

**2015 WATER QUALITY MONITORING
PROMPTON RESERVOIR
PROMPTON, PENNSYLVANIA**



**U.S. Army Corps of Engineers
Philadelphia District
Environmental Resources Branch**

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**2015 Water Quality Monitoring
Prompton Reservoir
Prompton, Pennsylvania**

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1.0 INTRODUCTION

1.1 PURPOSE OF THE MONITORING PROGRAM

The U.S. Army Corps of Engineers (USACE) manages Prompton Reservoir located in northeastern Pennsylvania within the Delaware River Basin. Prompton Reservoir provides flood control to downstream communities on the Lackawaxen River. Additionally, the reservoir provides important habitat for fish, waterfowl, and other wildlife, and recreational opportunities through fishing and boating. Because of the broad range of uses and demands that Prompton Reservoir serves, the USACE monitors water quality to compare with state water quality standards and to diagnose other problems that commonly effect reservoir health such as nutrient enrichment and toxic loadings. This report summarizes the results of monthly water quality monitoring at Prompton Reservoir for June to September 2015.

1.2 DESCRIPTION OF PROMPTON RESERVOIR

Prompton Reservoir was designed to provide flood control to downstream communities along the Lackawaxen River. A second authorized project purpose is recreation. The reservoir is located about 3 miles northwest of Honesdale, Pennsylvania, and dams a drainage area of 59.7 square miles. The primary surface water input to Prompton Reservoir originates from the West Branch of the Lackawaxen River. The reservoir is approximately 3 miles long and is about 30 feet deep at the face of the dam near the township of Prompton, Pennsylvania.

1.3 ELEMENTS OF THE STUDY

The USACE, Philadelphia District, has been monitoring water quality of Prompton Reservoir since 1975. Over this time, the yearly monitoring designs have evolved to address new concerns such as health of public drinking water and contamination of sediments. The 2015 monitoring program follows that in most recent years and includes the following major elements:

- Monthly water quality monitoring of reservoir and tributaries - to evaluate compliance with Pennsylvania state water quality standards and potential public health concerns; and
- Monthly profile samples for temperature, dissolved oxygen, chlorophyll, pH, turbidity, and conductivity at all stations in the reservoir and watershed.

2.0 METHODS

2.1 PHYSICAL STRATIFICATION MONITORING

Physical stratification monitoring of the water column at Prompton Reservoir was conducted five times between 03 June and 01 September 2015 (Table 2-1). Physical stratification parameters included temperature, dissolved oxygen (DO), pH, turbidity, and conductivity. Monitoring was conducted at four fixed stations located throughout the Prompton Reservoir watershed (Fig. 2-1). Surface water quality was monitored upstream of the lake at station PR-1S and downstream of the dam at station PR-4S (Fig. 2-1). Stations within the reservoir, PR-2 and PR-3, were monitored at 5-foot intervals from the surface to the bottom. All water quality parameters were measured with a calibrated YSI 6600 V2-4 water quality meter.

The results of stratification monitoring were compared to water quality standards authorized by the Pennsylvania Department of Environmental Protection (PADEP: Chapter 93 Water Quality Standards, 2000), where applicable. The water quality standard for DO is a minimum concentration of 5 mg/L and that for pH is an acceptable range from 6 to 9. All of the water quality data collected during physical stratification monitoring is summarized in Appendix A.

2.2 WATER COLUMN CHEMISTRY MONITORING

Water column chemistry monitoring of the water column at Prompton Reservoir was conducted five times between 03 June and 01 September 2015 (Table 2-1). Water samples were collected at four fixed stations within the reservoir watershed (Fig. 2-1). Surface water samples were collected at stations upstream (PR-1S) and downstream (PR-4S) of the reservoir. Surface, middle, and bottom water samples were collected at main reservoir body stations (PR-2 and PR-3). Surface water samples were collected by opening the sample containers approximately 1 foot below the water's surface. Middle and bottom water samples were collected with a Van Dorn design horizontal water sampler.

Water samples from all depths were analyzed for ammonia (NH₃), nitrite (NO₂), nitrate (NO₃), total kjeldahl nitrogen (TKN), soluble phosphorus (DP), total phosphorus (TP), ortho-phosphate (PO₄), total dissolved solids (TDS), total suspended solids (TSS), biochemical oxygen demand (BOD), alkalinity (ALK) and total organic carbon (TOC). Table 2-2 summarizes the water quality parameters, laboratory methods and reporting detection limits, state water quality standards, and allowable maximum hold times for each during the 2015 monitoring period. Laboratory reporting sheet are provided in Appendix B.

Table 2-1. Prompton Reservoir water quality monitoring schedule for 2015				
Date of Sample Collection	Physical Stratification Monitoring (All Stations)	Water Column Chemistry Monitoring (All Stations)	Trophic State Determination (PR-3)	Coliform Bacteria Monitoring (All Surface Stations)
03 June	X	X	X	X
30 June	X	X	X	X
22 July	X	X	X	X
12 August	X	X	X	X
01 September	X	X	X	X

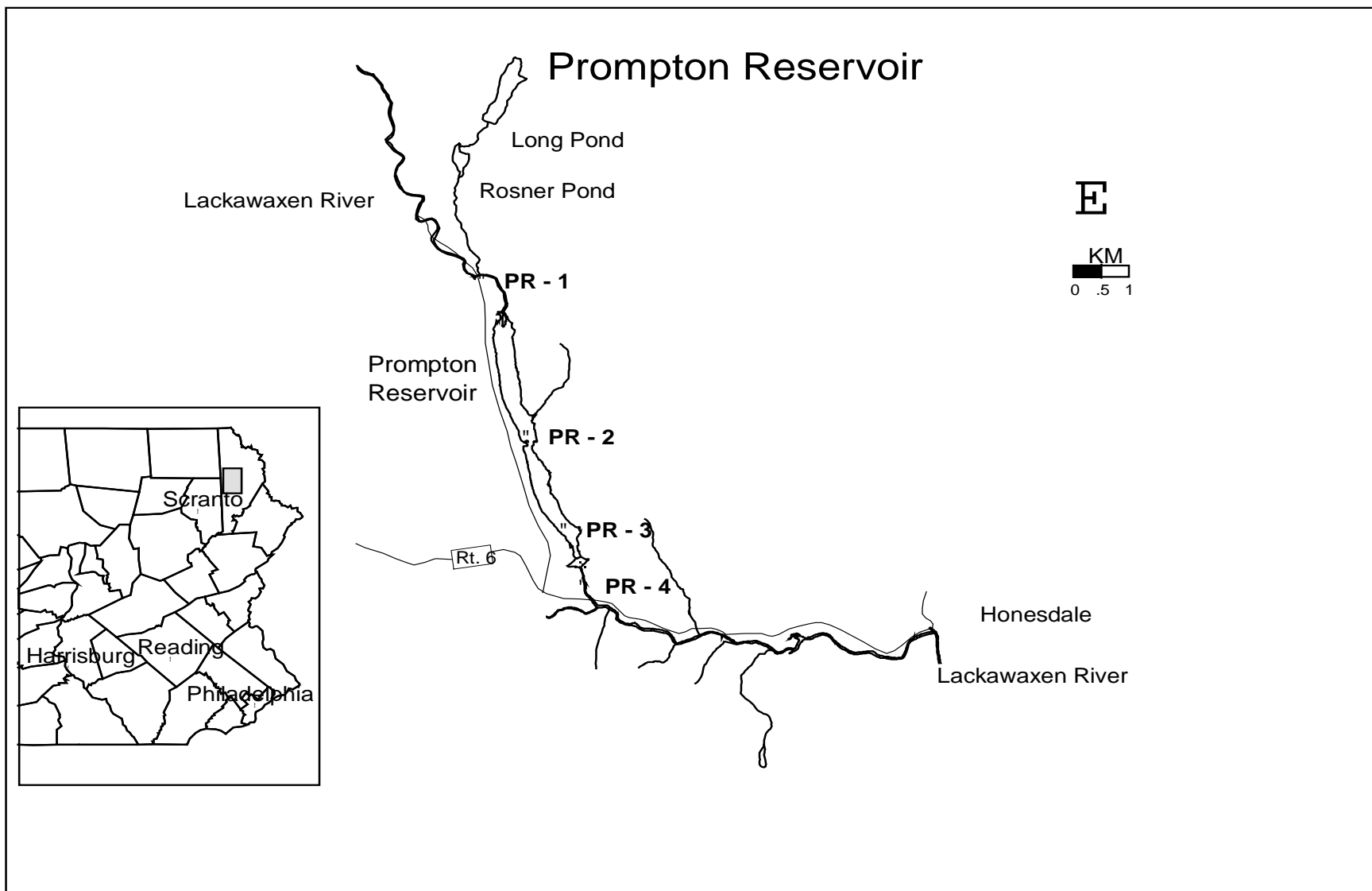


Figure 2-1. Location map for Prompton Reservoir and water quality monitoring stations in 2015.

Table 2-2. Water quality test methods, detection limits, state regulatory criteria, and sample holding times for water quality parameters monitored at Prompton Reservoir in 2015.

Parameter	(2) Method	Reporting Limit	PADEP Surface Water Quality Criteria	Allowable Hold Times (Days)
Total Alkalinity	SM-20 2320B	1.0 mg/L	Min. 20 mg/L CaCO ₃	14
Biochemical Oxygen Demand (BOD)	SM-20 5210B	2.0 mg/L	None	2
Total Phosphorus	SM-20 4500-PE	0.01 mg/L	None	28
Dissolved/Ortho- Phosphate	SM-20 4500-PE	0.01 mg/L	None	28
Soluble/Dissolved Phosphorus	SM-20 4500-PE	0.05 mg/L	None	28
(3) Total Organic Carbon (TOC)	SM-20 5310C	1.0 mg/L	None	14
(3) Total Inorganic Carbon (TIC)	SM-20 5310B	NA	None	NA
Total Carbon (TOC + TIC)	SM-20 5310B	NA	None	NA
(1) Chlorophyll a	YSI Probe	-----	None	
Total Kjeldahl Nitrogen	351.2 MCAWW	0.25 mg/L	None	28
Ammonia	D6919-03	0.05 mg/L	Temp. and pH dependent	28
Nitrate	MCAWW 353.2	0.05 mg/L	Maximum 10 mg/L (nitrate + nitrite)	28
Nitrite	MCAWW 353.2	0.05 mg/L		28
Total Dissolved Solids	SM-20 2540C	5 mg/L	Maximum 750 mg/L	7
Total Suspended Solids	SM-20 2540D	3.0 mg/L	None	7

(1) Chlorophyll a samples were recorded using a YSI 6600 with a chlorophyll sensor.

(2) Laboratory Methods Reference:

MCAWW- "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SM-20- "Standard Methods for the Examination of Water and Wastewater", 22nd Edition, 2012.

SW846- "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", 3rd. Edition, November 1986 and updates.

NA- Total Inorganic Carbon and Total Carbon were not sampled in 2015

2.3 TROPHIC STATE DETERMINATION

The trophic state of Prompton Reservoir was determined by methods outlined by Carlson (1977). In general, this method calculates trophic state indices (TSIs) independently for measures of total phosphorus, chlorophyll *a*, and secchi disk depth. Surface water measures of total phosphorus and chlorophyll *a* from chemistry monitoring were used independently in the calculations of monthly TSIs (Table-2-1). Secchi disk depth was measured monthly at station PR-3 and used for the TSI calculation. Trophic state determinations were made using criteria defined by Carlson (1977) and EPA (1983) and calculated only for Station PR-3 within the reservoir.

2.4 RESERVOIR BACTERIA MONITORING

Monitoring for coliform bacteria contaminants was conducted at Prompton Reservoir five times between 03 June and 01 September 2015. Surface water samples were collected in the same manner as for chemical parameter samples, and analyzed for total coliform and fecal coliform contamination. Table 2-3 presents the test methods, detection limits, PADEP standards, and sample holding times for the bacteria parameters monitored at Prompton Reservoir in 2015. The bacteria analytical method was based on a membrane filtration technique. All of the samples were analyzed within their maximum allowable hold times.

Monthly coliform bacteria counts were compared to the PADEP single sample and swimming beach water quality standard for bacteria. The multiple beach sample standards is defined as a maximum geometric mean of 200 colonies/100-ml based on five samples collected on different days within a 30-day period. Application of this standard is not necessary at Prompton reservoir because swimming and other human/water contact recreation is prohibited in the reservoir. However, it is used in evaluating the bacteria results.

Table 2-3. Water quality test methods, detection limits, PADEP standards, and sample holding times for bacteria parameters monitored at Prompton Reservoir in 2015

Parameter	Total coliform/E-Coli	Fecal coliform
Test method	SM 9223B	SM9222D
Min. Detection limit	1 clns/100mls	2 clns/100-mls
PADEP standard	None	Geometric Mean < 200 clns/100-mls (application of this standard is conservative because swimming is not permitted in the reservoir)
Maximum allowable holding time	30 hours	30 hours
Achieved holding time	<30 hours	<30 hours

3.0 RESULTS AND DISCUSSION

3.1 STRATIFICATION MONITORING

The following sections summarize the results of water quality monitoring for physical and chemical parameters: temperature, dissolved oxygen (DO), and pH. For each parameter, seasonal and spatial patterns of surface water quality measured throughout the watershed, and seasonal and depth related patterns of the lake water column based on measures from the deepest portion of the reservoir (station PR-3) are described. The discussion on stratification is focused on station PR-3 as water quality problems related to depth are generally most severe in deeper water habitats, thus the evaluation will be a conservative one. All of the physical/chemical parameters were measured with a calibrated YSI 6600 V2-4 water quality monitoring probe and are presented in Appendix A.

3.1.1 Temperature

Temperature is the primary influencing factor on water density, affects the solubility of many chemicals compounds, and can therefore influence the effect of pollutants on aquatic life. Increased temperatures elevate the metabolic oxygen demand, in conjunction with reduced oxygen solubility, and can impact many species. Vertical stratification patterns naturally occurring in lakes affect the distribution of dissolved and suspended compounds.

Temperature of the tributary and downstream surface waters of Prompton Reservoir generally followed a similar pattern during 2015. Maximum temperatures were recorded during the September time period (Fig. 3-1). Upstream temperatures at station PR-1S were cooler than downstream release temperatures with an average temperature of 17.92 °C and range from 15.37 °C in late June to 20.07 °C in September. Downstream temperatures at station PR-4S averaged 20.67 °C and ranged from 18.61 °C in early June to 24.23 °C in September. The warmer downstream temperatures likely result from thermally warmed waters being released from the reservoir. The surface water temperature (0-5 feet) of the reservoir was generally greater than the upstream and downstream stations as a result of in-lake thermal warming. Surface temperatures for the sampling period at reservoir body station PR-3 near the outlet works of the dam averaged 23.10 °C and ranged from 25.98 °C in July to 19.58 °C in late June.

Prompton Reservoir was stratified with respect to temperature in 2015 (Fig. 3-2). In early June, stratification was observed with surface temperatures (21.11 °C) approximately 10.85 °C warmer than the lower water column (10.26 °C). The onset of de-stratification was evident in early September. August and September sampling showed a noticeable cooling of surface waters.

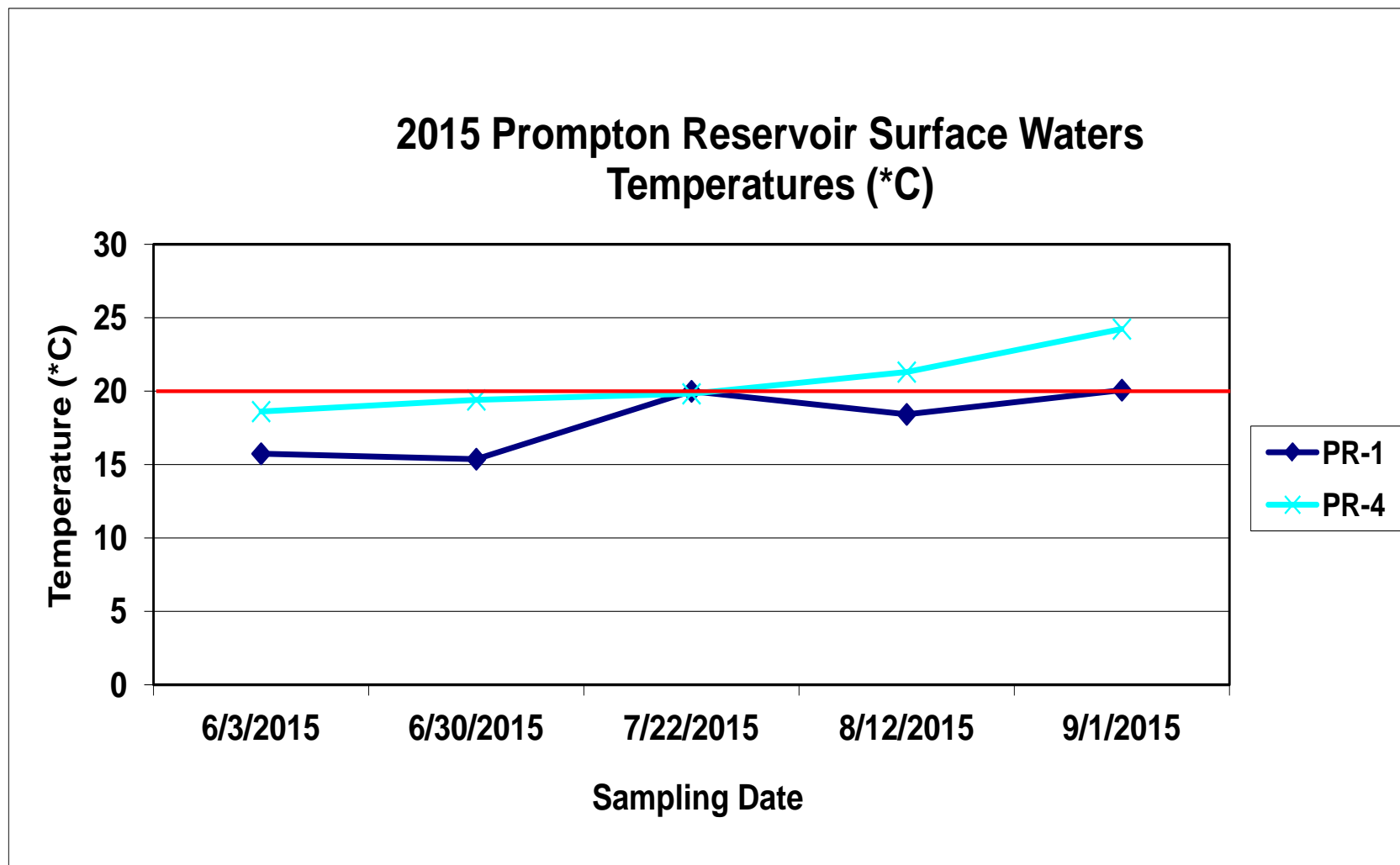


Figure 3-1. Temperature in surface waters of Prompton Reservoir during 2015. See Appendix A for a summary of plotted values.

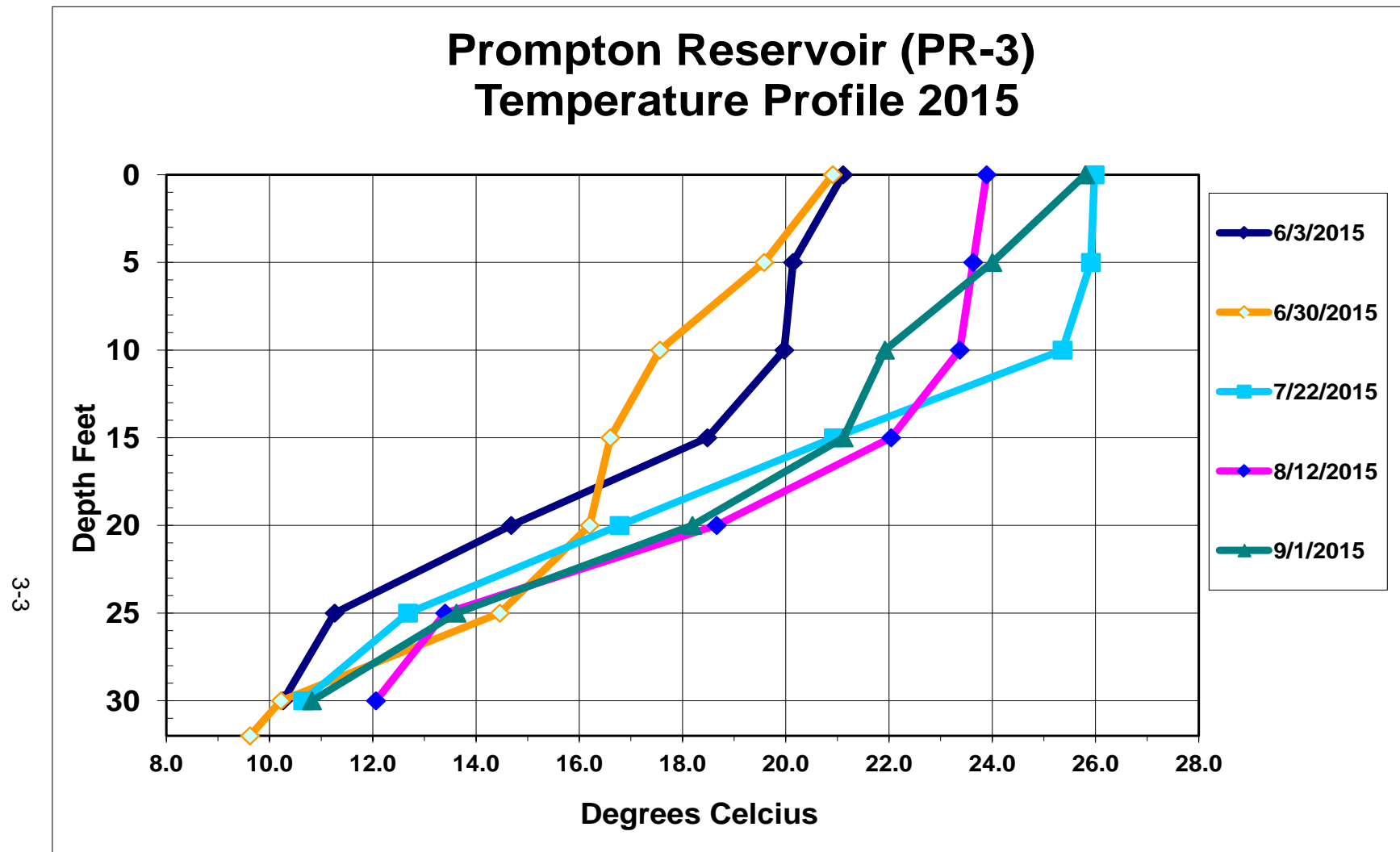


Figure 3-2. Temperature stratification of Prompton Reservoir during 2015 from water quality measured at station PR-3. See Appendix A for a summary of plotted values.

3.1.2 Dissolved Oxygen

Dissolved oxygen (DO) is the measure of the amount of DO in water. Typically, DO concentrations in surface waters are less than 10 mg/L. Dissolved Oxygen concentrations are subject to diurnal and seasonal fluctuations that can be influenced, in part, by temperature, river discharge, and photosynthetic activity. Dissolved Oxygen is essential to the respiratory metabolism of most aquatic organisms. It affects the availability and solubility of nutrients and subsequently the productivity of aquatic ecosystems. Low levels of oxygen can facilitate the release of nutrients from bottom sediments.

Dissolved oxygen (DO) in the inflow and outflow tributary surface waters of Prompton Reservoir generally followed a similar decreasing seasonal pattern throughout the 2015 sampling season (Fig. 3-3). Waters released from the reservoir and measured at station PR-4S had consistently lower dissolved oxygen levels than reservoir inflows at tributary station PR-1S. The greatest difference of DO readings was recorded on 12 August when inflow (PR-1S) DO was 8.65 mg/L and outflow (PR-4S) DO was 6.78 mg/L. Dissolved oxygen concentrations upstream (PR-1S) ranged from 9.63 mg/L in early June to 8.61 mg/L in September with an average seasonal reading of 9.06 mg/L. Dissolved oxygen concentrations downstream (PR-4S) ranged from 6.78 mg/L in August to 8.55 mg/L in early June with an average seasonal reading of 7.77 mg/L.

The stratification of Prompton Reservoir influenced the distribution of DO in the water column during 2015 (Fig. 3-4). In early June, the influence of stratification was apparent, as DO concentrations decreased from 9.10 mg/L at the surface to 0.51 mg/L at the bottom. From late June and continuing through September, the lower water column from approximately 15 feet to the bottom was severely depleted of oxygen with concentrations less than 5 mg/L. The release of waters downstream containing lower DO concentrations had some lowering effect on DO levels recorded at downstream station PR-1S. However, the re-aeration of the released waters through the dam conduit system elevated DO concentrations above state criteria.

DO concentrations in the water column of Prompton Reservoir were in compliance with PADEP water quality standards from early June through August. September sampling showed DO levels in the epilimnion less than the state criteria. The Pennsylvania water quality standard for DO is a minimum concentration of 5 mg/L in the epilimnion of stratified lakes. The health of aquatic ecosystems can be impaired by low DO concentrations in the water column. Hypoxia, or conditions of DO concentrations less than 2 mg/L, is generally accepted as the threshold at which the most severe effects on biota occur. In 2015, the lower water column of Prompton was affected by hypoxia. Hypoxic water was encountered in early June through September and commonly occupied the lower half of the water column from 20 feet to the bottom. Hypoxia in the lower water column is a symptom of eutrophication. Nutrients in the water column feed explosive algal growth at the surface photic zone. Dead and decaying algae sink to lower levels of the water column and during the process of decay; oxygen is removed from the water.

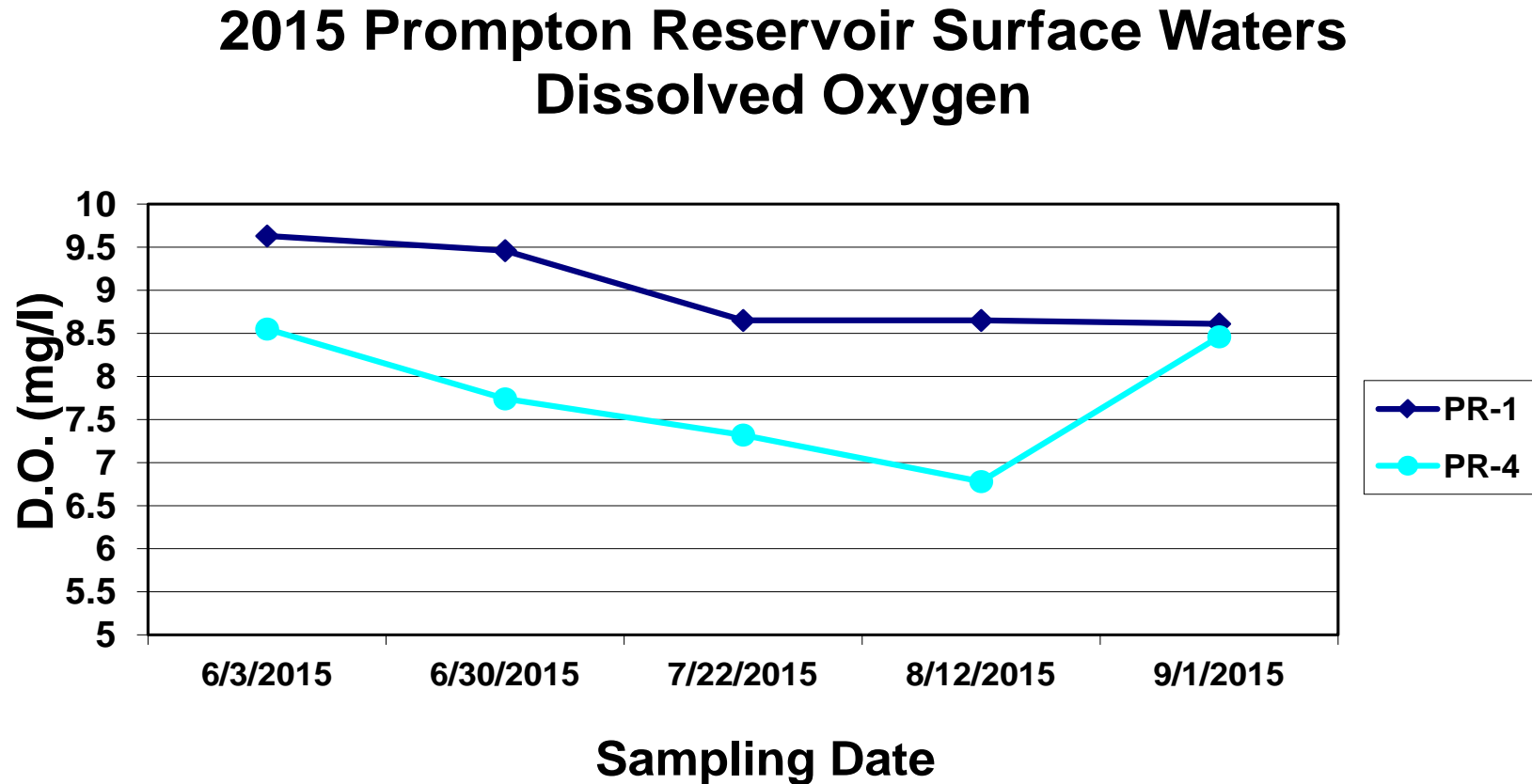


Figure 3-3. Dissolved oxygen in tributary surface waters of Prompton Reservoir during 2015. PADEP minimum DO standard is 5 mg/L. See Appendix A for a summary of plotted values.

3-6

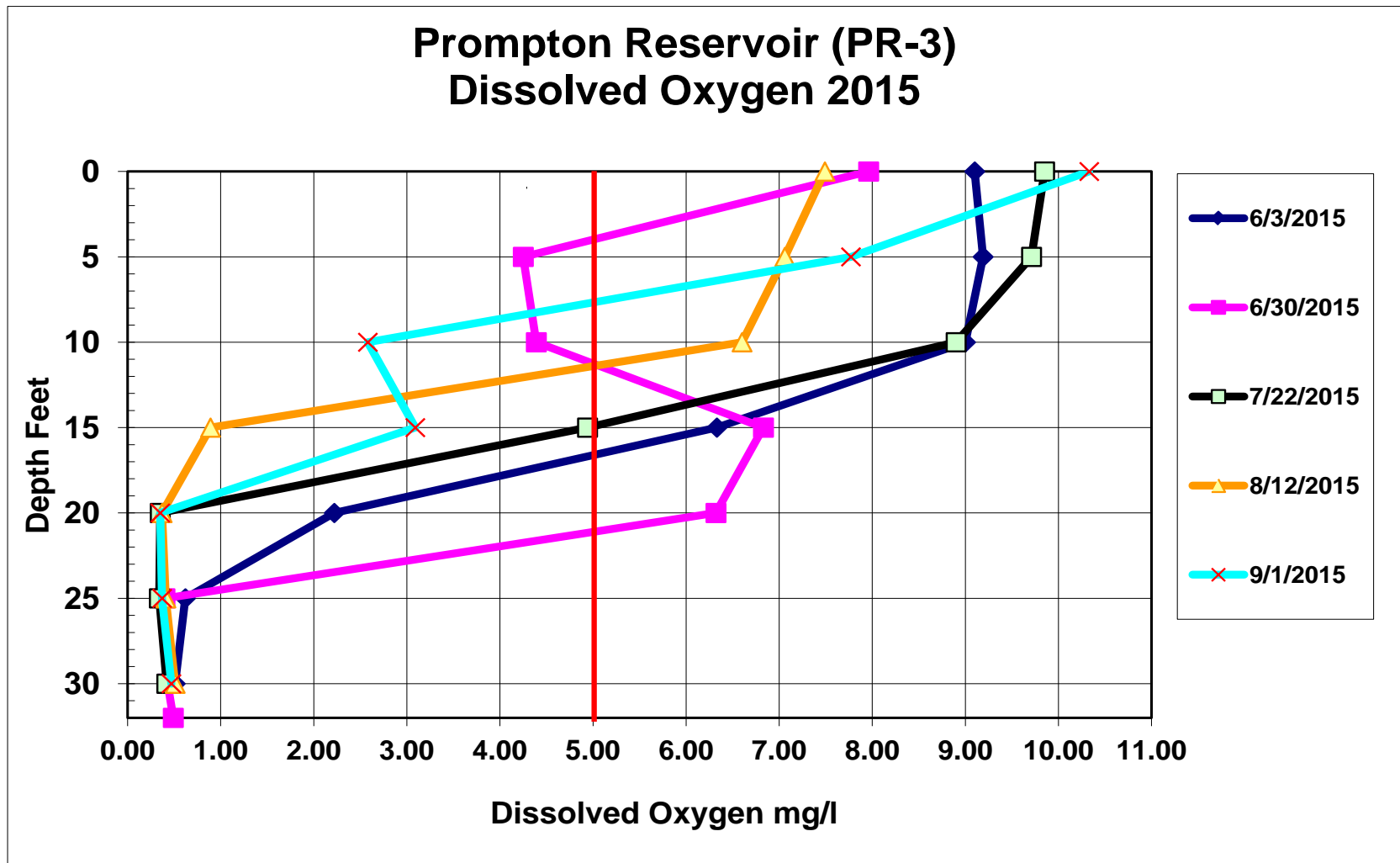


Figure 3-4. Dissolved oxygen stratification of Prompton Reservoir during 2015 from water quality measured at station PR-3. The PADEP minimum DO standard is 5 mg/L. See Appendix A for a summary of plotted value

3.1.3 pH

PH is the measure of the hydrogen –ion concentration in the water. A pH below 7 is considered acidic and a pH above 7 is basic. The pH scale is 0-14 with the lower numbers being more acidic and the higher numbers being more basic. High pH values tend to facilitate solubilization of ammonia, salts, and heavy metals. Low pH levels tend to increase carbonic acid and carbon dioxide concentrations. Lethal effects of pH on aquatic life typically occur below pH 4.5 and above pH 9.5.

Measures of pH in the surface water tributary stations PR-1S and PR-4S at Prompton Reservoir ranged from 6.62 in early June to 8.57 in September (Fig. 3-5). The seasonal pH average for PR-1S and PR-4S were 7.69 and 7.27, respectively.

The water column of Prompton Reservoir maintained a relatively stable pH through most of the sampling season in 2015 with higher lake surface water pH seen in July and September (Fig. 3-6). In general the development of stratification and increase in surface temperatures during this time period is reflected with an increase in pH at the surface while the lower water column remained relatively constant. This was seen especially during July when the upper water column ranged as high as 9.08 and the bottom waters had a reading of 6.89. The elevated pH in surface waters of the reservoir during summer periods is most likely due to algal blooms. As a function of increased productivity, algae remove CO₂ from the water column. Since dissolved CO₂ is slightly acidic, its reduction in the water column is manifested by an increase in pH.

The surface waters of the Prompton Reservoir lake stations were not in compliance with PADEP standards for pH during 2015. The water quality standard for pH is a range of acceptability from 6 to 9. One surface water reading in July exceeded the pH 9.0 criteria.

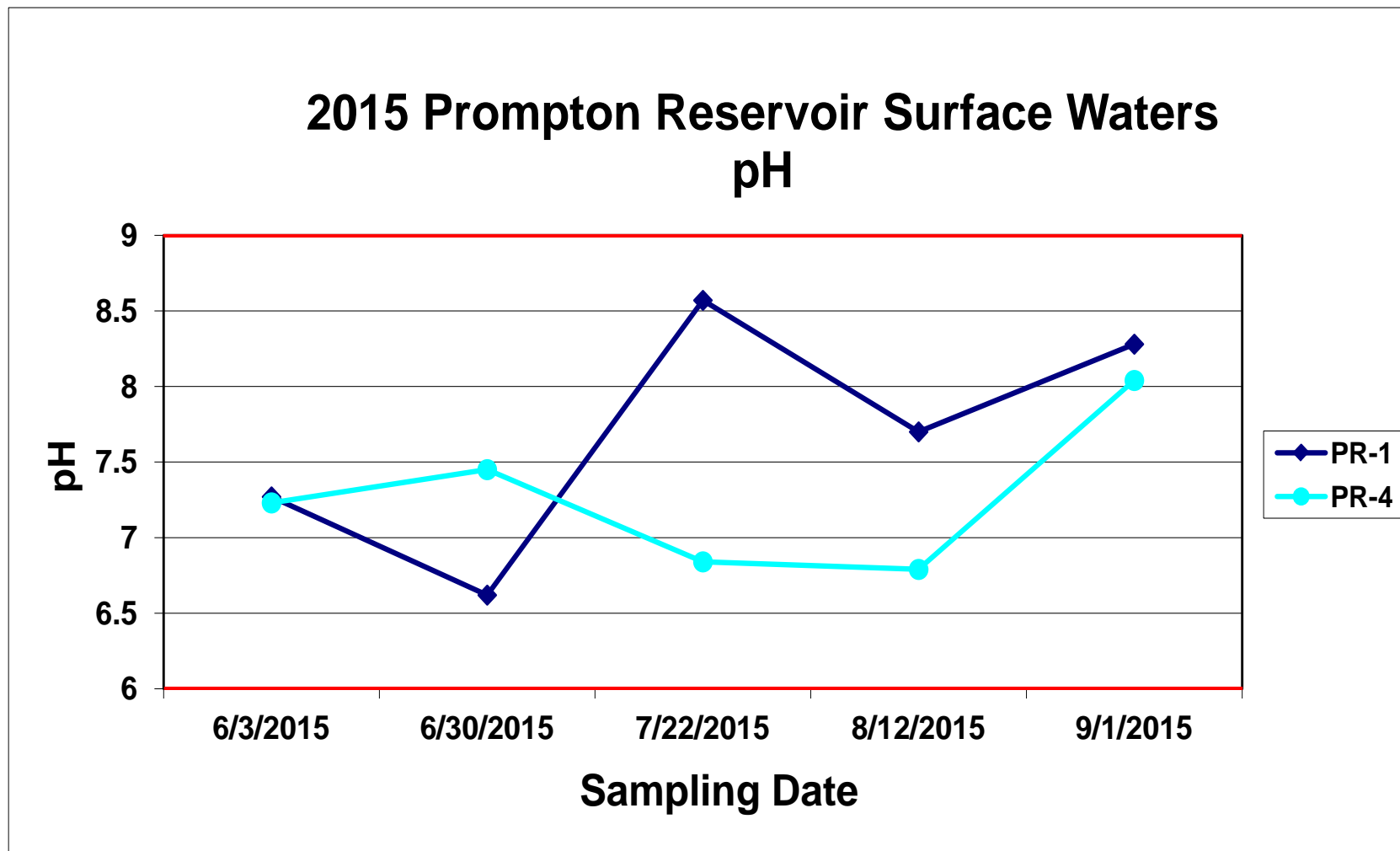


Figure 3-5. Measures of pH in tributary surface waters of Prompton Reservoir during 2015. PADEP minimum and maximum pH standards are 6 and 9, respectively. See Appendix A for a summary of plotted values.

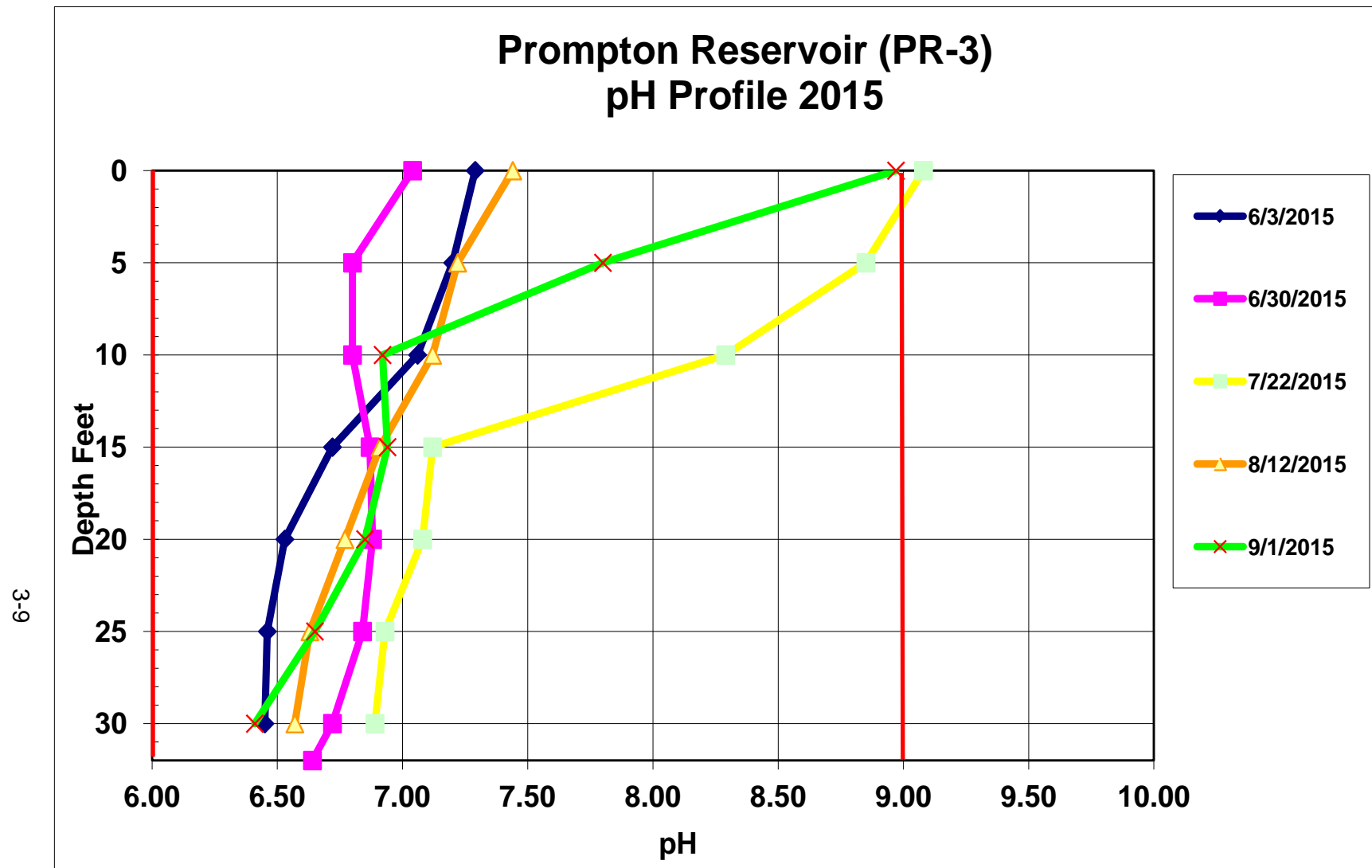


Figure 3-6. Stratification of pH at Prompton Reservoir during 2015, from water quality measured at station PR-3. PADEP minimum and maximum pH standards are 6 and 9, respectively. See Appendix A for a summary of plotted values.

3.2 WATER COLUMN CHEMISTRY MONITORING

The following sections describe temporal, spatial, and depth related patterns for water quality parameters measured at Prompton Reservoir during 2015 (Table 3-2).

3.2.1 Ammonia

Total Ammonia (NH₃) is a measure of the most reduced inorganic form of nitrogen in water and includes dissolved ammonia and the ammonium ion. Ammonia is a small component of the nitrogen cycle but as an essential plant nutrient, it contributes to the trophic status of a water body. Excess ammonia contributes to eutrophication of water bodies. This can result in excessive algal growths and impacts on recreation and drinking water supplies. In high concentrations, ammonia is toxic to aquatic life.

Ammonia in the water column of Prompton Reservoir was low during 2015 (Table 3-2). Concentrations measured at many surface and middle water column stations were less than the reporting limit (0.05 mg/L). The highest concentration (2.82 mg/L) was measured in September in the bottom waters of the deeper portion of the reservoir located at station PR-3B. Concentrations in the bottom waters at station PR-3B throughout the sampling season averaged 1.59 mg/L. Increased ammonia is characteristic of low dissolved oxygen environments in stratified lakes resulting from the decomposition of organic materials. Prompton Reservoir experienced these conditions from early June through September of 2015 resulting in elevated levels of Ammonia in the deeper areas of the reservoir. In 2015, Prompton Reservoir was in compliance with the PADEP water quality standard for ammonia, which is dependent on temperature and pH (Table 3-1).

Table 3-1. PADEP ammonia nitrogen criteria (Pennsylvania Code, Title 25, Chapter 93, 2002). Specific ammonia criteria dependent on temperature and pH (units in mg/L).					
PH	10 °C	15 °C	20 °C	25 °C	30 °C
6.50	25.5	17.4	12.0	8.4	5.9
6.75	23.6	16.0	11.1	7.7	5.5
7.00	20.6	14.0	9.7	6.8	4.8
7.25	16.7	11.4	7.8	5.5	3.9
7.50	12.4	8.5	5.9	4.1	2.9
7.75	8.5	5.8	4.0	2.8	2.0
8.00	5.5	5.8	4.0	2.8	2.0
8.25	3.4	2.3	1.6	1.2	0.9
8.50	2.0	1.4	1.0	0.7	0.6
8.75	1.2	0.9	0.6	0.5	0.4
9.00	0.8	0.5	0.4	0.3	0.3
9.25	0.36	0.24	0.17	0.12	0.08
9.50	0.20	0.13	0.10	0.07	0.05

Table 3-2. Summary of surface, middle, and bottom water quality monitoring data for Prompton Reservoir in 2015

Station	Date	ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	TP	TSS
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PR-1S	6/3/2015	25	<2	<.05	<.05	<.05	0.22	<.01	27	0.32	2.5	<.01	<3
	6/30/2015	18	<2	<.05	<.05	<.05	0.18	0.03	38	0.33	3.9	0.04	3
	7/22/2015	20	<2	<.05	0.08	<.05	0.11	<.01	55	0.36	4.1	<.01	4
	8/12/2015	23	2	<.05	<.05	<.05	0.1	<.01	53	0.48	3.3	0.03	17
	9/1/2015	24	<2	<.05	<.05	<.05	<.05	<.01	59	0.31	2.1	0.02	<3
	Mean	22.00	2.00	0.05	0.06	0.05	0.13	0.01	46.40	0.36	3.18	0.02	6.00
	Stdev	2.92	0.00	0.00	0.01	0.00	0.07	0.01	13.45	0.07	0.87	0.01	6.16
	Max	25.00	2.00	0.05	0.08	0.05	0.22	0.03	59.00	0.48	4.10	0.04	17.00
	Min	18.00	2.00	0.05	0.05	0.05	0.05	0.01	27.00	0.31	2.10	0.01	3.00
	No. of Det.	5.00	1.00	0.00	1.00	0.00	4.00	1.00	5.00	5.00	5.00	3.00	3.00
PR-2S	6/3/2015	19	<2	<.05	<.05	<.05	<.05	<.01	28	0.33	2.7	<.01	<3
	6/30/2015	19	4	<.05	<.05	<.05	<.05	0.02	45	0.93	3.4	0.03	4
	7/22/2015	18	<2	<.05	<.05	<.05	<.05	<.01	52	0.52	3.9	0.02	<3
	8/12/2015	21	2	<.05	<.05	<.05	<.05	<.01	56	0.65	3.7	0.02	4
	9/1/2015	22	4	<.05	<.05	<.05	<.05	0.06	54	1.54	4.1	0.07	6
	Mean	19.80	2.80	0.05	0.05	0.05	0.05	0.02	47.00	0.79	3.56	0.03	4.00
	Stdev	1.64	1.10	0.00	0.00	0.00	0.00	0.02	11.40	0.47	0.55	0.02	1.22
	Max	22.00	4.00	0.05	0.05	0.05	0.05	0.06	56.00	1.54	4.10	0.07	6.00
	Min	18.00	2.00	0.05	0.05	0.05	0.05	0.01	28.00	0.33	2.70	0.01	3.00
	No. of Det.	5.00	3.00	0.00	0.00	0.00	0.00	2.00	5.00	5.00	5.00	4.00	3.00

Table 3-2 continued. Summary of surface, middle, and bottom water quality monitoring data for Prompton Reservoir in 2015

Station	Date	ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	TP	TSS
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PR-2M	6/3/2015	18	<2	<.05	<.05	<.05	<.05	<.01	16	0.31	2.7	<.01	<3
	6/30/2015	20	<2	<.05	<.05	<.05	0.08	<.01	43	0.54	4.8	0.04	3
	7/22/2015	20	<2	<.05	<.05	<.05	<.05	<.01	51	0.42	3.8	0.02	10
	8/12/2015	23	<2	<.05	<.05	<.05	<.05	<.01	51	0.52	3.4	0.02	3
	9/1/2015	21	3	<.05	<.05	<.05	<.05	0.01	53	0.62	3.5	0.03	3
	Mean	20.40	2.20	0.05	0.05	0.05	0.06	0.01	42.80	0.48	3.64	0.02	4.40
	Stdev	1.82	0.45	0.00	0.00	0.00	0.01	0.00	15.47	0.12	0.76	0.01	3.13
	Max	23.00	3.00	0.05	0.05	0.05	0.08	0.01	53.00	0.62	4.80	0.04	10.00
	Min	18.00	2.00	0.05	0.05	0.05	0.05	0.01	16.00	0.31	2.70	0.01	3.00
	No. of Det.	5.00	1.00	0.00	0.00	0.00	1.00	1.00	5.00	5.00	5.00	4.00	4.00
PR-2B	6/3/2015	20	<2	<.05	<.05	<.05	0.08	<.01	71	0.68	3.4	0.17	83
	6/30/2015	20	<2	<.05	0.08	<.05	0.1	0.03	62	0.62	5.3	0.04	6
	7/22/2015	23	<2	<.05	0.3	<.05	<.05	<.01	71	0.78	4.4	0.11	31
	8/12/2015	25	<2	<.05	<.05	<.05	0.18	<.01	73	0.45	3.6	<.01	<3
	9/1/2015	24	3	<.05	<.05	<.05	<.05	0.08	65	0.78	2.8	0.08	48
	Mean	22.40	2.20	0.05	0.11	0.05	0.09	0.03	68.40	0.66	3.90	0.08	34.20
	Stdev	2.30	0.45	0.00	0.11	0.00	0.05	0.03	4.67	0.14	0.97	0.06	32.98
	Max	25.00	3.00	0.05	0.30	0.05	0.18	0.08	73.00	0.78	5.30	0.17	83.00
	Min	20.00	2.00	0.05	0.05	0.05	0.05	0.01	62.00	0.45	2.80	0.01	3.00
	No. of Det.	5.00	1.00	0.00	2.00	0.00	3.00	2.00	5.00	5.00	5.00	4.00	4.00

Table 3-2 continued. Summary of surface, middle, and bottom water quality monitoring data for Prompton Reservoir in 2015

Station	Date	ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	TP	TSS
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PR-3S	6/3/2015	19	<2	<.05	<.05	<.05	<.05	<.01	49	0.3	2.6	<.01	<3
	6/30/2015	21	3	<.05	<.05	<.05	<.05	0.02	59	0.71	3.5	0.02	<3
	7/22/2015	19	2	<.05	<.05	<.05	<.05	<.01	57	0.65	4.1	0.03	6
	8/12/2015	21	2	<.05	<.05	<.05	<.05	<.01	69	0.63	3.8	0.03	<3
	9/1/2015	22	4	<.05	<.05	<.05	<.05	0.04	60	1.06	4	0.05	9
	Mean	20.40	2.60	0.05	0.05	0.05	0.05	0.02	58.80	0.67	3.60	0.03	4.80
	Stdev	1.34	0.89	0.00	0.00	0.00	0.00	0.01	7.16	0.27	0.60	0.01	2.68
	Max	22.00	4.00	0.05	0.05	0.05	0.05	0.04	69.00	1.06	4.10	0.05	9.00
	Min	19.00	2.00	0.05	0.05	0.05	0.05	0.01	49.00	0.30	2.60	0.01	3.00
	No. of Det.	5.00	4.00	0.00	0.00	0.00	0.00	2.00	5.00	5.00	5.00	4.00	2.00
PR-3M	6/3/2015	19	<2	<.05	0.05	<.05	<.05	<.01	50	0.38	2.6	<.01	<3
	6/30/2015	19	<2	<.05	<.05	<.05	0.08	0.04	58	0.66	4.6	0.05	<3
	7/22/2015	21	<2	<.05	<.05	<.05	<.05	<.01	61	0.32	3.9	<.01	11
	8/12/2015	24	<2	<.05	<.05	<.05	<.05	<.01	64	0.48	3.2	<.01	<3
	9/1/2015	36	4	0.08	0.61	<.05	<.05	0.11	67	1.36	4.5	0.12	9
	Mean	23.80	2.40	0.06	0.16	0.05	0.06	0.04	60.00	0.64	3.76	0.04	5.80
	Stdev	7.12	0.89	0.01	0.25	0.00	0.01	0.04	6.52	0.42	0.86	0.05	3.90
	Max	36.00	4.00	0.08	0.61	0.05	0.08	0.11	67.00	1.36	4.60	0.12	11.00
	Min	19.00	2.00	0.05	0.05	0.05	0.05	0.01	50.00	0.32	2.60	0.01	3.00
	No. of Det.	5.00	1.00	1.00	2.00	0.00	1.00	2.00	5.00	5.00	5.00	2.00	2.00

Table 3-2 continued. Summary of surface, middle, and bottom water quality monitoring data for Prompton Reservoir in 2015

Station	Date	ALK	BOD5	DISS-P	NH3	NO2	NO3	PO4	TDS	TKN	TOC	TP	TSS
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PR-3B	6/3/2015	23	3	<.05	0.39	<.05	<.05	<.01	52	2.06	4	0.63	140
	6/30/2015	41	7	0.08	1.17	<.05	<.05	0.11	87	2.09	6	0.13	12
	7/22/2015	51	8	0.13	2	<.05	<.05	0.02	98	2.64	7.8	0.15	21
	8/12/2015	48	13	<.05	1.58	<.05	<.05	0.15	87	2.56	6.8	0.3	21
	9/1/2015	58	16	0.67	2.82	<.05	<.05	0.83	131	4.98	10	0.8	19
	Mean	44.20	9.40	0.20	1.59	0.05	0.05	0.22	91.00	2.87	6.92	0.40	42.60
	Stdev	13.33	5.13	0.27	0.91	0.00	0.00	0.34	28.29	1.21	2.22	0.30	54.57
	Max	58.00	16.00	0.67	2.82	0.05	0.05	0.83	131.00	4.98	10.00	0.80	140.00
	Min	23.00	3.00	0.05	0.39	0.05	0.05	0.01	52.00	2.06	4.00	0.13	12.00
	No. of Det.	5.00	5.00	3.00	5.00	0.00	0.00	4.00	5.00	5.00	5.00	5.00	5.00
PR-4S	6/3/2015	20	<2	<.05	0.08	<.05	<.05	<.01	57	0.38	2.7	0.03	4
	6/30/2015	20	2	<.05	<.05	<.05	0.06	0.05	48	0.61	3.9	0.05	3
	7/22/2015	24	<2	<.05	<.05	<.05	0.17	<.01	61	0.26	2.3	<.01	<3
	8/12/2015	22	<2	<.05	<.05	<.05	0.17	<.01	66	0.3	3	0.04	<3
	9/1/2015	25	<2	<.05	<.05	<.05	0.09	<.01	56	0.5	3.2	0.05	<3
	Mean	22.20	2.00	0.05	0.06	0.05	0.11	0.02	57.60	0.41	3.02	0.04	3.20
	Stdev	2.28	0.00	0.00	0.01	0.00	0.06	0.02	6.66	0.14	0.60	0.02	0.45
	Max	25.00	2.00	0.05	0.08	0.05	0.17	0.05	66.00	0.61	3.90	0.05	4.00
	Min	20.00	2.00	0.05	0.05	0.05	0.05	0.01	48.00	0.26	2.30	0.01	3.00
	No. of Det.	5.00	1.00	0.00	1.00	0.00	4.00	1.00	5.00	5.00	5.00	4.00	2.00

< Laboratory analysis result was less than the method or reporting limits.

3.2.2 Nitrite and Nitrate

Nitrite (NO_2) is a measure of a form of nitrogen that occurs as an intermediate in the nitrogen cycle. It is unstable and can rapidly be oxidized to nitrate or reduced to nitrogen gas. Nitrite is a source of nutrients for plants and can be toxic to aquatic life in relatively low concentrations. In 2015, nitrite concentrations in the waters of Prompton Reservoir measured at all stations and depths were less than the reporting limit of 0.05 mg/L (Table 3-2).

Nitrate (NO_3) is the measure of the most oxidized and stable form of nitrogen. It is the principal form of combined nitrogen in natural waters. Nitrate is the primary form of nitrogen used by plants as a nutrient to stimulate plant growth. In 2015, nitrate concentrations in the lake waters of Prompton Reservoir measured at all stations and depths were often less than the reporting limit of 0.05 mg/L (Table 3-2). Higher readings were seen in the lake tributary and release waters (PR-1S and PR-4S). The maximum nitrate measure of 0.22 mg/L was collected at station PR-1S in early June. This upstream tributary station also maintained the highest seasonal average concentration of 0.21 mg/L.

Prompton Reservoir was in compliance with the PADEP water quality standard for nitrite and nitrate during 2015. The standard is a summed concentration of nitrite and nitrate of less than 10 mg/L. Throughout the monitoring period, a maximum summed concentration for all stations and depths of 0.27 mg/L was measured at the upstream tributary surface water station PR-1S on 03 June.

3.2.3 Total Kjeldahl Nitrogen

Total kjeldahl nitrogen (TKN) is a measure of organic nitrogen that includes ammonia. Organic nitrogen is not immediately available for biological activity and is therefore not available for plant growth until decomposition to inorganic form occurs. Total kjeldahl nitrogen was uniformly low in the water column of Prompton Reservoir during 2015 (Table 3-2) although all samples were greater than the reporting limit of 0.25 mg/L. The highest single sample concentration of 4.98 mg/L and seasonal mean concentration of 2.87 mg/L were measured in the bottom water sample at station PR-3B.

3.2.4 Total Phosphorus

Total phosphorus (TP) is a measure of both organic and inorganic forms of phosphorus. It is an essential plant nutrient and is often the most limiting nutrient to plant growth in freshwater systems. Inputs of phosphorus are the prime contributing factors to eutrophication in most freshwater systems. Phosphorus bound to bottom sediments in lakes can be released when oxygen levels are depleted in bottom waters. This phosphorus then becomes available for plant growth.

EPA guidance for nutrient criteria in lakes and reservoirs suggests a minimum concentration for total phosphorus of 0.01-mg/L (EPA 2000). Lakes and reservoirs exceeding this concentration are more likely to experience algal bloom problems during the growing

season. Most of the measures for total phosphorus taken at all stations and depths at Prompton Reservoir were greater than the 0.01 mg/L reporting limit (Table 3-2). The highest single concentration of 0.80 mg/L was measured in the lake bottom waters at station PR-3B on 03 June. Higher concentrations of phosphorus in the lower water column are characteristic of temperature-stratified lakes. Low DO conditions in deeper waters create a reducing chemical environment that can mobilize phosphorus from bottom sediment. Prompton Reservoir experiences these conditions annually. Lower measurements of TP in lake surface waters are likely a product of algal uptake but still remain greater than the 0.01 mg/L recommended threshold.

3.2.5 Dissolved Phosphorus

Dissolved phosphorus (Diss P) concentrations measured at all stations and depths in the water column of Prompton Reservoir were less than the reporting limit of 0.05 mg/L except for lake station PR-3 (Table 3-2). Higher concentrations were seen in this lake bottom water sample in late June, July and September. The highest concentration of dissolved phosphorus (0.67 mg/L) was in the bottom waters of the reservoir at Station PR-3B on 01 September.

3.2.6 Dissolved Phosphate

Orthophosphate (PO₄) is a measure of the inorganic oxidized form of soluble phosphorus. This form of phosphorus is the most readily available for uptake during photosynthesis. In freshwater environments, dissolved phosphate is usually a limiting nutrient and is readily taken up by freshwater plants and algae. In 2015, dissolved phosphate concentrations were low with most measured concentrations below the reporting limit of 0.01 mg/L. Higher concentrations were seen in the lake bottom water samples during some periods of the sampling season. The highest concentration of 0.83 mg/L was collected in the bottom of the water column at station PR-3B on 01 September.

3.2.7 Total Dissolved Solids

Total dissolved solids (TDS) is a measure of the amount of non-filterable dissolved material in the water. Dissolved salts such as sulfate, magnesium, chloride, and sodium contribute to elevated levels. Total dissolved solids in the water column of Prompton Reservoir stayed consistently low during 2015. Concentrations measured at all stations and depths ranged from 16 to 131 mg/L throughout the monitoring period (Table 3-2). Total dissolved solids measured at Prompton Reservoir in 2015 were in compliance with PADEP water quality standards. The Pennsylvania standard for TDS is concentrations less than 500 mg/L as a monthly average with a maximum concentration of 750 mg/L.

3.2.8 Total Suspended Solids

Total suspended solids (TSS) is a measure of the amount of filterable particulate matter that is suspended within the water column. High concentrations increase the turbidity of the water and can hinder photosynthetic activity, result in damage to fish gills, and cause impairment to spawning habitat (smothering). During 2015, total suspended solids (TSS)

concentrations at all stations and depths ranged between less than the reporting limit of 3.0 mg/L to 140 mg/L (Table 3-2). The highest single sample measure of 140 mg/L was measured in the bottom waters of station PR-3B on 03 June. Uncharacteristically higher readings in bottom water samples can be attributed to sample collection error caused by disturbing bottom sediments inadvertently during sampling and those suspended materials being included in the sample. The 03 June TSS sample at station PR-3B may reflect this sampling error.

3.2.9 Biochemical Oxygen Demand

Five-day biochemical oxygen demand (BOD5) is a measure of the oxygen-depleting burden imposed by organic material present in water. It measures the rate of oxygen uptake by organisms in the water sample over a period of time. It is an indicator of the quality of a water body and the degree of pollution by biodegradable organic matter can therefore be inferred. The five-day biochemical oxygen demand and commonly accepted water quality inferences are as follows:

- 1-2 mg/L is associated with very clean water and little biodegradable wastes;
- 3-5 mg/L is associated with moderately clean water with some biodegradable wastes;
- 6-9 mg/L is associated with fairly polluted water, many bacteria, and much biodegradable wastes;
- 10+ mg/L is associated with very polluted water and large amounts of biodegradable wastes.

Biochemical oxygen demand concentrations in the waters of Prompton Reservoir were consistently low at all but one station in all months sampled (Table 3-2). Twelve of forty individual samples collected during the season were greater than the 2.0 mg/L reporting limit. Five of these higher readings were collected in the bottom waters at station PR-3B. The maximum BOD measure for all stations and depths was 16.0 mg/L collected at station PR-3B on 01 September. In considering the rarity overall and frequency at one sampling station of higher readings, it is inferred that Prompton Reservoir and its associated tributaries contained moderately clean waters with some biodegradable wastes in 2015.

3.2.10 Alkalinity

Alkalinity (Alk) is a measure of the acid-neutralizing capacity of water. Waters that have high alkalinity values are considered undesirable because of excessive hardness and high concentrations of sodium salts. Water with low alkalinity has little capacity to buffer acidic inputs and is susceptible to acidification (low pH). The PADEP standard is a minimum concentration of 20-mg/L CaCO_3 except where natural conditions are less.

Alkalinity in the water's of Prompton Reservoir remained near or greater than the state minimum standard during the 2015 sampling season (Table 3-2). Concentrations measured at all stations and depths during the monitoring period ranged from 18.0 to 58.0 mg/L. The highest measure was taken from the bottom waters of the reservoir at station PR-3B on 01 September. The lowest measure of 18 mg/L was recorded at stations PR-1S, PR-2S and PR-2M. The natural alkalinity of water is largely dependent on the underlying geology and soils within the

surrounding watershed. The alkalinity measured at Prompton Reservoir is likely a result of the regional geology and primary productivity. The reservoir waters and surrounding tributaries were in compliance with the PADEP alkalinity criteria in 2015.

3.2.11 Total Organic Carbon

Total organic carbon (TOC) is a measure of the dissolved and particulate organic carbon in water. The bulk of organic carbon in water is composed of humic substances and partly degraded animal and plant materials. High levels of organic carbon coincide with a lowering of dissolved oxygen concentrations. Carbon is a nutrient required for biological processes. Total organic carbon in the water column of Prompton Reservoir was present in low concentrations during 2015 (Table 3-2). Concentrations of TOC at all stations and depths ranged from 2.1 mg/L to 10.0 mg/L.

3.2.12 Chlorophyll a

Chlorophyll a is the measure of the plant chlorophyll a primary pigment which helps plants get energy from light. It is found in most plants, algae, and cyanobacteria. Chlorophyll a measures increase in relation to algal densities in a water body. Chlorophyll a concentrations in the tributary stream surface waters were low relative to in-lake concentrations during 2015 (Appendix A). Concentrations measured in stream surface waters at all stations and dates averaged 1.71 ug/L. Concentrations were consistently higher at the in-lake surface stations where algal productivity would be expected to also be higher. Concentrations at lake stations PR-2 and PR-3, from 0-5 feet of depth, ranged between 1.3 ug/L and 6.8 ug/L with a seasonal average of 3.38 ug/L. The highest concentrations were seen during the September sampling event. Chlorophyll a readings were collected using a YSI 6600 V2-4 chlorophyll sensor.

3.3 TROPHIC STATE DETERMINATION

Carlson's (1977) trophic state index (TSI) is a method of quantitatively expressing the magnitude of eutrophication for a lake. The trophic state analysis calculates separate indices for eutrophication based on measures of total phosphorus, chlorophyll a, and secchi disk. Index values for each parameter range on the same scale from 0 (least enriched) to 100 (most enriched). The resulting indices can also be compared to qualitative threshold values that correspond to levels of eutrophication. Classification of Prompton Reservoir was based on a single sample taken each month at station PR-3 during the sampling season.

TSIs calculated for measures of secchi disk depth classified Prompton Reservoir as mesotrophic in early June (43.28) and eutrophic in late June (54.65), July (54.65), August (54.65) and September (62.69) (Fig. 3-7). TSIs calculated for measures of total phosphorus classified Prompton Reservoir as oligotrophic in early June (37.35), mesotrophic in late June (47.35), and eutrophic in July (53.20), August (53.20) and September (60.56). TSIs calculated for measures of chlorophyll a classified Prompton Reservoir as oligotrophic in early June (39.59) and late June (39.06), and mesotrophic in July (41.28), August (40.59) and September (43.35). Chlorophyll a was measured with a YSI 6600 V2-4 chlorophyll sensor.

Carlson (1977) warned against averaging TSI values estimated for different parameters, and instead suggested giving priority to chlorophyll *a* in the summer and to phosphorus in the spring, fall, and winter. With this in mind, the trophic state of the reservoir based on TSI's was mesotrophic during most of the 2015 sampling period.

The EPA (1983) also provides criteria for defining the trophic conditions of lakes of the north-temperate zone based on concentrations of total phosphorus, chlorophyll *a*, and secchi depth (Table 3-3). Taking into account the general agreement between the EPA classifications with that of the Carlson (1977) calculated TSI values, the trophic condition of Prompton Reservoir was considered borderline mesotrophic/eutrophic during most of the sampling season.

Table 3-3. EPA trophic classification criteria and monthly measures for Prompton Reservoir in 2015.

Water Quality Variable	Oligo-trophic	Meso-trophic	Eutrophic	03 June	30 June	22 July	12 August	01 September
Total phos. (ppb)	<10	10-20	>20	10	20	30	30	50
Chlorophyll (ppb)	<4	4-10	>10	2.5	2.37	2.97	2.77	3.67
Secchi depth (m)	>4	2-4	<2	3.19	1.45	1.45	1.45	0.83

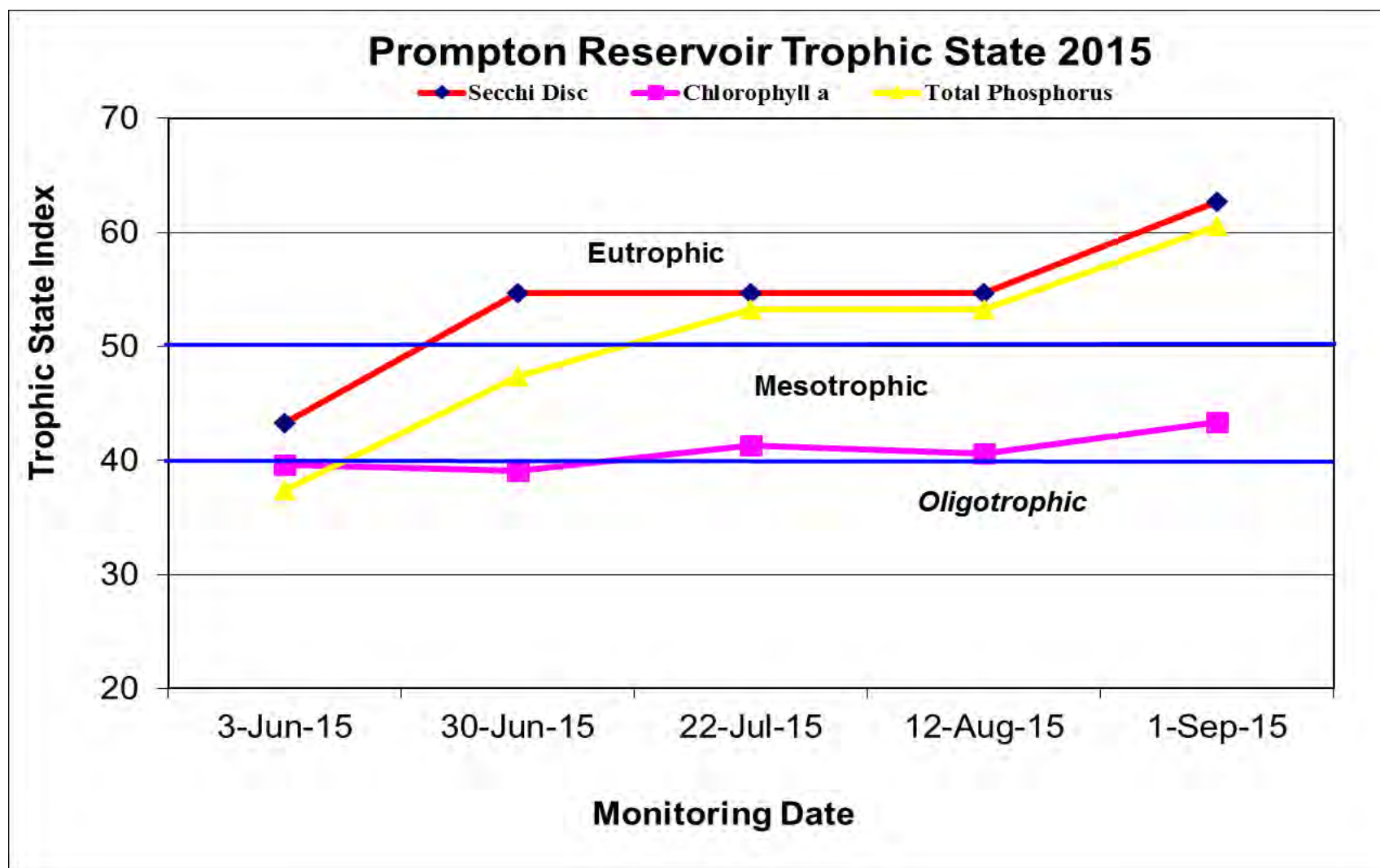


Figure 3-7. Trophic state indices calculated from secchi disk depth, concentrations of chlorophyll a, and total phosphorus measured in surface waters of Prompton Reservoir during 2015.

3.4 RESERVOIR BACTERIA MONITORING

Two forms of coliform bacteria contamination were monitored in the tributary and lake surface waters at Prompton Reservoir during 2015 including total and fecal coliform (Table 3-4). Total coliform includes *escherichia coliform* (*E. coli*) and related bacteria that are associated with fecal discharges. Fecal coliform bacteria are a subgroup of the total coliform and are normally associated with waste derived from human and other warm-blooded animals and indicate the presence of fecal contamination but not the associated risk.

Total coliform contamination of Prompton Reservoir was relatively high during the 2015 monitoring period with many counts exceeding the method counting limit of 2400 colonies/100-ml. Total coliform values for all stations ranged from greater than the method counting limit of 2400 colonies/100-ml to 280 colonies/100-ml. The lowest count of 280 colonies/100-ml was measured in the lake surface waters at station PR-3S on 01 September. Bacteria in natural waters are common and their presence in the sample is not necessarily a human health concern.

With respect to PADEP water quality standards, fecal coliform bacteria contamination was low at Prompton Reservoir during 2015. The PADEP standard for fecal coliform bacteria during the swimming season (from 1 May to 30 September) is a geometric mean not greater than 200 colonies/100-ml calculated for not less than five fecal coliform samples collected over a consecutive thirty day period. Given that our regular monitoring was completed on one day, single sample results were compared to the Pennsylvania Department of Health single sample standard of <1000 colonies/100-ml. No fecal coliform samples exceeded this standard. Routinely higher readings were seen at the upstream tributary station (PR-1S) and downstream outflow station (PR-4S). The higher upstream readings were not reflected in the reservoir surface water samples within the lake. Water contact recreation is not permitted at Prompton Reservoir.

Table 3-4. Bacteria counts (colonies/100 ml) at Prompton Reservoir during 2015. Shaded values exceed the Pennsylvania Department of Health water quality standard for bathing beaches. NS = Not Sampled in 2015

STATION	DATE		Total Coliform (TC)		Fecal Coliform (FC)		Escherichia coli
PR-1S	6/3/2015		2000		31		NS
	6/30/2015	>	2400		270		NS
	7/22/2015	>	2400		3		NS
	8/12/2015	>	2400		26		NS
	9/1/2015		2400		40		NS
PR-2S	6/3/2015		1600	<	2		NS
	6/30/2015	>	2400		5		NS
	7/22/2015	>	2400	<	2		NS
	8/12/2015	>	2400	<	2		NS
	9/1/2015		920	<	2		NS
PR-3S	6/3/2015		580	<	2		NS
	6/30/2015	>	2400		3		NS
	7/22/2015	>	2400		2		NS
	8/12/2015	>	2400	<	2		NS
	9/1/2015		280	<	2		NS
PR-4S	6/3/2015	>	2400		2		NS
	6/30/2015	>	2400		50		NS
	7/22/2015		2400		11		NS
	8/12/2015	>	2400		710		NS
	9/1/2015		2400		5		NS

4.0 REFERENCES

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APPENDIX A

STRATIFICATION DATA TABLES

2015 Prompton WQ Profile Summary

Station	Date	Time	Depth	Temp	DO	DO	pH	pHmV	ORP	Turbidity	Chloro.	SpCond
	M/D/Y	hh:mm:ss	ft	C	%	mg/L		mV	mV	NTU	ug/L	mS/cm
PR-1S Upstream												
	6/3/2015	13:17:44	0.5	15.74	97.1	9.63	7.27	-51.2	138.9	37.6	1.4	0.154
	6/30/2015	10:24:56	0.5	15.37	94.6	9.46	6.62	-14.4	153.6	35.2	2.9	0.064
	7/22/2015	13:22:24	0.5	19.99	95.1	8.65	8.57	-126	69.5	36.5	1.7	0.084
	8/12/2015	13:11:36	0.5	18.42	92.2	8.65	7.7	-76.2	48.6	42.9	2.7	0.083
	9/1/2015	13:48:48	0.5	20.07	94.9	8.61	8.28	-110	60.4	39.9	0.9	0.091
PR-2 Mid-Lake	6/3/2015	12:49:20	0.5	21.9	101.7	8.9	7.44	-61.5	113.7	34.8	2.4	0.134
		12:48:34	5	20.14	100.1	9.08	7.41	-59.6	110.1	35.3	3.5	0.137
		12:47:47	10	19.84	94.1	8.58	7.33	-54.9	113.6	35.4	7.3	0.138
		12:46:54	15	17.97	86.1	8.16	7.27	-51	118.5	36.4	2.9	0.143
		12:45:58	20	15.66	82.2	8.17	7.26	-50.3	117.3	51.5	3	0.15
PR-2 Mid-Lake	6/30/2015	11:32:12	0.5	20.76	99	8.87	7.57	-68.8	74.3	40.5	5.6	0.071
		11:30:26	5	20.13	66.9	6.07	7.04	-37.8	109.4	37.2	2.5	0.072
		11:29:37	10	17.61	84.8	8.09	7.07	-40	106.4	36.8	2.5	0.064
		11:28:43	15	16.89	82.8	8.02	7.07	-39.6	105.8	36.4	1.9	0.062
		11:27:34	20	16	66.7	6.59	7.04	-37.9	108.9	39.5	3.1	0.064
		11:26:28	22	15.89	68.1	6.73	7.08	-40.5	105.2	39.5	3.8	0.064
PR-2 Mid-Lake	7/22/2015	12:50:00	0.5	25.27	121.3	9.98	9.21	-166	26	38.1	2.3	0.071
		12:48:59	5	25.19	118.7	9.77	9.04	-156	22.7	38.4	2.4	0.071
		12:47:29	10	21.83	66.3	5.81	7.75	-79.3	71.5	35.7	3.9	0.072
		12:45:54	15	20.07	35	3.17	7.78	-80.9	70	36.1	2.9	0.077
		12:44:12	20	18.51	14.9	1.39	7.97	-91.6	48.8	38.3	2.4	0.08
PR-2 Mid-Lake	8/12/2015											
		12:30:44	0.5	23.36	89.5	7.63	7.81	-83.2	44.4	42.3	3.2	0.071
		12:29:55	5	23.17	86.5	7.39	7.58	-69.6	44.2	41.7	4.3	0.071
		12:29:00	10	22.92	74	6.36	7.37	-57.4	59.7	40.8	1.4	0.071
		12:28:12	15	20.35	70.9	6.4	7.33	-54.8	64.4	39.8	2.8	0.075
		12:27:18	20	19.12	69.7	6.45	7.35	-55.8	60.2	49.1	2.4	0.079
PR-2 Mid-Lake	9/1/2015											
		13:13:24	0.5	26	136	11.03	9.41	-178	10	51.2	5.4	0.082
		13:12:42	5	23.6	124.3	10.54	9.27	-168	11.9	49.3	6.4	0.08
		13:10:42	10	21.84	59.2	5.19	7.83	-83.8	61.1	41.8	2	0.078
		13:09:30	15	20.83	42.4	3.79	7.87	-86.1	58.6	41.6	0.9	0.082
		13:08:01	20	19.72	45.6	4.17	8.03	-94.9	39.2	41.5	1.4	0.087

2015 Prompton WQ Profile Summary

Station	Date	Time	Depth	Temp	DO	DO	pH	pHmV	ORP	Turbidity	Chloro.	SpCond
	M/D/Y	hh:mm:ss	ft	C	%	mg/L		mV	mV	NTU	ug/L	mS/cm
PR-3 Upstream of Dam Secchi 3.19 m	6/3/2015	12:34:28	0.5	21.11	102.4	9.1	7.29	-52.8	74.2	34.2	1.3	0.136
		12:33:28	5	20.14	101.3	9.19	7.2	-47.4	69.9	34.8	2.6	0.138
		12:32:31	10	19.97	99	9	7.06	-38.9	69.9	35.1	3.6	0.138
		12:30:45	15	18.48	67.5	6.33	6.72	-19.6	81.3	34.3	3.2	0.143
		12:29:23	20	14.68	21.8	2.22	6.53	-8.8	70.6	40.7	2.5	0.151
		12:27:49	25	11.26	5.7	0.62	6.46	-5.4	50.3	40.6	2.9	0.149
		12:26:00	30	10.26	4.6	0.51	6.45	-4.7	10.6	41.7	3.8	0.152
PR-3 Upstream of Dam Secchi 1.45 M	6/30/2015	11:15:28	0.5	20.91	89.1	7.96	7.04	-38	51.3	38.9	2.5	0.071
		11:13:55	5	19.58	46.3	4.25	6.8	-24.3	62.6	36.3	2.1	0.073
		11:13:26	10	17.56	46	4.39	6.8	-24	61.2	36.5	2.5	0.074
		11:11:57	15	16.6	70.1	6.83	6.87	-28.5	43.7	37.4	3.6	0.066
		11:10:44	20	16.2	64.3	6.32	6.88	-29	17.8	38	2.9	0.065
		11:08:53	25	14.46	3.9	0.4	6.84	-26.8	-70.6	36.6	2.5	0.091
		11:08:03	30	10.22	3.8	0.43	6.72	-20	-119	36.8	2.4	0.129
		11:07:25	32	9.62	4.3	0.49	6.64	-15.8	-133	35.1	2.3	0.163
PR-3 Upstream of Dam Secchi 1.45 M	7/22/2015											
		12:32:14	0.5	25.98	121.4	9.85	9.08	-159	-15	37.8	2.7	0.07
		12:31:25	5	25.91	119.5	9.71	8.85	-145	-25.9	37.8	3.4	0.07
		12:30:35	10	25.36	108.4	8.9	8.29	-112	-35.9	38.3	2.8	0.068
		12:29:14	15	20.93	55.3	4.94	7.12	-42.4	1.1	34	2.9	0.07
		12:27:50	20	16.78	3.6	0.35	7.08	-40.4	-71.3	38.1	3.4	0.076
		12:26:52	25	12.68	3.2	0.34	6.93	-31.8	-122	34.1	3	0.115
		12:24:52	30	10.65	3.8	0.42	6.89	-29.3	-143	32.3	3.3	0.167
PR-3 Upstream of Dam Secchi 1.45	8/12/2015											
		12:16:00	0.5	23.89	88.8	7.49	7.44	-61.2	-3.6	40.7	1.9	0.071
		12:15:20	5	23.63	83.3	7.06	7.22	-48.5	0.5	40.3	2.9	0.071
		12:14:30	10	23.37	77.4	6.6	7.12	-42.6	-2.8	39.8	3.5	0.071
		12:12:42	15	22.04	10.2	0.89	6.91	-30.3	-58.6	36.5	1.6	0.077
		12:11:26	20	18.66	4	0.37	6.77	-22.3	-138	35.3	2.2	0.1
		12:10:18	25	13.4	3.9	0.41	6.63	-15.1	-129	34.4	3	0.121
		12:09:08	30	12.06	4.8	0.51	6.57	-11.4	-122	42.7	3.7	0.149
PR-3 Upstream of Dam Secchi 0.83	9/1/2015											
		12:57:41	0.5	25.8	126.8	10.33	8.97	-152	-13.4	48	6.8	0.081
		12:56:18	5	24	92.3	7.77	7.8	-82.8	-12.1	47.4	3.4	0.078
		12:54:41	10	21.92	29.5	2.58	6.92	-31	24.5	39.7	0.8	0.08
		12:52:54	15	21.12	34.7	3.09	6.94	-32.4	-1.9	39.3	2.1	0.081
		12:50:31	20	18.19	3.7	0.35	6.85	-26.8	-134	36.8	2.2	0.109
		12:48:59	25	13.62	3.5	0.37	6.65	-16	-140	37.1	2.3	0.145
		12:47:08	30	10.82	4.3	0.47	6.41	-3	-160	45.8	4.8	0.254
PR-4S Dam Outfall												
	6/3/2015	13:27:44	0.5	18.61	91.5	8.55	7.23	-48.6	142.5	37.2	0.8	0.145
	6/30/2015	12:01:30	0.5	19.4	84.1	7.74	7.45	-61.5	100.5	37.9	3	0.071
	7/22/2015	11:33:55	0.5	19.82	80.2	7.32	6.84	-26.7	118.2	36.9	2.2	0.073
	8/12/2015	11:23:21	0.5	21.3	76.6	6.78	6.79	-23.8	114.9	35.5	-0.2	0.086
	9/1/2015	14:01:34	0.5	24.23	100.9	8.46	8.04	-96.8	117.8	38.8	1.5	0.09

APPENDIX B

LABORATORY CUSTODY SHEETS



CERTIFICATE OF ANALYSIS

M.J. Reid Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020552

Date Collected: 06/03/15 13:45
Collected By: Client

Sample Desc: PR-1 Surface

Date Received: 06/03/15 17:00

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	31	/100ml	2	1	SM 9222D	06/03	18:00	PLW
Total Coliform	2000	mpn/100ml	1	1	SM 9223B	06/04	12:45	RES
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	06/04	14:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	06/05	12:25	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	06/04	12:25	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	06/04	06:01	JCL
Nitrogen, Nitrate	0.22	mg/L	.05	1	EPA 353.2	06/04	18:31	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/04	16:52	JCL
Nitrogen, Total Kjeldahl	0.32	mg/L	.25	1	EPA 351.2	06/05	13:26	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	06/04	11:05	EMW
Total Organic Carbon	2.5	mg/L	1	1	SM5310 C	06/04	18:24	ALD
RESIDUES								
Solids, Total Dissolved	27	mg/L	5	1	SM 2540C	06/05	13:45	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	06/05	13:45	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	25	mg/L	1	1	SM 2320 B	06/09	10:30	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:

Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020552

Date Collected: 06/03/15 13:45
Collected By: Client

Sample Desc: PR-1 Surface

Date Received: 06/03/15 17:00

PWSID: 3130843

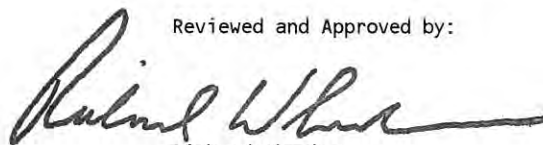
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
--------	------	--------------	------------------	-----------	--------------	--------------	---------

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 06/03/15 at 18:10.

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Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020553

Date Collected: 06/03/15 13:15
Collected By: Client

Sample Desc: PR-2 Surface

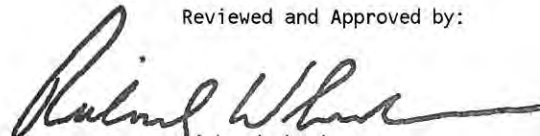
Date Received: 06/03/15 17:00

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTERIOLOGY								
Fecal Coliform	<2	/100ml	2	1	SM 9222D	06/03	18:00	PLW
Total Coliform	1600	mpn/100ml	1	1	SM 9223B	06/04	12:45	RES
CHEMISTRY								
COLORIMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	06/04	14:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	06/05	12:30	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	06/04	12:30	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	06/04	12:40	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	06/04	18:32	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/04	16:53	JCL
Nitrogen, Total Kjeldahl	0.33	mg/L	.25	1	EPA 351.2	06/05	13:27	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	06/04	11:05	EMW
Total Organic Carbon	2.7	mg/L	1	1	SM5310 C	06/04	18:42	ALD
RESIDUES								
Solids, Total Dissolved	28	mg/L	5	1	SM 2540C	06/05	13:45	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	06/05	13:45	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	19	mg/L	1	1	SM 2320 B	06/09	10:45	HRG

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Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020553

Date Collected: 06/03/15 13:15
Collected By: Client

Sample Desc: PR-2 Surface

Date Received: 06/03/15 17:00

PWSID: 3130843

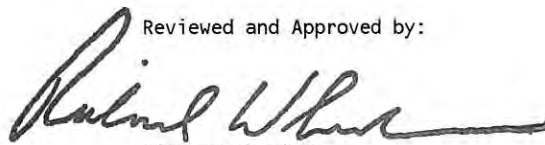
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 06/03/15 at 18:10.

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Richard Wheeler

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Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020554

Date Collected: 06/03/15 13:15
Collected By: Client

Sample Desc: PR-2 Mid-Depth

Date Received: 06/03/15 17:00

PWSID: 3130843

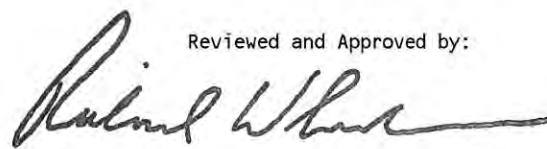
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	06/04	14:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	06/05	12:30	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	06/04	12:30	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	06/04	12:55	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	06/04	18:33	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/04	16:54	JCL
Nitrogen, Total Kjeldahl	0.31	mg/L	.25	1	EPA 351.2	06/05	13:28	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	06/04	11:05	EMW
Total Organic Carbon	2.7	mg/L	1	1	SM5310 C	06/04	19:01	ALD
RESIDUES								
Solids, Total Dissolved	16	mg/L	5	1	SM 2540C	06/05	13:45	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	06/05	13:45	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	18	mg/L	1	1	SM 2320 B	06/09	10:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020555

Date Collected: 06/03/15 13:15
Collected By: Client

Sample Desc: PR-2 Deep

Date Received: 06/03/15 17:00

PWSID: 3130843

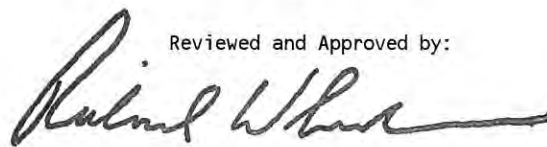
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	06/04	14:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	06/05	12:30	HRG
Phosphorus as P, Total	0.17	mg/L	.01	1	SM 4500P-E	06/04	12:30	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	06/04	13:09	JCL
Nitrogen, Nitrate	0.08	mg/L	.05	1	EPA 353.2	06/04	18:36	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/04	16:57	JCL
Nitrogen, Total Kjeldahl	0.68	mg/L	.25	1	EPA 351.2	06/05	13:30	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	06/04	11:05	EMW
Total Organic Carbon	3.4	mg/L	1	1	SM5310 C	06/04	20:07	ALD
RESIDUES								
Solids, Total Dissolved	71	mg/L	5	1	SM 2540C	06/05	13:45	TMH
Solids, Total Suspended	83	mg/L	3	1	SM 2540D	06/05	13:45	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	20	mg/L	1	1	SM 2320 B	06/09	10:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020556

Date Collected: 06/03/15 12:45
Collected By: Client

Sample Desc: PR-3 Surface

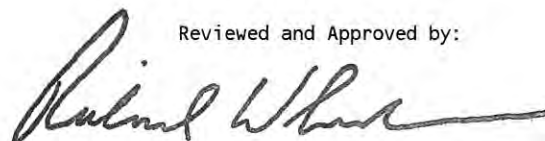
Date Received: 06/03/15 17:00

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	<2	/100mL	2	1	SM 9222D	06/03	18:00	PLW
Total Coliform	580	mpn/100mL	1	1	SM 9223B	06/04	12:45	RES
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	06/04	14:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	06/05	12:30	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	06/04	12:30	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	06/04	13:24	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	06/04	18:37	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/04	16:58	JCL
Nitrogen, Total Kjeldahl	0.30	mg/L	.25	1	EPA 351.2	06/05	13:31	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	06/04	11:05	EMW
Total Organic Carbon	2.6	mg/L	1	1	SM5310 C	06/04	20:24	ALD
RESIDUES								
Solids, Total Dissolved	49	mg/L	5	1	SM 2540C	06/05	13:45	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	06/05	13:45	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	19	mg/L	1	1	SM 2320 B	06/09	10:45	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020556

Date Collected: 06/03/15 12:45
Collected By: Client

Sample Desc: PR-3 Surface

Date Received: 06/03/15 17:00

PWSID: 3130843

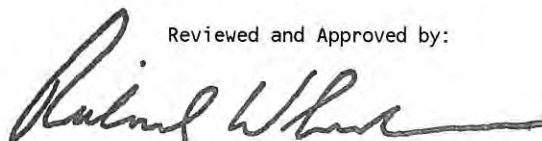
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
--------	------	--------------	------------------	-----------	--------------	--------------	---------

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 06/03/15 at 18:10.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020557

Date Collected: 06/03/15 12:45
Collected By: Client

Sample Desc: PR-3 Mid-Depth

Date Received: 06/03/15 17:00

PWSID: 3130843

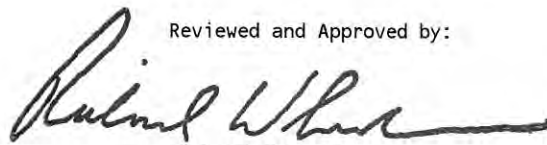
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	06/04	14:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	06/05	12:30	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	06/04	12:30	HRG
NITROGENS								
Nitrogen, Ammonia	0.05	mg/L	.05	1	D6919-03	06/04	13:38	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	06/04	18:38	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/04	16:59	JCL
Nitrogen, Total Kjeldahl	0.38	mg/L	.25	1	EPA 351.2	06/05	13:32	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	06/04	11:05	EMW
Total Organic Carbon	2.6	mg/L	1	1	SM5310 C	06/04	20:42	ALD
RESIDUES								
Solids, Total Dissolved	50	mg/L	5	1	SM 2540C	06/05	13:45	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	06/05	13:45	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	19	mg/L	1	1	SM 2320 B	06/09	10:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020558

Date Collected: 06/03/15 12:45
Collected By: Client

Sample Desc: PR-3 Deep

Date Received: 06/03/15 17:00

PWSID: 3130843

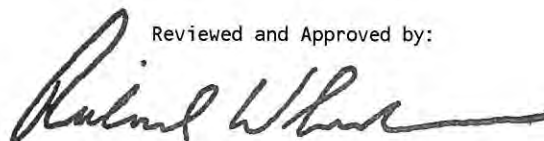
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	06/04	14:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	06/05	12:30	HRG
Phosphorus as P, Total	0.63	mg/L	.01	1	SM 4500P-E	06/04	12:30	HRG
NITROGENS								
Nitrogen, Ammonia	0.39	mg/L	.05	1	D6919-03	06/04	13:53	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	06/04	18:39	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/04	17:00	JCL
Nitrogen, Total Kjeldahl	2.06	mg/L	.25	1	EPA 351.2	06/05	13:33	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/L	2	1	SM 5210B	06/04	11:05	EMW
Total Organic Carbon	4.0	mg/L	1	1	SM5310 C	06/04	22:04	ALD
RESIDUES								
Solids, Total Dissolved	52	mg/L	5	1	SM 2540C	06/05	13:45	TMH
Solids, Total Suspended	140	mg/L	3	1	SM 2540D	06/05	13:45	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	23	mg/L	1	1	SM 2320 B	06/09	11:00	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
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Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020558

Date Collected: 06/03/15 12:45
Collected By: Client

Sample Desc: PR-3 Deep

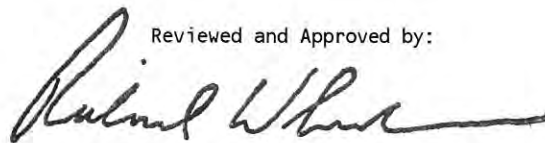
Date Received: 06/03/15 17:00

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
02	The SM 5210B sample did not have a DO depletion of at least 2 mg/L.							

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020559

Date Collected: 06/03/15 13:50
Collected By: Client

Sample Desc: PR-4 Surface

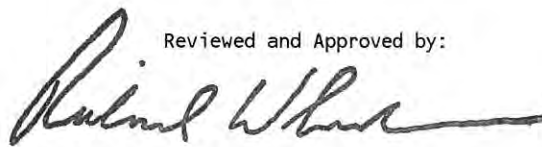
Date Received: 06/03/15 17:00

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	2	/100mL	2	1	SM 9222D	06/03	18:00	PLW
Total Coliform	>2400	mpn/100mL	1	1	SM 9223B	06/04	12:45	RES
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	06/04	14:15	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	06/08	12:15	HRG
Phosphorus as P, Total	0.03	mg/L	.01	1	SM 4500P-E	06/05	12:00	HRG
NITROGENS								
Nitrogen, Ammonia	0.08	mg/L	.05	1	D6919-03	06/04	14:08	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	06/04	18:42	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	06/04	17:02	JCL
Nitrogen, Total Kjeldahl	0.38	mg/L	.25	1	EPA 351.2	06/05	13:36	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	06/04	11:05	EMW
Total Organic Carbon	2.7	mg/L	1	1	SM5310 C	06/04	22:40	ALD
RESIDUES								
Solids, Total Dissolved	57	mg/L	5	1	SM 2540C	06/05	14:10	TMH
Solids, Total Suspended	4	mg/L	3	1	SM 2540D	06/05	13:45	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	20	mg/L	1	1	SM 2320 B	06/09	11:00	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 06/15/15
Lab ID: 3157-15-0020559

Date Collected: 06/03/15 13:50
Collected By: Client

Sample Desc: PR-4 Surface

Date Received: 06/03/15 17:00

PWSID: 3130843

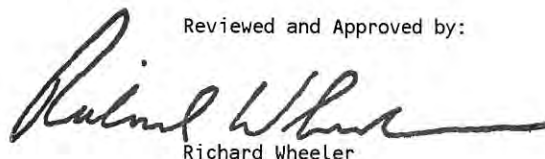
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
-----	-----	-----	-----	-----	-----	-----	-----

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 06/03/15 at 18:10.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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bsw
05/11/15 12:11:09 PM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 1

Chain of Custody

Account: 3157

Work Order: 006225

Project Leader: rxw

No: 257589

Customer: David Wertz

Work Order Description: Prompton Reservoir

Remarks:

Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516

Ext: WACIK

Samplers:

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 5 Deg C. If Temp Unacceptable, On Ice? Y N

Approved By: B5W

20552

Sample No: 1 Desc: PR-1 Surface

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

fc, tc,

Sample No: 2 Desc: PR-2 Surface

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

fc, tc,

Sample No: 3 Desc: PR-2 Mid-Depth

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

Matrix: 0

Date: 6/3/15
Time: 1345

- A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
- B - 1 X 8oz Alk p w/ Cool to 6 C;
- C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
- D - 1 X L bod p w/ Cool to 6 C;
- E - 1 X Pt no3no3 p w/ Cool to 6 C;
- F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: 0

Date: 6/3/15
Time: 1315

- A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
- B - 1 X 8oz Alk p w/ Cool to 6 C;
- C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
- D - 1 X L bod p w/ Cool to 6 C;
- E - 1 X Pt no3no3 p w/ Cool to 6 C;
- F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: 0

Date: 6/3/15
Time: 1315

- A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
- B - 1 X 8oz Alk p w/ Cool to 6 C;
- C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
- D - 1 X L bod p w/ Cool to 6 C;
- E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by:

Received by:

Date:

Time: 330

Received for laboratory by:

Date:

Time: 1700

Sample entered by:

bsw
05/11/15 12:11:09 PM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 2

Chain of Custody

Account: 3157

Work Order: 006225

Project Leader: rxw

No: 257589

Customer: David Wertz

Work Order Description: Prompton Reservoir

Remarks:

Address: Tetra Tech (Beltzville Dam)

1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers:

WOCik

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 5 Deg C. If Temp Unacceptable, On Ice? Y N

Approved By: BSW

20555

Sample No: 4 Desc: PR-2 Deep

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

Matrix: O

Date: 4/3/15

Time: 1315

20556

Sample No: 5 Desc: PR-3 Surface

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

fc, tc,

Matrix: O

Date: 4/3/15

Time: 1245

20557

Sample No: 6 Desc: PR-3 Mid-Depth

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

Matrix: O

Date: 4/3/15

Time: 1245

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mLMicro p w/ Sterile/Na2S2O3;
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by:

Received by:

Date: 4/3/15

Time: 330

Received for laboratory by:

Date: 6-3-15

Time: 1700

Sample entered by:

bsw
05/11/15 12:11:09 PM

M. J. REIDER ASSOCIATES, INC.

COFC. PRT
Page: 3

Chain of Custody

Account: 3157

Work Order: 006225

Project Leader: rxw

No: 257589

Customer: David Wertz

Work Order Description: Prompton Reservoir

Address: Tetra Tech (Beltsville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers:

WJACIK

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 5 Deg C. If Temp Unacceptable, On Ice? Y N

Approved By: BSW

20558

Sample No: 7 Desc: PR-3 Deep

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,

20559

Sample No: 8 Desc: PR-4 Surface

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,

fc, tc,

Matrix: o

Date: 6/3/15

Time: 1245

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Matrix: o

Date: 6/3/15

Time: 1350

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mLMicro p w/ Sterile/Na2S2O3;

Relinquished by:

Received by:

Date: 6/3/15

Time: 330

Received for laboratory by:

Date: 6-3-15

Time: 1700

Sample entered by:



CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/13/15
Lab ID: 3157-15-0023001

Date Collected: 06/30/15 10:50
Collected By: Client

Sample Desc: PR-1 Surface

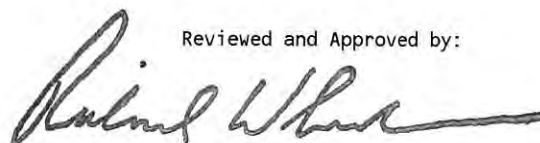
Date Received: 06/30/15 16:20

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	270	/100ml	2	1	SM 9222D	06/30	17:30	RES
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	07/01	11:25	TNS
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.03	mg/L	.01	1	SM 4500P-E	07/01	10:15	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/01	13:00	HRG
Phosphorus as P, Total	0.04	mg/L	.01	1	SM 4500P-E	07/01	12:40	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/01	14:11	JCL
Nitrogen, Nitrate	0.18	mg/L	.05	1	EPA 353.2	07/01	17:29	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/01	15:41	JCL
Nitrogen, Total Kjeldahl	0.33	mg/L	.25	1	EPA 351.2	07/02	16:53	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/01	12:00	EMW
Total Organic Carbon	3.9	mg/L	1	1	SM5310 C	07/01	21:55	ALD
RESIDUES								
Solids, Total Dissolved	38	mg/L	5	1	SM 2540C	07/01	13:25	TMH
Solids, Total Suspended	3	mg/L	3	1	SM 2540D	07/01	13:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	18	mg/L	1	1	SM 2320 B	07/02	13:45	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/13/15
Lab ID: 3157-15-0023001

Date Collected: 06/30/15 10:50
Collected By: Client

Sample Desc: PR-1 Surface

Date Received: 06/30/15 16:20

PWSID: 3130843

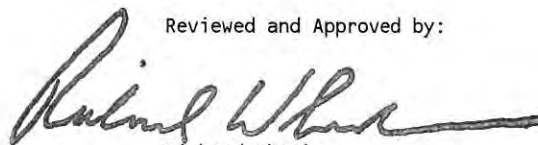
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 06/30/15 at 17:25.

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Attention: David Wertz
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 Arlington VA 22201

Date of Report: 07/13/15
 Lab ID: 3157-15-0023002

Date Collected: 06/30/15 11:55
 Collected By: Client

Sample Desc: PR-2 Surface


Date Received: 06/30/15 16:20

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	5	/100ml	2	1	SM 9222D	06/30	17:30	RES
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	07/01	11:25	TNS
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.02	mg/L	.01	1	SM 4500P-E	07/01	10:15	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/01	13:00	HRG
Phosphorus as P, Total	0.03	mg/L	.01	1	SM 4500P-E	07/01	12:40	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/01	14:25	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/01	17:30	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/01	15:42	JCL
Nitrogen, Total Kjeldahl	0.93	mg/L	.25	1	EPA 351.2	07/02	16:55	JCL
OTHER								
Biochemical Oxygen Demand	4	mg/L	2	1	SM 5210B	07/01	12:00	EMW
Total Organic Carbon	3.4	mg/L	1	1	SM5310 C	07/01	23:10	ALD
RESIDUES								
Solids, Total Dissolved	45	mg/L	5	1	SM 2540C	07/01	13:25	TMH
Solids, Total Suspended	4	mg/L	3	1	SM 2540D	07/01	13:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	19	mg/L	1	1	SM 2320 B	07/02	13:45	HRG

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1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/13/15
Lab ID: 3157-15-0023002

Date Collected: 06/30/15 11:55
Collected By: Client

Sample Desc: PR-2 Surface

Date Received: 06/30/15 16:20

PWSID: 3130843

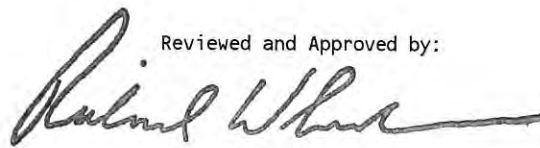
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 06/30/15 at 17:25.

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1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/13/15
Lab ID: 3157-15-0023003

Date Collected: 06/30/15 11:55
Collected By: Client

Sample Desc: PR-2 Mid-Depth

Date Received: 06/30/15 16:20

PWSID: 3130843

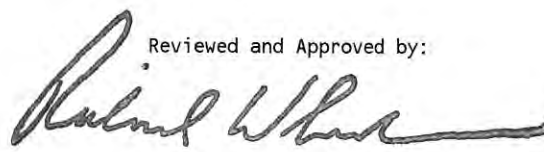
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	07/01	10:15	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/01	13:00	HRG
Phosphorus as P, Total	0.04	mg/L	.01	1	SM 4500P-E	07/01	12:40	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/01	14:40	JCL
Nitrogen, Nitrate	0.08	mg/L	.05	1	EPA 353.2	07/01	17:31	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/01	15:43	JCL
Nitrogen, Total Kjeldahl	0.54	mg/L	.25	1	EPA 351.2	07/02	16:56	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/01	12:00	EMW
Total Organic Carbon	4.8	mg/L	1	1	SM5310 C	07/01	23:42	ALD
RESIDUES								
Solids, Total Dissolved	43	mg/L	5	1	SM 2540C	07/01	13:25	TMH
Solids, Total Suspended	3	mg/L	3	1	SM 2540D	07/01	13:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	20	mg/L	1	1	SM 2320 B	07/02	13:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Date of Report: 07/13/15
 Lab ID: 3157-15-0023004

Date Collected: 06/30/15 11:55
 Collected By: Client

Sample Desc: PR-2 Deep

Date Received: 06/30/15 16:20

PWSID: 3130843

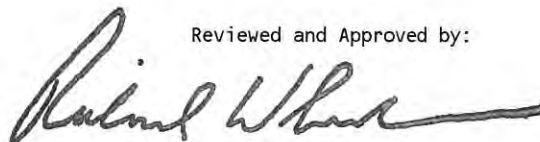
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.03	mg/L	.01	1	SM 4500P-E	07/01	10:20	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/01	13:00	HRG
Phosphorus as P, Total	0.04	mg/L	.01	1	SM 4500P-E	07/01	12:40	HRG
NITROGENS								
Nitrogen, Ammonia	0.08	mg/L	.05	1	D6919-03	07/01	14:54	JCL
Nitrogen, Nitrate	0.10	mg/L	.05	1	EPA 353.2	07/01	17:34	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/01	15:46	JCL
Nitrogen, Total Kjeldahl	0.62	mg/L	.25	1	EPA 351.2	07/02	16:57	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/01	12:00	EMW
Total Organic Carbon	5.3	mg/L	1	1	SM5310 C	07/02	00:32	ALD
RESIDUES								
Solids, Total Dissolved	62	mg/L	5	1	SM 2540C	07/01	13:25	TMH
Solids, Total Suspended	6	mg/L	3	1	SM 2540D	07/01	13:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	20	mg/L	1	1	SM 2320 B	07/02	13:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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 Arlington VA 22201

Date of Report: 07/13/15
 Lab ID: 3157-15-0023005

Date Collected: 06/30/15 11:30
 Collected By: Client

Sample Desc: PR-3 Surface

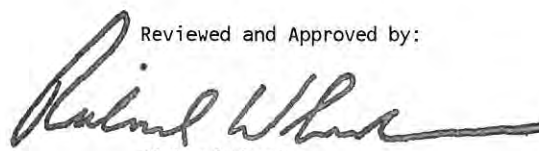
Date Received: 06/30/15 16:20

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	3	/100mL	2	1	SM 9222D	06/30	17:42	RES
Total Coliform	>2400	mpn/100mL	1	1	SM 9223B	07/01	11:25	TNS
CHEMISTRY								
COLORIMETRIC								
Phosphate as P, Ortho	0.02	mg/L	.01	1	SM 4500P-E	07/01	10:20	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/01	13:00	HRG
Phosphorus as P, Total	0.02	mg/L	.01	1	SM 4500P-E	07/01	12:40	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/01	15:09	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/01	17:35	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/01	15:47	JCL
Nitrogen, Total Kjeldahl	0.71	mg/L	.25	1	EPA 351.2	07/02	17:00	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/L	2	1	SM 5210B	07/01	12:00	EMW
Total Organic Carbon	3.5	mg/L	1	1	SM5310 C	07/02	00:47	ALD
RESIDUES								
Solids, Total Dissolved	59	mg/L	5	1	SM 2540C	07/01	13:25	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	07/01	13:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	21	mg/L	1	1	SM 2320 B	07/02	14:00	HRG

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1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/13/15
Lab ID: 3157-15-0023005

Date Collected: 06/30/15 11:30
Collected By: Client

Sample Desc: PR-3 Surface

Date Received: 06/30/15 16:20

PWSID: 3130843

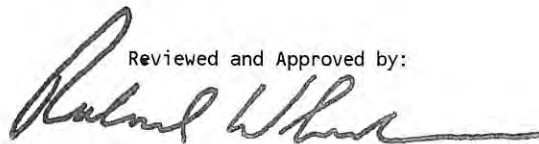
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 06/30/15 at 17:25.
- 03 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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 Arlington VA 22201

Date of Report: 07/13/15
 Lab ID: 3157-15-0023006

Date Collected: 06/30/15 11:30
 Collected By: Client

Sample Desc: PR-3 Mid-Depth

Date Received: 06/30/15 16:20

PWSID: 3130843

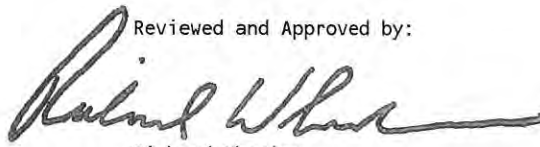
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/L	.01	1	SM 4500P-E	07/01	10:20	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/01	13:00	HRG
Phosphorus as P, Total	0.05	mg/L	.01	1	SM 4500P-E	07/01	12:40	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/01	15:24	JCL
Nitrogen, Nitrate	0.08	mg/L	.05	1	EPA 353.2	07/01	17:36	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/01	15:48	JCL
Nitrogen, Total Kjeldahl	0.66	mg/L	.25	1	EPA 351.2	07/02	17:01	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/01	12:00	EMW
Total Organic Carbon	4.6	mg/L	1	1	SM5310 C	07/02	01:04	ALD
RESIDUES								
Solids, Total Dissolved	58	mg/L	5	1	SM 2540C	07/01	13:25	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	07/01	13:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	19	mg/L	1	1	SM 2320 B	07/02	14:00	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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 Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


 Richard Wheeler

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Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/13/15
Lab ID: 3157-15-0023007

Date Collected: 06/30/15 11:30
Collected By: Client

Sample Desc: PR-3 Deep

Date Received: 06/30/15 16:20

PWSID: 3130843

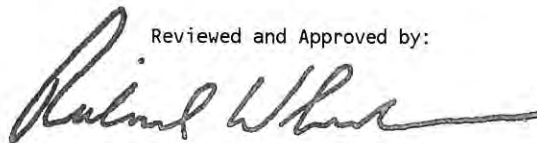
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.11	mg/L	.01	1	SM 4500P-E	07/01	10:20	HRG
Phosphorus as P, Dissolved	0.08	mg/L	.05	1	SM 4500P-E	07/01	13:05	HRG
Phosphorus as P, Total	0.13	mg/L	.01	1	SM 4500P-E	07/01	12:45	HRG
NITROGENS								
Nitrogen, Ammonia	1.17	mg/L	.05	1	D6919-03	07/01	15:38	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/01	17:37	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/01	15:49	JCL
Nitrogen, Total Kjeldahl	2.09	mg/L	.25	1	EPA 351.2	07/02	17:02	JCL
OTHER								
Biochemical Oxygen Demand	7	mg/L	2	1	SM 5210B	07/01	12:00	EMW
Total Organic Carbon	6.0	mg/L	1	1	SM5310 C	07/02	01:22	ALD
RESIDUES								
Solids, Total Dissolved	87	mg/L	5	1	SM 2540C	07/01	13:25	TMH
Solids, Total Suspended	12	mg/L	3	1	SM 2540D	07/01	13:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	41	mg/L	1	1	SM 2320 B	07/07	09:00	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.

Attention: David Wertz
 Reported To: Tetra Tech (Beltzville Dam)
 1320 North Courthouse Rd., Ste. 600
 Arlington VA 22201

Date of Report: 07/13/15
 Lab ID: 3157-15-0023008

Date Collected: 06/30/15 12:30
 Collected By: Client

Sample Desc: PR-4 Surface

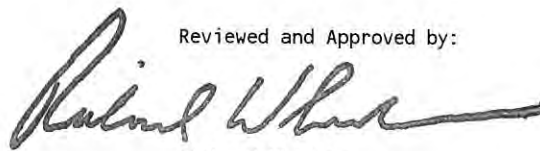
Date Received: 06/30/15 16:20

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTERIOLOGY								
Fecal Coliform	50	/100ml	2	1	SM 9222D	06/30	17:42	RES
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	07/01	11:25	TNS
CHEMISTRY								
COLORIMETRIC								
Phosphate as P, Ortho	0.05	mg/L	.01	1	SM 4500P-E	07/01	10:25	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/06	12:35	HRG
Phosphorus as P, Total	0.05	mg/L	.01	1	SM 4500P-E	07/02	12:00	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/01	15:53	JCL
Nitrogen, Nitrate	0.06	mg/L	.05	1	EPA 353.2	07/01	17:40	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/01	15:52	JCL
Nitrogen, Total Kjeldahl	0.61	mg/L	.25	1	EPA 351.2	07/02	17:03	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/L	2	1	SM 5210B	07/01	12:00	EMW
Total Organic Carbon	3.9	mg/L	1	1	SM5310 C	07/02	01:38	ALD
RESIDUES								
Solids, Total Dissolved	48	mg/L	5	1	SM 2540C	07/01	13:45	TMH
Solids, Total Suspended	3	mg/L	3	1	SM 2540D	07/01	13:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	20	mg/L	1	1	SM 2320 B	07/07	09:15	HRG

Distribution of Reports:
 Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


 Richard Wheeler

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CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/13/15
Lab ID: 3157-15-0023008

Date Collected: 06/30/15 12:30
Collected By: Client

Sample Desc: PR-4 Surface

Date Received: 06/30/15 16:20

PWSID: 3130843

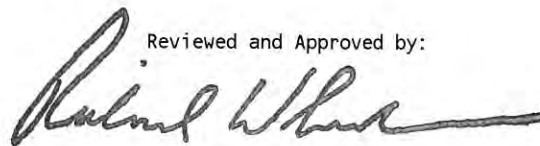
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
--------	------	--------------	------------------	-----------	--------------	--------------	---------

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 06/30/15 at 17:25.
- 03 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

Distribution of Reports:
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Reviewed and Approved by:


Richard Wheeler

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ejb
05/27/15 8:28:35 AM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 1

Account: 3157

Work Order: 006225

Project Leader: rxw

No: 258470

Customer: David Wertz

Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers:

WACIK

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 8

Deg C. If Temp Unacceptable, On Ice? N

Approved By: BSW

Sample No: 1 Desc: PR-1 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,

fc, tc,

Sample No: 2 Desc: PR-2 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,

fc, tc,

Sample No: 3 Desc: PR-2 Mid-Depth
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,

Matrix: o Date: 6/30/15
Time: 1050

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o Date: 6/30/15
Time: 1155

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o Date: 6/30/15
Time: 1155

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by:

Received by:

Received for Laboratory by:

Date: 6/30/15

Time: 1500

Date: 6-30-15

Time: 1620

Sample entered by: A

ejb
05/27/15 8:28:35 AM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 2

Account: 3157

Work Order: 006225

Project Leader: rxw

No: 258470

Customer: David Wertz

Work Order Description: Prompton Reservoir

Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers:

WACIK

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 8 Deg C. If Temp Unacceptable, On Ice? ☒ N

Approved By: BSW

Sample No: 4 Desc: PR-2 Deep

nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

Sample No: 5 Desc: PR-3 Surface

nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

fc, tcr

Sample No: 6 Desc: PR-3 Mid-Depth

nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod

Matrix: o

Date: 6/30/15

Time: 1155

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

Matrix: o

Date: 6/30/15

Time: 1130

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o

Date: 6/30/15

Time: 1130

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by: [Signature]

Received by: [Signature]

Received for Laboratory by: [Signature]

Date: 6/30/15

Time: 1500

Date: 6-30-15

Time: 1620

Sample entered by: [Signature]

M. J. REIDER ASSOCIATES, INC.

ejb
05/27/15 8:28:35 AM

Chain of Custody

Account: 3157 Work Order: 006225

Project Leader: rxw

No: 258470

Customer: David Wertz

Work Order Description: Prompton Reservoir

Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Remarks:

Phone: 703-387-5516 Ext:

Samplers:

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 8 Deg C. If Temp Unacceptable, On Ice? ☒ N

Approved By: B5W

Sample No: 7 Desc: PR-3 Deep
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod
fc, tc,

Sample No: 8 Desc: PR-4 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod
fc, tc,

Matrix: o Date: 6/30/15
Time: 1130

- A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
- B - 1 X 8oz Alk p w/ Cool to 6 C;
- C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
- D - 1 X L bod p w/ Cool to 6 C;
- E - 1 X Pt no3no3 p w/ Cool to 6 C;

Matrix: o Date: 6/30/15
Time: 1230

- A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
- B - 1 X 8oz Alk p w/ Cool to 6 C;
- C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
- D - 1 X L bod p w/ Cool to 6 C;
- E - 1 X Pt no3no3 p w/ Cool to 6 C;
- F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Relinquished by:

Received for Laboratory by:

Date: 6/30/15

Time: 1500

Date: 6/30/15

Time: 1620

Sample entered by: R

CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.

Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028777

Date Collected: 07/22/15 11:15
Collected By: Client

Sample Desc: PR-1 Surface

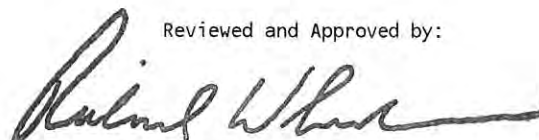
Date Received: 07/22/15 17:40

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	3	/100mL	2	1	SM 9222D	07/22	19:00	TNS
Total Coliform	>2400	mpn/100mL	1	1	SM 9223B	07/23	13:00	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	07/23	14:46	ALD
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/28	12:05	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	07/27	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	0.08	mg/L	.05	1	D6919-03	07/23	14:51	JCL
Nitrogen, Nitrate	0.11	mg/L	.05	1	EPA 353.2	07/23	17:36	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/23	15:52	JCL
Nitrogen, Total Kjeldahl	0.36	mg/L	.25	1	EPA 351.2	07/27	15:50	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/23	12:05	EMW
Total Organic Carbon	4.1	mg/L	1	1	SM5310 C	07/27	16:54	ALD
RESIDUES								
Solids, Total Dissolved	55	mg/L	5	1	SM 2540C	07/28	14:35	TMH
Solids, Total Suspended	4	mg/L	3	1	SM 2540D	07/28	14:35	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	20	mg/L	1	1	SM 2320 B	07/27	13:30	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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CERTIFICATE OF ANALYSIS
M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028777

Date Collected: 07/22/15 11:15
Collected By: Client

Sample Desc: PR-1 Surface

Date Received: 07/22/15 17:40

PWSID: 3130843

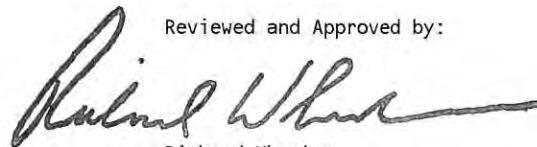
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 This sample was not collected in the appropriate container for microbiology analysis. The customer was contacted and they authorized the analysis.
- 02 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 03 The total coliform sample was placed in the incubator on 07/22/15 at 18:50.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028778

Date Collected: 07/22/15 12:45
Collected By: Client

Sample Desc: PR-2 Surface

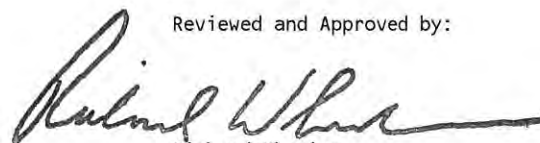
Date Received: 07/22/15 17:40

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTERIOLOGY								
MICROBIOLOGY								
Fecal Coliform	<2	/100mL	2	1	SM 9222D	07/22	19:00	TNS
Total Coliform	>2400	mpn/100mL	1	1	SM 9223B	07/23	13:00	PLW
CHEMISTRY								
COLORIMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	07/23	14:46	ALD
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/28	12:05	HRG
Phosphorus as P, Total	0.02	mg/L	.01	1	SM 4500P-E	07/27	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/23	15:06	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/23	17:37	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/23	15:53	JCL
Nitrogen, Total Kjeldahl	0.52	mg/L	.25	1	EPA 351.2	07/27	15:51	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/23	12:05	EMW
Total Organic Carbon	3.9	mg/L	1	1	SM5310 C	07/27	17:10	ALD
RESIDUES								
Solids, Total Dissolved	52	mg/L	5	1	SM 2540C	07/28	14:35	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	07/28	14:35	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	18	mg/L	1	1	SM 2320 B	07/27	13:30	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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CERTIFICATE OF ANALYSIS
M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028778

Date Collected: 07/22/15 12:45
Collected By: Client

Sample Desc: PR-2 Surface

Date Received: 07/22/15 17:40

PWSID: 3130843

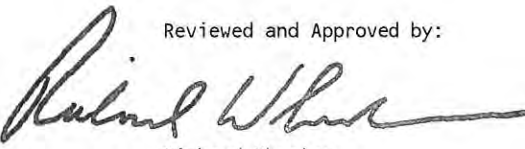
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
--------	------	--------------	------------------	-----------	--------------	--------------	---------

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 07/22/15 at 18:50.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.

Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028779

Date Collected: 07/22/15 12:45
Collected By: Client

Sample Desc: PR-2 Mid-Depth

Date Received: 07/22/15 17:40

PWSID: 3130843

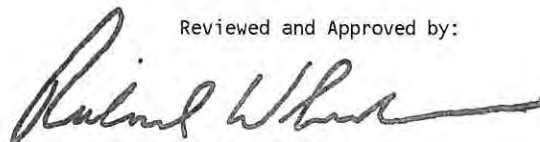
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	07/23	14:46	ALD
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/28	12:05	HRG
Phosphorus as P, Total	0.02	mg/L	.01	1	SM 4500P-E	07/27	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/23	15:20	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/23	17:38	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/23	15:54	JCL
Nitrogen, Total Kjeldahl	0.42	mg/L	.25	1	EPA 351.2	07/27	15:52	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/23	12:05	ENW
Total Organic Carbon	3.8	mg/L	1	1	SM5310 C	07/27	17:26	ALD
RESIDUES								
Solids, Total Dissolved	51	mg/L	5	1	SM 2540C	07/28	14:35	TMH
Solids, Total Suspended	10	mg/L	3	1	SM 2540D	07/28	14:35	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	20	mg/L	1	1	SM 2320 B	07/27	13:30	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.

Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028780

Date Collected: 07/22/15 12:45
Collected By: Client

Sample Desc: PR-2 Deep

Date Received: 07/22/15 17:40

PWSID: 3130843

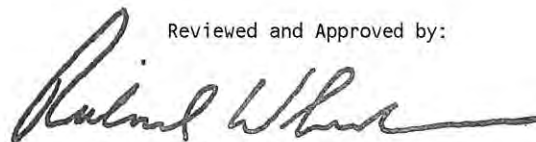
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	07/23	14:46	ALD
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/28	12:05	HRG
Phosphorus as P, Total	0.11	mg/L	.01	1	SM 4500P-E	07/27	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	0.30	mg/L	.05	1	D6919-03	07/23	15:35	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/23	17:41	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/23	15:57	JCL
Nitrogen, Total Kjeldahl	0.78	mg/L	.25	1	EPA 351.2	07/27	15:55	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/23	12:05	EMW
Total Organic Carbon	4.4	mg/L	1	1	SM5310 C	07/27	17:42	ALD
RESIDUES								
Solids, Total Dissolved	71	mg/L	5	1	SM 2540C	07/28	14:35	TMH
Solids, Total Suspended	31	mg/L	3	1	SM 2540D	07/28	14:35	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	23	mg/L	1	1	SM 2320 B	07/27	13:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028781

Date Collected: 07/22/15 12:15
Collected By: Client

Sample Desc: PR-3 Surface

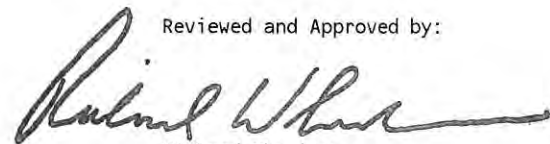
Date Received: 07/22/15 17:40

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTERIOLOGY								
MICROBIOLOGY								
Fecal Coliform	2	/100mL	2	1	SM 9222D	07/22	19:15	TNS
Total Coliform	>2400	mpn/100mL	1	1	SM 9223B	07/23	13:00	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	07/23	14:46	ALD
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/28	12:10	HRG
Phosphorus as P, Total	0.03	mg/L	.01	1	SM 4500P-E	07/27	14:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/23	15:50	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/23	17:42	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/23	15:58	JCL
Nitrogen, Total Kjeldahl	0.65	mg/L	.25	1	EPA 351.2	07/27	15:56	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/L	2	1	SM 5210B	07/23	12:05	EMW
Total Organic Carbon	4.1	mg/L	1	1	SM5310 C	07/27	17:57	ALD
RESIDUES								
Solids, Total Dissolved	57	mg/L	5	1	SM 2540C	07/28	14:35	TMH
Solids, Total Suspended	6	mg/L	3	1	SM 2540D	07/28	14:35	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	19	mg/L	1	1	SM 2320 B	07/27	13:45	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028781

Date Collected: 07/22/15 12:15
Collected By: Client

Sample Desc: PR-3 Surface

Date Received: 07/22/15 17:40

PWSID: 3130843

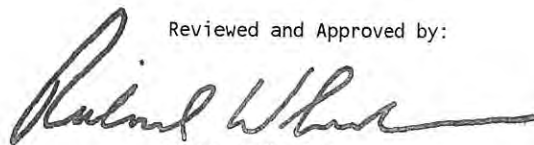
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
--------	------	--------------	------------------	-----------	--------------	--------------	---------

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 07/22/15 at 18:50.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028782

Date Collected: 07/22/15 12:15
Collected By: Client

Sample Desc: PR-3 Mid-Depth

Date Received: 07/22/15 17:40

PWSID: 3130843

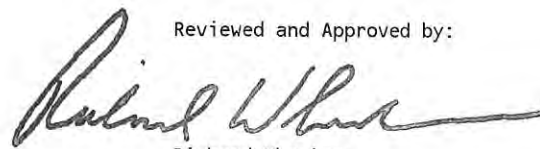
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	07/23	14:46	ALD
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/28	12:10	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	07/27	14:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/23	16:04	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/23	17:43	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/23	15:59	JCL
Nitrogen, Total Kjeldahl	0.32	mg/L	.25	1	EPA 351.2	07/27	15:57	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/23	12:05	EMW
Total Organic Carbon	3.9	mg/L	1	1	SM5310 C	07/27	18:13	ALD
RESIDUES								
Solids, Total Dissolved	61	mg/L	5	1	SM 2540C	07/28	14:35	TMH
Solids, Total Suspended	11	mg/L	3	1	SM 2540D	07/28	14:35	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	21	mg/L	1	1	SM 2320 B	07/27	14:00	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028783

Date Collected: 07/22/15 12:15
Collected By: Client

Sample Desc: PR-3 Deep

Date Received: 07/22/15 17:40

PWSID: 3130843

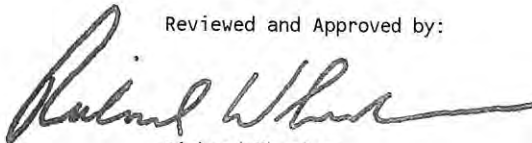
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.02	mg/L	.01	1	SM 4500P-E	07/23	14:46	ALD
Phosphorus as P, Dissolved	0.13	mg/L	.05	1	SM 4500P-E	07/28	12:10	HRG
Phosphorus as P, Total	0.15	mg/L	.01	1	SM 4500P-E	07/27	14:20	HRG
NITROGENS								
Nitrogen, Ammonia	2.00	mg/L	.05	1	D6919-03	07/23	16:19	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	07/23	17:44	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/23	16:00	JCL
Nitrogen, Total Kjeldahl	2.64	mg/L	.25	1	EPA 351.2	07/27	15:58	JCL
OTHER								
Biochemical Oxygen Demand	8	mg/L	2	1	SM 5210B	07/23	12:05	EMW
Total Organic Carbon	7.8	mg/L	1	1	SM5310 C	07/27	18:30	ALD
RESIDUES								
Solids, Total Dissolved	98	mg/L	5	1	SM 2540C	07/28	14:35	TMH
Solids, Total Suspended	21	mg/L	3	1	SM 2540D	07/28	14:35	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	51	mg/L	1	1	SM 2320 B	07/27	14:00	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028783

Date Collected: 07/22/15 12:15
Collected By: Client

Sample Desc: PR-3 Deep

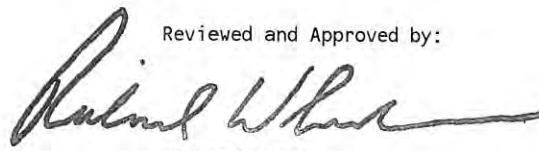
Date Received: 07/22/15 17:40

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
02	The SM 5210B sample did not have a DO depletion of at least 2							
	mg/L.							

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028784

Date Collected: 07/22/15 13:25
Collected By: Client

Sample Desc: PR-4 Surface

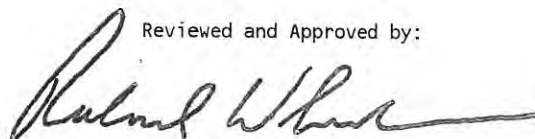
Date Received: 07/22/15 17:40

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	11	/100mL	2	1	SM 9222D	07/22	19:15	TNS
Total Coliform	2400	mpn/100mL	1	1	SM 9223B	07/23	13:00	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	07/23	14:46	ALD
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	07/28	12:10	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	07/27	14:20	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	07/23	16:33	JCL
Nitrogen, Nitrate	0.17	mg/L	.05	1	EPA 353.2	07/23	17:47	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	07/23	16:03	JCL
Nitrogen, Total Kjeldahl	0.26	mg/L	.25	1	EPA 351.2	07/27	16:01	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	07/23	12:05	EMW
Total Organic Carbon	2.3	mg/L	1	1	SM5310 C	07/27	19:30	ALD
RESIDUES								
Solids, Total Dissolved	61	mg/L	5	1	SM 2540C	07/28	15:00	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	07/28	15:00	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	24	mg/L	1	1	SM 2320 B	07/27	14:00	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 07/31/15
Lab ID: 3157-15-0028784

Date Collected: 07/22/15 13:25
Collected By: Client

Sample Desc: PR-4 Surface

Date Received: 07/22/15 17:40

PWSID: 3130843

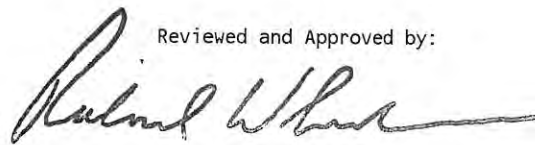
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
--------	------	--------------	------------------	-----------	--------------	--------------	---------

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 07/22/15 at 18:50.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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jbs
06/24/15 4:28:39 PM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 1

Chain of Custody

Account: 3157 Work Order: 006225
Customer: David Wertz Work Order Description: Prompton Reservoir
Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers: WACIK

Project Leader: rxw

No: 260280

Remarks:

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 12 Deg C. If Temp Unacceptable, On Ice? Y N
Approved By: TEN

Sample No: 1 Desc: PR-1 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,
fc, tc, NAP

Sample No: 2 Desc: PR-2 Surface

nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod,
fc, tc, NAP

Sample No: 3 Desc: PR-2 Mid-Depth

nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod,
NAP

28777 fecal Received
Empty. TEN 7-22-15

Matrix: O Date: 7/22/15
Time: 1115
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: O Date: 7/22/15
Time: 1245
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: O Date: 7/22/15
Time: 1245
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by: [Signature]

Received by: [Signature]

Received for laboratory by: Thomas C. Nelson

Date: 7/22/15

Date: 7/22/15

Time: 1530

Time: 1240

Sample entered by: RJC

jbs
06/24/15 4:28:39 PM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 2

Chain of Custody

Account: 3157 Work Order: 006225

Project Leader: rxw

No: 260280

Customer: David Wertz

Work Order Description: Prompton Reservoir

Address: Tetra Tech (Beltsville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers: WAGIK

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 12 Deg C. If Temp Unacceptable, On Ice? Y N

Approved By: TCN

Sample No: 4 Desc: PR-2 Deep
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod, NAP

Sample No: 5 Desc: PR-3 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod, NAP

Sample No: 6 Desc: PR-3 Mid-Depth
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod, NAP

Matrix: o Date: 7/22/15
Time: 1245

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Matrix: o Date: 7/22/15
Time: 1215

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o Date: 7/22/15
Time: 1215

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by: [Signature]

Received by: [Signature]

Received for laboratory by: [Signature]

Date: 7/22/15 Time: 1530

Date: 7/22/15 Time: 1740

Sample entered by: RTC

M. J. REIDER ASSOCIATES, INC.

jbs
06/24/15 4:28:39 PM

Chain of Custody

No: 260280

Project Leader: rxw

Work Order: 006225

Work Order Description: Prompton Reservoir

Customer: David Wertz

Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers: WACIK

Remarks:

Total Sampling Time (hours): _____ Bottle Prep by: _____

Laboratory Receipt Temp: 12 Deg C. If Temp Unacceptable, On Ice? Y N
Approved By: rxw

Sample No: 7 Desc: PR-3 Deep
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,
NAP

Sample No: 8 Desc: PR-4 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,
NAP

Matrix: o Date: 7/22/15
Time: 1215

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Matrix: o Date: 7/22/15
Time: 125

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mLMicro p w/ Sterile/Na2S2O3;

Relinquished by: [Signature] Received by: Tham C. Wilson

Date: 7/22/15 Time: 1530

Date: 7/22/15 Time: 1740

Sample entered by: RJC

CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.

Attention: David Wertz
 Reported To: Tetra Tech (Beltzville Dam)
 1320 North Courthouse Rd., Ste. 600
 Arlington VA 22201

Date of Report: 08/28/15
 Lab ID: 3157-15-0032797

Date Collected: 08/12/15 11:10
 Collected By: Client

Sample Desc: PR-1 Surface

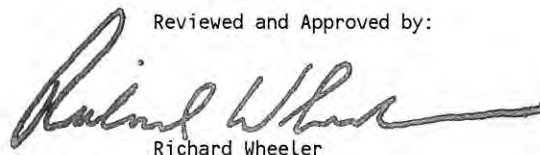
Date Received: 08/12/15 16:30

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTERIOLOGY								
MICROBIOLOGY								
Fecal Coliform	26	/100mL	2	1	SM 9222D	08/12	17:00	TNS
Total Coliform	>2400	mpn/100mL	1	1	SM 9223B	08/13	11:50	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/13	14:40	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	08/18	13:50	HRG
Phosphorus as P, Total	0.03	mg/L	.01	1	SM 4500P-E	08/13	13:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	08/13	06:15	JCL
Nitrogen, Nitrate	0.10	mg/L	.05	1	EPA 353.2	08/13	17:12	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	08/13	15:56	JCL
Nitrogen, Total Kjeldahl	0.48	mg/L	.25	1	EPA 351.2	08/24	16:08	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/L	2	1	SM 5210B	08/13	11:15	ALD
Total Organic Carbon	3.3	mg/L	1	1	SM5310 C	08/17	18:10	ALD
RESIDUES								
Solids, Total Dissolved	53	mg/L	5	1	SM 2540C	08/17	14:00	TMH
Solids, Total Suspended	17	mg/L	3	1	SM 2540D	08/17	14:00	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	23	mg/L	1	1	SM 2320 B	08/17	10:45	HRG

Distribution of Reports:
 Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


 Richard Wheeler

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M.J. Reider Associates, Inc.

Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032797

Date Collected: 08/12/15 11:10
Collected By: Client

Sample Desc: PR-1 Surface

Date Received: 08/12/15 16:30

PWSID: 3130843

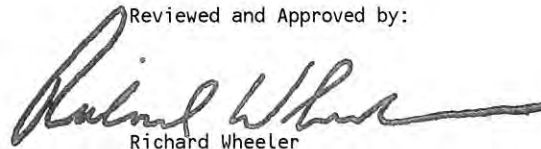
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.
- 02 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 03 The total coliform sample placed in the incubator on 08/12/15 at 17:20

Distribution of Reports:
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Richard Wheeler

Page 2 of 2

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M.J. Reider Associates, Inc.

Attention: David Wertz
 Reported To: Tetra Tech (Beltzville Dam)
 1320 North Courthouse Rd., Ste. 600
 Arlington VA 22201

Date of Report: 08/28/15
 Lab ID: 3157-15-0032798

Date Collected: 08/12/15 12:20
 Collected By: Client

Sample Desc: PR-2 Surface

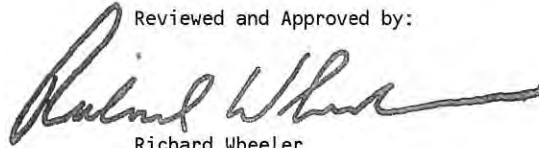
Date Received: 08/12/15 16:30

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTERIOLOGY								
MICROBIOLOGY								
Fecal Coliform	<2	/100mL	2	1	SM 9222D	08/12	17:00	TNS
Total Coliform	>2400	mpn/100mL	1	1	SM 9223B	08/13	11:50	PLW
CHEMISTRY								
COLORIMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/13	14:40	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	08/18	13:50	HRG
Phosphorus as P, Total	0.02	mg/L	.01	1	SM 4500P-E	08/13	13:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	08/13	11:49	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	08/13	17:13	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	08/13	15:57	JCL
Nitrogen, Total Kjeldahl	0.65	mg/L	.25	1	EPA 351.2	08/24	16:09	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/L	2	1	SM 5210B	08/13	11:15	ALD
Total Organic Carbon	3.7	mg/L	1	1	SM5310 C	08/17	18:26	ALD
RESIDUES								
Solids, Total Dissolved	56	mg/L	5	1	SM 2540C	08/17	14:00	TMH
Solids, Total Suspended	4	mg/L	3	1	SM 2540D	08/17	14:00	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	21	mg/L	1	1	SM 2320 B	08/17	10:45	HRG

Distribution of Reports:
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Reviewed and Approved by:


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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032798

Date Collected: 08/12/15 12:20
Collected By: Client

Sample Desc: PR-2 Surface

Date Received: 08/12/15 16:30

PWSID: 3130843

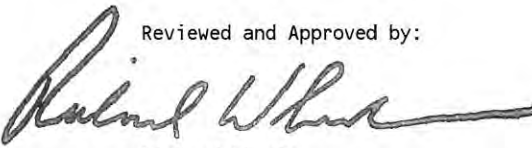
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample placed in the incubator on 08/12/15 at 17:20
- 03 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

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Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032799

Date Collected: 08/12/15 12:20
Collected By: Client

Sample Desc: PR-2 Mid-Depth

Date Received: 08/12/15 16:30

PWSID: 3130843

CHEMISTRY

COLORMETRIC

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/13	14:45	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	08/18	13:55	HRG
Phosphorus as P, Total	0.02	mg/L	.01	1	SM 4500P-E	08/13	13:15	HRG

NITROGENS

Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	08/13	12:03	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	08/13	17:14	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	08/13	15:58	JCL
Nitrogen, Total Kjeldahl	0.52	mg/L	.25	1	EPA 351.2	08/24	16:09	JCL

OTHER

Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	08/13	11:15	ALD
Total Organic Carbon	3.4	mg/L	1	1	SM5310 C	08/17	18:42	ALD

RESIDUES

Solids, Total Dissolved	51	mg/L	5	1	SM 2540C	08/17	14:00	TMH
Solids, Total Suspended	3	mg/L	3	1	SM 2540D	08/17	14:00	TMH

TITRATIONS

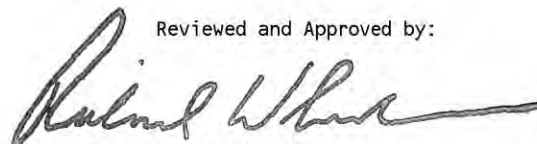
Alkalinity, Total to pH 4.5	23	mg/L	1	1	SM 2320 B	08/17	11:00	HRG
-----------------------------	----	------	---	---	-----------	-------	-------	-----

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Reviewed and Approved by:


Richard Wheeler

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Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032800

Date Collected: 08/12/15 12:20
Collected By: Client

Sample Desc: PR-2 Deep

Date Received: 08/12/15 16:30

PWSID: 3130843

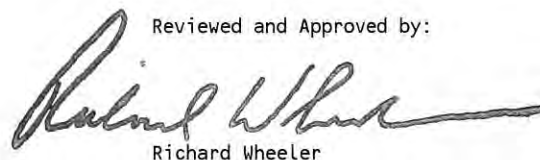
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/13	14:40	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	08/18	13:55	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	08/13	13:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	08/13	12:18	JCL
Nitrogen, Nitrate	0.18	mg/L	.05	1	EPA 353.2	08/13	17:17	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	08/13	16:01	JCL
Nitrogen, Total Kjeldahl	0.45	mg/L	.25	1	EPA 351.2	08/24	16:12	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	08/13	11:15	ALD
Total Organic Carbon	3.6	mg/L	1	1	SM5310 C	08/17	19:12	ALD
RESIDUES								
Solids, Total Dissolved	73	mg/L	5	1	SM 2540C	08/17	14:00	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	08/17	14:00	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	25	mg/L	1	1	SM 2320 B	08/17	11:00	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

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Richard Wheeler

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Attention: David Wertz
 Reported To: Tetra Tech (Beltzville Dam)
 1320 North Courthouse Rd., Ste. 600
 Arlington VA 22201

Date of Report: 08/28/15
 Lab ID: 3157-15-0032801

Date Collected: 08/12/15 12:00
 Collected By: Client

Sample Desc: PR-3 Surface

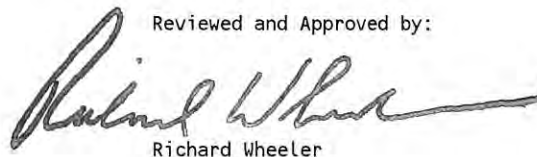
Date Received: 08/12/15 16:30

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	<2	/100ml	2	1	SM 9222D	08/12	17:10	TNS
Total Coliform	>2400	mpn/100ml	1	1	SM 9223B	08/13	11:50	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/13	14:45	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	08/18	13:55	HRG
Phosphorus as P, Total	0.03	mg/L	.01	1	SM 4500P-E	08/13	13:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	08/13	12:32	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	08/13	17:18	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	08/13	16:02	JCL
Nitrogen, Total Kjeldahl	0.63	mg/L	.25	1	EPA 351.2	08/24	16:13	JCL
OTHER								
Biochemical Oxygen Demand	2	mg/L	2	1	SM 5210B	08/13	11:15	ALD
Total Organic Carbon	3.8	mg/L	1	1	SM5310 C	08/17	19:28	ALD
RESIDUES								
Solids, Total Dissolved	69	mg/L	5	1	SM 2540C	08/17	14:00	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	08/17	14:00	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	21	mg/L	1	1	SM 2320 B	08/17	11:00	HRG

Distribution of Reports:
 Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


 Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032801

Date Collected: 08/12/15 12:00
Collected By: Client

Sample Desc: PR-3 Surface

Date Received: 08/12/15 16:30

PWSID: 3130843

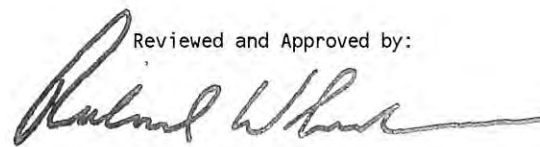
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample placed in the incubator on 08/12/15 at 17:20
- 03 The SM 5210B sample did not have a DO depletion of at least 2 mg/L.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032802

Date Collected: 08/12/15 12:00
Collected By: Client

Sample Desc: PR-3 Mid-Depth

Date Received: 08/12/15 16:30

PWSID: 3130843

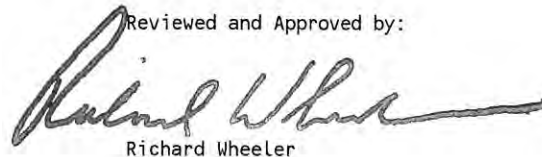
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/13	14:45	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	08/18	13:55	HRG
Phosphorus as P, Total	<.01	mg/L	.01	1	SM 4500P-E	08/13	13:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	08/13	12:47	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	08/13	17:19	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	08/13	16:03	JCL
Nitrogen, Total Kjeldahl	0.48	mg/L	.25	1	EPA 351.2	08/24	16:14	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	08/13	11:15	ALD
Total Organic Carbon	3.2	mg/L	1	1	SM5310 C	08/17	19:43	ALD
RESIDUES								
Solids, Total Dissolved	64	mg/L	5	1	SM 2540C	08/17	14:00	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	08/17	14:00	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	24	mg/L	1	1	SM 2320 B	08/17	11:00	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032803

Date Collected: 08/12/15 12:00
Collected By: Client

Sample Desc: PR-3 Deep

Date Received: 08/12/15 16:30

PWSID: 3130843

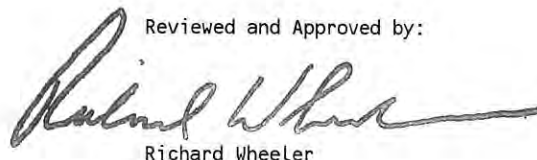
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.15	mg/L	.01	1	SM 4500P-E	08/13	14:45	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	08/19	13:40	HRG
Phosphorus as P, Total	0.30	mg/L	.01	1	SM 4500P-E	08/18	13:00	HRG
NITROGENS								
Nitrogen, Ammonia	1.58	mg/L	.05	1	D6919-03	08/13	13:02	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	08/13	17:20	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	08/13	16:04	JCL
Nitrogen, Total Kjeldahl	2.56	mg/L	.25	1	EPA 351.2	08/24	16:15	JCL
OTHER								
Biochemical Oxygen Demand	13	mg/L	2	1	SM 5210B	08/13	11:15	ALD
Total Organic Carbon	6.8	mg/L	1	1	SM5310 C	08/17	21:00	ALD
RESIDUES								
Solids, Total Dissolved	87	mg/L	5	1	SM 2540C	08/17	14:00	TMH
Solids, Total Suspended	21	mg/L	3	1	SM 2540D	08/17	14:00	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	48	mg/L	1	1	SM 2320 B	08/17	11:15	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032804

Date Collected: 08/12/15 13:10
Collected By: Client

Sample Desc: PR-4 Surface

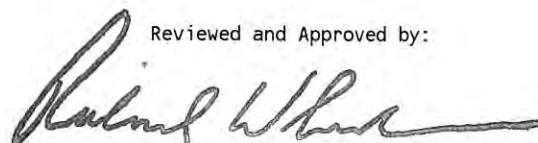
Date Received: 08/12/15 16:30

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	710	/100mL	2	1	SM 9222D	08/12	17:10	TNS
Total Coliform	>2400	mpn/100mL	1	1	SM 9223B	08/13	11:50	PLW
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	08/13	14:50	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	08/19	13:40	HRG
Phosphorus as P, Total	0.04	mg/L	.01	1	SM 4500P-E	08/18	13:00	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	08/13	13:16	JCL
Nitrogen, Nitrate	0.17	mg/L	.05	1	EPA 353.2	08/13	17:23	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	08/13	16:06	JCL
Nitrogen, Total Kjeldahl	0.30	mg/L	.25	1	EPA 351.2	08/24	16:16	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	08/13	11:15	ALD
Total Organic Carbon	3.0	mg/L	1	1	SM5310 C	08/17	21:16	ALD
RESIDUES								
Solids, Total Dissolved	66	mg/L	5	1	SM 2540C	08/17	14:25	TMH
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	08/17	14:25	TMH
TITRATIONS								
Alkalinity, Total to pH 4.5	22	mg/L	1	1	SM 2320 B	08/17	11:15	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 08/28/15
Lab ID: 3157-15-0032804

Date Collected: 08/12/15 13:10
Collected By: Client

Sample Desc: PR-4 Surface

Date Received: 08/12/15 16:30

PWSID: 3130843

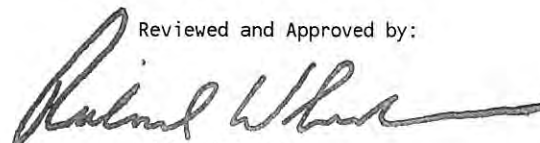
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample placed in the incubator on 08/12/15 at 17:20

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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jlg
07/17/15 3:15:37 PM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 1

Chain of Custody

Account: 3157 Work Order: 006225
Customer: David Wertz Work Order Description: Prompton Reservoir
Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers: WACIK

No: 261504

Project Leader: rxw

Remarks:

Total Sampling Time (hours): _____ Bottle Prep by: _____

Laboratory Receipt Temp: 2 Deg C. If Temp Unacceptable, On Ice? Y N

Approved By: RES

Sample No: 1 Desc: PR-1 Surface

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod, 46

fc, tc, RES

Sample No: 2 Desc: PR-2 Surface

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod, 46

fc, tc, RES

Sample No: 3 Desc: PR-2 Mid-Depth

nh3-n, tkm, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod, 46

Matrix: o Date: 8/12/15

Time: 1110

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o Date: 8/12/15

Time: 1220

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o Date: 8/12/15

Time: 1220

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by: [Signature]

Received by: [Signature]

Received for laboratory by: [Signature]

Date: 8/12/15

Date: 8/12/15

Time: 1500

Time: 1630

Sample entered by: WAC

M. J. REIDER ASSOCIATES, INC.

jlg
07/17/15 3:15:37 PM

Chain of Custody

No: 261504

Project Leader: rxw

Work Order: 006225

Work Order Description: Prompton Reservoir

Account: 3157

Customer: David Wertz

Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

WACIK

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 2 Deg C. If Temp Unacceptable, On Ice? Y N

Approved By: RES

Remarks:

Sample No: 4 Desc: PR-2 Deep

nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,

Sample No: 5 Desc: PR-3 Surface

nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,

fc, tc, RES

Sample No: 6 Desc: PR-3 Mid-Depth

nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod,

Matrix: o Date: 8/12/15

Time: 1220

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

Matrix: o Date: 8/12/15

Time: 1200

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o Date: 8/12/15

Time: 1200

A - 1 X Pt nh3 p w/ H2SO4 (pH<2);

B - 1 X 8oz Alk p w/ Cool to 6 C;

C - 1 X 2xambervoa g w/ H3PO4/zero headspace;

D - 1 X L bod p w/ Cool to 6 C;

E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by:

Received by:

Received for Laboratory by:

Date: 8/12/15

Time: 1500

Date: 8/12/15

Time: 1630

Sample entered by: WZ

jlg
07/17/15 3:15:37 PM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 3

Chain of Custody

Account: 3157 Work Order: 006225
Customer: David Wertz Work Order Description: Prompton Reservoir
Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201
Phone: 703-387-5516 Ext: WACIK
Samplers: WACIK

No: 261504

Project Leader: rxw

Remarks:

Total Sampling Time (hours): _____ Bottle Prep by: _____

Laboratory Receipt Temp: 2 Deg C. If Temp Unacceptable, On Ice? Y N
Approved By: RES

Sample No: 7 Desc: PR-3 Deep
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod, fc

Sample No: 8 Desc: PR-4 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod, fc, tc, RES

Matrix: o Date: 8/12/15
Time: 1200
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Matrix: o Date: 8/12/15
Time: 1310
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Relinquished by: [Signature]

Received by: [Signature]

Received for Laboratory by: [Signature]

Date: 8/12/15

Time: 1500

Date: 8/12/15

Time: 1630

Sample entered by: WZ



CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036170

Date Collected: 09/01/15 13:40
Collected By: Client

Sample Desc: PR-1 Surface

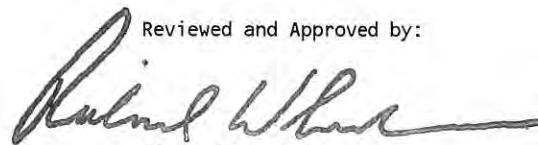
Date Received: 09/01/15 17:50

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	40	/100mL	2	1	SM 9222D	09/01	18:55	PLW
Total Coliform	2400	mpn/100mL	1	1	SM 9223B	09/02	12:55	TNS
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	09/02	15:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	09/02	14:45	HRG
Phosphorus as P, Total	0.02	mg/L	.01	1	SM 4500P-E	09/02	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	09/02	18:29	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	09/02	15:11	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	09/02	09:58	JCL
Nitrogen, Total Kjeldahl	0.31	mg/L	.25	1	EPA 351.2	09/03	14:16	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	09/02	13:45	EMW
Total Organic Carbon	2.1	mg/L	1	1	SM5310 C	09/03	19:16	ALD
RESIDUES								
Solids, Total Dissolved	59	mg/L	5	1	SM 2540C	09/02	10:30	ALD
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	09/04	11:30	ALD
TITRATIONS								
Alkalinity, Total to pH 4.5	24	mg/L	1	1	SM 2320 B	09/08	15:30	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036170

Date Collected: 09/01/15 13:40
Collected By: Client

Sample Desc: PR-1 Surface

Date Received: 09/01/15 17:50

PWSID: 3130843

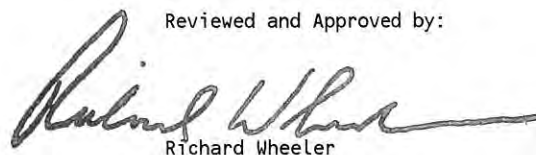
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
-----	-----	-----	-----	-----	-----	-----	-----

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 09/01/15 at 18:30.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036171

Date Collected: 09/01/15 12:55
Collected By: Client

Sample Desc: PR-2 Surface

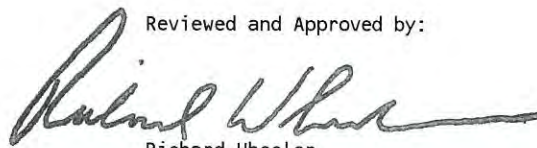
Date Received: 09/01/15 17:50

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
<hr/>								
BACTI								
MICROBIOLOGY								
Fecal Coliform	<2	/100ml	2	1	SM 9222D	09/01	18:55	PLW
Total Coliform	920	mpn/100ml	1	1	SM 9223B	09/02	12:55	TNS
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.06	mg/L	.01	1	SM 4500P-E	09/02	15:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	09/02	14:45	HRG
Phosphorus as P, Total	0.07	mg/L	.01	1	SM 4500P-E	09/02	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	09/02	18:44	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	09/02	15:12	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	09/02	09:59	JCL
Nitrogen, Total Kjeldahl	1.54	mg/L	.25	1	EPA 351.2	09/03	14:17	JCL
OTHER								
Biochemical Oxygen Demand	4	mg/L	2	1	SM 5210B	09/02	13:45	EMW
Total Organic Carbon	4.1	mg/L	1	1	SM5310 C	09/03	19:33	ALD
RESIDUES								
Solids, Total Dissolved	54	mg/L	5	1	SM 2540C	09/02	10:30	ALD
Solids, Total Suspended	6	mg/L	3	1	SM 2540D	09/04	11:30	ALD
TITRATIONS								
Alkalinity, Total to pH 4.5	22	mg/L	1	1	SM 2320 B	09/08	15:30	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036171

Date Collected: 09/01/15 12:55
Collected By: Client

Sample Desc: PR-2 Surface

Date Received: 09/01/15 17:50

PWSID: 3130843

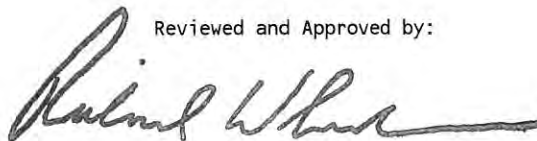
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 09/01/15 at 18:30.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036172

Date Collected: 09/01/15 12:55
Collected By: Client

Sample Desc: PR-2 Mid-Depth

Date Received: 09/01/15 17:50

PWSID: 3130843

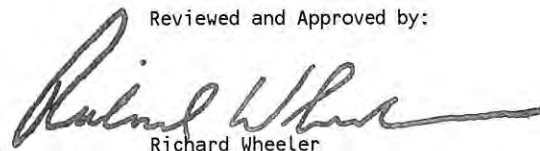
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.01	mg/L	.01	1	SM 4500P-E	09/02	15:10	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	09/02	14:45	HRG
Phosphorus as P, Total	0.03	mg/L	.01	1	SM 4500P-E	09/02	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	09/02	18:58	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	09/02	15:13	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	09/02	10:00	JCL
Nitrogen, Total Kjeldahl	0.62	mg/L	.25	1	EPA 351.2	09/03	14:18	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/L	2	1	SM 5210B	09/02	13:45	EMW
Total Organic Carbon	3.5	mg/L	1	1	SM5310 C	09/03	19:48	ALD
RESIDUES								
Solids, Total Dissolved	53	mg/L	5	1	SM 2540C	09/02	10:30	ALD
Solids, Total Suspended	3	mg/L	3	1	SM 2540D	09/04	11:30	ALD
TITRATIONS								
Alkalinity, Total to pH 4.5	21	mg/L	1	1	SM 2320 B	09/08	15:30	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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CERTIFICATE OF ANALYSIS

M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036173

Date Collected: 09/01/15 12:55
Collected By: Client

Sample Desc: PR-2 Deep

Date Received: 09/01/15 17:50

PWSID: 3130843

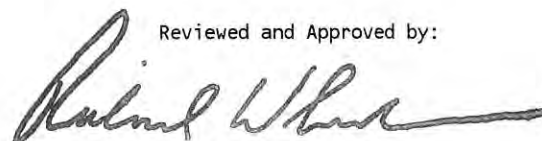
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.08	mg/L	.01	1	SM 4500P-E	09/02	15:15	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	09/02	14:45	HRG
Phosphorus as P, Total	0.08	mg/L	.01	1	SM 4500P-E	09/02	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	09/02	19:13	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	09/02	15:15	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	09/02	10:02	JCL
Nitrogen, Total Kjeldahl	0.78	mg/L	.25	1	EPA 351.2	09/03	14:21	JCL
OTHER								
Biochemical Oxygen Demand	3	mg/L	2	1	SM 5210B	09/02	13:45	EMW
Total Organic Carbon	2.8	mg/L	1	1	SM5310 C	09/03	20:18	ALD
RESIDUES								
Solids, Total Dissolved	65	mg/L	5	1	SM 2540C	09/02	10:30	ALD
Solids, Total Suspended	48	mg/L	3	1	SM 2540D	09/04	11:30	ALD
TITRATIONS								
Alkalinity, Total to pH 4.5	24	mg/L	1	1	SM 2320 B	09/08	15:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036174

Date Collected: 09/01/15 12:20
Collected By: Client

Sample Desc: PR-3 Surface

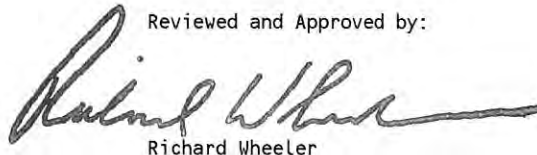
Date Received: 09/01/15 17:50

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTERIOLOGY								
Fecal Coliform	<2	/100mL	2	1	SM 9222D	09/01	18:55	PLW
Total Coliform	280	mpn/100mL	1	1	SM 9223B	09/02	12:55	TNS
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.04	mg/L	.01	1	SM 4500P-E	09/02	15:15	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	09/02	14:45	HRG
Phosphorus as P, Total	0.05	mg/L	.01	1	SM 4500P-E	09/02	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	09/02	19:27	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	09/02	15:16	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	09/02	10:03	JCL
Nitrogen, Total Kjeldahl	1.06	mg/L	.25	1	EPA 351.2	09/03	14:22	JCL
OTHER								
Biochemical Oxygen Demand	4	mg/L	2	1	SM 5210B	09/02	13:45	EMW
Total Organic Carbon	4.0	mg/L	1	1	SM5310 C	09/03	20:35	ALD
RESIDUES								
Solids, Total Dissolved	60	mg/L	5	1	SM 2540C	09/02	10:30	ALD
Solids, Total Suspended	9	mg/L	3	1	SM 2540D	09/04	11:30	ALD
TITRATIONS								
Alkalinity, Total to pH 4.5	22	mg/L	1	1	SM 2320 B	09/08	15:45	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036174

Date Collected: 09/01/15 12:20
Collected By: Client

Sample Desc: PR-3 Surface

Date Received: 09/01/15 17:50

PWSID: 3130843

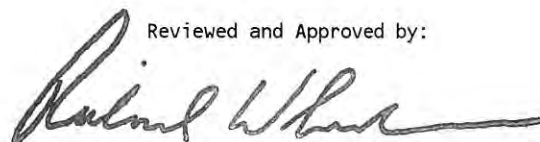
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 09/01/15 at 18:30.

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Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036175

Date Collected: 09/01/15 12:20
Collected By: Client

Sample Desc: PR-3 Mid-Depth

Date Received: 09/01/15 17:50

PWSID: 3130843

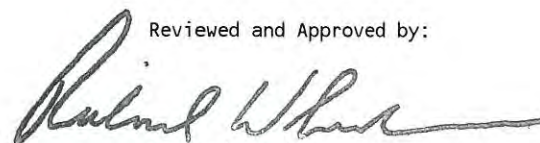
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.11	mg/L	.01	1	SM 4500P-E	09/02	15:15	HRG
Phosphorus as P, Dissolved	0.08	mg/L	.05	1	SM 4500P-E	09/02	14:50	HRG
Phosphorus as P, Total	0.12	mg/L	.01	1	SM 4500P-E	09/02	14:10	HRG
NITROGENS								
Nitrogen, Ammonia	0.61	mg/L	.05	1	D6919-03	09/02	19:42	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	09/02	15:17	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	09/02	10:04	JCL
Nitrogen, Total Kjeldahl	1.36	mg/L	.25	1	EPA 351.2	09/03	14:23	JCL
OTHER								
Biochemical Oxygen Demand	4	mg/L	2	1	SM 5210B	09/02	13:45	EMW
Total Organic Carbon	4.5	mg/L	1	1	SM5310 C	09/03	20:52	ALD
RESIDUES								
Solids, Total Dissolved	67	mg/L	5	1	SM 2540C	09/02	10:30	ALD
Solids, Total Suspended	9	mg/L	3	1	SM 2540D	09/04	11:30	ALD
TITRATIONS								
Alkalinity, Total to pH 4.5	36	mg/L	1	1	SM 2320 B	09/08	15:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036176

Date Collected: 09/01/15 12:20
Collected By: Client

Sample Desc: PR-3 Deep

Date Received: 09/01/15 17:50

PWSID: 3130843

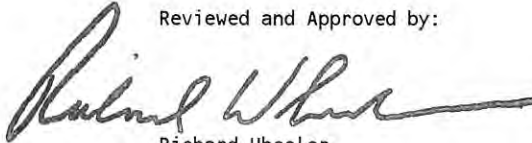
	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	0.83	mg/L	.01	1	SM 4500P-E	09/02	15:15	HRG
Phosphorus as P, Dissolved	0.67	mg/L	.05	1	SM 4500P-E	09/02	14:50	HRG
Phosphorus as P, Total	0.80	mg/L	.01	1	SM 4500P-E	09/02	14:15	HRG
NITROGENS								
Nitrogen, Ammonia	2.82	mg/L	.05	1	D6919-03	09/02	19:57	JCL
Nitrogen, Nitrate	<.05	mg/L	.05	1	EPA 353.2	09/02	15:18	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	09/02	10:05	JCL
Nitrogen, Total Kjeldahl	4.98	mg/L	.25	1	EPA 351.2	09/03	14:24	JCL
OTHER								
Biochemical Oxygen Demand	16	mg/L	2	1	SM 5210B	09/02	13:45	EMW
Total Organic Carbon	10.0	mg/L	1	1	SM5310 C	09/03	21:11	ALD
RESIDUES								
Solids, Total Dissolved	131	mg/L	5	1	SM 2540C	09/02	10:30	ALD
Solids, Total Suspended	19	mg/L	3	1	SM 2540D	09/04	11:30	ALD
TITRATIONS								
Alkalinity, Total to pH 4.5	58	mg/L	1	1	SM 2320 B	09/08	15:45	HRG

COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036177

Date Collected: 09/01/15 14:00
Collected By: Client

Sample Desc: PR-4 Surface

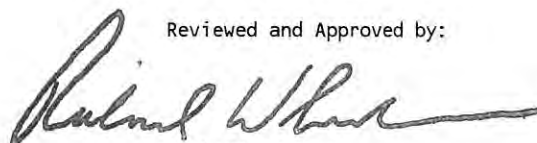
Date Received: 09/01/15 17:50

PWSID: 3130843

	Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
BACTI								
MICROBIOLOGY								
Fecal Coliform	5	/100mL	2	1	SM 9222D	09/01	18:55	PLW
Total Coliform	2400	mpn/100mL	1	1	SM 9223B	09/02	12:55	TNS
CHEMISTRY								
COLORMETRIC								
Phosphate as P, Ortho	<.01	mg/L	.01	1	SM 4500P-E	09/02	15:20	HRG
Phosphorus as P, Dissolved	<.05	mg/L	.05	1	SM 4500P-E	09/04	13:20	HRG
Phosphorus as P, Total	0.05	mg/L	.01	1	SM 4500P-E	09/04	13:15	HRG
NITROGENS								
Nitrogen, Ammonia	<.05	mg/L	.05	1	D6919-03	09/02	20:55	JCL
Nitrogen, Nitrate	0.092	mg/L	.05	1	EPA 353.2	09/02	15:21	JCL
Nitrogen, Nitrite	<.05	mg/L	.05	1	EPA 353.2	09/02	10:08	JCL
Nitrogen, Total Kjeldahl	0.50	mg/L	.25	1	EPA 351.2	09/03	14:27	JCL
OTHER								
Biochemical Oxygen Demand	<2	mg/L	2	1	SM 5210B	09/02	13:45	EMW
Total Organic Carbon	3.2	mg/L	1	1	SM5310 C	09/03	21:27	ALD
RESIDUES								
Solids, Total Dissolved	56	mg/L	5	1	SM 2540C	09/02	10:30	ALD
Solids, Total Suspended	<3	mg/L	3	1	SM 2540D	09/04	13:15	ALD
TITRATIONS								
Alkalinity, Total to pH 4.5	25	mg/L	1	1	SM 2320 B	09/08	16:00	HRG

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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M.J. Reider Associates, Inc.



Attention: David Wertz
Reported To: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Date of Report: 09/11/15
Lab ID: 3157-15-0036177

Date Collected: 09/01/15 14:00
Collected By: Client

Sample Desc: PR-4 Surface

Date Received: 09/01/15 17:50

PWSID: 3130843

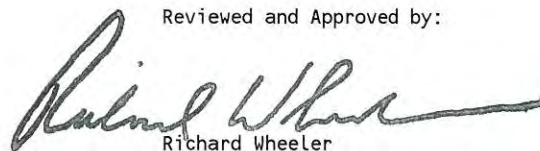
Result	Unit	Rep Limit	Dilutn Factor	Procedure	Test Date	Test Time	Analyst
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COMMENTS

- 01 The Ortho-phosphate was filtered and the dissolved phosphorous was filtered and preserved w/ H2SO4 to pH <2 after the sample was received at the laboratory.
- 02 The total coliform sample was placed in the incubator on 09/01/15 at 18:30.

Distribution of Reports:
Gregory Wacik - USACE (Beltzville Dam)

Reviewed and Approved by:


Richard Wheeler

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08/07/15 8:01:09 AM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 1

Chain of Custody

Account: 3157 Work Order: 006225
Customer: David Wertz Work Order Description: Prompton Reservoir
Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201
Phone: 703-387-5516 Ext:
Samplers: WACIK

No: 262655

Project Leader: rxw

Remarks:

Total Sampling Time (hours): Bottle Prep by:

Laboratory Receipt Temp: 5 Deg C. If Temp Unacceptable, On Ice? (Y) N
Approved By: ARM

36170 Sample No: 1 Desc: PR-1 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod,
fc, tc, NAR
36171 Sample No: 2 Desc: PR-2 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod,
fc, tc, NAR
36172 Sample No: 3 Desc: PR-2 Mid-Depth
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod,
fc, tc, NAR

Matrix: o Date: 9/1/15
Time: 12:46
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o Date: 9/1/15
Time: 12:53
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Matrix: o Date: 9/1/15
Time: 12:55
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Relinquished by: [Signature] Received by: [Signature]
Date: 9/1/15 Time: 3:45 Date: 9-1-15 Time: 1750

ARM 9-1-15 1630

Sample entered by: DSM

08/07/15 8:01:09 AM

M. J. REIDER ASSOCIATES, INC.

COFC.PRT
Page: 2

Account: 3157

Work Order: 006225

Project Leader: rxw

No: 262655

Customer: David Wertz

Work Order Description: Prompton Reservoir

Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

Phone: 703-387-5516 Ext:

Samplers:

WACIK

Total Sampling Time (hours):

Bottle Prep by:

Laboratory Receipt Temp: 5 Deg C. If Temp Unacceptable, On Ice: N
Approved By: APM

Remarks:

36173 Sample No: 4 Desc: PR-2 Deep
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod, NAR
NAP PR-3 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod, NAR
fc, toc, NAR
36174 Sample No: 5 Desc: PR-3 Mid-Depth
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod, NAR
NAP
36175 Sample No: 6 Desc: PR-3 Mid-Depth
nh3-n, tkn, alk, tds, tss, po4-p, toc,
no2-n, no3-n, d-po4-p, o-po4, bod, NAR
NAP

Matrix: o Date: 9/1/15 Time: 12:55
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
Matrix: o Date: 9/1/15 Time: 12:20
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;
Matrix: o Date: 9/1/15 Time: 12:20
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Relinquished by: [Signature]

Received by: [Signature]

Received for laboratory by: [Signature]

Date: 9/1/15

Time: 3:45

Date: 9-1-15

Time: 1750

Sample entered by: gsm

Chain of Custody

Account: 3157 Work Order: 006225
Customer: David Wertz Work Order Description: Prompton Reservoir
Address: Tetra Tech (Beltzville Dam)
1320 North Courthouse Rd., Ste. 600
Arlington VA 22201

No: 262655

Project Leader: rxw

Remarks:

Total Sampling Time (hours): Bottle Prep by:

Laboratory Receipt Temp: 5 Deg C. If Temp Unacceptable, On Ice Y N
Approved By: WACIK

Phone: 703-387-5516 Ext:

Samplers: WACIK

36176 Sample No: 7 Desc: PR-3 Deep
nh3-n, tkn, alk, tds, tss, po4-p, toc,

no2-n, no3-n, d-po4-p, o-po4, bod, NAP

36177 Sample No: 8 Desc: PR-4 Surface
nh3-n, tkn, alk, tds, tss, po4-p, toc, NAP

no2-n, no3-n, d-po4-p, o-po4, bod, NAP
fc, tc, NAP

Matrix: o Date: 9/1/15
Time: 12:20
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;

Matrix: o Date: 9/1/15
Time: 2:00
A - 1 X Pt nh3 p w/ H2SO4 (pH<2);
B - 1 X 8oz Alk p w/ Cool to 6 C;
C - 1 X 2xambervoa g w/ H3PO4/zero headspace;
D - 1 X L bod p w/ Cool to 6 C;
E - 1 X Pt no3no3 p w/ Cool to 6 C;
F - 1 X 250mlMicro p w/ Sterile/Na2S2O3;

Relinquished by: [Signature] Received by: [Signature]
Date: 9/1/15 Time: 345

Received for laboratory by: [Signature]
Date: 9-1-15 Time: 1750

APM 9-1-15 1630

Sample entered by: 94m