Madrid Engineering Group, Inc.

2006 Mid Season Report

LAZY "S" RANCH ULTRA PHOS-FILTER™ PROJECT
Phosphorus Source Control Grant Program

The Earth is our Business℠

Prepared for:

Eugene Stokes

and

South Florida Water Management District

Prepared by:

MADRID ENGINEERING GROUP, INC.
P.O. Box 2506
Bartow, FL 33831
863-533-9007

Project No. 3083.2
October 2006

CERTIFICATIONS

Engineering Certification

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Madrid Engineering Group, Inc. under license number EB 0006509 issued by the Florida Department of Business and Professional Regulation and the Board of Professional Engineers. I certify that I, or others under my direct supervision, have prepared the geotechnical engineering evaluations, findings, opinions and conclusions represented in this report.

Lazy "S" Ranch Phos-Filter™ Project
Phosphorus Reduction Program
2006 Mid Season Report
MEG Project No. 3083.2

SIGNATURE: _____
NAME: Larry D. Madrid, P.E.
LICENSE #: 39559
DATE: 10/25/06

APPENDIX A

REPORT OF STOKES LAZY "S" ULTRA PHOS-FILTER™ PROJECT OCTOBER 2006

This is a 2006 update report on the operation and test results of the Stokes Lazy "S" Ranch **Phosphorus Source Control Grant** program of the South Florida Water Management District (SFWMD). Although there is still water in the reservoir pond of the system at the time of this report, and a heavy rain event may yet occur in 2006 to cause additional flow through the Ultra Phos-Filter™ system, for all practical purposes the rain year has ended and this report sufficiently describes the operation of the system and results of phosphorus reduction in 2006.

2006 OPERATION AND MAINTENANCE ISSUES

This system uses the patented, non-toxic, environmentally friendly iron-based porous media named Ultra Phos-Filter™ in a system designed by Madrid Engineering Group, Inc. to uptake phosphorus from phosphorus-enriched agricultural runoff as the water flows through the media.

Flow Meter Repair

At the beginning of the 2006-year, the flow meter from the east treatment pond had been sent back to the factory for repairs due to Platt Branch Creek flooding over it during the previous hurricane season, damaging the meter and making it unserviceable at the end of the 2005 season. Upon receiving it back from the factory, we reset the cumulative total flow of both meters back to zero, and the flow calibrations were set to read in gallons per minute (GPM). The flow meters were reinstalled in March of this year and we began the waiting period for the first precipitation heavy enough to start the system in operation.

Before the meters were installed, we checked the accuracy by timing the filling of a 5-gallon bucket, and determined that the rates were accurate.

Rainfall Issues

2006 has been a relatively dry year at the Stokes property; see **Attachment "A"** Archbold Biological Station Monthly Precipitation Amounts for the official rainfall in that area. Through September, the rainfall for this area of Florida was 43.34 inches, which is less than the precipitation of the first 9 months of each year for the previous 5 years.

Because of the "drought", we were not able to begin the Ultra Phos-Filter™ pump operation until the second week of July, and it took until August 8th before enough water had been pumped into the 2.5-acre main reservoir pond and overflow into the Ultra Phos-Filter™ treatment ponds sufficient enough to begin the first sampling events of this year. The first week of August, therefore, brought the first opportunity of 2006 to obtain water samples for phosphorus and iron testing because of lack of rain.

Unfortunately, almost half of the rainfall for the year came in the month of August, and was too much for the system to handle. According to the Archbold station measurements some 5 miles from the ranch, there was 20.09 inches of rain during August 2006, which is the highest monthly rainfall recorded going back to 1969 (period of record). Therefore, during this wet period the emergency overflow of the reservoir (a half-round CMP drop inlet spillway) overflowed to prevent flooding, and according to Mr. Wright, Mr. Stokes also operated his big pump for approximately 2 days during that same period to dry out the ranch. It is unknown exactly how much unprocessed water was released during this period.

Analytical Testing Methods

In processing the 2005 data for this project, we discovered Jupiter Environmental Testing Laboratory had used two different testing methods for total phosphorus, with one of the methods providing Report Limits of only 0.50 mg/L. This was not precise enough to give the results needed for this project, so this year we coordinated with Jupiter to get the most accurate results for all future testing. All 2006 phosphorus test analyses are provided with a Report Limit of 0.020 mg/L using the EPA 365.1 Analytical Method with a Matrix of Aqueous Liquid. Also, in 2006 we began testing the iron content, both before the treatment ponds and at the point of discharge from the filter system.

Pond Maintenance

Prior to the start up of the system this year, while the system was dry, Don Wright, field contact person for Lazy "S" ranch, completed maintenance of the filter ponds by removing a fine layer of sediment that had accumulated in 2005 on the top 1/2-inch of the east treatment pond. The west treatment pond had the silty sediment surface removed shortly after the system was shut down in December 2005, at the end of the wet season, and therefore did not need maintenance this year. Mr. Wright sprayed some Aquatic Roundup on the plant life growing in the empty ponds throughout the year, trying to keep vegetation down to a minimum and to prevent vegetation growth in the Ultra Phos-Filter™ ponds.

Systems Operation

On August 24, 2006 Paul Ritter, Field Technician for SFWMD, made a site visit to the project site to observe the conditions. Here is a summary of his visit:

The outflow for the east treatment pond was flowing at a rate of 8 G.P.M. Paul lowered the adjustable discharge pipe about one foot and the flow rate increased to about 18 G.P.M. The flow on the west treatment pond was initially at about 15 G.P.M. and after lowering that adjustable discharge pipe approximately one foot, the flow rate increased to 38 G.P.M.

The next day, August 25, 2006, Paul Ritter, Don Wright, Eugene Stokes (Lazy "S" Ranch Property Owner), and Bill Maul (Field Supervisor for Madrid Engineering Group, Inc.) met at the project site to assess the operation. As part of the assessment, they reviewed the progress for 2006 and then implemented necessary changes to improve the operation for the rest of the 2006 season.

The pump servicing the large 2-/2 acre reservoir pond had been running steadily for the entire months of July, August and through mid- September. At the time of the inspection, all ponds were full and in operation. The flow rate was 18 G.P.M. on the east treatment pond on the date of August 25. We were able to lower the adjustable discharge pipe an additional foot and increase the flow rate to 36 G.P.M. The west treatment pond flow was running at a rate of 38 G.P.M., but after lowering the adjustable discharge pipe 8 to 10 inches, the flow rate was increased to around 65 G.P.M. Therefore, the system flow rate was increased to approximately 100 G.P.M. for the two treatment ponds.

The flow meters are now at their lowest safe elevation relative to the Platt Branch Creek, allowing for the highest discharge rates. However, heavy rain events could cause the tailwater of the Platt Branch Creek to be higher than the meters, which would damage them. Don Wright agreed to come to the site and remove the meters, should a large rain event like a large tropical storm or hurricane place them in danger of flooding out. Soon after the inspection, on August 31, 2006, it did become necessary to remove the meters due to a large rain event that we understand caused several upstream dikes to break, causing flooding at our discharge point. The east meter was re-installed on September 5, 2006, and the west meter was re-installed on September 13th. During the time that the meters were off, the flow rate was estimated based upon the last flow rate measured before removal.

A chart with the flow rates and total gallons of discharge for the system is included in **Attachment "B".** *It is important to note the significant increase in flow rate due to increase of one foot or less difference in the head pressure.* We are confident if it were possible to raise the head pressure even more, the system flow rate would increase significantly. Unfortunately, the system is constrained by the tail water elevation and the elevation of the berms of the reservoir and filter ponds.

Water Quality Sampling

Water quality samples were obtained at approximately weekly intervals during periods of discharge from the system. The sample locations are as follows:

- Iron sample near the intake of the treatment ponds.
- Iron sample at the discharge of the east treatment pond
- Iron sample at the discharge of the west treatment pond.
- Phosphorus near the intake of the treatment ponds.
- Phosphorus sample at the discharge of the east treatment pond.
- Phosphorus sample at the discharge of the west treatment pond.

It was further decided at the August 25 meeting that starting with the next sampling event, one additional phosphorus sample would be obtained at the pump discharge location into the 2-1/2 acre reservoir. This additional test would hopefully provide more information as to the performance of the Ultra Phos-Filter™ itself as opposed to the contribution (if any) of the reservoir.

2006 TEST RESULTS

The results for this series of tests of both iron and total phosphorus beginning August 9 through September 31, 2006 are included as **Attachment "B".**

Results indicate that for the second year, the Ultra Phos-Filter™ has provided significant removal of phosphorus from the agricultural waters of the Lazy-S Ranch. Some results are as follows:

- Average inflow Total Phosphorus (TP) was 1.533 mg/l; average outflow was 0.31 mg/l in the west pond, and 0.15 mg/l in the east pond.

- The TP readings of water going into the reservoir and those going out of the reservoir (from 8/25 to 9/29), indicate a *slight increase in concentration* from the reservoir from 1.467 to 1.483, before significant drop in TP through the Ultra Phos-Filter™.

- The removal efficiency rate was 80% in the west pond, and 90% in the east pond.

- The east pond ran at a slower flow rate overall, and this is the likely reason that the phosphorus removal efficiency was higher in the east pond.

- The system removed an estimated 54.0 pounds of phosphorus from the discharge of the Lazy-S ranch.

- A total flow of 3.822 million gallons of water was processed using the Ultra Phos-Filter™ system to date in 2006.

- Iron was tested before and after the Ultra Phos-Filter™, with an average "before" concentration of 1.226 mg/l, and average "after" concentration of 1.878 mg/l, for an overall increase of 0.65 mg/l at the point of discharge.

CONCLUSIONS AND RECOMMENDATIONS

Although the year was dryer, and the amount of water through the system was significantly less this year as compared to last year (except for the rain pulse in August that caused release without treatment), the system performed well. It is our opinion that the phosphorus removal efficiency was very consistent throughout the year, based on the test results.

The weighted average TP concentration of the two ponds after filtration was 0.233 mg/l, which is less than the goal of 0.3 mg/l for cow/calf operations, according to the SFWMD and USDA. *Therefore, the project has been a success.* It is further our opinion that the reason more phosphorus was not removed from this location in 2006 with the Ultra Phos-Filter™ system is because of the low amount of precipitation and associated runoff, as shown on the Archbold Biological Station Monthly Total Precipitation Chart.

With regard to iron, it is our opinion that even though iron content increases when water is passed through the Ultra Phos-Filter™, the concentration is not problematic. There are no health risks for water with this concentration of iron, and iron is only listed as a secondary drinking water standard for aesthetic purposes (primarily taste). In any case, if water were be obtained from downstream of the Stokes ranch, it would surely be treated to drinking water standards before being used for human consumption. A review of the Polk County Water Atlas for the Kissimmee River in Polk County indicated that between 1972 and now, iron has fluctuated from 2.3 mg/l to 0.03 mg/l.

Overall, the treatment ponds and the reservoir pond are holding up well, although there is some seepage through the west pond where the discharge pipe goes through the bank. At this time, it does not appear serious. Our operation and maintenance recommendations for the future include the following:

1. The west filter cell, based on the flow meter, shows signs of clogging and the cell should be cleaned before the next major rain event.

2. Don Wright will remove the flow meters before any hurricane or similar extreme heavy rain event to prevent damage from flooding from the Platt Branch Creek.

3. If the flow meters need to be removed during high tailwater, the flow rate and cumulative gallons run through the system should be recorded before meter removal. Mr. Wright or Mr. Stokes should also record the amount of time they are off-line.

4. Record the flow rate and cumulative gallons run through the system each time a water quality sample is taken. The sampling intervals should be weekly during periods of high flow.

5. Obtain samples at the discharge of the reservoir pump to determine the total effectiveness of the whole system.

6. When the treatment ponds clog off with the thin layer of silt that normally accumulates during use, remove the top one inch of Ultra Phos-Filter™ with the silt to be sure all the silt has been removed, then a layer of clean porous sand several inches thick is to be placed on top of the remaining Ultra Phos-Filter™ media. This will allow future maintenance in removal of silts to be done by scraping down sand, and not removing the filter media.

7. To improve the measurement of system performance, Madrid Engineering Group, Inc. recommends the installation of a staff gage on the inside of the reservoir pond to determine the elevation of the top of water, and a similar gage at the downstream discharge pipes as a way of determining the elevation difference in the discharge pipes and the top of tailwater. With this information,

along with some site surveying, we could determine the head pressure differential of the water and be better able to estimate flow conditions even when the flow meters are not in place. We could also back-calculate the permeability of the filter media with this information. This may become critical/useful information for future projects that SFWMD would be interested in using with this system.

8. As recommended in our 2005 Project Summary Report, we again recommend that the District use the Ultra Phos-Filter™ technology to work with, extend the performance, and possibly enhance the performance, of the STA's being used as part of the Everglades Restoration Project.

9. Finally, it is recommended that the SFWMD grant another season of monitoring for this project, including any additional funding required to complete additional monitoring.

APPENDIX B

ARCHBOLD BIOLOGICAL STN, FLORIDA

Monthly Total Precipitation (inches)

(080236)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1969	1.26	1.56	7.43	1.79	4.19	12.21	6.09	5.99	9.65	8.40	2.69	2.83	64.09
1970	4.78	3.57	8.85	0.19	4.97	8.62	8.94	4.24	4.93	3.16	0.12	0.31	52.68
1971	0.57	1.80	1.06	0.08	2.42	7.89	5.79	9.06	7.22	3.20	1.28	1.08	41.45
1972	0.25	2.99	0.78	5.90	2.25	10.53	3.90	5.35	4.27	3.35	3.52	1.97	45.06
1973	5.11	2.86	2.93	4.90	4.41	5.47	8.27	6.43	9.97	3.47	0.29	2.39	56.50
1974	0.33	1.09	0.05	1.41	5.39	14.12	16.89	10.23	4.87	0.56	0.53	2.93	58.40
1975	0.13	0.49	1.04	1.81	6.97	8.63	8.76	5.84	5.55	3.07	0.13	0.60	43.02
1976	0.08	0.76	2.45	1.88	4.98	9.75	6.50	7.65	6.61	3.42	1.75	1.19	47.02
1977	1.91	0.53	1.02	0.69	6.53	6.60	4.68	9.17	9.87	3.29	4.17	4.90	53.36
1978	1.81	2.38	3.16	0.43	7.00	9.04	10.00	7.71	4.24	3.63	1.76	4.16	55.32
1979	7.91	1.09	2.21	1.37	4.81	1.70	10.58	12.76	14.15	0.96	0.90	2.45	60.89
1980	3.72	1.65	1.47	3.90	3.90	2.40	6.64	4.71	2.92	0.40	3.21	1.34	36.26
1981	0.36	3.46	1.24	0.16	2.82	10.38	7.50	10.54	6.02	0.98	1.35	0.22	45.03
1982	1.16	2.06	6.52	4.15	6.96	11.14	7.79	5.97	10.65	2.59	1.57	0.51	61.07
1983	4.41	10.85	4.83	2.63	1.01	5.44	7.31	6.74	2.37	5.18	1.84	2.45	55.06
1984	0.45	2.93	6.42	2.75	5.09	7.39	13.09	2.71	3.70	0.13	3.13	0.61	48.40
1985	0.40	0.76	2.29	3.47	2.77	7.20	7.10	4.93	6.46	4.37	2.62	1.60	43.97
1986	1.33	0.78	6.03	0.21	1.56	15.85	7.75	8.14	5.06	4.05	0.08	3.35	54.19
1987	3.10	1.14	6.61	0.52	2.44	3.27	4.52	3.50	9.92	6.63	5.94	1.23	48.82
1988	2.39	2.37	6.21	1.47	2.90	3.01	9.29	10.20	2.41	1.81	3.80	1.73	47.59
1989	2.03	0.33	4.11	2.98	2.21	4.79	7.60	7.80	8.10	4.35	0.97	2.54	47.81
1990	2.21	3.27	1.79	1.34	1.72	9.20	10.89	9.40	3.88	0.53	0.45	1.01	45.69
1991	5.17	1.48	4.61	2.03	5.87	7.37	8.66	7.39	4.70	2.98	0.86	0.88	52.00
1992	0.36	4.73	2.26	4.91	3.84	15.77	4.67	12.12	6.71	1.91	4.37	0.58	62.23
1993	5.12	3.07	5.74	2.78	1.07 a	4.96	11.03	4.28	4.63	6.95	0.82	1.32	51.77
1994	3.82	1.84	3.49	2.00	4.30	11.35	3.64	9.03	8.31	2.57	4.16	3.83	58.34
1995	2.89	2.99	4.72	3.27	2.05	8.35	7.56	8.15	6.92	7.15	1.20	0.68	55.93
1996	2.42	1.71	4.76	1.16	7.61	8.32	5.57	6.03	0.70	3.72	0.20	1.64	43.84

1997	1.19	3.02	1.67	5.47	4.98	6.76	6.29	4.40	9.16	0.68	4.46	7.60	55.68
1998	5.65	8.28	5.39	0.95	3.94	0.90	7.08	6.22	8.73	2.90	5.16	0.94	56.14
1999	2.29	0.27	0.76	3.48	6.52	10.89	5.34	14.31	8.93	3.86	1.19	2.26	60.10
2000	1.15	0.37	2.00	1.92	1.17	3.76	5.06	1.94	7.95	1.37	0.24	0.38	27.31
2001	0.26	0.00	3.64	1.47	3.43	8.24	17.27	8.43	11.55	4.68	0.81	0.55	60.33
2002	1.74	3.86	0.06	1.20	3.67	18.66	11.05	10.80	9.10	1.73	4.52	6.22	72.61
2003	1.23	0.73	7.52 a	2.57	5.25	11.04	4.02	7.82	9.69	0.25	0.86	3.75	54.73
2004	1.41	5.00	0.22	4.10	3.19	7.32	8.52	17.88	12.54	3.02	0.67	2.19	66.06
2005	1.25	2.06	4.58	2.45	1.09	13.89	7.31	8.37	3.30	9.24	3.78	0.27	57.59
2006	0.31	3.31	0.87	0.03	1.46	4.13 g	9.35	20.09	3.79	0.00 z	0.00 z	0.00 z	43.34

Period of Record Statistics

MEAN	2.16	2.41	3.44	2.21	3.86	8.44	7.92	7.74	6.91	3.26	2.04	2.01	52.60
S.D.	1.91	2.15	2.42	1.58	1.91	4.08	3.16	3.26	3.12	2.25	1.68	1.69	8.77
SKEW	1.08	2.09	0.39	0.59	0.22	0.35	1.26	0.83	0.18	0.83	0.64	1.47	-0.43
MAX	7.91	10.85	8.85	5.90	7.61	18.66	17.27	17.88	14.15	9.24	5.94	7.60	72.61
MIN	0.08	0.00	0.05	0.03	1.01	0.90	3.64	1.94	0.70	0.13	0.08	0.22	27.31

*** Note *** Provisional Data *** After Year/Month 200603
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing

2006 STOKES TEST RESULTS

ULTRA PHOS-FILTER ™ TEST RESULTS

Madrid Engineering Group, Inc.

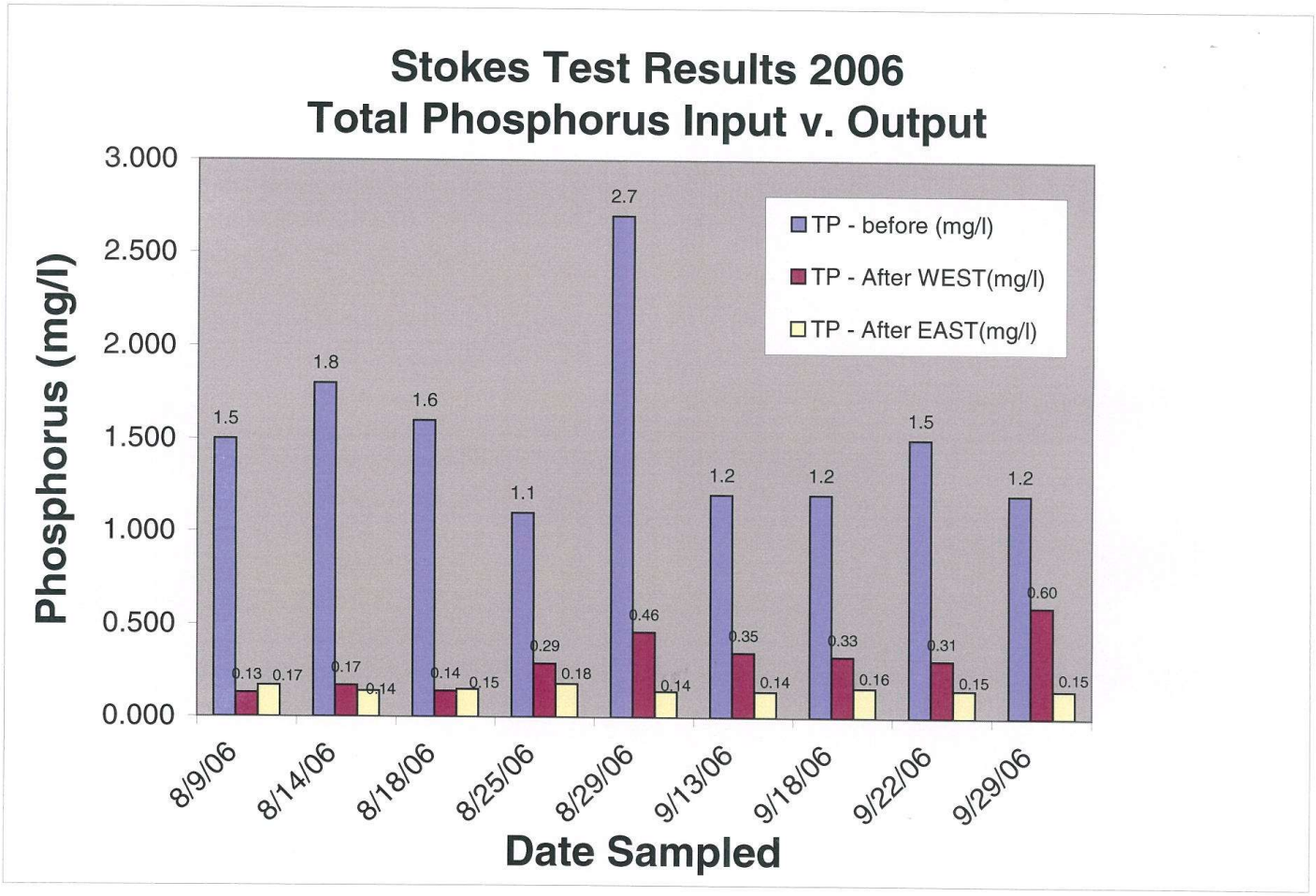
17-Oct-06

WEST ULTRA PHOS-FILTER CELL

Date	TP - reservoir intake (mg/l)	TP - before (mg/l)	TP - After WEST(mg/l)	Percent Phosphorus Removed	Flow Meter (gpm)	Flowmeter reading (gal)	Phosphorus Removed mg/l	Pounds Phosphorus Removed
INITIAL	Outflow started trickling on/about 8/2/06; steady flow by 8/9					0		
8/9/06		1.500	0.13	91.3	9 (estim)		1.370	
8/14/06		1.800	0.17	90.6	12 (estim)		1.630	
8/18/06		1.600	0.14	91.3	15 (estim)		1.460	
8/25/06	1.5	1.100	0.29	73.6	65.0	278,142	0.810	3.45
8/29/06	2.0	2.700	0.46	83.0	57.0	615,839	2.240	2.28
9/13/06	1.4	1.200	0.35	70.8	32.0	1,559,507	0.850	17.64
9/18/06	1.2	1.200	0.33	72.5	22.6	1,731,904	0.870	1.22
9/22/06	1.3	1.500	0.31	79.3	20.2	1,839,992	1.190	0.78
9/29/06	1.4	1.200	0.60	50.0	11.9	1,987,980	0.600	1.47
	1.467	**1.483**	**0.31**	**80%**			**W. TOTAL**	**26.9**
		1.533						

EAST ULTRA PHOS-FILTER CELL

Date	TP - reservoir intake (mg/l)	TP - before (mg/l)	TP - After EAST(mg/l)	Percent Phosphorus Removed	Flow Meter (gpm)	Flowmeter reading (gal)	Phosphorus Removed mg/l	Pounds Phosphorus Removed
INITIAL	Outflow started trickling on/about 8/2/06; steady flow by 8/9					0		
8/9/06		1.500	0.17	88.7	7.5 (estim)		1.330	
8/14/06		1.800	0.14	92.2	7.5 (estim)		1.660	
8/18/06		1.600	0.15	90.6	7.5 (estim)		1.450	
8/25/06	1.5	1.100	0.18	83.6	29.1	172,315	0.920	2.13
8/29/06	2.0	2.700	0.14	94.8	28.1	331,123	2.560	1.22
9/13/06	1.4	1.200	0.14	88.3	39.8	1,118,455	1.060	16.82
9/18/06	1.2	1.200	0.16	86.7	37.0	1,372,716	1.040	2.25
9/22/06	1.3	1.500	0.15	90.0	34.5	1,553,552	1.350	1.57
9/29/06	1.4	1.200	0.15	87.5	22.6	1,833,924	1.050	3.16
	1.467	**1.483**	**0.15**	**90%**			**E. TOTAL**	**27.1**
		1.533					**Grand Total**	**54.0**


Stokes Test Results 2006
Total Phosphorus Input v. Output
Phosphorus (mg/l)
3.000
2.500
2.000
1.500
1.000
0.500
0.000
TP - before (mg/l)
TP - After WEST(mg/l)
TP - After EAST(mg/l)
1.5
0.13
0.17
1.8
0.17
0.14
1.6
0.14
0.15
1.1
0.29
0.18
2.7
0.46
0.14
1.2
0.35
0.14
1.2
0.33
0.16
1.5
0.31
0.15
1.2
0.60
0.15
8/9/06
8/14/06
8/18/06
8/25/06
8/29/06
9/13/06
9/18/06
9/22/06
9/29/06
Date Sampled

2006 STOKES TEST RESULTS

Madrid Engineering Group, Inc.

ULTRA PHOS-FILTER ™ IRON TEST RESULTS

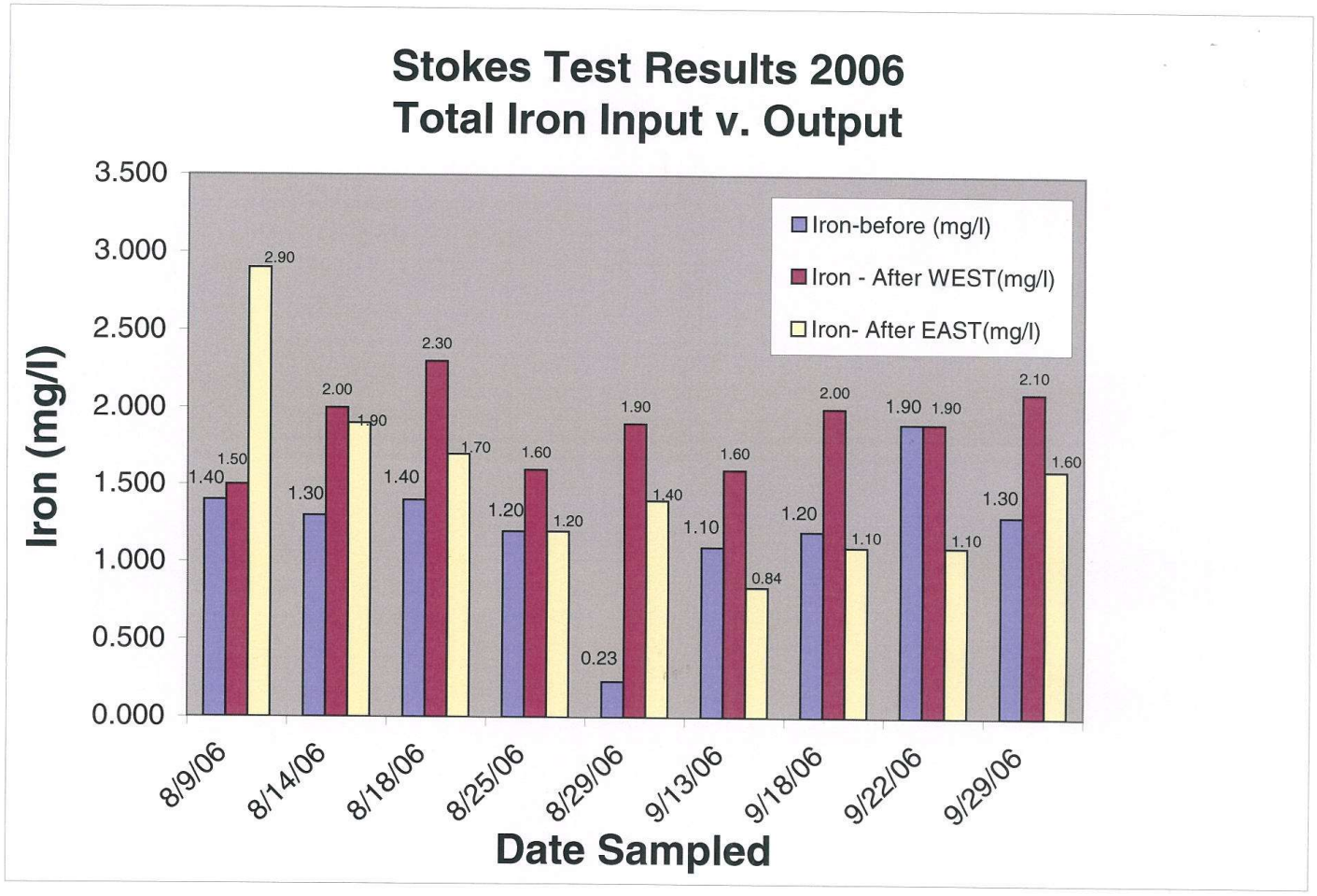
17-Oct-06

WEST ULTRA PHOS-FILTER CELL

Date	Iron - before (mg/l)	Iron - After WEST(mg/l)	Iron Increase mg/l	Flow Meter (gpm)	Flowmeter reading (gal)
INITIAL	Outflow started trickling on/about 8/2/06; steady flow by 8/9				0
8/9/06	1.400	1.50	0.1	9 (estim)	
8/14/06	1.300	2.00	0.7	12 (estim)	
8/18/06	1.400	2.30	0.9	15 (estim)	
8/25/06	1.200	1.60	0.4	65.0	278,142
8/29/06	0.230	1.90	1.7	57.0	615,839
9/13/06	1.100	1.60	0.5	32.0	1,559,507
9/18/06	1.200	2.00	0.8	22.6	1,731,904
9/22/06	1.900	1.90	0.0	20.2	1,839,992
9/29/06	1.300	2.10	0.8	11.9	1,987,980

EAST ULTRA PHOS-FILTER CELL

Date	Iron-before (mg/l)	Iron- After EAST(mg/l)	Iron Increase mg/l	Flow Meter (gpm)	Flowmeter reading (gal)
INITIAL	Outflow started trickling on/about 8/2/06; steady flow				0
8/9/06	1.400	2.90	1.5	7.5 (estim)	
8/14/06	1.300	1.90	0.6	7.5 (estim)	
8/18/06	1.400	1.70	0.3	7.5 (estim)	
8/25/06	1.200	1.20	0.0	29.1	172,315
8/29/06	0.230	1.40	1.2	28.1	331,123
9/13/06	1.100	0.84	-0.3	39.8	1,118,455
9/18/06	1.200	1.10	-0.1	37.0	1,372,716
9/22/06	1.900	1.10	-0.8	34.5	1,553,552
9/29/06	1.300	1.60	0.3	22.6	1,833,924


Stokes Test Results 2006
Total Iron Input v. Output
Iron (mg/l)
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Iron-before (mg/l)
Iron - After WEST(mg/l)
Iron- After EAST(mg/l)
1.40
1.50
2.90
1.30
2.00
1.90
1.40
2.30
1.70
1.20
1.60
1.20
0.23
1.90
1.40
1.10
1.60
0.84
1.20
2.00
1.10
1.90
1.90
1.10
1.30
2.10
1.60
8/9/06
8/14/06
8/18/06
8/25/06
8/29/06
9/13/06
9/18/06
9/22/06
9/29/06
Date Sampled