluent
- Ambient monitoring

Protection of Aquatic Life in NPDES Permitting

EPA's approach to aquatic life protection is outlined in detail in the *Technical Support Document for Water Quality-based Toxics Control* (USEPA, 1991). EPA and states evaluate toxicological information from a wide range of species and life stages in establishing water quality criteria for the protection of aquatic life.

The NPDES program evaluates a wide range of chemical constituents (as well as whole effluent toxicity testing results) to identify pollutants of concern with respect to the criteria values. When a facility discharges a pollutant at a level that has a "reasonable potential" to exceed, or to contribute to an exceedance of, the water quality criteria, permit limits are established to prevent exceedances of the criteria in the receiving water (outside any authorized mixing zone).

Effects Determination

Since the proposed permit has been developed to protect aquatic life species in the receiving water in accordance with the Washington WQS, EPA has determined that issuance of this permit is not likely to adversely affect any EFH in the vicinity of the discharge. EPA will provide NMFS with copies of the draft permit and fact sheet during the public notice period. Any recommendations received from NMFS regarding EFH will be considered prior to reissuance of this permit.

Appendix G. CWA § 401 Certification

Below is EPA's draft CWA § 401 Certification. EPA is taking comment on EPA's intent to certify this permit as described in Section VI.C.

Clean Water Act (CWA) Section 401 Certification for Discharger Located within Tribal Boundaries

Facility: Washington Beef, Toppenish Plant
NPDES Permit Number: WA0050202
Location: Yakama Reservation
Receiving Waters: Wanity Slough and Spencer Lateral
Facility Location: 201 Elmwood Road
Toppenish, Washington 98948

EPA hereby certifies that the conditions in the National Pollutant Discharge Elimination System (NPDES) permit for the Washington Beef Toppenish Plant, are necessary to assure compliance with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA. See CWA Section 401(a)(1), 33 U.S.C. 1341(a)(1); 40 CFR 124.53(e).

The State in which the discharge originates is responsible for issuing the CWA Section 401 certification pursuant to CWA Section 401(a)(1). When a NPDES permit is issued on Tribal Land, the Tribe is the certifying authority where the Tribe has been approved by EPA for Treatment as a State (TAS) pursuant to CWA Section 518(e) and 40 CFR § 131.8. Where a Tribe does not have TAS, EPA is the certifying authority. The Yakama Nation does not have TAS for the reservation. Therefore, EPA is responsible for issuing the CWA Section 401 Certification for this permit.

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