



Memorandum

Florida Department of Environmental Protection

To: Suzanne Cooper, Agency on Bay Management
From: Phil Coram, P.E.
Date: July 7, 2004
Re: Piney Point – Status Update

The following is a status update on Piney Point for distribution to the interested parties.

Closure: The following are the Engineer's recommended near term and long term consumption rates for the site:

July 2004:	1.0 MGD
October 2006:	0.5 MGD
December 2006:	0.3 MGD

Closure construction activities have been completed on the north compartment of the new gypsum stack (NNGS). In addition, the west slope of the NNGS has been seeded to develop a grass cover on this slope over the rainy season. Liner deployment on the south compartment of the old gypsum stack (OGS-S) has also been completed and certified by the site engineer. Since it does not appear that the lined OGS-S reservoir will be needed for process water management it has effectively been occluded from the process system watershed. These reservoirs provide 270 and 155 million gallons of storage, respectively.

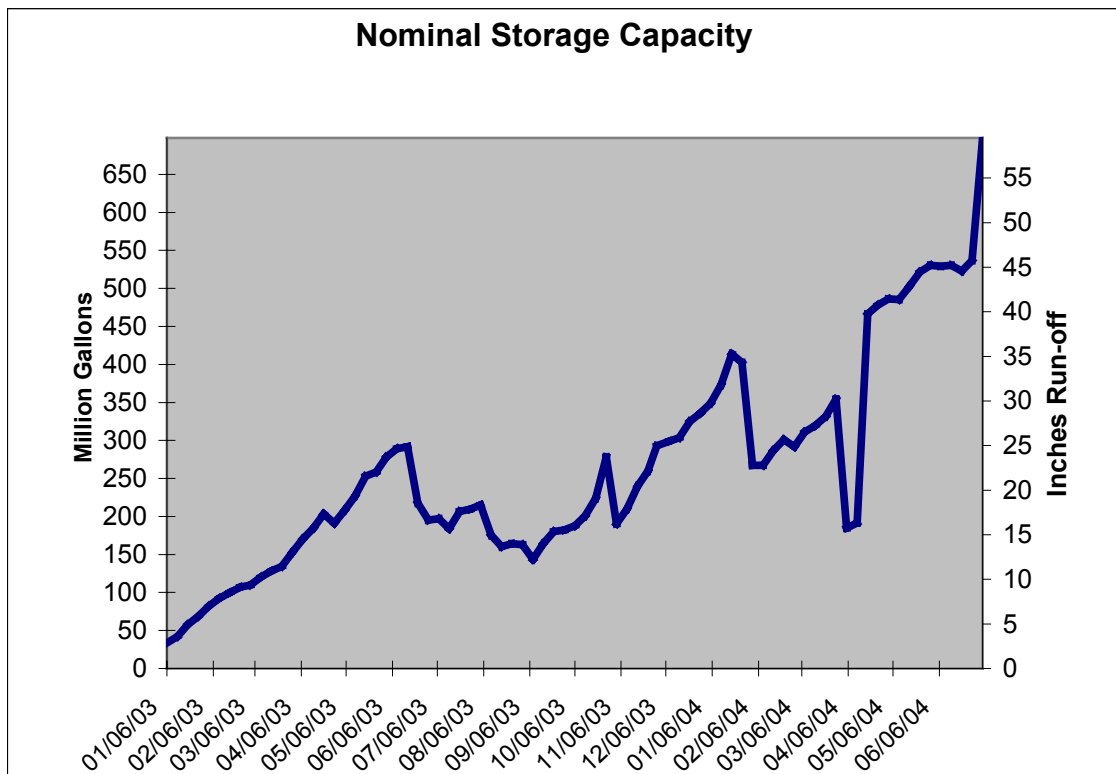
The north compartment of the old gypsum stack (OGS-N) has also been drained and over 156,000 cubic yards of compacted fill have already been placed, approximately 85 % of the total fill requirement. Liner installation in this compartment began on June 4, with about 13 acres of liner installed as of July 1. Completion of construction is expected in late August or early September. Below is an aerial of the site taken on June 21 looking from the southwest to the northeast. The recently completed OGS-S is in the foreground.



Storage Capacity and Water Inventory: On June 30 the Engineer included the recently completed lined old gypsum stack south (OGS-S) in the available surge storage capacity and removed its 24.5 acres from the watershed. The north compartment of the old gypsum stack (OGS-N) is not included in the storage because of the on-going closure construction activities. However, OGS-N compartment storage capacity remains available for use as part of the maximum potential surge capacity during emergencies.

As of July 6, the total nominal water storage capacity was 698 million gallons or about 59.5 inches of rainfall run-off over the watershed. If emergency freeboard is utilized, these numbers increase to 919 million gallons of storage capacity or about 78.3 inches of rainfall run-off. The storage levels are more than adequate to contain the 100 year-24 hour storm event. The following figure shows the changes in *nominal* storage capacity since January 2003.

Figure 1

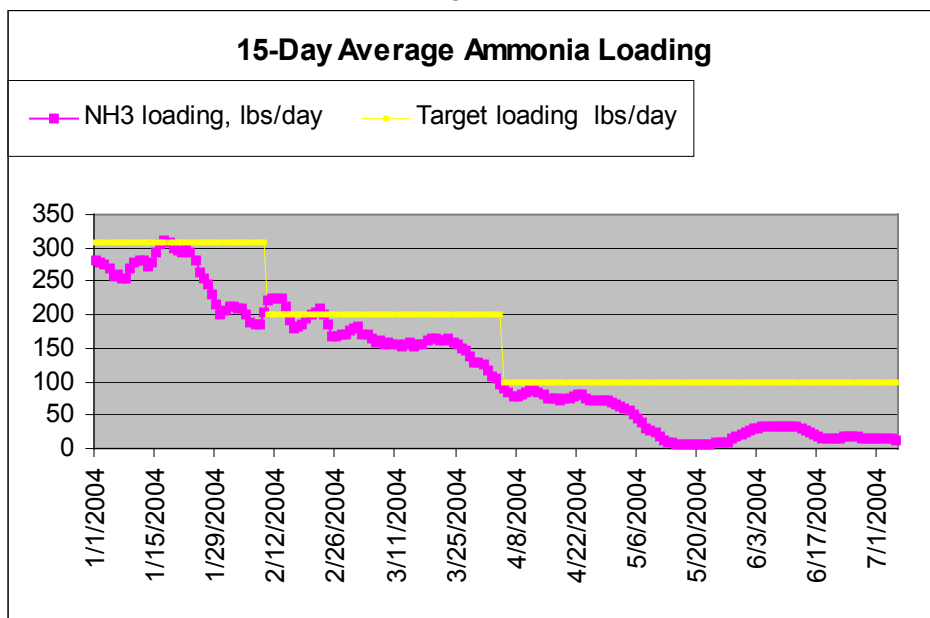


On 6/30/04, the Engineer included the storage capacity of the finished old gypsum stack south compartment. See discussion above.

Water Outputs: For the June reporting period, a total of 40.7 million gallons of water was removed from the site, or an average of the about 1.35 million gallons per day, which is slightly less than the engineer's recommended consumption rate of 1.5 mgd for the month of June.

Bishop Harbor: Discharge from the facility to Bishop Harbor in June increased slightly to 1.35 mgd in June, compared to 1.30 mgd in May. Associated ammonia concentrations also increased as well averaging about 1.8 mg/l in June compared to about 1.5 mg/l in May. Resultant ammonia loadings in June averaged about 19 lbs/day compared to 15 lbs/day in May. The figure below shows ammonia loadings since January 2004, as well as the target limits.

Figure 3

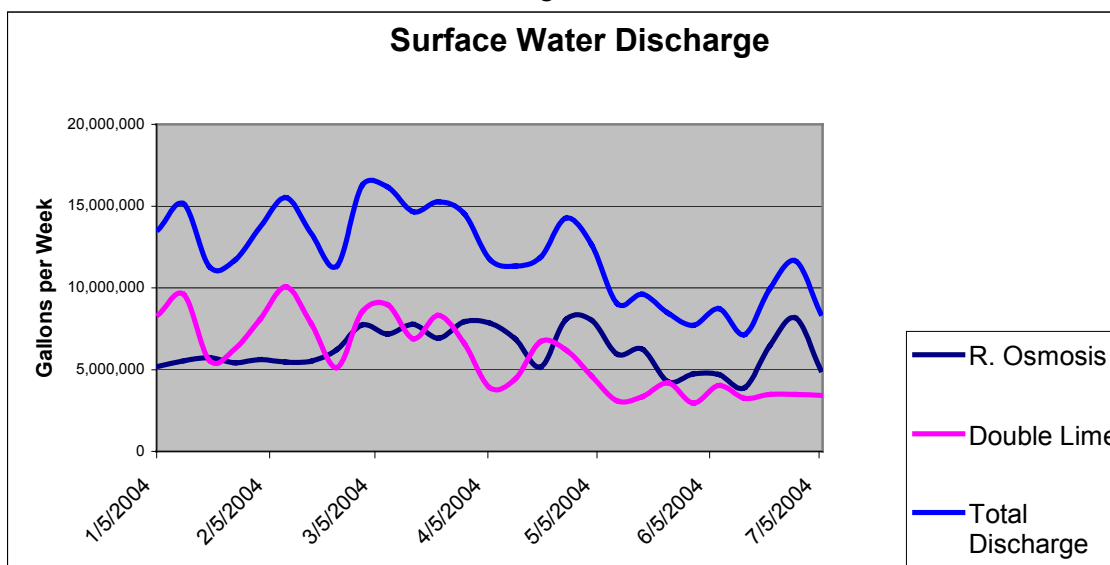


The seven-day average flows (in million gallons per day) for daily treated water discharges to Bishop Harbor, as well as ammonia-nitrogen and total nitrogen concentrations for the blended discharge, are shown below for the past four weeks:

Week Ending	Double Lime (mgd)	Reverse Osmosis (mgd)	Total Volume (mgd)	Ammonia-N (mg/l)	Total N (mg/l)
June 14	0.46	0.56	1.02	2.35	6.0
June 21	0.50	0.92	1.42	0.71	3.2
June 28	0.50	1.2	1.70	1.60	4.7
July 5	0.49	0.71	1.20	0.46	2.8

Since the beginning of the year discharges to Bishop Harbor have decreased resulting in a significant reduction in the overall nitrogen loading to surface waters at Bishop Harbor. The weekly volumes of double-lime treatment and reverse osmosis discharges to Bishop Harbor since January 1, 2004 are indicated in the following figure.

Figure 4



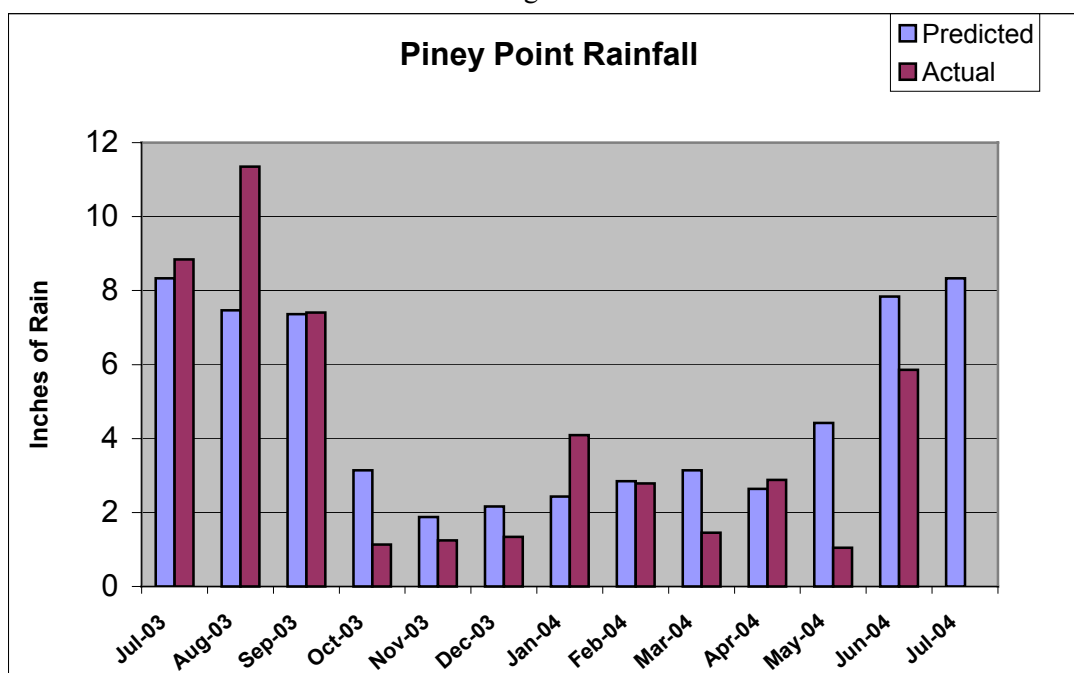
During the end of May and early June, chlorophyll-a concentrations at most of the sites were low with the exception of higher values found near the outfall. Chlorophyll-a levels during the period May through early June 2004 were relatively similar to those observed during the same period in 2003. Water quality, sediment, seagrass, macroalgae and other data for Bishop Harbor can be reviewed and downloaded from a Web Site constructed and maintained by Janicki & Associates. The information on the Web Site is updated on a monthly basis and can be found at:

<http://www.janickienvironmental.com/bishopharbor/index.html>

Rainfall: As of July 5, the site received 18.12 inches of rain since the beginning of the year, or about 6.5 inches below average for the year. For the period July 1, 2003 through June 30, 2004, the site received 49.4 inches of rain, about 4.2 inches below the average rainfall estimate for this twelve-month period.

Rainfall for the past year is shown in the figure below:

Figure 5



Please contact me at (850) 413-8192, extension 41 if you have any questions.

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