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**To:** Nevada Division of Environmental Protection  
Nevada Environmental Response Trust

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**Cc:** Nevada Environmental Response Trust Stakeholders

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**From:** Ryan Sullivan, Vice President Service and O&M

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**Date:** Oct 20, 2018

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**Subject:** NERT – GWETS Operation Monthly Report – Sept 2018

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At the request of the Nevada Environmental Response Trust (Trust), Envirogen Technologies, Inc. (ETI) is providing this summary of the groundwater extraction and treatment system (GWETS) operation and performance during September 2018.

### Summary of GWETS Operation

Envirogen Technologies, Inc. (ETI) mechanically operated the GWETS and ion exchange (IX) system normally in September 2018. Flow from PC-119, PC-120, PC-121, and PC-133 was routed to the IX system, bypassing all flow meters associated with the FBR plant. The flow rate to the IX system averaged approximately 182 gallons per minute (gpm). The flow rate to the FBR plant averaged approximately 1,030 gpm during September 2018. At the end of the month, the GW-11 Pond volume was at 34.8 million gallons (MG), which would allow 19.2 days of available additional storage in the event of an emergency FBR plant shutdown with continued well field pumping. The water volume stored in the GW-11 Pond remained the same from the end of August 2018. Figure 1 in this report depicts the actual GW-11 pond volumes and additional storage available.

The influent perchlorate concentration to the IX system averaged 0.75 mg/L for the month. The influent perchlorate concentration to the FBR plant averaged 117 mg/L for the month, with a maximum concentration of 130 mg/L. In comparison, the influent perchlorate concentration to the FBRs for the month of August 2018 averaged 106 mg/l, with a maximum concentration of 110 mg/l. Fluctuations in the influent perchlorate concentrations are due to the changes in the AP-5 treatment feed rate and not a result of groundwater changes.

### Enhanced Operational Metrics

Tables 1 and 2 provide a summary of the current GWETS operational metrics data for flow rates, perchlorate and chromium concentrations, and mass removal. These tables also include data associated with the AP-5 decant liquids. Figure 2 graphically presents historical perchlorate and chromium mass flux information. Attachment A provides a summary of the NPDES permit analytes with numerical discharge limits.

## Operational Issues

All routine plant repairs conducted by ETI were performed in accordance with the NERT Perchlorate Treatment System Operations Manual. The following is a list of operational issues and major repairs and/or equipment replaced during this reporting period.

### 1. GW-11

There were seven diversions into GW-11 for the purposes of maintaining the GW-11 elevation level. Below is a description of the events that occurred:

- Effluent Diversion to GW-11 occurred on September 2, 2018 at 11:33pm to 5:32am to maintain the GW-11 elevation level. Approximately 385,000 gallons of Effluent were diverted to GW-11.
- Effluent Diversion to GW-11 occurred on September 7, 2018 at 11:14pm to 5:15am to maintain the GW-11 elevation level. Approximately 360,000 gallons of Effluent were diverted to GW-11.
- Effluent Diversion to GW-11 occurred on September 11, 2018 at 12:58am to 5:01am to maintain the GW-11 elevation level. Approximately 261,000 gallons of Effluent were diverted to GW-11.
- Effluent Diversion to GW-11 occurred on September 15, 2018 at 11:17pm to 5:17am to maintain the GW-11 elevation level. Approximately 381,000 gallons of Effluent were diverted to GW-11.
- Effluent Diversion to GW-11 occurred on September 18, 2018 at 11:13pm to 4:40am to maintain the GW-11 elevation level. Approximately 335,000 gallons of Effluent were diverted to GW-11.
- Effluent Diversion to GW-11 occurred on September 23, 2018 at 11:16pm to 4:36am to maintain the GW-11 elevation level. Approximately 343,000 gallons of Effluent were diverted to GW-11.
- Effluent Diversion to GW-11 occurred on September 29, 2018 at 11:17pm to 5:13am to maintain the GW-11 elevation level. Approximately 383,000 gallons of Effluent were diverted to GW-11.

### 2. Biological Plant

Treatment of AP-5 water through the FBR Biological plant continued in the month of September maintaining a flow rate of 2.0 gpm throughout the month. This flow rate was necessary to maintain compliance with the reduced ammonia loading effluent limits for April through September specified in the NPDES permit.

There was one Influent diversion into GW-11 due to an electrical outage, one event that required an extraction well field to be taken offline for maintenance, and one event that required maintenance on an individual extraction well. Below is a description of the events that occurred:

#### Diversions Events

- Influent Diversion to GW-11 occurred on September 10, 2018 from 1:15pm to 1:49pm due to a temporary loss of power from the Colorado River Commission that also caused the Interceptor Well Field to go offline. Approximately 35,000 gallons of Influent were diverted to GW-11.
- Shutdown of the IWF as well as the GWTP occurred on September 5, 2018 from 8:25am to 10:40am due to maintenance activities at the GWTP. An evaluation of the existing piping and tanks were completed at this time.
- Shutdown of extraction well I-V beginning on September 28, 2018 at 1:50pm until 3:15pm due to maintenance (replacing the pump motor).

### 3. Spills

There were no reportable spills for the month of September.

### 4. Maintenance

- Major maintenance performed by ETI in the month included:
  - I. Installed a new bulkhead valve on the caustic tank.
  - II. Installed a new caustic feed pump.
  - III. Assembled a new cage at LS-1 to improve pig retrieval.
  - IV. Installed a new ½ hp motor on extraction well I-V.
  - V. New sight glasses were installed on the discharge of the media return pumps.
  - VI. New airlines were installed on the FBR A skid.
  - VII. New sunshades were installed on the bed height pumps for FBR 2 and FBR A.
  - VIII. A small leak on the effluent line at the EQ area (inside containment) was sealed off.
  - IX. New concrete was poured around the effluent line inside containment.
  - X. A new airlift was assembled and installed on #1 airlift for the sand filter.
  - XI. A new connection was made to the phosphoric acid tote.
  - XII. Permanent power was run to the new flowmeter for extraction well ART-4.
  - XIII. New electrical outlets were installed at the GWTP.
  - XIV. During the controlled shutdown of the GWTP, new suction piping was installed on the influent pumps and the clarifier tank was drained of all solids.
  - XV. The spring was repaired on the front gate to control the rollers for the drive motor.
  
- Preventative Maintenance completed or being performed by ETI in the month included:
  - I. Completed a full GWTP inspection during the controlled shutdown.
  - II. Performed the PM of the east turbine at LS-2 including a visual inspection, oil change, temperature and vibration testing.
  - III. Vibration tests were completed on the backstage recycle pumps and motors.
  - IV. All pH and ORP probes were calibrated.
  - V. Worked with Bishop Air on completing the PM's on the air conditioner units at the lift stations including cleaning of the filters, inspection of the duct work, and a check of all electrical connections.
  - VI. Performed a full inspection on the new utility carts.

### GWETS Upgrades and Facility Projects

Alumina Chlorohydrate (ACH) Pilot Study - Following NDEP approval of the Revised Operations and Maintenance Manual ETI will begin the transition to Alumina Chlorohydrate.

Treatment System Extension – After initial meetings between the Trust, TIMET, ETI, and NDEP, the system size / flow capacity has been agreed to at 200 gpm. ETI is now proceeding to produce the process engineering including Process Flow, Mass Balance and P&IDs for initial submission to NDEP. ETI anticipates they will be ready for submission early November 2018. ETI has also coordinated with Tetra Tech, who will install the system including the interconnection between TIMET and the Trust. Preliminary layouts and other installation information was given to Tetra Tech. ETI also supplied Tetra Tech with the required information for the air permit analysis required for this addition.

### **Equipment Availability Tracking**

ETI operators continue to update the equipment tracking form on a weekly basis or whenever there is a change in the status of key equipment. During regular site visits, Tetra Tech field personnel verify the entries on the form, including both the operating status and confirmation of the inventory of required shelf spares. The equipment tracking form is included as Attachment B.

### **GWETS Staffing**

ETI continues with 24-hour staffing of the GWETS at the direction of the Trust and continues to follow the security procedures in the Standard Operating Procedures (SOP).

# Tables

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*Operational Metrics*

<b>Nevada Environmental Response Trust I Groundwater Extraction and Treatment System I Monthly Stakeholder Metrics</b>				
<b>Location ID</b>	<b>Average Flow Rate (gpm)</b>	<b>Perchlorate (mg/L)<sup>6 7</sup></b>	<b>Chromium (TR) (mg/L)<sup>6 7</sup></b>	<b>Chromium(VI) (mg/L)<sup>6 7</sup></b>
SWF Total Extraction <sup>1</sup>	740 <sup>5</sup>	9.0	0.0021	0.0018
AWF Total Extraction <sup>1</sup>	475 <sup>5</sup>	74	0.16	0.17
IWF Total Extraction <sup>1</sup>	55 <sup>5</sup>	571	8.0	7.7
AP Area Total Extraction <sup>1</sup>	8.4 <sup>5</sup>	889	0.072	0.069
GWTP Effluent <sup>2</sup>	58	638	0.22	0.000066
GW-11 Influent <sup>1</sup>	0.16	58	0.073	0.039
FBR Influent <sup>2 3</sup>	1,030	117	0.026	0.021
T-205 Effluent (AP-5 Wash Water) <sup>3 4</sup>	2.0	14,389	NA	NA

## Notes:

TR = Total Recoverable; NA = Not Analyzed; ND = Not detectable above laboratory method detection limit (Chromium (VI) = 0.25 ug/L).

1: Perchlorate and chromium TR sampled monthly, values reported from TestAmerica.

2: Perchlorate, chromium TR, and chromium (VI) sampled weekly, values reported from TestAmerica.

3: AP-5 Wash Water perchlorate data is also included in the GW-11 Effluent/ FBR Influent totals.

4: Flow weighted average concentration based on mass flow meter readings.

5: Sum of daily average flow for individual wells.

6: All concentrations reported are monthly flow weighted averages.

7: ND analytical values are treated as zero values in the flow weighted average calculations.

<b>Nevada Environmental Response Trust I Groundwater Extraction and Treatment System I Monthly Stakeholder Metrics</b>			
<b>Location ID</b>	<b>Perchlorate (lbs/month)<sup>3</sup></b>	<b>Chromium (TR) (lbs/month)<sup>3</sup></b>	<b>Chromium (VI) (lbs/month)<sup>3</sup></b>
SWF Total Extraction	2,401	0.56	0.49
AWF Total Extraction	12,722	28	29
IWF Total Extraction	11,321	160	153
AP Area Total Extraction	2,696	0.22	0.21
GWTP Effluent	13,354	4.6	0.00
GW-11 Influent	3.4	0.00	0.00
FBR Influent <sup>1</sup>	43,497	9.7	7.8
T-205 Effluent (AP-5 Wash Water) <sup>1 2</sup>	10,388	NA	NA

Notes:

TR = Total Recoverable; NA = Not Analyzed.

1: AP-5 Wash Water perchlorate data is also included in the GW-11 Effluent/ FBR Influent totals.

2: AP-5 Wash Water concentrations and mass flux are estimates based on mass flow meter readings.

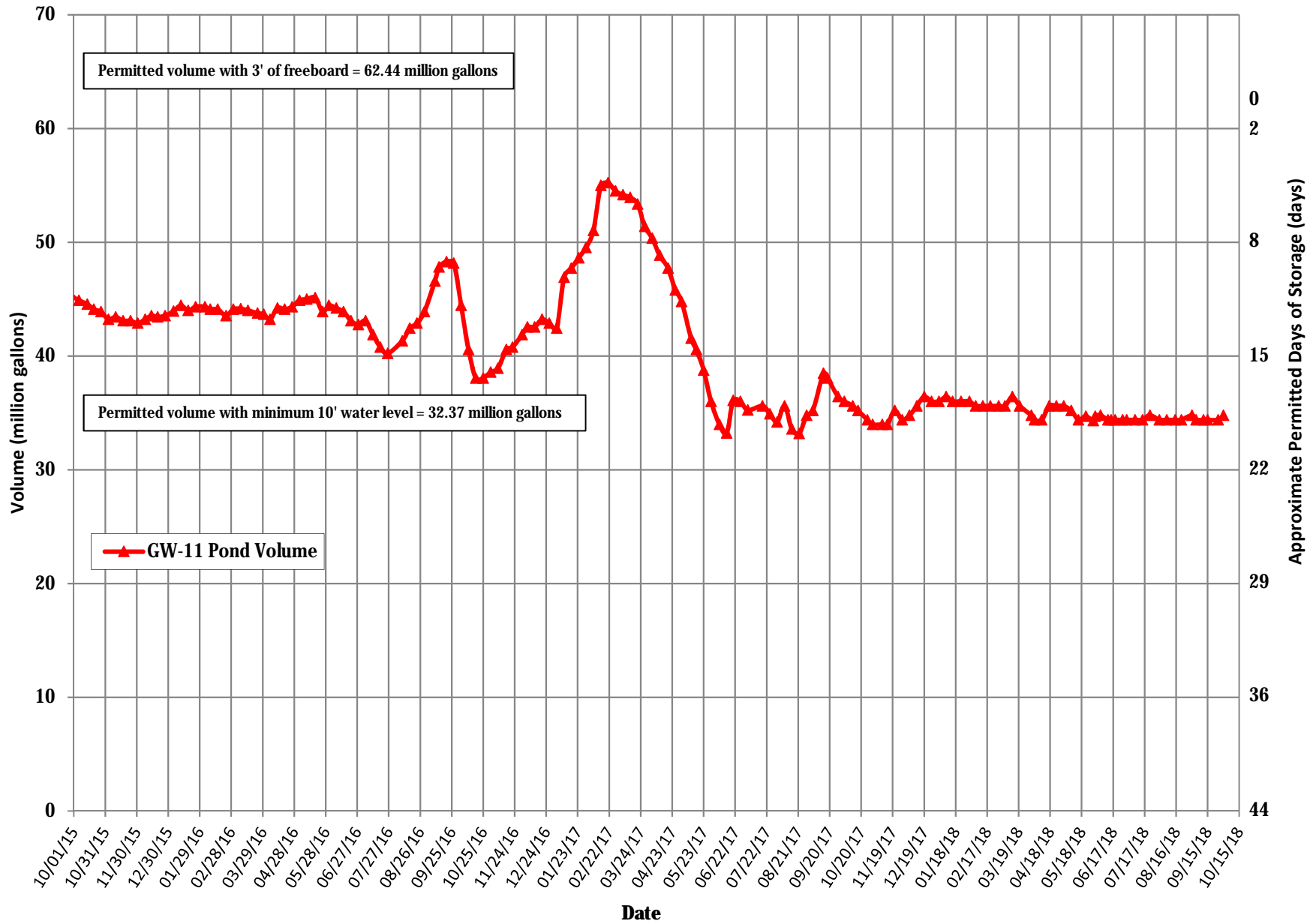
3: Total mass extracted is calculated from flow weighted average concentration and average flow (see Table 1).

# Figures

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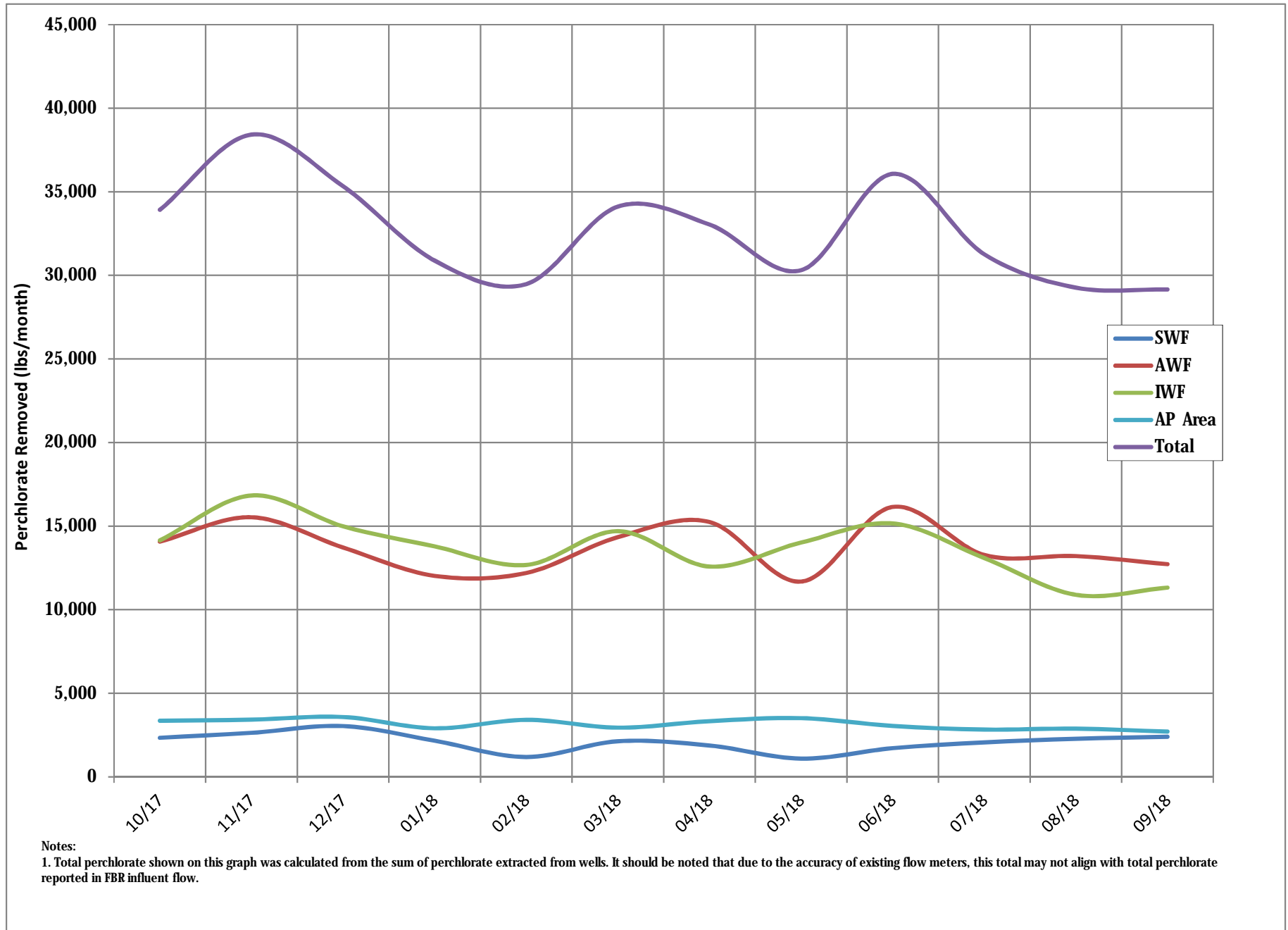
*Operational Metrics*





Note: Measurements switched from manual to transducer on 06/20/17. The pond volume fluctuations between 05/30 and 06/20 reflect the decreasing manual measurement accuracy at lower pond levels.

Figure 2 - Historical Perchlorate Mass Removed From Environment



# Attachment A

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*NPDES Tracking Sheet (Prepared by ENVIRON)*



# Attachment B

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*Equipment Tracking Form*

Sub-System	P&ID	Description	Status <sup>1</sup>	Checked	Criticality <sup>2</sup>	Notes
<b>Main Plant Equipment</b>						
<b>1</b>		<b>Seep Wells and Lift Station 1</b>				
1.01		Seep Well Field, 9 wells	Running			
1.02		Lift Station 1 Lift Pump A	Running			
1.03		Lift Station 1 Lift Pump B	Standby			
1.04		Area in and around Lift Station 1	Running		4	Assembled a cage to retrieve the pig after it is launched
<b>2</b>		<b>Athens Road Wells and Lift Station 3</b>				
2.01		Athens Road Well Field, 9 wells	Running		3	Permanent power was run to the new ART-4 flowmeter
2.02		Lift Station 3 Lift Pump A	Standby			
2.03		Lift Station 3 Lift Pump B	Running			
2.04		Area in and around Lift Station 3	Running			
<b>3</b>		<b>Lift Station 2 and Transmission Pipelines</b>				
3.01		Influent Pipeline	In operation			
3.02		Effluent Pipeline	Running		2	A leak was sealed on the eff line inside containment at the EQ area. The line is isolated.
3.03		Lift Station 2 Lift Pump A	Running		2	The pump was taken offline temporarily to repair the connections on the discharge swing check valve.
3.04		Lift Station 2 Lift Pump B	Standby			
3.05		Area in and around Lift Station 2	Running			
<b>4</b>		<b>Interceptor Wells and Cr Treatment Plant</b>				
4.01		IWF Well Field, 30 wells	Running		2	A new 1/2 hp motor was installed on I-V.
4.02		Ferrous Sulfate Feed System	Running			
4.03		Polymer Feed System	Running			
4.04		Clarifier	In operation			
4.05		Filter Press	Running			
4.06		GWTP Effluent Tank	In operation			
4.07		Interceptor Booster Pump A	Running		1	During the plant down day the flex coupling was replaced and the solids were removed from the pump casing.
4.08		Interceptor Booster Pump B	Standby			
4.09		Area In And Around GWTP	Running		1	During a scheduled down day the clarifier was emptied of solids, the degassifier was cleaned and the piping was replaced on the suction side of the influent pumps. New outlets were installed around the plant.
<b>5</b>		<b>Equalization Area and GW-11 Pond</b>				
5.01	PID10A	Pond GW-11	In operation			
5.02	PID10A	Pond Water Pump - P101A	Running			

Status Codes

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Criticality Codes

1= Critical - Cannot continue with operation until repairs made  
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Sub-System	P&ID	Description	Status <sup>1</sup>	Checked	Criticality <sup>2</sup>	Notes
5.03	PID10A	Pond Water Pump - P101B	Standby			
5.04	PID10A	Equalization Tanks	In operation			
5.05	PID10A	Area in and Around EQ	In operation		4	New concrete was poured around the containment of the effluent pipe.
5.06	PID10A	Raw Water Feed Pump - P102A				
5.07	PID10A	Raw Water Feed Pump - P102B				
5.08	PID10A	F-101 Filters	Running			
5.09	PID10B	Carbon Absorber - LGAC 201A	Running			
5.10	PID10B	Carbon Absorber - LGAC 201B	Running			
5.11	PID10B	Carbon Absorber - LGAC 201C	Running			
<b>6</b>		<b>First Stage FBRs A, 1 &amp; 2</b>				
6.01	PID14	FBR A			1	The skid was taken offline to run new airlines
6.02	PID14	Separator Tank - 1401			4	A new sunshade was installed over the bed height pump
6.03	PID14	Media Return Pump - P 1401			2	New sight glass was installed on the discharge of the pump
6.04	PID14	P1401A				
6.05	PID01A	P1401B				
6.06	PID01A	FBR 1	Running		2	A new pH probe and meter was installed on the ORP line.
6.07	PID02A	FBR 2	Running			
6.08	PID01A	First Stage Separator Tank - T2011	Running			
6.09	PID01A	Media Return Pump - P2011	Running		2	New sight glass was installed
6.10	PID01A	First Stage FBR Pump - P1011	Standby			
6.11	PID01A	First Stage FBR Pump - P1012	Running			
6.12	PID01A	First Stage FRB Pump - P101A	Running			
6.13	PID07A	FBR A pH Feed Pump - P71A	Off			
6.14	PID07A	FBR 1 pH Feed Pump - P711	Off			
6.15	PID07A	FBR 2 pH Feed Pump - P712	Off			
6.16	PID07A	FBR A Nutrient (Urea) Feed Pump - P72A	Off			
6.17	PID07A	FBR 1 Nutrient (Urea) Feed Pump - P721	Off			
6.18	PID07A	FBR 2 Nutrient (Urea) Feed Pump - P722	Off			
6.19	PID15	FBR A Nutrient (Phos Acid) Feed Pump - P1520A	Running			
6.20	PID15	FBR 1 Nutrient (Phos Acid) Feed Pump - P1521	Running			
6.21	PID15	FBR 2 Nutrient (Phos Acid) Feed Pump - P1522	Running			
6.22	PID07B	FBR A Electron Donor Assembly Pump - P73A	Running			
6.23	PID07B	FBR 1 Electron Donor Assembly Pump - P731	Running			
6.24	PID07B	FBR 2 Electron Donor Assembly Pump - P732	Running			
<b>7</b>		<b>First Stage FBRs 3 &amp; 4</b>				
7.01	PID01B	FBR 3	Running			

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Sub-System	P&ID	Description	Status <sup>1</sup>	Checked	Criticality <sup>2</sup>	Notes
7.02	PID01B	FBR 4	Running			
7.03	PID02B	First Stage Separator Tank - T2012	Running			
7.04	PID01B	Media Return Pump - P2012	Running		2	A new sight glass was installed on the discharge line
7.05	PID01B	First Stage FBR Pump - P1013	Running			
7.06	PID01B	First Stage FRB Pump - P1014	Running			
7.07	PID01B	First Stage FBR Pump - P102A	Running			
7.08	PID07A	FBR 3 pH Feed Pump - P713	Running			
7.09	PID07A	FBR 4 pH Feed Pump - P714	Running			
7.10	PID07A	FBR 3 Nutrient (Urea) Feed Pump - P723				
7.11	PID07A	FBR 4 Nutrient (Urea) Feed Pump - P 724	Off			
7.12	PID15	FBR 3 Nutrient (Phos Acid) Feed Pump - P1523	Running			
7.13	PID15	FBR 4 Nutrient (Phos Acid) Feed Pump - P1524	Running			
7.14	PID07B	FBR 3 Electron Donor Assembly Pump - P733	Running			
7.15	PID07B	FBR 4 Electron Donor Assembly Pump - P734	Running			
<b>8</b>		<b>Second Stage FBRs 5 &amp; 6</b>				
8.01	PID03A	FBR 5	Running			
8.02	PID03A	FBR 6	Running			
8.03	PID03C	Second Stage Separator Tank - T3011	Running			
8.04	PID03A	Media Return Pump - P3011	Running		2	A new sight glass was installed on the discharge line
8.05	PID03A	Second Stage FBR Pump - P3015	Running			
8.06	PID03A	Second Stage FBR Pump - P3016	Standby			
8.07	PID03A	Second Stage FBR Pump - P301A	Running			
8.08	PID07A	FBR 5 pH Feed Pump - P715	Off			
8.09	PID07A	FBR 6 pH Feed Pump - P716	Off			
8.1	PID07A	FBR 5 Nutrient (Urea) Feed Pump - P725	Off			
8.11	PID07A	FBR 6 Nutrient (Urea) Feed Pump - P726	Off			
8.12	PID07B	FBR 5 Electron Donor Assembly Pump - P735	Running			
8.13	PID07B	FBR 6 Electron Donor Assembly Pump - P736	Running			
<b>9</b>		<b>Second Stage FBRs 7 &amp; 8</b>				
9.01	PID03B	FBR 7	Running			
9.02	PID03B	FBR 8	Running			
9.03	PID03D	Second Stage Separator Tank - T3012	Running			
9.04	PID03B	Media Return Pump - P3012	Running		2	A new sight glass was installed on the discharge line
9.05	PID03B	Second Stage FBR Pump - P3017	Running			
9.06	PID03B	Second Stage FBR Pump - P3018	Running			
9.07	PID03B	Second Stage FBR Pump - P302A	Running			
9.08	PID07A	FBR 7 pH Feed Pump - P717	Off			

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Sub-System	P&ID	Description	Status <sup>1</sup>	Checked	Criticality <sup>2</sup>	Notes
9.09	PID07A	FBR 8 pH Feed Pump - P718	Off			
9.10	PID07A	FBR 7 Nutrient (Urea) Feed Pump - P727	Off			
9.11	PID07A	FBR 8 Nutrient (Urea) Feed Pump - P728	Off			
9.12	PID07B	FBR 7 Electron Donor Assembly Pump - P737	Running			
9.13	PID07B	FBR 8 Electron Donor Assembly Pump - P738	Running			
<b>10</b>		<b>Aeration and DAF System</b>				
10.01	PID04	Aeration Tank	In operation			
10.02	PID04	Aeration Blower - B401	Running			
10.03	PID04	Bio filter	In operation			
10.04	PID04	Nutrient Solution	Running			
10.05	PID04	Bio filter Sump				
10.06	PID04	Nutrient Pump - P401	Running			
10.07	PID04	Bio filter Sump Pump - P402A	Standby			
10.09	PID04	Bio filter Blower	Running			
10.10	PID05	DAF Pressure Tanks	In operation			
10.11	PID05	DAF Vessel - D501	Running			
10.12	PID05	DAF Pressure Pump - P501	Running			
10.13	PID05	DAF Float Pump - P502	Running			
10.14	PID05	DAF Vessel - D551	Running			
10.15	PID05	DAF Pressure Pump - P551	Running			
10.16	PID05	DAF Float Pump - P552	Running			
10.17	PID05	Screw Conveyer Drive	Standby			
10.18	PID05	Skimmer Drive	Running			
<b>11</b>		<b>Pumping System (Old Effluent)</b>				
11.01	PID06	Effluent Tank 601	In operation			
11.02	PID06	Effluent Pump - P601	Running			
11.03	PID06	Effluent Pump - P602	Standby			
<b>12</b>		<b>Sand Filter System</b>				
12.01	PID17	Sand Filter			3	A new airlift was installed on the sand filter
12.02	PID17	Filter Reject Tank	In operation			
12.03	PID17	Filter Reject Pump - P1701A	Standby			
12.04	PID17	Filter Reject Pump - P1701B	Running			
<b>13</b>		<b>Effluent Tank and Pumping</b>				
13.01	PID10C	UV Effluent Tank	Running			
13.02	PID10C	Effluent Booster Pump - P1302A	Running			
13.03	PID10C	Effluent Booster Pump - P1302B	Standby			
13.04	PID10C	Area Around Effluent and North D-1	Running			

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Sub-System	P&ID	Description	Status <sup>1</sup>	Checked	Criticality <sup>2</sup>	Notes
<b>14</b>		<b>Solids Collection and Pressing System</b>				
14.01	PID16	Sludge Storage Tank	In operation			
14.02	PID16	Solids Storage Effluent Pump - P1601	Running			
14.03	PID16	Solids Cond. Tank	In operation			
14.04	PID09	Sludge Mixer	Running			
14.05	PID09	Filter Press Pump - P901	Running			
14.06	PID09	Filter Press Pump - P902				
14.07	PID09	West Press	Standby			
14.08	PID09	East Press	Running			
14.09	PID09	Filtrate Tank	In operation			
14.10	PID09	Filtrate Tank Effluent (recycle) Pump - P903	Running			
		<b>Chemical Systems</b>				
<b>15</b>		<b>Electron Donor System</b>				
15.01	PID07B	Electron Donor Tank	In operation			
15.02	PID07B	Booster Pump P739A	Running			
15.03	PID07B	Booster Pump P739B	Standby			
17	PID07C	Micro Nutrient System	In operation			
18	PID07C	Hydrogen Peroxide System	In operation			
19	PID07C	De-Foam System	In operation			
20	PID15	Nutrient (Phosphoric Acid) System (Tank only - pumps included in FBRs)	In operation			
21	PID07A	Nutrient (Urea) System (Tank only - pumps included in FBRs)	In operation			
22	PID07A	pH System (Tank and effluent pH feed pump only - other pumps included in FBRs)	In operation		2	A new feed pump was installed
23	PID07C	Ferric Chloride System	In operation			
24	PID07B	Polymer Systems - DAF	In operation			
25	PID09	Polymer System - Solids Dewatering (2 tanks, 2 centrifugal pumps, mixer, volumetric feeder)	In operation			
		<b>Utility Systems</b>				
<b>26</b>		<b>Compressed Air System</b>				
26.01	PID08	West Compressor	Running			
26.02	PID08	East Compressor	Running			
26.03	PID08	O2 Compressor	Running			
26.04	PID08	Compressed Air Receiver Tank	In operation			
26.05	PID08	Air Dryer	Running			
26.06	PID08	Oil Removal Filter	In operation			

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Sub-System	P&ID	Description	Status <sup>1</sup>	Checked	Criticality <sup>2</sup>	Notes
26.07	PID08	Particulate Filter	In operation			
27	PID16	Oxygen System	In operation			
28		GWETS Plant Controls/ Siemens Controls	In operation			
29		Well Control System/ Allen Bradley Controls	In operation			
30		MCC FBR Pad	In operation			
31		MCC in D-1	In operation			
32		MCC in EQ area	In operation			
<b>Miscellaneous Systems</b>						
33		Operations Office/Network	In operation			
34		Laboratory Analyzers	In operation			
35		Security Systems	In operation			
<b>Shelf Spares</b>						
		Media Return Pump Rebuild Kit	In stock			
		pH Feed Pump	In stock			
		Nutrient Feed Pump	In stock			
		Electron Donor Feed Pump	In stock			
		Phosphoric Acid Feed Pump	In stock			Spares are on the shelf
		Interceptor Well Pumps (4 each)	In stock			Pumps and motors are on order
		Seep Well Pump (1 each, same as Athens so total of 2)	In stock			
		Athens Road Well Pump (1 each, same as Seep so total of 2)	In stock			Spares are on the shelf.

Status Codes

Running - Unit is in operation  
 Standby - Spare or duplicate, not currently in operation  
 Maintenance - Out of service for maintenance  
 Off - Not currently needed for use, but can be placed in service

Criticality Codes

1= Critical - Cannot continue with operation until repairs made  
 2= Important - Can still operate safely and in compliance with permits, but risks are increased  
 3 = Moderate - Work needs to be performed, but plant can still operate with redundancy that is in place  
 4 = Low - Minor repairs that in no way alter the performance of the plant