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September 12, 2008

HAND DELIVERY

MARTIN S. FRIEDMAN, P.A.
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CHRISTIAN W. MARCELLI, OF COUNSEL
(LICENSED IN NEW YORK ONLY)

Ann Cole, Commission Clerk
Office of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

RE: Docket No. 080247-SU; Utilities, Inc. of Eagle Ridge's Application for Increase in
Wastewater Rates in Lee County, Florida
Our File No.: 30057.158

RECEIVED-FPSC
08 SEP 12 AM 10:28
COMMISSION
CLERK

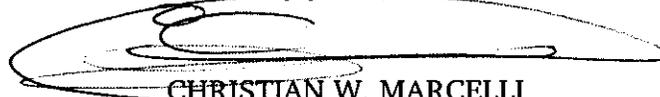
Dear Ms. Cole:

The following documents, enclosed for filing herein, were inadvertently omitted from the Additional Engineering Information filed with the Application in the above-referenced docket:

- Updated Capacity Analysis Report for the Eagle Ridge Wastewater Treatment Facility; and
- Updated Capacity Analysis Report for the Cross Creek Wastewater Treatment Facility.

Should you have any questions regarding this filing, please do not hesitate to give me a call.

Very truly yours,


CHRISTIAN W. MARCELLI
Of Counsel

CWM/tlc
Enclosures

cc: Richard Redemann, Division of Economic Regulation (w/encs.) (via hand delivery)
John Hoy, Chief Regulatory Officer (w/enclosures)
Patrick C. Flynn, Regional Director (w/o enclosures)
Ms. Deborah Swain (w/enclosures)

DOCUMENT NUMBER-DATE

08532 SEP 12 8



Land Planning and
Engineering

Stormwater
Management

Drainage and Utilities

Environmental Permitting
Construction Administration

Project Management
Government Agency Liaison

Phase 1 ESA & Due Diligence

Water & Wastewater
Treatment Facilities

Water/Sewer Utility
Rates & Charges

Pumping Stations

UPDATED CAPACITY ANALYSIS REPORT

**Permit Number: FLA014498
Permit Expiration Date: October 14, 2008
Field Evaluation: January 29, 2008**

**Prepared for:
Utilities Inc. of Eagle Ridge
200 Weathersfield
Altamonte Springs, FL 32714**

**Prepared by:
Excel Engineering Consultants, LLC
122 Wilshire Boulevard
Casselberry, FL 32707**

March 20, 2008

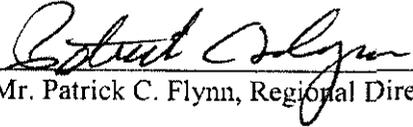
CERTIFICATIONS

Permittee:

County of: Lee

Mr. Patrick C. Flynn, Regional Director
Utilities Inc. of Eagle Ridge
Altamonte Springs, FL 32714
407-869-1919

I have reviewed, am fully aware of, and intend to comply with the recommendations and schedules included in the report.

 4/14/08
Mr. Patrick C. Flynn, Regional Director Date

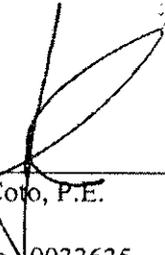


Professional Engineer:

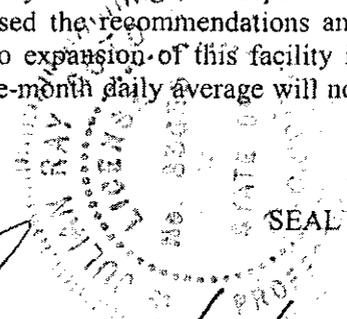
Mr. Julian Ray Coto, P.E., D.E.E
President

Excel Engineering Consultants, LLC
122 Wilshire Boulevard
Casselberry, FL 32707
407-260-2292

The information contained in this report is true and correct to the best of my knowledge; the report was prepared in accordance with sound engineering principles, and I discussed the recommendations and schedules with the permittee or permittee's delegated representative. No expansion of this facility is anticipated in the next five years and it is expected that the facility's three-month daily average will not exceed the permitted capacity within the next five years.

 4/14/08
Mr. Julian R. Coto, P.E. Date

Registration No. 0033635



DOCUMENT NUMBER-DATE

08532 SEP 12 08

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**Eagle Ridge
Wastewater Treatment Facility**

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APPENDIX A: Facility Plans
APPENDIX B: Flow Analysis
APPENDIX C: Process Analysis
APPENDIX D: Additional Information

UTI02-0107-Eagle Ridge WWTF-Updated CAR.doc

DOCUMENT NUMBER-DATE

08532 SEP 12 8

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Eagle Ridge Wastewater Treatment Facility

1.0 INTRODUCTION

Excel Engineering Consultants, LLC prepared this Capacity Analysis Report (CAR) for the Eagle Ridge Wastewater Treatment Facility (WWTF) in conjunction with the Operating Permit renewal application for the WWTF. This CAR serves as the updated CAR and covers the period from October 1998 through November 2007.

A. Service Area

Eagle Ridge WWTF is located at 14688 Aeries Way in Ft. Myers, Florida. The service area for the Eagle Ridge WWTF is located in Section 29, Township 45 South, Range 25 East, in Lee County, Florida. The Eagle Ridge service area is approximately 99% built-out and consists of 1,367 residential units with 450 single-family homes, 325 condominiums and 592 multifamily apartments. The average unit flow is estimated to be approximately 200 gpd for a total ADF of 273,400 gpd at full occupancy.

B. Facility Description

The wastewater treatment facility is a 0.443 mgd TMADF contact stabilization and/or 0.318 mgd TMADF extended aeration process facility based on the three-month average daily flow. The facility provides public access irrigation to a 90-acre golf course. The wastewater residuals are transferred to aerobic digesters and transported off-site for treatment by Appalachian Material Services, Inc.

A locked fence surrounds the plant. The principal items included in the main processing plant is three surge tanks with a combined volume of 92,700 gallons; four aeration tanks with a combined volume of 255,180 gallons; two settling tanks with a combined surface area of 597.30 s.f.; dual filtration which includes one Kruger Hydrotech Discfilter and one 180 s.f. ABW sand filter; three chlorine contact tanks with a combined volume of 20,760 gallons; two aerobic digesters with a combined volume of 112,200 gallons; one 1,329,500 gallon reclaimed water storage pond; one 600,000 gallon lined reject water storage pond; air distribution and supply system, scum troughs, clarifier sludge collector mechanisms, return/waste sludge system, walkways, internal piping, and electrical controls. Air is provided by alternating three Lamson centrifugal blowers to furnish overall air requirements for the process portion of the plant. Air is provided to the surge tanks by two Tuthill 3006 rotary blowers/motors. The facility utilizes a U.S. Filter odor control system that is physically connected to the surge tanks. A standby generator is used to provide emergency power in the event of an electrical power outage.

The facility meets Class C, Category II treatment facility. The facility requires a licensed operator with a minimum certification of Class C to be on-site for six (6) hours per day, seven (7) days per week.

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2.0 EXISTING CONDITIONS

A. Permitted Capacity

The plant, currently under FDEP Permit No. FLA014498 is authorized to operate a 0.443 MGD TMADF contact stabilization and/or 0.318 MGD TMADF extended aeration wastewater treatment facility with effluent disposal by way of public access irrigation to a 90-acre golf course. The WWTF meets the requirements of a Class C, Category II treatment facility.

B. Historical Flows

Flows and effluent water quality data were obtained from the Discharge Monitoring Reports (DMRs) submitted to the FDEP. Our analysis is focused on the flows experienced between October 1998 and November 2007. The monthly average daily flows have varied between 203,000 and 311,000 gpd. The three-month running average daily flow during this period varied between 203,000 and 309,000 gpd. The twelve-month running average daily flow during this period varied between 228,000 and 285,000 gpd. Our analysis of the past 9 years suggests that the wastewater treatment facility experiences seasonal flows that are consistent with the typical tourist season here in Florida.

C. Seasonal Variations

The flows typically peak during the winter months, which coincide with the arrival of Florida's tourist season. The tourists arriving in Florida for the winter months cause increased flows at Eagle Ridge. The ratio of the average 3-month ADF to the maximum 12-month ADF is as follows:

**Table I
 Average Ratio**

ANNUAL PERIOD	ANNUAL AVERAGE	HIGHEST 3 MONTH AVG	RATIO
January – December 1999	0.218	0.226	1.035
January – December 2000	0.229	0.242	1.058
January – December 2001	0.231	0.241	1.043
January – December 2002	0.255	0.276	1.081
January – December 2003	0.262	0.286	1.093
January – December 2004	0.274	0.283	1.034
January – December 2005	0.282	0.309	1.097
January – December 2006	0.251	0.289	1.153
January – December 2007	0.228	0.245	1.076
AVERAGE RATIO			1.074

D. Updated Flow and Loading Information

The treatment efficiency of each component associated with the wastewater treatment facility and reuse disposal system were analyzed and compared to the criteria of the applicable publications stated in 62-600.300(4), FAC. The results of our analysis, shown in Appendix C, suggest that the facility's components are operating at better than the minimum design requirements (See Appendix B & C). The following is a summary of the treatment efficiency parameters:

**Table II
Contact Stabilization Treatment Efficiencies**

ITEM	COMPONENT DESCRIPTION	TREATMENT CRITERIA	RESULTS OF ANALYSIS	DESIGN PARAMETERS
1.0	Contact Stabilization Tanks	Detention Time (hours)	4.61 hours	0.5 to 1 hours
		BOD Loading Rated	61.73 #BOD/1,000 c.f.	10 to 25 # BOD/1,000 c.f.
2.0	Reaeration Tanks	Detention Time (hours)	9.22 hours	3 to 6 hours
		BOD Loading Rated	30.87 #BOD/1,000 c.f.	10 to 25 # BOD/1,000 c.f.
3.0	MLSS Aeration	Applied Air	2,063 c.f./# BOD	2,000 c.f./#BOD
4.0	Clarifiers	Overflow Rate (gpdpsf)	741.67 gpdpsf	200 to 600 gpdpsf
5.0	Chlorine Contact Tanks	Detention Time (minutes)	67.48 min. adf 33.74 min. peak	30 min. adf 15 min. peak
6.0	Golf Course Irrigation	Application Rate (inches per week)	1.27 inches per week	2.0 Inches per week
7.0	BOD ₅	% Removal Efficiency	99.17%	90%
8.0	TSS	% Removal Efficiency	99.45%	90%

**Table III
Extended Aeration Treatment Efficiencies**

ITEM	COMPONENT DESCRIPTION	TREATMENT CRITERIA	RESULTS OF ANALYSIS	DESIGN PARAMETERS
1.0	Aeration Tanks	Detention Time (hrs)	19.26 hours	18 - 36 hours
		BOD Loading Rated	14.77 #BOD/1,000 c.f.	10 to 25 # BOD/1,000 c.f.
2.0	MLSS Aeration	Applied Air (known)	2,063 c.f./# BOD	2,000 c.f./#BOD
3.0	Clarifiers	Overflow Rate (gpdpsf)	532.40 gpdpsf	200 to 600 gpdpsf
4.0	Chlorine Contact Tanks	Detention Time (min.)	94.01 min. adf 37.00 min. peak	30 min. adf 15 min. peak
5.0	Percolation Ponds	Application Rate (gpdpsf)	0.91 gpdpsf	5.6 gpdpsf
6.0	BOD ₅	% Removal Efficiency	99.17%	90%
7.0	TSS	% Removal Efficiency	99.45%	90%

The effluent BOD₅ samples were analyzed every two weeks and the effluent TSS samples were analyzed four days per week. The facility's average BOD₅ removal rate over the study period was 99.17% and the TSS removal rate was 99.45%. Based on the results of our analysis the facility exceeded the minimum 90% treatment efficiency for both BOD₅ and TSS in all measured occasions. It is expected that the wastewater treatment facility will continue to provide treatment efficiencies in excess of 90% during the coming permitting period.

3.0 FUTURE CONDITIONS

The wastewater treatment facility is permitted to treat 443,000 gallons per day of domestic wastewater through contact stabilization or 318,000 gallons per day through the extended aeration process based on the three-month average daily flow. Our analysis over the previous 9 years suggests that the average flow during the period is 248,000 gpd for the 30-day adf, 250,000 gpd for the 3-month adf, and 251,000 gpd for the annual adf. The monthly average daily flows have varied between 203,000 and 311,000 gpd. The three-month running average daily flow during this period varied between 203,000 and 309,000 gpd. The twelve-month running average daily flow during this period varied between 228,000 gpd and 285,000 gpd.

During the 9-year study period, the facility's three-month average daily flow did not exceed the facility's rated capacity on any one occasion. The wastewater treatment facility is permitted to 443,000 gpd in the contact stabilization mode and to 318,000 gpd in the extended aeration mode; and it is expected that the facility's three-month average daily flow will not exceed the permitted capacity within the next five years.

4.0 SUMMARY AND CONCLUSION

A. Conclusion

The wastewater treatment plant is a 443,000 gallon per day contact stabilization facility and/or 318,000 gallon per day extended aeration facility based on the three-month average daily flow. The collection system receives only domestic wastewater since there are no industrial users associated with the service area. Our analysis over the previous 9 years has revealed that the 3-month ADF did not exceed the facility's rated capacity in all observed instances.

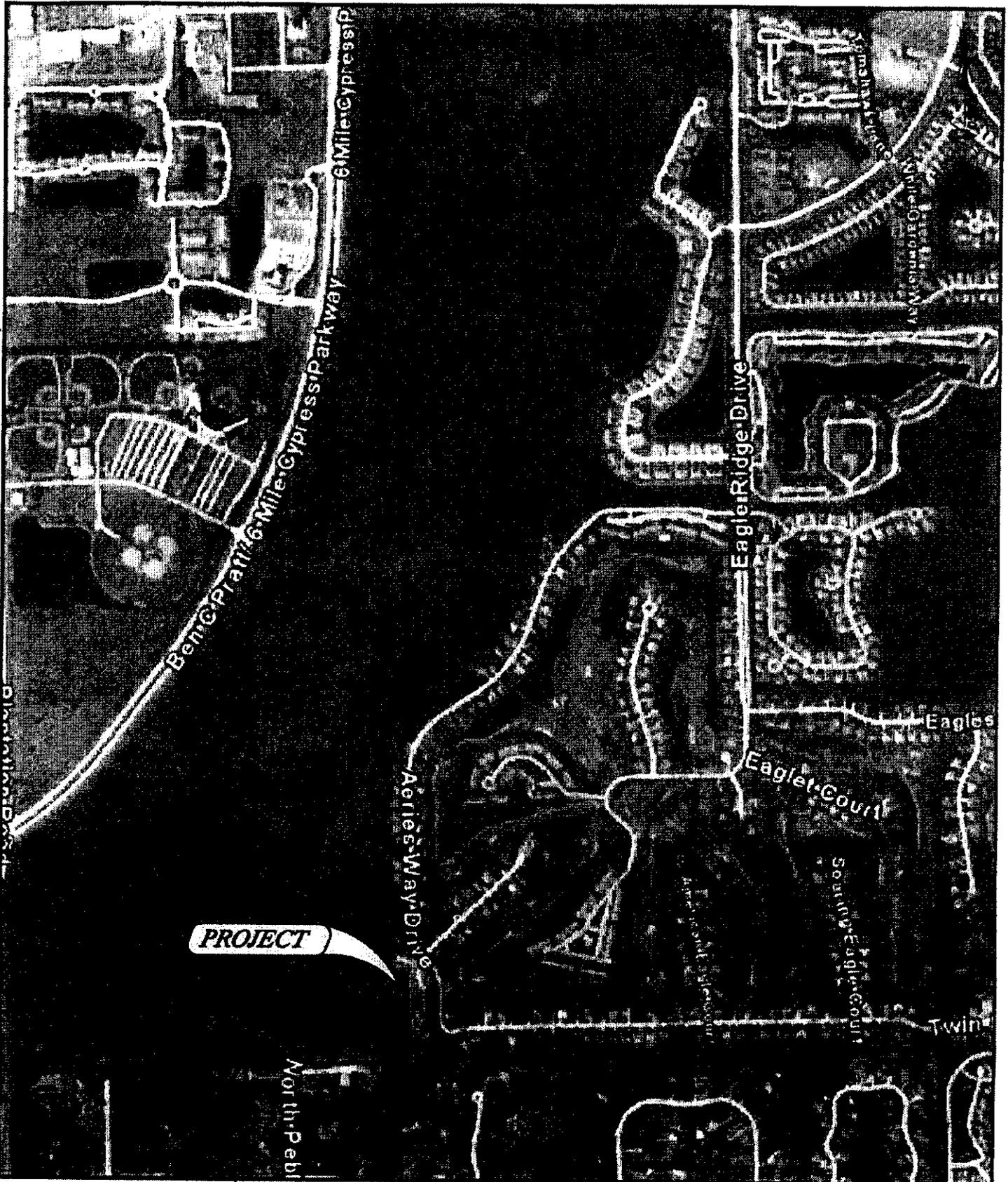
Based on the fact that the flows have remained within the permitted limits and that the facility is approximately 99% built-out, the flows are expected to be below or in the range of the permitted capacities for the life of the permit.

B. Recommendation for Expansion

The WWTF has been designed to treat a flow of 443,000 gpd through contact stabilization or 318,000 gpd through extended aeration. The three-month average daily flows have remained well within the permitted limit during the study period, no expansion is recommended at this time.

APPENDIX A

FACILITY PLANS



Excel Engineering
 ENVIRONMENTAL & CIVIL ENGINEERS
 122 WILSHIRE BOULEVARD
 CASSELBERRY, FL 32707
 TEL: (407) 280-2292 FAX: (407) 280-1103
 CERTIFICATE OF AUTHORIZATION NO. 27541

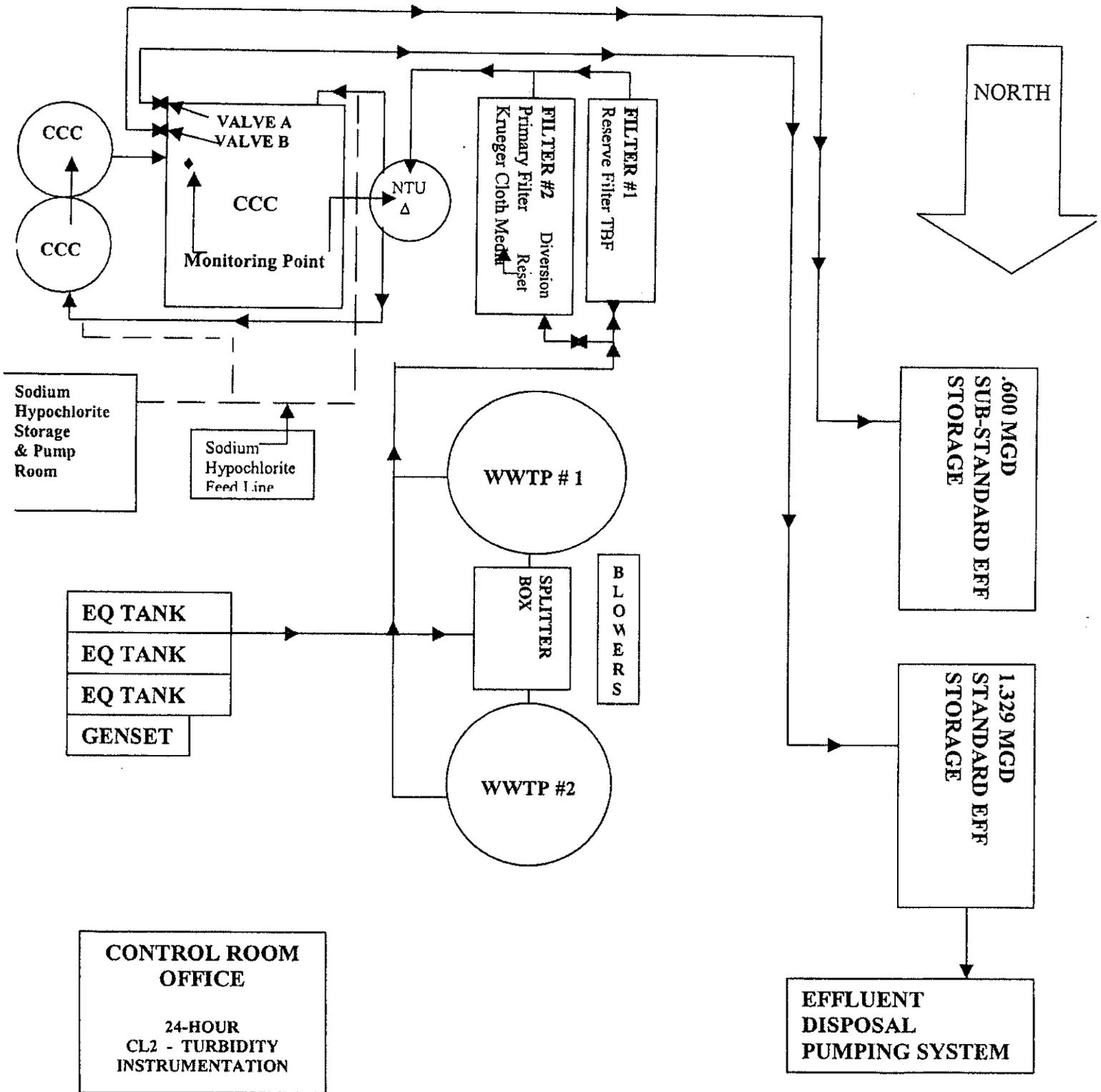
EAGLE RIDGE
WWTP

LOCATION MAP

PROJECT: UT102-0107	SCALE: 1"=1000'
DRAWN: MDM	CHECKED: ART
DATE: 12.28.07	SHEET 1 OF 1

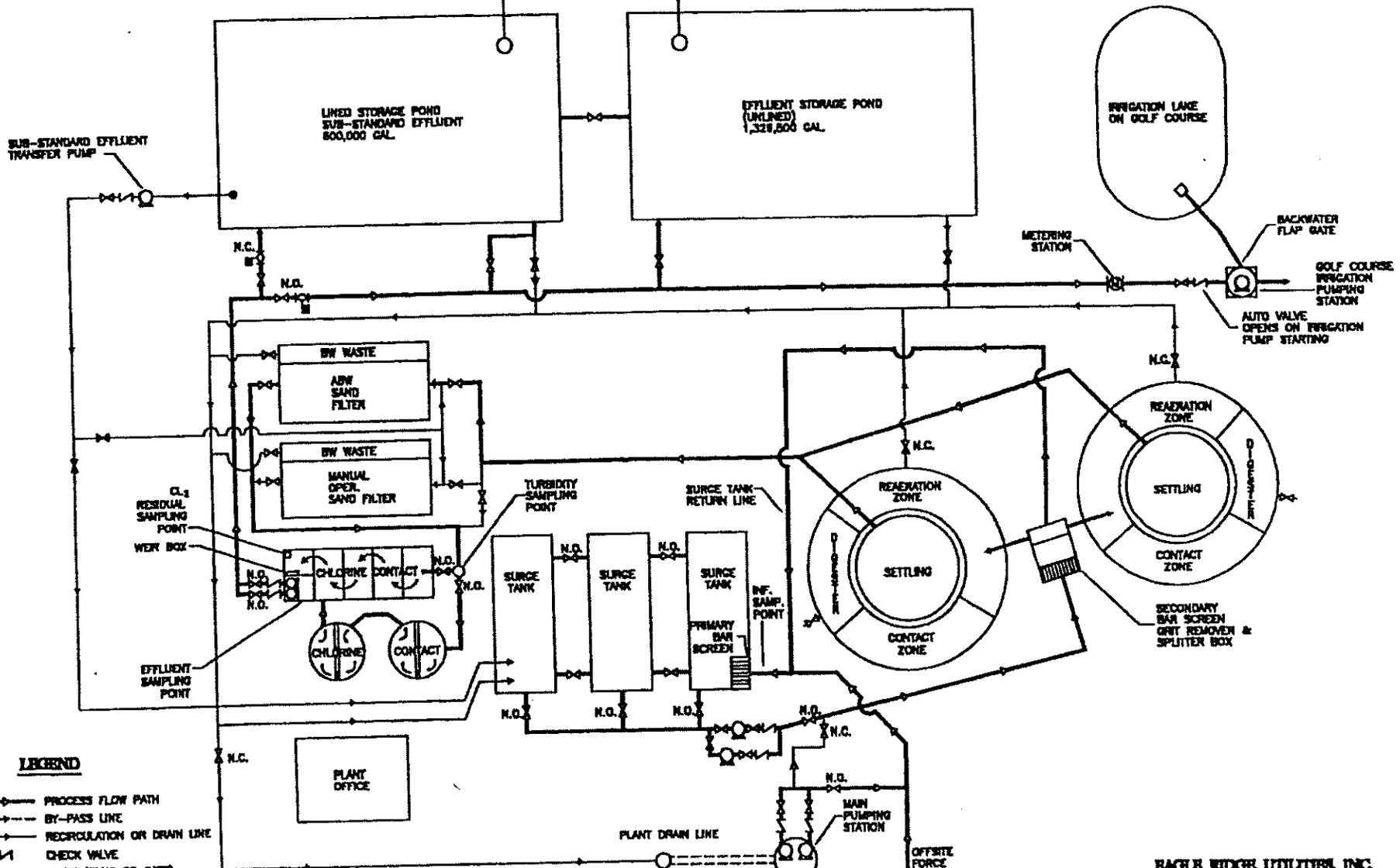
APPENDIX B
FLOW ANALYSIS

Attachment A



◆ = EFA -1 Monitoring Point for Total Residual Chlorine, Fecal Coliform & CBOD
 Δ = EFB-1 Monitoring Point for Turbidity & TSS
 ⊕ = Diversion Reset Switch (General Location)
 Valve A is the Automatic Standard Effluent Storage Control Valve.
 Valve B is the Automatic Substandard Effluent Diversion Valve

EMERGENCY POND OVERFLOW LINE TO GOLF COURSE DRAINAGE SYSTEM



LEGEND

- PROCESS FLOW PATH
- - - BY-PASS LINE
- - - RECIRCULATION OR DRAIN LINE
- ∨ CHECK VALVE
- X VALVE (PLUG OR GATE)
- N.O. NORMALLY OPEN VALVE (WHEN ATTENDED)
- N.C. NORMALLY CLOSED VALVE (WHEN ATTENDED)
- ⊗ MOTORIZED BUTTERFLY VALVE

EXHIBIT NO. 3

RECEIVED

AUG 11 2003

D.E.P. - South District

EAGLE RIDGE UTILITIES, INC.
WASTEWATER TREATMENT FACILITY
FLOW DIAGRAM

	SCALE: _____ DATE: _____	DRAWN BY: _____ CHECKED BY: _____
	PROJECT NO. _____ SHEET NO. _____ OF _____	

Eagle Ridge WWTF

WWTF Historical Flows and Loading Data

DATE	30 DAY ADF(mgd)	3 MO. ADF(mgd)	12 MO. ADF(mgd)	PEAK (mgd)	IN BOD (mg/l)	IN TSS (mg/l)	OUT BOD (mg/l)	OUT TSS (mg/l)	BOD EFF. %	TSS EFF. %	CHLORINE RESIDUAL (mg/l)	pH	FECAL COLIFORM (#/100ml)	TURBIDITY (NTU)
Oct-98	0.203			0.248	233	221		1.1		99.50%	3.5	7.0	0.9	
Nov-98	0.227			0.308	287	299	3.5	1.4	98.78%	99.53%	4.5	6.7	0.9	
Dec-98	0.224	0.218			203	226	2.6	1	98.72%	99.56%	3.0	6.7	0.9	
Jan-99														
Feb-99	0.235			0.268	147	213	1.2	1.1	99.18%	99.48%	3.0	6.9	0.9	
Mar-99	0.227			0.265	229	351	3.5	1.2	98.47%	99.66%	1.8	7.0	0.9	
Apr-99	0.215	0.226		0.244	190	254	2.4	1.5	98.74%	99.41%	1.8	7.0	0.9	
May-99	0.216	0.219		0.242		175	1.5	0.8		99.54%	1.7	7.0	0.9	
Jun-99	0.208	0.213		0.243	235	221	0.5	0.7	99.79%	99.68%	1.8	7.0	0.9	
Jul-99	0.202	0.209		0.294	180	171	0.6	0.8	99.67%	99.53%	3.1	6.8	0.9	
Aug-99	0.204	0.205		0.254	196	185	0.45	0.7		99.62%	3.5	6.8	0.9	
Sep-99			0.216											
Oct-99	0.212		0.217	0.239	203	268	1.2	0.7	99.41%	99.66%	3.0	6.8	1.0	
Nov-99	0.235		0.218	0.259	165	177	0.9	0.6	99.45%		3.0	6.7	0.9	
Dec-99	0.230	0.226	0.218	0.302	179	210	1.2	0.7	99.33%	99.67%	3.2	6.7	0.9	
Jan-00	0.221	0.229	0.219	0.293	212	223	0.8	0.7	99.62%	99.69%	2.9			
Feb-00			0.217											
Mar-00	0.265		0.221	0.3	214	237	1.5	0.82	99.30%	99.65%		6.7	0.9	
Apr-00	0.253		0.225	0.287	203	227	1.6	0.9	99.21%	99.60%	3.4	6.7	0.9	
May-00	0.203	0.240	0.223	0.292	240	257	2	0.8	99.17%	99.69%	2.2	7.1	0.9	
Jun-00	0.203	0.220	0.223	0.251	245	291	1.5	0.7	99.39%	99.76%	2.2	7.0	0.9	
Jul-00	0.203	0.203	0.223	0.238	211	259	0.9	0.3	99.57%	99.88%	1.7	7.1		
Aug-00	0.211	0.206	0.224	0.267	156	206	1.3	0.72	99.17%	99.65%	1.5	7.2	0.9	
Sep-00	0.242	0.219	0.225	0.333	161	180	0.9		99.44%		1.5	7.1	0.9	
Oct-00	0.237	0.230	0.228	0.29		221	1				1.7	7.3	0.9	
Nov-00	0.248	0.242	0.229	0.317	173	212	0.5	0.9	99.71%	99.58%	1.6	6.5	0.9	
Dec-00	0.231	0.239	0.229	0.265	187	251	0.9	1.1	99.52%	99.56%	1.7	6.5	0.9	
Jan-01	0.243	0.241	0.231	0.289	174	208	1.9	0.9	98.91%	99.57%	1.8	6.6	0.9	
Feb-01	0.238	0.237	0.231	0.279	187	210	0.1	0.6	99.95%	99.71%	1.8	6.9	0.9	
Mar-01	0.231	0.237	0.229	0.314	204	225	1.5	1	99.26%	99.56%	1.2	7.1	0.9	
Apr-01	0.240	0.236	0.228	0.315	267	314	3	0.6	98.88%	99.81%	2.0	7.0	0.9	
May-01	0.239	0.237	0.231	0.284	185	196	0.5	0.8	99.73%	99.59%	1.0	6.8	0.9	
Jun-01	0.215	0.231	0.232	0.281	193	245	1.5	0.8	99.22%	99.67%	0.6	6.7	0.9	
Jul-01	0.208	0.221	0.232	0.27	181	203	1.7	0.6	99.06%	99.70%	1.1	6.9	0.9	
Aug-01	0.224	0.216	0.233	0.278	148	258	1.5	0.7	98.99%	99.73%	1.2	6.8	0.9	
Sep-01	0.229	0.220	0.232	0.254	278	431	1	0.7	99.64%	99.84%	1.1	6.7	0.9	
Oct-01	0.232	0.228	0.232	0.258	170	354	1	0.7	99.41%	99.80%	1.3	6.7	0.9	
Nov-01	0.234	0.232	0.230	0.285	244	404	1.5	0.8	99.39%	99.80%	1.7	6.6	0.9	
Dec-01	0.239	0.235	0.231	0.3	126	102	0.9	0.9	99.29%	99.12%	1.2	6.5	0.9	
Jan-02	0.206	0.226	0.228	0.27	172	238	1.9	0.7	98.90%	99.71%	1.0	6.2	0.9	1.00
Feb-02	0.242	0.229	0.228	0.284	208	211	2.0	1.0	99.04%	99.53%	1.0	6.3	0.9	1.96
Mar-02	0.259	0.236	0.231	0.288	298	415	1.9	2.1	99.36%	99.49%	1.0	6.0	0.9	1.50
Apr-02	0.261	0.254	0.232	0.279	253	298	2.0	1.9	99.21%	99.36%	1.1	6.5	0.9	0.90
May-02	0.239	0.253	0.232	0.238	271	434	1.9	1.5	99.30%	99.65%	1.2	6.4	0.9	0.40
Jun-02	0.240	0.247	0.234	0.267	411	351	1.9	0.7	99.54%	99.80%	1.1	6.4	0.9	0.30
Jul-04	0.261	0.247	0.239	0.277	227	338	1.9	0.7	99.16%	99.79%	1.0	6.3	0.9	0.40
Aug-02	0.270	0.257	0.243	0.294	213	236	1.9	0.6	98.11%	99.75%	1.0	6.5	0.9	0.40
Sep-02	0.287	0.273	0.248	0.302	127	136	1.9	0.7	98.50%	99.49%	1.0	6.4	0.9	0.30
Oct-02	0.267	0.275	0.250	0.289	168	153	1.9	0.9	98.87%	99.41%	1.0	6.4	0.9	0.80

(1)

(1)

(1)

Eagle Ridge WWTF
WWTF Historical Flows and Loading Data

DATE	30 DAY ADF(mgd)	3 MO. ADF(mgd)	12 MO. ADF(mgd)	PEAK (mgd)	IN BOD (mg/l)	IN TSS (mg/l)	OUT BOD (mg/l)	OUT TSS (mg/l)	BOD EFF. %	TSS EFF. %	CHLORINE RESIDUAL (mg/l)	pH	FECAL COLIFORM (#/100ml)	TURBIDITY (NTU)
Nov-02	0.274	0.276	0.254	0.299	171	135	1.9	3.4	98.89%	97.48%	1.1	6.0	0.9	0.80
Dec-02	0.259	0.267	0.255	0.280	135	119	1.9	1.1	98.59%	99.08%	1.5	6.2	0.9	0.40
Jan-03	0.293	0.275	0.263	0.300	130	132	1.9	1.2	98.54%	99.09%	1.0	6.4	0.9	1.00
Feb-03	0.282	0.278	0.266	0.318	184	205	1.9	3.0	98.97%	98.54%	1.0	6.4	0.9	1.00
Mar-03	0.284	0.286	0.268	0.322	143	132	1.9	3.9	98.67%	97.05%	1.0	6.1	0.9	1.20
Apr-03	0.252	0.273	0.267	0.267	193	131	1.9	3.2	99.02%	97.56%	1.0	6.1	0.9	1.40
May-03	0.242	0.259	0.268	0.277	210	207	1.9	1.3	99.10%	99.37%	1.0	6.4	0.9	0.80
Jun-03	0.269	0.254	0.270	0.297	188	199	1.9	0.8	98.99%	99.60%	1.0	6.4	0.9	0.30
Jul-03	0.234	0.248	0.268	0.260	223	212	1.9	1.5	99.15%	99.29%	1.0	6.6	0.9	0.30
Aug-03	0.255	0.253	0.267	0.272	158	106	1.9	1.1	98.79%	98.96%	1.0	6.5	0.9	0.60
Sep-03	0.257	0.249	0.264	0.288	170	168	1.9	1.1	98.88%	99.35%	1.0	6.2	0.9	0.60
Oct-03	0.249	0.254	0.263	0.309	300	153	1.0	1.2	99.67%	99.22%	1.0	6.3	0.9	0.60
Nov-03	0.262	0.256	0.262	0.298	210	178	2.0	1.4	99.05%	99.21%	1.0	6.2	0.9	1.20
Dec-03	0.281	0.257	0.262	0.297	261	244	1.0	1.0	99.62%	99.59%	1.0	6.4	0.9	0.80
Jan-04	0.284	0.269	0.261	0.317	350	291	1.0	1.0	99.71%	99.65%	1.2	6.3	0.9	2.00
Feb-04	0.281	0.275	0.261	0.326	266	213	1.9	0.3	99.28%	99.88%	3.6	6.2	0.9	1.80
Mar-04	0.285	0.283	0.261	0.357	210	190	2.0	0.9	99.05%	99.55%	1.4	6.6	1.0	
Apr-04	0.272	0.279	0.263	0.313	199	229	0.7	1.0	99.66%	99.56%	1.0	6.8	2.8	1.80
May-04	0.254	0.270	0.264	0.304	198	179	2.0	0.8	98.99%	99.55%	1.5	6.5	0.9	2.00
Jun-04	0.241	0.256	0.261	0.292	250	214	2.0	0.9	99.20%	99.58%	1.4	6.3	1.0	1.90
Jul-04	0.252	0.249	0.263	0.287	242	239	2.0	0.7	99.17%	99.69%	1.1	6.3	1.0	1.90
Aug-04	0.287	0.260	0.265	0.349	184	180	2.0	0.7	98.91%	98.64%	1.7	6.6	1.0	2.20
Sep-04	0.282	0.274	0.268	0.335	199	179	2.0	0.9	98.99%	99.49%	2.0	6.5	1.0	1.70
Oct-04	0.273	0.281	0.270	0.315	268	237	2.0	2.0	99.25%	99.16%	1.0	6.5	1.0	1.80
Nov-04	0.285	0.280	0.271	0.333	201	277	2.0	0.7	99.00%	99.76%	1.0	6.3	0.9	0.80
Dec-04	0.288	0.282	0.274	0.318	278	260	2.0	2.2	99.28%	99.15%	1.5	6.3	0.9	2.10
Jan-05	0.311	0.295	0.276	0.371	265	352	2.0	1.0	99.24%	99.73%	1.0	6.4	0.9	2.40
Feb-05	0.305	0.301	0.278	0.337	321	250	2.0	0.7	99.38%	99.70%	5.0	6.5	0.9	3.80
Mar-05	0.310	0.309	0.280	0.374	254	236	2.0	0.6	99.21%	99.73%	5.0	6.4	0.9	2.50
Apr-05	0.286	0.300	0.281	0.331	205	211	2.0	2.4	99.02%	98.86%	5.0	6.3	0.9	1.90
May-05	0.263	0.286	0.282	0.291	298	298	2.0	1.1	99.33%	99.65%	5.0	6.5	0.9	2.50
Jun-05	0.274	0.274	0.285	0.353	180	143	2.0	2.8	98.89%	98.04%	5.0	6.4	0.9	10.00
Jul-05	0.259	0.265	0.285	0.321	122	98	2.0	1.5	98.35%	98.46%	5.0	6.5	0.9	2.30
Aug-05	0.267	0.267	0.284	0.330	192	215	2.0	1.6	98.96%	99.26%	1.4	6.5	0.9	6.30
Sep-05	0.263	0.263	0.282	0.310	168	160	2.0	1.7	98.81%	98.94%	1.2	6.5	0.9	1.20
Oct-05	0.268	0.266	0.282	0.342	211	273	2.0	0.6	99.05%	99.78%	1.0	6.5	0.9	3.00
Nov-05	0.272	0.268	0.281	0.309	213	175	2.0	1.0	99.06%	99.41%	3.5	7.0	1.0	1.60
Dec-05	0.301	0.280	0.282	0.329	193	206	2.0	0.6	98.96%	99.71%	1.4	6.3	0.9	1.60
Jan-06	0.281	0.285	0.279	0.351	190	211	2.0	1.1	98.95%	99.46%	3.8	6.8	1.0	10.00
Feb-06	0.286	0.289	0.278	0.359	215	225	2.0	0.8	99.07%	99.67%	4.2	6.6	1.1	10.00
Mar-06	0.299	0.289	0.277	0.334	206	95	2.0	9.6	99.03%	88.85%	4.5	6.5	2.3	10.00
Apr-06	0.257	0.281	0.274	0.310	333	247	2.0	2.2	99.40%	99.11%	1.2	6.7	1.0	5.00
May-06	0.238	0.265	0.272	0.270	240	212	2.0	0.7	99.17%	99.67%	3.1	6.7	1.5	10.00
Jun-06	0.231	0.242	0.269	0.288	290	246	2.0	2.0	99.31%	99.19%	4.0	7.0	1.0	10.00
Jul-06	0.236	0.235	0.267	0.267	138	199	2.0	2.7	98.55%	98.64%	1.9	6.5	1.0	5.00
Aug-06	0.233	0.233	0.264	0.260	230	196	2.0	1.0	99.13%	99.49%	2.1	6.5	7.0	10.00
Sep-06	0.225	0.231	0.261	0.263	169	207	2.0	1.3	98.82%	99.39%	3.0	7.1	1.0	10.00
Oct-06	0.227	0.228	0.257	0.285	206	278	2.0	0.6	99.03%	99.77%	4.3	7.2	1.0	1.40

(1)

Eagle Ridge WWTF

WWTF Historical Flows and Loading Data

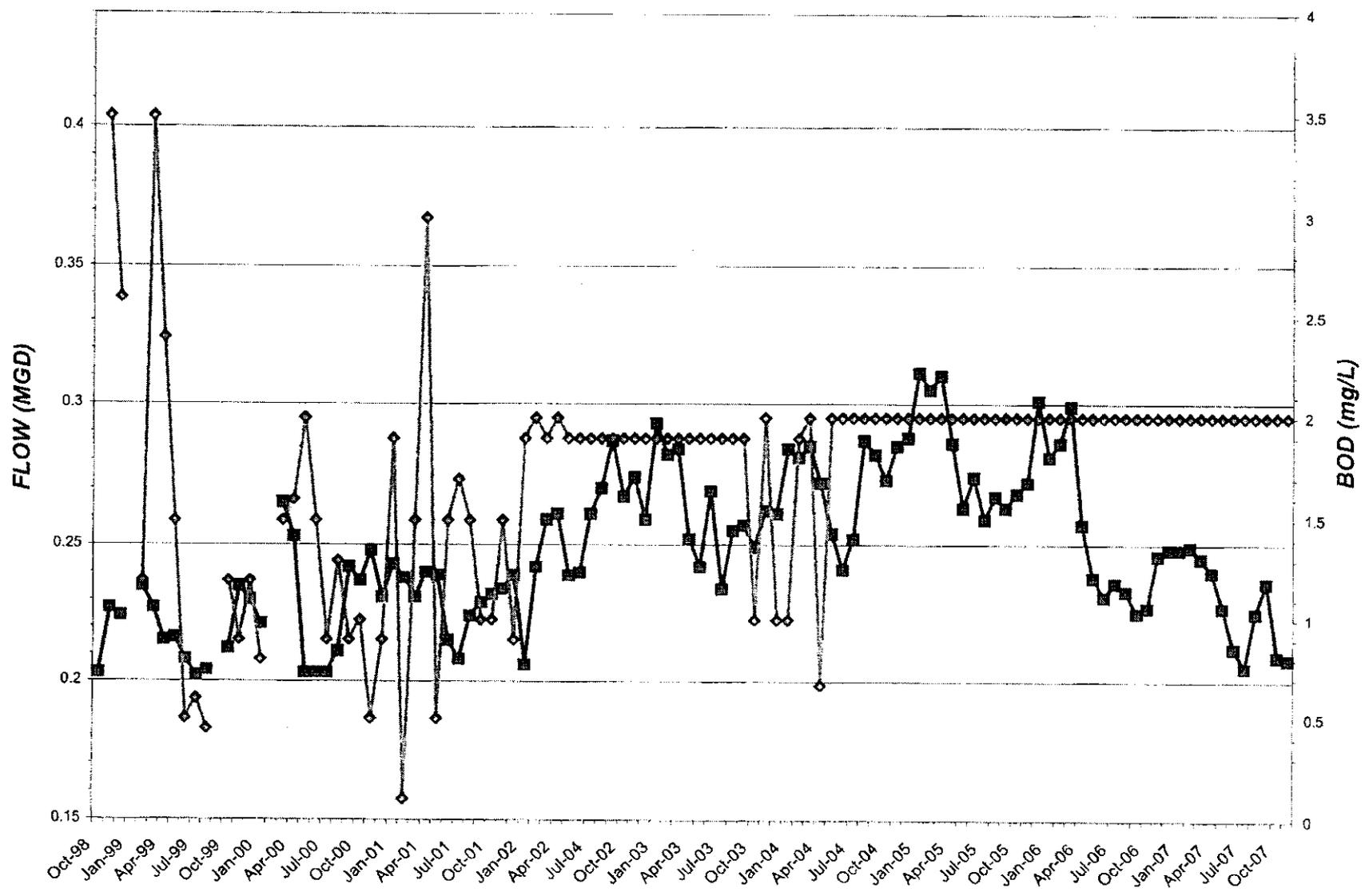
DATE	30 DAY ADF(mgd)	3 MO. ADF(mgd)	12 MO. ADF(mgd)	PEAK (mgd)	IN BOD (mg/l)	IN TSS (mg/l)	OUT BOD (mg/l)	OUT TSS (mg/l)	BOD EFF. %	TSS EFF. %	CHLORINE RESIDUAL (mg/l)	pH	FECAL COLIFORM (#/100ml)	TURBIDITY (NTU)
Nov-06	0.246	0.233	0.255	0.275	221	180	2.0	0.6	99.10%	99.67%	4.1	7.3	1.0	3.00
Dec-06	0.248	0.240	0.251	0.277	321	246	2.0	0.7	99.38%	99.71%	2.8	7.3	1.0	3.00
Jan-07	0.248	0.247	0.248	0.293	310	296	2.0	1.2	99.35%	99.59%	3.5	7.2	1.0	2.20
Feb-07	0.249	0.248	0.245	0.293	287	274	2.0	0.8	99.30%	99.69%	3.5	6.9	1.0	2.10
Mar-07	0.245	0.247	0.240	0.283	139	180	2.0	0.8	98.56%	99.58%	4.9	7.0	1.0	2.00
Apr-07	0.240	0.245	0.239	0.290	161	216	2.0	1.1	98.75%	99.50%	4.8	6.9	1.0	2.00
May-07	0.227	0.237	0.238	0.210	166	187	2.0	0.6	98.80%	99.67%	3.9	6.9	1.0	2.10
Jun-07	0.212	0.226	0.236	0.238	191	241	2.0	0.9	98.95%	99.63%	4.0	7.0	1.0	1.60
Jul-07	0.205	0.215	0.234	0.232	137	112	2.0	0.8	98.53%	99.28%	3.7	7.0	1.0	2.20
Aug-07	0.225	0.214	0.233	0.293	125	116	2.0	0.6	98.40%	99.48%	3.7	7.1	1.0	2.50
Sep-07	0.236	0.222	0.234	0.242	172	145	2.0	3.9	98.84%	97.34%	3.9	7.3	1.0	2.20
Oct-07	0.209	0.223	0.233	0.262	171	176	2.0	0.6	98.83%	99.66%	1.0	6.4	1.0	2.50
Nov-07	0.208	0.218	0.229	0.254	100	130	2.0	0.6	98.00%	99.54%	3.6	6.7	1.0	3.00
Avg.	0.248	0.250	0.250	0.291	209.6	221.8	1.7	1.2	99.17%	99.45%	2.2	6.7	1.0	2.71

Note: (1) Data not available.

(2) 10-month and 11-month ADF calculated when 30-Day ADF data is missing.

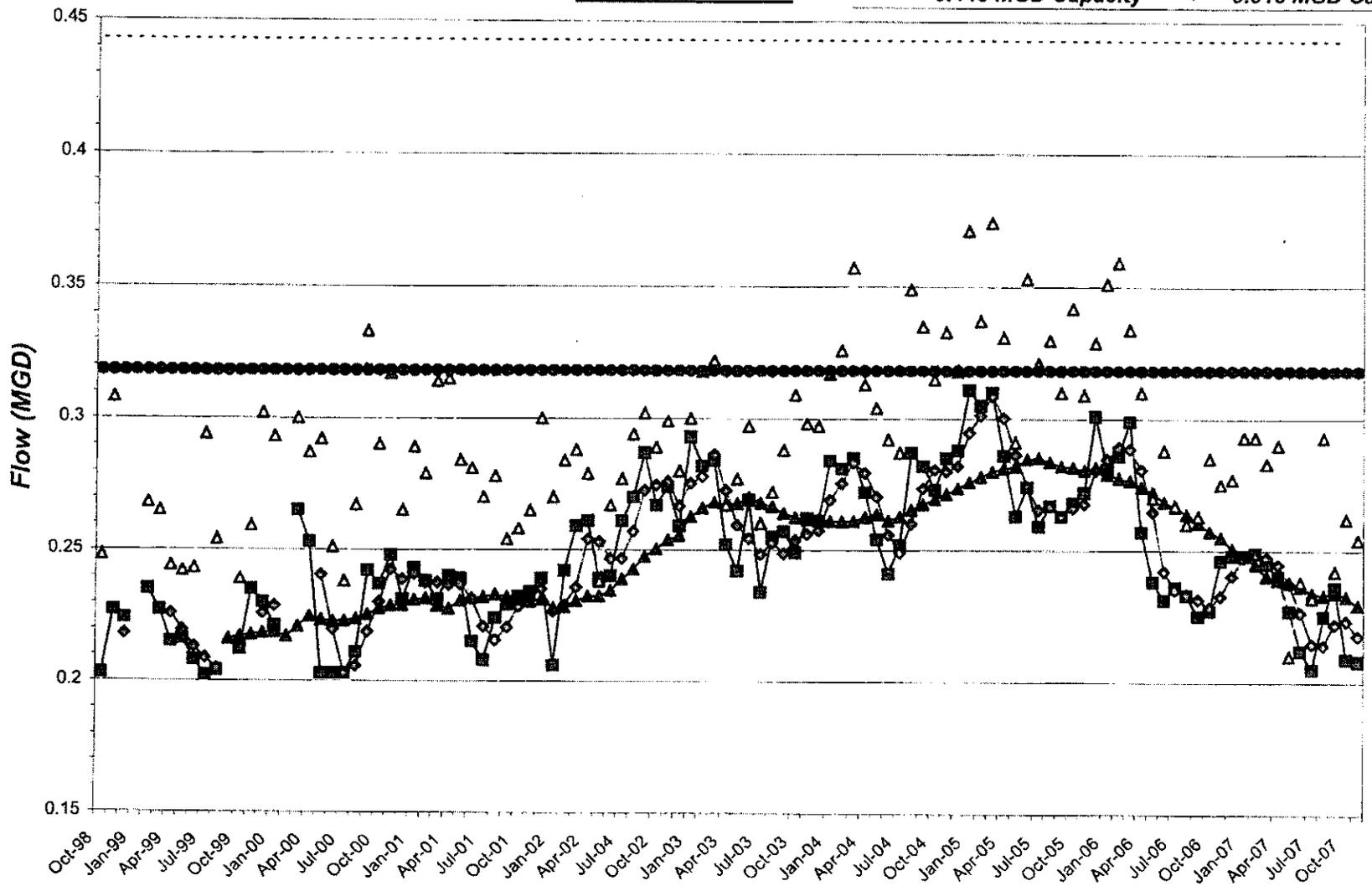
Eagle Ridge WWTF
30 Day ADF vs. Effluent BOD

■ 30 DAY ADF ◇ BOD EFF.

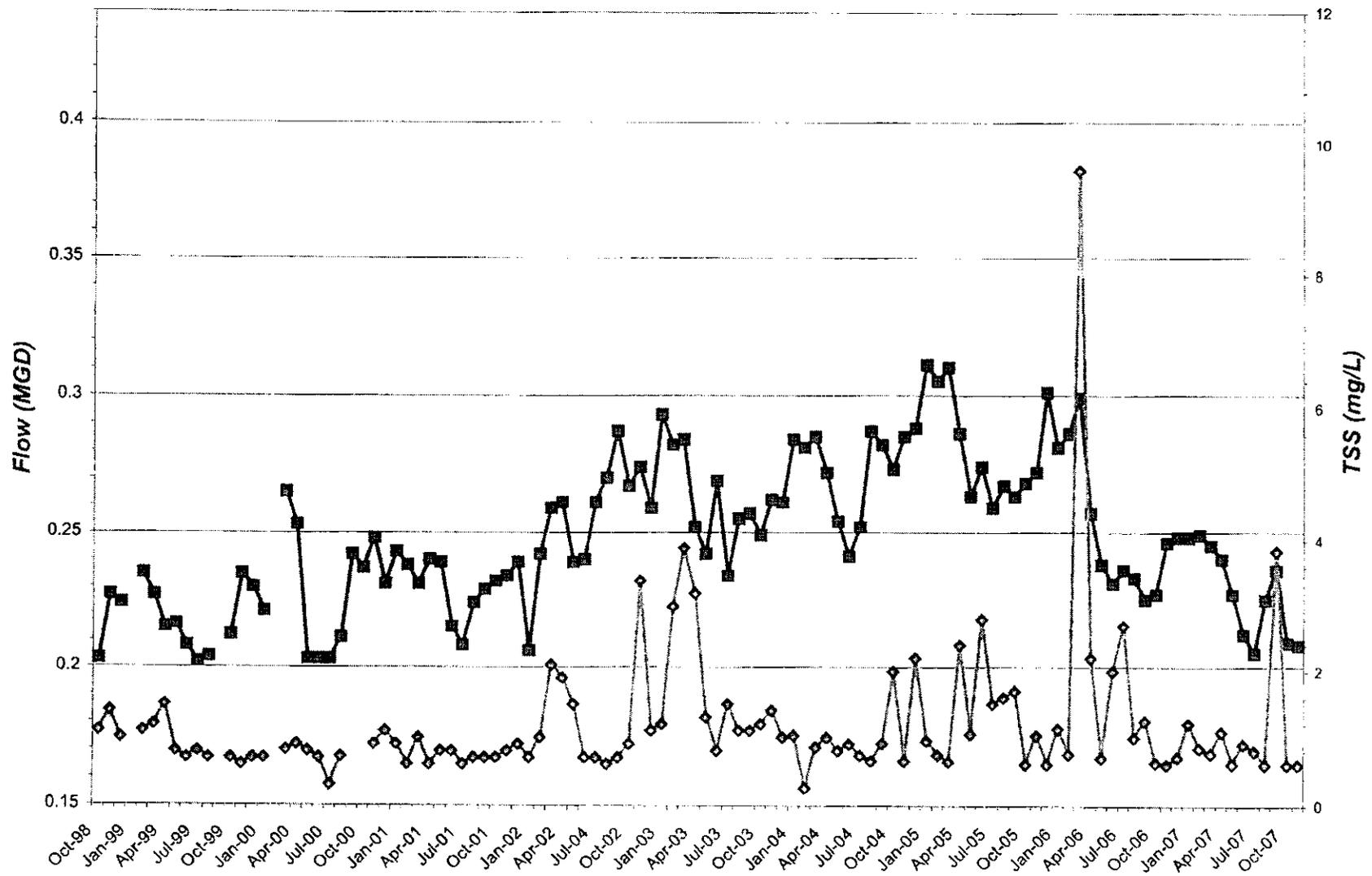


**Eagle Ridge WWTF
Historical Flows**

- 30 Day ADF
- ▲ 12 Mo. ADF
- 0.443 MGD Capacity
- ◆ 3 Mo. ADF
- △ Peak ADF
- 0.318 MGD Capacity



Eagle Ridge WWTF
30-Day ADF vs. Effluent TSS



Eagle Ridge WWTF
Determination of Seasonal Variations

Date	30 Day ADF	Date	30 Day ADF	Date	30 Day ADF
Jan-99		Jan-00	0.221	Jan-01	0.243
Feb-99	0.235	Feb-00		Feb-01	0.238
Mar-99	0.227	Mar-00	0.265	Mar-01	0.231
Apr-99	0.215	Apr-00	0.253	Apr-01	0.240
May-99	0.216	May-00	0.203	May-01	0.239
Jun-99	0.208	Jun-00	0.203	Jun-01	0.215
Jul-99	0.202	Jul-00	0.203	Jul-01	0.208
Aug-99	0.204	Aug-00	0.211	Aug-01	0.224
Sep-99		Sep-00	0.242	Sep-01	0.229
Oct-99	0.212	Oct-00	0.237	Oct-01	0.232
Nov-99	0.235	Nov-00	0.248	Nov-01	0.234
Dec-99	0.230	Dec-00	0.231	Dec-01	0.239
AVG.	0.218	AVG.	0.229	AVG.	0.231
3 Mo. Max	0.226	3 Mo. Max	0.242	3 Mo. Max	0.241
3 Mo. Max/ AvgMoADF	1.035	3 Mo. Max/ AvgMoADF	1.058	3 Mo. Max/ AvgMoADF	1.043

Eagle Ridge WWTF
Determination of Seasonal Variations

Date	30 Day ADF	Date	30 Day ADF	Date	30 Day ADF
Jan-02	0.206	Jan-03	0.293	Jan-04	0.284
Feb-02	0.242	Feb-03	0.282	Feb-04	0.281
Mar-02	0.259	Mar-03	0.284	Mar-04	0.285
Apr-02	0.261	Apr-03	0.252	Apr-04	0.272
May-02	0.239	May-03	0.242	May-04	0.254
Jun-02	0.240	Jun-03	0.269	Jun-04	0.241
Jul-02	0.261	Jul-03	0.234	Jul-04	0.252
Aug-02	0.270	Aug-03	0.255	Aug-04	0.287
Sep-02	0.287	Sep-03	0.257	Sep-04	0.282
Oct-02	0.267	Oct-03	0.249	Oct-04	0.273
Nov-02	0.274	Nov-03	0.262	Nov-04	0.285
Dec-02	0.259	Dec-03	0.261	Dec-04	0.288
AVG.	0.255	AVG.	0.262	AVG.	0.274
3 Mo. Max	0.276	3 Mo. Max	0.286	3 Mo. Max	0.283
3 Mo. Max/ AvgMoADF	1.081	3 Mo. Max/ AvgMoADF	1.093	3 Mo. Max/ AvgMoADF	1.034

Eagle Ridge WWTF
Determination of Seasonal Variations

Date	30 Day ADF	Date	30 Day ADF	Date	30 Day ADF
Jan-05	0.311	Jan-06	0.281	Jan-07	0.248
Feb-05	0.305	Feb-06	0.286	Feb-07	0.249
Mar-05	0.310	Mar-06	0.299	Mar-07	0.245
Apr-05	0.286	Apr-06	0.257	Apr-07	0.240
May-05	0.263	May-06	0.238	May-07	0.227
Jun-05	0.274	Jun-06	0.231	Jun-07	0.212
Jul-05	0.259	Jul-06	0.236	Jul-07	0.205
Aug-05	0.267	Aug-06	0.233	Aug-07	0.225
Sep-05	0.263	Sep-06	0.225	Sep-07	0.236
Oct-05	0.268	Oct-06	0.227	Oct-07	0.209
Nov-05	0.272	Nov-06	0.246	Nov-07	0.208
Dec-05	0.301	Dec-06	0.248	Dec-07	
AVG.	0.282	AVG.	0.251	AVG.	0.228
3 Mo. Max	0.309	3 Mo. Max	0.289	3 Mo. Max	0.245
3 Mo. Max/ AvgMoADF	1.097	3 Mo. Max/ AvgMoADF	1.153	3 Mo. Max/ AvgMoADF	1.076

APPENDIX C

PROCESS ANALYSIS

EFFLUENT DISPOSAL

	Volume gallons	Detention Time days (ADF)	Detention Time days (Peak)
Reclaimed Water Holding Pond	1,329,500	4.18	2.09
Lined Reject Water Holding Pond	600,000	1.89	0.94

Note: Peak detention time based on peak factor = 2.0

	Area s.f.	Area acres	Loading Rate gdpsf	Loading Rate inches/week	Loading Rate inches/day
Golf Course	3,920,400	90.00	0.08	0.91	0.13

AIR REQUIREMENTS

SURGE TANK

Total Volume gallons	Mixing cfm	Aerobic cfm
92,700	222.48	1.22

AERATION TANKS

Total Vol. gallons	Mixing cfm	Aerobic cfm	Safety Factor # Air/# BOD	Min. Air @ 1.5 BOD
255,180	510.36	795.30	2.00	596.48

AEROBIC DIGESTER

Total Volume gallons	Mixing cfm	Aerobic cfm
112,200	269.28	76.35

AIR LIFT PUMPS

No. ALP	cfm
6.00	60.00

TOTAL SYSTEM AIR REQUIREMENTS

Surge Tanks:	222.48	cfm
Process Tanks:	1,124.58	cfm

Eagle Ridge WWTF
Contact Stabilization Activated Sludge Process Analysis

Flow = 443,000 gpd 0.443 mgd

SURGE TANKS

	Volume gallons	% Total Flow
Tank #1	30,900	
Tank #2	30,900	
Tank #3	30,900	
Total	92,700	20.9%

AERATION TANKS

		Volume gallons	Detention Time hours	BOD Loading #/1,000 cf
North Train	Contact Tank #1	42,530		
South Train	Contact Tank #2	42,530		
	Subtotal:	85,060	4.61	20.58
North Train	Reaeration Tank #1	85,060		
South Train	Reaeration Tank #2	85,060		
	Subtotal:	170,120	9.22	20.58
	Total	255,180	13.82	20.58

CLARIFIER TANKS

		Area s.f.	Hydraulic Loading gpd/sf	Peak Solids Loading lb/day/sf
North Train	Clarifier #1	298.65	741.67	64.95
South Train	Clarifier #2	298.65	741.67	64.95
	Total:	597.30	741.67	64.95

Note: MLSS = 3,000 mg/l

FILTERS

		Area s.f.	Loading Rate gpmpsf	
Main Filter	Filter #1	325.7	0.9	[(8) 7.2-ft diameter discs]
Backup Filter	Filter #2	180.0	1.7	
	Total:	505.7	0.6	

CHLORINE CONTACT TANKS

	Volume gallons	Detention Time minutes (ADF)	Detention Time minutes (Peak)
CCT #1	5,190		
CCT#2	5,190		
CCT#2	10,380		
Total:	20,760	67.48	33.74

Note: Peak detention time based on peak factor = 2.0

AEROBIC DIGESTER

		Volume gallons	Sludge Prod. gpd	Retention Time days	Sludge Prod. tons/yr
North Train	Tank #1	56,100			
South Train	Tank #2	56,100			
	Total:	112,200	2,630.31	42.66	76.87

EFFLUENT DISPOSAL

	Volume gallons	Detention Time days (ADF)	Detention Time days (Peak)
Reclaimed Water Holding Pond	1,329,500	3.00	1.50
Lined Reject Water Holding Pond	600,000	1.35	0.68

Note: Peak detention time based on peak factor = 2.0

	Area s.f.	Area acres	Loading Rate gpdpsf	Loading Rate inches/week	Loading Rate inches/day
Golf Course	3,920,400	90.00	0.11	1.27	0.18

AIR REQUIREMENTS

SURGE TANK

Total Volume gallons	Mixing cfm	Aerobic cfm
92,700	222.48	1.22

AERATION TANKS

Total Vol. gallons	Mixing cfm	Aerobic cfm	Safety Factor # Air/# BOD	Min. Air @ 1.5 BOD
265,180	510.36	1,107.92	2.00	830.94

AEROBIC DIGESTER

Total Volume gallons	Mixing cfm	Aerobic cfm
112,200	269.28	106.36

AIR LIFT PUMPS

No. ALP	cfm
6.00	60.00

TOTAL SYSTEM AIR REQUIREMENTS

Surge Tanks:	222.48	cfm
Process Tanks:	1,437.20	cfm

Eagle Ridge WWTF
Applied Air Calculations - WWTF Air Diffuser System

Process Blowers: (3) - Lamson Centrifugal 557-5-2-AD

Design Flow w/ Extended Aeration = 0.318 mgd
 Design Flow w/ Contact Stabilization = 0.443 mgd
 Total Air Required = 1,437.20 cfm

Motor RPM = 3,450 rpm
 Motor Horsepower = 50.0 hp
 Blower Air Pressure = 7.0 psi
 Blower Speed = 3,525 rpm
 Blower Horsepower = 28.0 hp
 Blower Air Flowrate = 550.0 cfm (Each Blower)
 Operational Blower Air Flowrate = 1,100.0 cfm (Two Blowers in Operation)

BOD5 Average Influent Concentration = 209.6 mg/l
 BOD5 Average Effluent Concentration = 1.7 mg/l

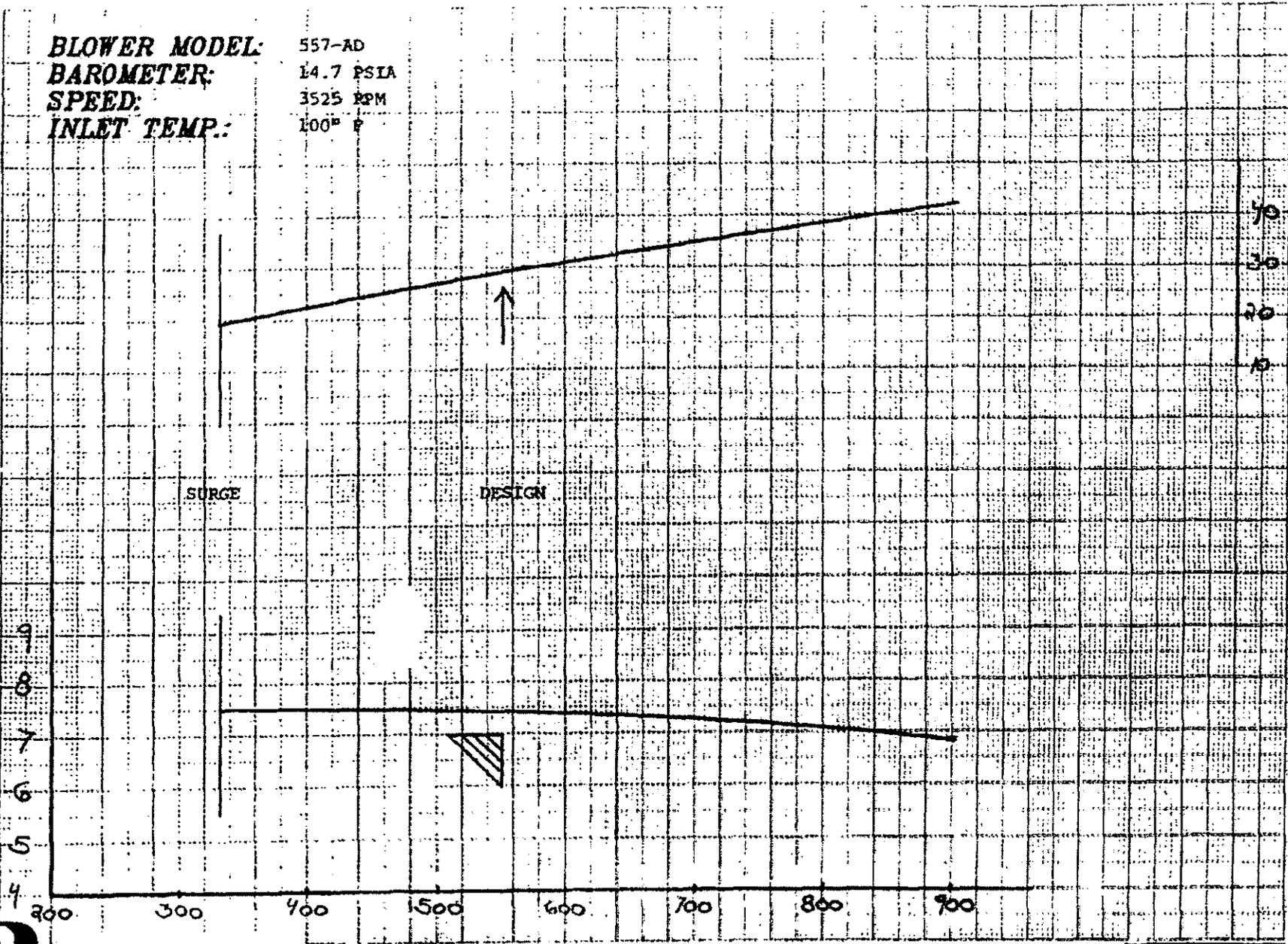
Calculations:

BOD5 Removal Concentration (Influent - Effluent) = 207.8 mg/l
 8.34 lb/gallon x BOD5 Removal Conc. x Design Flow = 767.8 pounds BOD5/day
 Operational Blower Air Flowrate x 1440 minutes per day = 1,584,000 cubic feet/day

Applied Air	=	$\frac{1,584,000}{767.8}$	$\frac{\text{cubic feet/day}}{\text{pounds BOD5/day}}$
	=	2,062.93	cubic feet of air per pound of BOD5

BLOWER MODEL: 557-AD
BAROMETER: 14.7 PSIA
SPEED: 3525 RPM
INLET TEMP.: 100° F

PRESSURE - P.S.I.G.



P.D.

Process Blowers


 Over 100 Years of Leadership
LAMSON CORPORATION

VOLUME - I.C.F.M.

PHONE (214) 432-8888
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(3) BA-1106

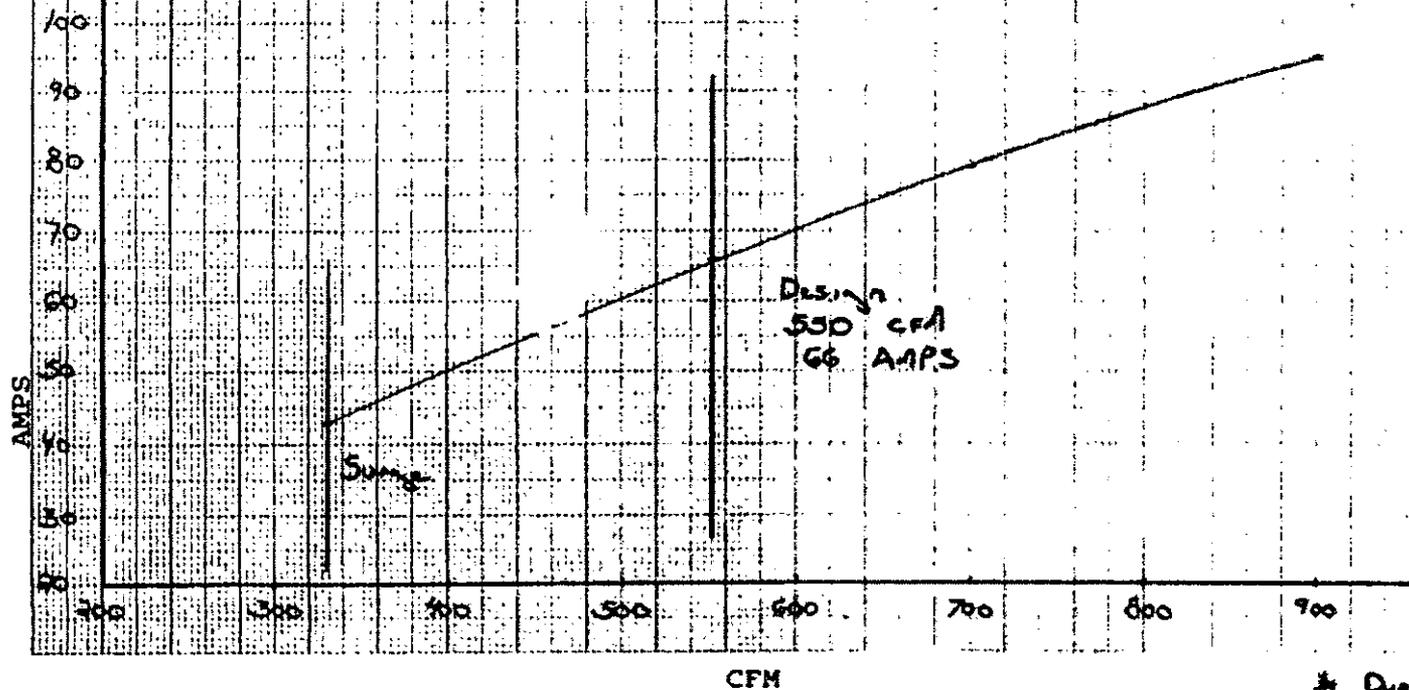
LAMSON JOB #

LAMSON ORDER # 60344 / 56181

JOB VOLTAGE 230 volts

MOTOR HP 30 HP

FULL LOAD AMPS 68.2 FLA

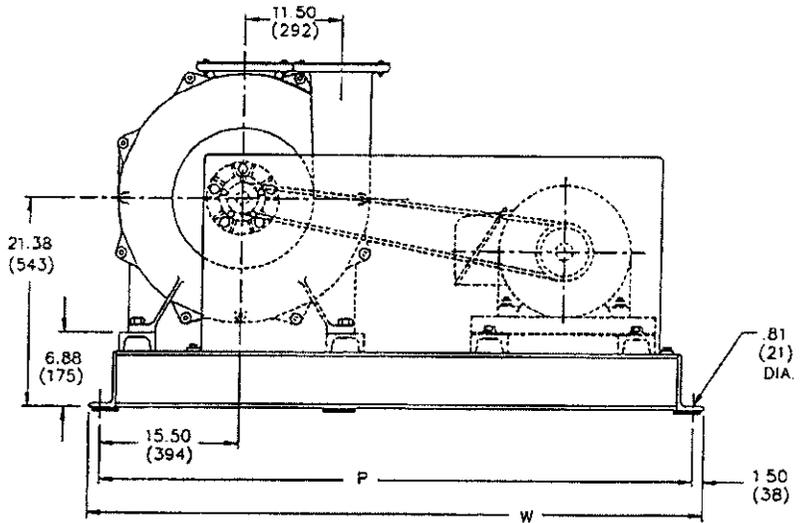
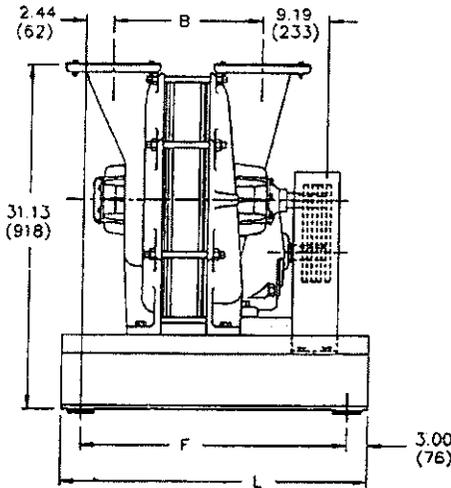
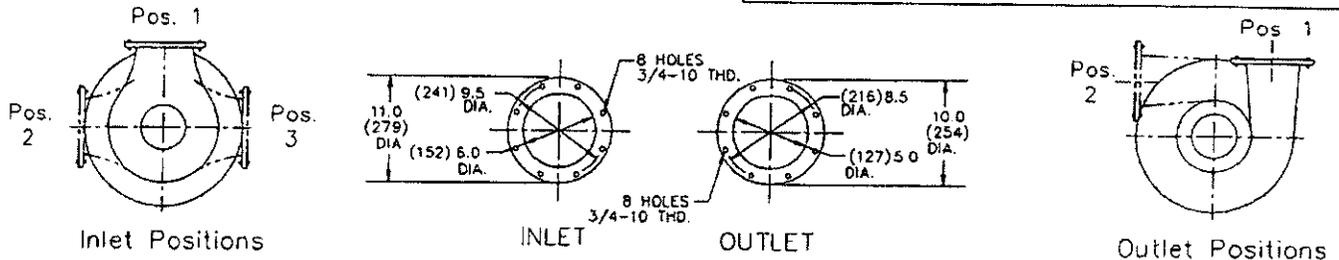


* Duplicate of So # 56181

For Approval Certified For

**"550" Series
Air Outlet Driven
Belt Drive - Dimensions**

Project _____
Your Order # _____
Our Order # _____ By _____



50 Hz, 3525 RPM

Frame No.	Dimensions in Inches and (mm)				
	B	F	L	P	W
552	11.75 (299)				
553	15.0 (381)	32.75 (832)	38.75 (984)	58.50 (1486)	61.50 (1562)
554	18.25 (464)				
555	21.50 (546)				
556	24.75 (629)	44.00 (1118)	50.00 (1270)	64.00 (1626)	67.00 (1702)
557	28.0 (711)				

1. Flange dimensions conform to 125 pound American standard cast iron flanged fittings.
2. Dimensions in inches and (mm).
3. Specifications subject to change without notice.

Eagle Ridge WWTF

Applied Air Calculations - WWTF Air Diffuser System

Surge Tank Blowers: (2) - Tuthill 3006-21L2

Design Flow w/ Extended Aeration = 0.318 mgd
Design Flow w/ Contact Stabilization = 0.443 mgd
Total Air Required = 222.48 cfm

Blower Diameter = 8.0 inches
Motor Diameter = 8.0 inches
Motor RPM = 1,760 rpm
Motor Horsepower = 7.5 hp
Blower Air Pressure = 4.0 psi

Calculations:

Motor Diameter X Motor rpm = Blower Diameter X Blower rpm

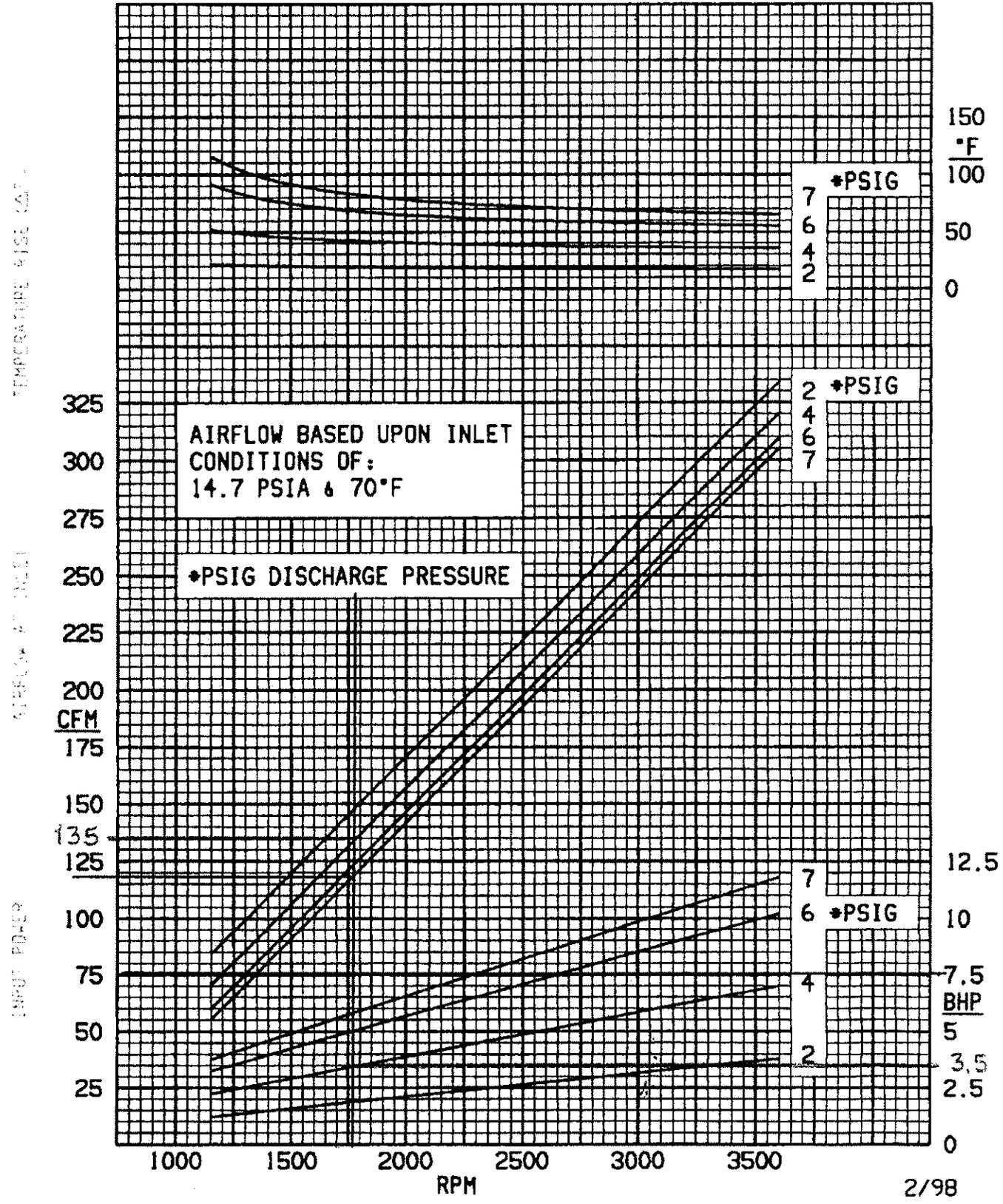
$$\text{Blower rpm} = \frac{\text{Motor Diameter X Motor rpm}}{\text{Blower Diameter}}$$
$$= 1,760 \text{ rpm}$$

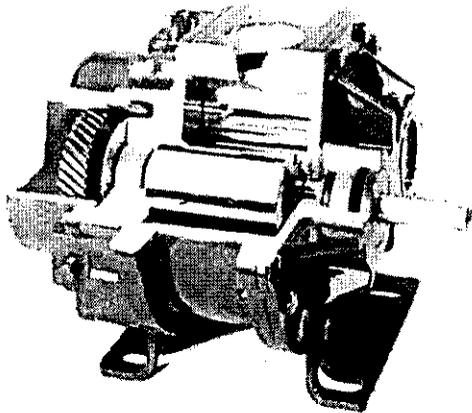
From Blower Performance Curve at 4.0 psig and 1,760 rpm:

Blower Horsepower = 3.5 hp
Blower Air Flowrate = 135.0 cfm (Each Blower)



3006 COMPETITOR PLUS™ PRESSURE CURVE (.102 CFR DISPL.)





M-D Pneumatics™

COMPETITOR PLUS™

Rotary Positive Blowers

COMPETITOR PLUS rotary blowers are designed to be interchangeable with equivalent sizes of Roots Universal RA1®, and many Sutorbilt® California Series B and F, and Legend™ Series L and P blowers. COMPETITOR PLUS models are rated up to 15 PSIG discharge pressure or 16" Hg dry vacuum.

In addition to interchangeability, Tuthill Vacuum & Blower Systems has improved on existing designs with the following superior features ordinarily found only on premium blowers:

Helical Gearing

COMPETITOR PLUS blowers are timed with hardened, precision helical gears, keyed to the rotor shafts, not taper fit spur gears as offered by other manufacturers, which have greater backlash, and can slip and lose timing. Helical gears are also quieter, reducing mechanical noise.

Stronger Bearings

All COMPETITOR PLUS blowers include double row ball bearings at the gear end, stronger than single row ball bearings offered by other manufacturers. Drive shaft bearing is cylindrical roller type for additional strength against side loading from V-belt drives. As a result of this superior design, COMPETITOR PLUS blowers offer design bearing life as much as 50% greater than models offered by other manufacturers.

Rotors with Integral Shafts

COMPETITOR PLUS blowers include precision machined ductile iron rotors with large, integrally cast shafts, not press fit and/or pinned shafts offered by other manufacturers, which can loosen over time and cause rotor clash. All rotors are dynamically balanced for vibration-free rotation.

Positive End Clearances

End clearances are positively established at the blower gear end, eliminating the risk of shifting end clearances when installing or removing drive components. This also eliminates the need for those special fork and saddle tools required by other brands to reset end clearances.

Polished Sealing Surfaces

All shaft surfaces in contact with sealing members are polished to reduce seal wear and risk of leakage.

Individually Tested

Every COMPETITOR PLUS blower is factory tested to assure you of the highest quality. While some manufacturers perform only sample testing, We go the distance to insure that your blower meets our rigid ISO 9001 registered quality standards.

ISO 9001 Registration

COMPETITOR PLUS blowers are manufactured under the Tuthill Vacuum & Blower Systems ISO 9001 registered quality assurance program, the first American manufacturer of rotary blowers to gain such international recognition.

Warranty

Every COMPETITOR PLUS blower is backed by the Tuthill Vacuum & Blower Systems limited warranty for a period of 18 months after installation or 2 years after original blower shipment, whichever occurs first.

Metric Availability

All COMPETITOR PLUS blowers are available with metric drive shaft and process connections.

Worldwide Sales and Service

With sales offices and service facilities located on six continents, you can be assured of availability and service for your COMPETITOR PLUS blowers.

Material Specifications:

Housing: Cast iron

End Plates: Cast iron

End Cover: Cast iron

Rotors: Ductile iron

Shafts: Ductile iron, cast integrally with rotors

Bearings: Gear end - Double row ball, both rotors

Drive end - Cylindrical roller on drive rotor

Single row ball on driven rotor

Drive Shaft: Ductile iron, cast integrally with drive rotor

Gears: Heat treated alloy steel, helical cut

Seals: Lip seals on rotor shafts and drive shaft

Lubrication: Oil splash on gear end, grease on drive end

Model Size	Max. Press. PSI	Max. Vac. (in. Hg)	Maximum RPM	Displacement CFR
2002	12	16	5275	.016
2004	7	16	5275	.032
3002	15	16	3600	.0467
3003	12	15	3600	.0616
→ 3006	7	15	3600	.102
4002	15	16	3600	.061
4005	12	16	3600	.121
4007	7	15	3600	.160
5003	15	16	2850	.132
5006	13	16	2850	.221
5009	7	15	2850	.323
6005	15	16	2350	.246
6008	14	16	2350	.395
6015	7	14	2350	.740
7006	15	16	2050	.402
7011	10	16	2050	.738
7018	6	12	2050	1.200

LEADING THE SEARCH FOR INNOVATIVE SOLUTIONS



TUTHILL
Vacuum & Blower Systems



4840 West Kearney Street
Springfield, Missouri USA 65803-8702
Tel 417 865-8715 800 825-6937 Fax 417 865-2950

<http://pneumatics.tuthill.com>

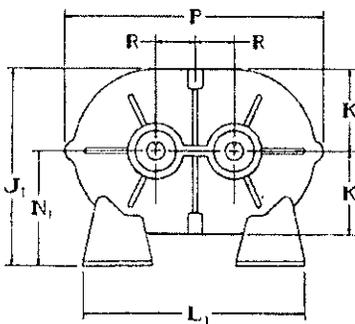
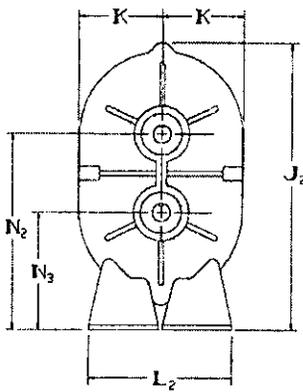
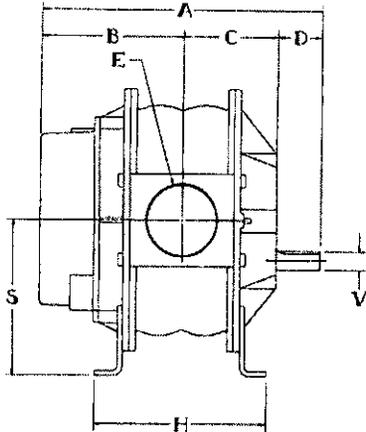
Performance

Pressure performance is based on inlet conditions of 14.70 PSIA and 70° F.

Vacuum performance is based on inlet temperature of 70° F and discharge pressure of 14.70 PSIA.

In conjunction with our program of continuous testing and upgrading, all specifications are subject to change without notice.

All data are approximate. Request a quotation for your specific application.



Blower Model	SPEED (RPM)	6 PSIG		7 PSIG		10 PSIG		12 PSIG		13 PSIG		14 PSIG		15 PSIG		Max. Vacuum			
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	"Hg	CFM
2002	1750	8	0.9	6	1.0												9	7	0.7
	3600	38	1.8	36	2.1	32	2.8	29	3.3								14	28	2.1
	5275	64	2.7	63	3.1	59	4.2	56	4.9								16	51	3.4
2004	1750	24	1.6	21	1.9												10	20	1.4
	3600	83	3.3	80	3.8												14	68	3.8
	5275	137	4.9	134	5.6												16	115	6.3
3002	1170	23	1.6	20	1.9												10	19	1.4
	2700	94	3.8	92	4.3	85	6.0	81	7.1	79	7.6	77	8.2	75	8.7	15	76	4.5	
	3600	136	5.0	134	5.7	127	7.9	123	9.4	121	10	119	11	118	12	16	114	6.4	
3003	1170	31	2.1	28	2.4												10	27	1.7
	2700	126	4.8	122	5.5	114	7.7	109	9.2								14	107	5.4
	3600	181	6.4	178	7.4	169	10	164	12								15	158	7.7
3006	1170	62	3.3	57	3.8												11	51	3.0
	2700	218	7.7	213	8.9												15	185	9.3
	3600	310	10	305	12												15	277	12
4002	880	20	1.8	17	1.8												10	16	1.3
	1760	74	3.2	71	3.6	64	5.0	60	6.0	58	6.4	56	6.9				14	58	3.6
	3600	186	6.6	183	7.4	176	10	172	12	170	13	168	14	166	15	16	163	8.3	
4005	880	44	3.0	39	3.4												9	42	2.2
	1760	150	5.9	145	6.8	132	9.6	124	11								14	121	6.7
	3600	373	12	368	14	354	20	347	24								16	330	16
4007	880	58	3.9	52	4.5												9	56	2.9
	1760	199	7.7	193	9.0												13	169	8.2
	3600	494	16	487	18												15	447	19
5003	710	42	2.7	38	3.1												10	36	2.2
	1760	181	6.6	176	7.6	166	11	159	13	156	14	153	15				18	146	8.5
	2850	324	11	320	12	309	17	303	21	300	22	297	24	294	25	16	289	14	
5006	710	70	4.3	63	5.0												10	61	3.6
	1760	302	11	295	12	277	17	268	21	261	23						14	282	12
	2850	543	17	536	20	518	28	507	34	502	37						16	485	22
5009	710	133	6.2	125	7.2												11	114	5.6
	1760	472	15	464	18												14	427	18
	2850	824	25	816	28												15	769	30
6005	710	93	4.9	87	5.6	70	7.9										12	70	4.8
	1760	352	12	345	14	328	20	318	23	313	25	309	27	304	29	18	296	16	
	2350	497	16	490	19	473	25	463	31	458	34	454	36	449	39	16	442	21	
6008	710	150	7.6	139	8.9	112	13										12	113	7.5
	1760	565	19	554	22	527	31	510	37	503	40	496	43				15	490	23
	2350	798	25	787	29	760	41	744	50	736	54	729	58				16	709	33
6015	710	281	14	261	16												10	254	12
	1760	1058	35	1038	40												14	943	40
	2350	1494	46	1475	54												14	1380	53
7006	710	195	7.8	188	9.1	168	13	157	15	152	17	569	44	564	47	13	161	8.3	
	1760	617	19	610	22	591	32	579	38	574	41	686	51	681	55	16	556	25	
	2050	734	23	726	26	707	37	696	44	691	48					16	672	29	
7011	710	367	14	354	16	321	23										13	308	15
	1760	1142	35	1129	41	1096	58										16	1035	45
	2050	1356	41	1343	47	1310	67										16	1249	53
7018	710	632	23														10	608	19
	1760	1892	58														12	1830	55
	2050	2240	65														12	2178	64

Dimensions

Model Size	A	B	C	D	E	H	J1	J2	K	L1	L2	N1	N2	N3	P	R	S	V
2002	10.00	4.88	2.63	2.50	1" NPT	5.00	6.88	9.69	3.13	5.13	5.13	3.75	6.25	3.75	9.38	1.25	5.00	.625
2004	12.00	5.88	3.63	2.50	2" NPT	7.00												
3002	11.56	5.69	3.38		1 1/4" NPT	6.75												
3003	12.44	6.19	3.75	2.50	2" NPT	7.63	8.94	12.81	3.94	7.25	7.25	5.00	8.50	5.00	12.19	1.75	6.75	.875*
3006	14.81	7.38	4.94		2 1/2" NPT	10.00												
4002	12.84	6.25	3.69		1 1/2" NPT	7.25												
4005	15.69	7.63	5.06	3.00	2 1/4" NPT	10.00	10.63	15.13	4.38	8.00	8.00	6.25	10.25	6.25	13.69	2.00	8.25	.875
4007	17.44	8.50	5.94		3" NPT	11.75												
5003	15.25	7.38	4.50		2 1/2" NPT	8.38												
5006	17.88	8.69	5.81	3.38	4" NPT	11.00	12.13	17.38	5.38	10.50	10.50	6.75	11.25	6.25	17.19	2.50	8.75	1.125
5009	20.88	10.19	7.31		4" NPT	14.00												
6005	18.75	8.44	5.63		3" NPT	10.13	15.06		6.25									
6008	21.75	10.94	7.13	3.69	5" NPT	13.13	15.06	21.69	6.25	17.00	11.00	8.75	14.75	8.75	19.81	3.00	11.75	1.375
6015	28.75	14.44	10.63		6" FLG	20.13	16.44		7.50									
7006	20.31	10.31	5.94		4" NPT	11.75	20.63		9.63									
7011	25.31	12.69	8.44	4.06	6" FLG	16.75	19.50	26.13	8.50	21.00	14.00	11.00	18.00	11.00	23.25	3.50	14.50	1.562
7018	32.31	16.31	11.94		8" FLG	23.75	19.50		8.50									

Values shown are approximate and should not be used for construction.

Certified drawings are available through your local Tuthill Vacuum & Blower Systems Sales Professional.

LEADING THE SEARCH FOR INNOVATIVE SOLUTIONS

Your Local Tuthill Vacuum & Blower Systems Sales Professional:



TUTHILL
Vacuum & Blower Systems



4840 West Kearney Street
Springfield, Missouri USA 65803-8702
Tel 417 865-8715 800 825-6937 Fax 417 865-2950

<http://pneumatics.tuthill.com>

APPENDIX D

ADDITIONAL INFORMATION

Appalachian Material Service, Inc.

Phone (941) 776-8706
Fax (941) 776-8707

PO BOX 97
Terra Ceia, FL 34250

Appalachian Material Services MJ Ranch, Facility ID No. FLA190284
AMS Central RMF, Facility ID No. FLA467049
Nordgren Ranch RMF, Facility ID No. FLA280348

File 673.7.4

RESIDUALS HAULING AND LIME STABILIZATION AGREEMENT

Appalachian Material Service, Inc. agrees to haul and lime stabilize your waste water residuals at our Residuals Management Facilities. All existing state (DEP) and federal (EPA) regulations will be observed as per permit requirements and conditions.

GENERATORS RESPONSIBILITY:

1. Maintain residuals at a percentage of solids that is transferable by pump.
2. Schedule loads for pick up.

Appalachian Material Services, Inc. RESPONSIBILITY:

1. Pick up and transport your residuals to our residuals management facilities for further treatment and disposal, IAW with state and local regulatory requirements. Appalachian Material Service, Inc. shall be responsible for the proper transport and spill contingency procedures from the generating facility to our residuals management facilities.
2. Process and land apply the residuals in accordance with EPA and DEP regulations and current permit requirements. The quality of the generating facility's residuals is at least untreated with a quantity estimated not to exceed 1320 DTY. The hauled residuals will be processed at our Residuals Management Facilities to meet or exceed the minimum requirements for land application as stated by the permit conditions, and shall not exceed the amount permitted for processing for our residuals management facilities, as described in our operating permits.
3. Maintain all records of lime stabilization and land application areas and rates as per EPA and DEP regulations and current permit requirements.

LETTER OF COMMITMENT

Customer: Eagle Ridge WWTP

Facility No.: FLA014498

Address: 14700 Aeries Way

Phone Number: (407) 948-6297

Fl. Myers, FL

County: Lee

Contact Person: ~~Michael Dunn~~ MICHAEL WILSON

Operator:

Phone #:

Engineer of Record:

Phone #:

Check one of the following:

All Residuals Removed and Processed IAW Chapter 62-640, F.A.C.

Cancellation may be executed with a 30 days written notice by either party.

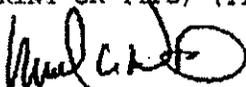
Upon acceptance of this agreement, Customer agrees to the following terms: Payment is DUE UPON RECEIPT OF INVOICE. Interest at the rate of 1 1/2% per month will be charged on Past Due Balances. Rate quotation will be updated annually.

TERMS ACCEPTED:

(CUSTOMER)

BY MICHAEL A. WILSON REGIONAL MGR. 1/8/07

(PRINT OR TYPE) (TITLE) (Date)



(Authorized Signature) Title

Appalachian Material Service, Inc.

BY

(PRINT OR TYPE) (TITLE) (Date)

(Authorized Signature) Title



Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, Fl. 32746
 Tel. 407-330-4420

Equipment Location	Range	Last Calibration	Cal Equipment Used
EAGLE RIDGE WW	0-2000	2/06	DYNASONICS PORTABLE
Manufacturer	Model	S/N	Nomenclature
WATER SPECIALTIES	6" NRS		INFLUENT FLOW

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			614 GPM	585 GPM	585 GPM

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: Ronald Gray

Date: 1/27/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, FL 32746
 Tel. 407-330-4420

Equipment Location	Range	Last Calibration	Cal Equipment Used
EAGLE RIDGE WW	0-3000 GPM	2/06	FLUKE 787
Manufacturer	Model	S/N	Nomenclature
PARTLOW	MRL 5000		INFLUENT FLOW

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			0.0 GPM	62 GPM	8 GPM
2			2000 GPM	1980 GPM	1982 GPM

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: *Ronald Gray*

Date: 1/27/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, Fl. 32746
 Tel. 407-330-4420

JAN 30 2007

Equipment Location	Range	Last Calibration	Cal Equipment Used
EAGLE RIDGE WW	0-1000	2/06	DYKASONICS PORTABLE
Manufacturer	Model	S/N	Nomenclature
WATER SPECIMENS	4" MAG		SURGE FLOW

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			260 GPM	268 GPM	268 GPM

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: *Ronald Gray*

Date: 1/27/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, Fl. 32746
 Tel. 407-330-4420

Equipment Location	Range	Last Calibration	Cal Equipment Used
EDGE RIDGE WW	0-100	2/06	FLUKE 787
Manufacturer	Model	S/N	Nomenclature
DICKSON	ETC		EFFLUENT FLOW

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			0.0	0.0	0.0
2			100	101	101

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: _____

Ronald Gray

Date: _____

1/27/07

Due Date: _____

1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, FL 32746
 Tel. 407-330-4420

Equipment Location	Range	Last Calibration	Cal Equipment Used
EAGLE RIDGE WWU	0-1000 GPM	7/06	DYNASONICS PORTABLE
Manufacturer	Model	S/N	Nomenclature
WATER SPECIALTIES	4" MAG	UN3000196	EFFLUENT FLOW

Calibration Check

Test #	Input In %	Type/Total	Expected	Found	Left
1			280 GPM	271 GPM	271 GPM

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: Ronald Gray

Date: 1/27/07

Due Date: 1/31/08

Certificate of Calibration

Moplux Service
 797 Silversmith Cir.
 Lake Mary, Fl. 32748
 Tel. 407-330-4420

Equipment Location	Range	Last Calibration	Cal Equipment Used
EAGLE RIDGE WW	0-10 NTU	7/06	HF SCIENTIFIC STANDARDS
Manufacturer	Model	S/N	Nomenclature
HF SCIENTIFIC	DRT 900 E	406067	EFFLUENT NTU

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			.02	.01	.01
2			10	10.01	10.01

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: *Donald Gray*

Date: 1/31/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 787 Silversmith Cir.
 Lake Mary, Fl. 32746
 Tel. 407-330-4420

Equipment Location	Range	Last Calibration	Cal Equipment Used
EAGLE RIDGE WW	0-100	2/06	FLUKE 787
Manufacturer	Model	S/N	Nomenclature
DICKSON	ET6		EFFLUENT NTU

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			0.0	0.2	0.2
2			100	100.2	100.2

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: Donald Gray

Date: 11/27/07

Due Date: 12/7/08

Certificate of Calibration

Moplux Service
 797 Silversmith Cir.
 Lake Mary, Fl. 32746
 Tel. 407-330-4420

Equipment Location	Range	Last Calibration	Cal Equipment Used
EAGLE RIDGE DW	0-5 Mg/L	7/06	HACH STANDARD
Manufacturer	Model	S/N	Nomenclature
HACH	CL17		EFFLU. CL7

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			3.84 Mg/L	3.88 Mg/L	3.88 Mg/L

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: *Ronald Gray*

Date: 11-7-07

Due Date: 11-7-08

Certificate of Calibration

Mopluv Service
797 Silversmith Cir.
Lake Mary, Fl. 32748
Tel. 407-330-4420

Equipment Location	Range	Last Calibration	Cal Equipment Used
EAGLE RIDGE DW	0-100	2/06	FLUKE 787
Manufacturer	Model	S/N	Nomenclature
DICKSON	ET6		EFFLU. CL ₂

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			0.0	0.0	0.0
2			100	100	100

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: *Ronald Gray*

Date: 1/27/07

Due Date: 1/27/08



TEST AND MAINTENANCE REPORT

CUSTOMER NAME: Wilkins Inc. @ Eagle Ridge
 PHONE: _____
 STREET ADDRESS: _____
 CITY: _____ ST: _____ ZIP: _____
 MAILING ADDRESS: _____
 CITY: _____ ST: _____ ZIP: _____
 LOCATION OF ASSEMBLY: Backflow @ Entrance of Wwp

Severn Trent Environmental Services, Inc.
 3726 Corporation Circle
 Fort Myers, FL 33905

TYPE OF ASSEMBLY: RP DC RP DC SIZE: 3/4
 MANUFACTURER Wilkins/Turn MODEL: 975XL SERIAL NO.: 1468704

CHECK VALVE #1	RELIEF VALVE	CHECK VALVE #2	PRES VACUUM BREAKER
Leaked <input type="checkbox"/> Closed Tight <input checked="" type="checkbox"/> Diff pressure across check valve <u>7.6</u> psi	Opened at: <u>32</u> psi Did not open: <input type="checkbox"/>	Leaked <input type="checkbox"/> Closed Tight <input checked="" type="checkbox"/> Diff pressure across check valve <u>2.5</u> psi	Air inlet opened at _____ psi Check Valve: Leaked <input type="checkbox"/> Held at _____ psi
Cleaned only <input type="checkbox"/> Replaced: Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/> Or Disc <input type="checkbox"/> O'rings <input type="checkbox"/> Seat <input type="checkbox"/> Spring <input type="checkbox"/> Stem/guide <input type="checkbox"/> Retainer <input type="checkbox"/> Lock nuts <input type="checkbox"/> other <input type="checkbox"/>	Cleaned only <input type="checkbox"/> Replaced: Rubber kit <input type="checkbox"/> RV assembly <input type="checkbox"/> Or Disc <input type="checkbox"/> Diaphragm(s) <input type="checkbox"/> Seat <input type="checkbox"/> Spring <input type="checkbox"/> Guide <input type="checkbox"/> O'rings <input type="checkbox"/> Other <input type="checkbox"/>	Cleaned only <input type="checkbox"/> Replaced: Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/> Or Disc <input type="checkbox"/> O'rings <input type="checkbox"/> Seat <input type="checkbox"/> Spring <input type="checkbox"/> Stem/guide <input type="checkbox"/> Retainer <input type="checkbox"/> Lock nuts <input type="checkbox"/> other <input type="checkbox"/>	Cleaned only <input type="checkbox"/> Replaced: Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/> Disc, air in <input type="checkbox"/> Disc, CV <input type="checkbox"/> Spring, air <input type="checkbox"/> Spring, CV <input type="checkbox"/> Retainer <input type="checkbox"/> Guide <input type="checkbox"/> O'rings <input type="checkbox"/> Other <input type="checkbox"/>
Diff pressure Across check valve _____ psi	Opened at _____ psi	Diff pressure Across check valve _____ psi	air inlet _____ psi chk valve _____ psi

NOTE: ALL REPAIRS SHALL BE COMPLETED WITHIN THIRTY (30) DAYS.

METER# _____
 READING: 0763290

REMARKS: _____

PASSED FAILED

I HEREBY CERTIFY THAT THIS DATA IS ACCURATE AND REFLECTS THE PROPER OPERATION AND MAINTENANCE OF THE ASSEMBLY.

TESTER: Shawn Walker CERT #: E12-07-5177 DATE: 12/28/07
 TIME: _____

WHITE COPY: ORIGINAL - YELLOW & PINK COPIES: CUSTOMER

Prepared by and return to:

Michael B. Fischer, Esq.
Rudnick & Wolfe
203 North LaSalle Street
Chicago, Illinois 60601-1293

Jim Elliott
9-18-96
5 pages
From: ERU
Terry

EASEMENT AND EFFLUENT REUSE AGREEMENT

THIS AGREEMENT made and entered into as of this 21st day of August, 1995, by and between EAGLE RIDGE GOLF AND TENNIS CLUB, LTD., a Florida Limited Partnership, whose address is 14589 Eagle Ridge Drive, S.E., Fort Meyers, FL 33912, ("Owner"), and EAGLE RIDGE UTILITIES, INC., whose address is 14589 Eagle Ridge Drive, S.E., Fort Myers, FL 33912, ("Utility").

WITNESSETH:

WHEREAS, Owner is the fee simple owner of certain lands situated, lying and being in Lee County, Florida, and legally described in Exhibit "A" attached hereto and made a part hereof (the "Owner's Parcel"), upon a portion of which Owner has constructed a golf course;

WHEREAS, Utility owns or leases certain lands situated, lying and being in Lee County, Florida, and legally described as Exhibit "B" attached hereto and made a part hereof (the "Utility Parcel"), upon which Utility operates a sewage treatment facility ("S.T.F."), pursuant to and under a certificate from the Florida Public Service Commission and certain operating permits from the Florida Department of Environmental Protection;

WHEREAS, Utility has determined that the method of disposing of properly treated sewage effluent ("Effluent") provided for in this Agreement is less expensive than alternate methods of Effluent disposal which would require considerably greater capital investment and would result in significantly higher sewer rates to its customers;

WHEREAS, Owner has a need for an assured and available supply of properly treated Effluent in order to irrigate his landscaping and golf course, which effluent is available to Owner at a minimal cost as set forth hereinafter; and

WHEREAS, Utility and Owner have entered into an agreement dated as of April 11, 1995, to memorialize the agreement between them concerning this matter, but now wish to clarify their intentions with regard thereto by restating the terms and conditions of the agreement in this instrument.

NOW THEREFORE, in consideration of the mutual promises of the parties hereto, one to another, and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed as follows:

1. **RECITALS.** All recitals hereto are agreed by the parties to be true and correct and are incorporated herein by specific reference.

2. **GRANTS BY OWNER.** Owner hereby creates, grants and conveys to Utility, its successors and assigns, an easement appurtenant burdening the Owner's Parcel and benefitting the Utility Parcel, for the purposes of using the golf course for discharge of up to 450,000 gallons per day of treated Effluent generated in connection with the operation of the S.T.F., discharge and dispersal lines and other facilities necessary for Effluent disposal into the golf course on the Owner's Parcel. Owner agrees to accept on the golf course all discharge of up to 450,000 gallons per day of Effluent generated in connection with the operation of the S.T.F. on the Utility Parcel to the fullest extent the golf course can tolerate such discharge. Utility shall have the right of reasonable and necessary egress and ingress across the Owner's Parcel for the foregoing purposes. Owner further agrees to pay to Utility the sum of Ten and No/100 Dollars (\$10.00) per annum in consideration of the receipt by Owner of the Effluent as contemplated herein.

3. **COVENANTS OF UTILITY.** Utility covenants and agrees with Owner as follows:

- a. Subject to the issuance of any necessary permits or approvals by the Florida Department of Environmental Protection, which Utility agrees to use its best efforts to obtain, Utility shall discharge all of the Effluent generated in connection with the operation of the S.T.F., but in no event in excess of 450,000 gallons per day without Owner's written permission, into the golf course on Owner's Parcel, and Utility further covenants and agrees not to seek approval and/or request any authorization from the Florida Public Service Commission and the Florida Department of Environmental Protection to implement any charges for effluent disposal on the golf course without prior approval from Owner.
- b. Utility shall not unreasonably interfere with Owner's operation of the golf course.
- c. Utility shall exercise its rights under the easement in accordance with the established and generally accepted practices of waste water treatment and effluent disposal systems and in conformity with all existing and future rules, regulations, ordinances, laws and statutes lawfully established and imposed by any governmental body or agency having jurisdiction of Utility, and specifically those requirements relating to the treatment and disposal of "public access" effluent for spray irrigation. Any costs associated with meeting such standards shall be borne by Utility.

- d. Utility agrees never to exercise its easement rights in such a manner as to create a public nuisance on the Owner's Parcel and in the event that Owner shall ever contend that this provision has been violated, Owner agrees to give Utility a written notice accordingly and Utility shall have a reasonable period of time to cure any actual and conceded condition of public nuisance. If Utility does not agree with Owner that a condition of public nuisance does exist, the controversy shall be submitted to a court of competent jurisdiction for determination on the complaint of either party.
- e. Utility agrees that if the Effluent discharged onto the golf course is not properly treated, Utility shall be responsible for the increased maintenance costs due to abnormally increased vegetation growth in or adjacent to the golf course. Utility further agrees to indemnify and hold harmless Owner from all damages, costs and expenses incurred by Owner in connection with any discharge of improperly treated Effluent onto the golf course, provided that Utility is given the right to defend any claims made by others against Owner in connection therewith.
- f. Utility has no ownership interest in the discharge and dispersal lines located on the Owner's Parcel, and ownership thereof by Owner is hereby acknowledged.

4. **MAINTENANCE.** Owner agrees to maintain and operate the irrigation system, i.e., the discharge and dispersal lines and the spray heads, at its sole cost and expense, in a good and serviceable condition and in accordance with Utility's guidelines and governmental regulations. Major repairs and replacements to the system which are not in the nature of routine maintenance items shall be at the sole cost and expense of Utility.

5. **COVENANTS RUNNING WITH THE LAND.** The easements created pursuant to this Agreement shall be deemed to run with the lands described in Exhibit "A" (the "Owner's Parcel") in favor of the lands described in Exhibit "B" (the "Utility Parcel"), and the obligation to discharge the Effluent into the golf course on the Owner's Parcel shall be deemed to run with the Utility Parcel in favor of the Owner's Parcel.

6. **EFFLUENT REUSE ASSURANCE.** Utility agrees that all treated Effluent generated and discharged by the S.T.F., up to 450,000 gallons per day, shall be provided to Owner and that Utility shall not discharge to any third party any of the first 450,000 gallons per day of treated Effluent without Owner's prior express written consent, as long as Owner has the capacity to accept such treated Effluent. In the event Owner has the capacity to accept less than 450,000 gallons per day of treated Effluent, Utility agrees that all such treated Effluent, up to 450,000 gallons per day, generated and discharged by the S.T.F. which can be properly accepted by Owner shall be provided to Owner. Owner and Utility agree that a breach by Utility of this covenant would cause irreparable harm to Owner and that this covenant may be enforced by a suit by Owner for damages and for specific performance.

7. **FURTHER ASSURANCES.** The parties hereto agree to execute and deliver to one another from time to time such documents or instruments as may be reasonably required to confirm or implement the provisions and intentions of this Agreement.

8. **SUCCESSORS AND ASSIGNS:** Whenever reference is made to a party, said reference is intended to extend to and include the successors and assigns of said party whether so stated or not, it being the agreement of the parties that the provisions hereof shall bind and inure to their respective successors and assigns.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals as of the date first above written.

Witnesses:

Theresa J. Jacobs
Print Name
of Witness: Theresa J. Jacobs
Dale Sindt
Print Name
of Witness: Dale Sindt

EAGLE RIDGE GOLF AND TENNIS CLUB,
LTD., a Florida limited partnership

By: *William E. Maddox*
WILLIAM E. MADDOX, General Partner
Attest: *Don A. Mill*

Witnesses:

Theresa J. Jacobs
Print Name
of Witness: Theresa J. Jacobs
Thomas W. Campbell
Print Name
of Witness: THOMAS W. CAMPBELL

EAGLE RIDGE UTILITIES, INC.

By: *Frederick Quinn*
FREDERICK QUINN, President
Attest: *[Signature]*

JUL 16 2002
EAGLE RIDGE UTILITIES, INC.

STATE OF FLORIDA)
) SS
COUNTY OF LEE)

The foregoing instrument was acknowledged before me this 14th day of February, 1996, by WILLIAM E. MADDOX, who is the General Partner of EAGLE RIDGE GOLF AND TENNIS CLUB, LTD., a Florida limited partnership, on behalf of the limited partnership. He is personally known to me and did not take an oath.



TERESA J. JACOBS
My Comm Exp. 3/21/00
Bonded By Secretary
No. 00145560

Theresa J. Jacobs
Notary Public

Theresa J. Jacobs
Printed Name of Notary Public

My Commission Expires: 3-24-98

STATE OF FLORIDA)
) SS
COUNTY OF LEE)

The foregoing instrument was acknowledged before me this 15th day of February, 1996, by FREDERICK QUINN, who is the President of EAGLE RIDGE UTILITIES, INC., on behalf of the corporation. He is personally known to me and did not take an oath.



TERESA J. JACOBS
My Comm Exp. 3/21/00
Bonded By Secretary
No. 00145560

Theresa J. Jacobs
Notary Public

Theresa J. Jacobs
Printed Name of Notary Public

My Commission Expires: 3-24-98

RECORDED

JUL 16 2002

REG. - 804511102

EAGLE RIDGE

RECLAIMED WATER MANUAL

RECEIVED

SEP 15 2003

D.E.P. - South District

Revised 7/03

Michael Dunn

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RECLAIMED WATER MANUAL

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SEP 15 2003

SECTION 1

D.E.P. - South District

RECLAIMED WATER PROGRAM

The provision of reclaimed water to any consumer, owner, or other entity shall be in accordance with the utility's tariffs, regulations, rules, and Chapter 62-610, F.A.C.

1.1 Design Requirements

All reclaimed water systems shall be designed and constructed in accordance with Chapter 62-610 F.A.C. The Utilities, Inc. of Florida criteria for the construction of reuse distribution systems shall, as a minimum, include those requirements specified in Chapter 62-610 F.A.C. and the specifications contained in Section 2 of this Manual. If the criteria is found to be in conflict or less restrictive than the provisions of Chapter 62-610, then the provisions of 62-610 shall prevail and shall govern the design and construction of reclaimed water systems owned and operated within the utility service area. More specifically, these requirements shall include, as a minimum, the following items.

1.2 Cross-Connection Control

The cross-connection of the reclaimed water distribution system with the potable water system, the sanitary sewer system or with any other water system is specifically prohibited (ref. 62-610.469 F.A.C.). All consumers or customers connected to the reclaimed water system of the utility shall comply with the requirements of the utility's Cross-Connection Control Program Manual and Policy.

Reclaimed water is defined as an auxiliary water supply for residential, commercial, irrigation, or industrial usages.

The Cross-Connection Control Program Manual and Policy of the utility shall be adhered to in full.

1.3 Setback Requirements

Plans for golf courses proposing to include provisions for reclaimed water service shall include a survey of all surrounding property for the purpose of identifying the existence of potable water wells within 200 feet of the boundary of any potential reclaimed water

wetted surface. Reclaimed water application systems will not be considered or permitted within 75 feet of any existing or permitted future potable water supply well (ref. 62-610.471 F.A.C.).

A minimum horizontal separation of five (5) feet (center to center) or three (3) feet (outside to outside) shall be maintained between reclaimed water lines and potable water lines or sewage lines (ref. 62-610.469 F.A.C.). Minimum vertical separations between reclaimed water lines, potable water lines and sewage lines shall be maintained in accordance with Chapter 62-604.400 (g-j) F.A.C.

Reclaimed water irrigation systems located within 100 feet of public eating, drinking or bathing facilities shall utilize low trajectory spray heads, or methods approved by the utility to reduce aerosol drift.

Reclaimed water irrigation systems shall be constructed and operated so as to minimize overspray onto impervious surfaces.

1.4 Signage and Coding

Golf courses installing reclaimed water systems shall be required to provide public notice signs at storage ponds identifying the use of reclaimed water in the area

All reclaimed water transmission lines shall be color-coded and/or labeled to specifically identify said piping as reclaimed water lines (ref. 62-610.469 F.A.C.).

1.5 Prohibited Uses.

There shall not be above ground hose bibb connections to the reclaimed water system. All hose bibb connections must be located in below-grade, locked vaults clearly labeled as being non-potable.

Reclaimed water cannot be applied to the ground within 75 feet of a potable water well. New potable water well construction is prohibited within 75 feet of a reclaimed water irrigation area.

Reclaimed water shall not be used to fill swimming pools, hot tubs, wading pools, spas or similar appliances.

Tanker trucks used for transporting products intended for human consumption are prohibited from transporting reclaimed water.

Use of reclaimed water for any purpose other than those allowed by Chapter 62-610 F.A.C. is prohibited.

Failure to comply with the prohibitions governing the use of reclaimed water shall be cause for the discontinuation of reclaimed water service, and other penalties as appropriate.

1.6 Other Uses

Reclaimed water to be used for golf course irrigation will require a separate, specific agreement between the utility and the applicant.

SECTION 2

RECLAIMED WATER SERVICE AND INSTALLATION SPECIFICATIONS FOR GOLF COURSE IRRIGATION, FIRE SUPPRESSION, AND OTHER USES

2.1 General Requirements

Reclaimed water may be utilized for purposes other than irrigation of residential landscaping and public access irrigation usages. Utilization of reclaimed water for other purposes shall be limited to those set forth in Chapter 62-610, F.A.C., subsections 62-610.475 through 62-610.480. The utility shall consider such proposed usages on a case by case basis, as proposed by the applicant. In all cases, approval of the utility must be granted in writing and the regulatory requirements of Chapter 62-610, F.A.C. complied with in full.

With regard to the use of reclaimed water for golf courses on a continual basis, a specific agreement must be entered into between the utility and the owner of the facility that will utilize the reclaimed water. The terms and conditions of the agreement will be addressed on a case by case basis. No reclaimed water service shall be provided by the utility until an agreement has been prepared and executed by the parties thereto.

The requirements of the Utilities, Inc. of Florida Cross-Connection Control Program Manual and Policy shall be complied with in full by the applicant.

2.2 Golf Course Irrigation

New golf courses proposed for construction shall provide the utility with two sets of plans and specifications for the proposed irrigation system and all reclaimed water storage facilities to be located at the golf course. The pumping capacities, locations, and specifications for the proposed irrigation pump stations will be shown on the plans. The locations, dimensions, and volumes of all storage ponds or tanks will be specified. Open storage ponds shall be designed, constructed, or modified to preclude leakage of reclaimed water, as required by the Florida Department of Environmental Protection.

Existing golf courses shall provide the utility with one set of the plans and specifications describing the turf irrigation system and water storage facilities. If not available, the utility shall be provided, at a minimum, the irrigation pump equipment locations and capacities, and the locations, dimensions and volumes of all storage ponds or tanks. Open storage ponds shall be designed, constructed, or modified to preclude leakage of reclaimed water, as required by the Florida Department of Environmental Protection.

All golf courses, either new or existing, shall provide to the utility, engineering plans, details, and specifications prepared by a professional engineer registered in the state of Florida describing the proposed connection to the utility's existing reclaimed water system, the size and location of the reclaimed water main to the storage facilities of the

golf course, and any other associated piping, equipment or controls. A flow meter approved by the utility shall be installed in the reclaimed water supply main to the golf course. All reclaimed water supply mains and associated equipment shall comply with the specifications contained in this manual. The owner will provide access to the reclaimed water meter by utility personnel during normal business hours.

Any and all costs or expenses associated with the provision of reclaimed water service to a golf course shall be borne by the consumer, owner, or entity that has entered into the agreement with the utility.

2.3 Inspections and Activation

Inspections of the reclaimed water mains, and all other facilities associated with reclaimed water systems that have been constructed to allow the use of reclaimed water shall be performed by those local and state governmental agencies having jurisdiction. Approvals shall be obtained by the applicant or owner, and copies of said approvals submitted to the utility. Final inspection and approval must be received from the utility's authorized representatives prior to activation. Final inspections by the utility will not be performed or scheduled until the utility has received copies of all other agencies' approvals.

Existing or new golf courses must apply for and receive appropriate clearances from the Florida Department of Environmental Protection prior to activation.



Land Planning and
Engineering
Stormwater
Management
Drainage and Utilities

Environmental Permitting
Construction Administration
Project Management
Government Agency Liaison
Phase 1 ESA & Due Diligence

Water & Wastewater
Treatment Facilities
Water/Sewer Utility
Rates & Charges
Pumping Stations

UPDATED CAPACITY ANALYSIS REPORT

Permit Number: FLA014505
Permit Expiration Date: October 14, 2008
Field Evaluation: January 29, 2008

Prepared for:
Utilities Inc. of Eagle Ridge
200 Weathersfield
Altamonte Springs, FL 32714

Prepared by:
Excel Engineering Consultants, LLC
122 Wilshire Boulevard
Casselberry, FL 32707

March 20, 2008

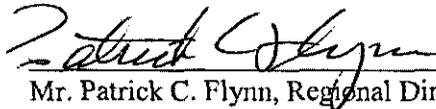
CERTIFICATIONS

Permittee:

County of: Lee

Mr. Patrick C. Flynn, Regional Director
Utilities Inc. of Eagle Ridge
Altamonte Springs, FL 32714
407-869-1919

I have reviewed, am fully aware of, and intend to comply with the recommendations and schedules included in the report.

 4/14/08
Mr. Patrick C. Flynn, Regional Director Date

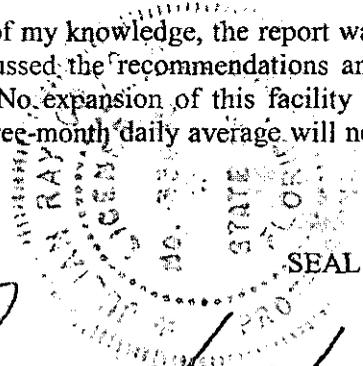


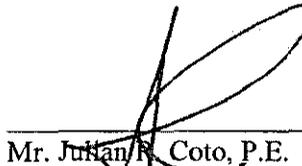
Professional Engineer:

Mr. Julian Ray Coto, P.E., D.E.E
President

Excel Engineering Consultants, LLC
122 Wilshire Boulevard
Casselberry, FL 32707
407-260-2292

The information contained in this report is true and correct to the best of my knowledge, the report was prepared in accordance with sound engineering principles, and I discussed the recommendations and schedules with the permittee or permittee's delegated representative. No expansion of this facility is anticipated in the next five years and it is expected that the facility's three-month daily average will not exceed the permitted capacity within the next five years.



 4/14/08
Mr. Julian R. Coto, P.E. Date

Registration No. 0033635

**Cross Creek
Wastewater Treatment Facility**

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b. Facility Description.....	1
2.0 Existing Conditions.....	2
a. Permitted Capacity.....	2
b. Historical Flows.....	2
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3.0 Future Conditions.....	3
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APPENDIX A:	Facility Plans
APPENDIX B:	Flow Analysis
APPENDIX C:	Process Analysis
APPENDIX D:	Additional Information

Cross Creek Wastewater Treatment Facility

1.0 INTRODUCTION

Excel Engineering Consultants, LLC prepared this Capacity Analysis Report (CAR) for the Cross Creek Wastewater Treatment Facility (WWTF) in conjunction with the Operating Permit renewal for the 249,000 gpd WWTF. This CAR serves as the updated CAR and covers the period from January 1999 through November 2007.

A. Service Area

Cross Creek WWTF is located at 13046 Cross Creek Blvd. in Ft. Myers, Florida. The service area for the Cross Creek WWTF is located in Section 20, Township 45 South, and Range 25 East, in Lee County, Florida. There are currently approximately 905 users connected to the facility with no plans for expansion. The average daily flow per user is approximately 150 gpd for a total ADF of 135,750 gpd at full capacity.

B. Facility Description

The wastewater treatment facility is a 249,000-gallon per day extended aeration facility based on the maximum monthly average daily flow. The facility provides public access irrigation to a 60-acre golf course. The wastewater residuals are transferred to an aerobic digester and transported off-site by Appalachian Material Services, Inc.

A locked fence surrounds the plant. The principal items included in the main processing plant is one 92,700 gallon surge tank; one 89,975 gallon, one 69,025 gallon, one 43,750 gallon and one 56,430 gallon aeration tanks; two settling tanks with a combined surface area of 733 s.f.; dual tertiary filtration which includes two 12.6 s.f. cylindrical filters and two 16.0 s.f. rectangular filters; dual 6,573 gallon chlorine contact tanks; one 9,933 gallon, one 18,610 gallon and one 24,482 gallon digester; one 690,000 gallon and one 200,000 gallon (total 890,000 gal) reclaimed water storage tanks; one 375,000 gallon reject water storage tank; air distribution and supply system, scum troughs, clarifier sludge collector mechanisms, return/waste sludge system, walkways, internal piping, and electrical controls. Air is provided by alternating two Lamson centrifugal blowers to furnish overall air requirements for the process portion of the plant. Air is provided to the surge tank by three Roots 47 URAI rotary blowers. Air is provided to the filters for air scour during the backwash cycle by one Roots 33 URAI rotary blower. A standby generator is used to provide emergency power in the event of an electrical power outage.

The facility meets Class C, Category III treatment facility. The facility requires a licensed operator with a minimum certification of Class C to be on-site for six (6) hours per day seven (7) days per week.

2.0 EXISTING CONDITIONS

A. Permitted Capacity

The plant, currently under FDEP Permit No. FLA014505 is authorized to operate a 0.249 MGD extended aeration plant with chlorinated effluent disposal to public access golf course irrigation. The WWTF meets the requirements of a Class C, Category III treatment facility.

B. Historical Flows

Flows and effluent water quality data were obtained from the Discharge Monitoring Reports (DMRs) submitted to the FDEP. Our analysis is focused on the flows experienced between January 1999 and November 2007. The monthly average daily flows have varied between 39,000 and 165,000 gpd. The three-month running average daily flow during this period varied between 40,000 and 135,000 gpd. The twelve-month running average daily flow during this period varied between 69,000 and 99,000 gpd. Our analysis of the past 9 years suggests that the wastewater treatment facility experiences seasonal flows. Typically, the highest of these flows is experienced during the winter months and the lowest during the summer months.

C. Seasonal Variations

The flows typically peak during the winter months, which coincides with the arrival of Florida's tourist season. The tourists arriving in Florida for the winter months cause increased flows at Cross Creek. The ratio of the average 3-month ADF to the maximum 12-month ADF is as follows:

**Table I
 Average Ratio**

ANNUAL PERIOD	ANNUAL AVERAGE	HIGHEST 3 MONTH AVG	RATIO
January – December 1999	0.089	0.087	0.98
January – December 2000	0.097	0.126	1.30
January – December 2001	0.077	0.135	1.70
January – December 2002	0.081	0.122	1.50
January – December 2003	0.082	0.120	1.47
January – December 2004	0.072	0.115	1.50
January – December 2005	0.069	0.109	1.58
January – December 2006	0.072	0.108	1.51
January – December 2007	0.069	0.115	1.67
AVERAGE RATIO			1.47

D. Updated Flow and Loading Information

The treatment efficiency of each component associated with the wastewater treatment facility and reuse disposal system were analyzed and compared to the criteria of the applicable publications stated in 62-600.300(4), FAC. The results of our analysis, shown in Appendix C, suggest that the facility's components are operating at better than the minimum design requirements (See Appendix B & C). The following is a summary of the treatment efficiency parameters:

**Table II
 Treatment Efficiencies**

ITEM	COMPONENT DESCRIPTION	TREATMENT CRITERIA	RESULTS OF ANALYSIS	DESIGN PARAMETERS
1.0	Aeration Tanks	Detention Time (hrs)	24.6 hours	18 - 36 hours
		BOD Loading Rated	11.57 #BOD/1,000 c.f.	10 to 25 # BOD/1,000 c.f.
		Applied Air	2,612 c.f./# BOD	2,000 c.f./#BOD
2.0	Clarifiers	Overflow Rate (gpdpsf)	339.70 gpdpsf	200 to 600 gpdpsf
3.0	Chlorine Contact Tanks	Detention Time (min.)	76.03 min. adf 38.01 min. peak	30 min. adf 15 min. peak
4.0	Golf Course Irrigation	Application Rate (inches per week)	1.07 inches per week	2.0 inches per week
5.0	BOD ₅	% Removal Efficiency	98.67%	90%
6.0	TSS	% Removal Efficiency	99.02%	90%

The effluent BOD₅ samples were analyzed every two weeks and the effluent TSS samples were analyzed four days per week. The facility's average BOD₅ removal rate over the study period was 98.67% and the TSS removal rate was 99.02%. Based on the results of our analysis the facility exceeded the minimum 90% treatment efficiency for both BOD₅ and TSS in all measured occasions. It is expected that the wastewater treatment facility will continue to provide treatment efficiencies in excess of 90% during the coming permitting period.

3.0 FUTURE CONDITIONS

The wastewater treatment facility is permitted to treat 249,000 gallons per day of domestic wastewater based on the maximum monthly average. The monthly average daily flows have varied between 39,000 and 165,000 gpd. The three-month running average daily flow during this period varied between 40,000 and 135,000 gpd. The twelve-month running average daily flow during this period varied between 69,000 and 99,000 gpd. Our analysis has revealed that the facility's monthly average daily flow has not exceeded its rated capacity on any occasion.

The flows have remained below the facility's rated capacity over study period. The wastewater treatment facility is permitted at 249,000 gpd and it is expected that the facility's maximum monthly average daily flow will not exceed the permitted capacity within the next five years.

4.0 SUMMARY AND CONCLUSION

A. **Conclusion**

The wastewater treatment facility is a 249,000-gallon per day facility based on the maximum monthly average daily flow. The collection system receives only domestic wastewater since there are no industrial users associated with the service area. Our analysis over the previous 9 years has revealed that the maximum monthly ADF did not exceed the facility's rated capacity on any one occasion.

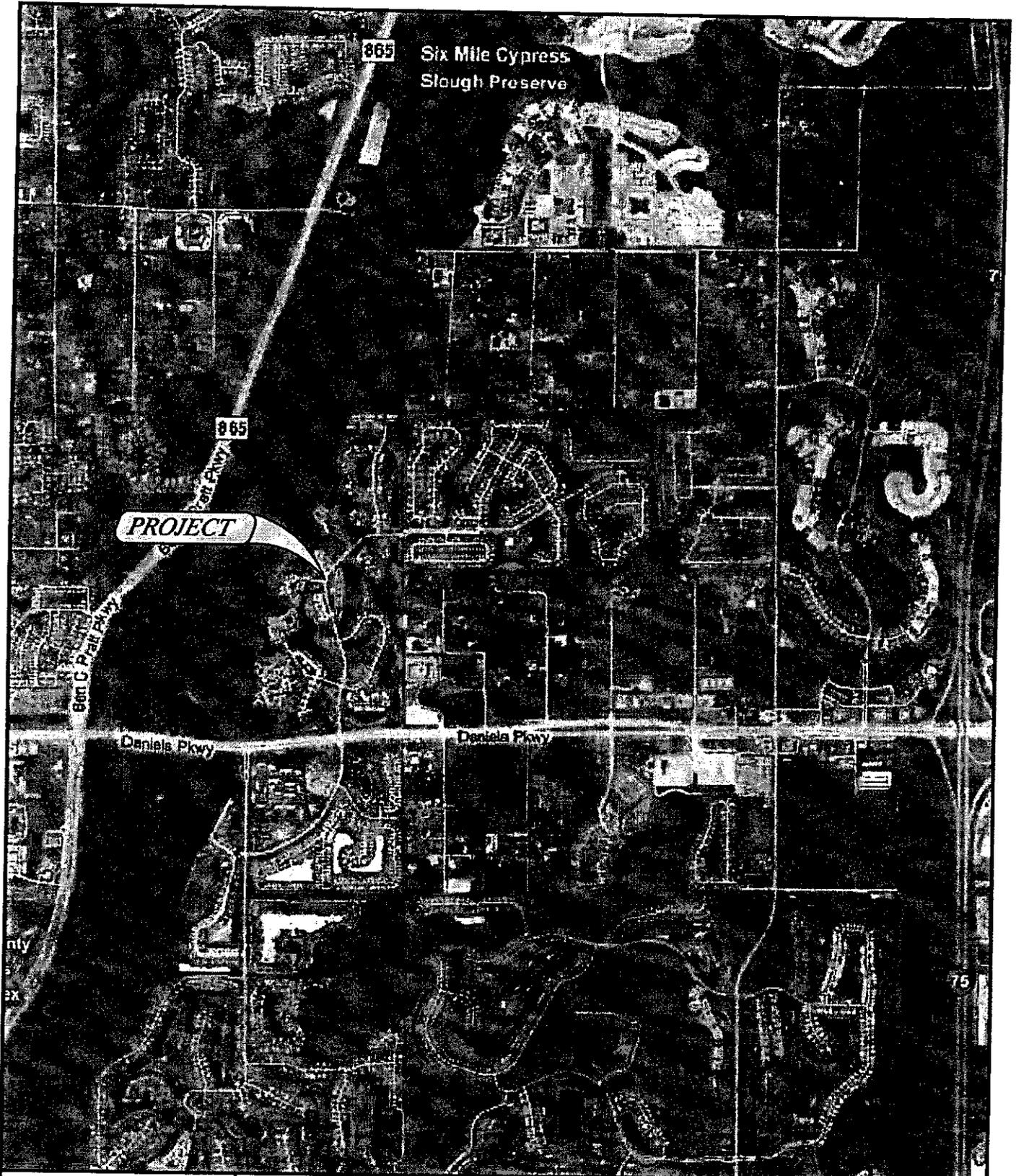
Based on the fact that the flows have remained under the permitted limit and the facility is built out, the flows are expected to be below or in the range of the permitted capacity for the life of the permit.

B. **Recommendation for Expansion**

The WWTF has been designed to treat a flow of 249,000 gpd. Since, the maximum monthly average daily flows have remained well within the permitted limit during the study period and the community is built-out, no expansion is recommended at this time.

APPENDIX A

FACILITY PLANS



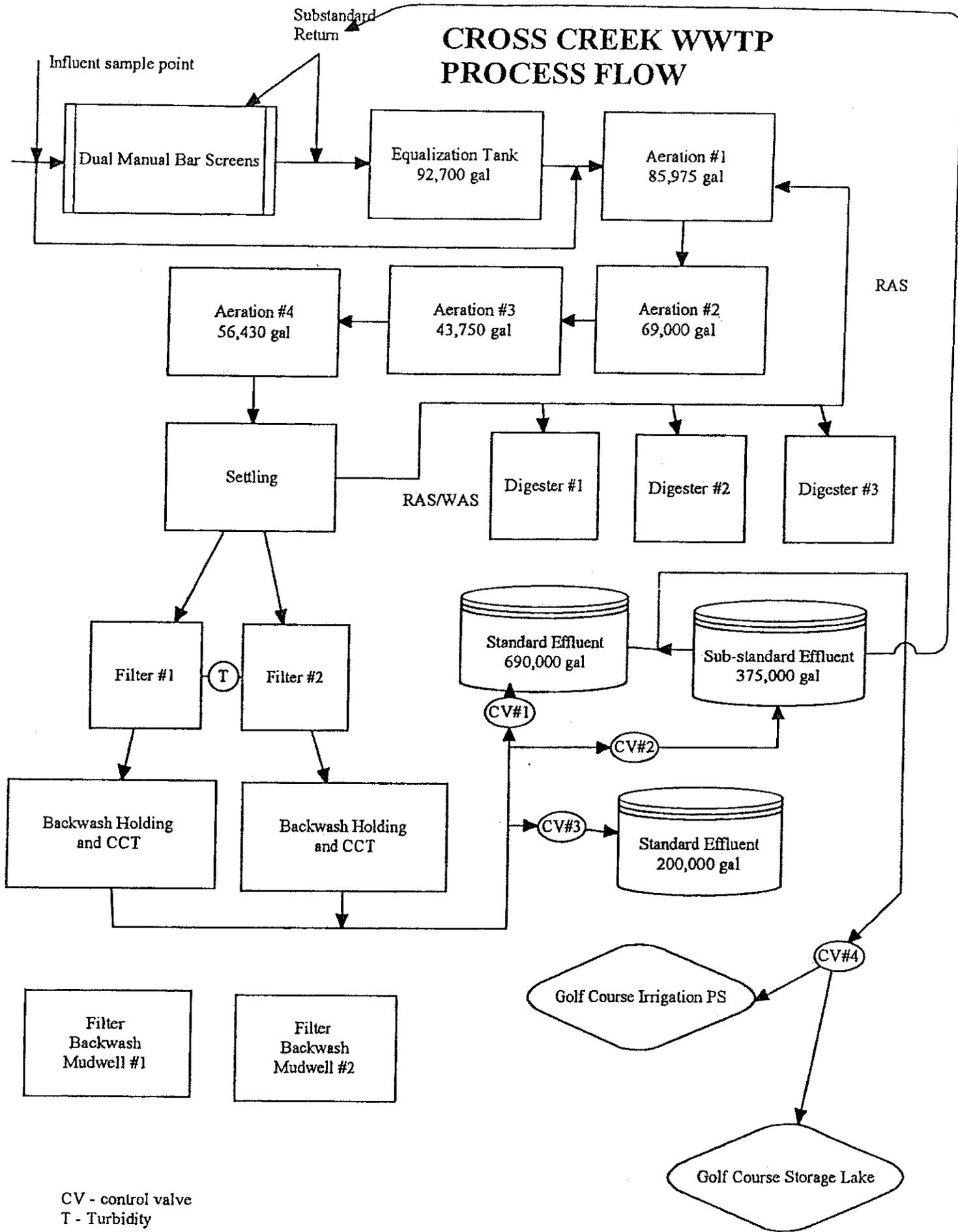
Excel Engineering
 ENVIRONMENTAL & CIVIL ENGINEERS
 122 WILSHIRE BOULEVARD
 CASSELBERRY, FL 32707
 TEL: (407) 280-2292 FAX: (407) 260-1193
 CERTIFICATE OF AUTHORIZATION NO. 27541

*CROSS CREEK
 WWTP PERMIT RENEWAL*

*LOCATION
 MAP*

PROJECT: UT101-0107	SCALE: 1"=1000'
DRAWN: JAL	CHECKED: ART
DATE: 12.28.07	SHEET 1 OF 1

CROSS CREEK WWTP PROCESS FLOW



CV - control valve
T - Turbidity

CONTROL VALVE SEQUENCING

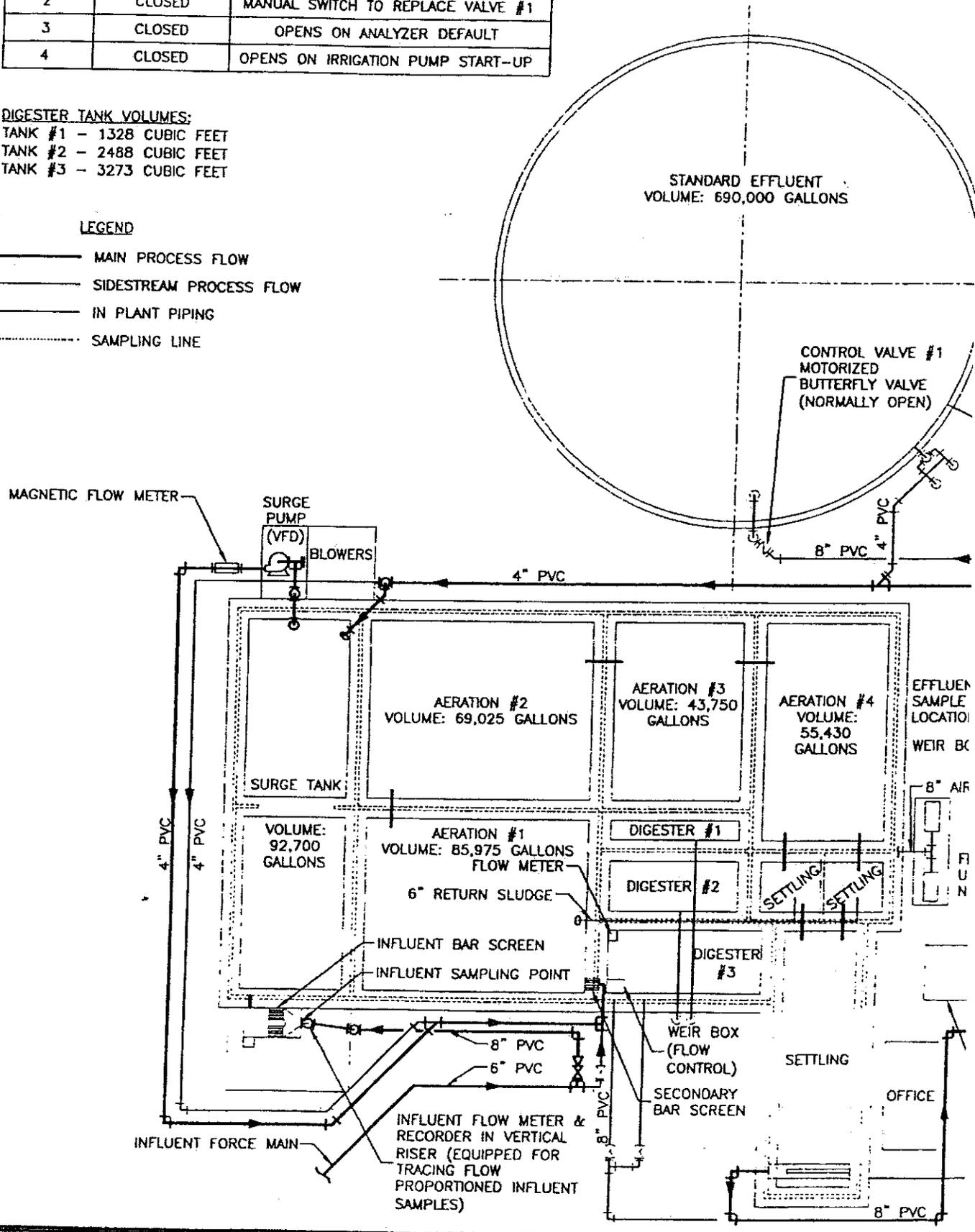
VALVE NO.	NORMAL STATUS	COMMENTS
1	OPEN	CLOSES ON ANALYZER DEFAULT
2	CLOSED	MANUAL SWITCH TO REPLACE VALVE #1
3	CLOSED	OPENS ON ANALYZER DEFAULT
4	CLOSED	OPENS ON IRRIGATION PUMP START-UP

DIGESTER TANK VOLUMES:

TANK #1 - 1328 CUBIC FEET
 TANK #2 - 2488 CUBIC FEET
 TANK #3 - 3273 CUBIC FEET

LEGEND

- MAIN PROCESS FLOW
- SIDESTREAM PROCESS FLOW
- IN PLANT PIPING
- SAMPLING LINE



APPENDIX B

FLOW ANALYSIS

Cross Creek WWTF
Historical Flows and Loading Data

DATE	30 DAY ADF(mgd)	3 MO. ADF(mgd)	12 MO. ADF(mgd)	PEAK (mgd)	IN BOD (mg/l)	IN TSS (mg/l)	OUT BOD (mg/l)	OUT TSS (mg/l)	BOD EFF. %	TSS EFF. %	CHLORINE RESIDUAL (mg/l)	pH	FECAL COLIFORM (#/100ml)	TURBIDITY (NTU)
Jan-99														
Feb-99	0.165			0.22		396	6.3					7	1	
Mar-99	0.086			0.155		294	1.5	0.9		99.69%	2	6.9	1	
Apr-99							2.1	1.4						
May-99	0.063			0.085	187		2	1.2	98.93%			6.4	1	
Jun-99					191	197	1.4	4.4	99.27%	97.77%		6.8	1	
Jul-99					192	203		1.8		99.11%	1	6.8	1	
Aug-99	0.123			0.196	293	277	2.1	2.4	99.28%	99.13%		6.8	1	
Sep-99	0.078			0.115	198	241	2.6	1.7	98.69%	99.29%		6.7	1	
Oct-99	0.061	0.087		0.088		401	1.9	1.1		99.73%		6.8	1	
Nov-99	0.062	0.067		0.063	235			2.3				6.8	1	
Dec-99	0.071	0.065	0.089	0.086	177	168	1.7	2.2	99.04%	98.69%	2	6.8	1	
Jan-00			0.089		192	212	0.9	1	99.53%	99.53%	2	6.8	1	
Feb-00	0.110		0.082	0.146	250	323	1.4	1.5	99.44%	99.54%	2	6.8	1	
Mar-00	0.142		0.089	0.173	260	203		4.6		97.73%	2	6.6	1	
Apr-00	0.123	0.125	0.093	0.153	279	232	1.3		99.53%		1	6.4	1	
May-00	0.069	0.111	0.093	0.118		228		3.7		98.38%	0.5	5.95	1	
Jun-00	0.145	0.112	0.098		92		1.4		98.48%		1	6.7	1	
Jul-00			0.098			354		3.8		98.93%		6.1		
Aug-00	0.060		0.092	0.063		172		1		99.42%			1	
Sep-00	0.081		0.092	0.102									1	
Oct-00			0.096		210		1.3		99.38%			5		
Nov-00	0.081		0.098	0.095	180	1								
Dec-00	0.060		0.097	0.063	348	354	1.6	0.7	99.54%	99.80%		6.1	1	
Jan-01	0.081	0.074	0.095	0.095		172		1.2		99.30%		5.2	1	
Feb-01	0.151	0.097	0.099		195	215	0.9	1.1	99.54%	99.49%	1	6.9	1	
Mar-01	0.139	0.124	0.099	0.149	397	352	0.9	0.8	99.77%	99.77%	1	7	1	
Apr-01	0.114	0.135	0.098	0.145	159	155	2	1.6	98.74%	98.97%	1	6.8	1	
May-01	0.042	0.098	0.095	0.138	182	177	0.9	3	99.51%	98.31%	1	6.5	1	
Jun-01	0.039	0.065	0.085	0.101	149	212	2	0.8	98.66%	99.62%	1	6.5	1	
Jul-01	0.059	0.047	0.082	0.065	173	179	2	1.1	98.84%	99.39%	1	6.5	1	
Aug-01	0.046	0.048	0.081	0.066	168	105	0.9	1.1	99.46%	98.95%	1	6.6	1	
Sep-01	0.055	0.053	0.079	0.07	70	69	2	1	97.14%	98.55%	1	6.8	1	
Oct-01	0.063	0.055	0.077	0.065	174	144	1	1.3	99.43%	99.10%	1	6.4	1	
Nov-01	0.066	0.061	0.076	0.083	165	129	3	2.3	98.18%	98.22%	1	6.6	1	
Dec-01	0.070	0.066	0.077	0.076	263	322	1	2	99.62%	99.38%	1	6.8	1	
Jan-02	0.135	0.090	0.082	0.212	145	113	1	0.88	99.31%	99.22%	1	6.4	1	
Feb-02	0.120	0.108	0.079	0.158	135	84	4	0.9	97.04%	98.93%	1	6.25	1	
Mar-02	0.112	0.122	0.077	0.15	146	122	2	0.7	98.63%	99.43%	1	6.45	1	
Apr-02	0.100	0.111	0.076	0.118	191	107	1.9	3.4	99.01%	96.82%	10	6.5	1	2.0
May-02	0.051	0.088	0.076	0.058	240	188	1.9	1	99.21%	99.47%	10	6.3	1	2.1
Jun-02	0.051	0.067	0.077	0.082	159	178	1.9	1.7	98.81%	99.04%	10	6.2	1	1.9
Jul-02	0.062	0.055	0.078	0.075	144	147	1.9	1.37	98.68%	99.07%	10	6.15	1	
Aug-02	0.050	0.054	0.078	0.068	173	124	1.9	0.81	98.90%	99.35%	10	6.3	1	2.0
Sep-02	0.062	0.058	0.079	0.078	91	65	3	1.05	96.70%	98.38%	5.46	6.5	1	1.8
Oct-02	0.066	0.059	0.079	0.073	102	86	2	2.8	98.04%	96.74%	3.15	6.3	1	2.1
Nov-02	0.082	0.070	0.080	0.096	58	46	1.9	0.95	96.72%	97.93%	3.4	6.6	1	1.4
Dec-02	0.082	0.077	0.081	0.093	110	109	1.9	1	98.27%	99.08%	1.2	6.14	1	1.5

Cross Creek WWTF
Historical Flows and Loading Data

DATE	30 DAY ADF(mgd)	3 MO. ADF(mgd)	12 MO. ADF(mgd)	PEAK (mgd)	IN BOD (mg/l)	IN TSS (mg/l)	OUT BOD (mg/l)	OUT TSS (mg/l)	BOD EFF. %	TSS EFF. %	CHLORINE RESIDUAL (mg/l)	pH	FECAL COLIFORM (#/100ml)	TURBIDITY (NTU)
Jan-03	0.117	0.094	0.080	0.132	101	91	1.9	1.7	98.12%	98.13%	1.5	6.24	1	2.0
Feb-03	0.120	0.106	0.080	0.131	76	73	1.9	2.9	97.50%	96.03%	10	6.28	1	1.4
Mar-03	0.123	0.120	0.081	0.138	103	86	1.9	3.6	98.16%	95.81%	1.1	6.43	1	2.8
Apr-03	0.102	0.115	0.081	0.1112	109	91	1.9	0.8	98.26%	99.12%	1	6.47	1	0.7
May-03	0.068	0.097	0.082	0.088	128	108	1.9	1.8	98.52%	98.33%	1	6.17	1	1.0
Jun-03	0.056	0.075	0.082	0.064	156	144	1.9	2.5	98.78%	98.28%	1	6.18	1	1.6
Jul-03	0.046	0.056	0.081	0.053	167	232	1.9	1.1	98.86%	99.53%	1	6.08	1	1.5
Aug-03	0.050	0.051	0.081	0.055	64	63	1.9	2	97.03%	96.83%	1	6.12	1	1.0
Sep-03	0.057	0.051	0.081	0.066	95	163	1.9	1.2	98.00%	99.26%	1	6.12	1	1.1
Oct-03	0.082	0.063	0.082	0.069	94	98	1.9	1.3	97.98%	98.67%	1	6.11	1	1.0
Nov-03	0.080	0.073	0.082	0.089	73	80	1.9	1.3	97.40%	98.38%	1	6.1	1	0.5
Dec-03	0.083	0.082	0.082	0.106	179	178	1.9	1.7	98.94%	99.04%	1	6.15	1	0.8
Jan-04	0.108	0.090	0.081	0.123	121	143	1.9	3.7	98.43%	97.41%	1	6.33	1	0.8
Feb-04	0.116	0.102	0.081	0.14	178	198	1.9	1.7	98.93%	99.14%	1	6.25	1	0.8
Mar-04	0.121	0.115	0.081	0.139	137	162	2	0.8	98.54%	99.51%	4.1	6.45	1	0.3
Apr-04	0.092	0.110	0.080	0.113	147	236	2	1.3	98.64%	99.45%	1.1	6.22	1	0.8
May-04	0.051	0.088	0.079	0.066	90	95	2	1.8	97.78%	98.11%	1	6.12	1	0.8
Jun-04	0.041	0.061	0.077	0.049	83	115	2	1.3	97.59%	98.87%	1.1	6.1	1	0.7
Jul-04	0.042	0.045	0.077	0.053	87	84	2	1.8	97.70%	97.86%	5	6.31	1	1.0
Aug-04	0.051	0.045	0.077	0.069	40	77	2	0.9	95.00%	98.83%	5	6.51	1	0.6
Sep-04	0.047	0.047	0.076	0.056	84	115	2	1.6	97.62%	98.61%	5	6.85	1	0.7
Oct-04	0.054	0.051	0.074	0.073	206	223	2	1.5	99.03%	99.33%	5	6.8	1	0.8
Nov-04	0.070	0.057	0.073	0.082	184	134	2	1.4	98.91%	98.96%	5	6.12	1	1.0
Dec-04	0.071	0.065	0.072	0.096	406	519	2	1.7	99.51%	99.67%	5	6.81	1	0.7
Jan-05	0.095	0.079	0.071	0.105	121	89	2.5	2.5	97.93%	97.19%	5	6.7	1	0.5
Feb-05	0.114	0.093	0.071	0.123	97	130	2	1.6	97.94%	98.77%	5	6.56	1	0.8
Mar-05	0.117	0.109	0.070	0.142	95	124	2.0	1.6	97.89%	98.71%	5.0	6.6	1	1.0
Apr-05	0.084	0.105	0.070	0.108	108	191	2.0	1.0	98.15%	99.48%	5.0	6.6	1	0.8
May-05	0.048	0.083	0.070	0.061	84	146	3.0	2.0	96.43%	98.63%	5.0	6.5	1	1.0
Jun-05	0.044	0.059	0.070	0.054	97	135	2.3	2.0	97.63%	98.52%	5.0	6.7	1	1.0
Jul-05	0.039	0.044	0.070	0.054	103	166	2.5	2.0	97.57%	98.80%	5.0	6.3	1	1.0
Aug-05	0.041	0.041	0.069	0.054	104	158	2.0	1.9	98.08%	98.80%	1.0	6.5	1	0.6
Sep-05	0.042	0.041	0.068	0.051	84	124	2.0	2.3	97.62%	98.15%	1.0	6.6	1	1.0
Oct-05	0.055	0.046	0.068	0.059	95	118	2.0	2.0	97.89%	98.31%	1.0	6.6	1	1.0
Nov-05	0.074	0.057	0.069	0.082	97	130	2.0	4.0	97.94%	96.92%	1.1	6.0	1	1.0
Dec-05	0.075	0.068	0.069	0.087	178	325	2.0	6.5	98.88%	98.00%	1.0	6.3	1	1.4
Jan-06	0.103	0.084	0.070	0.125	108	184	2.0	5.2	98.15%	97.17%	1.1	6.3	1	1.2
Feb-06	0.115	0.098	0.070	0.136	101	156	2.0	1.1	98.02%	99.29%	1.0	6.3	1	0.9
Mar-06	0.106	0.108	0.069	0.117	124	203	2.0	0.8	98.39%	99.61%	1.0	6.4	1	0.7
Apr-06	0.083	0.101	0.069	0.103	235	211	2.0	0.7	99.15%	99.67%	1.1	6.3	1	0.6
May-06	0.054	0.081	0.069	0.066	140	194	2.0	1.7	98.57%	99.12%	1.1	6.4	1	1.1
Jun-06	0.045	0.061	0.069	0.052	212	162	2.0	0.6	99.06%	99.63%	1.0	6.5	1	0.6
Jul-06	0.047	0.049	0.070	0.054	74	150	2.0	0.9	97.30%	99.40%	1.0	6.6	1	0.8
Aug-06	0.041	0.044	0.070	0.053	130	167	2.0	0.9	98.46%	99.46%	1.0	6.6	1	0.6
Sep-06	0.046	0.045	0.070	0.051	81	139	2.0	1.3	97.53%	99.06%	1.0	6.8	1	0.8
Oct-06	0.061	0.049	0.071	0.079	76	124	2.0	0.8	97.37%	99.35%	1.0	6.7	1	0.6
Nov-06	0.080	0.062	0.071	0.085	133	174	2.0	2.6	98.50%	98.51%	1.2	6.5	1	0.5
Dec-06	0.079	0.073	0.072	0.092	140	203	2.0	0.7	98.57%	99.66%	1.7	6.7	1	0.6

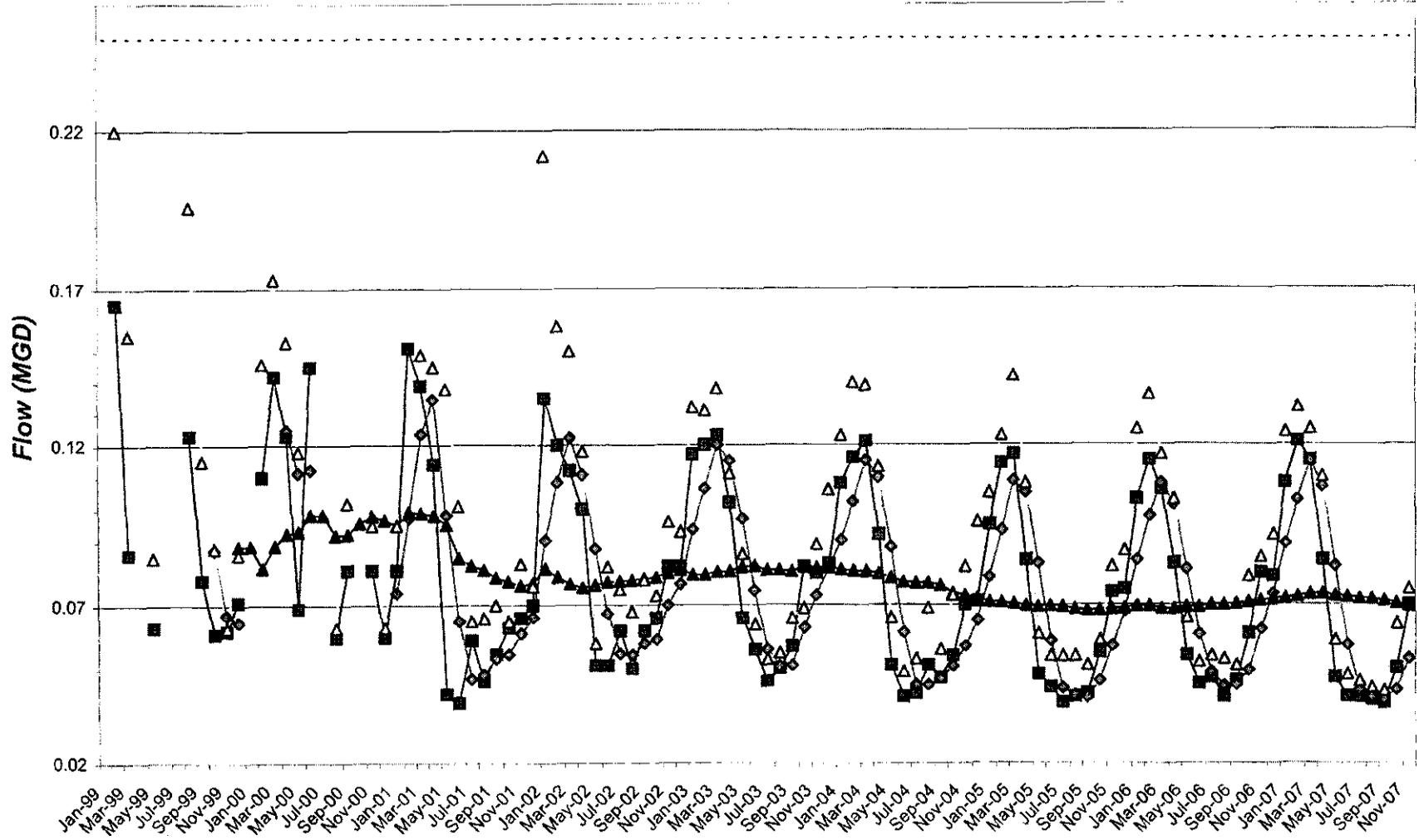
Cross Creek WWTF														
Historical Flows and Loading Data														
DATE	30 DAY ADF(mgd)	3 MO. ADF(mgd)	12 MO. ADF(mgd)	PEAK (mgd)	IN BOD (mg/l)	IN TSS (mg/l)	OUT BOD (mg/l)	OUT TSS (mg/l)	BOD EFF. %	TSS EFF. %	CHLORINE RESIDUAL (mg/l)	pH	FECAL COLIFORM (#/100ml)	TURBIDITY (NTU)
Jan-07	0.108	0.089	0.072	0.124	142	173	2.0	2.3	98.59%	98.67%	2.3	6.8	1	0.6
Feb-07	0.121	0.103	0.073	0.132	147	154	2.0	0.6	98.64%	99.61%	3.1	6.9	1	0.7
Mar-07	0.115	0.115	0.073	0.125	85	164	2.0	0.7	97.65%	99.57%	2.3	7.0	1	0.7
Apr-07	0.084	0.107	0.073	0.110	88	161	2.0	0.7	97.73%	99.57%	2.7	6.9	1	0.8
May-07	0.047	0.082	0.073	0.059	145	171	2.0	0.6	98.62%	99.65%	2.6	6.8	1	0.9
Jun-07	0.041	0.057	0.073	0.048	110	184	2.0	0.7	98.18%	99.62%	2.2	6.9	1	0.9
Jul-07	0.041	0.043	0.072	0.046	100	167	2.0	0.7	98.00%	99.58%	2.5	6.9	1	0.7
Aug-07	0.040	0.041	0.072	0.044	90	200	2.0	0.7	97.78%	99.65%	2.5	6.9	1	0.6
Sep-07	0.039	0.040	0.071	0.043	175	97	2.0	0.6	98.86%	99.38%	2.2	6.9	1	0.9
Oct-07	0.050	0.043	0.070	0.064	175	97	2.0	0.6	98.86%	99.38%	2.2	6.8	1	0.9
Nov-07	0.070	0.053	0.070	0.075	101	163	2.0	0.9	98.02%	99.45%	3.0	6.8	1	0.6
Avg.	0.078	0.076	0.079	0.094	148.0	170.0	2.0	1.7	98.67%	99.02%	2.6	6.5	1	1.0

Notes: (1) Some or all data not available from neither local or state FDEP offices.

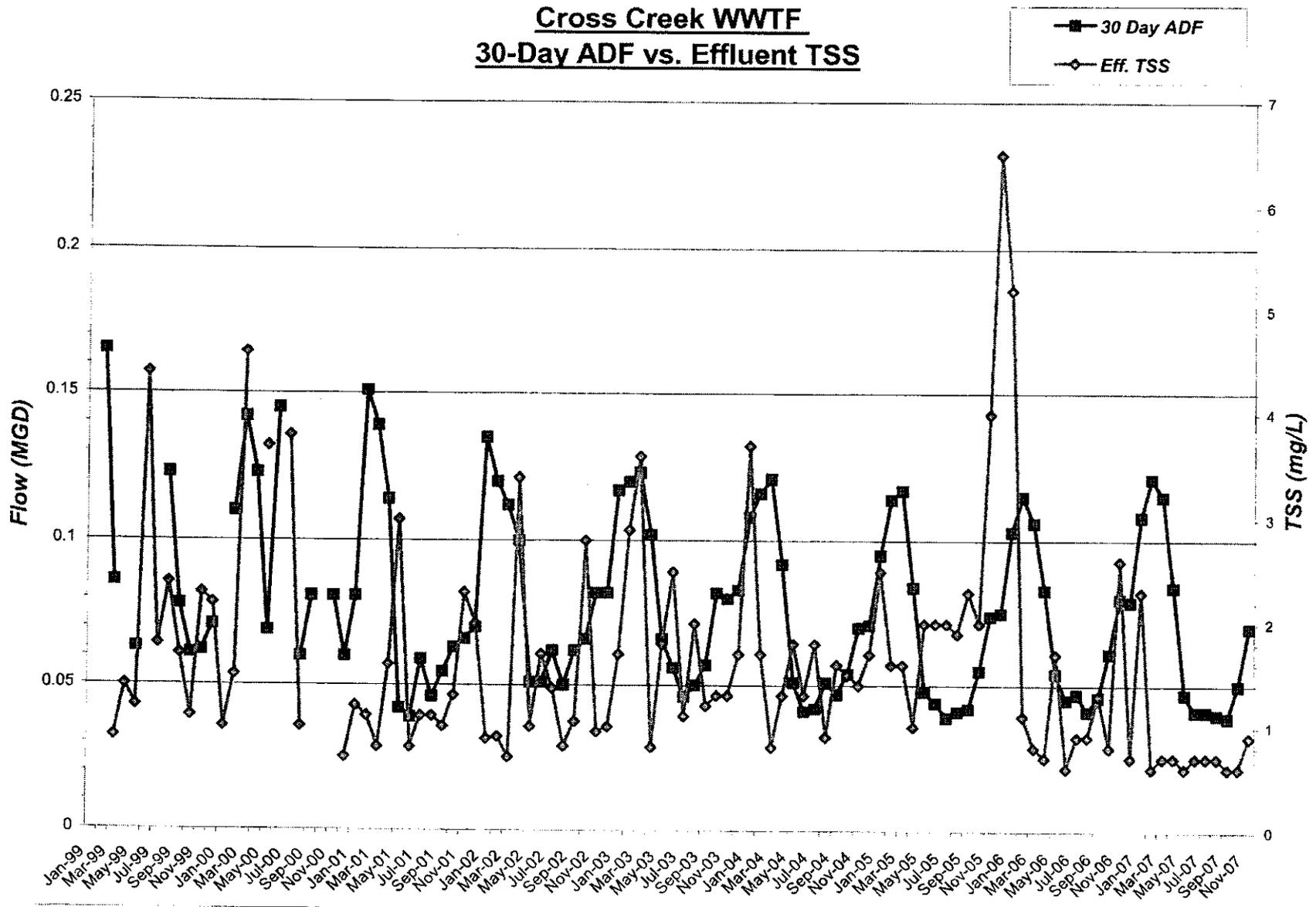
(2) 9-month, 10-month and 11-month ADF calculated in lieu of missing 30-Day ADF data.

Cross Creek WWTF Historical Flow Data

- 30 DAY
- 12 Mo.
- Capacity
- 3 Mo.
- Peak

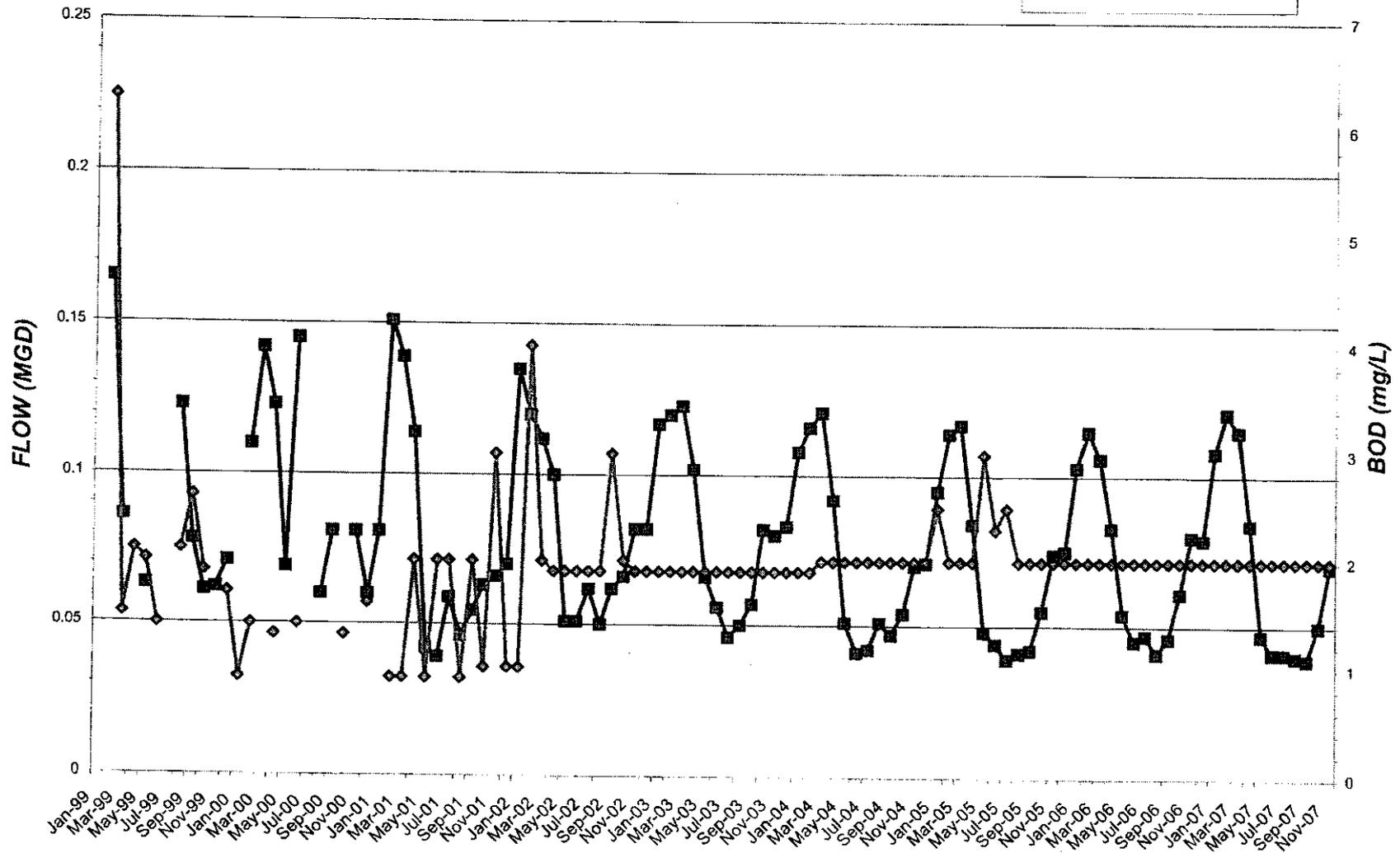


Cross Creek WWTF 30-Day ADF vs. Effluent TSS



Cross Creek WWTF 30-Day ADF vs. Effluent BOD

30 DAY ADF
 BOD EFF.



APPENDIX C

PROCESS ANALYSIS

**CROSS CREEK WWTF
EXTENDED AERATION ACTIVATED SLUDGE PROCESS ANALYSIS**

Flow = 249,000 gpd 0.249 mgd

SURGE TANKS

	Volume gallons	% Total Flow
Tank #1	92,700	
Total	92,700	37.23%

AERATION TANKS

	Volume gallons	Detention Time hours	BOD Loading #/1,000 cf
Tank #1	85,975		
Tank #2	69,025		
Tank #3	43,750		
Tank #4	56,430		
Total	255,180	24.60	11.57

CLARIFIER TANKS

	Area s.f.	Hydraulic Loading gpdpsf	Peak Solids Loading lb/day/sf
Clarifiers	733.00		
Total:	733.00	339.70	29.75

Note: MLSS = 3,000 mg/l

CHLORINE CONTACT TANKS

	Volume gallons	Detention Time minutes (ADF)	Detention Time minutes (Peak)
CCT #1	6,573		
CCT #2	6,573		
Total:	13,146	76.03	38.01

Note: Peak detention time based on peak factor = 2.0

AEROBIC DIGESTER

	Volume gallons	Sludge Prod. gpd	Retention Time days	Sludge Prod. tons/yr
Tank #1	9,933			
Tank #2	18,610			
Tank #3	24,482			
Total:	53,025	1,478.44	35.87	43.20

FILTERS

		Area s.f.	Loading Rate gmpsf
North Train	Filter #1	12.6	3.4
	Filter #2	12.6	3.4
South Train	Filter #1	16.0	2.7
	Filter #2	16.0	2.7
Total:		57.1	3.0

EFFLUENT DISPOSAL

	Volume gallons	Detention Time days (ADF)	Detention Time days (Peak)
Reclaimed Water Storage Tank #1	690,000	2.77	1.39
Reclaimed Water Storage Tank #2	200,000	0.80	0.40
Total:	890,000	3.57	1.79
Reject Water Storage Tank	375,000	1.51	0.75

Note: Peak detention time based on peak factor = 2.0

	Area s.f.	Area acres	Loading Rate gpdpf	Loading Rate Inches/week	Loading Rate Inches/day
Golf Course	2,613,600	60.00			
Total:	2,613,600	60.00	0.10	1.07	0.15

AIR REQUIREMENTS

SURGE TANK

Total Volume gallons	Mixing cfm	Aerobic cfm
92,700	222.48	1.22

AERATION TANKS

Total Vol. gallons	Mixing cfm	Aerobic cfm	Safety Factor # Air/# BOD	Min. Air @ 1.5 BOD
255,180	510.36	141.67	2.00	106.26

AEROBIC DIGESTERS

Total Volume gallons	Mixing cfm	Aerobic cfm
53,025	127.26	59.78

AIR LIFT PUMPS

No. ALP	cfm
5.00	50.00

FILTER TANK AIR SCOUR

Average Filter Media Area s.f.	Minimum Scour Rate cfm/s.f.	Minimum Air Flow cfm	
28.57	1.00	28.57	(Alternate Filter Air Scour/Backwash Cycles)

TOTAL SYSTEM AIR REQUIREMENTS

Surge Tank:	222.48	cfm
Process Tanks	687.62	cfm
Filter Air Scour:	28.57	cfm

Cross Creek
Applied Air Calculations - WWTF Air Diffuser System

Surge Tank Blowers: (3) - Roots 47 URAI

Design Flow =	0.249 mgd
Total Air Required =	222.48 cfm
Blower Diameter =	5.50 inches
Motor Diameter =	6.00 inches
Motor RPM =	1,755 rpm
Motor Horsepower =	10.0 hp
Blower Air Pressure =	5.0 psi

Calculations:

Motor Diameter X Motor rpm = Blower Diameter X Blower rpm

$$\begin{aligned} \text{Blower rpm} &= \frac{\text{Motor Diameter X Motor rpm}}{\text{Blower Diameter}} \\ &= 1,915 \text{ rpm} \end{aligned}$$

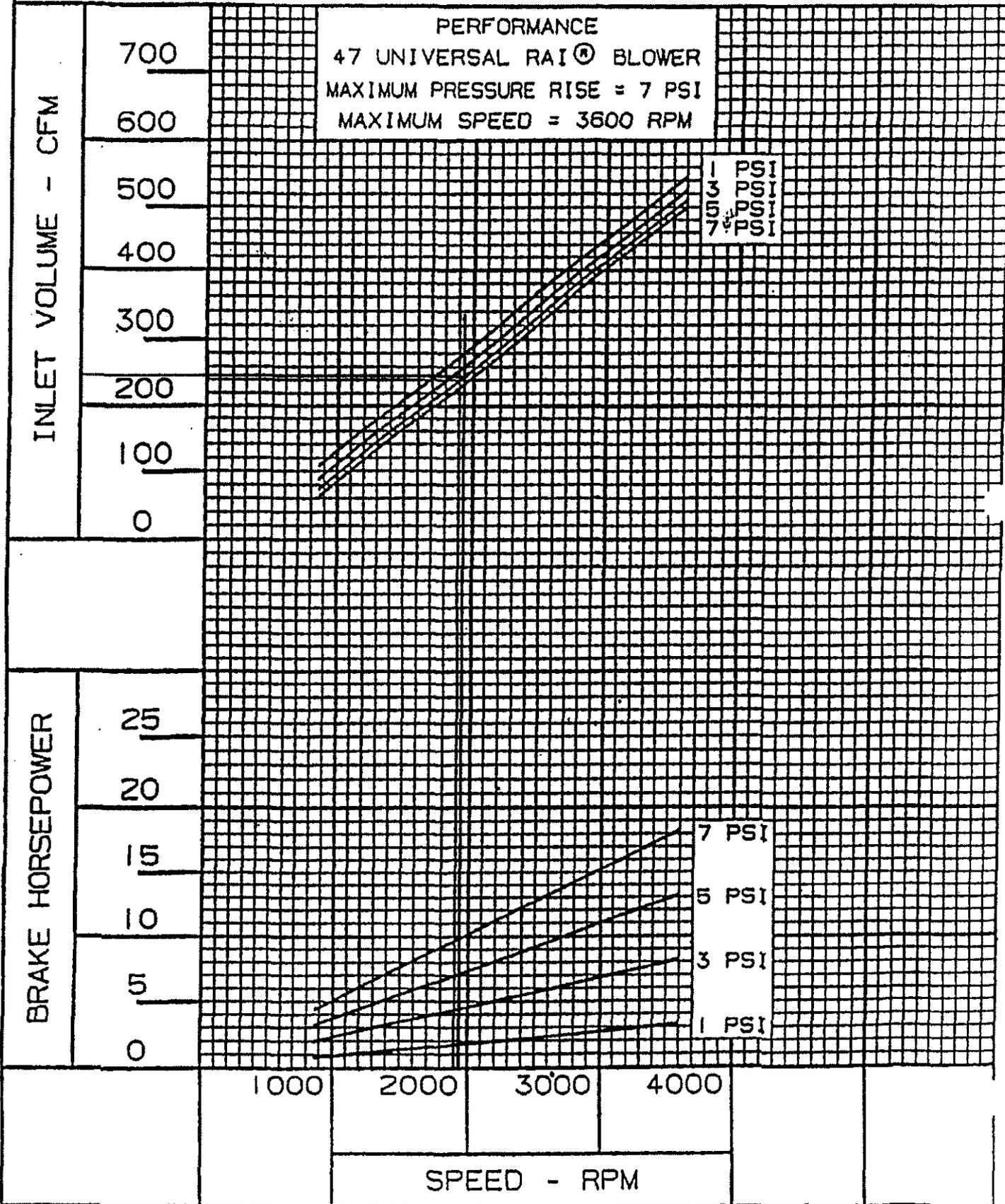
From Blower Performance Curve at 5.0 psig and 1,915 rpm:

Blower Horsepower =	7.0 hp
Blower Air Flowrate =	242.0 cfm (Each Blower)

Tipton Environmental International, Inc.
 4446 State Route 132
 Batavia, OH 45103 USA
 513-735-2777 Voice 513-735-1485 Fax
 www.wastewaterdepot.com
 info@tiptonenv.com

PERFORMANCE BASED ON INLET
 AIR AT 14.7 PSIA & 68°F

JUNE 1990



Cross Creek
Applied Air Calculations - WWTF Air Diffuser System

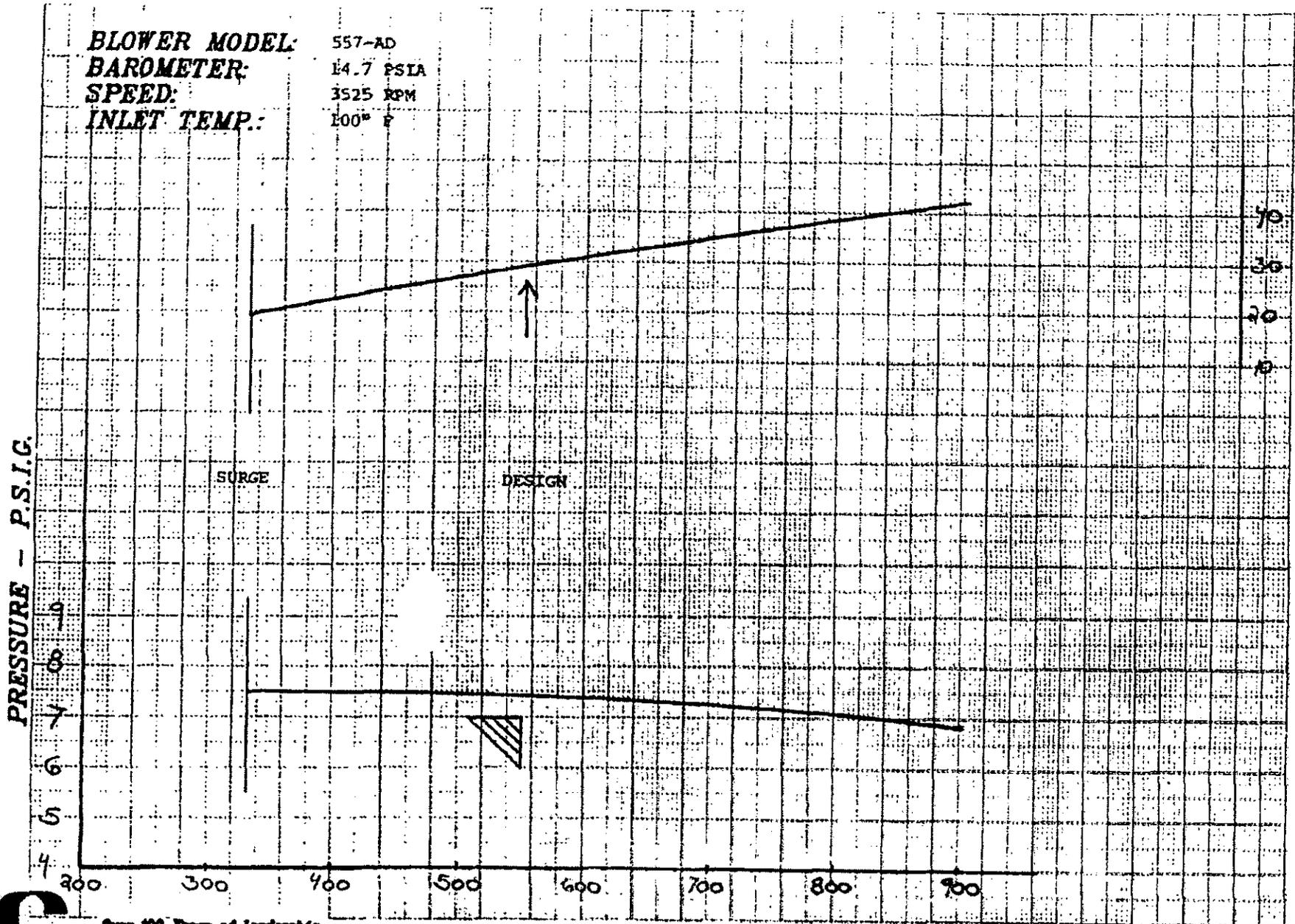
Process Blowers: (2) - Lamson Centrifugal Blowers (515-5-0-AD)

Design Flow =	0.249 mgd
Total Air Required =	687.62 cfm
Motor RPM =	3,555 rpm
Motor Horsepower =	40.0 hp
Blower Air Pressure =	7.0 psi
Blower Speed =	3,525.0 rpm
Blower Horsepower =	28.0 hp
Blower Air Flowrate =	550.0 cfm (Each Blower)
BOD5 Average Influent Concentration =	148.0 mg/l
BOD5 Average Effluent Concentration =	2.0 mg/l

Calculations:

BOD5 Removal Concentration (Influent - Effluent) =	146.04 mg/l
8.34 lb/gallon x BOD5 Removal Conc. x Design Flow =	303.27 pounds BOD5/day
Blower Air Flowrate x 1440 minutes per day =	792,000 cubic feet/day
Applied Air =	$\frac{792,000 \text{ cubic feet/day}}{303.27 \text{ pounds BOD5/day}}$
=	2,611.52 cubic feet of air per pound of BOD5

BLOWER MODEL: 557-AD
BAROMETER: 14.7 PSIA
SPEED: 3525 RPM
INLET TEMP.: 100° F



P.I.P.

LC Over 100 Years of Leadership
LAMSON CORPORATION

VOLUME - I.C.F.M.

PHONE (216) 432-2200
 FAX (216) 432-9401
 TELEF 937218

(3) SA-1106

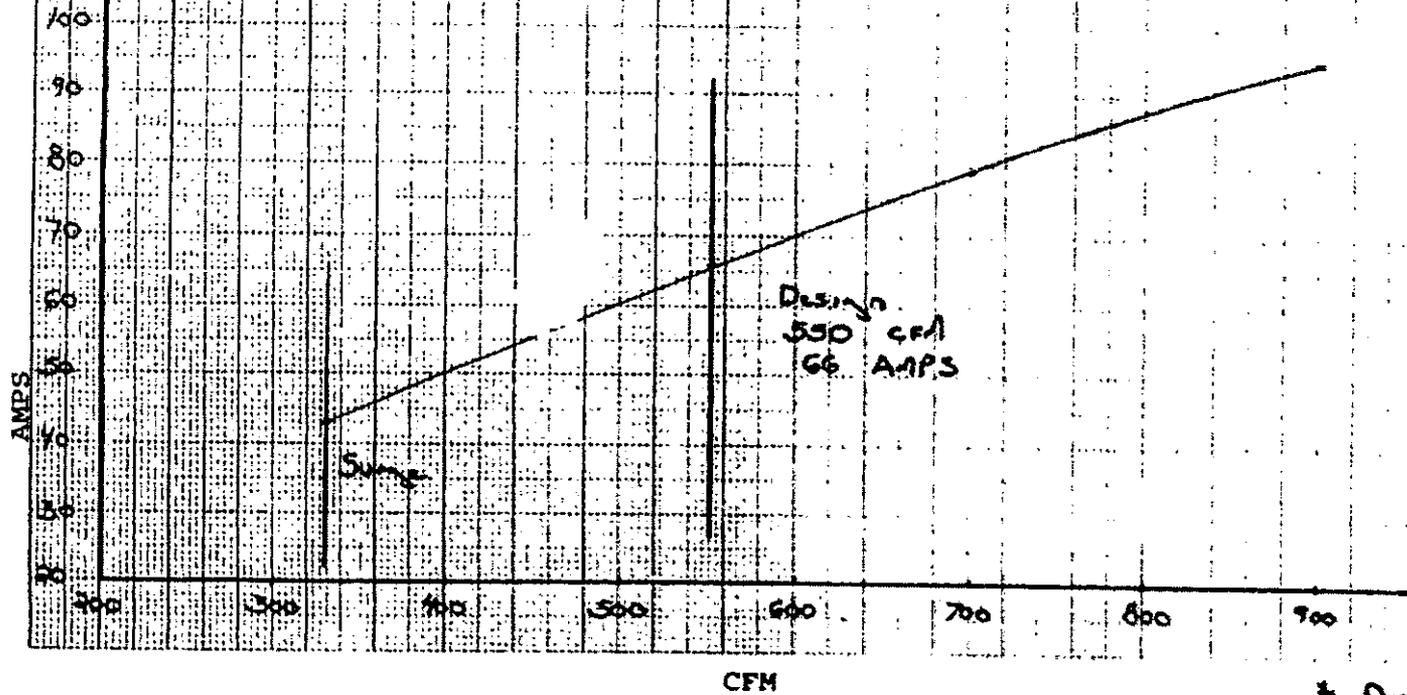
LAMSON JOB #

LAMSON ORDER # 60344 / 56181

JOB VOLTAGE 230 volts

MOTOR HP 30 HP

FULL LOAD AMPS 68.2 FLA



* Duplicate of So # 56181

Cross Creek
Applied Air Calculations - WWTF Air Diffuser System

Filter Air Scour Blower: (1) - Roots 33 URAI

Design Flow =	0.249 mgd
Total Air Required =	28.57 cfm
Blower Diameter =	4.00 inches
Motor Diameter =	4.00 inches
Motor RPM =	1,760 rpm
Motor Horsepower =	7.5 hp
Blower Air Pressure =	4.0 psi

Calculations:

Motor Diameter X Motor rpm = Blower Diameter X Blower rpm

$$\begin{aligned} \text{Blower rpm} &= \frac{\text{Motor Diameter X Motor rpm}}{\text{Blower Diameter}} \\ &= 1,760 \text{ rpm} \end{aligned}$$

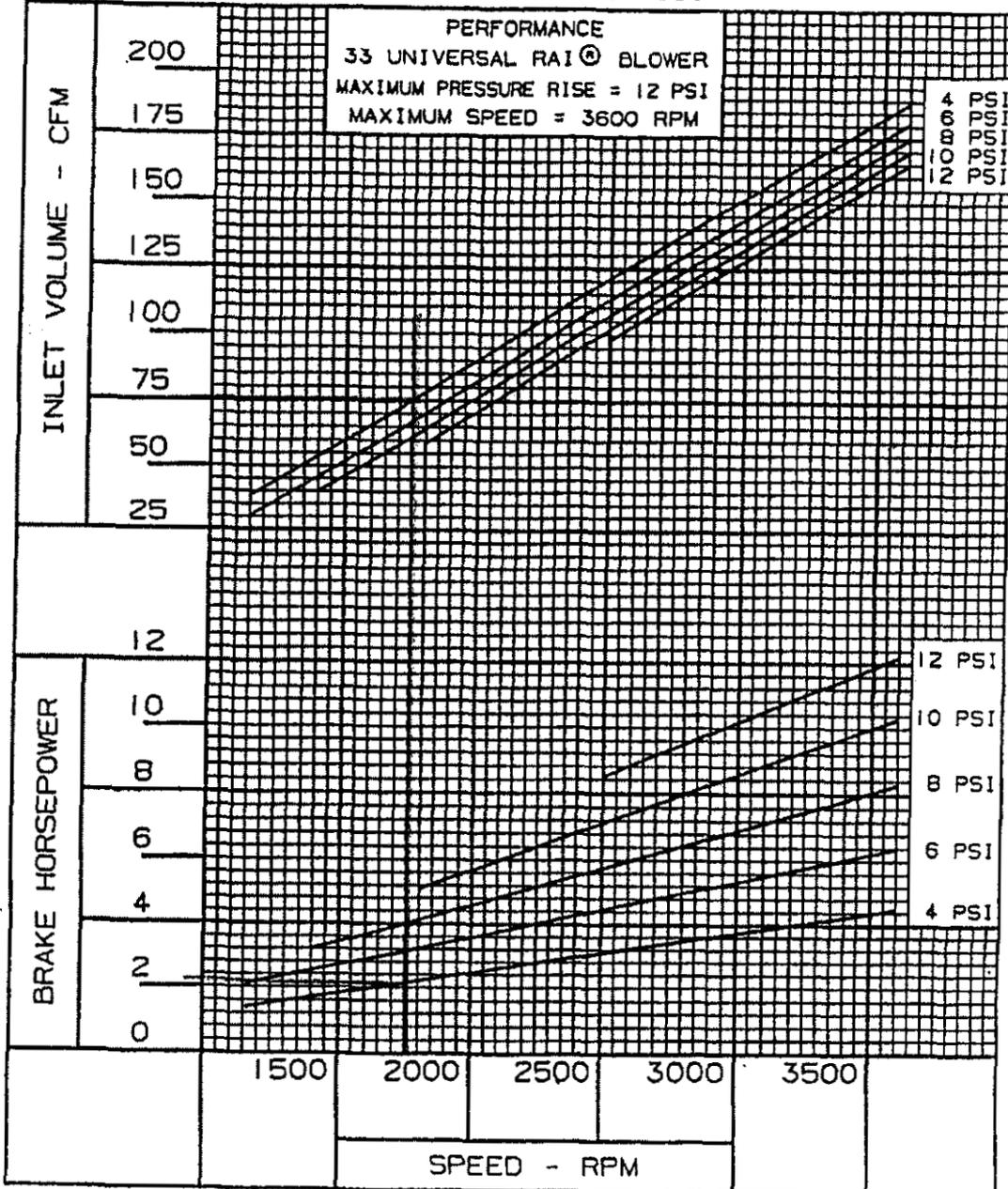
From Blower Performance Curve at 4.0 psig and 1,760 rpm:

Blower Horsepower =	2.2 hp
Blower Air Flowrate =	75.0 cfm

Tipton Environmental International, Inc.
 4446 State Route 132
 Balavia, OH 45103 USA
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 www.wastewaterdepot.com
 info@tiptonenv.com

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JUNE 1990



APPENDIX D

ADDITIONAL INFORMATION

Certificate of Calibration

Moplux Service
 797 Silversmith Cir.
 Lake Mary, FL 32746
 Tel. 407-330-4420

JAN 30 2007

Equipment Location	Range	Last Calibration	Cal Equipment Used
CROSS CREEK WW	0-800	2/06	DYNASONICS PORTABLE

Manufacturer	Model	S/N	Nomenclature
HERSHEY	4" MAG		INFLUENT FLOW

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			0.0	2.0	2.0
2			178 GPM	171 GPM	171 GPM

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: *Ronald Gray*

Date: 1/27/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, Fl. 32746
 Tel. 407-330-4420

JAN 30 2007

Equipment Location	Range	Last Calibration	Cal Equipment Used
CROSS CREEK WW	0-600 GPM	2/06	DYNASONICS PORTABLE

Manufacturer	Model	S/N	Nomenclature
WATER SPECIALTIES	3" HAS		EFFLUENT FLOW

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			30 GPM	37 GPM	37 GPM
2			298 GPM	309 GPM	309 GPM

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: Ronald Gray

Date: 1/27/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, FL 32746
 Tel. 407-330-4420

JAN 30 2007

Equipment Location	Range	Last Calibration	Cal Equipment Used
CROSS CREEK WW	0-100	2/06	FLUKE 787
Manufacturer	Model	S/N	Nomenclature
DICKSON	ET6		EFFLUENT FLOW

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			0.0	0.1	0.1
2			50.0	50.2	50.2
3			100	100.2	100.2

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: Donald Gray

Date: 1/27/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, Fl. 32746
 Tel. 407-330-4420

JAN 30 2007

Equipment Location	Range	Last Calibration	Cal Equipment Used
CROSS CREEK WW	0-800 GPM	2/06	FLUKE 787

Manufacturer	Model	S/N	Nomenclature
HONEYWELL	DR4300	0611 Y669986900001	INFLUENT FLOW

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			0.0	0.0	0.0
2			800	800.1	800.1

Remarks: Total good.

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: Donald Gray

Date: 1/27/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, FL 32746
 Tel. 407-330-4420

JAN 31 2007

Equipment Location	Range	Last Calibration	Cal Equipment Used
CROSS CREEK WW	0-10	2/06	HF SCIENTIFIC STANDARDS
Manufacturer	Model	S/N	Nomenclature
HF SCIENTIFIC	MICROTRON	401613	EFFLUENT NTU

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			.02	.02	.02
2			10.0	10.0	10.0

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: *Ronald Gray*

Date: 1/27/07

Due Date: 1/27/08

Certificate of Calibration

Mopluv Service
 797 Silversmith Cir.
 Lake Mary, Fl. 32746
 Tel. 407-330-4420

JAN 30 2007

Equipment Location	Range	Last Calibration	Cal Equipment Used
CROSS CREEK WW	0-5 Mg/L	7/06	HACH STANDARD

Manufacturer	Model	S/N	Nomenclature
HACH	CL17	020600004583	EFFLUENT CL2

Calibration Check

Test #	Input in %	Type/Total	Expected	Found	Left
1			4.2 Mg/L	4.17 Mg/L	4.17 Mg/L

Remarks: _____

This is to certify that the above listed instrument has been calibrated and meets or exceeds all published specifications. Calibration was performed using test equipment with an accuracy equal to or better than that stated by the instrument manufacturer.

Certified by: *Donald Gray*

Date: 1/27/07

Due Date: 1/27/08

Appalachian Material Service, Inc.

PO BOX 97
Terra Ceia, FL 34250

Phone (941) 776-8706
Fax (941) 776-8707

Appalachian Material Services MJ Ranch, Facility ID No. FLA190284
AMS Central RMF, Facility ID No. FLA467049
Nordgren Ranch RMF, Facility ID No. FLA280348

RESIDUALS HAULING AND LIME STABILIZATION AGREEMENT

Appalachian Material Service, Inc. agrees to haul and lime stabilize your waste water residuals at our Residuals Management Facilities. All existing state (DEP) and federal (EPA) regulations will be observed as per permit requirements and conditions.

GENERATORS RESPONSIBILITY:

1. Maintain residuals at a percentage of solids that is transferable by pump.
2. Schedule loads for pick up.

Appalachian Material Services, Inc. RESPONSIBILITY:

1. Pick up and transport your residuals to our residuals management facilities for further treatment and disposal, IAW with state and local regulatory requirements. Appalachian Material Service, Inc. shall be responsible for the proper transport and spill contingency procedures from the generating facility to our residuals management facilities.
2. Process and land apply the residuals in accordance with EPA and DEP regulations and current permit requirements. The quality of the generating facility's residuals is at least untreated with a quantity estimated not to exceed 1320 DTY. The hauled residuals will be processed at our Residuals Management Facilities to meet or exceed the minimum requirements for land application as stated by the permit conditions, and shall not exceed the amount permitted for processing for our residuals management facilities, as described in our operating permits.
3. Maintain all records of lime stabilization and land application areas and rates as per EPA and DEP regulations and current permit requirements.

RECEIVED
JAN 26 2007

LETTER OF COMMITMENT

Customer: Cross Creek Country Club
Address: 13050 Cross Creek S.T.P.
Ft. Myers, FL 33912

Facility No.: FL014505
Phone Number: (407) 869-1919
County: Lee

Contact Person: ~~Michael Dunn~~ **MICHAEL WILSON**
Operator:
Engineer of Record:

Phone #:
Phone #:

Check one of the following:

All Residuals Removed and Processed IAW Chapter 62-640,
F.A.C.

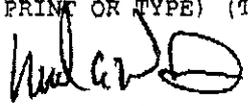
Cancellation of this agreement may be executed with a 30
days written notice by either party.

Upon acceptance of this agreement, Customer agrees to the
following terms: Payment is DUE UPON RECEIPT OF INVOICE.
Interest at the rate of 1 1/2% per month will
be charged on Past Due Balances. Rate quotation will be
updated annually.

TERMS ACCEPTED:

(CUSTOMER)

BY **MICHAEL A. WILSON REGIONAL MGR.** **1/8/07**
(PRINT OR TYPE) (TITLE) (Date)



(Authorized Signature) Title

Appalachian Material Service, Inc.

BY Jon Wimpy
(PRINT OR TYPE) (TITLE) (Date)

(Authorized Signature) Title President



FILE: 674.7.4