

Appendix B – Reservoir
Calculations



**2009 Water Quality
Implementation Report**

*Provo River, Deer Creek Reservoir
and Jordanelle Reservoir*

Water Quality Data Analysis - Reservoirs 2008 Water Year

Station ID 5913220

Deer Creek Reservoir - Above Dam

Date	Data	Chlorophyll a	Secchi Disk Depth	Dissolved oxygen (DO)	pH	Phosphorus	Temperature
10/16/2007	Average	8.1	1.6	7.0	8.11	0.00	11.8
	Max			7.6	8.45	0.00	11.8
	Min			6.5	7.62	0.00	11.7
5/7/2008	Average	14.1	1.7	8.2	8.33	0.01	7.3
	Max			10.5	8.71	0.03	10.4
	Min			6.8	7.88	0.00	5.9
6/4/2008	Average	4.2	3.6	7.0	8.40	0.00	11.2
	Max			8.6	8.75	0.02	14.2
	Min			5.3	7.80	0.00	9.0
7/9/2008	Average	3.5	5.0	6.2	8.48	0.01	15.7
	Max			8.1	8.85	0.03	20.0
	Min			3.1	8.16	0.00	11.4
8/7/2008	Average	9.9	1.9	5.4	8.58	0.00	17.8
	Max			9.7	9.09	0.03	22.4
	Min			0.7	7.66	0.00	13.5
9/4/2008	Average	15.8	2.8	3.2	8.40	0.01	17.2
	Max			7.2	9.10	0.13	18.1
	Min			0.2	7.31	0.00	16.2
Total Average		9.3	2.8	6.0	8.39	0.01	13.7
Total Max		15.8	5.0	10.5	9.10	0.13	22.4
Total Min		3.5	1.6	0.2	7.31	0.00	5.9

Water Quality Data Analysis - Reservoirs 2008 Water Year

Station ID 5913230

Deer Creek Reservoir - Midlake

Date	Data	Chlorophyll a	Secchi Disk Depth	Dissolved oxygen (DO)	pH	Phosphorus	Temperature
10/16/2007	Average	9.3	1.7	7.7	8.25	0.00	12.3
	Max			7.9	8.58	0.00	12.4
	Min			7.6	7.93	0.00	12.1
7/9/2008	Average	4.1	5.7	7.1	8.53	0.00	17.5
	Max			8.1	8.77	0.00	21.4
	Min			6.1	8.26	0.00	12.8
8/7/2008	Average	30.9	1.7	7.0	8.50	0.01	19.2
	Max			10.6	9.01	0.02	22.3
	Min			3.1	7.81	0.00	15.5
9/4/2008	Average	108.4	0.9	6.2	8.53	0.01	18.1
	Max			8.9	8.96	0.03	18.7
	Min			2.0	7.58	0.00	17.0
6/6/2008	Average	5.3	4.4	7.7	8.41	0.00	12.3
	Max	5.3	4.4	8.3	8.67	0.00	14.2
	Min	5.3	4.4	6.6	7.98	0.00	9.9
Total Average		31.6	2.9	7.1	8.46	0.00	16.4
Total Max		108.4	5.7	10.6	9.01	0.03	22.3
Total Min		4.1	0.9	2.0	7.58	0.00	9.9

Water Quality Data Analysis - Reservoirs 2008 Water Year

Station ID 5913240

Deer Creek Reservoir - Upper End

Date	Data	Dissolved oxygen					
		Chlorophyll a	Secchi Disk Depth	(DO)	pH	Phosphorus	Temperature
10/16/2007	Average	17.5	0.8	9.3	8.50	0.00	12.8
	Max			9.3	8.60	0.00	12.8
	Min			9.3	8.39	0.00	12.8
7/9/2008	Average	5.3	3.5	8.1	8.54	0.00	18.0
	Max			8.3	8.75	0.00	22.0
	Min			8.0	8.21	0.00	14.1
8/7/2008	Average	17.9	1.9	10.2	8.75	0.00	18.0
	Max			11.7	9.04	0.00	22.3
	Min			8.6	8.20	0.00	13.8
9/4/2008	Average	281.7	0.6	10.3	8.66	0.01	15.3
	Max			11.6	9.16	0.03	18.7
	Min			8.9	8.19	0.00	11.9
6/6/2008	Average	6.0	2.9	8.8	8.47	0.00	11.2
	Max	6.0	2.9	9.3	8.72	0.00	13.8
	Min	6.0	2.9	8.3	8.10	0.00	8.6
Total Average		65.7	1.9	9.3	8.59	0.00	15.3
Total Max		281.7	3.5	11.7	9.16	0.03	22.3
Total Min		5.3	0.6	8.0	8.10	0.00	8.6

Water Quality Data Analysis - Reservoirs 2008 Water Year

Station ID		Jordanelle Res ab Dam						
Date	Data	Chlorophyll a	Secchi Disk Depth	Dissolved oxygen (DO)	pH	Phosphorus	Temperature	
5/7/2008	Average	7.9	1.7	8.5	7.98	0.03	4.6	
	Max			9.2	8.49	0.22	6.9	
	Min			7.8	7.56	0.00	3.8	
10/18/2007	Average	3.7	4.2	6.4	7.77	0.00	8.9	
	Max			8.0	8.50	0.00	11.6	
	Min			4.4	6.09	0.00	5.3	
6/3/2008	Average	9.0	1.8	8.8	8.10	0.00	7.0	
	Max			9.6	8.66	0.00	11.6	
	Min			8.3	7.62	0.00	4.4	
7/8/2008	Average	1.6	3.7	7.7	8.38	0.00	9.2	
	Max			8.0	8.63	0.00	20.3	
	Min			7.2	8.10	0.00	5.2	
8/5/2008	Average	3.5	2.3	7.0	8.22	0.00	10.6	
	Max			7.5	8.72	0.00	21.6	
	Min			5.6	7.87	0.00	5.3	
9/2/2008	Average	2.4	2.5	6.4	7.95	0.00	10.9	
	Max			7.0	8.81	0.00	18.1	
	Min			4.3	7.14	0.00	5.2	
Total Average		4.7	2.7	7.4	8.07	0.00	8.9	
Total Max		9.0	4.2	9.6	8.81	0.22	21.6	
Total Min		1.6	1.7	4.3	6.09	0.00	3.8	

Water Quality Data Analysis - Reservoirs 2008 Water Year

Station ID	5914030
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Jordanelle Res North Arm

Date	Data	Chlorophyll a	Secchi Disk Depth	Dissolved oxygen (DO)	pH	Phosphorus	Temperature
6/3/2008	Average	8.3	1.4	8.9	8.17	0.00	8.6
	Max			9.6	8.40	0.00	12.2
	Min			8.1	7.63	0.00	5.0
7/8/2008	Average	1.8	3.2	7.0	8.07	0.00	13.5
	Max			7.1	8.45	0.00	21.1
	Min			7.0	7.82	0.00	5.8
8/5/2008	Average	3.3	2.5	6.9	8.36	0.00	14.0
	Max			7.3	8.75	0.00	22.1
	Min			6.5	7.88	0.00	5.9
9/2/2008	Average	2.4	2.0	6.4	7.92	0.00	12.3
	Max			7.0	8.57	0.00	18.2
	Min			5.7	7.13	0.00	6.3
Total Average		4.0	2.3	7.3	8.13	0.00	12.1
Total Max		8.3	3.2	9.6	8.75	0.00	22.1
Total Min		1.8	1.4	5.7	7.13	0.00	5.0

**Water Quality Data Analysis - Reservoirs
2008 Water Year**

Station ID 5914040

Jordanelle Res Provo Arm

Date	Data	Chlorophyll a	Secchi Disk Depth	Dissolved oxygen (DO)	pH	Phosphorus	Temperature
6/3/2008	Average	10.3	1.0	9.0	8.11	0.00	8.2
	Max			9.6	8.38	0.00	11.7
	Min			8.4	7.62	0.00	4.7
7/8/2008	Average	2.9	3.3	7.3	8.21	0.00	13.3
	Max			7.3	8.55	0.00	20.9
	Min			7.3	7.98	0.00	5.7
8/5/2008	Average	4.5	2.1	7.0	8.08	0.00	13.8
	Max			7.3	8.50	0.00	21.8
	Min			6.7	7.80	0.00	5.8
9/2/2008	Average	2.6	3.3	6.3	7.97	0.00	12.3
	Max			6.6	8.75	0.00	18.6
	Min			6.0	7.13	0.00	6.1
Total Average		5.1	2.4	7.4	8.09	0.00	11.9
Total Max		10.3	3.3	9.6	8.75	0.00	21.8
Total Min		2.6	1.0	6.0	7.13	0.00	4.7