

**APPENDIX F:  
AERATION FACILITY WEEKLY REPORTS, May 2008 - October 2008**

The Aeration Facility provides weekly reports for the Department of Water Resources. Reports are available at the Bay-Delta Office and the Bay-Delta web page.<sup>1</sup> Reports are available for May 30, 2008 through October 17, 2008.

1. May 30, 2008

With dissolved oxygen levels approaching 5.0 mg/l, the Aeration Facility may be operated the week of June 2nd. Due to an electronic component failing in Pump A, the facility will be operated at only 50% capacity. Pump A should be back in operation the week of June 9th once the contractor makes the necessary repairs.

2. June 6, 2008

The Aeration Facility was not operated during the week ending June 6th. With dissolved oxygen levels continuing to approach 5.0 mg/l, the Aeration Facility may be operated the week of June 9th. Due to an electronic component failing in Pump A, the facility may be operated at only 50% capacity. Pump A should be back in operation sometime during the week once necessary repairs are completed.

3. June 13, 2008

With dissolved oxygen levels approaching 5.0 mg/l, the Aeration Facility may be operated this coming week. Pump A was repaired so the system is back to full capacity.

4. June 20, 2008

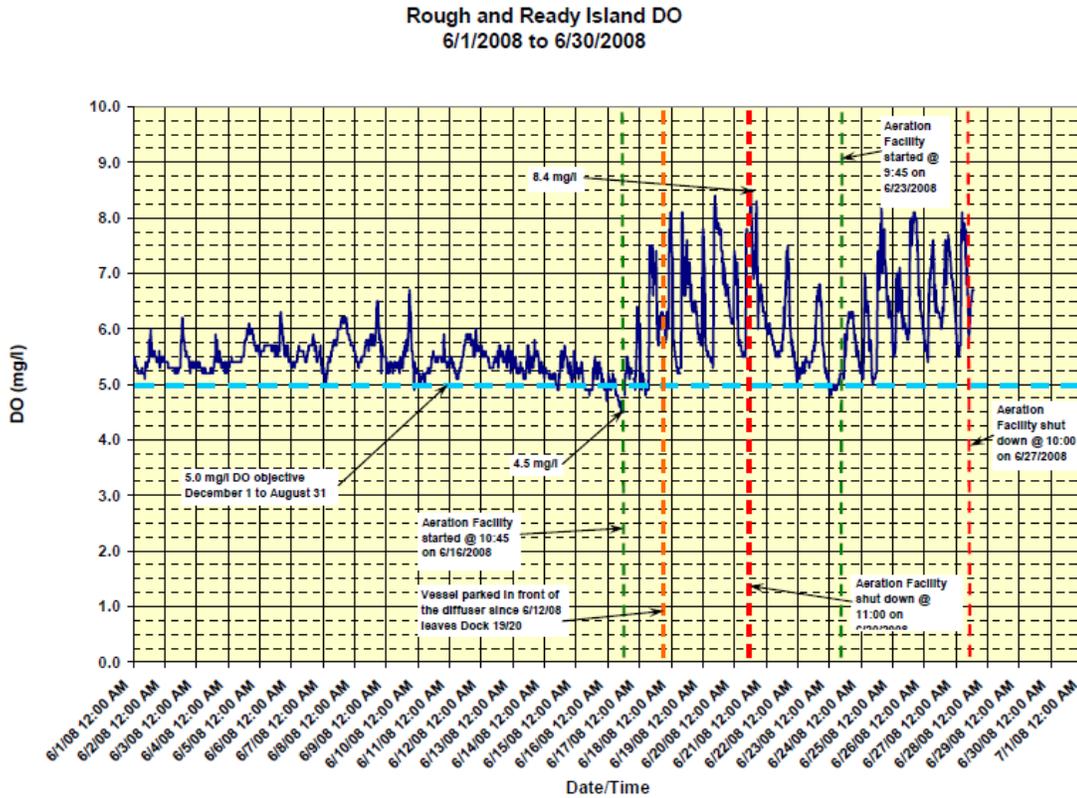
With dissolved oxygen (DO) levels beginning to drop below 5.0 mg/l last weekend, the Aeration Facility was turned on Monday, June 16, 2008 at about 10:45 a.m. to begin the first of several planned on/off pulse tests. The system was operated at full capacity with oxygenated water with a DO level in the upper 30 mg/l range. Water was discharged into the Stockton Deep Water Ship Channel for four full days ending Friday, June 20, 2008 at about 10:45 a.m. The system will be off for the weekend and will likely be turned back on Monday, June 23, 2008 at 9:00 a.m.

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<sup>1</sup> All reports area available at <http://baydeltaoffice.water.ca.gov/sdb/af/weekly/weekly.cfm>

5. June 27, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Monday, June 23, 2008 at about 9:45 a.m. The system was operated at full capacity with oxygenated water with a dissolved oxygen (DO) level in the upper 30 mg/l range. Water was discharged into the Stockton Deep Water Ship Channel (DWSC) for four full days ending Friday, June 27, 2008 at about 10:00 a.m. The system will be off for the next three days and will be turned back on Monday, June 30, 2008 at about 9:00 a.m. Below is a draft plot of the DO readings from the Rough and Ready Island station during June 2008. As we compile and analyze data from the four additional DO sensors in the DWSC we will share that information in future updates.



6. July 3, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Monday, June 30, 2008 at about 9:45 a.m. The system was operated at full capacity with oxygenated water with a dissolved oxygen (DO) level in the upper 30 mg/l range. Water was discharged into the Stockton Deep Water Ship Channel (DWSC) for three full days ending Thursday, July 3, 2008 at about 12:45 p.m. for Pump B and 3:00 p.m. for Pump

A. The system will be off for the next four days and will be turned back on Monday, July 7, 2008 at about 9:00 a.m. In addition, the efficiency of an updated oxygen injector will be tested Monday.

7. July 11, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Monday, July 7, 2008 at about 9:30 a.m. The system was operated at full capacity with oxygenated water with a dissolved oxygen (DO) level in the upper 30 mg/l range. Water was discharged into the Stockton Deep Water Ship Channel for four full days ending Friday, July 11 2008 at about 10:00 a.m. The system will be off for the next three days and will be turned back on Monday, July 14, 2008 at about 9:00 a.m.

8. July 18, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Monday, July 14, 2008 at about 9:45 a.m. The system was operated at full capacity with oxygenated water with a dissolved oxygen (DO) level in the upper 30 mg/l range. Water was discharged into the Stockton Deep Water Ship Channel for four full days ending Friday, July 18 2008 at about 9:30 a.m. The system will be off for the next three days and will be turned back on Monday, July 21, 2008 at about 9:00 a.m.

9. July 25, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Monday, July 21, 2008 at about 9:45 a.m. The system was operated at full capacity with oxygenated water with a dissolved oxygen (DO) level in the upper 30 mg/l range. Water was discharged into the Stockton Deep Water Ship Channel for four full days ending Friday, July 25 2008 at about 9:45 a.m. The system will be off for the next three days and will be turned back on Monday, July 28, 2008 at about 9:00 a.m.

10. August 1, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Monday, July 28, 2008 at about 9:45 a.m. The system was operated at full capacity with oxygenated water with a dissolved oxygen (DO) level in the upper 30 mg/l range. Water was discharged into the Stockton Deep Water Ship Channel for four full days ending Friday, August 1, 2008 at about 10:15 a.m. In addition, a test was conducted on Wednesday, July 30, 2008 to feed oxygen at a lower pressure to measure if higher oxygen transfer

efficiencies could be attained. Results are still being analyzed. Thus far, the maximum efficiency achieved has been in the low 60% range. An efficiency of 80% is hoped to be achieved through additional optimization testing. The system will be off for the next three days and will be turned back on Monday, August 4, 2008 at about 9:30 a.m.

11. August 8, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Monday, August 4, 2008 at about 9:45 a.m. The system was operated at full capacity with oxygenated water with a dissolved oxygen (DO) level in the upper 30 mg/l range. Water was discharged into the Stockton Deep Water Ship Channel for four full days ending Friday, August 8, 2008 at about 10:00 a.m. In addition, dye tests and longitudinal surveys were completed to measure the dilution of oxygen from the diffuser and to measure the tidal movement and spreading of the dye. Additional surveys will be conducted next week.

Preliminary results from last week's efficiency testing at a lower oxygen supply pressure show efficiencies increased slightly to the mid 60% range. Additional testing will be done to continue to increase the oxygen transfer efficiency. The system will be off for the next three days and will be turned back on Monday, August 11, 2008 at about 9:30 a.m.

12. August 15, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Tuesday, August 12, 2008 at about 11:30 a.m. The system is being operated at full capacity with oxygenated water with a dissolved oxygen (DO) level in the upper 30 mg/l range. The pulse operation will be increased from 4 days to 7 days to evaluate the benefit of three additional days of continuous operation. The system will be shut down on Tuesday, August 19, 2008 at approximately 11:30 a.m and is planned to be off for 7 days.

In addition, dye tests and longitudinal surveys were completed to measure the dilution of oxygen from the diffuser and to measure the tidal movement and spreading of the dye.

13. August 22, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on last Tuesday, August 12, 2008 at about 11:30 a.m and turned off Tuesday, August 19, 2008 at about

11:15 a.m. The system will be off for 7 days and turned back on next Tuesday, August 26, 2008 at approximately 11:30 a.m and is planned to operate for 7 days.

14. August 29, 2008

As a part of ongoing pulse tests, the Aeration Facility was turned on Tuesday, August 26, 2008 at about 11:00 a.m. and will run for 7 days. The system is being operated with oxygenated water with a dissolved oxygen (DO) level in the middle 30 mg/l range. The Aeration Facility will be turned off on Tuesday, September 2, 2008 at about 11:00 a.m. The system will then be off for 7 days and turned back on Tuesday, September 9, 2008.

15. September 2, 2008

A change has been made to the operation schedule for the Aeration Facility. Rather than shutting down today, the system will operate through Friday, September 5, 2008 at about 11:00 a.m. This will allow us to analyze a 10-day operation cycle. A longitudinal survey will be made after the system is turned off. The system will then be off for 10 days and turned back on Monday, September 15, 2008.

16. September 12, 2008

As a part of on-going pulse operations, the Aeration Facility will be turned back on Tuesday, September 16, 2008 at about 9:00 a.m. discharging a dissolved oxygen (DO) level in the mid 30 mg/l range. With the system being off for the last 10 days, natural DO levels are currently being observed which are below the 6.0 mg/l TMDL. The response of increasing DO levels to above the current TMDL will be monitored during the planned 7 day operation. The system will run until September 23, 2008.

17. September 19, 2008

As a part of on-going pulse operations, the Aeration Facility was turned back on Tuesday, September 16, 2008 at about 10:00 a.m. discharging a dissolved oxygen (DO) level in the mid 30 mg/l range. The system will operate for 10 days, shutting down on Friday, September 26, 2008 at about 10:00 a.m. The 10 day operation will allow longitudinal surveys at the high-high tide to be conducted after 2, 4, 6, 8, and possibly 10 days to further monitor the spatial effects on DO in the Stockton Deep Water Ship Channel. Longitudinal surveys have already been performed after 2, 4, 6, 8, and 10 days for the low-low tide.

18. September 26, 2008

As a part of on-going pulse operations, the Aeration Facility was turned off Friday, September 26, 2008 at about 10:00 a.m. after 10 days of operation. The system will be off for 10 days and started back up on Monday, October 6, 2008. Additional longitudinal surveys to monitor the spatial effects on DO in the DWSC will be performed after the system is off. Flows in the San Joaquin River at Vernalis are scheduled to increase beginning Wednesday, October 1, 2008 to meet water quality objectives for fish and wildlife beneficial uses. It appears the Head of Old River Barrier is scheduled to be installed next week.

19. October 3, 2008

The Aeration Facility was turned off Friday, September 26, 2008 at about 10:00 a.m. after 10 days of operation. The system was scheduled to be off for 10 days and started back up on Monday, October 6, 2008. The system will tentatively remain off for another week so that the effects of increased flows to meet water quality objectives in the San Joaquin River as well as the installation of the Head of Old River Barrier can be observed. The Head of Old River Barrier should be fully installed sometime next week. An update will be provided when the Aeration Facility is turned back on.

20. October 17, 2008

The Aeration Facility has been off since Friday, September 26, 2008. With dissolved oxygen (DO) levels in the Stockton Deep Water Ship Channel well above the water quality objective of 6.0 mg/l, the system will remain off. The effects of increased flows to meet water quality objectives in the San Joaquin River as well as the installation of the Head of Old River Barrier that was completed on Thursday, October 16, 2008 should keep DO levels up. If DO levels decrease to the water quality objective level, the system will be turned back on for additional testing. An update will be provided when that occurs.