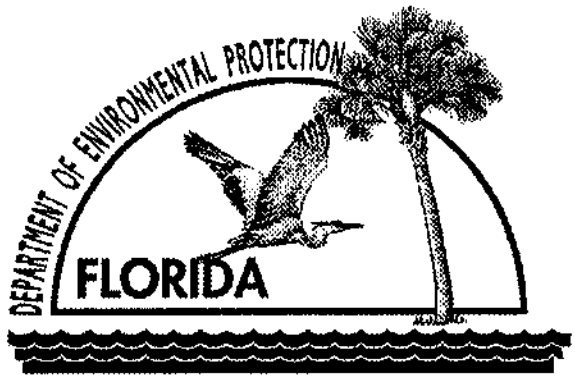


Biological Assessment of

J. R. Kelly Generating Station

Alachua County

NPDES #FL0026646

Sampled August 1996

November 1996

Biology Section
Division of Administrative and Technical Services

Comprehensive Quality Assurance Plan No. 870346G

Department of Environmental Protection
Results of Fifth Year Inspections

Discharger: J. R. Kelly Generating Station
County: Alachua
NPDES Number: FL0026646
NPDES Permit Expiration Date: 31 December 1995

Toxics Sampling Inspection (XSI)

Date Sampled: 5 August 1996

Results: Copper in outfall 002 (22 µg/L) and in outfall 001-2 (35 µg/L) exceeded the hardness based Class III water quality standard. Copper samples, however, were not taken at the edge of the facility's mixing zone, so compliance with the copper permit limit could not be established. No organic pollutants were detected in the three discharges.

Compliance Biomonitoring Inspection (CBI)

Date Sampled: 5 August 1996

Results: The three separate full strength effluent samples were not toxic to the the water flea, *Ceriodaphnia dubia*, or to the fish, *Cyprinella leedsi*.

Impact Bioassessment Inspection (IBI)

Date Sampled: 5 August 1996

Results: Both the dip net and Hester-Dendy samples indicated the discharges were not negatively affecting the receiving water benthic populations, which were already stressed for other reasons. For example, the SCI scores at the reference site (17 points) and at the test site (19 points) placed both stations in the "poor" category. Habitat disruption and scouring (causing catastrophic invertebrate drift) are probably responsible for the low SCI values. The discharges did not appear to cause additional adverse effects. Periphyton communities were not analyzed due to the loss of the samplers, caused by heavy rain and flooding during the incubation period. Phytoplankton populations were typical of a second order stream, with low taxa richness and very low density. Diversity increased from 2.7 to 3.1 between the reference and test tests, respectively. Chlorophyll *a* was undetected at both sites. There was no indication that the discharges were affecting the phytoplankton community.

Water Quality Inspection (WQI)

Date Sampled: 5 August 1996

Results: With the exception of nitrate-nitrite contributions from outfall 001-2, the discharges did not affect the nutrient regime of Sweetwater Branch. Nitrate-nitrite increased from 0.19 mg/L at the reference site to 0.27 mg/L at the test site, a 42% augmentation. It should be noted that the test site nitrate-nitrite value was higher than those found in approximately 75% of other Florida streams. Nitrate-nitrite at outfall 001-2 was 0.75 mg/L. Algal growth potential (AGP) increased from 16.7 mg dry wt/L at the reference site to 18.1 mg dry wt/L at the test site. Both Sweetwater Branch AGP values were above the 5 mg algal dry wt/L "problem threshold". The effluent from outfall 001-2 (25.2 mg dry wt./l) had the highest AGP of the three discharges, coinciding with the elevated nitrate-nitrite there.

Introduction

The J. R. Kelly Generating Station, an electric power plant, is located in Alachua County, Florida. Wastewater treatment at this 0.097 MGD facility consists of pH adjustment, oil skimming, and sand filtration. Effluent is discharged at three permitted outfalls: outfall 002 (a low volume waste stream), outfall 001-2 (from cooling tower #7), and outfall 001-3 (from cooling tower #8). Each outfall individually discharges into the Class III Sweetwater Branch, which flows through Paynes Prairie into Alachua Sink.

Permit limits for the cooling tower blowdown (outfalls 001-2 and 001-3) are as follows: flow (report), temperature (report), pH (6.0-8.5 SU), total residual chlorine (0.01 mg/L maximum), acute toxicity (less than 20% mortality in full strength sample), copper (Class III hardness based limit), zinc (Class III hardness based limit), iron (1,000 µg/L maximum), oil and grease (5.0 mg/L maximum). Additionally, the time allowed for the chlorine treatment is limited to 120 minutes/day/tower. An 800 meter mixing zone for copper, where the maximum allowed concentration is 30 µg/L, has been established for the 001 outfalls. DEP's continued acceptance of this mixing zone is currently being re-examined.

Permit limits for the low volume waste (outfall 002) are as follows: flow (report), TSS (100 mg/L maximum, 30 mg/L as an annual average), pH (6.0-8.5 SU), copper, nickel, cadmium, zinc, and arsenic (limits for these metals are Class III hardness based limits), iron (1,000 µg/L maximum), oil and

Major characteristics of community structure of control and test sites.

	Reference Site	Test Site
Macroinvertebrate Qualitative		
Number of Taxa	18	24
Florida Index	4	6
SCI	17	19
EPT Index	0	0
% Contribution of Dominant Taxon	36.7	33.1
% Oligochaeta	7.3	9.0
% Diptera	34.9	32.3
% Gastropoda	48.6	34.6
% Odonata	8.3	17.3
% Coleoptera	0	1.5
% Other	0.9	5.3
% Predators	14.2	21.8
% Above Surface Deposit Feeders	14.6	16.5
% Below Surface Deposit Feeders	6.4	9.0
% Suspension Feeders	0	0.75
% Scrapers	48.6	35.3
% Shredders	14.7	12.4
% Scavengers	0.5	1.5
Macroinvertebrate Hester-Dendy		
Number of Taxa	8	14
Florida Index	1	6
Shannon-Weaver Diversity	2.0	2.3
EPT Index	0	0
% Oligochaeta	0	1.6
% Diptera	35.3	82.5
% Gastropoda	61.8	7.9
% Other	2.9	8.0
% Predators	4.4	14.3
% Above Surface Deposit Feeders	5.9	36.5
% Below Surface Deposit Feeders	0	1.6
% Suspension Feeders	0	1.6
% Scrapers	61.8	7.9
% Shredders	5.9	33.3
% Scavenger	1.5	0
Phytoplankton Algae		
Number of Taxa	7	9
Shannon-Weaver Diversity	2.7	3.1
Algal Density (#/mL)	115.5	115.5
Chlorophyll a (µg/L)	10.0 U	10.0 U
% Blue-green	0	18.2
% Green	27.3	36.4
% Diatoms	63.6	45.5
% Other	9.1	0
Algal Growth Potential (mg dry wt/l)	16.7	18.0

grease (5.0 mg/L maximum), and acute toxicity (less than 20% mortality in full strength sample).

No plant upsets or violations have been confirmed in the past year. In 1992, the facility was fined $8,000 when 5,400 gallons of cooling water with excessive chlorine were discharged. In 1991, the facility was fined $16,000 for discharging low volume waste with excessively low pH. A previous bioassessment (FDER 1991) concluded that the receiving waters appeared more affected by stormwater inputs than by the facility.

Methods

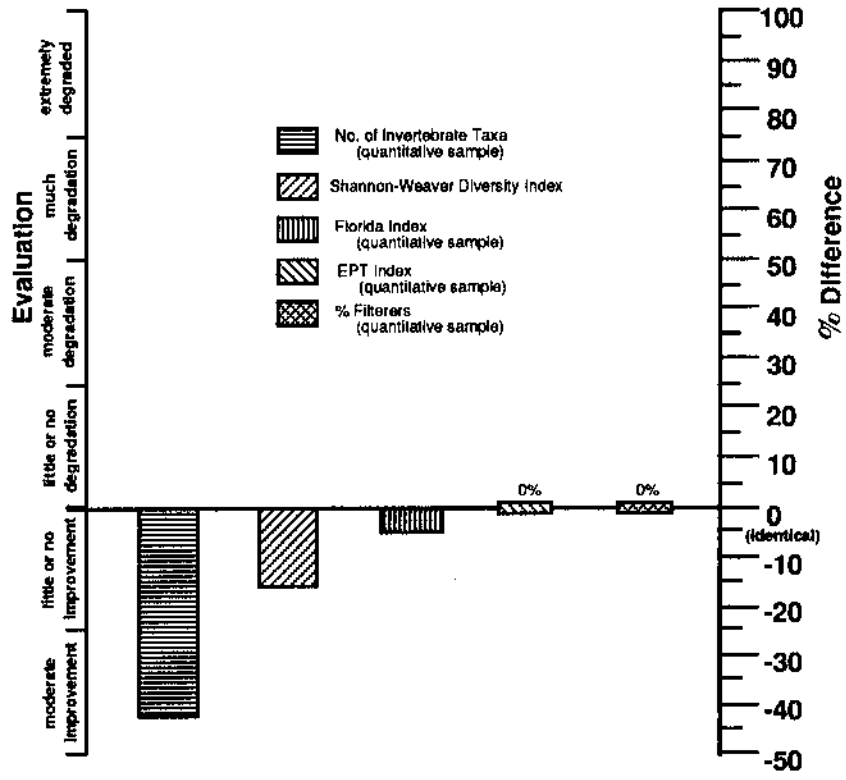
The focus of this investigation was to determine the discharger's effects on the receiving waters. A comparison of biological community health was made between a reference site (located upstream of the discharges in Sweetwater Creek) and a test site (located downstream of the discharges). Note that the test site is also located below the confluence of an additional tributary of Sweetwater Branch, which drains a residential neighborhood. A habitat assessment was performed *in situ* to establish comparability between sites. Supplemental physical/chemical data were also collected on the effluent and study sites. Acute screening toxicity bioassays, using *Ceriodaphnia dubia* and *Cyprinella leedsi* as test organisms, were performed on an effluent sample (Weber 1991). The effluent was analyzed for metals and for organic constituents (base neutral and acid extractables, and pesticide extractables). Additionally, nutrient analyses were performed on effluent, reference, and test sites. Methods used for all chemical analyses are on file at the Tallahassee DEP Chemistry Laboratory.

Benthic macroinvertebrate communities were evaluated at reference and test sites. Invertebrates were collected from multiple substrates (*e.g.*, snags, leaf packs, vegetation) using discrete dip net sweeps (FDEP 1996). Additional invertebrate collections were accomplished using Hester-Dendy multiplate samplers which were incubated for 28 days (Ross 1990). Periphyton samplers were not recovered. Samples for chlorophyll *a* and phytoplankton community structure were collected using surface water grabs. Bacterial populations were analyzed for total and fecal coliforms following the methods of APHA (1989). Algal Growth Potential tests, using *Selenastrum capricornutum* as the test organism, followed Miller *et al.* (1978).

Explanation of Measurements of Community Health

Several different measurements of macroinvertebrate and algal community health have been employed to determine the effects of a discharge. These are briefly discussed here.

Habitat Assessment: Seven attributes known to have potential effects on the stream biota were evaluated and scored, with 20



Effect of discharge on the benthic macroinvertebrate community.

points possible for each factor. Based on the sum of these individual scores, overall habitat quality is assigned to one of four categories: Optimal (105-140 points); Suboptimal (70-104 points); Marginal (35-69 points); or Poor (0-34 points).

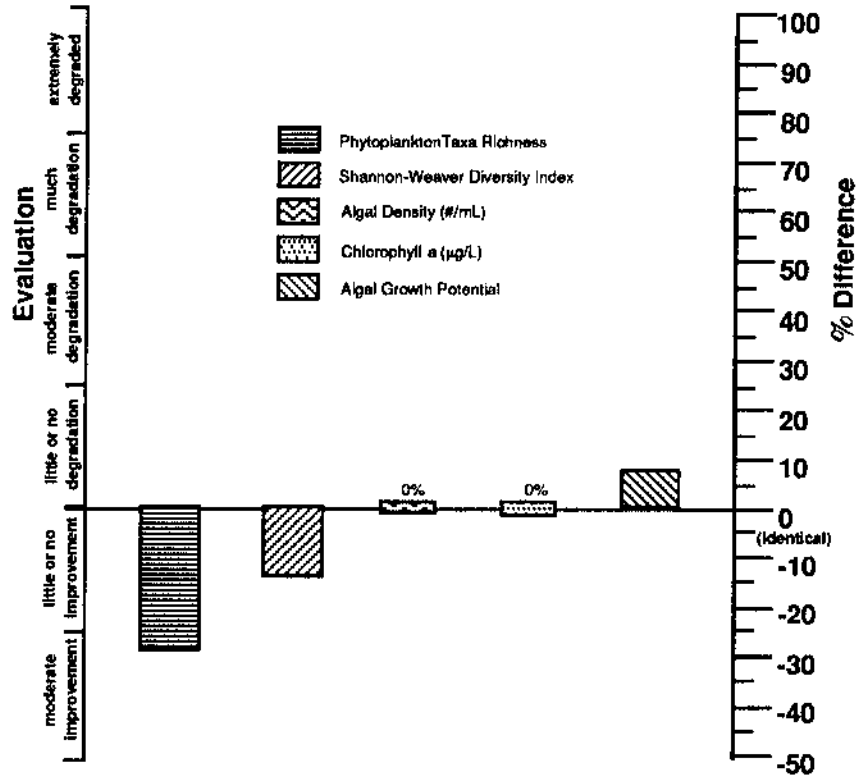
Taxa richness: Stress tends to reduce the number of different types of organisms present in a system, although moderate nutrient enrichment may sometimes be correlated with increased algal taxa richness.

Shannon-Weaver diversity: This index is specified in the Florida Administrative Code as a measure of biological integrity. Low diversity scores are undesirable. They represent conditions where only a few organisms are abundant, to the exclusion of other taxa. Excessive numerical dominance of a single type of organism (a high % contribution of the dominant taxon) is a related measure which is also associated with disturbance.

Numbers of pollution sensitive taxa: Some organisms become rare or absent as the intensity or duration of disturbance increases. For example, the Florida Index assigns points to stream-dwelling macroinvertebrates based on their sensitivity to pollution (see Ross 1990). A site with a high Florida Index score is considered healthy. Species sensitivity data from other sources, such as Hudson *et al.* (1990), Lenat (1993), and Chang *et al.* (1992) are used as appropriate.

Ephemeroptera/Plecoptera/Trichoptera Index: This index is the sum of the number of EPT taxa present. Higher EPT values are associated with healthier systems.

Community structure: Substantial shifts in proportions of major groups of organisms, compared to reference conditions, may indicate degradation.



Effect of discharge on the algal community.

Algal biomass: High algal biomass (algal density or chlorophyll *a*) implies nutrient stress. A decreased diatom to blue-green algae ratio (calculated by dividing the number of individuals in the Bacillariophyta by the number of individuals in the Bacillariophyta + Cyanophyta) is often indicative of nutrient enriched conditions in flowing streams.

Trophic composition/feeding guilds: Disturbance can shift the feeding strategies of invertebrates. In Florida for example, pollution may be responsible for reducing the numbers of filter-feeders (FDEP 1994) and shredders (EA Engineering 1994).

The Stream Condition Index for Florida (SCI) is a composite macroinvertebrate metric (Barbour *et al.* 1996). The SCI assigns points to a variety of parameters, depending on how closely each parameter approaches an expected reference condition (see SCI calculation table in Appendix).

For graphical purposes, the percent differences between the reference and test sites involving the number of taxa, the diversity index, the Florida Index, the EPT Index, the diatom to blue-green algae ratio, and the % filter-feeders are measured as the reference site minus test site divided by the reference site. The percent differences between sites involving algal density, chlorophyll *a*, and algal growth potential are measured as the test site minus reference site divided by the reference site.

The following personnel were involved in this investigation: Tim McKelvey and Ruth Bouman (DEP which District) and Lyn Burton, Jennifer Eichelberger, Marshall

Faircloth, Russel Frydenborg, Joy Jackson, Elizabeth Miller, Urania Quintana, Bart Richard, Lisa Tamburello, David Whiting, Vicki Whiting, and Greg Wynn (Tallahassee Biology Laboratory). The report was reviewed by the Point Source Studies Review Committee, consisting of Wayne Magley, Jan Mandrup-Poulsen, and Michael Tanski, as well as District representatives.

Results and Discussion

Habitat quality was in the sub-optimal category at both Sweetwater Creek stations. The habitat scores were slightly lower at the test site (with 79 points) than at the reference site (which had 87 points). Both sites suffered from artificial channelization, sediment deposition, poor bank stability, inadequate riparian zone width, and poor riparian zone vegetation quality. Recent high water resulted in obvious scouring at both sites. Some of these habitat problems, especially the scouring, artificial channelization, and bank stability, appeared worse at the test site.

Field physical/chemical measurements were mostly similar between the two sites. The pH was 6.9 SU at the reference site and 7.3 SU at the test site. The temperature ranged from 27.7° C at the reference site to 25.5° C at the test site. Conductivity increased slightly, from 235 µmhos/cm at the reference site to 393 µmhos/cm at the test site. Dissolved oxygen, which was 6.3 mg/L at the reference and 7.2 mg/L at the test site, complied with Class III water standards at both stations.

The three separate full strength effluent samples were not toxic to the water flea, *Ceriodaphnia dubia*, or to the fish, *Cyprinella leedsi*. No mortality occurred in the six individual toxicity tests performed on the three effluents.

No organic pollutants were detected in the three effluent samples.

Several metals were detected in the three effluent samples (see Chemistry Summary Table in Appendix). The only metal found in concentrations high enough to be of concern was copper. Copper in outfall 002 (22 µg/L) and in outfall 001-2 (35 µg/L) exceeded the hardness based Class III water quality standard. Copper samples, however, were not taken at the edge of the facility's mixing zone, so compliance with the copper permit limit could not be established.

With the exception of nitrate-nitrite contributions from outfall 001-2, the discharges did not affect the nutrient regime of Sweetwater Branch. For example, total phosphorus was 0.15 mg/L at the reference site, increasing slightly to 0.18 mg/L at the test site, both slightly above normal values. Ammonia actually decreased from 0.025 mg/L at the reference site to 0.015 mg/L at the test site. Nitrate-nitrite, however, increased from 0.19 mg/L at the reference site to 0.27 mg/L at the test site, a 42% augmentation. It should be noted that the test site nitrate-nitrite value was higher than those found in approximately 75% of other Florida streams. Nitrate-nitrite at outfall 001-2 was 0.75 mg/L.

Algal growth potential (AGP) increased from 16.7 mg dry wt/L at the reference site to 18.1 mg dry wt/L at the test site. Both Sweetwater Branch AGP values were above the 5 mg algal dry wt/L "problem threshold" (Raschke and Schultz 1987). The effluent from outfall 001-2 (25.2 mg dry wt/L) had the highest AGP of the three discharges, coinciding with the elevated nitrate-nitrite there.

Measures of macroinvertebrate health indicated the discharges were not negatively affecting the receiving water benthic populations, which were already stressed for other reasons. The figure on p. 2 indicates the degree of difference between the reference and test sites. Larger differences (that is, higher percentages) correspond with greater degrees of degradation. Negative values mean that the test site is better than the reference site. The relative abundance of each individual taxon appears in the Appendix.

Hester-Dendy taxa richness was relatively low at both sites, but increased from 8 taxa at the reference site to 14 taxa at the test site. Similarly, the Florida Index increased from 1 at the reference site to 6 at the test site. The EPT Index was extremely low, with zero (0) points at each site. Note that these Florida Index and EPT values were abnormally low at both sites, potentially related to instream scouring effects. Shannon-Weaver diversity was similarly low at the two Sweetwater Branch stations, with 2.0 at the reference site and 2.3 at the test site.

As summarized by the Stream Condition Index (SCI), the dip net samples also showed both sites to be stressed, with no further adverse effects related to the discharges. The SCI scores at the reference site (17 points) and at the test site (19 points) placed both stations in the "poor" category. As mentioned ear-

lier, habitat disruption and scouring (causing catastrophic invertebrate drift) are probably responsible for the low SCI values. The discharges did not appear to cause additional adverse effects.

Periphyton communities were not analyzed due to the loss of the samplers, caused by heavy rain and flooding during the incubation period. Phytoplankton populations were typical of a second order stream, with low taxa richness (7 taxa at the reference site and 9 taxa at the test site) and very low density (116 cells/mL at both sites). Diversity increased from 2.7 to 3.1 between the reference and test sites, respectively. Chlorophyll *a* was undetected at both sites. There was no indication that the discharges were affecting the phytoplankton community.

Conclusions

The three separate full strength effluent samples were not toxic to the the water flea, *Ceriodaphnia dubia*, or to the fish, *Cyprinella leedsi*.

No organic pollutants were detected in the three discharges.

Copper in outfall 002 (22 µg/L) and in outfall 001-2 (35 µg/L) exceeded the hardness based Class III water quality standard. Copper samples, however, were not taken at the edge of the facility's mixing zone, so compliance with the copper permit limit could not be established.

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Chemistry Summary Table for J.R. Kelly Generating Station.	Effluent 002 (low vol. waste)	Effluent 001-2 (cooling tower # 7)	Effluent 001-3 (cooling tower # 8)	Reference Site	Test Site
Organic Constituents (ug/L)					
None detected					
Metals (ug/L)					
Aluminum	100 U	100 U	100 U		
Arsenic	20 U	19 I	20 U		
Cadmium	0.06 I	0.05 U	0.05 U		
Copper	22	35 A	18		
Chromium	5 U	9 I	7 I		
Iron	192	154 A	250		
Lead	10 U	10 U	10 U		
Mercury	0.1 U	0.1 U	0.1 U		
Nickel	4 U	4 U	4 U		
Selenium	30 U	30 U	30 U		
Silver	0.04 U	0.04 U	0.04 U		
Zinc	13	10 I	12		
Nutrients (mg/L)					
Ortho-phosphate	0.12 A	0.17	0.20	0.10 Q	0.12
Total phosphorus	0.15 A	0.20	0.24	0.15	0.18
Ammonia	0.020 U	0.048	0.020 U	0.025	0.015 I
Nitrate+Nitrite	0.13 A	0.75	0.15	0.19	0.27
TKN	0.27 A	1.3	0.56	0.30	0.39
General Phys-Chem Parameters					
Habitat Assessment				87	79
D. O. (mg/L)	7.3	7.2	7.7	6.3	7.2
pH (SU)	7.0	8.0	8.1	6.9	7.3
Specific Conductance (µmhos/cm)	1121	202	565	235	393
Temperature (°C)	27.8	30.2	31.3	27.7	27.5
Total Suspended Solids (mg/L)	1	3	7	2	1
Biological Oxygen Demand, 5 day (mg/L)	2 U	2 U	2 U	2 U	2 U
Hardness (mg CaCO3)	178.3	308.8	250.6		
Algal Growth Potential (mg dry wt/L)	8.9	25.2	1.0	16.7	18.0
Toxicity					
Bioassay Fish	Not toxic	Not toxic	Not toxic		
Bioassay Invertebrate	Not toxic	Not toxic	Not toxic		

A - Value reported is the mean of two or more determinations

I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit

J - Estimated value

Q - Sample held beyond normal holding time

U - Material analyzed for but not detected; value reported is the minimum detection limit

V - Analyte was detected in both sample and method blank

Z - Colonies were too numerous to count (TNTC)

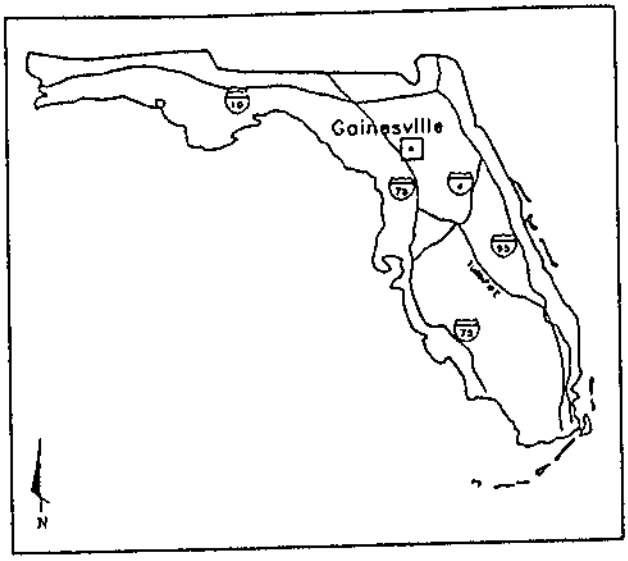
Typical Values for Selected Parameters in Florida Waters

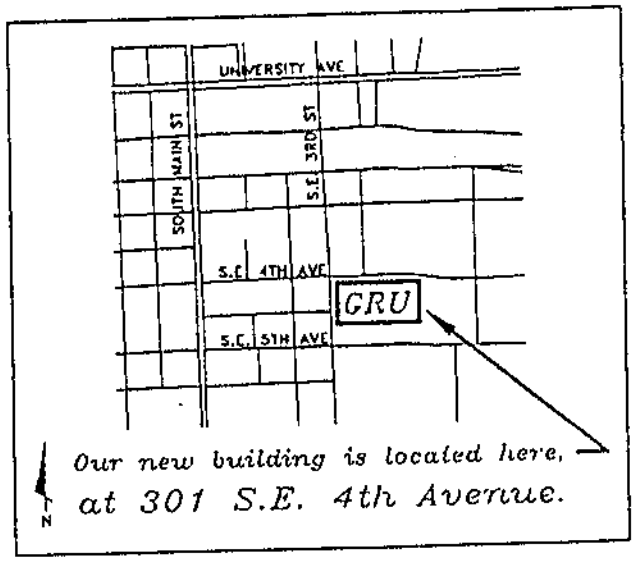
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(data was collected between 1980 and 1989)

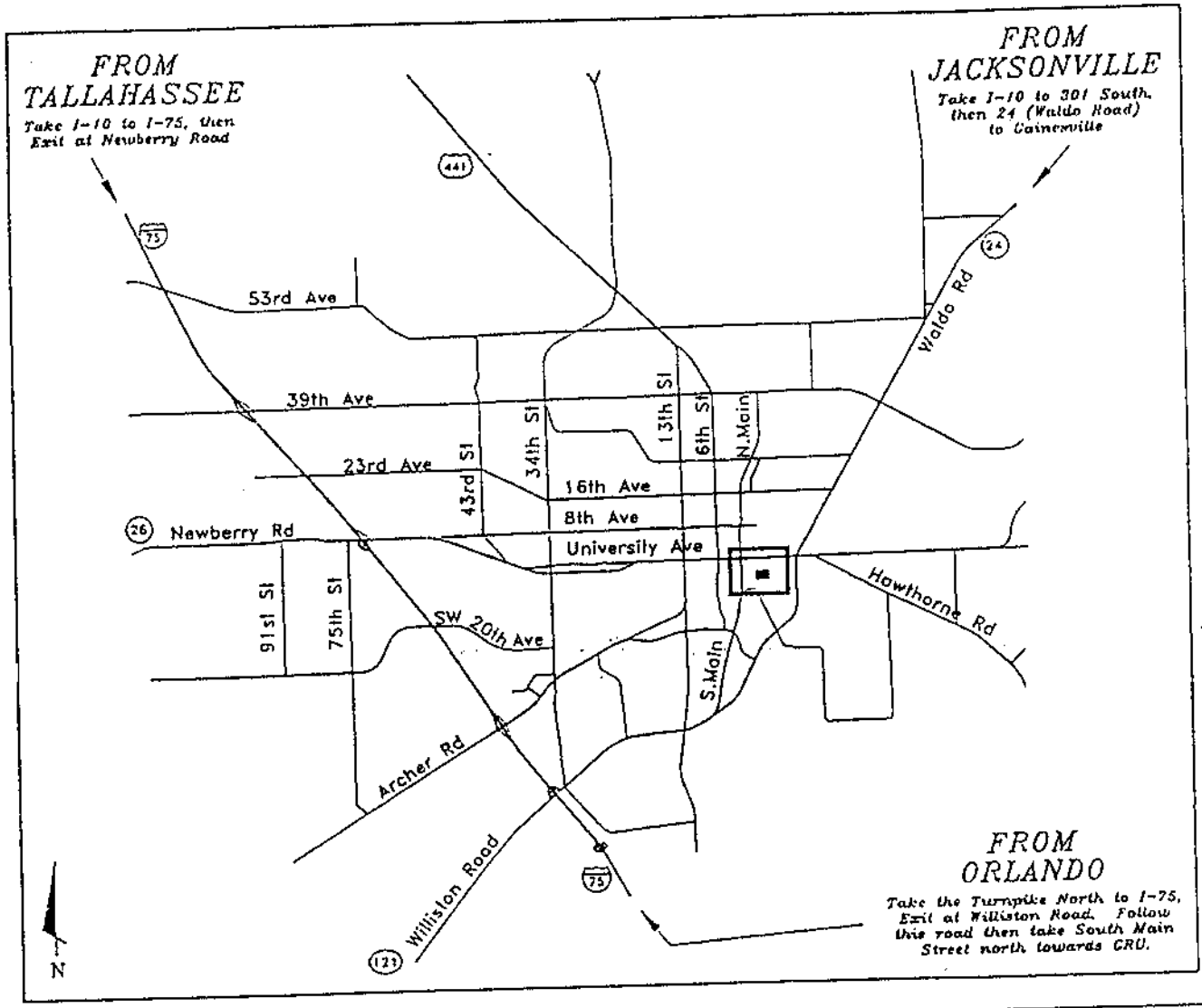
Percentile Distribution

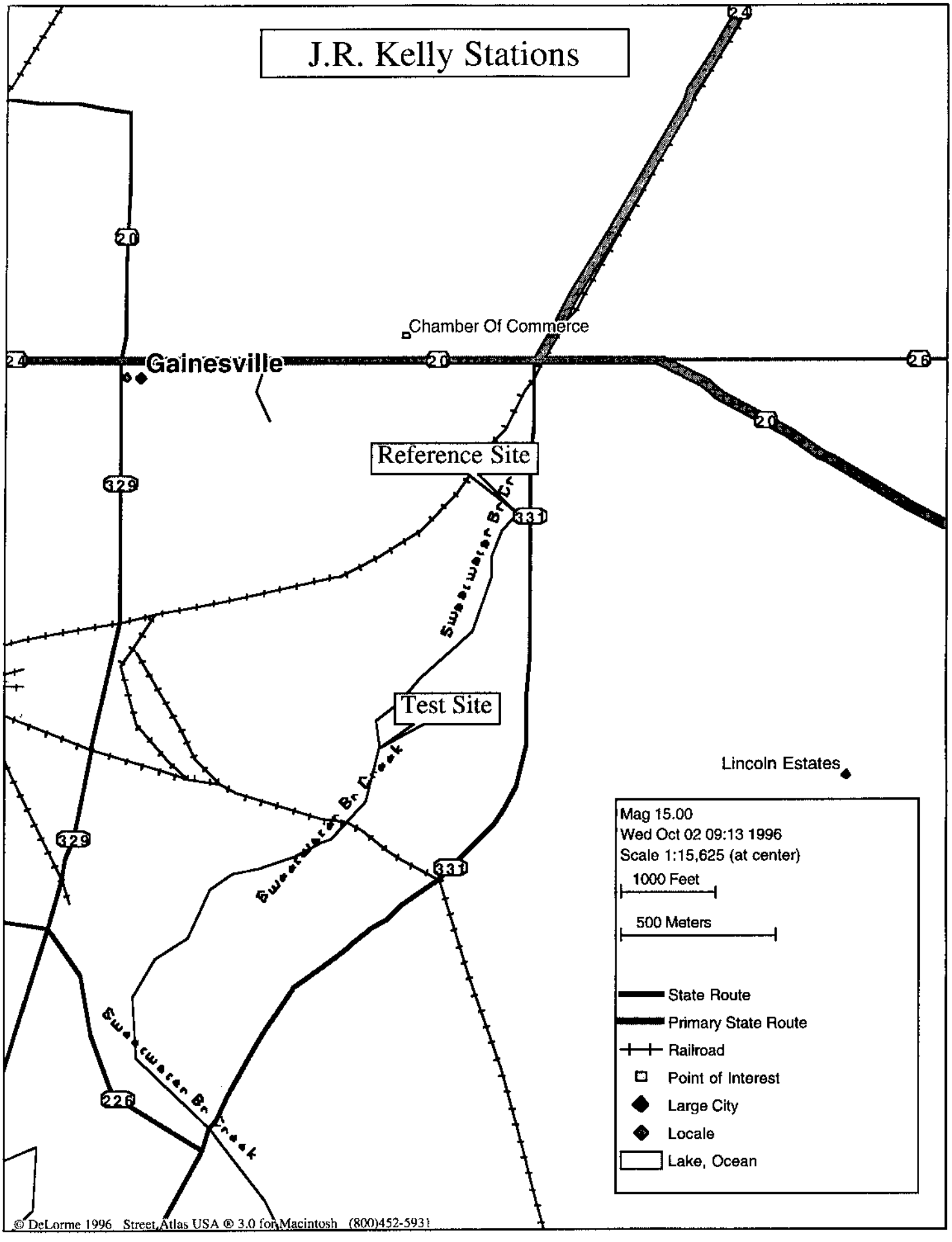
Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%
STREAMS (1617 stations)											
Phytoplankton Chlorophyll *a*	0.22	0.52	0.94	1.60	3.02	4.63	6.72	9.87	14.68	27.35	48.70
Periphyton Chlorophyll *a*	0.31	0.43	0.77	1.04	2.16	2.94	6.45	10.51	17.00	39.51	60.85
H-D Diversity	0.84	2.12	2.48	2.74	2.88	3.09	3.25	3.40	3.52	3.76	3.90
Qualitative Taxa Richness	9.00	12.00	17.00	20.00	22.00	24.50	26.00	28.00	31.00	37.00	53.00
H-D Taxa Richness	6.00	6.50	9.00	11.50	13.00	15.00	17.00	21.50	26.00	29.00	32.00
TKN	0.30	0.39	0.56	0.73	0.87	1.00	1.11	1.26	1.49	1.93	2.80
Ammonia	0.02	0.02	0.04	0.05	0.06	0.08	0.11	0.14	0.20	0.34	0.60
NO2-NO3	0.01	0.01	0.03	0.05	0.07	0.10	0.14	0.20	0.32	0.64	1.05
Total Phosphorus	0.02	0.03	0.05	0.06	0.10	0.13	0.18	0.25	0.39	0.74	1.51
Ortho Phosphorus	0.01	0.01	0.03	0.04	0.05	0.08	0.11	0.17	0.27	0.59	1.37
Turbidity	0.60	0.90	1.20	1.45	2.10	2.80	3.60	4.50	6.65	10.45	16.30
LAKES (477 stations)											
Phytoplankton Chlorophyll *a*	0.80	1.71	2.88	4.28	10.06	13.40	20.00	30.10	47.20	65.44	113.90
Dredge Diversity	0.71	0.97	1.43	1.74	1.98	2.12	2.21	2.59	2.85	3.15	3.17
Dredge Taxa Richness	3.00	5.00	6.50	7.00	9.00	10.00	11.00	13.00	15.00	17.00	21.00
TKN	0.36	0.49	0.67	0.83	1.08	1.26	1.40	1.51	1.68	2.11	3.46
NH3+NH4	0.01	0.02	0.02	0.03	0.04	0.06	0.08	0.12	0.15	0.21	0.28
NO2-NO3	0.00	0.00	0.01	0.01	0.01	0.02	0.04	0.05	0.10	0.14	0.23
Total Phosphorus	0.01	0.02	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.23	0.42
Ortho-Phosphorus	0.00	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.21	0.32
Turbidity	1.00	1.25	1.55	2.05	2.75	4.50	6.45	9.60	14.10	26.00	40.00
ESTUARIES (690 stations)											
Phytoplankton Chlorophyll *a*	2.14	3.28	4.49	5.13	6.00	6.93	7.94	9.60	12.40	17.60	22.20
Dredge Diversity	1.34	1.53	1.91	2.28	2.56	2.90	3.15	3.59	4.01	4.53	4.98
Dredge Taxa Richness	4.00	6.00	9.00	11.00	15.00	18.50	25.00	35.00	41.00	62.00	90.00
TKN	0.26	0.34	0.42	0.50	0.59	0.69	0.76	0.82	0.95	1.30	1.49
NH3+NH4	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.13	0.22	0.28
NO2-NO3	0.00	0.00	0.01	0.01	0.01	0.02	0.03	0.05	0.08	0.17	0.23
Total Phosphorus	0.01	0.02	0.06	0.07	0.10	0.11	0.14	0.17	0.23	0.43	0.59
Ortho-Phosphorus	0.01	0.02	0.03	0.04	0.04	0.05	0.07	0.09	0.12	0.21	0.44
Turbidity	3.50	4.00	4.50	5.05	5.40	5.60	6.30	6.80	8.00	11.40	11.75

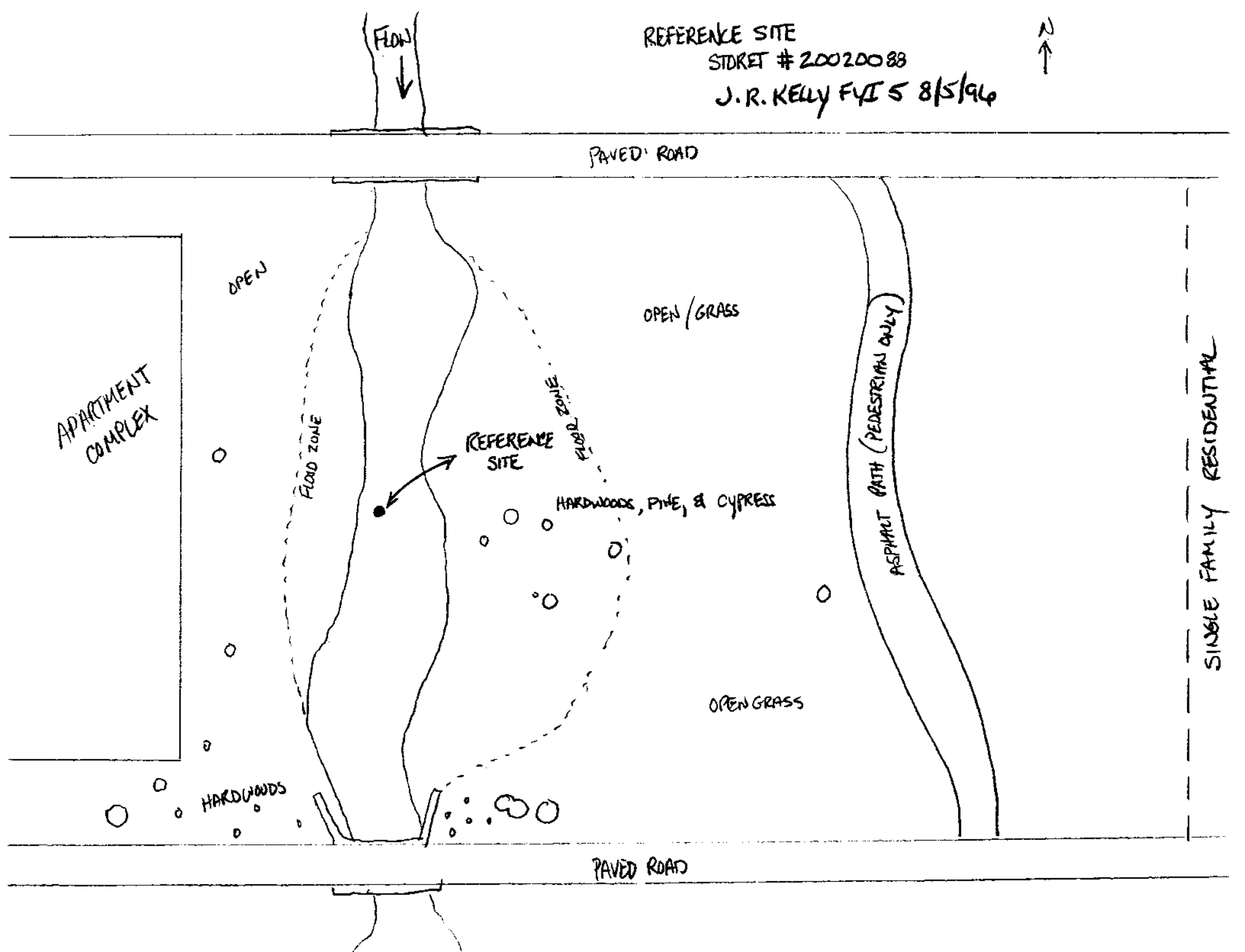
Units:
Phytoplankton Chlorophyll *a* (ug/L), Periphyton Chlorophyll *a* (mg/m^2), Nutrients (mg/L), Turbidity (NTU), Taxa richness and diversity values are for macroinvertebrates

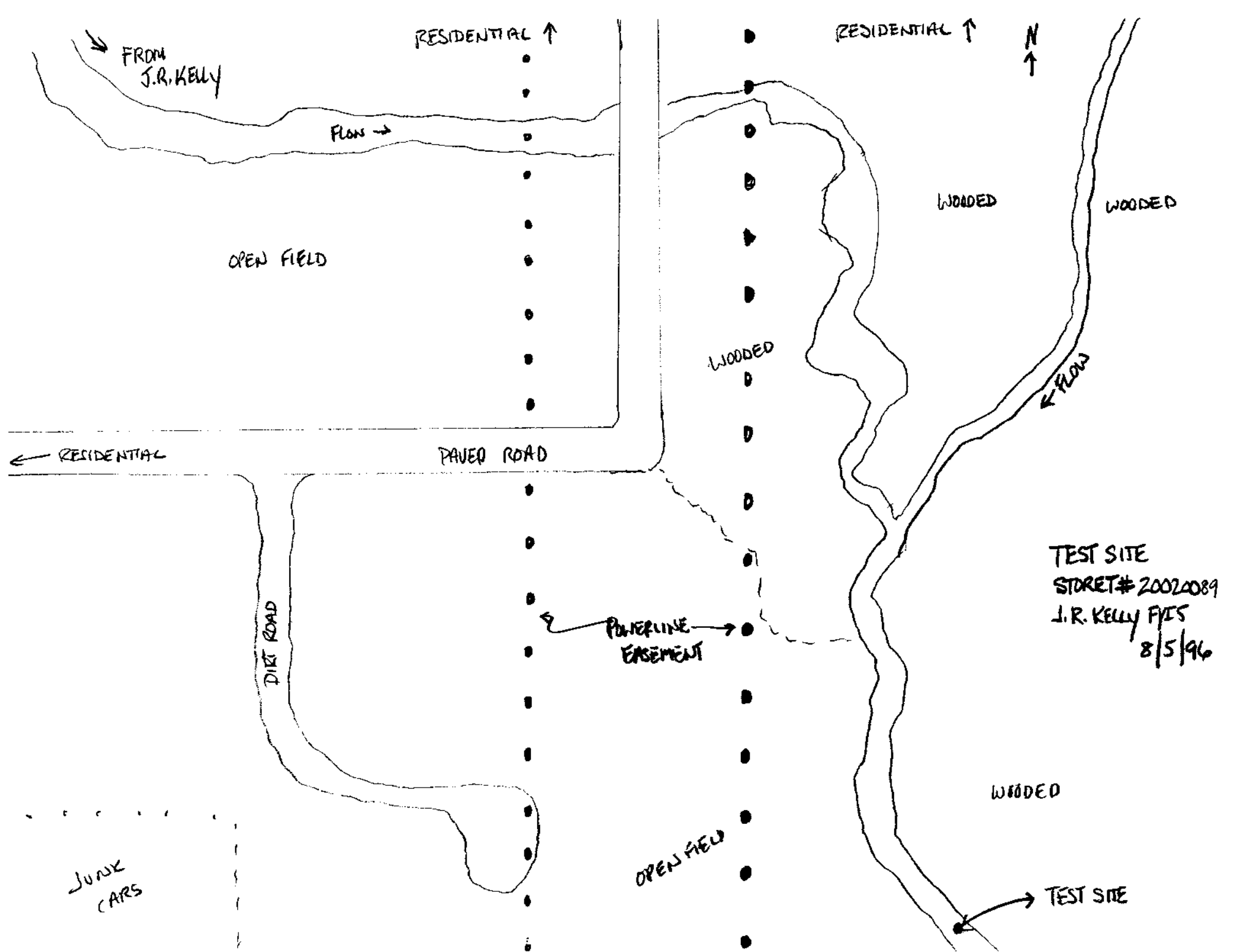

Gainesville
10
75
95
N


UNIVERSITY AVE
SOUTH MAIN ST
S.E. 3RD ST
S.E. 4TH AVE
GRU
S.E. 5TH AVE
N
Our new building is located here,
at 301 S.E. 4th Avenue.


FROM TALLAHASSEE
Take I-10 to I-75, then Exit at Newberry Road
FROM JACKSONVILLE
Take I-10 to 301 South, then 24 (Waldo Road) to Gainesville
441
75
24
53rd Ave
39th Ave
23rd Ave
Waldo Rd
13th St
6th St
N.Main
34th St
43rd St
16th Ave
8th Ave
26
Newberry Rd
University Ave
Hawthorne Rd
91st St
75th St
SW 20th Ave
S.Main
Archer Rd
Williston Road
121
75
N
FROM ORLANDO
Take the Turnpike North to I-75, Exit at Williston Road. Follow this road then take South Main Street north towards GRU.


J.R. Kelly Stations
Chamber Of Commerce
Gainesville
Reference Site
Test Site
Lincoln Estates
Sweetwater Br Creek
Mag 15.00
Wed Oct 02 09:13 1996
Scale 1:15,625 (at center)
1000 Feet
500 Meters
State Route
Primary State Route
Railroad
Point of Interest
Large City
Locale
Lake, Ocean
© DeLorme 1996 Street Atlas USA ® 3.0 for Macintosh (800)452-5931


REFERENCE SITE
STORET # 20020088
J.R. KELLY FYI 5 8/5/96
N
FLOW
PAVED ROAD
APARTMENT COMPLEX
OPEN
FLOOD ZONE
REFERENCE SITE
FLOOD ZONE
OPEN / GRASS
HARDWOODS, PINE, & CYPRESS
ASPHALT PATH (PEDESTRIAN ONLY)
SINGLE FAMILY RESIDENTIAL
OPEN GRASS
HARDWOODS
PAVED ROAD


FROM J.R. KELLY
RESIDENTIAL
FLOW
OPEN FIELD
RESIDENTIAL
N
WOODED
WOODED
WOODED
FLOW
RESIDENTIAL
PAVED ROAD
DIRT ROAD
POWERLINE EASEMENT
TEST SITE
STORET# 20020089
J.R. KELLY FYE5
8/5/96
JUNK CARS
OPEN FIELD
WOODED
TEST SITE

State of Florida
Department of Environmental Protection
Facility Summary

Facility Name: J. R. Kelly Generating Station	**Prepared By:** Jim Maher **Date:** 08/02/96

Location: (See Attached Map)	**County:** ~~16 - Duval~~ ALACHUA	**District:** Northeast

Federal Permit No.: FL0026646 **Expiration Date:** 12/31/95 (ext)	**State GMS #:** 3101M00147 **State Expiration Date:** 5/2/97	**Facility Type:** Industrial

Function of Facility: Power plant

Description of treatment process: Low Volume Waste (outfall 002): pH adjust, clarification, oil skimming, sand filtration. Separate outfalls for cooling tower blowdown (outfalls 001-2 and 001-3).

Receiving Waters: Sweetwater Branch, which connects to Paynes Prairie and on to Alachua Sink	Classification: Class III
Design Flow: 0.097 MGD (low volume waste)	Actual Mean Flow: past year ~

Discharge is: Continuous Intermittent Seasonal Rainfall Dependent Other

Facility Mixing Zone Details: An 800' mixing zone for meeting Copper level of 0.03 mg/l is referenced in the NPDES permit for the cooling tower blowdown outfall 1.

List effluent limits:

PARAMETER	LIMIT (unit)	Describe special permit conditions and permit modifications
Cooling Tower Blowdown, outfalls 001-2 and 001-3		The adjacent parameters are based from FAC 62-302, Surface Water Quality Standards.
Flow	Report (0.097 max)	
Temperature	Report	minimum blowdown necessary
TRC	0.01 mg/l	only needed after disinfection of the cooling water
Time TRC disch	120 min/day/tower	only needed after disinfection of the cooling water
pH	6.0 - 8.5	
Acute Toxicity	Mortality < 20%	only after wood preservative is used
Copper	Hardness Based	requesting mixing zone
Zinc	Hardness Based	
Iron	1.0 mg/l	
Oil & Grease	5.0 mg/l	
Low volume waste Outfall 002		May include metal cleaning waste from outfall 003, but has not done so for years.
Flow	Report	
Oil and Grease	5.0 mg/l	
TSS	100 mg/l mx (30 avg)	
pH	6.0 - 8.5	
Total Copper	Hardness based	
Iron	1.0 mg/l	only needed when metal cleaning waste is included
Zinc	Hardness based	

Nickel	Hardness based	only needed when metal cleaning waste is included
Arsenic	50 ug/l	only needed when metal cleaning waste is included
Lead	Hardness based	only needed when metal cleaning waste is included
Cadmium	Hardness based	only needed when metal cleaning waste is included
Acute Toxicity	Mortality < 20 %	only needed when metal cleaning waste is included only after wood preservative addition

Description of permitted outfall:
The low volume waste stream (002), cooling tower 7 discharge (001-2) and cooling tower 8 discharge (001-3) each individually join Sweetwater Branch which serves as a stormwater ditch through the property, some of it culverted. This creek eventually joins Paynes Prairie and on to Alachua Sink.

List permit violations (MOR data) and plant upsets that occurred at the plant within the past year:

A review of MOR submitted data indicates one iron exceedance that is likely to have been incorrectly reported units. No abnormal events logged in past 12 months.

Describe previous impact bioassessments, WQBEL's, and previous or current enforcement actions:
A 1992 state enforcement action was settled for $8000 when 5400 gallons cooling water with excessive TRC was discharged. A 1991 federal enforcement case was settled for $16,000 for discharging low volume waste with excessively low pH. An 800 foot mixing zone granted in past permits for Copper is being re-evaluated in the current permit renewal. It was believed that the newer hardness based Copper limits may not be met at the time of issuance of the existing state TOP so a copper study is required in the compliance schedule. The Baseline Copper Study and Phase I Chemical Treatment testing Program Results have been received. This study identified copper reductions and the concluded that the reductions, coupled with TTA addition and a mixing zone would allow the hardness based water quality limits to be met. A 1991 Fifth year inspection found the habitat quality at the test site to compare favorably with the control site which is substantially impacted by non point source runoff. No WET toxicity was observed.
(None in past 12 mo.)

Discuss MOR trends to prior data; is the trend improving or declining: The trend appears to remain consistent.

Additional Information: The power plant is a backup for the GRU grid and is often idle. Discharge occurs when power demand requires it to come on line.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (5-10-96)

SUBMITTING AGENCY CODE: 8031 / SUBMITTING AGENCY NAME: FDEP NER	STORET STATION NUMBER: 20020089	DATE (M/D/Y): 8/5/96	TIME: 1430	RECEIVING BODY OF WATER: SWEETWATER BRANCH

REMARKS: water level very low	COUNTY: ALACHUA	LOCATION: DOWNSTREAM OF POD	FIELD ID/NAME: TEST SITE

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Land-Use in Watershed (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)
30				60			10 ←

Local Watershed Erosion (check box): None ☐ Slight ☐ Moderate ☐ Heavy ☑

Local Watershed NPS Pollution (check box): No evidence ☐ Slight ☐ Moderate potential ☐ Obvious sources ☑

Width of riparian vegetation (m) on least buffered side: 46 M

List & map dominant vegetation on back

Artificially Channelized ☐ no ☐ recent, severe ☑ some recovery ☐ mostly recovered, more sinuous

Artificially Impounded ☐ yes

High Water Mark: 2.5 (m above present water level) + .1 (present depth in m) = 2.6 (m above bed)

Typical Width (m)/Depth (m) /Velocity (m/sec) Transect

1.0 m wide

.5 m/s .5 m/s .5 m/s

.1 m deep .2 m deep .1 m deep

Canopy Cover % : Open : ☑ Lightly Shaded (11-45%): ☐ Moderately Shaded (46-80%): ☐ Heavily Shaded: ☐

Bounding right of way borders Creek on west side. Clear cut visible.

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: ☑ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Anaerobic: ☐ Other: ☐

Sediment Oils: Absent: ☐ Slight: ☑ Moderate: ☐ Profuse: ☐

Sediment Deposition: Sludge: ☐ Sand smothering: none slight (moderate) severe Silt smothering: none slight moderate severe Other:

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled	method
Woody Debris (Snags)				Sand	50	5	dipnet
Leaf Packs or Mats				Mud/Muck/Silt			
Aquatic Vegetation	15	5	dipnet	Other:			
Rock or Shell Rubble	20	5	dipnet	Other:			
Undercut banks/Roots	15	5	dipnet	*Draw aerial view sketch of habitats found in 100 m section*			

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	SAL		Secchi (m):
Top								
Mid-depth								
Bottom	.3	27.54	7.30	7.15	393	0.2		.3

System Type : Stream: ☑ (1st) 2nd order 3rd - 4th order 5th - 6th order 7th order or greater) Lake: ☐ Wetland: ☐ Estuary: ☐ Other: ☐

Water Odors (check box): Normal: ☑ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐

Water Surface Oils (check box): None: ☑ Sheen: ☐ Globs: ☐ Slick: ☐

Clarity (check box): Clear: ☑ Slightly turbid: ☐ Turbid: ☐ Opaque: ☐

Color (check box): Slightly Tannic: ☑ Green (algae): ☐ Clear: ☑ Other: ☐

Weather Conditions/Notes: HOT, HUMID, PARTLY CLOUDY. WATER LEVEL LOW. PERIPHYTON PACK GONE. HESTER-DENDY'S ½ EXPOSED DUE TO LOW WATER LEVEL.

Abundance:	Absent	Rare	Common	Abundant
Periphyton	☐	☐	☑	☐
Fish	☐	☐	☑	☐
Aquatic Macrophytes	☐	☑	☐	☐
Iron/sulfur Bacteria	☑	☐	☐	☐

SAMPLING TEAM:	SIGNATURE:	DATE:
Tim McKelvey / Ruth Bowman	Tim McKelvey	8/7/96

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
FRESHWATER BENTHIC HABITAT ASSESSMENT FIELD DATA SHEET (v2)

SUBMITTING AGENCY CODE: 8031 / SUBMITTING AGENCY NAME: FDEP - NED	STORET STATION NUMBER: 20020089	DATE (M/D/Y): 8/5/96	RECEIVING BODY OF WATER: ALLIGATOR CREEK

REMARKS:	LOCATION: DOWNSTREAM OF P.O.D.	FIELD ID/NAME: TEST SITE

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Bottom Substrate/ Available Cover [12]	Greater than 40% snags, logs, tree roots, emergent vegetation, leaf packs (partially decayed), undercut banks, rubble, or other stable habitat. 20 19 18 17 16	20% to 40% snags, logs, tree roots, emergent vegetation, leaf packs, etc. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 **(12)** 11	5% to 20% snags, logs, tree roots, emergent vegetation, leaf packs, etc. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	Less than 5% snags, logs, tree roots, emergent vegetation, leaf packs, etc. Lack of habitat is obvious, substrates unstable. 5 4 3 2 1
Water Velocity [15]	Max. observed: >0.25 m/sec. but < 2 m/sec 20 19 18 17 16	Max. observed; 0.1 to 0.25 m/sec **(15)** 14 13 12 11	Max. observed; 0.05 to 0.1 m/sec 10 9 8 7 6	Max. observed; <0.05 m/sec, or spate occurring; > 2 m/sec 5 4 3 2 1
Artificial Channelization [9]	No artificial channelization or dredging. Stream with normal, sinuous pattern 20 19 18 17 16	May have been channelized in the past (>20 yrs), but mostly recovered, fairly good sinuous pattern 15 14 13 12 11	Channelized, somewhat recovered, but > 80% of area affected 10 **(9)** 8 7 6	Artificially channelized, box-cut banks, straight, instream habitat highly altered 5 4 3 2 1
Deposition [15]	Less than 20% of habitats affected by sand or silt accumulation 20 19 18 17 16	20%-50% of habitats affected by sand or silt accumulation **(15)** 14 13 12 11	Smothering of 50%-80% of habitats with sand or silt, pools shallow, frequent sediment movement 10 9 8 7 6	Smothering of >80% of habitats with sand or silt, a severe problem, pools absent 5 4 3 2 1
Bank Stability [8]	Stable. No evidence of erosion or bank failure. Little potential for future problems. 20 19 18 17 16	Moderately stable. Infrequent or small areas of erosion, mostly healed over. 15 14 13 12 11	Moderately unstable. Moderate areas of erosion, high erosion potential during floods. 10 9 **(8)** 7 6	Unstable. Many (60%-80%) raw, eroded areas. Obvious bank sloughing. 5 4 3 2 1
Riparian Buffer Zone Width [5]	Width of native vegetation (least buffered side) greater than 18 m 20 19 18 17 16	Width of native vegetation (least buffered side) 12 m to 18 m 15 14 13 12 11	Width of native vegetation 6 to 12 m, human activities still close to system 10 9 8 7 6	Less than 6 m of native buffer zone due to intensive human activities **(5)** 4 3 2 1
Riparian Zone Vegetation Quality [10]	Over 80% of riparian surfaces consist of native plants, including trees, understory shrubs, or non-woody macrophytes. Normal, expected plant community for given sunlight & habitat conditions. 20 19 18 17 16	50% to 80% of riparian zone is vegetated, but one class of plants normally expected for the sunlight & habitat conditions is not represented. Some disruption in community evident. 15 14 13 12 11	25% to 50% of riparian zone is vegetated, but one or two expected classes of plants are not represented. Patches of bare soil or closely cropped vegetation, disruption obvious. **(10)** 9 8 7 6	Less than 25% of streambank surfaces are vegetated. Poor plant community (*e.g.* grass monoculture or exotics) present. Vegetation removed to stubble height of 2 inches or less. 5 4 3 2 1

[5] Add **5 points** if cross-sectional area of flow is estimated to be > one square meter during periods of normal flow.

[79] **TOTAL SCORE**

Comments WATER LEVEL LOW.

ANALYSIS DATE: 8/5/96	ANALYST: Tim McKelvey	SIGNATURE: Timothy R. McKelvey

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (5-10-96)

SUBMITTING AGENCY CODE: 8031 / SUBMITTING AGENCY NAME: FDEP NED	STORET STATION NUMBER: 20020088	DATE (M/D/Y): 8/5/96	TIME: 1315	RECEIVING BODY OF WATER: SWEETWATER BRANCH

REMARKS:	COUNTY: ALACHUA	LOCATION: UPSTREAM OF POD	FIELD ID/NAME: REFERENCE SITE

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Land-Use in Watershed (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)
				100			

Local Watershed Erosion (check box): None ☐ Slight ☐ Moderate ☑ Heavy ☐

Local Watershed NPS Pollution (check box): No evidence ☐ Slight ☐ Moderate potential ☐ Obvious sources ☐

Width of riparian vegetation (m) on least buffered side: 46m

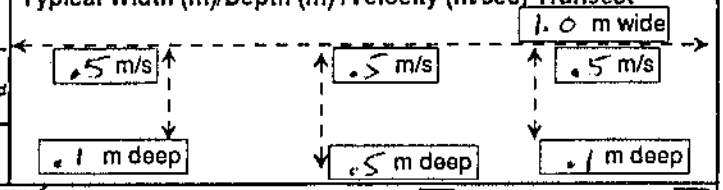
List & map dominant vegetation on back

Artificially Channelized ☐ no ☐ recent, severe ☐ some recovery ☐ mostly recovered ☑ more sinuous

Artificially Impounded ☑ yes UPSTREAM

High Water Mark: 1.5 (m above present water level) + .5 (present depth in m) = 2.0 (m above bed)

Typical Width (m)/Depth (m) /Velocity (m/sec) Transect



Canopy Cover % : Open : ☐ Lightly Shaded (11-45%): ☑ Moderately Shaded (46-80%): ☐ Heavily Shaded: ☐

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: ☑ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Anaerobic: ☐ Other: ☐

Sediment Oils: Absent: ☑ Slight: ☐ Moderate: ☐ Profuse: ☐

Sediment Deposition: Sludge: ☐ Sand smothering: none / slight / moderate / severe Silt smothering: none / slight / moderate / severe Other:

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled	method
Woody Debris (Snags)				Sand	70	5	dipnet
Leaf Packs or Mats				Mud/Muck/Silt			
Aquatic Vegetation	10	5	dipnet	Other:			
Rock or Shell Rubble	10	5	dipnet	Other:			
Undercut banks/Roots	10	5	dipnet	*Draw aerial view sketch of habitats found in 100 m section*			

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	SAL.		Secchi (m):
Top								
Mid-depth		27.72	6.93	6.29	225	0.2		.5
Bottom	.5							

System Type : Stream: ☑ (1st - 2nd order / 3rd - 4th order / 5th - 6th order / 7th order or greater) Lake: ☐ Wetland: ☐ Estuary: ☐ Other: ☐

Water Odors (check box): Normal: ☑ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐

Water Surface Oils (check box): None: ☑ Sheen: ☐ Globs: ☐ Slick: ☐

Clarity (check box): Clear: ☑ Slightly turbid: ☐ Turbid: ☐ Opaque: ☐

Color (check box): Slightly Tannic: ☑ Green (algae): ☐ Clear: ☑ Other: ☐

Weather Conditions/Notes: WARM, SUNNY, HUMID
LOW WATER LEVEL.

Abundance:	Absent	Rare	Common	Abundant
Periphyton	☐	☐	☑	☐
Fish	☐	☐	☑	☐
Aquatic Macrophytes	☐	☐	☑	☐
Iron/sulfur Bacteria	☑	☐	☐	☐

SAMPLING TEAM:	SIGNATURE:	DATE:
TIM McKELVEY / RUTH BOUMAN	Tim McKelvey	8/7/96

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
FRESHWATER BENTHIC HABITAT ASSESSMENT FIELD DATA SHEET (v2)

SUBMITTING AGENCY CODE: 8031 / SUBMITTING AGENCY NAME: FDEP - NED	STORET STATION NUMBER: 20020088	DATE (M/D/Y): 8/5/96	RECEIVING BODY OF WATER: ALLIGATOR CREEK

REMARKS:	LOCATION: UPSTREAM OF POD	FIELD ID/NAME: REFERENCE SITE

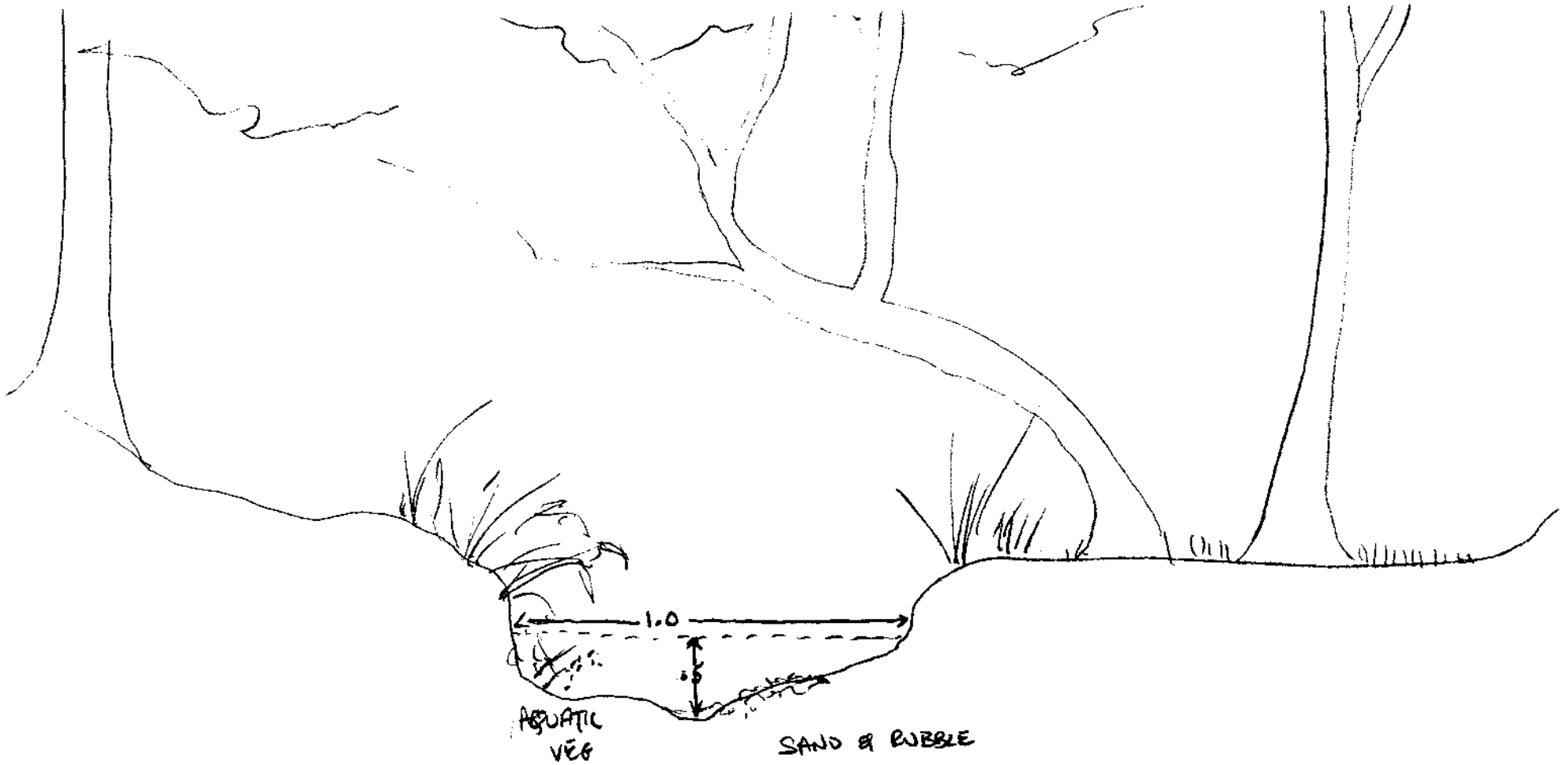
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Bottom Substrate/ Available Cover [7]	Greater than 40% snags, logs, tree roots, emergent vegetation, leaf packs (partially decayed), undercut banks, rubble, or other stable habitat. 20 19 18 17 16	20% to 40% snags, logs, tree roots, emergent vegetation, leaf packs, etc. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	5% to 20% snags, logs, tree roots, emergent vegetation, leaf packs, etc. Less than desirable habitat, frequently disturbed or removed. 10 9 8 (7) 6	Less than 5% snags, logs, tree roots, emergent vegetation, leaf packs, etc. Lack of habitat is obvious, substrates unstable. 5 4 3 2 1
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[5] Add **5 points** if cross-sectional area of flow is estimated to be > one square meter during periods of normal flow.

Comments
WATER LEVEL LOW.

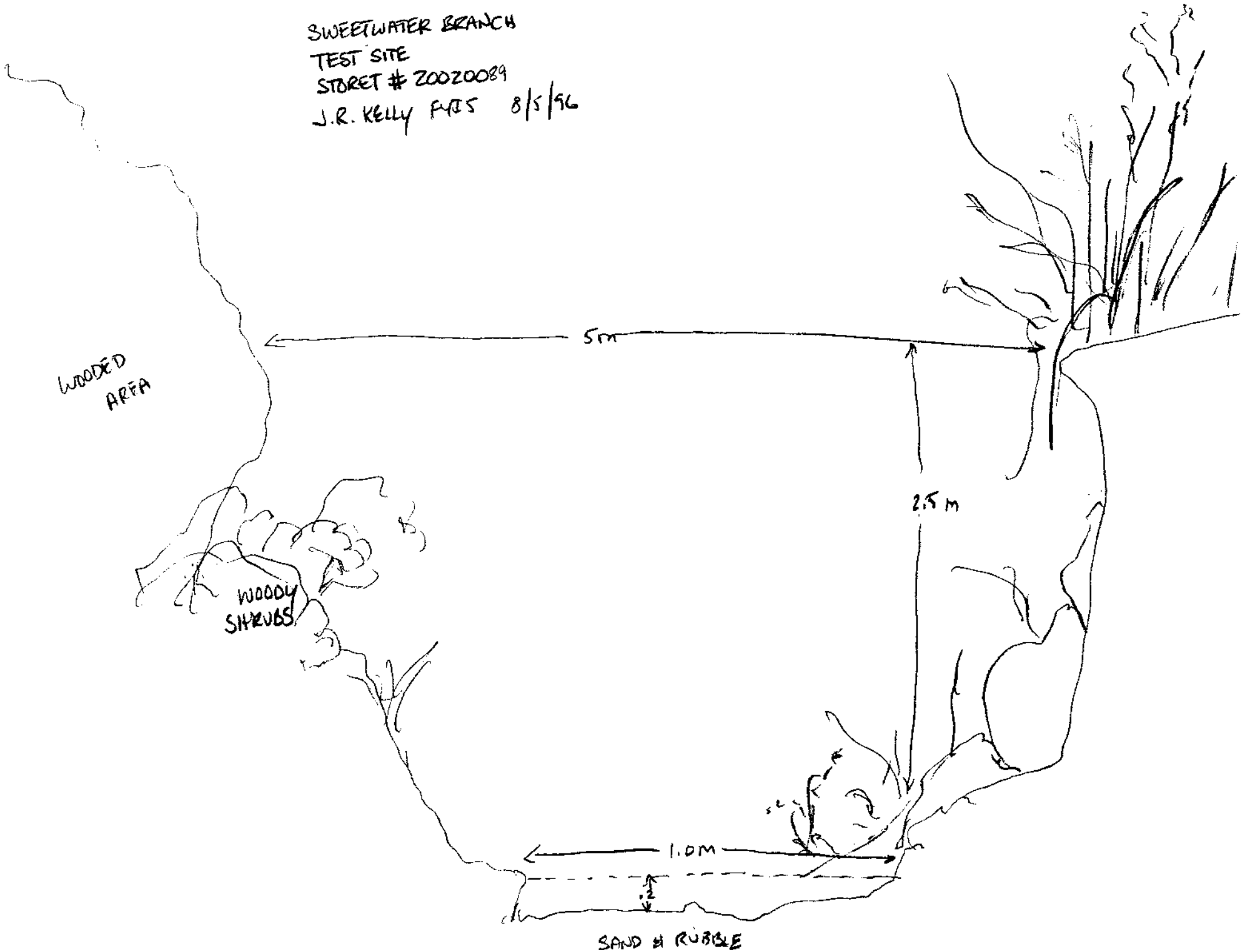
[87] **TOTAL SCORE**

ANALYSIS DATE: 8/5/96	ANALYST: TIM MCKELVEY	SIGNATURE: Tim McKelvey



SWEETWATER BRANCH
REFERENCE SITE
STORET # 20020088

J.R. KELLY FYLS 8/5/96


SWEETWATER BRANCH
TEST SITE
STORET # 20020089
J.R. KELLY FWIS 8/5/96
WOODED AREA
5m
2.5 m
WOODY SHRUBS
1.0m
.2
SAND & RUBBLE

FDEP Biology Section — Acute Bioassay Bench Sheet

Sample Source: JR Kelly outfall D01-2
County: Alachua
Contact / District: Tim McKelvey / Northeast
NPDES Permit #: ~~FL0002664~~ FL0026646
LIMS Sample #: 147882 LIMS Job #: 96-AUG-06-32-02
sample log 8/9/96 OW

Sample Collection: Date 8-5-96 Time 1150
Test Beginning: Date 8-6-96 Time 1430
Test Ending: Date 8-8-96 Time 1430
Organism Batch #: 33 Diluent Batch #: 35
Organism Age: < 24 hours
Test Organism: Ceriodaphnia dubia

Test Type: (Screening) / Definitive
(Static) / Static Renewal / Flow-through

Test Number: 1 of 2

Remarks:

Instrument Calibrations:	pH	Temperature °C	D.O. mg/L	Conductivity µmhos/cm
meter #	7851	90H018262	90H018262	G9005749
0 hr	7.0 @ 7.0 9.0 @ 9.0	24.5 @ 24.4	8.3 @ 24.4 °C	1012 @ 1015 988 @ 1006 @ 24.1 °C
24 hr	7.0 @ 7.0 9.0 @ 9.0	23.8 @ 23.8	8.4 @ 24.1 °C	1040 @ 1015 999 @ 1006 @ 24.4 °C
48 hr	7.0 @ 7.0 9.0 @ 9.0	23.6 @ 23.5	8.4 @ 23.8 °C	1054 @ 1015 992 @ 1006 @ 24.9 °C

Conc.	Chamber #	Number Live 0 hr	Number Live 24 h	Number Live 48 h	pH 0 hr	pH 24 h	pH 48 h	Temperature (°C) 0 hr	Temperature (°C) 24 h	Temperature (°C) 48 h	D.O. (mg/L) 0 hr	D.O. (mg/L) 24 h	D.O. (mg/L) 48 h	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhos/cm) 0 hr	UNCORRECTED 24 h	UNCORRECTED 48 h
Control A	A	5	5	5	8.0		8.3	24.1		24.2	7.9		8.2	185		195
Control B	B	5	5	5			8.3			24.3			8.2			185
Control C	C	5	5	5			8.3			24.3			8.3			185
Control D	D	5	5	5			8.3			24.5			8.3			185
100 % A	A	5	5	5	8.3		8.3	24.0		24.3	7.8		8.3	690		720
100 % B	B	5	5	5			8.3			24.3			8.4			730
100 % C	C	5	5	5			8.3			24.4			8.4			730
100 % D	D	5	5	5			8.3			24.4			8.4			735
Measured/Loaded by:		TM	MF	MF	MF		MF	MF		MF TM	MF		LF LM	MF		LF LM
Recorded by:		OW	MF	MF	ND		LM	ND		ND	ND		ND	ND		LM

Investigators' Signatures

Marshall Knudsen
Tim Lewis
Dan Mc
Liz Mould
Tina McKelvey
Tim. T.O.D

Water Quality Parameters	Salt Water / Well Water	20% Min Water	Sample	Method	Measured by
Field Total Residual Cl2 (mg/L):			Not measured		
Lab Total Residual Cl2 (mg/L):	—	< 0.03	< 0.03	DR100	DB
Alkalinity (mg/L as $CaCO_3$):	—	80	85	HACH	DB
Hardness (mg/L as $CaCO_3$):	—	80	250	HACH	DB
Total ammonia (mg/L as N):	—	< 0.017	< 0.97	Orion	LM

Ammonia Ammonia Ammonia Control ppt Sample ppt

FDEP Biology Section — Acute Bioassay Bench Sheet

Sample Source: JR Kelly outfall 001-2
County: Alachua
Contact / District: Tim McKelvey / NorthEast
NPDES Permit #: FL0002664 mf 8/8/96 FL0026646
LIMS Sample #: 147882 LIMS Job #: 96-AUG-06-32-02
sample log 8/9/96 DW
Test Type: (Screening) | Definitive
(Static) | Static Renewal | Flow-through
Test Number: 2 of 2
Remarks:

Sample Collection: Date 8-5-96 Time 1150
Test Beginning: Date 8-6-96 Time 1500
Test Ending: Date 8-8-96 Time 1500
Organism Batch #: 58 Diluent Batch #: well
Organism Age: 11 days
Test Organism: Cyprinella leedsi

Instrument Calibrations:	pH	Temperature °C	D.O. mg/L	Conductivity µmhos/cm
meter #	7851	90H018262	90H018262	G9005749
0 hr	7.0 @ 7.0 9.0 @ 9.0	24.5 @ 24.4	8.3 @ 24.4 °C	101.2 @ 101.5 988 @ 1006 @ 24.1 °C
24 hr	7.0 @ 7.0 9.0 @ 9.0	23.8 @ 23.8	8.4 @ 24.1 °C	104.0 @ 101.5 999 @ 1006 @ 24.4 °C
48 hr	7.0 @ 7.0 9.0 @ 9.0	23.6 @ 23.5	8.4 @ 23.8 °C	105.4 @ 101.5 992 @ 1006 @ 24.9 °C

Conc.	Chamber #	Number Live			pH			Temperature (°C)			D.O. (mg/L)			UNCORRECTED Cond. (mmhos/cm) Cond. (µmhos/cm)		
		0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h
Control A	A1	5	5	5	8.0	8.3	8.4	24.2	23.6	23.5	7.7	7.9	8.4	250	250	255
Control B	A2	5	5	5	8.0	8.3	8.4	24.1	23.5	23.5	7.7	7.9	8.4	250	245	250
Control C	A3	5	5	5	8.0	8.3	8.4	24.1	23.5	23.5	7.6	8.0	8.4	250	245	250
Control D	A4	5	5	5	8.0	8.3	8.4	24.1	23.5	23.5	7.6	8.1	8.3	250	250	250
100% A	A5	5	5	5	8.4	8.3	8.3	24.0	23.6	23.5	7.5	7.9	8.3	715	720	725
100% B	A6	5	5	5	8.4	8.3	8.3	23.8	23.6	23.4	7.4	7.8	8.2	720	720	725
100% C	A7	5	5	5	8.4	8.3	8.3	23.8	23.5	23.4	7.4	7.7	8.2	720	720	725
100% D	A8	5	5	5	8.4	8.3	8.3	23.8	23.5	23.4	7.4	7.8	8.2	720	720	725
Measured/Loaded by:		TM	MF	ND	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
Recorded by:		DW	MF	ND	ND	DW	LM	ND	DW	LM	ND	DW	LM	ND	DW	LM

Investigators' Signatures Deanna Nicholson
Marshall Faircloth
Nicki Sanzo
Dan Gillette
Dan Gillette
Linda M. Kuhlski
J. H. Wolfe
reviewer

form updated 4/01/96

Water Quality Parameters	Salt Water / (Well Water)	20% Min Water	Sample	Method	Measured by
Field Total Residual Cl2 (mg/L):			No	measured	
Lab Total Residual Cl2 (mg/L):	<0.03	—	<0.03	DR100	DB
Alkalinity (mg/L as $CaCO_3$):	135	—	85	HACH	DB
Hardness (mg/L as $CaCO_3$):	120	—	250	HACH	DB
Total ammonia (mg/L as N):	<.017	—	<.017	Orion	LM

Ammonia Meter #98136 Ammonia Meter Slope: -56.90 Ammonia Blank: <.017 Control Salinity: 0 ppt Sample Salinity: 0 ppt

FDEP Biology Section — Acute Bioassay Bench Sheet

Sample Source: J R Kelly Outfall 001-3
County: Alachua
Contact / District: Tim McKelvey / NortheasT
NPDES Permit #: ~~FL0002664~~ FL0026646 8/8/96
LIMS Sample #: 147883 LIMS Job #: 96-AUG-06-32-03
sample log 8/9/96 DV
Test Type: (Screening) Definitive
(Static) Static Renewal | Flow-through
Test Number: 1 of 2
Remarks:

Sample Collection: Date 8-5-96 Time 1230 1430
Test Beginning: Date 8-6-96 Time 1430
Test Ending: Date 8-8-86 Time 1430
Organism Batch #: 33 Diluent Batch #: 35
Organism Age: < 24 hours
Test Organism: Ceriodaphnia dubia

Instrument Calibrations:

	pH	Temperature °C	D.O. mg/L	Conductivity µmhos/cm
meter #	7851	90H018262	90H018262	G9005749
0 hr	7.0 @ 7.0 9.0 @ 9.0	24.5 @ 24.4	8.3 @ 24.4 °C	101.2 @ 101.5 988 @ 1006 @ 24.1
24 hr	7.0 @ 7.0 9.0 @ 9.0	23.8 @ 23.8	8.4 @ 24.1 °C	104.0 @ 101.5 999 @ 1006 @ 24.1
48 hr	7.0 @ 7.0 9.0 @ 9.0	23.6 @ 23.5	8.4 @ 23.8 °C	105.4 @ 101.5 992 @ 1006 @ 24.1

		Number Live			pH			Temperature (°C)			D.O. (mg/L)			UNCORRECTED Cond. (mmhos/cm) Cond. (µmhos/cm)		
Conc.	Chamber #	0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h
Control A	A	5	5	5	8.3		8.3	23.9		24.2	8.0		8.4	190		205
Control B	B	5	5	5			8.3			24.2			8.4			200
Control C	C	5	5	5			8.3			24.2			8.4			200
Control D	D	5	5	5			8.3			24.3			8.4			200
100% A	A	5	5	5	8.5		8.5	23.8		24.2	8.0		8.6	575		695
100% B	B	5	5	5			8.5			24.3			8.6			650
100% C	C	5	5	5			8.5			24.3			8.7			680
100% D	D	5	5	5			8.5			24.2			8.7			670
Measured/Loaded by:		TM	MF	MF	MF		MF	MF		MF	MF		MF	MF		MF
Recorded by:		DW	MF	MF	ND		LM	ND		LM	ND		LM	ND		LM

Investigators' Signatures
Marshall Fairchilds
Nick Smith
Dan Pitt
David Hall
Wm Nemeth
Tina Mitchell
Art Wolfe

	Salt Water Well Water	Water Quality Parameters 20% Min Water	Sample	Method	Measured by
Field Total Residual Cl2 (mg/L):			Not measured		
Lab Total Residual Cl2 (mg/L):	—	<0.03	<0.03	DR100	DB
Alkalinity (mg/L as $CaCO_3$):	—	80	100	HACH	DB
Hardness (mg/L as $CaCO_3$):	—	80	300	HACH	DB
Total ammonia (mg/L as N):	—	<.017	<.07	Orion	LM

Ammonia Ammonia Ammonia Control Sample

Sample Source: JR Kelly Outfall 001-3
County: Alachua
Contact / District: Tim McKelvey / Northeast
NPDES Permit #: ~~FL0002664~~ mf 8/15/96 FL0026646
LIMS Sample #: 14783 LIMS Job #: 96-AUG-06-32-03
sample log 8/9/96 DW
Test Type: ~~Screening~~ / Definitive
~~Static~~ / Static Renewal / Flow-through
Test Number: 2 of 2
Remarks:

Sample Collection: Date 8-5-96 Time 1210
Test Beginning: Date 8-6-96 Time 1500
Test Ending: Date 8-8-96 Time 1500
Organism Batch #: 58 Diluent Batch #: well
Organism Age: 11 days
Test Organism: Cyprinella leedsi

Instrument Calibrations:	pH	Temperature °C	D.O. mg/L	Conductivity µmhos/cm
meter #	7851	90H018262	90H018262	G9005749
0 hr	7.0 @ 7.0 9.0 @ 9.0	24.5 @ 24.4	8.3 @ 24.4 °C	101.2 @ 101.5 988 @ 1006 @ 24.1 °C
24 hr	7.0 @ 7.0 9.0 @ 9.0	23.8 @ 23.8	8.4 @ 24.1 °C	104.0 @ 101.5 999 @ 1006 @ 24.4 °C
48 hr	7.0 @ 7.0 9.0 @ 9.0	23.6 @ 23.5	8.4 @ 23.8 °C	105.4 @ 101.5 992 @ 1006 @ 24.9 °C

Conc.	Chamber #	Number Live 0 hr	Number Live 24 h	Number Live 48 h	pH 0 hr	pH 24 h	pH 48 h	Temperature (°C) 0 hr	Temperature (°C) 24 h	Temperature (°C) 48 h	D.O. (mg/L) 0 hr	D.O. (mg/L) 24 h	D.O. (mg/L) 48 h	UNCORRECTED Cond. (mmhos/cm) 0 hr	UNCORRECTED Cond. (mmhos/cm) 24 h	UNCORRECTED Cond. (mmhos/cm) 48 h
Control A	A17	5	5	5	8.0	8.3	8.4	24.3	23.8	23.4	7.7	7.9	8.0	250	250	255
Control B	A18	5	5	4	8.0	8.3	8.4	24.2	23.7	23.3	7.8	8.0	8.0	250	245	245
Control C	A19	5	5	5	8.0	8.3	8.4	24.2	23.7	23.3	7.8	8.1	8.2	250	245	245
Control D	A20	5	5	5	8.0	8.3	8.4	24.2	23.7	23.4	7.8	8.1	8.3	250	250	250
100% A	A21	5	5	5	8.5	8.3	8.3	24.2	23.9	23.4	7.9	7.9	8.2	605	605	610
100% B	A22	5	5	5	8.5	8.3	8.3	24.2	23.9	23.4	8.0	8.0	8.2	605	605	610
100% C	A23	5	5	5	8.5	8.3	8.3	24.2	23.9	23.4	8.0	8.0	8.4	605	605	605
100% D	A24	5	5	5	8.5	8.3	8.3	24.2	23.8	23.5	8.1	8.0	8.4	605	605	610
Measured/Loaded by:		TM	MK	ND	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
Recorded by:		OW	MK	ND	ND	DN	LM	ND	DN	LM	ND	DN	LM	ND	DN	LM

Investigators' Signatures: Marshall Faircloth, Deanna Nicholson, Tricia Knight, Pam Mills, Daniel Coffey, Mike Morello, Tina Mikulasik, Jeff Wolfe

Water Quality Parameters	Salt Water: Well Water	20% Min Water	Sample	Method	Measured by
Field Total Residual Cl2 (mg/L):			NOT measured		
Lab Total Residual Cl2 (mg/L):	<0.03	—	<0.03	DR100	DB
Alkalinity (mg/L as $CaCO_3$):	135	—	100	HACH	DJ
Hardness (mg/L as $CaCO_3$):	120	—	300	HACH	DB
Total ammonia (mg/L as N):	<.017	—	<.017	Orion	LM

Ammonia Meter #98136 Ammonia Meter Slope: -56.8 Ammonia Blank: <.017 Control Salinity: 0 ppt Sample Salinity: 0 ppt

reviewer

form updated 4/01/96

FDEP Biology Section — Acute Bioassay Bench Sheet

Sample Source: JR Kelly Outfall 002
County: Alachua
Contact / District: Tim Mickelvey / Northeast
NPDES Permit #: ~~FL0002664~~ MF 8/8/96 FL0026646
LIMS Sample #: 147882 MF 8/6/96 entry error LIMS Job #: 96-AUE-06-32-02 MF 8/8/01 entry error
sample log 8/9/96

Sample Collection: Date 8-5-96 Time 1180 entry MF 8/6/96
Test Beginning: Date 8-6-96 Time 1430
Test Ending: Date 8-8-96 Time 1435
Organism Batch #: 33 Diluent Batch #: 35
Organism Age: < 24 hours
Test Organism: Ceriodaphnia dubia

Test Type: (Screening) | Definitive
(Static) | Static Renewal | Flow-through

Test Number: 1 of 2

Remarks:
* Hach Began writing DR100 DB 4/6/96

Instrument Calibrations:

	pH	Temperature °C	D.O. mg/L	Conductivity µmhos/cm
meter #	7851	90H018262	90H018262	G9005749
0 hr	7.0 @ 7.0 9.0 @ 9.0	24.5 @ 24.4	8.3 @ 24.4 °C	101.2 @ 101.5 988 @ 1006 @ 24.1
24 hr	7.0 @ 7.0 9.0 @ 9.0	23.8 @ 23.8	8.4 @ 24.1 °C	104.0 @ 101.5 999 @ 1006 @ 24.4
48 hr	7.0 @ 7.0 9.0 @ 9.0	23.6 @ 23.5	8.4 @ 23.8 °C	105.4 @ 101.5 992 @ 1006 @ 24.9

Conc.	Chamber #	Number Live 0 hr	Number Live 24 h	Number Live 48 h	pH 0 hr	pH 24 h	pH 48 h	Temperature (°C) 0 hr	Temperature (°C) 24 h	Temperature (°C) 48 h	D.O. (mg/L) 0 hr	D.O. (mg/L) 24 h	D.O. (mg/L) 48 h	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhos/cm) 0 hr	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhos/cm) 24 h	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhos/cm) 48 h
Control A	A	5	5	5	8.3		8.3	24.0		24.3	7.8		8.4	175		185
Control B	B	5	5	5			8.3			24.4			8.4			190
Control C	C	5	5	5			8.3			24.4			8.4			185
Control D	D	5	5	5			8.3			24.4			8.4			185
100% A	A	5	5	5	8.0		8.1	24.0		24.3	7.9		8.3	1120		1210
100% B	B	5	5	5			8.1			24.4			8.4			1210
100% C	C	5	5	5			8.1			24.4			8.4			1220
100% D	D	5	5	5			8.1			24.4			8.4			1230
Measured/Loaded by:		TM	MF	MF	MF		MF LM	MF		MF LM	MF		MF LM	MF		MF LM
Recorded by:		DW	MF	MF	ND		LM	ND			ND			ND		

Investigators' Signatures

reviewer

Water Quality Parameters

	Salt Water / Well Water	20% Min Water	Sample ** 40 MF 8/8/96 entry error	Method	Measured by
Field Total Residual Cl2 (mg/L):			** NOT Measured		
Lab Total Residual Cl2 (mg/L):	—	<0.03	<0.03	DR100	DB
Alkalinity (mg/L as $CaCO_3$):	—	80	60	~~HACH~~ *	DB
Hardness (mg/L as $CaCO_3$):	—	80	180	HACH	DB
Total ammonia (mg/L as N):	—	<.017	<.017	Orion	LM

Ammonia Meter #98136 Meter Slope: -56.0 Ammonia Blank: <.017 Control Salinity: 0 ppt Sample Salinity: 0

Sample Source: JR Kelly Outfall 002
County: Alachua
Contact / District: Tim McKelvey / North east
NPDES Permit #: ~~FL0002664~~ mf 8/8/96 FL0026646
LIMS Sample #: 147881 LIMS Job #: 96-AUG-06-32-01
sample log 8/5/96 DW
Test Type: ~~Screening~~ / Definitive
(Static) / Static Renewal / Flow-through
Test Number: 2 of 2
Remarks:

Sample Collection: Date 8-5-96 Time 1130
Test Beginning: Date 8-6-96 Time 1500
Test Ending: Date 8-8-96 Time 1500
Organism Batch #: 58 Diluent Batch #: well
Organism Age: 11 days
Test Organism: Cyprinella leedsi

Instrument Calibrations:	pH	Temperature °C	D.O. mg/L	Conductivity µmhos/cm
meter #	7851	90H018262	90H018262	G9005749
0 hr	7.0 @ 7.0 9.0 @ 9.0	24.5 @ 24.4	8.3 @ 24.4 °C	101.2 @ 101.5 988 @ 1006 @ 24.1 °C
24 hr	7.0 @ 7.0 9.0 @ 9.0	23.8 @ 23.8	8.4 @ 24.1 °C	104.0 @ 101.5 999 @ 1006 @ 24.4 °C
48 hr	7.0 @ 7.0 9.0 @ 9.0	23.6 @ 23.5	8.4 @ 23.8 °C	1054 @ 101.5 992 @ 1006 @ 24.9 °C

		Number Live			pH			Temperature (°C)			D.O. (mg/L)			UNCORRECTED Cond. (mmhos/cm) ~~Cond. (µmhos/cm)~~		
Conc.	Chamber #	0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h	0 hr	24 h	48 h
Control A	A9	5	5	5	8.0	8.3	8.4	24.1	23.7	23.4	7.7	7.8	8.1	250	250	250
Control B	A10	5	5	5	8.0	8.3	8.4	24.1	23.6	23.3	7.8	7.9	8.1	250	250	250
Control C	A11	5	5	5	8.0	8.3	8.4	24.1	23.5	23.3	7.7	7.9	8.2	230	255	250*
Control D	A12	5	5	5	8.0	8.3	8.4	24.1	23.5	23.4	7.8	8.0	8.1	250	255	255
100% A	A13	5	5	5	8.0	8.0	8.1	24.2	23.7	23.4	7.7	7.9	8.2	1200	1195	1200
100% B	A14	5	5	5	8.0	8.0	8.1	24.2	23.7	23.3	7.7	7.9	8.1	1205	1190	1190
100% C	A15	5	5	5	8.0	8.0	8.1	24.2	23.6	23.3	7.8	8.0	8.2	1205	1190	1195
100% D	A16	5	5	5	8.0	8.0	8.1	24.2	23.6	23.4	7.7	8.0	8.1	1205	1195	1200
Measured/Loaded by:		TM	MF	ND	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
Recorded by:		DW	MF	ND	ND	DN	LM	ND	DN	LM	ND	DN	LM	ND	DN	LM

* 8.8.96 255 LM wrote incorrect #.

Investigators' Signatures: Deirna Nicholson, Marshall Faircloth, Tish Knipple, Dawn Nettles, Ty Mondy, Tina Mikulski, Jeff Wolfe

reviewer

form updated 4/01/96

Water Quality Parameters	Salt Water: Well Water / 20% Min Water	Sample	Method	Measured by
Field Total Residual Cl2 (mg/L):		0.0	—	Ruth Bowman
Lab Total Residual Cl2 (mg/L):	<0.03 / —	<0.03	DR/100	DB
Alkalinity (mg/L as $CaCO_3$):	135 / —	60	HACH	DB
Hardness (mg/L as $CaCO_3$):	120 / —	180	HACH	DB
Total ammonia (mg/L as N):	<0.017 / —	<0.017	Orion	LM

Ammonia Meter #98136 Meter Slope: -56.8 Ammonia Blank: <0.017 Control Salinity: 0 ppt Sample Salinity: 0 ppt

JR KELLY REFERENCE SITE

Summer Index Period: Stream Condition Index for Florida (SCI) (April 1996)													
Macroinvertebrate Dip Net (20 sweeps of most productive substrates)	Value	**Panhandle**				**Peninsula**				**Northeast**			
		5	3	1	Score	5	3	1	Score	5	3	1	Score
Total Number of Taxa	18	≥ 31	30-16	<16		≥ 26	25-14	<14	3	≥ 22	21-12	<12	
EPT Index	0	≥ 7	6-4	<4		≥ 4	3-2	<2	1	-	≥2	<2	
# Chironomid Taxa	5	≥9	8-5	<5		≥7	6-4	<4	3	≥7	6-4	<4	
% Contribution of Dominant Taxon	36.7	≤22	23-61	>61		≤29	30-64	>64	3	≤31	32-66	>66	
% Diptera	34.9	-	≤50	>50		-	≤37	>37	3	-	≤47	> 47	
Florida Index	4	≥ 16	15-8	<8		≥7	6-4	<4	3	≥ 8	7-4	<5	
% Suspension feeders/Filterers	0	≥ 12	11-6	<6		-	≥7	<7	1	-	≥7	<7	
Total Score		**Panhandle**				**Peninsula**			17	**Northeast**			
Interpretation of Score		**Excellent**			27-33	**Excellent**			26-31	**Excellent**			25-29
		Good			21-26	**Good**			20-25	**Good**			19-24
		Poor			14-20	**Poor**			13-19	**Poor**			13-18
		Severely Degraded			7-13	**Severely Degraded**			7-12	**Severely Degraded**			7-12

JR KELLY TEST SITE

Summer Index Period: Stream Condition Index for Florida (SCI) (April 1996)													
Macroinvertebrate Dip Net (20 sweeps of most productive substrates)	Value	**Panhandle**				**Peninsula**				**Northeast**			
		5	3	1	Score	5	3	1	Score	5	3	1	Score
Total Number of Taxa	24	≥ 31	30-16	<16		≥ 26	25-14	<14	3	≥ 22	21-12	<12	
EPT Index	0	≥ 7	6-4	<4		≥ 4	3-2	<2	1	-	≥2	<2	
# Chironomid Taxa	9	≥9	8-5	<5		≥7	6-4	<4	5	≥7	6-4	<4	
% Contribution of Dominant Taxon	33.1	≤22	23-61	>61		≤29	30-64	>64	3	≤31	32-66	>66	
% Diptera	32.3	-	≤50	>50		-	≤37	>37	3	-	≤47	> 47	
Florida Index	6	≥ 16	15-8	<8		≥7	6-4	<4	3	≥ 8	7-4	<5	
% Suspension feeders/Filterers	0.75	≥ 12	11-6	<6		-	≥7	<7	1	-	≥7	<7	
Total Score		**Panhandle**				**Peninsula**			19	**Northeast**			
Interpretation of Score		**Excellent**			27-33	**Excellent**			26-31	**Excellent**			25-29
		Good			21-26	**Good**			20-25	**Good**			19-24
		Poor			14-20	**Poor**			13-19	**Poor**			13-18
		Severely Degraded			7-13	**Severely Degraded**			7-12	**Severely Degraded**			7-12

Macroinvertebrate taxa list for J. R. Kelly Generating Station, collected via Hester Dendy samplers on 5 August 1996 in Sweetwater Creek.

	Reference Site	Test Site
Oligochaeta		
Enchytraeidae	–	1
Gastropoda		
Lymnaeidae	–	1
Ancylidae	15	–
Ferrissia sp.	–	4
Ferrissia hendersoni	5	–
Planorbella duryi	1	–
Decapoda		
Cambaridae	1	–
Colembolla		
Isotomurus tricolor	–	1
Odonata		
Argia sp.	–	4
Diptera		
Tipula sp.	–	1
Chironomidae	3	3
Thienemannimyia grp.	–	1
Cricotopus bicinctus	–	1
Chironomus sp.	3	1
Cryptochironomus sp.	1	–
Goeldichironomus holoprasinus	4	2
Polypedilum illinoense grp.	1	38
Stenochironomus sp.	–	1
Tanytarsus sp.	–	2
Hemerodromia sp.	–	2

Macroinvertebrate taxa list for J. R. Kelly Generating Station, collected via 20 dip net sweeps on 5 August 1996 in Sweetwater Creek.

	Reference Site	Test Site
Oligochaeta		
Lumbriculidae	–	2
Eclipidrilus sp.	1	2
Enchytraeidae	1	1
Limnodrilus hoffmeisteri	4	7
Bratislavia unidentata	1	–
Hirudinea		
Helobdella elongata	1	–
Gastropoda		
Melanoides tuberculata	40	44
Ancylidae	5	2
Hebetancylus excentricus	4	–
Planorbella duryi	3	–
Physella sp.	1	–
Acarina		
Hygrobates sp.	–	1
Isopoda		
Lirceus sp.	–	3
Amphipoda		
Talitroides sp.	–	2
Decapoda		
Procambarus sp.	1	–
Procambarus paeninsulanus	–	1
Odonata		
Libellulidae	2	–
Pachydiplax longipennis	2	–
Erythemis simplicicollis	–	1
Coenagrionidae	–	1
Ischnura posita	2	–
Argia sp.	2	20
Argia sedula	–	1
Argia tibialis	1	–
Coleoptera		
Microcylloepus pusillus	–	2
Diptera		
Tipula sp.	–	3
Atrichopogon sp.	–	2
Chironomidae	4	3
Conchapelopia	–	1
Thienemannimyia grp.	1	1
Cricotopus or *orthocladius*	–	1
Cricotopus bicinctus	1	1
Rheocricotopus robacki	–	1
Chironomus sp.	1	–

Dicrotendipes neomodestus	–	1
Goeldichironomus holoprasinus	1	–
Apedilum sp.	–	1
Polypedilum illinoense grp.	30	26
Tanytarsus sp.	–	1
Hemerodromia sp.	–	1

Phytoplankton taxa list for J. R. Kelly Generating Station, collected via whole water grab sample on 5 August 1996 in Sweetwater Creek.

	Reference Site	Test Site
Cyanophyta		
Gloeocapsa sp.	–	1
Oscillatoria sp.	–	1
Bacillariophyta		
Achnanthes sp.	2	1
Navicula sp.	1	2
Gomphonema sp.	2	1
Nitzschia sp.	2	–
Hantzschia sp.	–	1
Chlorophyta		
Chlorophyceae	–	1
Chlamydomonas sp.	2	1
Schroederia sp.	1	–
Scenedesmus sp.	–	1
Dictyosphaerium sp.	–	1
Euglenophyta		
Euglena sp.	1	–

Fill Out This Section For All Surface Water Discharger Inspections (CEI, CSI, CBI, PAI, XSI - RI Optional)

1	2	3	11	12	17	18	19	20
Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
N	5	FL0026646		960805		X	S	2

Remarks

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Fill Out This Section For All Surface Water Discharger Inspections (CEI, CSI, CBI, PAI, XSI - RI Optional)

1	2	3	11	12	17	18	19	20
Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
N	5	FL0026646		960805		B	S	2

Remarks

21 66