PHASE I FINAL REPORT

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS

Prepared for:

Capital Area Ground Water Conservation Commission

City of Baton Rouge
Parish of East Baton Rouge
Department of Public Works

April 2004

URS Corporation

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS – PHASE I REPORT

APRIL 2004

URS Corporation, working in conjunction with the Capital Area Ground Water Conservation Commission (CAGWCC), the City of Baton Rouge/Parish of East Baton Rouge (City/Parish) and representatives from local industrial facilities, has completed the first phase of a comprehensive study to evaluate the technical feasibility of the use of City/Parish wastewater treatment plant effluent as a source of reclaimed water to replace or supplement existing industrial groundwater uses and/or to provide an alternative water supply source for new industrial development in the area. The following summarizes the key findings and conclusions reached during this initial phase and the essential elements and objectives for subsequent phases of the study.

- This initial phase indicated that reclaimed water may be usable by industry as an alternate water supply source for once-through cooling water, and possibly recirculated cooling water and other utility uses, with further treatment to improve its quality and consistency.
- Other high quality industrial uses of reclaimed water may be developed by providing additional advanced treatment or blending of reclaimed water (i.e. – process water or boiler feed water).
- Reclaimed water could provide an alternate water supply source for new or future industries, and possibly expansions of existing facilities.
- With consistent disinfection, reclaimed water may be usable for irrigation of green areas such as parks, golf courses or cemeteries (even though these uses tend to be small).
- The next phase of the study will identify individual industrial facilities most likely to participate in a reclaimed water program and include further study of their current water supply sources, specific industrial water uses and associated water quality and treatment requirements.

- One key element of the next phase of the study will be to determine the potential regulatory impacts of use of reclaimed water on existing discharge permits at the City/Parish WWTPs and the industrial facilities.
- Preliminary concepts for reclaimed water storage, treatment and transport systems, and the feasibility of blending of reclaimed water with treated Mississippi River water, will also be developed.
- Conceptual level estimates of the total cost of reclaimed water storage, treatment and transport systems will be developed. Preliminary financial evaluations will include advantages/disadvantages for reclaimed water suppliers and users, public benefits of reduced groundwater usage and available financing mechanisms to provide economic viability.

The ultimate objective of a potential reclaimed water supply program in the Baton Rouge area is to provide an alternate water source that meets the requirements of the potential uses, maintains very high reliability, poses no public health concerns, achieves compliance with all regulatory requirements and can be supplied at a cost equal to or lower than current water source. In short, reclaimed water should become the preferred source of water to local industry and other potential users.

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLES

TABLE OF CONTENTS

FIGURES

APPENDICES

TABLE OF CONTENTS

APPENDICES (continued)

ACRONYMS

ADF	average daily flow
Avg	average
BFW	boiler feed water
BOD_5	biochemical oxygen demand, 5-day
BGS	below ground surface
BR	Baton Rouge
C/P	City/Parish
Ca	calcium
$CaCO_3$	calcium carbonate
CAGWCC	Capital Area Ground Water Conservation Commission
CGWA	Critical Groundwater Area
Cl	chloride
COD	chemical oxygen demand
cols/100 mL	colonies per 100 mL
°C	degrees Celsius
°F	degrees Fahrenheit
DPW	Department of Public Works
DMR	Discharge Monitoring Report
EBR	East Baton Rouge
EPA	Environmental Protection Agency
GPD	gallons per day
gpm	gallons per minute
GW	groundwater
F	fluoride
FW	firewater
lb/day	pounds per day
LA	Louisiana
LDEQ	Louisiana Department of Environmental Quality
LDHH	Louisiana Department of Health and Hospitals
LPDES	Louisiana Pollutant Discharge Elimination System
LGMC	Louisiana Groundwater Management Commission
Mg	magnesium
Mgal	million gallons
Max	maximum
MGD	million gallons per day
Min	minimum
mg/L	milligrams per liter
µg/L	micrograms per liter
NA	not available or not analyzed
ND	not detected

ACRONYMS (continued)

nitrate-N	nitrate nitrogen
nitrite-N	nitrite nitrogen
NO_2	nitrite
NO_3	nitrate
NR	not reported
NH_3-N	ammonia nitrogen
NTU	nephelometric turbidity unit
O&G	oil and grease
OPO_4	orthophosphate
OTCW	once-through cooling water
PHF	peak hourly flow
POTW	publicly owned treatment works
PotW	potable water
PW	process water
PWS	public water supply
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
RCW	recirculating cooling water
SIC	Standard Industrial Classification
SiO_2	silica
SO_4	sulfate
s.u.	standard units
SVOCs	semivolatile organic compounds
SW	surface water
TKN	Total Kjeldahl Nitrogen
TDS	total dissolved solids
TS	total solids
TN	total nitrogen
TPhos	total phosphorous
TRC	total residual chlorine
TOC	total organic carbon
US	United States
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
UW	utility water
VOCs	volatile organic compounds
WBR	West Baton Rouge
WWTP	wastewater treatment plant

The Greater Baton Rouge area is fortunate to have one of the highest quality groundwater resources in the United States, which is available in large volumes and requires minimal or no treatment prior to most uses. Groundwater resources in the area have become the focus of increasing legislative and public attention in the past 25 years, because of the increasing use of the resource as the local drinking water supply and for high-volume industrial uses, in very large total annual volumes. Specifically, there is now public concern regarding the long-term effects of groundwater table drawdown due to increased groundwater use and the resulting quality degradation due to salt water.

As a result, increased attention and emphasis is being placed on the availability of supplemental and/or replacement water supply sources for current and future groundwater uses in the area. In addition, recent Louisiana legislation has defined "reclaimed water" and encourages the use of this potential resource as one way of alleviating the issues associated with use of the local groundwater resource for other than drinking water supply, which has been deemed as the highest priority use of this resource. Reclaimed water is defined in this study as treated wastewater or recycled water that is available in significant volumes for further use with or without additional treatment.

The Baton Rouge area is also fortunate to have the availability of an abundant surface water supply source, the Mississippi River, which is used heavily by industry for cooling and other water supply uses, and in areas south of Baton Rouge is also used as a drinking water supply source. In many cases, it may be possible for selected users to switch from groundwater to Mississippi River surface water supply.

This study was undertaken to identify the potential for additional use of the largest single potential reclaimed water supply sources in the Baton Rouge area – treated municipal sewage effluent. This source may be usable by local industry for once-through cooling and possibly recirculated cooling, or other purposes, with or without further treatment to improve the quality and consistency of supply. It may also be useful for public and agricultural irrigation and related non-industrial uses. Treated effluent is currently pumped into the Mississippi River after treatment is completed, eliminating the potential for any additional beneficial uses. In the future, this source may be beneficially re-used, replacing an equivalent volume of groundwater usage, and thereby providing better management of the groundwater resource for the legislatively mandated high priority purpose as a drinking water supply for local residents.

The primary goal of this phase of the study was to evaluate the technical feasibility of the use of City of Baton Rouge/Parish of East Baton Rouge (City/Parish) wastewater treatment plant

(WWTP) effluent as a source of reclaimed water to replace or supplement existing industrial groundwater uses, and/or provide an alternative water supply source for new industry. The overall objectives identified and completed to meet the study goals were to:

- Review historical water usage and quality data for the local groundwater and surface water resources,
- Assess the volume and quality characteristics of the reclaimed water source (i.e. – City/Parish WWTP effluent),
- Evaluate the water supply volume and quality requirements of local industry by supply source and use category,
- Compare the results of the current water supply, reclaimed water source and industrial water usage assessments to determine the viability of a potential reclaimed water program, and
- Identify alternatives for improvement of reclaimed water quality to allow use as an industrial water supply source.

Historical groundwater and surface water usage data were obtained and evaluated for the five parish area surrounding the study area (Ascension, East Baton Rouge, Iberville, Livingston and West Baton Rouge) in order to assess current usage rates and recent usage trends for these resources. Local groundwater and Mississippi River water quality data were also obtained to allow a characterization of the current water supply sources in the area.

The quality and volume of the sewage effluent from the three City/Parish WWTPs (North WWTP, Central WWTP and South WWTP) were characterized utilizing three and a half years of effluent monitoring data. In order to provide an additional assessment of the potential for use of City/Parish WWTP effluent as a reclaimed water source, a limited supplemental effluent characterization program was completed at the three City/Parish WWTPs.

The assessment of the industrial water supply usage and quality requirements in the study area was facilitated through the completion of a survey of local industries, files searches performed at the Louisiana Department of Environmental Quality (LDEQ) and literature research. Industrial water usage rates and quality requirements were further delineated by water supply source and industrial use categories.

The ultimate objective of the study is the development of a local Baton Rouge area reclaimed water program that meets the requirements of potential users with very high reliability, no public health concerns, compliance with industrial discharge permits, and an equal or lower cost than current water sources, so that reclaimed water becomes the preferred source.

Conclusions reached as a result of the current water supply, reclaimed water supply and industrial water supply assessments included the following:

- Groundwater usage in the five parish area including East Baton Rouge Parish as of CY200:
  - Is increasing with time
  - Represents >96% of the total drinking water supply
  - Is almost 40% greater for industrial water supply (114 MGD) than for drinking water supply (83 MGD)
  - By industry represents approximately 56% of the total groundwater pumpage (about 114 MGD of 204 MGD total).
- The total average groundwater use for industrial purposes in the study area is about 89 MGD. The top three uses of groundwater by local industry include process use or consumption (40 MGD), cooling (22 MGD), and boiler feedwater (15 MGD).
- City/Parish WWTP effluent can provide an average total of approximately 61 MGD of reclaimed water as an alternative industrial water supply source, potentially replacing some percentage of the current industrial groundwater usage.
- Treated sewage effluent quality compares favorably to, and in some cases is better than, that of Mississippi River surface water quality for some constituents (i.e. – lower TSS and total hardness), but would require additional treatment to approach that of local groundwater resources.
- Given the current water quality characteristics of the C/P WWTP treated effluent, the most likely use of reclaimed water supply by local industry would be for cooling or utility purposes, if a reclaimed water of consistent volume and quality could be provided. With additional treatment or blending, other alternative industrial water supply uses may also be developed.

- Statutory reclaimed water quality characteristics written into Louisiana law would need to be modified to allow for some lower quality industrial water supply uses, because these limits are intended for non-consumption public reuses. However, these statutory limits may be appropriate for higher quality industrial uses.

- Several options are available to improve quality of reclaimed water, including additional treatment, blending with groundwater or Mississippi River water, or potentially blending with treated industrial treated effluent streams.

- Further study of individual industrial water supply sources and specific industrial water uses is required to determine the technical and economic feasibility of using reclaimed water as a source for an alternative water supply program for local industry. It is especially important to determine specific water quality requirements and potential additional treatment requirements for use of reclaimed water by industry.

Recommendations of the current study include the following:

- Develop a more detailed characterization of existing C/P treated effluent, including variability in volume and quality of the source, for purposes of determining suitability for a potential range of reclaimed water uses.

- Develop a conceptual plan for alternative industrial water supply using reclaimed water derived from treated sewage effluent, including identification of individual industrial facilities most likely to participate in such a program and evaluation of the regulatory impacts on existing industrial discharge permits.

- Develop a conceptual plan for reclaimed water transport from existing treated sewage sources, reclaimed water storage requirements, and additional treatment and/or blending requirements to achieve industrial water supply quality requirements.

- Develop a conceptual plan for reclaimed water blending using a new Mississippi River surface water blending plant constructed for that purpose.

- Develop conceptual level cost estimates for reclaimed water transport, storage, treatment, and/or blending alternatives for a local Baton Rouge area reclaimed water program.

- Perform a preliminary financial evaluation for a local Baton Rouge area reclaimed water program, including costs and benefits for providers and users, public benefits of reduced groundwater pumpage, and financial mechanisms required to provide economic viability.

1.1 BACKGROUND INFORMATION

The Baton Rouge metropolitan area is fortunate to have an abundant, high-quality groundwater resource that has been utilized since the time of Spanish and French exploration of the area. Early wells drilled in the area into the deeper aquifers of this local resource resulted in artesian or flowing wells that did not require pumping. The water was discovered to be of excellent quality and useful for most purposes without any form of treatment. Thus the quantity, quality, and low cost of use led to rapid development of this resource in the 20th century, and provided a major stimulus for economic and population growth in the Baton Rouge area.

The development of the local groundwater resource for drinking purposes has followed the development of the local population demographics, primarily through private enterprise, resulting in the formation of private water companies that today provide drinking water to the metropolitan population. The rapid growth of industry in the Baton Rouge metropolitan area also resulted in part from the availability of an abundant and high quality groundwater resource, in addition to the availability of the Mississippi River as a water supply source, a discharge location for treated wastewater, and as a navigable waterway for shipment of raw materials and products.

The rapidly increasing use of local groundwater and the resulting saltwater encroachment into the resource led to the formation of the Capital Area Ground Water Conservation Commission (CAGWCC) in the 1970s, as concerns about the volume of usage and the long term effect on groundwater table drawdown emerged as local water supply issues. Since that time, the CAGWCC has monitored the local groundwater source (i.e. – pumpage, quality, water table elevations, etc.) through a cooperative program with the US Geological Survey (USGS). In addition, the CAGWCC has established a fee system for selected local groundwater users.

As the greater Baton Rouge area grew in population and industrial development, concurrent increases were observed in water usage from both groundwater resources and the Mississippi River. Particularly in East Baton Rouge Parish, developers of residential and commercial properties as well as industry initiated related sewage and industrial wastewater treatment programs to address environmental impacts of wastewater discharged after beneficial uses were completed. These programs ranged from comprehensive treatment before discharge to the Mississippi River or the Amite River Drainage Basin, to once-through cooling water usages that returned water directly to the Mississippi River with only a temperature change.

As the 1990s ended in the Baton Rouge metropolitan area, increasing groundwater usage for both drinking and industrial purposes continued to draw down groundwater levels, both locally and statewide, and generated interest in the imposition of additional management controls. In 2001, the Louisiana Legislature enacted groundwater legislation (Act 446) including the formation of an interim Louisiana Groundwater Management Commission (LGMC) to address "finding a middle ground between allowing use of the resource and protecting it for the future." One of the first steps taken by the LGMC was development of the "Statewide Water Management Plan, Volumes 1 to 3" (December 2002). This comprehensive plan provides a compendium of information relative to statewide groundwater resources, and proposes a regulatory and management plan for establishing an Office of Water Resources in the Louisiana Department of Natural Resources. The term of the interim LGMC expired on June 30, 2003 and was reestablished as a permanent LGMC with the passage of Act 49 in 2003 by the Louisiana Legislature.

The water management plan includes a chapter on alternatives to conserve fresh groundwater, including the option of alternative sources for selected usages including "reclaimed water." Reclaimed water is defined in this study as treated wastewater or recycled water that is available in significant volumes for further usage with or without additional treatment. The plan embodies the principle that the use of high quality fresh groundwater should be first dedicated to drinking uses. Other users, including industry, will be authorized by permit for groundwater usage in the future under the management procedures envisioned by the plan.

1.2 RECLAIMED WATER STUDY OBJECTIVES

The objectives of this study were as follows:

- Evaluate the major source of reclaimed water in the Baton Rouge metropolitan area relative to volume and quality characteristics (i.e. – City of Baton Rouge/ Parish of East Baton Rouge wastewater treatment plant effluent).
- Evaluate the water supply characteristics and needs of local industry.

- Evaluate the technical feasibility of a reclaimed water reuse program in the local study area that can reduce the dependence of industry on groundwater resources.

1.3 LOCAL GROUNDWATER SUPPLY ISSUES

Local groundwater supply issues were summarized in detail in the recent report from the LGMC entitled "Statewide Water Management Plan, Volumes 1 to 3" (December 2002). These issues include the following in the Baton Rouge area as summarized briefly in this section:

Increasing pumpage over time

Both municipal drinking and other (industrial, commercial, agricultural) usages have been steadily increasing. Selected aquifers recovered somewhat after several large industrial groundwater withdrawals were terminated in 1974. However, pumpage has continued to increase in almost all of the fresh water aquifers in the Baton Rouge area.

Localized drawdown of the groundwater table in several local aquifers

Monitoring of the local aquifers indicates a significant cone of depression centered in the Baton Rouge metropolitan area, in all of the primary aquifers, caused by the increasing pumpage over time. Drawdown has been demonstrated to be reversible with decreased pumpage, but requires years to decades to achieve significant recharge and reversal of water table drawdown.

Salt water encroachment into fresh water aquifers via the Baton Rouge Fault

This is considered the most significant issue with local groundwater resources. The Baton Rouge Fault is a major dividing line between fresh groundwater resources north of the fault line, and rapidly increasing salinity in resources south of the fault line with increasing depth. Pressure differentials across the fault line due to heavy pumping north of the fault line have caused saline water encroachment in several aquifers, especially the "1,500-Ft sand." The isoconcentration contour of this saline water continues to migrate northward with time, and is considered primarily an issue related to increasing pumpage.

Groundwater quality issues in selected withdrawal areas of the Mississippi River Alluvial Aquifer

The Mississippi River Alluvial Aquifer becomes less fresh (i.e. - higher total dissolved solids or TDS) in the Baton Rouge area and immediately down gradient. This aquifer also has other defining quality characteristics, including higher hardness, high iron concentrations in some locations, and odor causing sulfur compounds in some locations. Because of these quality issues, this aquifer is not the groundwater supply of choice for drinking, although several smaller municipal supplies are extracted from this aquifer. In addition, industry does not favor this aquifer, especially at pumpage locations south of Baton Rouge, for high purity uses such as demineralization; however, industry does make use of the aquifer.

Concerns over contamination by surface wastes of the more shallow reaches of the Mississippi River Alluvial Aquifer

Generally, local groundwater resources in the Southern Hills aquifers are recharged well to the north in the Florida parishes and in southwestern Mississippi. These areas are generally rural, with very few threats from infiltrating runoff with the exception of agricultural sources (pesticides, animal wastes, etc.). No significant waste disposal issues have been documented that affect groundwater usage in the Baton Rouge area. The Mississippi River Alluvial Aquifer is more susceptible to waste contamination, as the aquifer is shallow and major industrial sites occupy the land directly above the aquifer along the banks of the Mississippi River. Although many of the industrial sites have documented land-based waste disposal issues from historical practices of storing wastes in unlined impoundments, pits, ponds, and lagoons, none of these issues have been linked to major documented contamination of the alluvial aquifer in the Baton Rouge area. However, industry is required to monitor the aquifer at several locations, and other agencies monitor general water quality at many of the pumping wells in the aquifer.

1.4 RECENT LEGISLATIVE ISSUES

Because of the priority placed on local groundwater issues, the increasing usage of local groundwater resources for non-drinking purposes has attracted the attention of state legislators and regulators. The following legislative actions have been taken recently to further identify and manage the legal, technical, financial, and institutional issues related to local (and statewide) groundwater usage:

Establishment of special groundwater management districts

A second special management district, the Sparta Groundwater Conservation District (SGCD), was created in 1999 by the Louisiana Legislature to address groundwater usage and quality issues associated with the Sparta Aquifer in northwest Louisiana. The SGCD and the CAGWCC (the CAGWCC was created in 1974) have common goals and purposes. The CAGWCC has taken recent regulatory actions to address the local Baton Rouge groundwater resources issues as follows:

- **Resolution of October 1991 affecting the center of drawdown in the "2,000-Ft Sand" in north Baton Rouge:** The resolution established a maximum pumpage rate of 26 million gallons per day (MGD), proposed a maximum water level of 320 feet below ground surface (BGS), and encouraged development of alternative aquifers less susceptible to saltwater encroachment including the Mississippi River.
- **Adopted a fee system for the use of groundwater pumped from the Southern Hills aquifer system (five parish area):** Fees were set at $3.50 per million gallons (Mgal) for wells with a pumpage of >50,000 gallons per day (GPD). These fees are used to support the data collection and management operations of the CAGWCC, along with other relevant studies conducted by the local USGS office.

Interpretation of historical groundwater law in light of new groundwater issues

Act 446 of the 2001 Regular Legislative Session defined the "Critical Groundwater Area (CGWA)" as a groundwater resource meeting the following criteria:

- Further decline of water levels will render the aquifer inadequate as a supply for current or future demands without management controls.
- Increases in total dissolved solids (TDS), chlorides, or other constituents indicative of salt water encroachment will render the aquifer inadequate as a drinking water source.
- Annual pumpage exceeds established recharge rates sufficiently to threaten the sustainability of the aquifer.

In addition, Act 446 created the interim Louisiana Groundwater Management Commission (LGMC) as a state-level board to oversee the statewide management of groundwater resources, and authorized the preparation of a Statewide Water Management Plan (emphasizing groundwater). The term of the interim LGMC expired on June 30, 2003.

Preparation of the Statewide Water Management Plan in 2002

The Statewide Water Management Plan (emphasizing groundwater) was prepared by a team of consultants retained by the LGMC in 2002. This comprehensive plan achieved several objectives in planning for statewide management of groundwater resources:

- Groundwater resource identification and aquifer designations
- Groundwater uses and pumpage statewide
- Projections of future groundwater pumpage
- Legal and institutional issues discussion and summary
- Evaluation of groundwater management strategies
- Developed framework for future comprehensive groundwater management planning including proposal for a new state agency

Passage of Act 49 in the 2003 Regular Legislative Session

Act 49 of 2003 revised previous legislation related to groundwater resources management by designating the Office of Conservation in the Department of Natural Resources as the groundwater resources jurisdictional agency. It also created a permanent Louisiana Groundwater Management Commission (LGMC) and the Groundwater Management Task Force, provided for designation of critical groundwater areas, clarified the duties of the special groundwater conservation districts in Louisiana, provided for registration of certain groundwater wells, as well as related matters.

This legislation is important to the discussion of alternative water supplies, because in the future the Commissioner of Conservation and the Groundwater Resources Commission may take actions to deny permits for new wells where groundwater aquifers cannot be sustained with additional pumpage. The commission can also require adjustment of pumpage in critical groundwater areas or other locations where aquifers cannot be sustained, as well as during groundwater emergencies (e.g., severe droughts). If groundwater pumpage and usage is limited, access to alternative water supplies may become critical to local users of large volumes of water.

Passage of Act 985 in the 2003 Regular Legislative Session

This new law provides for mandatory use of reclaimed water for particular needs, including irrigation and selected industrial uses. After August 2003, groundwater suitable for potable usage may not be used for selected public irrigation if there exists an available reclaimed water source. Industrial uses and selected irrigation uses existing before August 2003 may elect to use reclaimed water, but are not required to do so. Irrigation water used for crops for human consumption is excluded from the requirement to use reclaimed water. Reclaimed water used for these purposes must meet all federal and state water quality standards and the following minimum quality characteristics from the point of origin:

- Biochemical Oxygen Demand (BOD_5) $\leq$5 mg/L
- Total Suspended Solids (TSS) $\leq$5 mg/L
- Ammonia-nitrogen (NH_3-N) $\leq$2 mg/L
- Total Nitrogen (TN) $\leq$10 mg/L
- Total Residual Chlorine (TRC) $\geq$2 mg/L

Records of water quality by testing seven days per week must be supplied by the producer of the reclaimed water. The cost of reclaimed water to the user must be equal to or less than the equivalent cost of treated potable water, including the costs to transport the reclaimed water to the end user. Capital improvements made in accordance with the provisions of this law qualify for any tax deductions provided for by law. Transmission and transport of reclaimed water shall comply with the requirements of the Louisiana State Sanitary Code relative to separation from potable water distribution systems.

Copies of both recent legislative acts (Acts 49 and 985) are provided in Appendix A as a reference.

1.5 NATIONAL PERSPECTIVE ON ALTERNATE WATER SUPPLIES

The federal government and most state governments are increasingly focusing on diminishing groundwater resources in many areas of the United States. Over-pumpage of major aquifers, salt water encroachment in coastal areas, and aquifer contamination by wastes are major national issues. The increased focus on these and related issues has resulted in new legislation and regulation, increased levels of monitoring, prioritizing of groundwater resources to guarantee supply to the most critical uses, re-injection of fresh water into selected aquifers to halt the progression of salt water encroachment, and regional plans to look at alternative sources of water supply.

The focus of this study is the use of reclaimed water as a potential alternative source of water supply for industrial uses in the Baton Rouge area.

2.1 LOCAL WATER SUPPLY SOURCES AND USAGE

The primary local sources of water supply are the Mississippi River and local groundwater resources. Other sources, such as reclaimed water, have been identified as potential supplemental water supply sources. This study examines the potential for the use of large volume, reclaimed water sources in East Baton Rouge Parish as an alternative water supply for local industrial facilities.

2.2 GROUNDWATER

The Statewide Water Management Plan (2002) places local Baton Rouge groundwater resources in Region III of a statewide geohydrologic classification system. The system of aquifers providing local groundwater supplies include the Mississippi River Alluvial Aquifer and the Southern Hills Aquifer group, which consist of several major interbedded sand freshwater aquifers to depths of 3,000 feet or greater below local ground surface (BGS). These sand aquifers have historically been referred to by depth, for example, the "1,500-Ft Sands." The statewide plan defines the local aquifers based on depth below land surface as equivalent to other named aquifers at the same depths in other locations of the State. The following Table 2-1 summarizes the designation and nomenclature for local groundwater aquifers:

Table 2-1
Groundwater Aquifer Designations
in the Baton Rouge Area

Aquifer Depth (Ft BGS)	Traditional Designation	LGMC WMP Designation
50 to 500	Mississippi River Alluvial Aquifer	Mississippi River Alluvial Aquifer
400 to 600	"400-Ft", "600-Ft" Sands	Southern Hills Chicot-equivalent Aquifer
800 to 1,700	"800-Ft", "1,000 Ft", "1,200-Ft", "1,500-Ft", "1,700-Ft" Sands	Southern Hills Evangeline-equivalent Aquifer
2,000 to 2,800	"2,000-Ft", "2,400-Ft", "2,800-Ft" Sands	Southern Hills Jasper-equivalent Aquifer

2.2.1 Drinking Water Supplies

Use of the local groundwater aquifer system by municipal (public) or private water supply companies for drinking water purposes is significant, and is increasing with time. Although the Mississippi River is available as a drinking water source, in the local Baton Rouge area almost all drinking water originates as groundwater.

Pumpage statistics for the past 10+ years for East Baton Rouge Parish and the four surrounding parishes are summarized in Table 2-2 (Statewide Water Management Plan, Appendix III; Water Use In Louisiana – 2000). Important conclusions relative to the overwhelming use of groundwater for drinking purposes include the following:

- Groundwater usage for drinking purposes constitutes more than 96% of total drinking water supply in the five parish area surrounding East Baton Rouge Parish (Ascension, East Baton Rouge, Iberville, Livingston and West Baton Rouge Parishes).
- Groundwater usage for drinking purposes is increasing in all of the five parishes with time, reflecting the increasing population growth of the greater metropolitan Baton Rouge area.
- Groundwater is pumped from both the Southern Hills Aquifers and the Mississippi River Alluvial Aquifer in significant quantities.
- The intrinsic high quality of groundwater resources relative to that of the Mississippi River surface water resource results in significantly lower costs to treat and distribute the water supply to water customers.

As noted elsewhere in this report, the use of groundwater resources for drinking water supplies is considered the highest priority use of this resource. New legislation since the year 2000 in Louisiana increasingly emphasizes and encourages drinking uses as the best use of the groundwater resource.

Table 2-2
Local Water Supply Sources for Drinking Water Usage

User	Groundwater Supplies (MGD)			Surface Water Supplies (MGD)		
	1990	1995	2000	1990	1995	2000
East Baton Rouge Parish						
Baker Utilities	1.95	1.92	2.00	-	-	-
Baton Rouge Water Co.	43.38	43.46	49.06	-	-	-
Bellingrath Water Co.	0.19	0.20	0.26	-	-	-
Parish Water Co.	7.13	7.31	9.91	-	-	-
Red Oaks Water Co.	0.59	0.58	0.64	-	-	-
Slaughter Water System	0.08	0.03	0.03	-	-	-
Zachary Water System	1.23	1.43	1.90	-	-	-
East Baton Rouge Parish Totals	**54.55**	**54.93**	**63.80**	**-**	**-**	**-**
Ascension Parish						
Capitol Utilities Co.	0.55	0.57	0.57	-	-	-
Diversion Water Co.	-	-	0.05	-	-	-
Gonzales Water System	0.89	1.17	1.27	-	-	-
Parish Water Co.	-	0.50	0.57	-	-	-
Peoples Water Service	-	-	-	1.57	1.64	2.36
Ascension Parish Totals	**1.44**	**2.24**	**2.46**	**1.57**	**1.64**	**2.36**
Livingston Parish						
Denham Springs Water	2.61	3.05	3.60	-	-	-
Ward 2 Water District	1.00	1.61	2.48	-	-	-
Walker Water System	0.51	0.63	0.99	-	-	-
Livingston Water System	0.23	0.29	0.36	-	-	-
French Settlement Water	0.22	0.37	0.20	-	-	-
Others	0.46	0.68	0.99	-	-	-
Livingston Parish Totals	**5.03**	**6.63**	**8.62**	**-**	**-**	**-**
Iberville Parish						
Maringouin Water System	1.25	1.18	1.18	-	-	-
Iberville WW District 3	-	-	-	1.04	1.04	1.03
Iberville WW District 4	0.25	0.31	0.44	-	-	-
Others	0.25	0.20	0.23	-	-	-
Iberville Parish Totals	**1.75**	**1.69**	**1.85**	**1.04**	**1.04**	**1.03**
West Baton Rouge Parish						
Plaquemine City Water	1.66	1.55	1.48	-	-	-
Port Allen Water	0.68	0.63	0.62	-	-	-
WBR Water System	1.38	1.71	1.86	-	-	-
Others	1.68	1.57	2.11	-	-	-
West Baton Rouge Parish Totals	**5.40**	**5.46**	**6.07**	**-**	**-**	**-**
Totals – Baton Rouge Area	**68.17**	**70.95**	**82.80**	**2.61**	**2.68**	**3.39**

2.2.2 Industrial Groundwater Supply

Significant industry has located along the Mississippi River in the Baton Rogue area since the early 1900s, when what is now the ExxonMobil – Baton Rouge Refinery complex began operations. Industrial development in the area has been concentrated in petroleum refining, related petrochemical and inorganic chemical production, and the pulp & paper industry. Over the years the industry base has diversified, but remains primarily centered within the selected basic chemical manufacturing categories. The local industrial facilities require large volumes of water supply for consumptive process uses, cooling of thermal processes, utilities (especially boiler feed water usage), firewater, potable water, demineralized water for high purity uses, and many other smaller-volume uses.

Both groundwater and surface water are important sources of water supply to local industry. Groundwater usage predominates in the northern Baton Rouge industrial corridor, where supplies from the Southern Hills and Mississippi River Alluvial Aquifer are not currently limited. Surface water drawn from the Mississippi River predominates in the southern industrial corridor from St. Gabriel to Geismar, where groundwater supply is limited to lower quality Mississippi River Alluvial Aquifer sources. Refer to Figure 1 for the relative locations of these industrial regions.

Table 2-3 summarizes the overall usage of groundwater by industry in the Baton Rouge area, including primarily Ascension, East Baton Rouge, Iberville, and West Baton Rouge Parishes along the Mississippi River corridor. Livingston Parish has no appreciable industrial water use. Data from Table 2-3 indicate that a total of approximately 114 MGD of groundwater is used for industrial purposes in the metropolitan Baton Rouge area, most of which is in East Baton Rouge and Iberville Parishes, where larger concentrations of industries are located.

In comparison, industrial usage of groundwater in the local area (114 MGD) is almost 40 percent greater than the use of groundwater for drinking purposes (83 MGD). Total use of groundwater for drinking and industrial uses in the Baton Rouge area is almost 200 MGD (as of CY2000).

Table 2-3
Local Water Supply Sources for Industrial Water Usage

SIC Code / User	Groundwater Supplies (MGD)			Surface Water Supplies (MGD)		
	1990	1995	2000	1990	1995	2000
East Baton Rouge Parish						
20 / Food Products	0.27	0.29	0.33	-	-	-
26 / Paper Products	33.08	36.90	25.60	-	-	-
28 / Chemicals	23.66	22.07	22.54	-	-	-
29 / Petroleum Refining	4.48	7.81	13.83	21.53	19.89	18.49
30 / Rubber & Plastics	1.16	1.93	0.74	-	-	-
32 / Glass, Clay, Concrete	0.01	-	0.01	-	-	-
33 / Primary Metals	0.16	0.22	0.28	-	-	-
Power Generation	5.77	5.04	7.44	-	-	-
East Baton Rouge Parish Totals	**68.59**	**69.22**	**70.77**	**21.53**	**19.89**	**18.49**
Ascension Parish						
20 / Food Products	7.15	4.83	5.45	-	-	-
28 / Chemicals	4.32	3.96	1.95	180.05	209.05	199.46
Power Generation			-	-	-	-
Ascension Parish Totals	**11.47**	**8.79**	**7.40**	**180.05**	**209.05**	**199.46**
Iberville Parish						
13 / Oil & Gas Extraction	-	-	-	3.77	-	0.05
20 / Food Products	2.47	4.23	7.40	-	-	-
28 / Chemicals	18.33	12.72	16.02	512.61	492.32	553.58
29 / Petroleum Refining	-	-	0.01	-	-	-
34 / Metal Products	0.01	-	-	-	-	-
Power Generation	1.31	1.68	1.65	525.74	692.82	569.94
Iberville Parish Totals	**22.12**	**18.63**	**25.80**	**1,042.12**	**1,185.14**	**1,123.50**
West Baton Rouge Parish						
20 / Food Products	1.79	1.56	3.44	-	-	-
28 / Chemicals	2.38	2.81	6.54	-	-	-
29 / Petroleum Refining	0.14	0.15	0.14	-	-	-
Power Generation	-	-	-	-	-	-
West Baton Rouge Parish Totals	**4.31**	**4.52**	**10.19**	**-**	**-**	**-**
Totals -Baton Rouge Area	**106.49**	**101.16**	**114.16**	**1,243.70**	**1,414.08**	**1,341.45**

2.2.3 Other Groundwater Uses

Other uses of local groundwater include rural domestic, livestock watering, agricultural crop irrigation, and aquaculture. These uses are relatively insignificant compared to drinking and industrial uses. Table 2-4 summarizes these minor miscellaneous uses in CY2000 (Water Use in Louisiana – 2000). The estimated total of 6.58 MGD for these miscellaneous uses is about 5% of the total groundwater pumpage in the local area.

Table 2-4
Other Groundwater Usage in the Baton Rouge Area – CY2000

Use Designation	Withdrawal (MGD)
East Baton Rouge Parish	
Rural Domestic	0.25
Livestock	0.13
Irrigation	0.26
Aquaculture	0.07
East Baton Rouge Parish Total	**0.71**
Ascension Parish	
Rural Domestic	2.80
Livestock	0.09
Irrigation	0.06
Aquaculture	0.07
Ascension Parish Totals	**3.02**
Livingston Parish	
Rural Domestic	2.15
Livestock	0.14
Irrigation	0.05
Aquaculture	0.20
Livingston Parish Totals	**2.54**
Iberville Parish	
Rural Domestic	0.15
Livestock	0.05
Irrigation	-
Aquaculture	0.05
Iberville Parish Totals	**0.25**
West Baton Rouge Parish	
Rural Domestic	0.04
Livestock	0.02
Irrigation	-
Aquaculture	-
West Baton Rouge Parish Totals	**0.06**
Totals – Baton Rouge Area	**6.58**

2.3 MISSISSIPPI RIVER

The Mississippi River represents the largest fresh water supply resource in the southern United States, especially in the final reach of the river south of the Atchafalaya River diversion structure. Thirty percent of the total flow of the river is mandated by the US Congress to be diverted at the Old River Control Structures location about 100 miles north of Baton Rouge. The remainder of the total river flow passes by the metropolitan Baton Rouge area, where withdrawals are made primarily for industry, but also for minor drinking water supplies. Further south of the Baton Rouge area, where suitable fresh groundwater resources are no longer available in large quantities, the Mississippi River becomes the water supply of choice for almost all fresh water uses, including drinking (e.g., the New Orleans metropolitan area) and industrial uses.

Data previously presented in Table 2-2 (drinking water usage) and Table 2-3 (industrial water usage) reflect the rapid change in water supply choice from groundwater resources to the Mississippi River south of Baton Rouge (in Ascension and Iberville Parishes), and the increased use over time of both groundwater and surface water supplies.

2.3.1 Public Water Supplies

North of the Ascension Parish boundary, there are no drinking water withdrawals from the Mississippi River. In the Ascension Parish and Iberville Parish area south of Baton Rouge, there are only two relatively small surface water drinking water supply withdrawals (totaling 3.4 MGD in CY2000).

South of Iberville Parish, however, almost all of the public drinking water supplied is withdrawn from the Mississippi River, as the volume of suitable fresh groundwater diminishes rapidly. The groundwater that is available south of this location is primarily associated with the Mississippi River Alluvial Aquifer, a very large reservoir, the water level of which fluctuates with the stage of the Mississippi River. Other aquifers that provide some fresh water downriver include the Gramercy, Norco and Gonzales-New Orleans Aquifers.

The lower Mississippi River supports withdrawals for drinking water supplies that are very large. Examples are as follows:

- Orleans Parish – 155 MGD

- Jefferson Parish – 85 MGD
- St. Charles Parish – 10 MGD
- St. Bernard Parish – 10 MGD, and
- Plaquemines Parish – 8 MGD

2.3.2 Industrial Water Supplies

Industrial water supply withdrawals from the lower Mississippi River mimic to some degree the pattern of drinking water supplies. North of Baton Rouge, industrial water supply withdrawals from the river are very limited. The northern tier of industrial locations in the Baton Rouge metropolitan area also is dominated by groundwater usage (70.8 MGD), although Mississippi River withdrawals are significant (18.5 MGD).

South of Baton Rouge, industrial withdrawals from the Mississippi River predominate, because of the lack of large volumes of suitable fresh groundwater. Examples include the following:

- Ascension Parish – 199.5 MGD
- Iberville Parish – 1,123.5 MGD
- St. James Parish – 227.3 MGD
- St. John the Baptist Parish – 80.7 MGD
- St. Charles Parish – 2,689.7 MGD
- Jefferson Parish – 1,058.6 MGD
- Orleans Parish – 582.3 MGD, and
- St. Bernard Parish – 271.2 MGD

More than half of these volumes consist of once-through cooling water (OTCW) withdrawals used at conventional and nuclear power plants. This water is generally returned to the river immediately after use, with only a change in temperature.

The remainder of industrial uses includes process uses, recirculating cooling uses, boiler feedwater, firewater, and other utilities. Consumptive uses include some process uses, steam system consumption, and evaporation from recirculated cooling towers. Most of the remaining Mississippi River withdrawals for industrial uses are used, treated to achieve discharge permit limits, and are subsequently returned to the river.

2.4 RECLAIMED WATER

Recent Louisiana legislation (Act 985, as discussed in Section 1 and included in Appendix A) has defined "reclaimed water," and established a legal framework within which reclaimed water can be re-used in applications such as industrial cooling and non-crop irrigation. Reclaimed water is defined as "water that as a result of treatment of waste is suitable for a direct beneficial use or a controlled use and that is therefore considered a valuable resource". At this time, reclaimed water is not a major source of water supply in the Baton Rouge study area.

Nationally, reclaimed water is becoming an increasingly used alternative water supply source in several types of applications. These include:

- Re-injection of reclaimed water into drinking water aquifers to retard salt water encroachment
- Irrigation of non-crop agricultural commodities
- Re-use in industrial applications, especially non-contact cooling
- Direct recycle in industrial applications after advanced wastewater treatment to achieve specific water quality goals

Many of the reservations about use of reclaimed water, either directly or more likely indirectly by recharge of aquifers, as a drinking water supply are derived from public health concerns about disease-causing organisms that can affect the health of large numbers of people in a very short period of time. Modern applications of disinfection during wastewater treatment have reduced the likelihood of such public health concerns, but there is a long-lived public perception that reclaimed water may be unsafe. Thus the key to use of reclaimed water in the short term is emphasis on non-drinking, non-consumptive uses that do not threaten public health. The current Louisiana reclaimed water legislation exempts both drinking water and agricultural crop irrigation intended for human consumption from the requirement to consider use of reclaimed water.

2.5 OTHER SOURCES

Other sources of water supply include small domestic groundwater wells, individual surface water irrigation withdrawals, and related sources which are not of sufficient magnitude to be considered during this reclaimed water study.

The treated wastewater effluent originating from the City of Baton Rouge/Parish of East Baton Rouge (City/Parish) Publicly-Owned Treatment Works (POTWs) constitutes one of the largest volume, potential sources of reclaimed water that may be beneficially used for industrial or other uses, as a possible supplement or replacement for groundwater. The objectives of this study with regard to potential reuse of City/Parish POTW effluent wastewater as a source of reclaimed water included:

- Determine the current and potential effluent wastewater volumes available from the City/Parish wastewater treatment plants (WWTPs)
- Determine the current and potential effluent wastewater quality from the City/Parish WWTPs

The sections that follow present the results of the City/Parish WWTP effluent wastewater volume and quality assessment relative to the potential for use as reclaimed water.

Another potential source of reclaimed water in the study area is treated industrial wastewater effluent, which could potentially provide an even larger volume of water for reuse than municipal WWTP effluent. There are specific quality issues associated with industrial effluent that could limit or restrict its potential for use as reclaimed water. A discussion of the potential for use of industrial effluent wastewater as a source of reclaimed water and the associated issues are also presented in this section.

3.1 MUNICIPAL SEWAGE TREATMENT PLANT EFFLUENT

The City/Parish Department of Public Works (DPW) currently operates three major municipal wastewater treatment plants that serve the Baton Rouge area as follows:

- North Wastewater Treatment Plant (North WWTP)
- Central Wastewater Treatment Plant (Central WWTP)
- South Wastewater Treatment Plant (South WWTP)

All three plants provide primary and secondary treatment of domestic and commercial wastewater prior to discharge to the plant outfalls at the Mississippi River. The approximate locations of the three City/Parish WWTPs are shown on Figure 2. The secondary treatment process utilized at all three facilities is trickling filters followed by disinfection with chlorine and dechlorination with sulfur dioxide. The reported design capacity for each of the three wastewater treatment plants is presented in Table 3-1.

Table 3-1
Baton Rouge City/Parish Wastewater Treatment Plants
Existing Plant Design Capacities

Facility Name	Design Flow (MGD) [1]	
	Average Daily Flow (ADF) [2]	Peak Hourly Flow (PHF)
North WWTP	30.1	130.0
Central WWTP	18.5	65.0
South WWTP	45.2	119.0
Total	93.8	314.0

[1] Reference – Correspondence from Mr. Justin S. Haydel. P.E. – CDM to Mr. Robert Groht – Baton Rouge DPW, dated October 31, 1995.
[2] ADF values reported are plant design values and do not represent current operating conditions

3.1.1 City/Parish WWTP Effluent Quantity and Quality

In order to assess the potential for use of the treated effluent from the existing City/Parish WWTPs as reclaimed water, an evaluation to determine the current and potential effluent wastewater volumes and water quality was performed. The City/Parish WWTPs are operated under the requirements of the Louisiana Pollutant Discharge Elimination System (LPDES) discharge permit program, which requires treatment to achieve water quality effluent limits for discharge to the Mississippi River. Each of the WWTPs operates under a separate LPDES permit that requires daily monitoring of the following parameters in order to demonstrate permit compliance:

- Flow
- pH
- Biochemical Oxygen Demand (BOD_5)
- Total Suspended Solids (TSS)
- Total Residual Chlorine (TRC)
- Fecal Coliforms

The City/Parish is further required to report the compliance monitoring results by submitting monthly Discharge Monitoring Reports (DMRs) for each WWTP. The discharge permit also requires semiannual monitoring for a specific list of priority pollutants (organic/inorganic, metals, volatiles/semi-volatiles, pesticides/herbicides, etc.), in addition to effluent biomonitoring testing requirements.

As a first step in the effluent quantity/quality assessment process, monthly Discharge Monitoring Reports (DMR) data were obtained from the City/Parish DPW for each of the three City/Parish WWTPs for the period from December 1999 to May 2003, as well as the semiannual monitoring results from CY2001 and CY2002. The monthly effluent data were tabulated into spreadsheets and statistical correlations performed as presented in Appendix B. Table 3-2 summarizes the results of the data tabulation/correlation for the monthly effluent DMR data for the period of record. Semiannual testing data (including conventional/nonconventional and priority pollutant monitoring) for the four events completed at each plant in 2001 and 2002 are summarized in Table 3-3. Table 3-3 presents only water quality parameters that were detected above analytical method detection limits. For a summary of the complete analytical results for the semiannual testing, refer to Appendix C.

Discussion of Historical DMR Data

The following discussions summarize the effluent wastewater characterization data presented in Table 3-2 and Appendix B.

Wastewater Flow – The average effluent flow discharged to the Mississippi River from the North, Central and South WWTP are 15.95, 10.43, and 34.31 million gallons per day (MGD), respectively. The resultant total average effluent flow available for potential reuse is 60.69 MGD.

pH – The average pH of the effluent wastewater from the three plants ranged from 7.12 to 7.29 standard units (s.u.). The minimum pH of 6.00 s.u. was reported at the South WWTP and the maximum pH of 8.14 s.u. was reported at the North WWTP.

Table 3-2
Baton Rouge City/Parish Wastewater Treatment Plants
Historical Monthly Effluent DMR Data
December 1999 to May 2003

Value	Parameter								
	Flow (MGD)	pH (su)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	Total Residual Chlorine (mg/L)	Fecal Coliform (cols/100 mL)	Temp (°F)
North WWTP									
Average	15.95	7.29	24	380	21	347	0.10	1,461	68.41
Maximum	96.67	8.14	76	3,673	140	7,347	6.00	454,545	85.10
Minimum	6.42	6.10	6	84	4	59	0.00	10	45.86
Central WWTP									
Average	10.43	7.12	24	251	19	213	0.03	1,922	70.66
Maximum	48.50	7.84	81	1,358	60	1,936	0.75	530,000	89.06
Minimum	4.92	6.37	5	41	3	22	0.00	9	47.14
South WWTP									
Average	34.31	7.12	36	1,251	29	1,029	0.16	16,652	70.93
Maximum	98.42	7.97	110	5,298	78	7,047	0.80	3,000,000	85.82
Minimum	17.51	6.00	8	240	5	136	0.00	10	58.46

Table 3-3
Baton Rouge City/Parish Wastewater Treatment Plants
Semiannual Testing Results Summary – 2001 & 2002

Parameter	Concentration Range (mg/L or as otherwise noted)		
	North WWTP	Central WWTP	South WWTP
pH (s.u.)	7.2 – 7.3	7.0 – 7.1	7.1 – 7.2
BOD_5	16 - 17	16 – 22	25 – 30
TSS	8 – 10	10 – 13	13 – 29
Nitrates	10.1 – 11.75	6.3 – 10.6	1.45 – 9.8
Phenols	0.01 – 0.024	0.005 – 0.006	0.004 – 0.014
Fluoride	0.4 – 1.06	0.4 – 1.24	0.36 – 1.14
Barium	0.013 – 0.022	0.015 – 0.024	0.019
Copper	ND	0.012 – 0.020	0.014
Zinc	0.026 – 0.060	0.030 – 0.060	0.036 – 0.070
Chloroform	ND	0.006 – 0.008	0.008 – 0.023
Bis-2-ethylhexyl Phthalate	0.011 – 0.024	0.010 – 0.012	0.013 – 0.015

[1] Data only reported for parameters with values above the method detection limit

BOD_5 – The average effluent BOD_5 concentrations from the three WWTPs ranged from 24 to 36 mg/L, with a maximum value of 110 mg/L being reported for the South WWTP effluent. Minimum effluent BOD_5 concentrations ranged form 5 to 8 mg/L for the three WWTPs.

TSS – The effluent from the three City/Parish WWTPs exhibited average TSS concentrations ranging from 19 to 29 mg/L and minimum TSS concentrations from 3 to 5 mg/L. The maximum reported TSS concentration of 140 mg/L was reported at the North WWTP.

Total Residual Chlorine (TRC) – The average effluent TRC reported for the three WWTPs ranged from 0.03 to 0.16 mg/L. The maximum TRC concentration of 6.0 mg/L was reported at the North WWTP.

Fecal Coliform – The average effluent fecal coliform counts ranged from 1,461 to 16,652 colonies/100 mL with a maximum of 3,000,000 colonies/100 ml reported at the South WWTP. Positive fecal coliform counts typically are associated with periods of low Total Residual Chlorine (TRC) in the effluent. For reclaimed water use of the effluent, it will be important to maintain the required TRC level above the minimum required value at all times.

Temperature – The average effluent temperature from the three WWTPs ranged from 68.41 to 70.93 °F with a maximum of 89.06 °F reported for the Central WWTP effluent.

Discussion of Semiannual Testing Data

The following discussions summarize the semiannual testing data presented in Table 3-3 and Appendix C.

BOD_5, pH, and TSS – The concentrations reported for BOD_5, pH and TSS were similar to the historical DMR data presented in Table 3.2.

Nitrates – Effluent nitrate concentrations ranged from 1.45 to 11.75 mg/L for the three WWTPs. The average nitrate concentration ranged from 4.69 to 11.03 mg/L for the four monitoring events at each facility.

Cyanide – Cyanide was not detected in the effluent from the three WWTPs during priority pollutant testing.

Phenols – The effluent phenol concentrations for the three WWTPs ranged from not detected (ND or <0.002 mg/L) to 0.024 mg/L.

Fluoride – The average effluent fluoride concentrations ranged form 0.60 to 0.67 mg/L with a maximum value of 1.24 mg/L being reported at the Central WWTP.

Oil & Grease – No oil and grease was detected in the WWTP effluent streams during the priority pollutant sampling events (method detection limit 5.0 mg/L).

Metals – Of the metals tested for in the WWTP effluent streams, only barium, copper and zinc were detected. All others were below method detection limits. The metals concentrations exhibited by the WWTP effluents were as follows:

- Barium – ND (<0.010 mg/L) to 0.024 mg/L
- Copper – ND (<0.010 mg/L) to 20 mg/L
- Zinc – 0.026 to 0.070 mg/L

Volatile Organic Compounds (VOCs) – The only volatile organic compound detected during the semiannual pollutant testing was chloroform, with concentrations ranging from ND (<0.005 mg/L) to 0.023 mg/L.

Semivolatile Organic Compounds (SVOCs) – The only semivolatile organic compound detected was bis-2-ethylhexyl Phthalate, with concentrations ranging from ND (<0.010 mg/L) to 0.024 mg/L.

Pesticides/Herbicides – None of the compounds tested by these analyses exhibited levels above method detection limits.

3.1.2 City/Parish WWTP Supplemental Effluent Characterization Program

Routine effluent monitoring, both compliance and performance, typically performed by the City/Parish at its three WWTPs provides a good characterization of basic water quality parameters, but does not encompass all of the specific water quality parameters of importance for consideration of wastewater reuse for industrial or other purposes. In order to support the assessment of the potential reuse of the City/Parish WWTP effluent for industrial water uses, additional wastewater characterization data were required. Based on the water quality requirements of the various industrial water users, a supplemental effluent wastewater sampling and analysis program was developed and completed at each of the three WWTPs. A copy of the Supplemental Sampling and Analysis Plan is included in Appendix D for reference.

A total of six (6) sampling events were conducted at each of the three WWTPs over a five-week period in June/July 2003. In addition, one duplicate sample was collected at each WWTP concurrently with the target sample and analyzed for the complete matrix of analytes for lab quality assurance/quality control (QA/QC) purposes. All samples were collected by City/Parish DPW personnel, and included both 24-hour composite samples and grab samples as required by the selected analytical methods. All samples were submitted to and analyzed by the City/Parish contract laboratory (ENTEK Environmental Laboratories, Inc.). Table 3-4 presents a summary of the selected analyses and analytical methods utilized for the samples collected as part of this evaluation.

It is important to note that the supplemental data collection program was limited by the duration of the study, and was not intended to provide a comprehensive characterization of the City/Parish effluent. Instead, the supplemental data collection program was intended to provide an evaluation of whether the effluent can be used for reclaimed water purposes in a general sense (e.g., the effluent does not exhibit characteristics that would obviously make it unsuitable for any industrial reclaimed water use). A more detailed, ongoing effluent characterization would be required to further evaluate the suitability of the effluent for particular industrial water supply requirements.

3.1.3 City/Parish WWTP Supplemental Effluent Characterization Results

The results obtained from the supplemental effluent characterization program completed at the three City/Parish WWTPs were tabulated into spreadsheets and statistical correlations performed as presented in Appendix D. A summary of the statistical correlations for the data obtained from each WWTP is presented in Table 3-5. Copies of the laboratory analytical reports are also presented in Appendix D.

The following discussions summarize the results obtained during the supplemental effluent wastewater characterization program performed as presented in Table 3-5 and Appendix D.

pH – The effluent pH ranged from 7.5 to 8.1 s.u. for the three WWTPs. The effluent wastewater from the three plants exhibited an average pH of 7.7 s.u.

BOD_5 – The BOD_5 concentrations in the effluent wastewater from the three WWTPs ranged from 10 to 39 mg/L, with an overall average BOD_5 concentration of 21.5 mg/L.

COD – The minimum and maximum COD concentrations in the WWTP effluent streams were 58 and 419 mg/L, respectively. The average COD concentration for the three facilities was 93.8 mg/L.

TOC – The minimum and maximum TOC concentrations exhibited by the data were 10 and 57 mg/L, respectively, with an average concentration of 21.7 mg/L for all three WWTPs.

Oil & Grease – No oil and grease was detected in the WWTP effluent streams during the supplemental sampling events (method detection limit 5.0 mg/L).

TSS – The effluent suspended solids (TSS) concentrations in the wastewater were relatively low, ranging from 3 to 31 mg/L. The average effluent TSS concentration for the three WWTPs was 18.3 mg/L.

TDS – The effluent wastewater exhibited moderate levels of TDS, ranging from 310 to 490 mg/L for the three WWTPs. The average effluent TDS concentration was 411.9 mg/L.

Total Solids – The total solids concentrations exhibited by the data ranged from 330 to 495 mg/L, with an average value of 430.2 mg/L for the three plants.

Turbidity – The effluent turbidity ranged from 6.5 to 27.4 mg/L and averaged 15.32 mg/L for the three WWTPs.

Total Alkalinity – The effluent total alkalinity (as $CaCO_3$) ranged from 108 to 208 mg/L and averaged 152.6 mg/L for the three plants.

Total Hardness – The total hardness levels (as $CaCO_3$) observed in the samples collected at the three WWTPs ranged from 30.4 to 54.6 mg/L. The average effluent hardness for all three plants was 40.8 mg/L.

Table 3-4
Baton Rouge City/Parish WWTP Supplemental Sampling Program
Selected Analytical Parameters/Methods

Analyte/Parameter	Standard Method
pH, s.u.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	4110B
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	4110B
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as $CaCO_3$)	2340
Comprehensive metals scan (aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	4110B
Silica (SiO_2)	6010B
Sulfate (SO_4)	4110B
Sulfide (total)	376.1
Sulfite	377.1

Table 3-5
Baton Rouge City/Parish Wastewater Treatment Plants
Supplemental Effluent Characterization Results Summary

Parameter	Concentration (mg/L or as otherwise noted)								
	North WWTP			Central WWTP			South WWTP		
	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min
pH (s.u.)	7.8	8.1	7.6	7.6	7.6	7.5	7.8	7.9	7.6
BOD_5	15	20	10	15	22	10	34	39	20
COD	71	83	60	72	85	58	139	419	81
TOC	22	57	10	21	42	14	22	46	16
Oil & Grease		<5.0			<5.0			<5.0	
TSS	12	25	3	17	30	11	25	31	21
TDS	418	490	310	416	470	330	402	470	325
Total Solids	430	495	330	434	480	360	427	495	355
Turbidity (NTU)	11.1	21.0	6.5	13.3	26.2	9.1	21.7	27.4	18.9
Color		<1.0			<1.0			<1.0	
Total Alkalinity (as $CaCO_3$)	146	164	120	131	140	108	181	208	156
Nitrate-N	8.4	10.7	5.7	8.0	9.3	6.1	2.9	4.3	1.5
Nitrite-N	0.111	0.212	0.058	0.128	0.465	0.011	4.23	20.96	0.878
TKN	12.5	15.8	7.2	13.2	18.6	7.9	17.5	22.4	11.0
NH_3-N	0.99	1.83	<0.1	1.23	2.81	<0.1	11.36	12.20	<0.10
Cyanide		<0.02			<0.02			<0.02	
Chloride	34	40	26	51	66	42	34	37	28
Fluoride	0.35	0.42	0.26	0.45	0.53	0.39	0.34	0.60	0.24
Sulfate	17.1	19.5	15.8	22.3	25.5	20.0	16.8	18.6	15.5
Sulfite		<2.0			<2.0			<2.0	
Sulfide [1]		<2.0			<2.0			<2.0	
Total Phosphorous	2.87	3.85	2.01	2.26	3.38	1.69	3.24	3.71	2.50
Orthophosphate	2.47	3.13	1.58	1.96	2.39	1.51	2.60	2.88	2.13
Total Hardness (as $CaCO_3$)	36.2	41.5	30.4	45.2	54.6	35.8	40.9	43.8	35.0
Aluminum	0.34	0.65	0.20	0.24	0.60	0.16	0.42	0.64	0.32
Antimony		<0.01			<0.01			<0.01	
Arsenic		<0.01			<0.01			<0.01	
Barium	0.01	0.02	<0.01	0.06	0.30	0.02	0.02	0.02	0.02
Beryllium		<0.01			<0.01			<0.01	
Cadmium		<0.01			<0.01			<0.01	
Calcium	10.7	12.2	9.2	13.3	16.1	10.3	11.6	12.5	10.0
Chromium		<0.01			<0.01			<0.01	
Cobalt		<0.01			<0.01			<0.01	
Copper		<0.01			<0.01			<0.01	
Iron	0.34	0.67	0.19	0.47	0.96	0.33	0.64	0.81	0.49
Lead		<0.01			<0.01			<0.01	
Magnesium	2.34	2.69	1.81	2.93	3.50	2.40	2.91	3.29	2.40
Manganese	0.02	0.04	<0.01	0.06	0.10	0.04	0.06	0.08	0.04
Mercury		<0.0002			<0.0002			<0.0002	
Nickel		<0.01			<0.01			<0.01	
Potassium	7.1	8.8	6.2	6.8	9.3	5.6	7.8	11.0	6.3
Selenium		<0.01			<0.01			<0.01	
Silica	29	34	26	27	28	23	28	31	26
Silver		<0.01			<0.01			<0.01	
Sodium	94	110	66	98	112	69	88	100	70
Thallium		<0.01			<0.01			<0.01	
Vanadium		<0.01			<0.01			<0.01	
Zinc	0.03	0.04	0.02	0.03	0.04	0.03	0.04	0.04	0.03

[1] The sulfide value of 1,100 mg/L reported for the North WWTP on 7/21, 22/03 is considered anomalous and not included
[2] Values reported as < represent method detection limits.

Nitrogen Compounds – The effluent concentration ranges and average effluent concentrations exhibited by the data for nitrogen compounds at the three WWTPs were as follows:

- **Total Kjeldahl Nitrogen (TKN)** – range 7.17 to 22.40 mg/L, 14.42 mg/L average
- **Ammonia-nitrogen (NH_3-N)** – range <0.10 to 12.20 mg/L, 4.5 mg/L average
- **Nitrate-N** – range 1.45 to 10.70 mg/L, 6.44 mg/L average
- **Nitrite-N** – range 0.01 to 20.96 mg/L, 1.49 mg/L average

Phosphorous Compounds – The effluent concentration ranges and average effluent concentrations exhibited by the data for phosphorous compounds at the three WWTPs were as follows:

- **Total Phosphorous** – range 1.69 to 3.85 mg/L, 2.79 mg/L average
- **Orthophosphate** – range 1.51 to 3.13 mg/L, 2.34 mg/L average

Sulfur Compounds - The effluent concentration ranges and average effluent concentrations exhibited by the data for sulfur compounds at the three WWTPs were as follows:

- **Sulfate** – range 15.5 to 25.5 mg/L, 18.75 mg/L average
- **Sulfite** – not detected (<2.0 mg/L)
- **Sulfide** – all samples were below detection limits (<2.0 mg/L) except one, which had a sulfide concentration of 1,100 mg/L; this value is considered anomalous and was therefore not used.

Chloride – The effluent chloride concentrations ranged from 26.2 to 65.8 mg/L for the three WWTPs. The average effluent chloride concentration was 39.7 mg/L for all three plants.

Fluoride – The effluent fluoride concentrations ranged from 0.24 to 0.60 mg/L for the three WWTPs. The average effluent chloride concentration was 0.38 mg/L for all three plants.

Cyanide – Cyanide was not detected (<0.02 mg/L) in any of the samples collected.

Silica (SiO_2) – The effluent silica concentrations ranged from 23 to 34 mg/L and averaged 28.1 mg/L for the three WWTPs.

Metals – The metals detected in the effluent wastewater samples collected at the three WWTPs were barium, calcium, iron, magnesium, manganese, potassium, sodium and zinc. Other metals were below method detection limits (0.01 mg/L, 0.0002 mg/L for mercury). The effluent concentration ranges and average effluent concentrations exhibited by the data for metals at the three WWTPs were as follows:

- Aluminum – range 0.16 to 0.65 mg/L, 0.34 mg/L average
- Barium – range <0.01 to 0.30 mg/L, 0.04 mg/L average
- Calcium – range 9.2 to 16.1 mg/L, 11.85 mg/L average
- Iron – range 0.19 to 0.96 mg/L, 0.48 mg/L average
- Magnesium – range 1.81 to 3.50 mg/L, 2.73 mg/L average
- Manganese – range <0.01 to 0.10 mg/L, 0.05 mg/L average
- Potassium – range 5.6 to 11.0 mg/L, 7.25 mg/L average
- Sodium – range 66 to 112 mg/L, 93.0 mg/L average
- Zinc – range 0.02 to 0.04 mg/L, 0.03 mg/L average

In general, the results obtained during the supplemental effluent characterization program were within the same order-of-magnitude as the historical effluent DMR data reviewed as part of this study relative to consideration of a reclaimed water program. As stated previously, a more comprehensive effluent quality characterization that reflects normal variation and seasonal changes is required to fully evaluate the suitability of the C/P WWTP effluent as a reclaimed water source.

3.2 OTHER POTENTIAL SOURCES OF RECLAIMED WATER

This section of the reclaimed water study has emphasized the potential re-use of East Baton Parish treated sewage effluent. There are other potential sources of reclaimed water in the local study area. Treated industrial wastewater effluent is the largest class of potential reclaimed water supplies; it is even larger in volume than municipal treated sewage effluent based on total water usage by the industrial plants. However, unique quality issues exist associated with the use of treated industrial wastewater effluent as reclaimed water, including the following:

- Temperature of once-through cooling water (OTCW) is elevated after its intended use, although discharge permits limit the incremental increase in temperature allowed for this water use upon return to the receiving water body. Increased temperature would limit the re-use of OTCW for its original usage (cooling of industrial streams by heat exchange), and may limit other uses of the water, such as irrigation, where increased temperature could damage or affect the quality of the irrigated crop. Generally, when industry decides to recycle OTCW, recirculating cooling towers are utilized so that multiple re-use of the water supply is provided for. Cooling towers provide countercurrent recirculation of the water supply with ambient air, providing for rapid evaporation which in turn rapidly decreases the temperature of the water supply.

- An increase in total dissolved solids (TDS) content of many industrial water supplies occurs during usages within the manufacturing plant. The TDS increases typically occur in conjunction with evaporation (such as during recirculation through cooling towers) as the volume of water decreases. The decreased volume proportionately increases the concentration of dissolved salts in the water, measured as TDS. Industry typically manages this phenomenon by discharging a side stream of the water supply after usage, which is typically termed a "blowdown stream." The blowdown stream may constitute 5 to 10 percent of the total water usage, and will be elevated in dissolved salts measured as TDS. Reclaimed water with high TDS may not be usable for irrigation, because the dissolved salts will build up in the soil over time, damaging the ability of the soil to be used for agricultural production. It also cannot be used for any purpose where sensitive aquatic species may be harmed by the eventual discharge of the elevated TDS effluent. Other industrial processes that increase TDS in a water supply source include reverse osmosis and demineralization processes that are typically used to prepare water supplies for high quality uses (e.g., - process use, boiler feedwater, etc.). These uses also produce blowdown streams with elevated TDS that must be discharged under restricted permit conditions to receiving waters.

- The pH of treated industrial wastewater streams may be affected by usages within the manufacturing plant environment. Typically, pH is neutralized to a range of 6.5 to 8.5 using chemical treatment by acids and bases prior to final discharge of the effluent to the receiving stream. However, depending on the dissolved salt content of the water (TDS), the alkalinity and hardness of the water may be low or high, requiring additional treatment before reclaimed water from such a source could be re-used.

- Residual organic compounds typically exist in treated industrial wastewater effluents, if the discharge is from a petroleum refinery or a petrochemical plant that manufactures or handles organic chemicals. Although low concentrations of these compounds are allowable in permitted discharges to receiving waters, the presence of these compounds might interfere with intended re-uses of the effluent as reclaimed water, for example in irrigation of crops or use in a different industrial plant.

- Residual inorganic compounds such as metals typically exist in treated industrial wastewater effluents, if the manufacturing processes involve the use of elemental or complexed metals. As with organic compounds, low to very low concentrations of these compounds are allowable in permitted discharges to receiving waters, but the presence of these compounds may interfere with intended re-uses of the effluent as reclaimed water.

3.3 TYPICAL RECLAIMED WATER CRITERIA FOR WATER SUPPLY USES

Recent legislation (Act 985 of 2003 Louisiana Regular Legislative Session) provides a statutory definition for the quality of reclaimed water to be re-used under the auspices of the Act. The minimum quality parameters defined in the Act are presented in Table 3-6, including factors that are deemed important in reclaimed water use based on each quality parameter. These quality parameters and the established minimum quality value for each parameter are based primarily on the expectation of public irrigation re-use of reclaimed water.

In other situations of re-use, such as alternative industrial water supplies, the statutory levels of quality provided in the definition of reclaimed water may be overly stringent, thus potentially preventing the effective re-use of the water for many purposes. In other cases, these defining values for the parameters may not be stringent enough for other water uses in industry. In addition, parameters other than those listed in the legislation may be important in selected industrial alternative water supplies, and re-use may need to consider other parameters for contract specifications or monitoring of the re-use over time.

Although not presently considered a viable use for reclaimed water, indirect or direct human consumption based on reclaimed water use may be possible in the future. Indirect human consumption refers to such practices as irrigation of crops intended for human consumption with reclaimed water. Direct human consumption refers to the practice of using reclaimed water as a source for drinking water, either alone or in a blended stream of virgin source water and reclaimed water. The major issues with human consumption of water associated with reclaimed water are public-health related, particularly the risk of water borne diseases caused by protozoan, bacterial, or viral agents.

Some, but not all, of the important considerations for industrial water uses and human consumption as related to reclaimed water re-use are discussed below.

3.3.1 Chemical Criteria

Table 3-7 summarizes chemical criteria that are likely to be the most important in industrial, irrigation, or human consumption-related reclaimed water use scenarios in the study area. A range of appropriate values for each chemical water quality criterion or parameter is provided based on generally available knowledge relative to the intended re-use. It should be stressed that the actual water quality requirements for industrial reclaimed water supply may vary from use "as-is" to significantly more stringent water quality requirements. It will be important to analyze the actual water quality requirements of individual industrial facilities and plants in determining the viability of local reclaimed water programs.

3.3.2 Public Health Criteria

Table 3-8 summarizes public health criteria that are likely to be the most important in industrial, irrigation, or human consumption-related re-use scenarios in the study area. A range or threshold value for each biological water quality criterion or parameter is provided based on generally available knowledge relative to the intended re-use. It should be stressed that public health criteria may be just as or more stringent for many industrial water supply uses, as for public uses such as crop or non-crop irrigation. In situations where industrial workers may be exposed to reclaimed water supplies either directly or indirectly (e.g., spray from recirculated cooling towers), public health criteria may be expected to be no different than for the public at large.

Table 3-6
Reclaimed Water Quality Criteria
Based on Act 985 of the 2003 Louisiana Regular Legislative Session

Parameter	Units	Minimum Quality Requirement	Reclaimed Water Comments [1], [2], [3], [4]
Biochemical Oxygen Demand (BOD_5)	mg/L	5	Indirect measure of the residual organic constituent content of reclaimed water. This value is representative of irrigation or similar re-use not sensitive to residual organic compounds. Advanced wastewater treatment is required to achieve this level on a routine basis.
Total Suspended Solids (TSS)	mg/L	5	Direct measure of the amount of particulate solids in the reclaimed water. This value is representative of re-use requiring very low levels of TSS. Advanced wastewater filtration is required to achieve this level on a routine basis.
Ammonia Nitrogen (NH_3-N)	mg/L	2	Direct measure of the residual ammonia concentration in reclaimed water. This value is representative of re-use requiring a low concentration of ammonia. Irrigation of crops would benefit from higher concentrations of ammonia as a nutrient/fertilizer.
Total Nitrogen (TN)	mg/L	10	Typically indirectly measured by adding the values of organic nitrogen (Total Kjeldahl Nitrogen or TKN in mg/L) and inorganic forms of nitrogen (ammonia [NH_3] + nitrate [NO_3]). Advanced treatment is required to achieve this level on a routine basis. Irrigation of crops would benefit from higher concentrations of total nitrogen as a nutrient/fertilizer.
Total Residual Chlorine (TRC)	mg/L	2	Direct measure of the residual free chlorine remaining after treatment by chlorine disinfection. This level is greater than that required by most discharge permits to receiving waters, or water supply distribution systems.

[1] Reclaimed water quality shall be sufficient for the proposed beneficial use considering all relevant factors including but not limited to safety, effects of the beneficial use based on specific constituents in the reclaimed water source, and effects on state and federal water discharge permits.
[2] Reclaimed water quality shall meet all applicable state and federal water quality standards, which may be more stringent than the criteria established in the statute.
[3] Reclaimed water quality shall be measured at the discharge from the producer's plant site.
[4] The use of reclaimed water cannot adversely affect downstream water quality or be injurious to wildlife, fish, or plant life.

Table 3-7
Typical Reclaimed Water Chemical Criteria
For Selected Use Applications

Parameter	Units	Representative Criteria [1]	Use Application Comments
pH	--	6 - 9	All Uses
Biochemical Oxygen Demand (BOD_5) & Total Organic Carbon (TOC)	mg/L	<5 <15 <30	Drinking Water; Industrial Process Irrigation Industrial Cooling
Chemical Oxygen Demand (COD)	mg/L	<30 <75 <125	Drinking Water; Industrial Process Irrigation Industrial Cooling
Total Suspended Solids (TSS)	mg/L	<2 <30 <75	Drinking Water; Industrial Process Irrigation Industrial Cooling
Total Dissolved Solids (TDS)	mg/L	<250 250 – 1000 <1000	Drinking Water; Industrial Process Irrigation Industrial Cooling (higher concentration possible with greater blowdown)
Total Alkalinity & Total Hardness	mg/L	25 – 75 75 – 150 <250	Drinking Water; Industrial Process Irrigation Industrial Cooling (higher concentration possible with greater blowdown)
Ammonium Ion (NH_4+-N) at neutral pH (no free ammonia)	mg/L	<2 <20 <20	Drinking Water; Industrial Process Irrigation (is a plant nutrient) Industrial Cooling
Nitrate (NO_3-N)	mg/L	<10 <30 <45	Drinking Water; Industrial Process Irrigation (is a plant nutrient) Industrial Cooling
Chloride (Cl)	mg/L	<250 <500 <1000	Drinking Water; Industrial Process Irrigation Industrial Cooling
Silica (SiO_2)	mg/L	<5 <10 <10	Drinking Water; Industrial Process Irrigation Industrial Cooling
Sulfate (SO_4)	mg/L	<30 <50 <50	Drinking Water; Industrial Process Irrigation Industrial Cooling
RCRA Metals [2]	mg/L	<0.01 <1 <10	Drinking Water; Industrial Process Irrigation Industrial Cooling
RCRA VOCs [3]	mg/L	<0.01 <0.1 <1	Drinking Water; Industrial Process Irrigation Industrial Cooling

[1] Literature values for typical applications, actual required quality for specific applications is site-specific for each water quality parameter.

[2] Total RCRA metals concentration (arsenic, cadmium and selenium are examples of metals with specific toxic effects to human health or the environment)

[3] Total volatile organic compounds (VOCs) – benzene, toluene, ethylbenzene, xylenes, styrene, and chlorinated ethenes are examples of VOCs.

Table 3-8
Typical Reclaimed Water Public Health Criteria
For Selected Use Applications

Parameter	Units	Representative Criteria	Use Application Comments
Total Residual Chlorine	mg/L	>0.5	Drinking Water; Industrial Process Irrigation Industrial Cooling
Fecal Coliform	#/100 ml	<10 <100 <1000	Drinking Water; Industrial Process Irrigation (non-food crop only) Industrial Cooling
Total Coliform	#/100 ml	<10 <100 <1000	Drinking Water; Industrial Process Irrigation (non-food crop only) Industrial Cooling
Giardia (Protozoan)	#/100 ml	<2 N/A N/A	Drinking Water; Industrial Process Irrigation Industrial Cooling
Cryptosporidium (Protozoan)	#/100 ml	<2 N/A N/A	Drinking Water; Industrial Process Irrigation Industrial Cooling
Viruses (Non-Specific)		Not Detected N/A N/A	Drinking Water; Industrial Process Irrigation Industrial Cooling

[1] Literature values for typical applications, actual required quality for specific applications is site-specific for each water quality parameter.

This section describes the activities completed and the results of the assessment of the industrial water supply and usage in the Greater Baton Rouge area. The objectives of the industrial water supply and usage assessment were as follows:

- Identify existing and potential future industrial water users in the study area;
- Determine current and potential future water supply sources for each identified industrial user;
- Determine current and future specific water use categories for each identified industrial user;
- Determine current and future specific water use volumes for each identified industrial user; and
- Determine current and future water quality requirements and constraints for each identified industrial user.

The following sections describe the industrial facilities included in the assessment; the industrial water supply and usage survey prepared and completed; the data gathering, compilation and correlation activities; and the results obtained during the execution of the study.

4.1 LOCAL INDUSTRY GROUP INCLUDED IN SURVEY

For the purposes of this reclaimed water study, the target industrial facilities were those located on the East Bank of the Mississippi River, from Port Hudson to the north and Geismar to the south. A total of thirty-four (34) industrial facilities/complexes were selected for inclusion in the survey of industrial water users. The approximate location of each of the industrial facilities included in the survey is shown on Figure 3.

Industrial categories included in the survey were as follows:

- Electrical power generation
- Metals manufacturing
- Nitrogen and phosphorous fertilizer manufacturing
- Organic/inorganic chemical manufacturing
- Paper products manufacturing

- Petroleum refining
- Petrochemical manufacturing

Within the study area, the industrial facilities were further subdivided by geographic region as follows (refer also to Figure 3):

- **North Baton Rouge Area** – facilities north of Highway 190 (*8 facilities total*)
- **South Baton Rouge Area** – facilities adjacent to and south of Highway 190 and north of Interstate 10 (*10 facilities total*)
- **St. Gabriel/Geismar Area** – facilities south of Interstate 10 (*16 facilities total*)

Table 4-1 presents a summary of the industrial facilities, grouped as designated above, included in the study. Table 4-1 also indicates the source of the water use/quality data utilized in this study (i.e. – from completed survey questionnaires/interviews or LPDES research, or both). As can be seen in Table 4.1, less than 50 percent of the industries contacted provided completed questionnaires.

4.2 INDUSTRIAL WATER SUPPLY SURVEY DEVELOPMENT

In order to assemble, catalogue and document the data necessary for the assessment of industrial water supply and usage, a survey questionnaire was developed for completion by the industrial facilities in the study area. Once completed, the questionnaire was mailed to the target industrial facilities under cover letter from the CAGWCC. A sample copy of the cover letter and survey questionnaire are presented in Appendix E. The questionnaire was designed to obtain the following information from the target facilities:

- Facility Information – facility name, address, type, industry sector, SIC code(s)
- Contact Information – name, title, phone/FAX/email address

Table 4-1
Industrial Facilities Included in Study

Facility Name	Data Source: Survey	Data Source: LPDES
North Baton Rouge Area		
Deltech Corporation		X
Exide Technologies – Baton Rouge Smelter	X	X
ExxonMobil – Baton Rouge Plastics Plant	X	X
ExxonMobil – Baton Rouge Polyolefins Plant	X	X
ExxonMobil – Baton Rouge Resins Finishing Plant		X
Ferro Corporation – Baton Rouge Site		X
Georgia Pacific – Port Hudson Operations	X	X
Great Lakes Carbon – Baton Rouge Calcined Coke Plant		X
South Baton Rouge Area		
Albemarle Corporation – Process Development Center		X
DSM Copolymer Inc. – Baton Rouge Plant		X
Entergy Gulf States – LA Station	X	
Ethyl Corporation	X	
ExxonMobil – Baton Rouge Chemical Plant	X	X
ExxonMobil – Baton Rouge Refinery	X	X
Formosa Plastics Corporation	X	X
Honeywell International Inc. – Baton Rouge Facility		X
Rhodia Inc. – Baton Rouge Plant	X	X
UOP LLC – Baton Rouge Plant	X	X
St. Gabriel/Geismar Area		
Air Products & Chemicals, Inc. – St. Gabriel Plant		X
BASF Corporation – Geismar Facility	X	X
Borden Chemicals & Plastics	[1]	
Crompton		X
Entergy Gulf States – Willow Glen Plant		X
Honeywell International Inc. – Geismar Facility		X
Ineos Fluor – St. Gabriel Plant		X
PCS Nitrogen – Geismar Plant		X
Pioneer Chlor-Alkali – St. Gabriel Plant		X
Praxair Inc. – Geismar Facility		X
Rhodia Inc. – Geismar Plant		X
Rubicon Inc. – Geismar Plant		X
Shell Chemical Company LLP – Geismar Plant	X	X
Syngenta Crop Protection, Inc. – St. Gabriel Plant	X	
Vulcan Chemicals – Geismar Facility		X
Williams Olefins LLC – Geismar Plant	X	X

[1] Borden facility shut down at time of survey, no data reported/obtained

- Water Supply Sources – groundwater, surface water, public water supply, other
- Water Uses (by water supply source) – process, boiler feedwater, cooling water, etc.
- Water Utilization Rates (by water supply source and use) – average, maximum and annual flows/volumes
- Water Treatment Processes employed (by water supply source and use) – coagulation/flocculation, precipitation, sedimentation, etc.
- Water Quality Requirements (by water use) – target water quality levels for each industrial water use category at the facility

Within a few weeks of issuance of the questionnaire to the industrial facilities, follow-up calls were initiated in order to answer any questions regarding the study and to arrange for site visits and onsite interviews with appropriate plant personnel to review the questionnaire and address specific water supply/use issues at each facility.

Concurrent with the compilation of data and information through the completion of the survey questionnaires and site visits/interviews, a file search was performed at the LDEQ in order to obtain site water balance and other relevant information from the most current LPDES wastewater discharge permit application and other permit files. Where contact with a target industrial facility was not accomplished, survey questionnaires were completed based on the information obtained from the LPDES file research performed for that facility.

Literature research was also performed to obtain generic water quality criteria information for various industrial water use categories such as boiler feedwater, cooling water, firewater, etc. Once the completed survey forms were received and/or the LDEQ file search completed, the resulting data were entered into a database and spreadsheets for tabulation and evaluation.

4.3 INDUSTRIAL WATER USE BY CATEGORY

The water supplies utilized by the industrial facilities in the study area consist of the following:

- Groundwater Supply

- Surface Water Supply
- Public Water Supply

In addition to these external water supply sources, several industrial facilities utilize stormwater runoff from within plant limits and some select in-plant blowdown streams (i.e. – OTCW, cooling tower blowdown, boiler blowdown, etc.) as internal sources of water for uses with less stringent quality requirements (i.e. – firewater, utility water etc.).

The volumes of water utilized from each supply source vary by industry, by production process within a specific industry, by specific use category, and by geographic region. The water obtained from these supply sources are utilized for various in-plant uses that can be generally categorized as follows:

- Process Water (PW)
- Boiler Feed Water (BFW)
- Once-Through Cooling Water (OTCW)
- Recirculating Cooling Water (RCW)
- Firewater (FW)
- Potable Water (PotW)
- Non-potable Utility Water (UW)

The quality of water required varies based on specific use category and to a lesser degree the type of industry and materials being manufactured. The following sections summarize the industrial water usage and water quality data obtained through the survey of industrial facilities, LDEQ water discharge permit file searches and other research performed as part of this study.

4.4 INDUSTRIAL WATER USE QUANTITIES BY CATEGORY

The data relating to industrial water usage rates collected and evaluated as part of this study are summarized in the following tables and in Appendix E:

- **Table 4-2 – Regional Industrial Water Use Ranges by Water Supply and Usage Category** – summarizes the ranges of average water use by industrial region, water supply source and specific use category.

- **Table 4-3 – Industrial Water Use by Category – Summary by Water Supply Source and Study Area** – summarizes the average industrial water usage rates for each water supply source by study region and specific use category.

The following sections summarize the results of the survey of industrial facilities and other research performed regarding industrial water usage rates as presented in Tables 4-2 and 4-3 and in Appendix E. The water usage values presented in the following sections and tables represent average daily use values.

4.4.1 Overall Water Usage

- Total industrial water usage in study area – 1,057.6 MGD
- Total industrial water usage by l area (largest to smallest):
  - St. Gabriel/Geismar Area – 954.0 MGD or 90.2%
  - South Baton Rouge Area – 57.9 MGD or 5.5%)
  - North Baton Rouge Area – 45.7 MGD or 4.3%)
- Total industrial water usage by supply source (largest to smallest):
  - Surface water – 968.8 MGD or 91.6%
  - Groundwater – 88.5 MGD or 8.4%
  - Public water supply – 0.3 MGD or <0.1%
- Total industrial water usage by usage category (largest to smallest):
  - Once-through Cooling Water – 900.2 MGD or 85.1%
  - Process Water – 55.2 MGD or 5.2%
  - Recirculating Cooling Water – 44.2 MGD or 4.2%
  - Boiler Feedwater –29.0 MGD or 2.7%
  - Utility Water – 12.4 MGD or 1.2%
  - Potable Water – 6.0 MGD or 0.6%
  - Other – 6.9 MGD or 0.7%
  - Firewater – 3.7 MGD or 0.3%

4.4.2 Groundwater Usage

- Groundwater usage constitutes approximately eight percent (8%) of the total water usage in the study area (88.5 MGD of 1057.6 MGD total).
- Groundwater usage is highest in the North Baton Rouge industrial region (45.7 MGD or 51.6%).
- Groundwater usage is lowest in the St. Gabriel/Geismar industrial region (11.5 MGD or 12.9%).
- Groundwater usage rates for the entire study area by usage category (largest to smallest):
  - Process Water – 40.4 MGD or 45.7%
  - Recirculating Cooling Water – 18.1 MGD or 20.5%
  - Boiler Feedwater – 15.0 MGD or 16.9%
  - Potable Water – 5.6 MGD or 6.3%
  - Other – 3.4 MGD or 3.9%
  - Once-Through Cooling Water – 3.4 MGD or 3.9%
  - Utility Water – 2.1 MGD or 2.4%
  - Firewater – 0.4 MGD or 0.4%

4.4.3 Surface Water Usage

- Surface water usage constitutes approximately ninety-two percent (92%) of the total water usage in the study area (968.8 MGD of 1,057.6 MGD total).
- Surface water usage is highest in the St. Gabriel/Geismar industrial region (942.5 MGD or 97.3%).
- Surface water usage is lowest in the South Baton Rouge industrial region (26.3 MGD or 2.7%).
- There is currently no use of surface water for industrial purposes in the North Baton Rouge industrial region.
- Surface water usage rates for the entire study area by usage category (largest to smallest):

- Once-Through Cooling Water – 896.8 MGD or 92.6%
- Recirculating Cooling Water – 26.1 MGD or 2.7%
- Process Water – 14.7 MGD or 1.5%
- Boiler Feedwater – 13.9 MGD or 1.4%
- Utility Water – 10.2 MGD or 1.1%
- Other – 3.4 MGD or 0.4%
- Firewater – 3.3 MGD or 0.3%
- Potable Water – 0.3 MGD or <0.1%

4.4.4 Public Water Supply Usage

- Public water supply usage constitutes less than one-tenth of a percent (<0.1%) of the total water usage in the study area (0.3 MGD of 1,057.6 MGD total).
- Public water usage is highest in the South Baton Rouge industrial region (0.248 MGD or 89.2%).
- Public water supply usage is lowest in the North Baton Rouge industrial region (0.005 MGD or 1.8%).
- Public water supply usage rates for the entire study area by usage category (largest to smallest):
    - Potable Water – 0.2 MGD or 56.0%
    - Process Water – 0.06 MGD or 20.9%
    - Boiler Feedwater – 0.06 MGD or 20.9%
    - Utility Water – 0.006 MGD or 2.2%

Table 4-2
Regional Industrial Water Use Ranges by Water Supply and Usage Category

Industrial Region/Water Supply	Average Water Usage Rate (MGD)								Total
	PW	BFW	OTCW	RCW	FW	PotW	UW	Other [2]	
North Baton Rouge Area									
Groundwater Supply	0.04 – 31.30	0 – 4.00	0 - 0.451	0 – 1.78	0 – 0.18	0 – 3.7	0 – 0.02	0 – 0.40	0.20 – 39.00
Surface Water Supply	0	0	0	0	0	0	0	0	0
Public Water Supply	0	0	0	0	0	0.005	0	0	0 – 0.005
South Baton Rouge Area									
Groundwater Supply	0 – 2.30	0 – 6.20	0	0 – 10.10	0	0 – 1.00	0 – 0.29	0 – 1.92	0.30 – 14.60
Surface Water Supply	0 – 1.49	0 – 1.55	0	0 – 16.00	0 – 1.40	0	0 0.10	0	0 – 21.10
Public Water Supply	0 – 0.06	0 – 0.06	0	0	0	0 – 0.10	0	0	0 – 0.13
St. Gabriel/Geismar Area									
Groundwater Supply	0 – 1.30	0 – 1.19	0 – 2.88	0 – 0.72	0 – 0.08	0 – 0.40	0 – 0.92	0 – 0.09	0 – 3.28
Surface Water Supply	0 – 6.36	0 – 8.53	0 – 761.40	0 – 4.35	0 – 1.91	0 – 0.15	0 – 8.93	0 – 2.30	0 – 761.40
Public Water Supply	0	0	0	0	0	0 – 0.007	0 – 0.006	0	0 – 0.013

[1] *PW* = Process Water; *BFW* = Boiler Feedwater, *OTCW* = Once-through Cooling Water, *RCW* = Recirculating Cooling Water, *FW* = Firewater, *PotW* = Potable Water, *UW* = Utility Water
[2] Individual usage rates not quantified in available data

Table 4-3
Industrial Water Use by Category – Summary by Water Supply Source and Study Area

Water Supply Source/Industrial Region	Average Water Usage Rate (MGD)								Total
	PW	BFW	OTCW	RCW	FW	PotW	UW	Other [2]	
Groundwater Supply									
North Baton Rouge Area Totals	32.162	4.425	0.504	3.956	0.280	3.915	0.031	-	45.672
South Baton Rouge Area Totals	6.409	8.206	-	12.015	-	1.271	0.540	2.955	31.396
St. Gabriel/Geismar Area Totals	1.874	2.351	2.880	2.165	0.101	0.426	1.570	0.087	11.454
Study Area Groundwater Supply Totals	**40.445**	**14.982**	**3.384**	**18.136**	**0.381**	**5.612**	**2.141**	**3.442**	**88.523**
Surface Water Supply									
North Baton Rouge Area Totals	-	-	-	-	-	-	-	-	-
South Baton Rouge Area Totals	2.290	4.350	-	18.110	1.400	-	0.100	-	26.250
St. Gabriel/Geismar Area Totals	12.455	9.567	896.826	7.987	1.910	0.258	10.112	3.430	942.545
Study Area Surface Water Supply Totals	**14.745**	**13.917**	**896.826**	**26.097**	**3.310**	**0.258**	**10.212**	**3.43**	**968.795**
Public Water Supply									
North Baton Rouge Area Totals	-	-	-	-	-	0.005	-	-	0.005
South Baton Rouge Area Totals	0.058	0.058	-	-	--	0.132	-	-	0.248
St. Gabriel/Geismar Area Totals	-	-	-	-	-	0.019	0.006	-	0.025
Study Area Public Water Supply Totals	**0.058**	**0.058**	**-**	**-**	**-**	**0.156**	**0.006**	**-**	**0.278**
Study Area Water Usage Totals	**55.248**	**28.957**	**900.210**	**44.233**	**3.691**	**6.025**	**12.359**	**6.872**	**1057.594**

[1] *PW* = Process Water; *BFW* = Boiler Feedwater, *OTCW* = Once-through Cooling Water, *RCW* = Recirculating Cooling Water, *FW* = Firewater, *PotW* = Potable Water, *UW* = Utility Water
[2] Usage values reported as "other" include uses that do not fit the other categories and also total usage rates for facilities for which categorical usage rates were not quantified in available data

4.5 INDUSTRIAL WATER USE QUALITY CRITERIA BY CATEGORY

The water quality requirements for each industrial use category collected and evaluated as part of this study are summarized in Table 4-4 and in Appendix E.

4.5.1 Process Uses

Water to be consumed in manufacturing processes is generally of the highest quality and required to be essentially free of organics, solids (suspended and dissolved), inorganic constituents and metals.

4.5.2 Cooling Uses

The water quality requirements for cooling uses vary with the type of cooling processes employed. Once-through cooling water systems typically require water of lower quality than other industrial uses. OTCW is required to have slightly basic pH and low organic, solids (dissolved and suspended), inorganic, and metals content. OTCW quality is more often governed by discharge limits as more often than not this stream is returned to the source stream directly after use. Recirculating cooling systems require a makeup water that is of higher quality than OTCW, but typically not as pure as for process and boiler feedwater uses.

4.5.3 Demineralized Uses

As with water uses for process purposes, water utilized for uses that require a demineralized water source has to be of the highest quality (almost pure) and be essentially free of organics, solids, inorganics and metals.

4.5.4 Sanitary Uses

Water to be used for sanitary purposes within industrial facilities is generally required to meet state and federal drinking water standards.

4.5.5 Utility Uses

Water utilized for utility purposes (washdown water, maintenance, firewater) is required to be of only moderate quality compared to the other uses and is usually required to be low in organic/inorganic, solids and metals content.

Table 4-4
Summary of Industrial Water Use Quality Criteria by Category

Parameter	Concentration Ranges (mg/L or as noted)					
	Process Water	Boiler Feedwater	O. T. Cooling Water	Rec. Cooling Water	Potable Water [1]	Utility Water
pH (s.u.)	7.0 to <10.2	7.5 to 11.0	9.5 to 10.5	8.0 to 10.5	6.5 – 8.5	10.0
BOD_5	<25	-	-	<5.0 to <50	-	<10
COD	-	<0.2 to <1.0	-	<5.0	-	-
TOC	<5	-	<5.0	<5.0	-	13
Oil & Grease	<5	<0.5 to <1.0	-	<2.0	-	-
Conductivity, (µmho/cm)	<25 to 280	<10	-	<280	-	800
TSS	<1.0 to <100	nil to <150	<1.0	<1.0 to 700	-	<100
TDS	<8 to <500	<0.70	400 µmho/cm	<500	500	<500
Total Solids	<1,000	400 to 2,000	-	<1,200	-	<1,000
Turbidity (NTU)	<1 to <100	-	<1.0	<1.0 to 100	-	20 to <100
Color	<20	-	-	<20	15	<20
DO	-	<0.007 to 0.04	-	-	-	-
Free Carbon Dioxide	<1.0	-	-	<5.0	-	<1.0
Total Alkalinity (as $CaCO_3$)	36 to <200	<2 to <200	36	36 to <200	-	<200
Nitrate-N	4.1	-	4.1	4.1 to <5.0	-	-
Nitrite-N	45	-	45	45	-	-
TKN & NH_3-N	-	-	-	<2.0	-	-
Chloride	30 to <100	-	30	<25 to <200	250	75 to <100
Fluoride	-	-	-	<1.0	2.0	-
Sulfate	<40	-	40	40 to <100	250	<39 to 120
Sulfide	-	-	-	<1.0 to 54	-	-
Total Phosphorous	<1.0	30 to 50	-	<2.0 to 20	-	-
Orthophosphate	<1.0	-	-	<2.0	-	-
Total Hardness (as $CaCO_3$)	-	<0.1 to <0.5	-	<5.0	-	-
Hardness – Carbonate (as $CaCO_3$)	<0.5 to <260	0.1	20	12 to <400	-	<100
Hardness – Bicarbonate (as $CaCO_3$)	17	-	17	17	-	174
Aluminum	0.1 to <1.0	-	0.1	0.1 to <1.0	0.05 to 0.2	-
Antimony	-	-	-	-	0.006	-
Arsenic	-	-	-	-	0.010	-
Barium	0.1	-	0.1	0.1	2.0	-
Beryllium	-	-	-	-	0.004	-
Cadmium	-	-	-	-	0.005	-
Calcium	<3 to <170	0.05	45	<3.0 to <300	-	180
Chromium	-	-	-	-	0.10	-
Cobalt	<0.01	<0.01	-	<0.01	-	-
Copper	0.01	<0.002 to 0.05	0.01	<0.01 to 0.05	1.3	-
Iron – total	<0.05	<0.005 to 0.1	0.7	0.7 to <4.1	0.3	<4.1
Iron – soluble	-	<0.002 to 0.02	0.7	0.7 to <1.0	-	<4.1
Lead	-	<0.05	-	<0.05	-	-
Magnesium	<1.5 to <75	0.05	38	<1.5 to <100	-	<40 to 80
Manganese	0.1 to <0.5	-	0.1	0.1 to 40	0.05	<1.0
Nickel	<0.01	<0.01	-	<0.01 to 0.05	-	-
Potassium	0.8	0.8 to 4.0	-	-	-	-
Selenium	<0.1	<0.1	-	<0.1	0.05	-
Silica	<0.4 to <30	<0.1 to 40	2	2.0 to 150	-	-
Silver	-	-	-	-	0.10	-
Sodium	<2 to <340	<0.5 to <4.0	35	35 to <500	-	95 to <340
Thallium	<0.1	<0.1	-	<0.1	0.002	-
Tin	<0.05	<0.05	-	<0.05	-	-
Vanadium	<0.01	<0.01	-	<0.01	-	-
Zinc	<0.01	<0.01	-	<0.01 to <0.5	5.0	-

[1] Industrial potable (sanitary) water quality based on EPA National Primary and Secondary Drinking Water Standards when utilized for human consumption. Not all primary/secondary contaminants listed or tested for as part of this study.

5.1 QUALITY ASSESSMENT – RECLAIMED WATER VERSUS CURRENT SUPPLY SOURCES

The essential requirement for substitution of a water supply, whether as a substitution of a groundwater or a surface water source, is that the alternative water supply must meet the water quality requirements of the user.

Table 5-1 provides a parameter-by-parameter comparison of East Baton Rouge Parish treated effluent quality, on an average daily basis, with groundwater from the Mississippi River Alluvial and Southern Hills aquifer systems and raw surface water from the Mississippi River. Tabular summaries of the historical groundwater and Mississippi River water quality data are presented in Appendix F.

Most of the East Baton Rouge Parish wastewater from which treated effluent is derived is comprised of groundwater extracted from the Southern Hills aquifers. Quality characteristics of the raw groundwater resource are modified by the myriad uses of the water supply prior to discharge to municipal sewers. The following discussion summarizes quality characteristics of local groundwater, local Mississippi River surface water, and East Baton Rouge Parish treated effluent by parameter or group of parameters.

5.1.1 Groundwater Quality Assessment

Groundwater extracted from the Southern Hills aquifers constitutes most of the metropolitan Baton Rouge area municipal drinking water supply. Groundwater in the Southern Hills aquifer system is well characterized, with a water quality characterization program that began in the 1940s and continues to the present day. Monitoring is accomplished for individual aquifers, and includes general and ion specific water quality parameters of importance to water supply characterization. The information in Table 5-1 for groundwater is from a baseline statistical summary of the local groundwater aquifer system, corrected by omitting data from observation wells that in the past or currently indicate salt water encroachment. This characterization summary was developed by summarizing groundwater quality from individual observation wells and aquifers, and tabulating arithmetic averages for each parameter. Monitoring data for this effort was taken from a recent report available from the USGS Baton Rouge Regional Office. Tabulated groundwater quality data by aquifer, and for all aquifers as a group, are included in tables in Appendix F of this report.

Table 5-1
Comparison of Water Supply Source Water Quality

Parameter	Average Concentration (mg/L or as noted)		
	Reclaimed Water [1]	Mississippi River [2]	Groundwater [3]
pH (s.u.)	7.7	7.6	7.2
BOD_5	21.5	1.6	-
COD	93.8	-	-
TOC	21.7	3.8	1.96 [4]
Oil & Grease	<5.0	-	-
Conductivity, (µS/cm)	-	363	358
TSS	18	196	-
TDS	412	217	236
Total Solids	430	-	-
Turbidity (NTU)	15.3	93	1.05 [4]
Color	-	18	-
DO	-	8.5	-
Total Alkalinity (as $CaCO_3$)	153	103	157
Nitrate-N	6.44	1.52	0.04
Nitrite-N	1.49	0.02	-
TKN	14.4	0.7	-
NH_3-N	4.51	0.08	-
Chloride	39.7	40.5	15.1
Fluoride	0.38	0.2	0.3
Sulfate	18.75	40.5	6.9
Total Phosphorous	2.79	0.26	0.22 [4]
Orthophosphate	2.34	0.07	-
Total Hardness (as $CaCO_3$)	41	140	41
Aluminum	0.34	0.005	0.10 [4]
Antimony	-	0.0002	-
Arsenic	-	0.0012	-
Barium	0.04	0.052	-
Calcium	11.85	36.5	1.08 [4]
Cobalt	-	0.00013	-
Copper	<0.01	0.0018	0.05 [4]
Iron	0.48	0.027	0.19 [4]
Lead	<0.01	0.00015	-
Magnesium	2.73	11.26	0.07 [4]
Manganese	0.05	0.0027	0.01
Nickel	<0.01	0.0015	0.27 [4]
Potassium	7.25	10.14	1.3
Selenium	-	0.0006	-
Silica	28.14	5.79	28
Sodium	92.95	8.58	69
Vanadium	-	0.0017	-
Zinc	0.03	0.003	0.06 [4]

[1] Reclaimed water quality data based on average effluent values for all three City/Parish WWTPs from Supplemental Effluent Characterization completed as part of this study.
[2] Mississippi River water quality data for USGS Station No. 07373420 (Mississippi River near St. Francisville, LA) from "Water Resources Data – Louisiana, Water Year 2001 & 2002".
[3] Groundwater quality data from long term statistical average for observation wells, taken from "Ground-Water Quality Data for East and West Baton Rouge, East and West Feliciana, and Pointe Coupee Parishes, Louisiana, Water Years 1944-97".
[4] Groundwater quality data from historical raw groundwater data provided by Entergy Gulf States – LA Station as part of this study.

It should be noted that the groundwater quality presented in Table 5-1 does not reflect the differences in groundwater quality based on the depth of the observation well. For instance, the average total hardness of the groundwater varies from about 31 mg/L for the 400 Ft Sand aquifer to about 4 mg/L for the 2800 Ft Sand aquifer. The potential impact that these differences will have on a facility's operating costs will have to be taken into account when considering a switch to reclaimed water. The most significant issue for groundwater quality is salt water encroachment that is occurring in several of the Southern Hills aquifers in the Baton Rouge area (most significantly in the 1500-Ft Sand and 2000-Ft Sand). This phenomenon is well documented by several federal and local agencies, and is described in detail in the recent Louisiana Groundwater Management Plan. In summary, groundwater higher in salt content (sodium and chloride ions) is moving through the Baton Rouge fault from south to north, as pumpage of selected aquifers lowers the potentiometric hydraulic head and induces flow of the higher salt content water through the fault. Thus the more salty water is gradually encroaching into the fresh water aquifers north of the fault. This phenomenon is generally understood to be exacerbated by higher pumpage from these selected aquifers, based on hydraulic modeling completed in recent years and reported separately. Selected cases of reduced withdrawals from the aquifer system indicate that higher water tables in the aquifers will over the long term slow and dilute the salt water encroachment. The salt water encroachment phenomenon is the primary water quality issue associated with future use of the Southern Hills aquifer system, as higher salinity of the resource could potentially reduce potential for use as a drinking water supply. The recent Louisiana legislative initiatives are intended to provide incentives to reduce use of groundwater for non-drinking purposes in order to protect the groundwater resource from accelerated salt water encroachment, and ultimately to reduce the impacts of salt water encroachment by reducing total withdrawals and allowing recovery of the water levels in selected aquifers.

As groundwater extracted from the Southern Hills aquifers is used for myriad purposes, quality characteristics change. Eventually, most of the groundwater used in East Baton Rouge Parish as a municipal water supply is discharged into municipal sanitary sewers and becomes the local sanitary wastewater. This wastewater is transported by municipal sewers to the East Baton Rouge Parish wastewater treatment plants for required treatment prior to discharge to the Mississippi River. The water quality characteristics of treated effluent are discussed in Section 3.0 of this report.

5.1.2 Mississippi River Surface Water Quality Assessment

Mississippi River water quality characteristics are determined by very large fluvial forces that involve erosion of two thirds of the United States land mass. The river carries a very large suspended sediment load that must be addressed with any withdrawal for water supply. In addition, the dissolved solids concentration in the river is substantial due to complex water chemistry of a large riverine water body. Finally, water quality characteristics of the river are affected by man-made discharges along the long length of the river system including tributaries and hundreds of industrial and municipal treated effluent discharges.

Water quality of the Mississippi River in south Louisiana is monitored by federal, state, and local agencies for multiple purposes including public health, navigation protection, general environmental condition, and fish and wildlife protection. Water quality data is tabulated, summarized, and reported each calendar year by the regional USGS office in conjunction with the Louisiana Department of Transportation and Development.

For the calendar years 2001 and 2002, water quality data for the Mississippi River was summarized for this report by water quality parameter. The data is presented and compared with other water supply sources in Table 5-1.

5.1.3 Reclaimed Water Assessment

Reclaimed water to be used as alternative industrial water supplies must meet minimum water quality requirements of the intended usage. Water quality requirements may vary widely among various industrial water uses. Individual water quality parameters must be assessed relative to potential impacts on industrial processes in order to determine required water quality criteria for reclaimed water use. The following discussion summarizes some of the primary water quality values of local groundwater and surface water supplies, versus requirements for reclaimed water supplies to be used for industrial processes. The discussion is summarized by parameter or group of parameters. Treatment processes that may be used to improve reclaimed water quality characteristics for industrial water uses are discussed as appropriate.

Table 5-2 is a summary of typical water quality requirements for reclaimed water use in industry, including treatment processes that may be used to achieve the required quality.

pH – The average pH of treated effluent and Mississippi River water are near neutral and are well buffered (moderate alkalinity). The pH of local groundwater is naturally slightly alkaline (>7.2) with a moderate alkalinity, but with low total hardness. Generally, any of these waters can be used without pH adjustments or addition of alkalinity for buffering. Most industrial uses of water supply have a balanced neutral pH although pH may be altered within the process unit (e.g., for demineralization by ion exchange) and then neutralized before discharge. Neutralization treatment to maintain a neutral pH is readily accomplished by the addition of a number of commercially available acids and bases.

Table 5-2
Summary of Baton Rouge Area Water Supply Quality Characteristics Versus Requirements for Industrial Water Supply Uses

Water Quality Parameter Group (mg/L or as noted)	Water Supply Source			Industrial Water Use		Treatment Processes Used to Upgrade Water Supply [1,2]
	Groundwater Supply (Average)	Mississippi River (Average)	EBR Parish Reclaimed Water (Average)	Cooling & Utility (Range or Max) [1,2]	Demineralized & Process (Range or Max) [1,2]	
pH (s.u.)	7.2	7.6	7.7	6 – 9	6 – 9	pH Neutralization
Temperature (°F)	77.5	55 - 75	69	Ambient or Lower	Ambient	Recirculating Cooling Towers (Evaporation)
Residual Organics (as TOC)	<0.1	<5	21.7	<30	<5	Biological Treatment Physical/Chemical Treatment
Oil & Grease (O&G)	<0.1	<0.1	<5	<5	<1	Gravity Separation Dissolved Air Flotation De-emulsification
Total Suspended Solids (TSS)	<0.1	196	18	<30	<5	Clarification Multimedia Filtration
Total Dissolved Solids (TDS)	236	217	412	<500	<50	Coagulation/Flocculation Ion Exchange Membrane Processes
Total Residual Chlorine (TRC)	Not Detected	Not Detected	0.03 – 0.16	0.1 – 1.0 (Biocide)	<0.1	Chemical De-chlorination
Ammonia	<0.1	0.08	4.5	<5	<1	Air Stripping at High pH Steam Stripping at High pH
Total Nitrogen	<0.1	2.3	26.5	<30	<10	Nitrification Denitrification
Total Phosphorus	0.22	0.26	2.8	<5	<1	Chemical Treatment

Table 5-2 (Continued)
Summary of Baton Rouge Area Water Supply Quality Characteristics Versus Requirements for Industrial Water Supply Uses

Water Quality Parameter Group (mg/L or as noted)	Water Supply Source			Industrial Water Use		Treatment Processes Used to Upgrade Water Supply [1,2]
	Groundwater Supply (Average)	Mississippi River (Average)	EBR Parish Reclaimed Water (Average)	Cooling & Utility (Range or Max) [1,2]	Demineralized & Process (Range or Max) [1,2]	
Cyanide	Not Detected	Not Detected	Not Detected	<1	<1	Chemical Treatment
Phenols	Not Detected	Not Detected	0.01	<1	<0.1	Biological Treatment Chemical Treatment Resin Adsorption
Hardness	41	140	41	<50 - 150	<50	Lime Softening Ion Exchange Membrane Processes
Silica	28	---	28	<10	<5	Membrane Processes
Total Iron	0.77	27	0.48	<1 - 10	<1	Chemical Precipitation Green Sand Filtration
Volatile Organics	<0.01	Trace	<0.01	<1	<1	Carbon Adsorption Air Stripping Steam Stripping
Semivolatile Organics	<0.01	<0.01	<0.01	<1	<1	Carbon Adsorption Biological Treatment
Pesticides/Herbicides	<0.01	<0.01	<0.01	<1	<1	Carbon Adsorption
Fecal Coliform (#/100ml)	<1	<1 – Many	<1 – Many	No Pathogens	No Pathogens	Chlorination UV/Ozonation

[1] The Nalco Water Handbook, Second Edition (1988).
[2] Manual – Guidelines for Water Reuse, US Environmental Protection Agency, EPA/625/R-92/004, September 1992.

Temperature – The average temperature of the treated effluent ranged from 68.41 °F to 70.93 °F with a maximum of 89.06 °F. Typically, the temperature of the treated effluent at the time of discharge to the Mississippi River is near ambient air temperature because of the residence time in the WWTP while undergoing treatment. Therefore, the temperature of the treated effluent will show a seasonal cycle, with highest discharge temperatures during summer months and lowest temperatures during winter months. There may also be smaller diurnal (daily) temperature fluctuations in treated effluent because of incident solar insolation effects. Temperature of the treated effluent is of concern primarily when reclaimed water is to be used for industrial cooling purposes. In this case, temperature of the water becomes an important quality characteristic, as sufficient heat absorption capacity must exist such that the final effluent temperature upon discharge to receiving waters is within permitted limits.

Residual Organic Content (as TOC) – The average treated effluent residual organic content as measured by TOC concentrations is significantly greater than either raw Mississippi River water or local groundwater. However, the residual organic content is not so high as to prevent the use of the treated effluent for industrial cooling or other uses where organic content is not a major quality factor. The residual organic content is the result of extensive biological treatment of the human sewage and related wastewater generated in the local Baton Rouge area, and is typically treatable to lower levels if necessary to achieve a reclaimed water quality criterion, using additional biological treatment or other treatment options.

One potential issue with residual organic content is chlorination of the water – if required for biological growth control purposes in cooling applications. Direct chlorination of a wastewater with residual constituent concentrations may produce chloramines or chlorinated organic compounds in very low concentrations. These compounds are not allowed in drinking water supplies because of human consumption and environmental concerns for aquatic life, but are typically not a significant concern in cooling applications. Additional treatment to remove residual organic content may include additional biological treatment, adsorption on activated carbon for specific compounds, and other related treatment processes. Such processes are expensive when used to remove residual organic compounds, however, and are likely to be employed only when necessary to upgrade the quality of a potential water supply.

Oil & Grease – Oil & grease is a generic test protocol that measures the amount of oily substances in a separate phase, solubilized in, or emulsified in water. No oil & grease was detected in the treated effluent, nor is oil & grease normally present in raw Mississippi River water. Historic oil spills into the river have created short term situations where drinking water intakes had to be temporarily shut down in order to avoid taking in free or dissolved oil products. Free oil (separate phase), although easy to separate from water, would be considered a serious issue with reclaimed water and would likely prevent any re-use. In the same manner, significant dissolved or emulsified oil or grease in water would severely restrict any re-use. Maintenance of reclaimed water sources free of any detectable oil & grease is a very important water quality objective.

TSS – The treated effluent has an average TSS concentration of 18 mg/L, reflecting clarification processes in the WWTP. Mississippi River water, by contrast, has a TSS average concentration of 196 mg/L, because of the nature of sediment transport in a major river system. Groundwater from local aquifers has essentially no suspended solids, because the aquifer itself is a filter. Groundwater is not treated in any way that would precipitate suspended solids before it is distributed and used in the local Baton Rouge area. Therefore, groundwater has a significant advantage where a water supply with very low TSS is important, such as boiler feedwater or process uses. On the other hand, many once-through cooling applications may operate with no problems using water with TSS concentrations of <15 to 30 mg/L. Almost all industrial users of surface water from the Mississippi River require a substantial TSS removal process such as clarification with chemical treatment to effectively remove solids before further use within the plant environment. TSS is readily removed to lower levels (<5 to 8 mg/L average) if required by sand or multimedia filtration processes, such as those employed typically in surface water treatment plants.

Total Residual Chlorine (TRC) – The average treated effluent TRC is 0.12 mg/L. Direct chlorination is employed for public health reasons prior to discharge of the effluent to the Mississippi River. However, because of the potential for generation of chlorinated organics in the receiving water, East Baton Rouge Parish also dechlorinates all wastewater prior to discharge to remove TRC. Therefore, treated effluent used as reclaimed water may either be supplied with a residual chlorine concentration (which may be useful if the water is to be used for cooling), or dechlorinated as is the current practice. In either case, by comparison, raw water supplies from groundwater or the Mississippi River have no TRC.

Ammonia – The average treated effluent concentration of ammonia is about 4.5 mg/L, while both groundwater and surface water resources exhibit ammonia levels less than 0.1 mg/L. Ammonia at neutral pH exists as ammonium ion in solution, and should not create water quality issues for industrial uses such as cooling. However, industrial uses requiring an increase in pH >10 (such as demineralization processes) would shift the equilibrium so that free ammonia would exist and might be emitted as a vapor from the water phase. Therefore, ammonia concentration in reclaimed water is a parameter that should be monitored.

Nitrates (including nitrite) – Treated effluent nitrate concentration averaged about 8 mg/L, while Mississippi River water averages about 1.5 mg/L; groundwater concentrations average about 0.04 mg/L. Nitrate is one of several common anions in reclaimed water, and is a public health issue if concentrations exceed 45 mg/L for drinking uses. For industrial uses, nitrates would represent a water quality issue primarily if the water were used in a process in which nitrates may chemically react with other constituents in a process environment.

Total Nitrogen – Total nitrogen is usually estimated by summing Total Kjeldahl (organic) nitrogen, ammonia, and nitrates. In this study, total nitrogen concentration in treated effluent is about 26 mg/L, while Mississippi River raw water is about 2.2 mg/L and groundwater is about 0.04 mg/L (nitrate only). Total nitrogen is most typically an indicator of the nutrient-containing value of irrigation water, as nitrogen in various forms is used by plants as a primary nutrient. For industrial water uses, however, low total nitrogen is preferred and may be an issue for recirculating cooling and non-cooling water supply uses, requiring further treatment to convert organic nitrogen and ammonia to nitrate (nitrification), or to convert nitrate to nitrogen gas (denitrification).

Total Phosphorus – As with total nitrogen, total phosphorus is a major agricultural nutrient water quality parameter. Total phosphorus in treated effluent averages 2.8 mg/L, while in raw Mississippi River water and local groundwater, the average is about 0.25 mg/L. The increase in treated effluent likely derives from the excretion of phosphorus from human metabolism, and runoff of phosphorus residuals from fertilizer applications on lawns that enter sanitary sewers via infiltration and inflow (I/I). Total phosphorus at existing levels should not represent a significant water quality issue for reclaimed water use in industrial once-through cooling, but may be an issue in recirculating cooling or specialty water uses at industrial plants. In some cases, inorganic phosphate compounds may be useful in preventing scaling in cooling water applications, but may also lead to scaling in some cooling tower uses.

Chloride – Chloride concentration in treated effluent is about 40 mg/L; the same concentration is observed in raw Mississippi River water. Local groundwater contains an average of about 15 mg/L chloride, but some areas with salt water encroachment into the aquifer have seen chloride increase to about >50 mg/L in recent years (see data in Appendix F). Chloride ion is the most important indicator of salt water encroachment, as this constituent is the most common ionic constituent in sea water. Thus, local treated effluent used as reclaimed water has no inherent disadvantage relative to chloride concentration.

Hardness (Ca/Mg as $CaCO_3$) – Local groundwater resources are well known for low hardness values (average <5 mg/L in the best aquifer zones), as this represents one of the indicators of excellent general water quality for most purposes. Hardness in treated effluent from the WWTPs in East Baton Rouge Parish is almost 40 mg/L as $CaCO_3$. In the transition from raw groundwater to treated effluent, groundwater used for water supply in the East Baton Rouge Parish area increases in hardness to about 40 mg/L. In contrast, raw Mississippi River water averages about 140 mg/L total hardness. Hardness is typically determined in raw water sources by the type of geologic formation from which the water is derived. For industrial uses, low hardness is typically considered a positive factor because of the reduced potential for scaling in piping and on heat exchanger surfaces in cooling applications. For demineralization, reduced hardness translates to lower operational costs of treatment. Therefore, most industrial water supply treatment plants using Mississippi River water include a lime softening or similar process to reduce hardness.

Silica – Silica is a measure of dissolved forms of silicon in water, and is an important parameter in demineralization processes in water as it is difficult to remove by treatment, except by expensive osmotic membrane processes. Silica in treated effluent averages 28 mg/L, while groundwater from which the effluent derives has an average of 28 mg/L. In contrast, raw Mississippi River water contains about 6 mg/L silica. Silica concentrations in treated effluent may represent an issue in demineralization treatment processes by increasing costs for removal by membrane treatment processes, but may not be a significant issue in once-through cooling uses at the levels detected.

Total Dissolved Solids – Total Dissolved Solids (TDS) is a general water quality parameter that represents the sum of the cations and anions present in water in a dissolved state. Typically, sodium and bicarbonate predominate as the most common cation and anion in fresh water in the Baton Rouge area, while sodium and chloride are predominant in salt water sources. Calcium and magnesium are important cations, while sulfate, nitrate, fluoride, and phosphate are other common anions. Treated effluent has an average TDS concentration of 412 mg/L, while raw Mississippi River water TDS concentration averages 217 mg/L. Local groundwater resource TDS concentrations are about 236 mg/L. As for other measures of cation/anion content of local waters, TDS of treated effluent represents the average buildup of dissolved solids in raw groundwater as that resource is used for drinking and other purposes. TDS becomes important in industrial water supplies when the concentration exceeds the solubility limits for selected cations and anions, which then precipitate and form suspended solids. Typically, TDS dominated by sodium and chloride ions is not a quality issue for cooling water supplies, but TDS may be important for demineralization processes, increasing costs of ion exchange or membrane processes used to reduce TDS concentrations in water supplies.

Metals – Of the metals tested for in treated effluent (including RCRA toxic metals), average concentrations of detected metals were as follows:

- Aluminum – 0.34 mg/L
- Barium – 0.04 mg/L (RCRA toxic metal)
- Calcium – 12 mg/L
- Iron – 0.48 mg/L
- Magnesium – 2.7 mg/L
- Manganese – 0.05 mg/L
- Potassium – 7.3 mg/L
- Sodium – 93 mg/L
- Zinc – 0.03 mg/L

All other metals were below method detection limits, including RCRA toxic metals. All of the detected "earth" metals are present at detectable levels in local groundwater and in raw Mississippi River water. Levels in treated effluent are somewhat higher than native groundwater (reflecting uses of the water before wasting as sewage), while most metals levels are lower than in Mississippi River water. For example, iron concentrations in Mississippi River water is significantly higher at about 27 mg/L. Iron is a significant water quality issue in many industrial water applications because of the scaling and fouling caused by precipitated iron oxides. Treatment processes used to remove metals may include precipitation or membrane processes. Common treatment methods for iron in water supplies include aeration (to precipitate iron oxides) and green sand filtration (adsorption of iron).

Volatile Organic Compounds (VOCs) – In treated effluent, the only volatile organic compound observed on the US EPA test protocol for VOCs during regular semi-annual testing was chloroform, with an average concentration of <0.01 mg/L. Raw Mississippi River water may contain similar concentrations of VOCs due to minor industrial discharges of organic compounds that are persistent in the environment. Local groundwater does not contain detectable concentrations of VOCs. VOCs are important in two respects if found in reclaimed water used as an industrial water supply. First, uses may be restricted because of the reactivity of the compounds, even in low concentrations. Secondly, industrial wastewater discharge permits may prohibit the discharge of VOCs, or limit discharges to very low concentrations.

Semi-Volatile Organic Compounds (SVOCs) – Samples of treated effluent did not contain any concentrations of SVOCs on the US EPA test protocol. This class of organic compounds would not be expected to be detected in either raw Mississippi River water or local groundwater. SVOCs are important in two respects if found in reclaimed water used as an industrial water supply. First, uses may be restricted because of the reactivity of the compounds, even in low concentrations. Secondly, industrial wastewater discharge permits may prohibit the discharge of SVOCs, or limit discharges to very low concentrations.

Pesticides/Herbicides – Samples of treated effluent did not contain detectable concentrations of this class of compounds. The same is true of raw Mississippi River water and local groundwater. However, Mississippi River water has in the past contained detectable concentrations of pesticides such as DDT when this compound was widely used in the southern states for pest control of cotton crops. Pesticides/herbicides are important in two respects if found in reclaimed water used as an industrial water supply. First, uses may be restricted because of the reactivity of the compounds, even in low concentrations. Secondly, industrial wastewater discharge permits may prohibit the discharge of pesticides/herbicides, or limit discharges to very low concentrations.

Fecal Coliform – Fecal coliform, or the similar biological indicator test for Total Coliform, are common test protocols for determining the need for disinfection of a wastewater. Treated effluent was determined to sometimes have fecal coliform counts even after disinfection, which likely reflects a non-uniform disinfection process.. Raw Mississippi River water may contain similar or greater average residual fecal coliform counts due to agricultural or feedlot runoff. This parameter is of most significance where reclaimed water may be reused for crop irrigation or drinking purposes, but is also of prime importance in any potential public health situation, including industrial uses, where human contact with reclaimed water is a possibility. For industrial once-through cooling where direct human contact with the cooling water is not expected, the presence of fecal coliform may not be a significant factor.

5.2 QUANTITY ASSESSMENT – SUPPLY VERSUS USAGE POTENTIAL

Table 5-3 summarizes the quantities of groundwater and surface water used in the local metropolitan Baton Rouge Parish area by industry, and compares these values to the potential reclaimed water availability from East Baton Rouge Parish treated effluent. The table is structured in order to demonstrate location preferences for transporting reclaimed water from East Baton Rouge Parish treated effluent to potential industrial water users.

Table 5-3
Comparison of Reclaimed Water Availability Versus Current Industrial Uses by Source
Baton Rouge Study Area

Reclaimed Water Volumes City/Parish WWTPs (MGD)		**Potential Reclaimed Water Use (MGD)**	**Current Industrial Water Use by Source Baton Rouge Area (MGD)**		
City/Parish Treatment Facility	**Average Daily Volume**	**Average Daily Volume**	**Industrial Facility Group**	**Ground Water Supply**	**Surface Water Supply**
North WWTP	15.95	Replace Groundwater [1] 15.95	[1] North BTR	45.672	0
Central WWTP	10.43	Replace Groundwater [1] + [2] 10.43	[2] South BTR	31.396	26.250
South WWTP	34.31	Replace Groundwater [2] + [3] 34.31	[3] St Gabriel/ Geismar	11.454	942.545
Totals	**60.69**	**60.69**	**Totals**	**88.523**	**968.795**

For example, the North WWTP is located in the same area as a group of industries grouped together as the "North BTR" industrial group (see Figure 4). In this area, about 16 MGD of reclaimed water is potentially available for re-use, while the North BTR industrial group collectively uses about 46 MGD of groundwater. It should be noted that the North BTR industrial group does not extract water from the Mississippi River for water supply. Potentially, up to 16 MGD of local groundwater resources could be replaced by reclaimed water in this area, if reclaimed water quality is adequate to meet industrial needs.

Likewise, the Central WWTP is located in the same area as a group of industries grouped together as the "South BTR" industrial group (see Figure 4). In this area, about 10.5 MGD of reclaimed water is potentially available for re-use, while the South BTR industrial group collectively uses about 31.5 MGD of groundwater and 26.3 MGD of Mississippi River water. Potentially, up to 10 MGD of local groundwater resources could be replaced by reclaimed water in this area, if reclaimed water quality is adequate to meet industrial needs. Reclaimed water could also be transported from the Central WWTP to the North BTR industrial group.

Finally, the South WWTP is located between the "South BTR" industrial group and the "St Gabriel/Geismar" industrial group in Iberville and Ascension Parishes south of the metropolitan Baton Rouge area (see Figure 4). In this area, about 34 MGD of reclaimed water is potentially available for re-use, while the total groundwater usage by the industrial groups (South Baton Rouge + St. Gabriel/Geismar) is about 43 MGD, and Mississippi River water supply usage is greater than 968 MGD (the majority of which is used by the Entergy Willow Glen power plant for once-through cooling). Potentially, up to 34 MGD of local groundwater resources could be replaced by reclaimed water in this area, if reclaimed water quality is adequate to meet industrial needs.

Combining the EBR Parish Central and South WWTPs treated effluent (about 45 MGD), all of the total groundwater resource usage (about 43 MGD) by the South BTR and St. Gabriel/ Geismar industrial groups could potentially be replaced by reclaimed water usage.

From the perspective of the overall metropolitan Baton Rouge study area, the table shows that about 61 MGD of reclaimed water from treated effluent is available to potentially replace about 69% of the approximate 89 MGD of currently utilized groundwater resources from the combined Southern Hills aquifers and the Mississippi River Alluvial Aquifer.

If all of the potentially available reclaimed water (61 MGD) could replace current groundwater usage by industry, an amount of groundwater approximately equal to 68% of that used currently for drinking and related uses in the 5-parish area (89 MGD) could be saved for high-priority drinking uses. This would represent a 30% reduction in total groundwater withdrawals in the metropolitan Baton Rouge area, and would likely be sufficient to allow water level recharge in some or all of the local Southern Hills aquifers.

This preliminary quantity assessment would require further study to identify individual sources of industrial water supply that could be replaced by reclaimed water usage. In addition, the technical feasibility of individual industrial water supply replacements would need to be evaluated based on water quality requirements, reclaimed water transport and delivery requirements (method of transport by gravity or pumped means; number of lift stations required, transport routes, industrial water supply tie-in locations, etc.), and financial feasibility. Financial feasibility would include an analysis of both the capital and O&M costs that would be incurred in converting individual water supplies from groundwater usage to reclaimed water usage, and the financial arrangements that would be necessary to create willing sellers and buyers of the reclaimed water supply.

5.3 QUALITY ASSESSMENT – SUPPLY VERSUS USAGE POTENTIAL

This section includes more detailed discussion of the priorities for reclaimed water use as alternative local industrial water supplies, including issues related to industrial water quality requirements and concerns by usage category.

5.3.1 Reclaimed Water Use for Industrial Cooling Water or Utility Supply

The most likely conversion of local Baton Rouge study area industrial water supplies from groundwater usage to reclaimed water usage would be for cooling water or utility water, as discussed elsewhere in this report. Cooling water and utility requirements tend to have the least stringent water quality requirements for use, and industrial cooling water is used in large volumes, which could potentially create the most financially feasible alternative supply scenarios (i.e., lowest cost per gallon).

Table 5-4 summarizes the potentially available reclaimed water supply from East Baton Rouge Parish treated effluent sources, compared with specific industrial quantity requirements for once-through cooling water (OTCW), recirculating cooling water (RCW) categories, and Utilities/Firewater/Other categories, organized by local industrial groups and supply source.

Table 5-4
Comparison of Reclaimed Water Availability Versus Current Industrial Uses - Industrial Cooling & Utilities Supplied by Groundwater
Baton Rouge Study Area

Reclaimed Water Volumes EBR Parish (MGD)		Potential Reclaimed Water Use-By Category (MGD)	Current Industrial Water Use by Category Baton Rouge Area (MGD)			
EBR Parish Treatment Facility	**Average Daily Volume**	**Average Daily Volume**	**Industrial Facility Group**	**OTCW**	**RCW**	**UW, FW, Other**
North WWTP	15.95	Replace Groundwater [1] + [2] 15.95	[1] North BTR	0.50 (GW) 0 (SW)	3.96 (GW) 0 (SW)	0.31 (GW) 0 (SW)
Central WWTP	10.43	Replace Groundwater [2] 10.43	[2] South BTR	0 (GW) 0 (SW)	12.02 (GW) 18.11 (SW)	3.50 (GW) 1.50 (SW)
South WWTP	34.31	Replace Groundwater [2] + [3] 22.33	[3] St Gabriel/ Geismar	2.88 (GW) 896.83 (SW)	2.17 (GW) 8.00(SW)	1.76 (GW) 15.45 (SW)
Totals	**60.69**	**27.11 (GW)**	**Totals**	**3.39 (GW) 896.83 (SW)**	**18.15 (GW) 26.11 (SW)**	**5.57 (GW) 16.95 (SW)**

[1] *GW* = Groundwater Supply; *SW* = Surface Water Supply; *OTCW* = Once-through Cooling Water; *RW* = Recirculating Cooling Water; *UW* = Utility Water; *FW* = Firewater

Once-through cooling water (OTCW) accounts for about 85% (900.21 MGD) of total industrial water supply usage (including both groundwater and surface water supply sources). Recirculating cooling water (RCW) accounts for another approximately 4% (44.23 MGD) of total industrial usage. Total usage for all cooling purposes is about 944.44 MGD by industry in the East Baton Rouge metropolitan study area. Utility, firewater, and other miscellaneous usages add an additional 23 MGD (2.2% of total industrial usage). This high percentage of water usage devoted to industrial cooling and utility requirements suggests that reclaimed water alternatives for these sources could be feasible, especially since these usages generally have the lowest water quality requirements.

Within the cooling and utility categories, about 27 MGD of the total industrial water supply is from groundwater resources. Because of the lower water quality requirements for these usage categories, the highest priority for replacement of groundwater supply with alternative reclaimed water supply for local industry is likely to be this 27 MGD of cooling and utility water supplied by groundwater. As can be seen in Table 5-4, the location preferences for providing reclaimed water for alternative industrial cooling and utility supplies would be as follows:

- The North WWTP can supply 4.7 MGD of alternative cooling and utility water supply to the North BTR industry group (replacing all existing cooling and utility water supplied by groundwater). The North WWTP could also supply alternative reclaimed water to the South BTR industry group for the same purposes (up to 15.95 MGD of reclaimed water available).
- The Central WWTP can supply 10.43 MGD of alternative cooling and utility water supply to the South BTR industry group (replacing about 67% of the existing cooling and utility water supplied by groundwater).
- The South WWTP can supply reclaimed water to replace all of the cooling and utility water usage supplied by groundwater for the St Gabriel/Geismar group and the South BTR group (22.33 MGD).
- Overall, there is sufficient reclaimed water available (61 MGD) to replace all cooling and utility water used by the three industry groups from groundwater resources (27.11 MGD).

5.3.2 Reclaimed Water Use for Industrial Non-Cooling Category Water Supply

After satisfying all local study area demand for alternative reclaimed water supply replacement for groundwater in the industrial cooling and utility categories, sufficient treated effluent remains to supply alternative reclaimed water for other local study area industrial uses in a volume of about 34 MGD. This potential remaining reclaimed water supply could provide alternative water supplies to replace existing usages such as selected process uses or feed to demineralization processes.

Use of reclaimed water as an alternative industrial water supply for other than cooling or utility usages may introduce more significant issues of industrial water quality requirements. General requirements for industrial water quality in various categories are discussed in Section 4.0 of this report. There are four broad water quality issues that are most important to industrial water quality for non-cooling uses:

- Residual organics and inorganics content

- Total suspended solids
- Total dissolved solids (cations/anions)
- pH balance, alkalinity, and hardness

Additional water quality issues that may be important to industrial water quality in particular instances, but generally are more important to re-uses such as agricultural irrigation include:

- Microbiology
- Nutrient content

A discussion of each of these water quality issues as related to the use of reclaimed water for industrial water supply is provided in the following sections.

Residual Organics and Inorganics Content

Industrial operations at refineries and chemical plants that dominate the local Baton Rouge area generate process wastewaters (generally separate from cooling water or cooling water blowdown discharges) that contain a large number of individual organic and inorganic constituents. Each industrial SIC category operates under a regulatory program that includes specific discharge limits for either 1) parameters that measure total organic or inorganic content, or 2) individual organic or inorganic constituents. Industrial wastewater effluent discharges typically contain detectable levels of residual organic and inorganic constituents that are carefully controlled by industrial wastewater treatment plant operations, and are subject to regulatory permit enforcement, including fines and penalties, if exceeded.

Addition of residual organic or inorganic constituents to industrial water supplies via the use of reclaimed water as water supply for various in-plant purposes may result in 1) reactions with other organic or inorganic raw materials used to produce treated industrial water supply water quality specifications, or 2) total residual organic or inorganic constituents in final effluent that may exceed permit discharge limits. Thus, reclaimed water use by industry may have significant impacts on existing industrial water discharge permit conditions.

Use of reclaimed water for industrial purposes beyond once-through cooling and utility needs will require individual consideration of residual organic and inorganic compound presence and concentrations. In some cases, reclaimed water may used without further treatment. In other cases, specific additional treatment may be required to reduce organic or inorganic constituent concentrations before re-use. Additional treatment, if required, would most likely take place at the industrial plant water supply treatment facility, but could be provided at the source municipal WWTPs. In either case, additional treatment would add additional cost to the use of reclaimed water.

Total Suspended Solids

Residual suspended solids in reclaimed water may prevent the direct re-use of the water because of the propensity of the solids to 1) physically clog or block final water filters installed in most industrial process loops; or 2) react with or adsorb dissolved constituents thus making the solids a chemical water quality issue. Reclaimed water supply would typically be blended into industrial raw water supply before any in-plant use; most industrial water supply treatment facilities have effective treatment processes that remove suspended solids to low levels (<10 to 15 mg/L). Therefore, the most significant potential effect of suspended solids contained in reclaimed water would be marginal additional costs to remove those solids during water supply treatment, including increased volumes of clarifier sludge that must be dewatered and disposed properly. Alternatively, additional TSS removal could be accomplished at the C/P WWTPs prior to delivery of reclaimed water to industrial facilities.

Total Dissolved Solids (Cations/Anions)

Dissolved solids in reclaimed water may be a significant water quality issue if reclaimed water is to be used for in-plant demineralization purposes. Demineralized water quality is required for boiler feedwater, some recirculating cooling tower applications, some utility water applications, and most process uses. Industrial plants generate large volumes of demineralized water supply via ion exchange or reverse osmosis water supply treatment processes. These processes are more efficient at removal of selected cations and anions, and less efficient for other residual constituents. Most importantly, dissolved ionic species may precipitate out of solution to form suspended solids that may greatly reduce the efficiency of demineralization processes, or more likely increase the cost of pre-filtering treatment of demineralized water treatment feedwater. Additional treatment at C/P WWTPs or industrial plants to remove excessive dissolved solids may include coagulation and flocculation operations as extensions of existing clarification processes, or optimization of demineralization processes such as ion exchange or revere osmosis at industrial facilities. In either case, the costs of treatment of reclaimed water supply would increase the total cost to use reclaimed water to meet process water quality requirements.

pH Balance, Alkalinity, and Hardness

The presence of calcium, magnesium, carbonate, and hydroxyl ionic species in reclaimed water may be a significant water quality factor in process or utility uses. These ions constitute the most important constituents for controlling pH balance, and for maintaining optimum levels of alkalinity and hardness in industrial water supply. Maintenance of a pH balance is very important to most industrial process uses. Insufficient alkalinity may lead to increased marginal costs for maintaining pH balance, although almost all industrial plants have process control loops and chemical feed systems for maintaining optimum pH both for process purposes, and to maintain effluent pH within permitted levels. Excessive hardness (measured as calcium carbonate equivalent) may cause precipitation of calcium and magnesium carbonate species and resultant scaling of in-plant piping. Most industrial plants have an active water quality monitoring program for pH, alkalinity, and hardness control, and optimize these parameters to prevent these problems. Therefore, the effect of use of reclaimed water supply with an imbalance in these constituents could be higher marginal treatment costs to maintain control, and not addition of new treatment systems. Use of East Baton Rouge Parish treated effluent is unlikely to cause significant issues because of the low hardness and moderate alkalinity of the Southern Hills groundwater resources used for local municipal water supplies.

Microbiology

Microbiology associated with reclaimed water is not likely to represent a significant issue for industrial non-cooling uses as long as effective and uniform disinfection has occurred as a treatment step before re-use. It is extremely unlikely that reclaimed water would be used as a source of drinking water in an industrial plant. Therefore, the more significant issue associated with microbiology of reclaimed water is whether the residual chlorine level is appropriate for process or other re-uses. In the case of C/P WWTP treated effluent used as reclaimed water, disinfection by chlorination and de-chlorination have been used to achieve permit requirements for Mississippi River discharge, so that microbiology should not be a significant issue for reclaimed water re-use by local industrial plants, if the C/P WWTP disinfection process is effective and consistently applied.

Nutrient Content

Nutrients, including various organic and inorganic forms of nitrogen and phosphorus, are defined by the value of these compounds as plant fertilizers. Therefore, these compounds are highly advantageous in reclaimed water used for cropland irrigation. Many of these compounds are present at low residual concentrations in East Baton Rouge Parish treated effluent because of the human waste sources of these compounds in municipal sewage. Residual concentrations of these compounds may enhance biological growth in wastewater treatment facilities (a positive effect in some nutrient deficient industrial WWTPs), or contribute to unwanted biological growth in cooling towers or other locations in industrial plants. Biocides are typically used in industrial cooling waters to inhibit or prevent biological growth. However, biocides are typically not used in many industrial water supply applications, and the presence of nitrogen or phosphorus-based residual nutrient concentrations may result in unwanted chemical reactions or ultimate discharge of excessive nutrients in final industrial effluents. Removal of residual nutrients, which tend to be in the nitrate and phosphate ionic forms in wastewater effluents, may be expensive and require advanced treatment processes. The marginal treatment costs to remove nutrients, if necessary, to improve the quality of reclaimed water for selected industrial uses, may be high relative to the value obtained from the use of the reclaimed water.

5.3.3 Blending To Provide High Quality Reclaimed Water

An alternative to achieving an additional degree of treatment or separate advanced treatment processes, at either East Baton Rouge WWTPs or at industrial water supply treatment plants, to improve the quality of reclaimed water for selected industrial uses, is blending of reclaimed water with other water supplies to improve the quality for industrial uses. Blending of reclaimed water with other water supply sources can be accomplished in several ways, including the following:

- Blending of reclaimed water with fresh groundwater sources, without treatment
- Blending of reclaimed water with Mississippi River water, after suspended solids removal, in a dedicated treatment facility
- Blending of reclaimed water with treated industrial water supply before first use

- Blending of reclaimed water with treated industrial wastewater effluents

Figure 6 describes schematically how reclaimed water sources can be blended with various other water supply sources to provide both the quantity and quality of reclaimed water necessary for various industrial uses. Each of the plans presented in Figure 6 is discussed further below.

Blending With Groundwater

Blending reclaimed water with fresh groundwater provides the greatest increase in blended water quality, because of the absence in groundwater of residual organics, nutrients, suspended solids, and low dissolved solids. However, the purpose of the reclaimed water program in the Baton Rouge study area is primarily to decrease the use of groundwater by replacement with reclaimed water. Therefore, blending reclaimed water with groundwater will not totally achieve the objectives of the proposed reclaimed water program.

It should be noted that selected small volume industrial uses of groundwater-blended reclaimed water might achieve the goals of a particular industrial plant, and therefore this option should be included in the list of possible uses of reclaimed water in specific individual situations.

Blending With Surface Water from the Mississippi River

Blending reclaimed water with fresh surface from the Mississippi River will significantly improve the blended water quality (due to better quality of Mississippi River water) for specific quality parameters, including residual organic compounds, nutrients, dissolved solids, and alkalinity. Improvements in blended water (due to better quality of the reclaimed water) would occur for parameters including suspended solids, hardness, specific cations and anions, and several metals including iron.

The suspended solids load present in the Mississippi River would in all likelihood prevent the use of blending water from this source, unless suspended and total dissolved solids treatment is provided prior to blending. The average TSS concentration of about 200 mg/L in river water could not be blended sufficiently without treatment to provide for even the lowest quality industrial uses for cooling. Therefore, blending with Mississippi River water would require treatment of the river water prior to blending, in order to reduce river sediment levels to <20 mg/L for the blended water stream. This level of treatment could be provided by high rate clarification and lime softening of river water as is currently practiced by both industrial and municipal users of river water for water supplies. Blending with Mississippi River water to improve reclaimed water quality therefore assumes the construction of a Mississippi River water supply blending plant providing high rate clarification and lime softening, or equivalent.

A Mississippi River blending plant could be constructed at many locations along the east bank of the river in the metropolitan Baton Rouge area to provide blending for Baton Rouge City/Parish treated effluent. The capacity of such a blending plant is assumed to be sufficient to provide a 50% (1 to 1 ratio) blending of reclaimed water for non-cooling industrial uses, or about 35 MGD (see discussion in Section 5.2 of this report).

Blending With Industrial Water Supplies

Blending of reclaimed water with treated industrial water supplies (assumed to be derived from Mississippi River water supply sources) may be an efficient way to improve water quality for selected industrial uses. This would represent an efficient means of improving an existing industrial water supply to meet greater volume requirements for cooling or other uses, while assuring that the water quality of the blended source is better than the reclaimed water used alone. In all cases where river water is currently used for industrial water supplies, suspended solids are reduced by some means of rapid rate clarification; therefore this alternative represents conceptually a similar option to dedicated use of a Mississippi River blending plant as discussed above.

Blending With Industrial Wastewater Effluent

Blending of reclaimed water with treated industrial wastewater effluent represents the ultimate re-use of water, as both municipal and industrial wastewaters would be used multiple times before ultimate discharge to receiving waters. A number of local industries have considered recycling and re-use of their own treated wastewater effluents, but the water quality requirements for uses other than cooling or utilities have often required the use of advanced treatment processes such as reverse osmosis or chemical oxidation because of residual constituents in the treated wastewater effluent. Therefore, the economic considerations associated with use of recycled industrial effluent have rarely competed financially with the low cost of using fresh groundwater or surface water supplies. In those cases where Baton Rouge City/Parish treated effluent would dilute critical water quality constituents or parameters in existing industrial wastewater effluents, the blending of the two sources might make the economics of total re-use more competitive, especially for uses such as cooling or utility water. Typically, the temperature of industrial once-through cooling water (OTCW) is too high for multiple uses, but the ambient temperature of a reclaimed water blending process might allow for multiple passes. For recirculating cooling tower water supplies, a percentage of the cooling water stream must be continuous blowdown to maintain a reasonable level of dissolved solids. In this case, blending with reclaimed water might reduce the blowdown stream significantly or extend the use period for recirculating cooling water.

All of the options for blending reclaimed water with other water sources, whether considering fresh unused groundwater, surface water, or recycled wastewater effluent must take into account the ultimate water quality requirements of the proposed industrial use, and the potential regulatory impacts on industrial water discharge permits. The water quality requirements will dictate the degree of blending required, and the type of blending necessary to meet water quality requirements.

This section of the reclaimed water study provides a summary of activities completed and recommendations for the further study of reclaimed water as an alternative industrial water supply in the Baton Rouge area.

6.1 SUMMARY OF STUDY

This reclaimed water study was undertaken to identify the current sources of water supply in the Baton Rouge area, including industry in the Baton Rouge to Geismar industrial corridor along the Mississippi River, and to determine the feasibility of providing large volume sources of reclaimed water to industry for use as an alternative water supply. These potential uses are those that are suited for evaluating the characteristic qualities of reclaimed water as determined during the study.

The study included several elements essential to an understanding of the technical, marketplace, and regulatory issues associated with the potential use of reclaimed water:

Review of current regulatory issues associated with water supply sources and the use of reclaimed water in the local Baton Rouge area.

Recent legislation in Louisiana has begun to address the issue of protecting the best uses of fresh groundwater resources statewide. By law, the best use of fresh groundwater resources is now defined to be for drinking purposes. This legislation has been driven by the public perception that groundwater resources are being threatened by pumping of aquifers beyond sustainable yields, used for purposes other than drinking water supplies, and threatened by surface contamination or saltwater encroachment. Certain large-volume future groundwater uses will require permitted approval by the Department of Natural Resources, Office of Conservation. Separate legislation in 2003 has defined reclaimed water and encourages the use of such alternative water supplies for industry, non-crop irrigation, and related uses.

Determination of the volume and characteristic quality of significant reclaimed water sources in the local Baton Rouge area.

The most significant volume of potential reclaimed water in the Baton Rouge area is treated sewage effluent generated in East Baton Rouge Parish. An average of approximately 61 MGD of treated wastewater, derived primarily from groundwater extracted in the Baton Rouge area, is discharged daily into the Mississippi River by pumping over the levee system.

Once pumped into the Mississippi River, the value of this potential reclaimed water supply source is lost by mixing with river water.

Treated sewage effluent derived from local groundwater resources has both advantages and disadvantages for further re-use. The most obvious disadvantage is the public health issue associated with potential contact or consumption of human or animal-derived bacterial or viral pathogens that may persist in wastewater that is not properly disinfected. Although Baton Rouge City/Parish treated effluent wastewater is disinfected by chlorination prior to discharge in accordance with stringent permit limits, there is still a significant negative public perception associated with any use of treated effluent that may involve consumption by or contact with people. This perception is so strong that recent legislation exempts from consideration any reclaimed water usages that might result in human contact of any type, even consumption of harvests of irrigated crops. The same concerns relative to contact with reclaimed water exist for industrial plant workers, where water supplies are not totally enclosed.

The major advantage of treated effluent derived from local groundwater is that it is still relatively low in ionic content (i.e., total dissolved solids or salinity) versus Mississippi River surface water, and can be cost effectively used for many industrial purposes for that reason.

Treated sewage effluent from the Baton Rouge WWTPs generally is of a similar quality to the newly defined statutory standards for reclaimed water quality as measured by the average values of BOD_5 (28 mg/L vs. 5 mg/L standard), TSS (23 mg/L vs. 5 mg/L standard), NH_3-N (4.5 mg/L vs. 2 mg/L standard), Total Nitrogen (26.8 vs. 10 mg/L), and chlorine residual (0.10 mg/L vs. 2 mg/L standard). These differences in average C/P effluent water quality and statutory standards for reclaimed water may be significant in many local industrial water re-use applications.

Generally, the reclaimed water standards included in the new reclaimed water statute are somewhat to significantly more stringent than those required for once-through cooling and related lower quality industrial uses. For uses that demand higher reclaimed water quality standards, treated effluent can be blended with other fresh water sources, such as Mississippi River water that has been treated for settleable solids removal, to improve BOD_5, TSS, NH_3-N, Total Nitrogen, and other parameters such that the user's quality needs are achieved. When industrial water quality requirements are stringent, the existing Baton Rouge

City/Parish WWTP effluent can be further treated before pumping to reclaimed water users in order to achieve the quality requirements of a particular user.

Inventory of industrial water supply sources, quality requirements, and distribution of usage for specific industrial sites in the Baton Rouge Mississippi River corridor.

A major aspect of any study of potential uses for reclaimed water is identification of potential users with water supply needs, or compatible existing uses. This study included a survey of industrial water users in the Baton Rouge corridor from north Baton Rouge to Geismar. Data provided either directly by industrial representatives, or from publicly available permit documents, provided a tabulated summary of total water usage, usage by water supply source, and type of uses in several broad categories.

A total of thirty-four (34) major industrial facilities or multi-plant complexes were included in the survey of industrial water users, including electrical power generating plants in the study area. Other categories of industry in the study area include petroleum refineries and lube plants, petrochemical and other organic chemical manufacturing plants, inorganic chemical and metals manufacturing plants, nitrogen and phosphorus fertilizer plants, and manufactured gas plants. These plants typically require water supply for diverse uses including process consumption, once-through and recirculating cooling, boiler feedwater and steam production, plant utilities, firewater, drinking water, and other miscellaneous uses. The quality of water supply required for these activities ranges from relatively solids free to extremely high quality for some process uses.

Water of lower quality is typically used for once-through cooling, firewater, and some utilities. Water with low suspended solids, low dissolved solids, and some specialty treatment (biocides) is typically used for recirculating cooling in cooling towers, although some cooling tower applications may require more stringent water quality requirements. Additional demineralization and deaeration is required to produce water of sufficient quality for boiler feedwater and typical process uses. Disinfection by chlorination or other treatment methods is required to produce drinking quality water. Finally, some specialty applications may require reverse osmosis, chemical treatments, or other specialty treatment to produce water that is absent of suspended solids, very low in dissolved solids and organic content, or with other specific high quality properties for process uses.

Typically, the volume of water supply required for industrial uses is directly disproportionate to the required quality. Very large volumes of once-through water are used for cooling, but the required treatment is none to simple settleable solids removal, depending on the source. The total volume of water supply used for once-through cooling at the surveyed plants was >900 MGD, or about 85% of the total water used for all purposes. If recirculating cooling by cooling towers is added to the total water supply for cooling, the total used is >940 MGD, or about 90% of the total water usage from all sources.

Firewater and utility water requiring low levels of treatment account for about 16 MGD of total usage (about 1.5% of the total usage). Firewater as inventoried in this study typically is representative of the quantities stored at a given time for a firefighting.

At the other end of the spectrum, high purity water is generated in very small volumes (hundreds of gallons per day) for process consumption using high cost treatment methods.

Industrial uses requiring higher levels of treatment including process consumption and boiler feedwater account for about 84 MGD of the total (about 8%); potable water supply and other miscellaneous uses account for about 13 MGD of the total (about 1%) of current industrial water uses.

Comparison of the availability of reclaimed water versus potential usage scenarios as alternative industrial water supplies, on a volume and quality basis, and considering geographic location and transport factors.

Table 6-1 summarizes the overall availability of reclaimed water in the Baton Rouge study area versus overall industrial water uses, by use sources as evaluated, summarized, and discussed in this report.

It is immediately obvious that, on a volume-to-volume basis only, the total reclaimed water availability is only a small percentage of total industrial water usage (about 6%). Evaluating further the potential of replacing high quality groundwater resources currently used by industry in the Baton Rouge area indicates that the total available reclaimed water supply from the C/P WWTPs is less than the volume of groundwater used (61 MGD reclaimed water supply versus 89 MGD groundwater used by industry). Evaluating location as a factor in reclaimed water use potential, reclaimed water supply may be adequate to replace as much as 79% of the industrial groundwater usage in north/south Baton Rouge, without consideration of the industrial corridor in St. Gabriel and Geismar. The location factor is potentially significant because of the potentially high additional transport cost to deliver reclaimed water from the C/P WWTPs to the industrial complexes in the St. Gabriel/Geismar area.

Table 6-1
Comparison of Reclaimed Water Availability
Versus Current Industrial Uses by Source
Baton Rouge Study Area

Reclaimed Water Volumes (MGD)			Industrial Water Use by Source (MGD)				
				Source of Water Supply			
Facility	**Average Daily Volume**	**Maximum Daily Volume**	**Industrial Area**	**Ground Water Supply**	**Surface Water Supply**	**Public Water Supply**	**Total Water Used**
North WWTP	15.95	96.67	North BTR	45.672	0	0.005	45.677
Central WWTP	10.43	48.50	South BTR	31.396	26.250	0.248	57.894
South WWTP	34.31	98.42	St. Gabriel/ Geismar	11.454	942.55	0.025	954.029
Totals	**60.69**	-----	**Totals**	**88.523**	**968.795**	**0.278**	**1057.600**

Reclaimed water could also be used to replace Mississippi River water supply used by industry in south Baton Rouge (26 MGD). However, because the highest priority for alternative water supplies is to replace groundwater as a source, the entire potential reclaimed water supply could be used to replace high value groundwater in the north/south Baton Rouge industrial corridor. Further, there is no legislative incentive to replace Mississippi River supplies.

Comparison of the availability of reclaimed water versus potential usage scenarios as alternative industrial water supplies, on a quality basis, and considering geographic location and transport factors.

Reclaimed water can serve as an alternative water supply for various uses in industry. The most probable industrial use is as once-through cooling water (OTCW), because not only is the volume of usage very large, but the quality required is typically the least stringent of all industrial uses. In fact, the quality of reclaimed water used as a OTCW source in industry may be limited by the discharge permit requirements for returning of the water to a receiving water, not by the quality required for the cooling usage. Reclaimed water from a source such as City/Parish WWTPs that is already approved for Mississippi River discharge by LPDES permit is likely to require no further treatment for use as industrial OTCW. The most stringent quality criteria for OTCW usage are likely to be related to the propensity for scaling of heat exchange tubes. Thus low hardness is a key quality criterion. Because the source of City/Parish treated effluent is Southern Hills groundwater with very low hardness, another significant advantage exists for use of this source as reclaimed water OTCW. In addition, City/Parish treated effluent is at neutral pH and has sufficient alkalinity to prevent pH swings during OTCW use, thus minimizing the need for chemical additives to control pH. Other City/Parish treated effluent quality characteristics that may be important to consideration for OTCW re-use are as follows:

- **Organic content:** BOD_5, COD, and TOC are higher than raw Mississippi River water supply, but are not important to OTCW use as long as volatiles (VOCs) are minimal, and the organics are stable. Typically, residual organic constituent concentration in secondary effluent from municipal POTWs is very stable and unlikely to represent an issue for OTCW use.
- **Nutrient content:** Excessive nutrients may cause biological growth in OTCW on warm heat exchange surfaces. For that reason, biocides are periodically added to OTCW water supplies. The nutrient levels in treated effluent as measured by total nitrogen and phosphorus are not excessive and should not cause a significant increase in the required use of biocides.
- **Metals content:** The important metals in C/P treated effluent are at lower concentrations than raw Mississippi River water, including iron, calcium and magnesium. The RCRA toxic metals arsenic, cadmium, and selenium are not present in C/P treated effluent. Therefore, metals do not appear to be an issue in reclaimed water re-use for OTCW purposes.
- **Suspended Solids:** The TSS content of C/P treated effluent is significantly lower that raw Mississippi River water, and presents a significant advantage for re-use as OTCW.
- **Dissolved Solids (Major Cations/Anions):** Although the TDS level of City/Parish treated effluent is somewhat higher than raw Mississippi River water, the important cations and anions that make up the TDS constituents are well within the acceptable range for use as OTCW. These include chloride, sulfate, nitrate, fluoride, and phosphate.

In summary, use of City/Parish treated effluent as reclaimed water for industrial OTCW usage is technically feasible based on quality considerations. In most industrial applications, no further treatment of the treated effluent may be required for this use, or if treatment is required, the treatment processes will likely represent extensions of processes currently used by the City/Parish or by local industrial facilities. In addition, the current practice of dechlorination of the effluent to prevent the formation of trace chlorinated organics in the receiving water can likely be discontinued, because the residual chlorine in the effluent will typically be useful to the biocide treatment for OTCW that is practiced by industry.

Consideration of technical factors such as blending with Mississippi River surface water to match reclaimed water volume and quality with industrial water supply needs.

For industrial use applications of reclaimed water where quality characteristics are more stringent than that required for once-through cooling, the use of City/Parish treated effluent may require additional treatment or blending with higher quality water to produce the desired reclaimed water characteristics. This can be accomplished by blending the effluent with raw Mississippi River water, treated Mississippi river water, or treated industrial wastewater effluent in order to reduce the concentrations of specific constituents in the reclaimed water source.

One alternative to achieve blended reclaimed water is construction of a Mississippi River raw water treatment facility in the Baton Rouge area, specifically for the purpose of producing blended reclaimed water. This facility would utilize gravity settling or a more advanced process to reduce the suspended solids content of raw Mississippi River water into the same range as City/Parish treated effluent (about 30 mg/L). The water quality parameters that would be "blended" to lower the concentrations in reclaimed water of BOD_5, COD, TOC, TDS, nutrients, and selected cations/anions. The remainder of water quality parameters associated with City/Parish treated effluent are already lower in concentration than raw Mississippi River water.

The volume capacity of such a blending water treatment facility would depend on the contracted volume of reclaimed water required by local industry. Based on existing availability of City/Parish treated effluent (about 61 MGD average daily flow), and a potential market for at least twice that volume of industrial water supply in the same area, a capacity of 60 MGD would be a reasonable estimate for such a facility. The economic feasibility of constructing such a facility would depend on the willingness of industry to contract for reclaimed water supply at a price that would allow amortization of a new water treatment facility over a period of 30 to 50 years.

Consideration of political, financial, and regulatory factors that either support or do not support the development of a reclaimed water marketplace in the local Baton Rouge area.

Political, regulatory, and financial factors are most likely to influence the reclaimed water marketplace in the Baton Rouge area. Technically, reclaimed water is available in large volumes and can be used to substitute for a large volume of groundwater that is used currently by industry. Monitoring, quality assurance, and other technical factors will be required to assure the continual supply and quality of reclaimed water, but these are programs that can readily be adapted from existing water supply and wastewater treatment programs as practiced in the local area.

Politically, recent actions by the Louisiana legislature suggest that the public is aware of the issue of security of the drinking water supply, and that groundwater resources currently used for that supply should be dedicated first to this most important usage as a high priority. Legislation now in place will continue to restrict and require permitting of new groundwater uses that are not dedicated to drinking water supply. New legislation defining reclaimed water, and promoting its use for selected usages including industrial and non-crop irrigation, will begin to have an impact on the planning of future water supplies, and may have a more near-term impact on conversion of selected water supplies from groundwater to reclaimed water.

Regulatory factors affecting the use of reclaimed water currently are limited to provisions of the Clean Water Act that require permitting of treated surface water discharges and establish water quality standards for surface waters; public health provisions of the Safe Drinking Water Act require monitoring and set standards for drinking water supplies, and limited regulations established by special local groundwater commissions establish limits on groundwater withdrawals from selected aquifers. The new statutes of the Louisiana Legislature will lead to further development of regulations by the Departments of Natural Resources (LDNR) and Transportation and Development (LDOTD) that will further require permitting and monitoring of groundwater resources that are being used for various purposes including drinking water supplies, industrial uses, and agricultural irrigation and aquaculture. These new regulations can be expected to be promulgated within the next several years.

Financial factors have been and will continue to be a very important driver for the selection of water supplies among the choices of groundwater, surface water, and reclaimed water. In the north Baton Rouge area, the excellent quality of groundwater resources combined with relative abundance of the resource and low pumping costs combine to make groundwater the most cost effective alternative for current water supply uses. Only to the south of Baton Rouge where the groundwater resource is limited in both volume and native quality do surface water supplies extracted from the Mississippi River predominate. For this reason, much of the local industry using Mississippi River water supplies has located immediately adjacent to the river (although navigable waterway availability is an equal or more important factor in the decision for location of industrial plants in the area). In addition, one Geismar industrial cluster utilizes common pumping and piping, and some common treatment facilities to generate water supply for multiple plant locations, thus sharing and reducing overall water supply costs.

The choice to convert selected existing groundwater or surface water supplies to reclaimed water will require economic and financial incentives, or strong political and legislative initiatives such as those recently promulgated in Louisiana. Economic and financial incentives may include, but are not limited to, the following:

- Subsidized prices
- Tax credits for infrastructure investments
- Mandated pass-through of costs to end users
- Technical assistance in implementation by public or private sector parties

6.2 CONCLUSIONS

The following conclusions have resulted from evaluation of the potential for the use of East Baton Rouge Parish treated effluent as a reclaimed water alternative water supply for selected local industrial uses.

- The best use of groundwater resources associated with local Southern Hills aquifers has been codified by recent laws as drinking water supply. However, more than 76 MGD of groundwater from this aquifer system continues to be used by industries located in the metropolitan Baton Rouge area. By contrast, a total withdrawal of about 83 MGD from this same aquifer system is used currently for drinking water supply.

- The majority of the groundwater withdrawn from the Southern Hills aquifers for drinking water and related uses is eventually treated as sewage by the City/Parish DPW, and discharged in accordance with LPDES permits to the Mississippi River.

- The majority of the groundwater withdrawn from the Southern Hills aquifers for industrial uses that include process water consumption, boiler feedwater, utility supply, and process cooling. This water is either discharged directly as once-through cooling water (OTCW), partially discharged as "blowdown" streams from recirculating cooling towers, boiler systems or demineralization water supply treatment, or is fully treated as process wastewater and discharged in accordance with LPDES permits to the Mississippi River.

- City/Parish treated effluent can serve as a reclaimed water supply source for selected industrial water usages in the local area, based on volume available and quality characteristics, and assuming some type of guarantee of reclaimed water quality at the user location.

- The industrial corridor in north Baton Rouge is the most likely group of potential reclaimed water users, based on location of City/Parish WWTPs and industrial plants. City/Parish treated effluent has the potential to replace about 61 MGD of existing groundwater withdrawals from the Southern Hills aquifer system, if suitable industrial uses such as once-through and recirculating cooling exist.

- Act 985 of 2003 of the Louisiana Regular Legislative Session defines "reclaimed water" and encourages new uses of this water supply source as well as conversion of existing raw groundwater or surface water supplies to reclaimed water, where appropriate quality and quantity of reclaimed water exists.

- In the short term, the future use of reclaimed water in the local Baton Rouge area is likely to depend more heavily on legislative, political, regulatory, and financial factors than on availability. In particular, the use of tax incentives and innovative pricing may encourage the rapid conversion of selected water supply users to reclaimed water sources.

- In the longer term, the future use of reclaimed water is likely to become more common as public perceptions of quality issues are changed by actual applications.

6.3 RECOMMENDATIONS

This study of the potential use of reclaimed water in the local Baton Rouge area has demonstrated that appropriate sources are available in large volumes, and that potential industrial users are available. In particular, the potential exists for replacing industrial groundwater usage in the north Baton Rouge area with reclaimed water derived from City/Parish treated effluent in volumes as great as 61 MGD, if appropriate industrial plant uses are identified.

Recommendations for follow-up to this preliminary evaluation of the use of reclaimed water are as follows:

Conceptual Plan of Industrial Plant Alternative Water Supply Using Reclaimed Water

Identify specific industrial water supply uses at selected industrial plant sites in north Baton Rouge, including the actual water quality criteria for each use. Using interviews with plant personnel responsible for water supply and treatment, identify conditions under which reclaimed water might provide an alternative water supply for these uses.

Identify the specific infrastructure requirements at selected industrial plant sites by which alternative water supplies could be provided to the plant.

Conceptual Plan of EBR Parish Reclaimed Water Delivery Infrastructure

Using specific industrial plant water supply criteria, match selected water supply uses with the available East Baton Rouge Parish treated effluent as a potential reclaimed water source, including identification of any WWTP treatment upgrades required to fully implement an alternative water supply program using reclaimed water.

Identify the specific infrastructure requirements required to be implemented by the City/Parish DPW to transport, store and deliver water to selected industrial plant users of reclaimed water, including pumping, conveyance, and related equipment.

Conceptual Plan of New Reclaimed Water Blending Plant Using Mississippi River Water Supply

Using the matched water quality volumes, quality characteristics, and delivery infrastructure needs of industrial plants and City/Parish DPW to implement a reclaimed water program, evaluate the feasibility of blending of existing reclaimed water as necessary to fully implement industrial alternative water supply needs that exceed the quality of potentially reclaimed water. This would be implemented by construction of a new Mississippi River water supply blending plant to improve the quality of reclaimed water for selected uses.

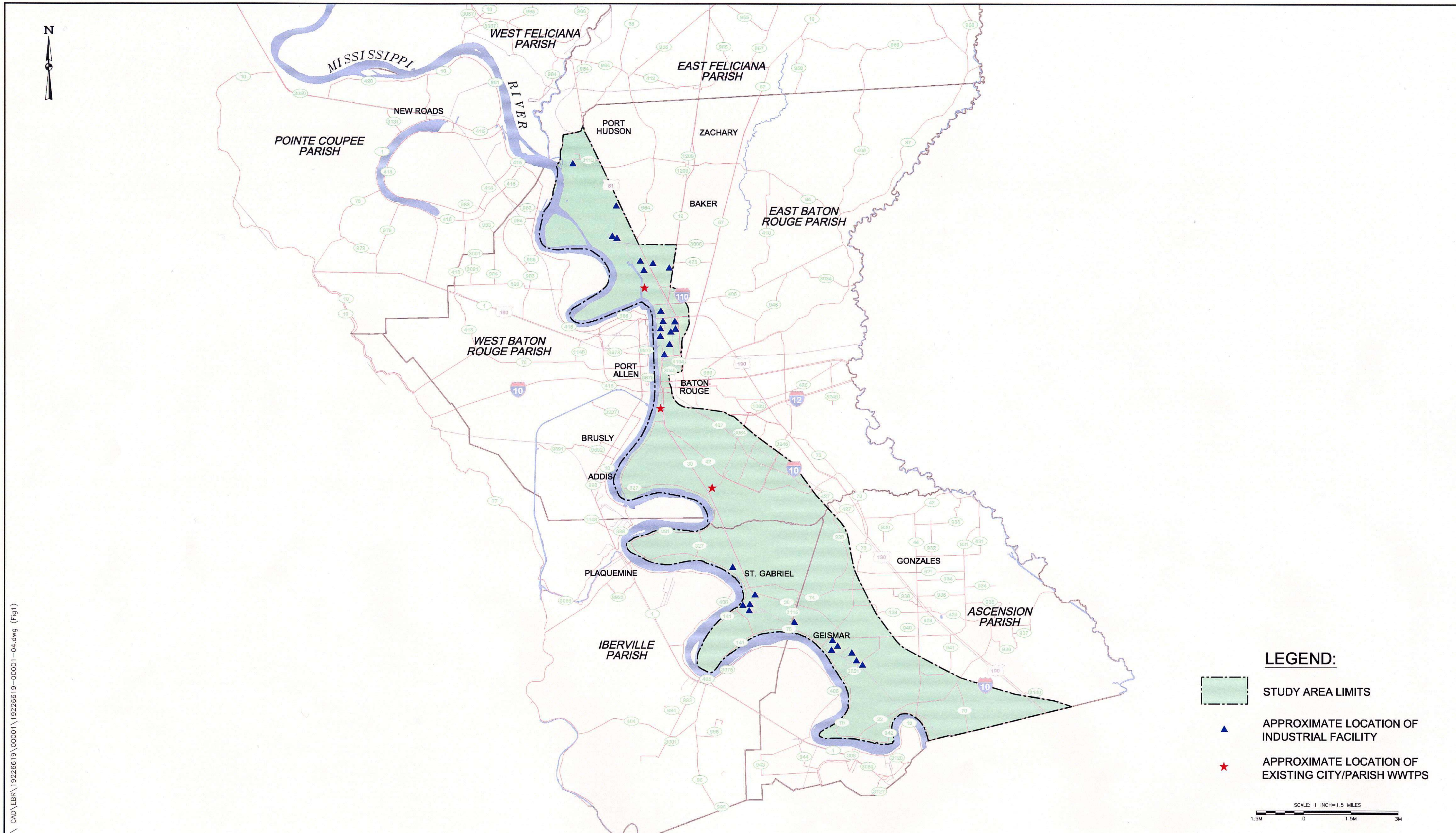
Conceptual Level Cost Estimates

Assuming that WWTP treatment upgrades, new water treatment blending capacity, or associated water supply delivery infrastructure improvements are required to consistently provide the quantity and quality of reclaimed water required to fully implement a local reclaimed water program, the above tasks will provide a conceptual plan at the level of process flow diagrams (PFDs) and conceptual cost estimates to construct components of the proposed reclaimed water program. Cost estimates at this level of planning will be adequate to generate financing alternatives, budget planning for interested parties, and to compare various capital needs. Cost estimates would include capital costs, as well as major annual operations and maintenance (O&M) costs. Present worth values would be determined for a range of cost sensitivity factors, including interest/discount rates, amortization periods for capital investments, and annual variations in operations or maintenance costs (periodic changes in water treatment chemical costs; etc).

Conceptual Level Reclaimed Water Program Financial Evaluation

A conceptual level reclaimed water program financial evaluation would be based on conceptual capital and O&M costs incurred by interested parties. The financial evaluation will include determination of the value of reclaimed water in a free marketplace with willing buyers and sellers. In addition, a preliminary evaluation will be completed of the effect of potential financial incentives such as tax exemptions, tax credits on capital investments, or subsidized pricing of reclaimed water sales by federal, state or local institutions.

FIGURES



REV	DESCRIPTION OF REVISION	BY	DATE
2	Final Report Submittal	EJO	4/23/04
1	Draft Report Submittal	EJO	11/13/03

Capital Area Ground Water Conservation Commission

URS
2822 O'Neal Lane
Baton Rouge, Louisiana 70816
225/751-1873

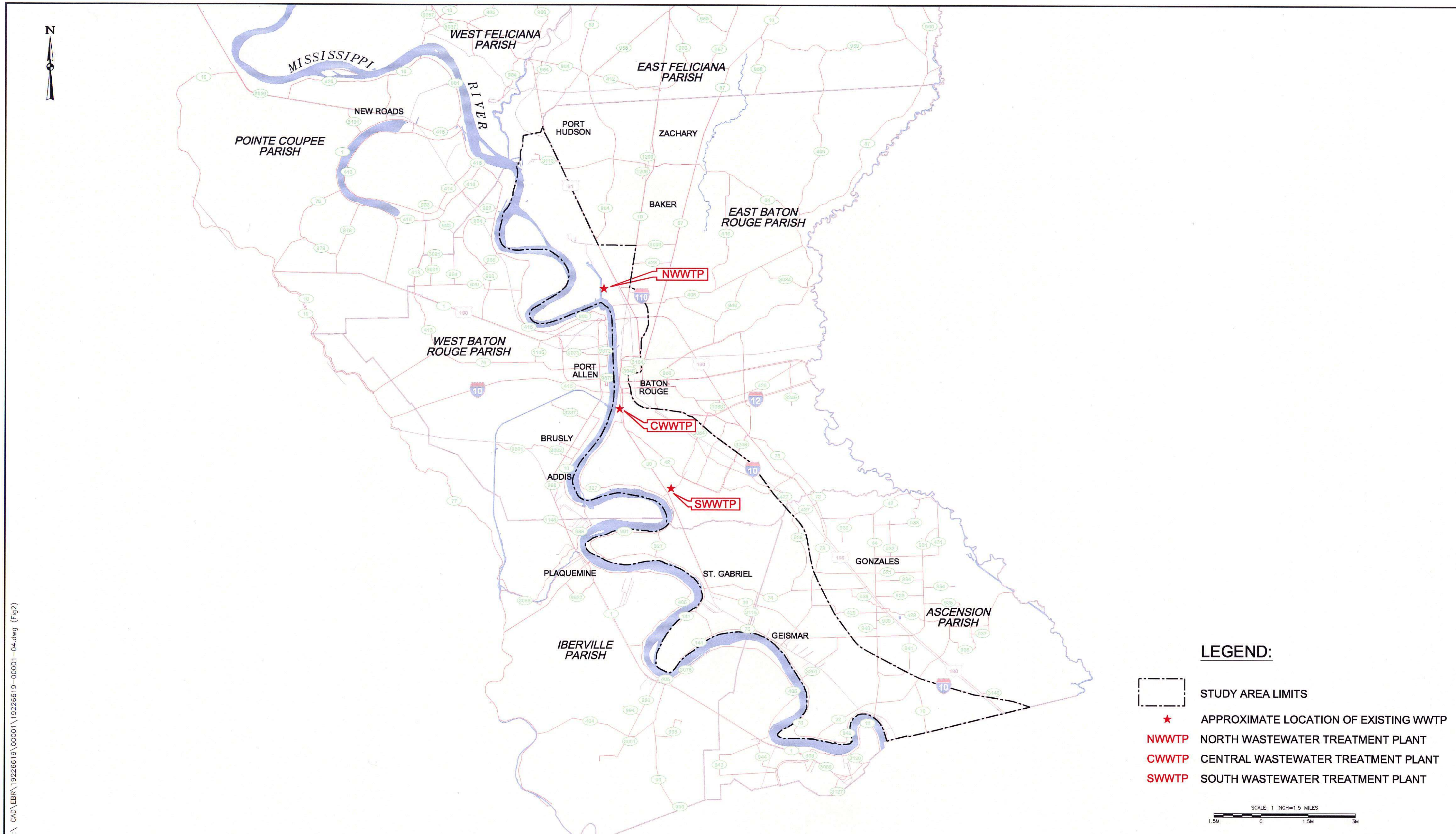
REFERENCE DRAWINGS

SCALE: 1"=1.5 Miles
DESIGNED: EJO
DRAWN: PB
CHECKED: WGS
PEER REVIEWED: KET
DATE: 11/13/03

Feasibility Study for Alternative Water Supply for Industrial Users

Study Area Location Map

REVISION: 2
PROJECT: 19226619
FIGURE: 1



REV	DESCRIPTION OF REVISION	BY	DATE
2	Final Report Submittal	EJO	3/24/04
1	Draft Report Submittal	EJO	11/13/03

Capital Area Ground Water Conservation Commission

URS
2822 O'Neal Lane
Baton Rouge, Louisiana 70816
225/751-1873

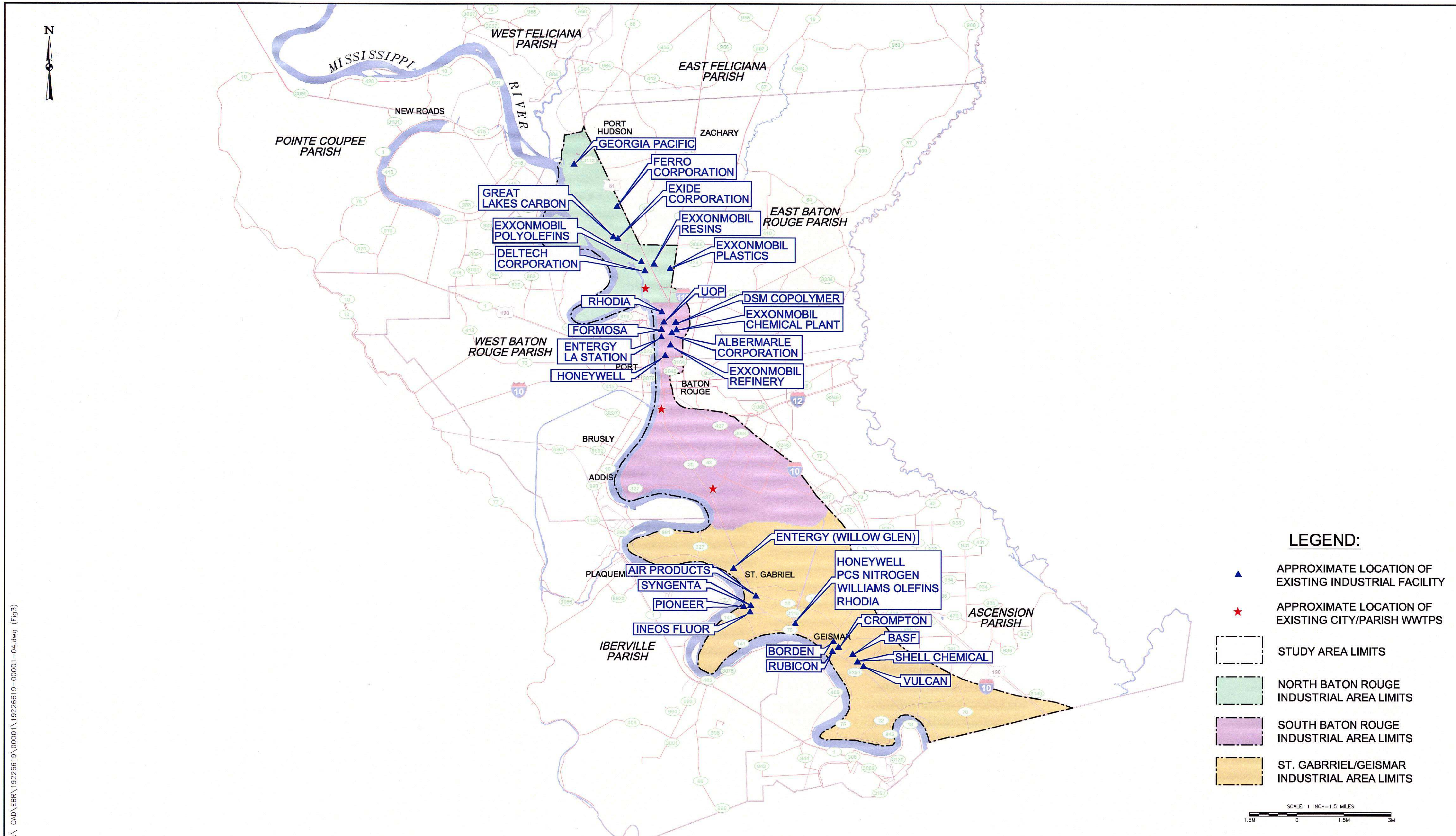
REFERENCE DRAWINGS

SCALE	1"=1.5 Miles
DESIGNED	EJO
DRAWN	PB
CHECKED	WGS
PEER REVIEWED	KET
DATE	11/13/03

Feasibility Study for Alternative Water Supply for Industrial Users

Location Plan
Existing City/Parish Wastewater Treatment Plants

REVISION 2
PROJECT 19226619
FIGURE 2



REV	DESCRIPTION OF REVISION	BY	DATE
2	Final Report Submittal	EJO	4/23/04
1	Draft Report Submittal	EJO	11/13/03

Capital Area Ground Water Conservation Commission

URS
2822 O'Neal Lane
Baton Rouge, Louisiana 70816
225/751-1873

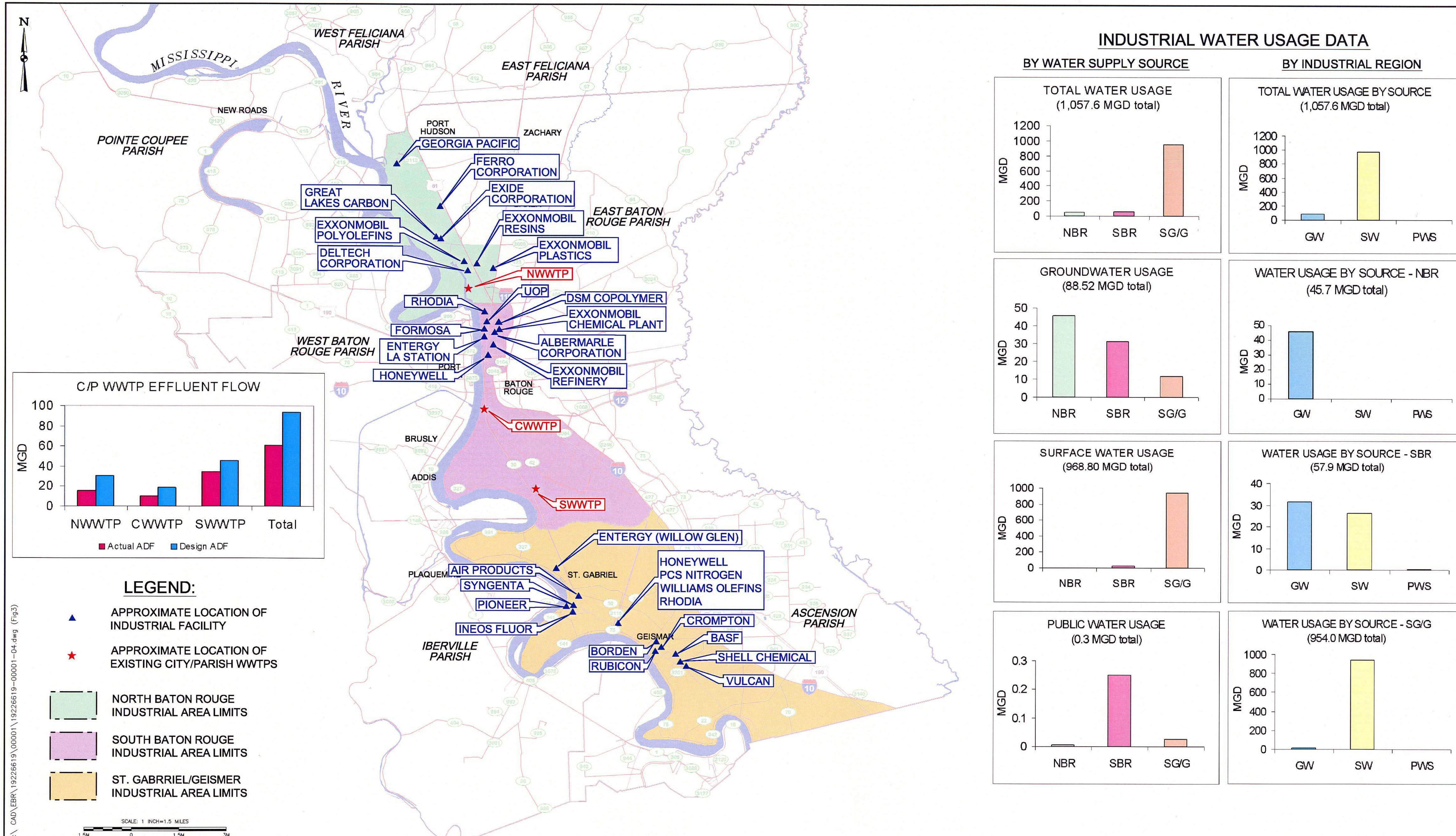
REFERENCE DRAWINGS

SCALE 1"=1.5 Miles
DESIGNED EJO
DRAWN PB
CHECKED WGS
PEER REVIEWED KET
DATE 11/13/03

Feasibility Study for Alternative Water Supply for Industrial Users

Location Plan
Existing Industrial Facilities

REVISION 2
PROJECT 19226619
FIGURE 3



REV	DESCRIPTION OF REVISION	BY	DATE
2	Final Report Submittal	EJO	4/23/04
1	Draft Report Submittal	EJO	11/13/03

Capital Area Ground Water Conservation Commission

URS
2822 O'Neal Lane
Baton Rouge, Louisiana 70816
225/751-1873

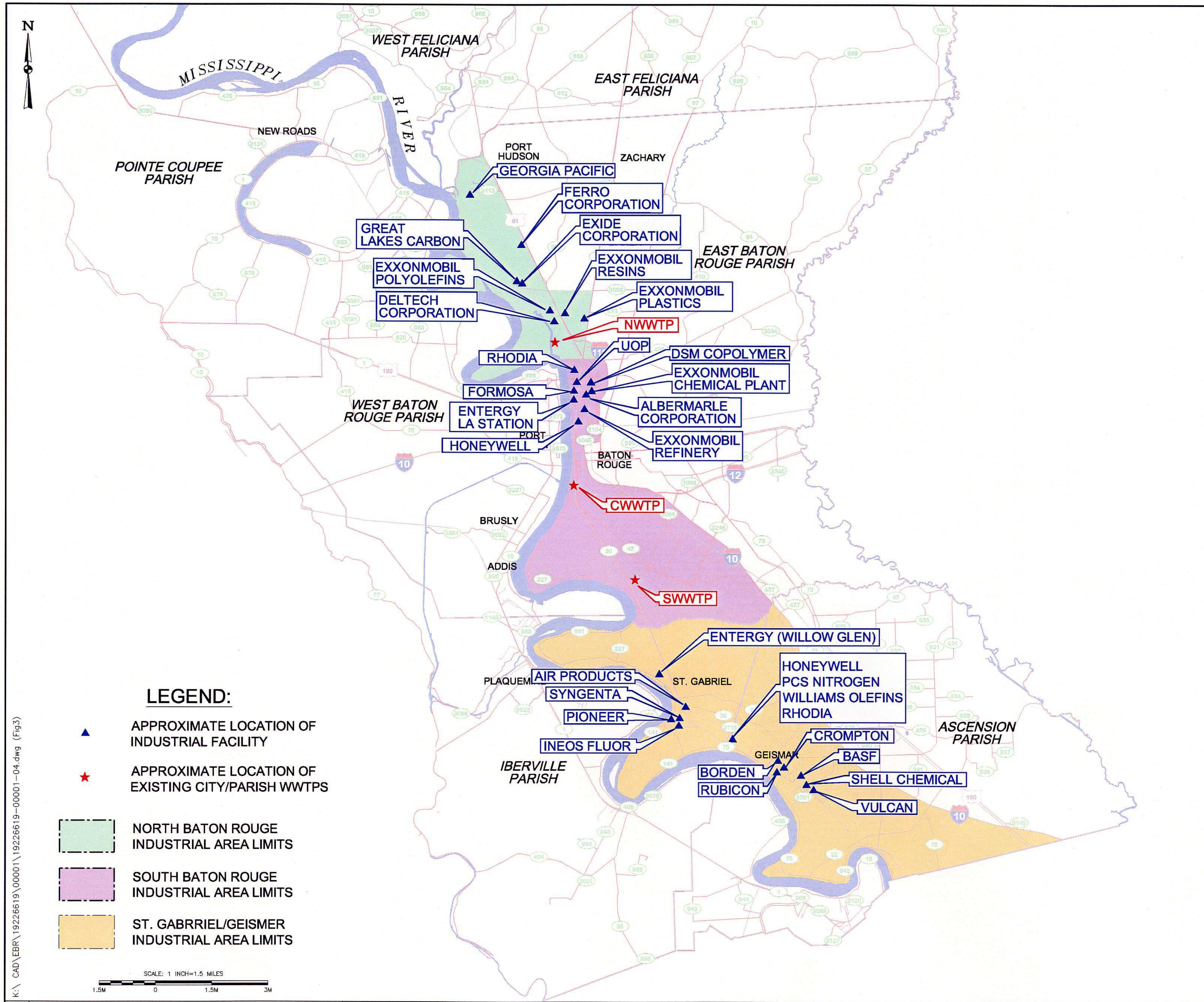
REFERENCE DRAWINGS

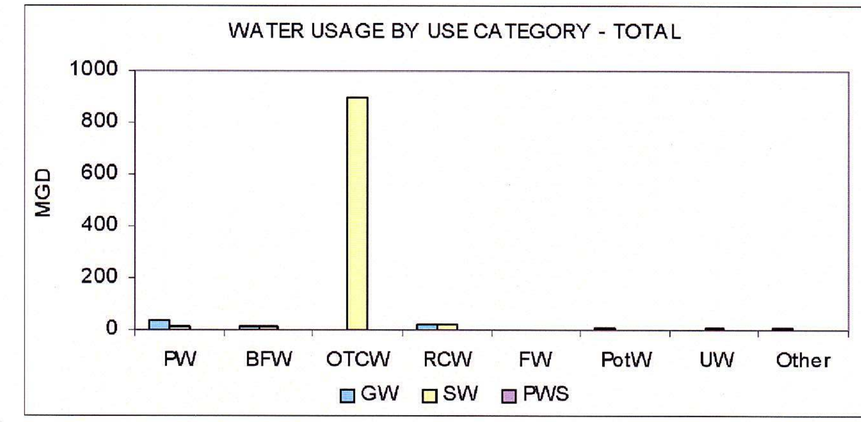
SCALE 1"=1.5 Miles
DESIGNED EJO
DRAWN PB
CHECKED WGS
PEER REVIEWED KET
DATE 11/13/03

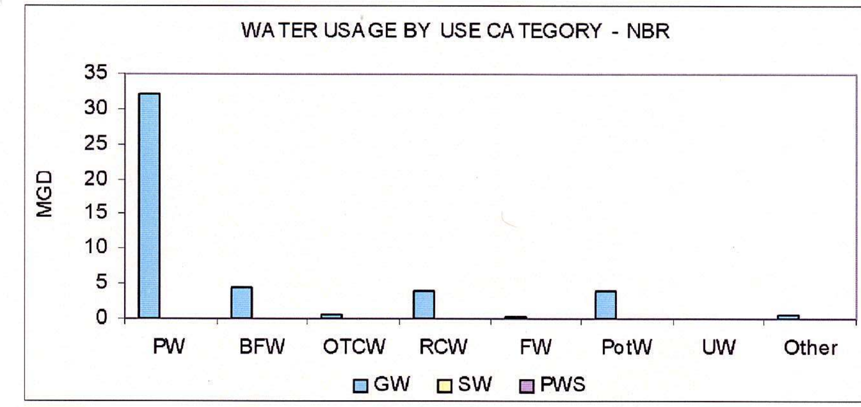
Feasibility Study for Alternative Water Supply for Industrial Users

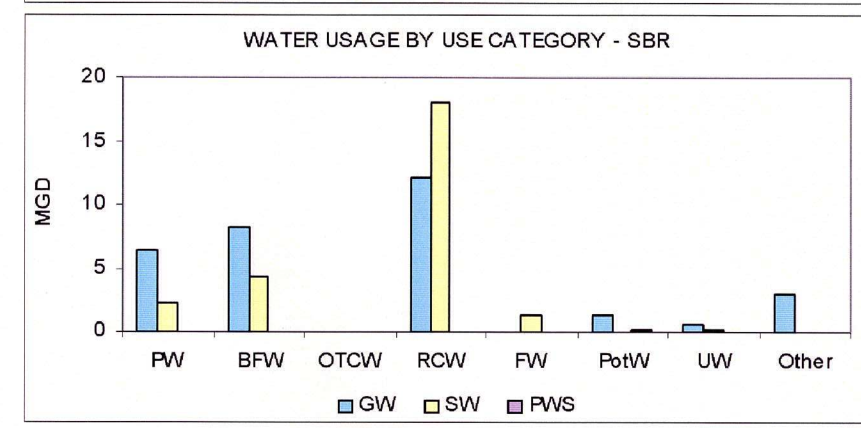
Industrial Water Usage & Reclaimed Water Supply Data

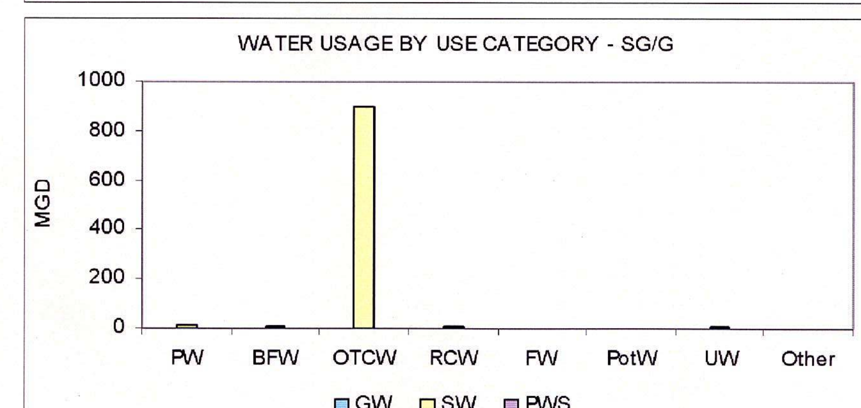
REVISION 2
PROJECT 19226619
FIGURE 4











REV	DESCRIPTION OF REVISION	BY	DATE
2	Final Report Submittal	EJO	4/23/04
1	Draft Report Submittal	EJO	11/13/03

Capital Area Ground Water Conservation Commission

URS
2822 O'Neal Lane
Baton Rouge, Louisiana 70816
225/751-1873

REFERENCE DRAWINGS

SCALE	1"=1.5 Miles
DESIGNED	EJO
DRAWN	PB
CHECKED	WGS
PEER REVIEWED	KET
DATE	11/13/03

Feasibility Study for Alternative Water Supply for Industrial Users

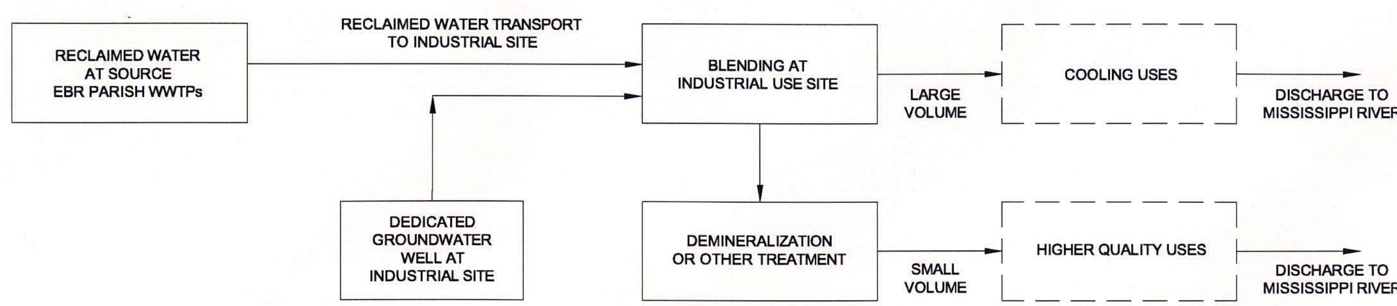
Industrial Water Usage by Use Category & Water Supply Source

REVISION 2

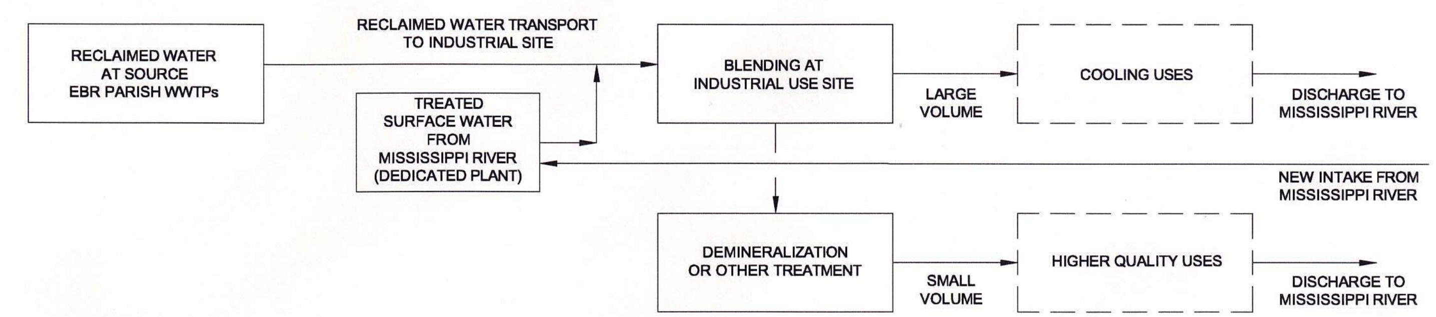
PROJECT 19226619

FIGURE 5

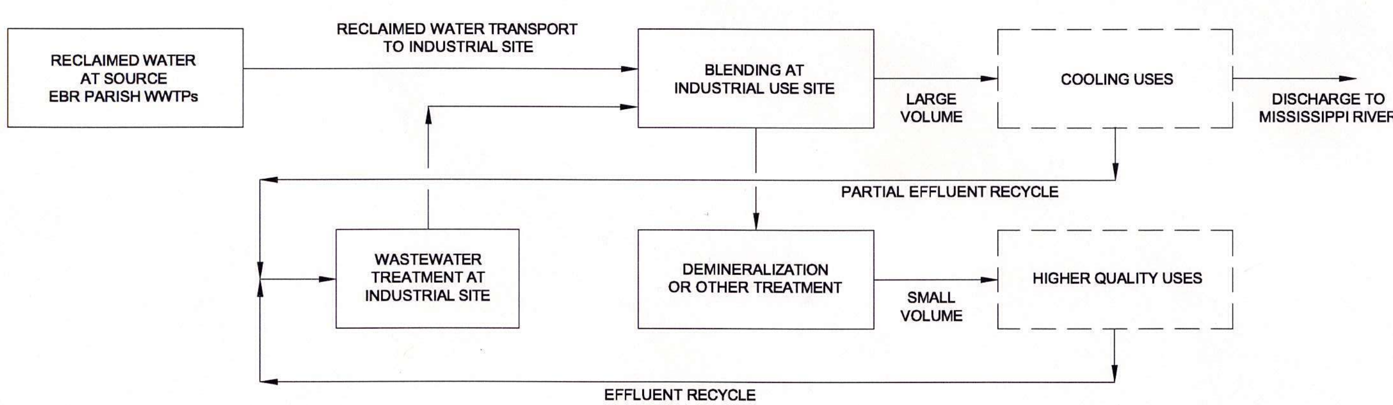
BLENDING WITH GROUNDWATER



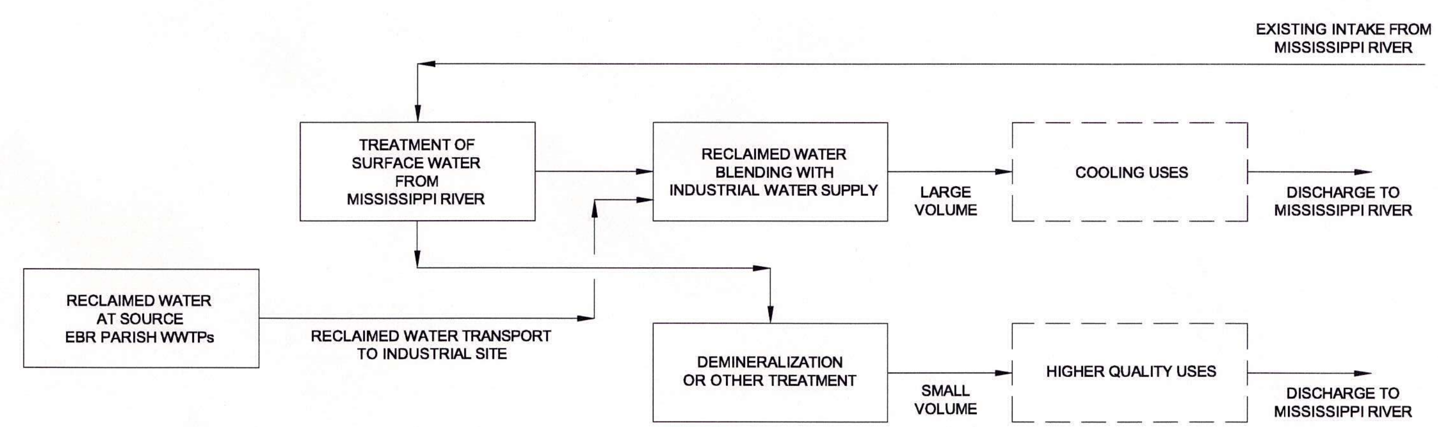
BLENDING WITH SURFACE WATER FROM MISSISSIPPI RIVER



BLENDING WITH INDUSTRIAL WASTEWATER EFFLUENT



BLENDING WITH INDUSTRIAL WATER SUPPLY



K:\ CAD\EBR\19226619\00001\19226619-00001-05.DWG

REV	DESCRIPTION OF REVISION	BY	DATE
2	Final Report Submittal	EJO	4/23/04
1	Draft Report Submittal	EJO	11/13/03

Capital Area Ground Water Conservation Commission

URS
2822 O'Neal Lane
Baton Rouge, Louisiana 70816
225/751-1873

REFERENCE DRAWINGS

SCALE	N.T.S.
DESIGNED	WGS
DRAWN	PCG
CHECKED	EJO
PEER REVIEWED	KET
DATE	11/13/03

Feasibility Study for Alternative Water Supply for Industrial Users

Flow Schematic
Concepts for Blending of Reclaimed Water

REVISION 2
PROJECT 19226619
FIGURE 6

APPENDIX A

LEGISLATIVE DOCUMENTATION

APPENDIX A-1

LEGISLATIVE DOCUMENTATION

ACT 49 OF THE 2003 LOUISIANA REGULAR LEGISLATIVE SESSION

ENROLLED

Regular Session, 2003

ACT No. 49

SENATE BILL NO. 99

BY SENATORS CAIN, FONTENOT, HOLLIS, HOYT AND MCPHERSON AND REPRESENTATIVES BEARD AND DANIEL

AN ACT

To amend and reenact R.S. 36:358(C), R.S. 38:3076(A)(introductory paragraph), and R.S. 49:968(B)(11), to enact R.S. 36:359(K) and 802.18, R.S. 38:3076(A)(24), 3087.136(4), and Chapter 13-A-1 of Title 38 of the Louisiana Revised Statutes of 1950, comprised of 3097.1 through 3097.6, and to repeal R.S. 36:4(X) and Chapter 13-C of Title 38 of the Louisiana Revised Statutes of 1950, comprised of R.S. 38:3099.1 through 3099.4, relative to ground water resources in the state of Louisiana; to provide for the powers, duties, functions, and responsibilities of the commissioner of conservation relative to ground water management; to create the Ground Water Resources Commission; to provide for the powers, duties, functions, and responsibilities of the commission; to provide for determination of critical ground water areas; to provide for preservation and management of ground water resources in critical ground water areas; to provide for duties of the Sparta Groundwater Conservation District and the Capital Area Groundwater Conservation District; to provide for registration for certain water wells; to provide for the Ground Water Management Task Force; and to provide for related matters.

Be it enacted by the Legislature of Louisiana:

Section 1. R.S. 36:358(C) is hereby amended and reenacted and R.S.

36:359(K) and 802.18 are hereby enacted to read as follows:

§358. Offices; purposes and functions

* * *

C. The office of conservation, in accordance with law, shall exercise the functions of the state with respect to the regulation, conservation, and use of the natural resources of the state which are not specifically within the jurisdiction of other state departments or agencies. Its functions shall include but not be limited to the conservation of the oil and gas resources of the state and matters pertaining thereto; the promotion and encouragement of exploration, production, and refining efforts for oil, intrastate gas, and other hydrocarbons; the control and allocation of energy supplies and distribution; the lease or construction and operation of intrastate pipeline systems; the implementation and enforcement of any emergency gas shortage allocation plan and the setting of priorities; ~~and~~ regulation of the minimum sale price of intrastate natural gas, **and management of ground water resources** all in accordance with applicable laws.

* * *

§359. Transfer of agencies and functions to Department of Natural Resources

* * *

R.S. 36:359(K) is all new law.

K. The Ground Water Resources Commission as provided in R.S. 38:3097.1 through 3097.6 shall be placed within the office of conservation, Department of Natural Resources, and shall exercise its powers, duties, functions, and responsibilities as provided in R.S.

36:802.18.

* * *

§802.18. Transfer; Ground Water Resources Commission

R.S. 36:802.18 is all new law.

The Ground Water Resources Commission placed in the office of conservation, Department of Natural Resources, by R.S. 36:359(K) shall exercise and carry out all powers, duties, functions, and responsibilities as provided by R.S. 36:802, except that the commission's powers, duties, functions, and responsibilities are in the nature of policymaking and adjudication. The commission shall continue to exercise all advising powers, duties, functions, and responsibilities provided by law.

Section 2. R.S. 38:3076(A)(introductory paragraph) is hereby amended and reenacted and R.S. 38:3076(A)(24), 3087.136(4), and Chapter 13-A-1 of Title 38 of the Louisiana Revised Statutes of 1950, comprised of 3097.1 through 3097.6, are hereby enacted to read as follows:

§3076. Powers of the board

A. The board shall ~~have authority~~ **work with the commissioner of conservation in his responsibilities** to do all things necessary to prevent waste of groundwater resources, and to prevent or alleviate damaging or potentially damaging subsidence of the land surface caused by withdrawal of groundwater within the district. ~~The~~ **In conjunction with the commissioner of conservation the** board shall have authority to do, as required, the following:

* * *

R.S. 38:3076(A)(24) is all new law.

(24) To advise and consult with the commissioner of

conservation and the Ground Water Resources Commission on matters that impact water resources within the board's jurisdiction.

* * *

§3087.136. Powers of the board

The board shall conduct a study and survey of the groundwater resources in the district, including but not limited to consideration of what is necessary or advisable to conserve groundwater resources and where appropriate, prevent or alleviate damaging or potentially damaging drawdowns, land surface subsidence and groundwater quality degradation. For this purpose, the board shall hold hearings and may:

* * *

R.S. 38:3087.136(4) is all new law.

(4) Advise and consult with the commissioner of conservation and the Ground Water Resources Commission on matters that impact water resources within the board's jurisdiction.

* * *

CHAPTER 13-A-1. GROUND WATER RESOURCES MANAGEMENT

Chapter 13-A-1 is all new law.

§3097.1. Legislative findings; purpose; effect

R.S. 38:3097.1 is all new law.

A. As the effective management and planning in the utilization of the state's water resources is hereby found and declared to be a matter of public interest, the state must have a comprehensive ground water management program. Said program must take into consideration the requirements, needs, and obligations of all stakeholders of water in the state of Louisiana. The program shall be based on good management practices, sound science, and economics according to generally accepted principles in those disciplines. It must include as a goal the long-term sustainability of the state's ground water aquifers and preservation of the state's ecological welfare, while considering the economic value thereof to the state's role in interstate commerce and the economic welfare of its citizens. Further, it must provide for the efficient administration in the utilization and management of ground water resources, including the gathering of data related to the state's water resources. Thus, the state's water resources must be protected, conserved, managed, and replenished in an effective manner, with due regard for the foregoing considerations and in the best interest of all the citizens of the state.

B. The legislature hereby recognizes the need for uniformity in the establishment of a comprehensive ground water management program. Therefore, the state shall have exclusive jurisdiction over the management of ground water and this Chapter shall supersede and preempt any rule, regulation, code, statute, or ordinance of any political subdivision or other unit of local government. However, nothing contained in this Chapter shall be construed to deny such local government the authority over siting facilities pursuant to any general land use planning or zoning or to deny soil and water conservation districts powers granted pursuant to R.S. 3:1208.

C. In accordance with the legislative intent provided herein, the statewide ground water resource management program and any rule, regulation, or order of the commissioner shall recognize historic use of ground water resources in the state and may incorporate the use of appropriate incentives to encourage conservation of ground water resources and the appropriate utilization of alternate water supplies where appropriate. Consistent with the provisions of this Chapter and in consultation with the commissioner, the incentives and provisions of alternate water resources may be provided by the state, or any local subdivision thereof, by virtue of tax incentives, tax credits, and physical projects transporting or providing alternate water resources to existing ground water users and by any private person with an interest in conserving such ground water resources for public use.

§3097.2. Definitions

R.S. 38:3097.2 is all new law.

Unless the context otherwise requires, the following terms shall have the following meanings for purposes of this Chapter:

(1) "Beneficial use" means the technologically feasible use of ground water for domestic, municipal, industrial, agricultural, recreational, or therapeutic purpose, or any other advantageous purpose.

(2) "Critical ground water area" shall mean an area in which, under current usage and normal environmental conditions, sustainability of an aquifer is not being maintained due to either movement of a salt water front, water level decline, or subsidence, resulting in unacceptable environmental, economic, social, or health impact, or causing serious adverse impact to an aquifer, considering the areal and temporal extent of all such impacts.

(3) "Commission" shall mean the Ground Water Resources Commission, established by R.S. 38:3097.4.

(4) "Commissioner" shall mean the commissioner of conservation.

(5) "Domestic well" shall mean a water well used exclusively to supply the household needs of the owner, lessee, or his family. Uses

may include but are not limited to drinking, cooking, washing, sanitary purposes, lawn and garden watering, and caring for pets. Domestic wells shall also include wells used on private farms and ranches for the feeding and caring of pets and watering of lawns, excluding livestock, crops, and ponds.

(6) "Ground water" is water suitable for any beneficial use percolating below the earth's surface which contains fewer than 10,000 mg/l total dissolved solids, including water suitable for domestic use or supply for a domestic water system.

(7) "Ground water emergency" shall mean an unanticipated occurrence as a result of a natural force or a man-made act which causes a ground water source to become immediately unavailable for beneficial use for the foreseeable future or drought conditions determined by the commissioner to warrant the temporary use of drought relief wells to assure the sustained production of agricultural products in the state.

(8) "Historic ground water production" means the average annual production of a ground water well since the calendar year 1995.

(9) "Large volume well" means a well with an exterior casing size of eight inches or greater in diameter, or as defined by rules and regulations promulgated by the commissioner pursuant to the Administrative Procedure Act.

(10) "Person" shall mean any natural person, corporation, association, partnership, receiver, tutor, curator, executor, administrator, fiduciary, or representative of any kind, or any governmental entity.

(11) "Replacement well" shall mean a well located within one

thousand feet of the original well and within the same property boundary as the original well, installed within the same aquifer over an equivalent interval with an equivalent pumping rate, and used for the same purpose as the original well.

(12) "Spacing" means the distance a water well may be located in relation to an existing or proposed water well, regardless of property boundaries.

(13) "Sustainability" means the development and use of ground water in a manner that can be maintained for the present and future time without causing unacceptable environmental, economic, social, or health consequences.

(14) "User" shall mean any person who is making beneficial use of ground water from a well or wells owned or operated by such person.

(15) "Well" or "water well" shall mean any well drilled or constructed for the principal purpose of producing ground water.

§3097.3. Commissioner of conservation; powers and duties

R.S. 38:3097.3 is all new law.

A. The commissioner, through the office of conservation, is empowered and responsible for the administration of all matters related to the management of the state's ground water resources by providing for the most advantageous use of the resource consistent with the protection, conservation, and replenishment thereof. The commissioner shall perform these functions to the extent such functions are not specifically within the jurisdiction of other state departments or agencies. The commissioner shall seek the advice and consultation of local governmental entities on any actions or decisions which may have an impact upon those entities or residents within the entities' respective jurisdictions.

B. The commissioner is authorized to employ, assign, and remove personnel, including a deputy, within the Department of Natural Resources, office of conservation, to provide administrative and technical staff functions the commissioner deems necessary to carry out the powers, functions, and duties under this Chapter. Personnel actions shall be in accordance with applicable civil service laws, rules, and regulations, and with the policies and rules of the department, all subject to budgetary control and applicable laws.

C. The commissioner has authority to make, after notice and public hearings in accordance with the Administrative Procedure Act, any reasonable rules, regulations, and orders that are necessary from time to time in the proper administration and enforcement of this Chapter, including rules, regulations, or orders for the following purposes:

(1) Do all things necessary to prevent waste of water resources.

(2) Prevent or alleviate damaging or potentially damaging salt water movement or water level decline, and loss of sustainability in the state's aquifers in accordance with Paragraph (4) of this Subsection.

(3) Prevent subsidence of the land surface caused by the withdrawal of ground water within the state in accordance with Paragraph (4) of this Subsection.

(4)(a) Require registration of all new wells by the owners. Such registration shall at a minimum require the date drilled or the estimated date to be drilled, the name of the driller, the current ownership, and the projected location of the well in latitude, longitude, and depth, and casing size together with such other information as the commissioner may reasonably require. The commissioner and the Department of Transportation and Development shall cooperate to insure the efficient and effective collection of well data. Registration shall be in the form of a notice of intent to drill submitted to the commissioner at least sixty days prior to drilling the well, except for the following types of wells which shall be registered no later than sixty days after completing the well:

(i) Domestic well.

(ii) Replacement well.

(iii) Drilling rig supply well, used only for the duration of the oil and gas drilling operation at the drilling location where sited for the immediate needs of rig operations.

(iv) Drought relief wells.

(v) All other wells the commissioner exempts for just cause.

(b) Within thirty days of receiving the well registration, the commissioner shall review the submitted information. During the thirty-day review period, the commissioner may either issue an order to the owner placing restrictions on the well or requesting further reasonable information on the well or may take no action. Prior to any order placing a restriction on a well, the commissioner shall determine, on the basis of good management practices and sound science, that such action is necessary to prevent adverse impacts to the sustainability of the aquifer from which the proposed well is to produce. An order placing restrictions on spacing may also be issued to avoid direct adverse impacts to existing wells. Restrictions and requests for information shall be subject to the following:

(i) For large volume wells or wells within a critical ground water area, the commissioner may issue to the owner of such well an order fixing allowable production, spacing, and metering necessary to properly manage the state's ground water resources consistent with R.S. 38:3097.6(B)(3). Before issuing any order placing restrictions on a well outside a critical ground water area, the commissioner shall consider a well owner's efforts to develop alternate water sources.

(ii) For all other wells located outside a critical ground water area, an order issued by the commissioner may only fix spacing of the well.

(iii) If more information is requested, the commissioner shall have an additional thirty days after receiving the additional information for review. The commissioner's request for further information may be appealed to the commission to determine the reasonableness of the request. Such determination shall be made within forty-five days from the date of the appeal.

(5) Determine critical ground water areas in accordance with R.S. 38:3097.6.

(6) Collect data with respect to water wells and water resources.

(7) Continue development of a statewide ground water resource management program that shall include but not be limited to evaluation of the state's water resources including current and projected demands; development of a water use conservation program; study of alternatives to ground water use, such as surface water to include treatment and transmission system, and reclaimed water; incentives for conservation; use of alternative technologies; and education and conservation programs. The plan should stress conservation as the primary

mechanism for the protection of the state's ground water resources.

(8) Develop a contingency plan to respond to a ground water emergency. Such a plan shall provide that ground water needed for human consumption shall have the highest priority. If the commissioner declares a ground water emergency, he shall define the geographical extent of the area included in the emergency by rule or order, may retain personnel or let contracts as necessary with persons who shall operate under his direction to abate the emergency conditions, and may fix the allowable production, spacing, and depth for wells within the area in such a way that the combined production of ground water will not have long-term adverse effects on the aquifer.

(9) Authorize the temporary use of drought relief wells for agricultural use in times of drought upon a determination that sufficient water resources are otherwise not available. The commissioner shall fix the allowable production, spacing, and depth for such wells in the issuance of an emergency order in such a way that the combined production of ground water from such wells will not have long-term adverse effects on the aquifer.

(10) Enter interagency agreements and interstate compacts in order to manage ground water resources. Such interstate compacts shall only be entered upon approval of the House Committee on the Environment and the Senate Committee on Environmental Quality.

D. Any rule or regulation promulgated or any critical ground water area declared by the Ground Water Management Commission pursuant to authority granted by Act No. 446 of the 2001 Regular Session shall remain in effect until July 1, 2004, or until such time as the commissioner promulgates rules pursuant to this Section or reviews any previously declared critical area.

§3097.4. Ground Water Resources Commission; membership; powers and responsibilities

R.S. 38:3097.4 is all new law.

A. The Ground Water Resources Commission is hereby created and shall be composed of the following members:

(1) The governor or his designee.

(2) The commissioner of conservation or his designee.

(3) The commissioner of agriculture and forestry or his designee.

(4) The secretary of the Department of Economic Development or his designee.

(5) The secretary of the Department of Environmental Quality or his designee.

(6) The secretary of the Department of Health and Hospitals or his designee.

(7) The secretary of the Department of Wildlife and Fisheries or his designee.

(8) The secretary of the Department of Transportation and Development or his designee.

(9) The director of the Governor's Office of Coastal Activities or his designee.

(10) One member appointed by the governor, who is a geologist or an engineer with expertise in ground water resource management.

(11) One member appointed by the governor from a list of four nominations submitted jointly by the Louisiana Chemical Association, the Louisiana Mid-Continent Oil & Gas Association, the Louisiana

Association of Business and Industry, and the Louisiana Pulp & Paper Association.

(12) One member appointed by the governor from a list of three names nominated by the Louisiana Farm Bureau.

(13) One member appointed by the governor from a list of three nominations submitted by the Police Jury Association of Louisiana.

(14) One member appointed by the governor from a list of three nominations submitted by the Louisiana Municipal Association.

(15) One member appointed by the governor from a list of three nominations submitted by the Sparta Groundwater Conservation District Board of Commissioners.

(16) One member appointed by the governor from a list of three nominations submitted by the board of commissioners of the Capital Area Groundwater Conservation District.

(17) One member appointed by the governor who resides or works in the geographical area of the state underlain by the Chicot aquifer.

(18) One member appointed by the governor from a list of three nominations submitted by the Louisiana Landowners Association.

(19) One member appointed by the governor from a list of three names submitted by the Louisiana Wildlife Federation, Coalition to Restore Coastal Louisiana, and the League of Women Voters.

B. The appointed members of the commission shall serve four-year terms except for the initial term, in which the governor shall designate the terms of office so that three members shall serve a one-year term, three members shall serve a two-year term, and four members shall serve a three-year term. No appointed member shall serve more than two consecutive terms. In case of a vacancy, the governor shall appoint a replacement to fill the unexpired term. Appointed members shall not be compensated for their services, except the commissioner may promulgate rules and regulations to provide for travel expenses. Appointed members shall be considered as such, and not elected, for the purposes of R.S. 42:1102 et seq.

C. The governor or his designee shall serve as chairman of the commission. The commission shall meet at least once per quarter, but may meet more often as necessary.

D. The commission shall have the authority to do the following:

(1) Review and approve or reject any orders of the commissioner placing restrictions on wells upon petition by the owner of the affected well or proposed well or any owner of a well in the same aquifer which may be adversely impacted by the well in question. In reviewing such decisions the commissioner shall not serve as a voting member of the commission. The order of the commissioner shall be rejected only if the commission concludes, after a review of the record, that a reasonable factual basis does not exist for the commissioner's decision. Rejected orders shall be returned to the commissioner for reconsideration. An order that has been returned to the commissioner twice shall be considered a final decision and eligible for judicial review pursuant to R.S. 38:3097.5.

(2) Review rules and regulations proposed by the commissioner pursuant to the proper administration and enforcement of this Chapter.

(3) Continue the development, in cooperation with the commissioner, of a statewide ground water resource management program that shall include but not be limited to evaluation of the state's

ground water resources including current and projected demands; development of a water use conservation program; study of alternatives to ground water use, such as surface water to include treatment and transmission system, and reclaimed water; incentives for conservation; use of alternative technologies; and education and conservation programs. The plan should stress conservation as the primary mechanism for the protection of the state's ground water resources. The commission shall also hold public hearings and consult with local governmental entities in the development of this program.

(4) Review the contingency plan developed by the commissioner to respond to a ground water emergency.

(5) The commission may direct the commissioner to promulgate rules and regulations for the appointment or designation of up to five regional bodies based on the general location of major aquifer systems and water sources of the state and composed of local stakeholders who are representative of current users. Such bodies may gather data and provide local input to the commission and the commissioner.

(6) At their discretion, attend all public meetings called by the commissioner pursuant to his power and duties in this Chapter.

§3097.5. Judicial review

R.S. 38:3097.5 is all new law.

A. The owner of the affected well or proposed well or any owner of a well in the same aquifer which may be significantly and adversely impacted by the well at issue may appeal devolutively a final determination by the commissioner only to the Nineteenth Judicial District Court. A petition for review must be filed in the district court within thirty days after notice of the final decision being appealed has been given. Copies of the petition shall be served upon the commissioner. The district court shall grant the petition for review. The commissioner shall not be required to file an answer to the petition for review.

B. The provisions of R.S. 49:964(C), (D), (F), and (G), including the standard of review, shall apply to petitions for judicial review provided in this Section.

C. Judicial review regarding well restriction orders shall be decided by the court summarily and by preference. In no case shall the date for a final decision on the merits of such review or appeals extend beyond the ninetieth day after receipt by the court of the record for adjudication. The court in its discretion may issue further orders consistent with the Louisiana Code of Civil Procedure to carry out the summary mandate of such reviews or appeals.

§3097.6. Determination of critical ground water area

R.S. 38:3097.6 is all new law.

A. Any owner of a well that is significantly and adversely affected as a result of the movement of a salt water front, water level decline, or subsidence in or from the aquifer drawn on by such well shall have the right to file an application to request the commissioner to declare that an area underlain by such aquifer is a critical ground water area. Such application shall contain a statement of facts and supporting evidence substantiating the area may be a critical ground water area as defined in R.S. 30:3097.2(2). On the basis of the application, good management practices and sound science, the commissioner shall either deny the request, in writing, or issue a draft order which describes the proposed boundaries of the critical ground water area. If the commissioner issues a draft order describing the proposed boundaries of the critical ground water area, the commissioner shall hold at least one public hearing in the locality of the proposed boundaries.

B. After holding hearings, the commissioner shall issue a written decision based on good management practices and scientifically sound data gathered from the application, the participants in the public hearing, and any other relevant information. If the commissioner has determined that a critical ground water area exists, his decision shall be in the form of an order that shall describe the boundaries of the area which is determined to be a critical ground water area. The order shall also contain a plan to preserve and manage the ground water resources in that area which may include but is not limited to the following:

(1) Educational and conservation programs.

(2) Incentives to reduce ground water use.

(3) Restrictions on the amount of withdrawals by any or all users in the area. If restrictions on withdrawals are imposed, the commissioner shall consider the following:

(a) Ground water needed for human consumption and public health and safety shall have the highest priority.

(b) Uses other than human consumption and public health and safety shall have equal priority.

(c) Historical use.

(d) Ability, including economic ability, of a particular user to relocate to an alternative source of water.

(e) User's conservation efforts and actual reductions in water usage, taking into account historic ground water production.

Section 3. R.S. 49:968(B)(11) is hereby amended and reenacted to read as follows:

§968. Review of agency rules; fees

* * *

B. * * *

(11) The Department of Natural Resources and all of the agencies made a part of it shall submit the report to the House Committee on Natural Resources and the Senate Committee on Natural Resources. **<u>However, for exercises of the commissioner of conservation's rule-making authority pursuant to Chapter 13-A-1 of Title 38 of the Louisiana Revised Statutes of 1950, the department shall submit the report to the House Committee on the Environment and the Senate Committee on Environmental Quality.</u>**

* * *

Section 4. R.S. 36:4(X) and Chapter 13-C of Title 38 of the Louisiana Revised Statutes of 1950, comprised of R.S. 38:3099.1 through 3099.4, are hereby repealed in their entirety.

<u>Section 5 is all new law.</u>

Section 5. (A) A comprehensive ground water management program must continue to be developed and implemented. To that end, there is hereby created a Ground Water Management Advisory Task Force with membership as follows:

(1) A person representing the office of the governor appointed by the governor.

(2) The president of the Louisiana Senate or his designee.

(3) The speaker of the Louisiana House of Representatives or his designee.

(4) The chair of the Senate Committee on Natural Resources or his designee.

(5) The chair of the House Committee on Natural Resources or his designee.

(6) The chair of the Senate Committee on Environmental Quality or his designee.

(7) The chair of the House Committee on Environment or his designee.

(8) The Louisiana State Conservationist, USDA Natural Resources Conservation Service or his designee.

(9) The chancellor of the Louisiana State University Agricultural Center or his designee.

(10) The executive director of the state soil and water conservation committee.

(11) The Louisiana district chief, United States Geological Survey, Water Resources Division, or his designee.

(12) The district engineer of the United States Army Corps of Engineers, New Orleans District, or his designee.

(13) The director of the Louisiana Geological Survey or his designee.

(14) The executive director of the Louisiana Wildlife Federation or his designee.

(15) The president of the Louisiana Farm Bureau or his designee.

(16) The president of the Louisiana Chemical Association or his designee.

(17) The executive director of the Coalition to Restore Coastal Louisiana or his designee.

(18) The president of the Louisiana Rice Growers Association or his designee.

(19) The executive director of Louisiana Mid-Continent Oil and Gas Association or his designee.

(20) The president of the Louisiana Catfish Farmers Association or his designee.

(21) One representative of the Louisiana Rural Water Association.

(22) The president of the Cotton Producers Association or his designee.

(23) One representative of the Capital Area Groundwater Conservation District.

(24) One representative of the Sparta Groundwater Conservation District.

(25) The executive director of the Louisiana Forestry Association or his designee.

(26) One representative of the Sabine River Authority.

(27) The president of the American Sugar Cane League or his designee.

(28) One representative of the Red River Compact Commission.

(29) The executive director of the Lake Pontchartrain Foundation or his designee.

(30) The president of the Louisiana Soybean Association or his designee.

(31) The president of the Louisiana Cattlemen Association or his designee.

(32) The executive director of the Barataria-Terrebonne National Estuary Program or his designee.

(33) The president of the Louisiana Crawfish Farmers Association or his designee.

(34) The chairman of the Louisiana Pulp and Paper Association or his

designee.

(35) A representative of the Louisiana Ground Water Association.

(36) A representative of the Louisiana Engineering Society who is a registered engineer with reservoir experience.

(37) The dean of the Southern University College of Agriculture, Family, and Consumer Science or his designee.

(38) A representative from Louisiana State University, Department of Geology.

(39) A representative from Louisiana Tech University, Department of Geology.

(40) A representative from University of Louisiana at Monroe, Department of Geology.

(41) A representative from University of Louisiana at Lafayette, Department of Geology.

(42) A representative of the Association of Public Utilities.

(43) A representative of the Irrigation Association.

(44) A representative of the League of Women Voters.

(45) A representative of the Citizens for a Clean Environment.

(46) A representative of Louisiana Independent Oil and Gas Association.

(47) A representative from the Louisiana State University at Shreveport Watershed Management Initiative.

(48) A representative of the Municipal Water Association.

(49) A representative of the New Orleans Sewerage and Water Board.

(B) The Ground Water Management Advisory Task Force shall assist the commissioner of conservation and the Ground Water Resource Commission in continuing to develop a statewide ground water resource management program. Such ground water management program shall include but not be limited to evaluation of the state's ground water resources including current and projected demands on the aquifers of the state; development of a water use conservation program; study of alternatives to ground water use, such as surface water to include treatment and transmission system, and reclaimed water; incentives for conservation; use of alternative technologies; and education and conservation programs. The plan should stress conservation as the primary mechanism for the protection of the state's ground water resources.

(C) The task force shall meet at least once per quarter, or more frequently as necessary. The task force shall report to the commissioner and the commission periodically on the activities and progress of the task force on continuing to develop the comprehensive ground water management program.

Section 6. This Act shall become effective on July 1, 2003; if vetoed by the governor and subsequently approved by the legislature, this Act shall become effective on July 1, 2003, or on the day following such approval by the legislature, whichever is later.

PRESIDENT OF THE SENATE

SPEAKER OF THE HOUSE OF REPRESENTATIVES

GOVERNOR OF THE STATE OF LOUISIANA

APPROVED: ____________

APPENDIX A-2

LEGISLATIVE DOCUMENTATION

ACT 985 OF THE 2003 LOUISIANA REGULAR LEGISLATIVE SESSION

ENROLLED

Regular Session, 2003

ACT No. 985

HOUSE BILL NO. 2016 (Substitute for House Bill No. 1060 by Representative Beard)

BY REPRESENTATIVE BEARD

AN ACT

To enact Chapter 17 of Subtitle II of Title 30 of the Louisiana Revised Statutes of 1950, to be comprised of R.S. 30:2391 through 2399, relative to reclaimed water; to establish a reclaimed water program; to provide for definitions; to prohibit the use of potable water for certain purposes if reclaimed water is available; to provide for the use of revenue collected from the sale of reclaimed water; to create a drought-proof supply of water for industry; and to provide for related matters.

Be it enacted by the Legislature of Louisiana:

Section 1. Chapter 17 of Subtitle II of Title 30 of the Louisiana Revised Statutes of 1950, comprised of R.S. 30:2391 through 2399, is hereby enacted to read as follows:

CHAPTER 17. LOUISIANA RECLAIMED WATER LAW

§2391. Short title

This Chapter shall be known and may be cited as the "Louisiana Reclaimed Water Law".

§2392. Purpose

The legislature hereby finds and declares that the use of potable water for nonpotable uses, including but not limited to cemeteries, golf courses, parks, highway landscaped areas, and industrial uses, is a waste of our most precious natural resource, which is an essential element for life. There is a need for a reliable source of water for uses

CODING: Words in ~~struck through~~ type are deletions from existing law; words underscored are additions.

that should not draw from the supply of potable water. With the proper investment and development of the necessary infrastructure, the creation of dependable reclaimed water resources will meet nonpotable needs and relieve stress on potable water resources. A drought-proof supply of water will assist industry and encourage economic development. In furtherance of the legislature's constitutional mandate to protect the natural resources of the state as provided in Article IX, Section 1 of the Constitution of Louisiana, there is hereby established the Louisiana Reclaimed Water Law.

§2393. Definitions

The following terms shall have the following meanings for the purposes of this Chapter:

(1) "Available reclaimed water source" means reclaimed water that meets all of the following requirements:

(a)(i) The source of reclaimed water is of sufficient quality for the proposed beneficial use considering all relevant factors including but not limited to safety, effects of the beneficial use based on specific constituents in the reclaimed water source, and effects on state and federal water discharge permits. The quality of the reclaimed water shall meet all applicable state and federal water quality standards and the following standards at the discharge from the producer's plant site:

$BOD_5 \leq 5$ mg/L

TSS ≤ 5 mg/L

NH_3-N ≤ 2 mg/L

TN ≤ 10 mg/L

Chlorine residual ≥ 2 mg/L

(ii) The reclaimed water producer must keep verifiable records of water quality as determined by effluent testing seven days per week. Such tests must be either flow proportional composite sampling or electronic testing with laboratory verification.

(b) The use of reclaimed water will not adversely affect downstream water quality and will not be injurious to wildlife, fish, or plant life.

(c) The reclaimed water must be furnished to the user at a cost that is equal to or less than the cost of potable water, in accordance with R.S. 30:2396.

(2) "Beneficial uses" means the technologically feasible uses of reclaimed water for domestic, municipal, industrial, agricultural, recreational, or therapeutic purposes.

(3) "Reclaimed water" means water that, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use and that is therefore considered a valuable resource.

(4) "Reclaimed water producer" means any public or private entity that produces, transmits, or distributes reclaimed water.

§2394. Use of potable groundwater; prohibition

A. No public or private entity shall use groundwater of quality suitable for potable domestic use to irrigate the grassy non-developed areas of cemeteries, golf courses built and completed on and after August 15, 2003, parks, and highway landscaped areas, if there exists an available reclaimed water source as defined in R.S. 30:2393(1).

B. Public or private entities that use a source of potable water for cooling tower applications and industrial purposes or to irrigate the grassy areas of golf courses built and completed before August 15, 2003, shall examine the use of reclaimed water, if an available reclaimed water source exists as defined in R.S. 30:2393(1), and may use the reclaimed water for those purposes and applications.

C. Public or private entities that use a source of potable water to irrigate crops not intended for human consumption are encouraged, but not mandated, to use reclaimed water.

D. Public or private entities which grow, package, or produce food for human consumption are specifically excluded from this Chapter.

§2395. Identification of uses and customers

A. Reclaimed water producers and potential customers may cooperate in joint technical, economic, and environmental studies to develop available reclaimed water sources.

B. Reclaimed water producers may identify potential customers for an available reclaimed water source. A reclaimed water producer that has identified a potential customer may, in writing, request that the customer enter into an agreement for the producer to provide reclaimed water.

C. Current users of potable groundwater for nonpotable uses may identify reclaimed water producers. Such a user that has identified a potential reclaimed water producer with an available reclaimed water source may, in writing, request that the reclaimed water producer enter into an agreement to supply reclaimed water.

§2396. Costs

The producers of reclaimed water shall not sell water to customers at a price over the following amounts which shall include the

CODING: Words in ~~struck through~~ type are deletions from existing law; words underscored are additions.

cost to the reclaimed water producer for physical facilities to produce and transport the reclaimed water:

(1) For customers currently purchasing potable water from a third party, the cost for reclaimed water shall not exceed the price per gallon, including the cost of piping or transporting the reclaimed water, that the customer paid to the third-party potable provider.

(2) For customers who currently self-produce and use water from a potable water source, the cost for reclaimed water, including any and all fees, shall not exceed the customer's cost of producing water.

§2397. Distribution of revenue

The state treasurer shall each fiscal year deposit the revenues generated under the provisions of this Chapter, from taxes applicable to the sale of reclaimed water, or other sources as provided for by law into the Bond Security and Redemption Fund. Out of the funds from such sources remaining in the Bond Security and Redemption Fund after a sufficient amount is allocated from that fund to pay all obligations secured by the full faith and credit of the state which become due and payable within any fiscal year, the treasurer shall deposit an amount equal to one-quarter of the revenues generated from the reclaimed water program into the Municipal Facilities Revolving Loan Fund, enacted in R.S. 30:2078, which shall be used for making grants to local governments to finance primary waste treatment facilities; one-quarter into the Coastal Resources Trust Fund, created in R.S. 49:214.40, and the remainder shall be used by the Department of Natural Resources for the protection of groundwater resources. Use of these funds shall be subject to an appropriation by the legislature.

§2398. Capital improvements

Any capital improvements made under this Chapter shall qualify for any tax deductions as provided by law.

§2399. Design of reclaimed water system

A. Reclaimed water systems shall be designed with the goal of preventing the contamination of potable water.

B. All transmission and distribution piping for a reclaimed water system shall comply with the requirements of Part XII (Water Supply) and Part XIV (Plumbing) of the Louisiana State Sanitary Code relative to color-coding, nonpotable water identification, complete separation from potable water systems, separation distances from potable water piping when run in parallel, separation distance requirements when crossing potable water line, and such other necessary items.

Section 2. The Department of Environmental Quality shall report to the Senate Committee on Environmental Quality and the House Committee on the Environment prior to the 2004 Regular Session of the Legislature on the utilization of reclaimed water.

SPEAKER OF THE HOUSE OF REPRESENTATIVES

PRESIDENT OF THE SENATE

GOVERNOR OF THE STATE OF LOUISIANA

APPROVED: ______________

APPENDIX B

BATON ROUGE CITY/PARISH WWTPS – MONTHLY EFFLUENT DMR DATA – DECEMBER 1999 TO MAY 2003

APPENDIX B-1

BATON ROUGE CITY/PARISH WWTPS – MONTHLY EFFLUENT DMR DATA SUMMARY – DECEMBER 1999 TO MAY 2003

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North, Central and South Wastewater Treatment Plants
Monthly DMR Data Summary
December 1999 to May 2003

	Parameter									
Value	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
North WWTP										
Average	15.95	24	380	21	347	7.29	0.10	1,461	20.23	68.41
Maximum	96.67	76	3,673	140	7,347	8.14	6.00	454,545	29.50	85.10
Minimum	6.42	6	84	4	59	6.10	0.00	10	7.70	45.86
Central WWTP										
Average	10.43	24	251	19	213	7.12	0.03	1,922	21.48	70.66
Maximum	48.50	81	1,358	60	1,936	7.84	0.75	530,000	31.70	89.06
Minimum	4.92	5	41	3	22	6.37	0.00	9	8.41	47.14
South WWTP										
Average	34.31	36	1,251	29	1,029	7.12	0.16	16,952	21.63	70.93
Maximum	98.42	110	5,298	78	7,047	7.97	0.80	3,000,000	29.90	85.82
Minimum	17.51	8	240	5	136	6.00	0.00	10	14.70	58.46

APPENDIX B-2

BATON ROUGE CITY/PARISH WWTPS – MONTHLY EFFLUENT DMR DATA – NORTH WWTP – DECEMBER 1999 TO MAY 2003

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data									
			Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
1999	December	12/01/99	9.56	18	172	18	172	6.92	0	10		
		12/02/99	9.99	20	200	19	190	7.24	0	10		
		12/03/99	10.54	20	211	10	105	7.09	0	10		
		12/04/99	10.88	18	196	14	152	7.10	0.16	10		
		12/05/99	15.48	18	279	4	62	7.23	0.02	10		
		12/06/99	10.07	18	181	16	161	7.04	0	10		
		12/07/99	10.19	20	204	14	143	6.96	0	10		
		12/08/99	10.42	25	261	40	417	7.08	0	10		
		12/09/99	11.86	21	249	12	142	7.21	0.19	10		
		12/10/99	9.56	24	229	26	249	7.14	0	10		
		12/11/99	10.79	23	248	20	216	7.11	0.18	10		
		12/12/99	23.34	32	747	26	607	7.55	0	10		
		12/13/99	13.52	17	230	36	487	7.06	0	10		
		12/14/99	10.58	20	212	22	233	7.39	0	10		
		12/15/99	10.35	19	197	19	197	7.62	0	144		
		12/16/99	9.69	20	194	19	184	6.98	0.22	10		
		12/17/99	9.57	21	201	12	115	7.36	0.08	10		
		12/18/99	44.66	28	1,250	32	1,429	7.60	0	727		
		12/19/99	17.13	13	223	16	274	7.04	0.02	10		
		12/20/99	47.64	28	1,334	32	1,524	6.78	0	10		
		12/21/99	43.28	18	779	22	952	6.92	0.03	10		
		12/22/99	13.45	20	269	38	511	6.82	0	10		
		12/23/99	12.08	16	193	14	169	7.04	0	10		
		12/24/99	12.27	20	245	22	270	7.29	0.17	10		
		12/25/99	10.48	19	199	16	168	7.21	0.23	10		
		12/26/99	10.86	21	228	26	282	7.10	0.14	10		
		12/27/99	11.15	22	245	16	178	7.12	0.34	10		
		12/28/99	10.29	24	247	23	237	7.05	0.01	10		
		12/29/99	10.19	26	265	31	316	7.13	0	10		
		12/30/99	10.63	28	298	16	170	7.07	0.02	10		
		12/31/99	11.36	31	352	21	239	7.05	0.41	10		
2000	January	01/01/00	9.75	32	312	30	293	6.89	0.02	10		
		01/02/00	11.09	26	288	25	277	7.04	0	10		
		01/03/00	29.72	47	1,397	38	1,129	6.93	0	10		
		01/04/00	18.26	40	730	49	895	6.84	0	10		
		01/05/00	11.31	30	339	29	328	6.28	0.18			
		01/06/00	10.16	28	284	26	264	7.07	0	10		
		01/07/00	9.77	32	313	22	215	7.26	0	10		
		01/08/00	11.12	29	322	34	378	6.91	0.11	10		
		01/09/00	31.04	54	1,676	54	1,676	7.25	0	10		
		01/10/00	19.46	32	623	25	487	6.73	0	36		
		01/11/00	12.12	20	242	16	194	7.08	0	10		
		01/12/00	11.78	27	318	18	212	6.90	0	10		
		01/13/00	7.07	23	163	9	64	7.07	0	10		
		01/14/00	9.8	28	274	21	206	6.94	0.3	10		
		01/15/00	11.7	36	421	13	152	7.59	0.39	10		
		01/16/00	10.66	34	362	8	85	7.08	0.03	10		
		01/17/00	10.55	35	369	16	169	7.04	0.4	10		
		01/18/00	10.62	67	712	60	637	7.35	0	10		
		01/19/00	10.13	31	314	18	182	7.31	0	10		
		01/20/00	9.64	24	231	16	154	7.24	0	10		
		01/21/00	9.02	30	271	22	198	6.98	0	10		
		01/22/00	12.05	34	410	22	265	7.08	0	10		
		01/23/00	25.56	40	1,022	41	1,048	7.41	0	72		
		01/24/00	14.38	21	302	24	345	7.06	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/25/00	9.76	22	215	21	205	7.04	0	10		
		01/26/00	10.14	33	335	32	324	7.39	0	81		
		01/27/00	11.25	36	405	24	270	7.38	0	10		
		01/28/00	18.82	40	753	40	753	7.53	0	10		
		01/29/00	11.7	29	339	27	316	7.30	0.07	10		
		01/30/00	10.98	32	351	32	351	7.25	0	10		
		01/31/00	9.65	35	338	32	309	7.20	0	10		
2000	Febuary	02/01/00	9.91	41	406	23	228	7.34	0	10		
		02/02/00	12.03	47	565	32	385	7.09	0	10		
		02/03/00	11.52	44	507	24	276	7.26	0	10		
		02/04/00	10.06	34	342	18	181	7.60	0	10		
		02/05/00	9.75	34	332	20	195	7.33	0.08	10		
		02/06/00	9.79	45	441	20	196	7.04	0.01	10		
		02/07/00	9.93	37	367	24	238	7.17	0	10		
		02/08/00	9.25	43	398	22	204	7.22	0	10		
		02/09/00	9.77	40	391	18	176	7.29	0	10		
		02/10/00	10	35	350	19	190	7.13	0	10		
		02/11/00	10.1	39	394	16	162	7.11	0	10		
		02/12/00	9.86	30	296	14	138	7.07	0	10		
		02/13/00	11.41	27	308	18	205	7.01	0.04	10		
		02/14/00	9.83	40	393	16	157	7.16	0	10		
		02/15/00	9.02	32	289	20	180	7.07	0.23	10		
		02/16/00	10.07	35	352	25	252	7.21	0	10		
		02/17/00	10.25	28	287	16	164	7.18	0	10		
		02/18/00	9.87	34	336	17	168	7.12	0	10		
		02/19/00	9.8	27	265	18	176	7.11	0	10		
		02/20/00	9.52	32	305	28	267	7.53	0	10		
		02/21/00	9.67	35	338	25	242	7.07	0	10		
		02/22/00	9.39	40	376	36	338	6.96	0	10		
		02/23/00	10.04	42	422	25	251	7.03	0	10		
		02/24/00	9.67	45	435	34	329	7.20	0.06	10		
		02/25/00	10.41	45	468	16	167	7.14	0	10		
		02/26/00	17.28	36	622	28	484	6.96	0	10		
		02/27/00	13.07	36	471	20	261	6.70	0	10		
		02/28/00	10.58	32	339	26	275	7.01	0	36		
		02/29/00	9.63	32	308	22	212	7.19	0	10		
2000	March	03/01/00	10.42	38	396	24	250	7.24	0	1,000		
		03/02/00	9.7	22	213	16	155	7.12	0	18		
		03/03/00	10.06	26	262	18	181	6.99	0	18		
		03/04/00	13.21	28	370	24	317	6.97	0.02	10		
		03/05/00	8.72	30	262	18	157	7.27	0	18		
		03/06/00	9.09	30	273	26	236	6.99	0	27		
		03/07/00	9.77	22	215	17	166	7.03	0	10		
		03/08/00	10.62	25	266	28	297	7.20	0	10		
		03/09/00	9.09	25	227	20	182	7.13	0	18		
		03/10/00	8.9	23	205	10	89	7.43	0	10		
		03/11/00	13.77	19	262	6	83	7.36	0	99		
		03/12/00	9.24	17	157	18	166	6.87	0	18		
		03/13/00	7.86	22	173	18	141	7.17	0	10		
		03/14/00	9.7	20	194	16	155	7.09	0	10		
		03/15/00	20.16	31	625	24	484	6.87	0	2,400		
		03/16/00	11.76	26	306	20	235	6.80	0	580		
		03/17/00	9.39	23	216	25	235	7.22	0	10		
		03/18/00	30.1	28	843	29	873	6.77	0	10		
		03/19/00	28.52	19	542	19	542	6.67	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		03/20/00	12.07	17	205	140	1,690	6.67	0	10		
		03/21/00	10.93	18	197	20	219	6.98	0	10		
		03/22/00	9.7	22	213	26	252	7.02	0	10		
		03/23/00	9.8	20	196	18	176	6.97	0	10		
		03/24/00	10.15	21	213	17	173	7.01	0	10		
		03/25/00	9.94	25	249	30	298	6.94	0	10		
		03/26/00	12.75	24	306	14	179	7.28	0	10		
		03/27/00	33.4	28	935	29	969	7.03	0	34,000		
		03/28/00	11.91	23	274	30	357	6.83	0	454,545		
		03/29/00	11.77	24	282	26	306	6.75	0	36		
		03/30/00	11.22	14	157	15	168	6.78	0.24	10		
		03/31/00	10.09	21	212	20	202	6.95	0	10		
2000	May	05/01/00	7.78	22	171	11	86	6.91	0	10		
		05/02/00	7.59	34	258	37	281	6.87	0	10		
		05/03/00	9.89	25	247	18	178	6.91	0	10		
		05/04/00	8.2	18	148	17	139	6.98	0	10		
		05/05/00	27.78	36	1,000	24	667	6.86	0	10		
		05/06/00	14.49	18	261	14	203	6.70	0	10		
		05/07/00	9.15	20	183	24	220	6.67	0	10		
		05/08/00	6.77	24	162	37	250	6.55	0	10		
		05/09/00	7.68	19	146	13	100	7.08	0	10		
		05/10/00	7.89	17	134	12	95	7.08	0.04	10		
		05/11/00	7.64	20	153	15	115	7.43	0			
		05/12/00	8.38	18	151	12	101	7.36	0.15	10		
		05/13/00	8.07	18	145	11	89	6.72	0	10		
		05/14/00	7.45	16	119	16	119	7.14	0	10		
		05/15/00	7.56	28	212	28	212	6.95	0	10		
		05/16/00	6.95	16	111	24	167	7.13	0.08	10		
		05/17/00	7.96	17	135	20	159	7.51	0	10		
		05/18/00	7.82	21	164	10	78	7.08	0	901		
		05/19/00	7.68	20	154	11	84	7.04	0	90		
		05/20/00	8.23	22	181	12	99	7.26	0.2	10		
		05/21/00	7.84	29	227	18	141	7.47	0.4	10		
		05/22/00	7.12	31	221	20	142	7.48	0.2	10		
		05/23/00	7.85	26	204	10	79	7.77	0.07	10		
		05/24/00	7.82	16	125	12	94	7.43	0.22	10		
		05/25/00	8.23	18	148	16	132	7.77	0.23	10		
		05/26/00	7.71	27	208	20	154	7.58	0.26	18		
		05/27/00	8.16	24	196	18	147	7.39	0	10		
		05/28/00	7.82	24	188	24	188	7.36	0.01	10		
		05/29/00	7.19	34	244	24	173	7.56	0	10		
		05/30/00	7.09	21	149	20	142	7.61	0.05	10		
		05/31/00	7.48	18	135	10	75	7.59	0.08	10		
2000	June	06/01/00	9.01	25	225	16	144	7.62	0.03	10		
		06/02/00	7.19	28	201	18	129	7.65	0	10		
		06/03/00	7.47	19	142	16	120	7.63	0.04	10		
		06/04/00	8.06	24	193	24	193	7.53	0.08	10		
		06/05/00	8.3	20	166	20	166	7.52	0	10		
		06/06/00	7.34	23	169	12	88	7.55	0.1	10		
		06/07/00	6.42	24	154	18	116	7.54	0.12	10		
		06/08/00	7.33	28	205	16	117	7.47	0.11	10		
		06/09/00	7.62	23	175	11	84	7.58	0	10		
		06/10/00	7.49	22	165	12	90	7.16	0	5,100		
		06/11/00	7.16	23	165	12	86	7.50	0.08	10		
		06/12/00	7.2	22	158	11	79	7.39	0.15	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		06/13/00	6.54	14	92	18	118	7.40	0.03	10		
		06/14/00	7.95	16	127	13	103	7.48	0.04	10		
		06/15/00	8.61	19	164	17	146	7.48	0	10		
		06/16/00	7.88	17	134	8	63	7.29	0	10		
		06/17/00	10.38	17	176	18	187	7.48	0.13	10		
		06/18/00	13.05	27	352	28	365	7.24	0.29	10		
		06/19/00	13.15	21	276	18	237	7.24	0	10		
		06/20/00	15.12	19	287	14	212	7.25	0	10		
		06/21/00	10.58	16	169	7	74	7.27	0.03	10		
		06/22/00	7.49	12	90	16	120	7.38	0.01	10		
		06/23/00	7.2	18	130	16	115	7.41	0.02	10		
		06/24/00	8.57	21	180	20	171	7.44	0.03	10		
		06/25/00	9.08	28	254	18	163	7.41	0.1	10		
		06/26/00	8.38	24	201	20	168	7.46	0	10		
		06/27/00	8.35	21	175	20	167	7.41	0.11	10		
		06/28/00	8.22	13	107	14	115	7.39	0.28	10		
		06/29/00	11.53	19	219	19	219	7.41	0.12	10		
		06/30/00	21.91	30	657	18	394	7.25	0	10		
2000	July	07/01/00	16.9	16	270	15	254	7.30	0.11	10		
		07/02/00	11.37	21	239	25	284	7.04	0.13	10		
		07/03/00	12.44	32	398	20	249	7.12	0.3	10		
		07/04/00	10.72	45	482	26	279	7.27	0	10		
		07/05/00	10.44	22	230	12	125	7.38	0.1	10		
		07/06/00	10.23	20	205	18	184	7.18	0	10		
		07/07/00	10.26	17	174	12	123	6.98	0.2	10		
		07/08/00	10.22	19	194	12	123	7.39	0	10		
		07/09/00	19.3	20	386	23	444	6.67	0.23	10		
		07/10/00	11.97	18	215	28	335	7.23	0.07	10		
		07/11/00	10.53	9	95	18	190	7.28	0.02	10		
		07/12/00	11.1	15	167	26	289	7.20	0.22	10		
		07/13/00	10.55	13	137	11	116	7.25	0.14	10		
		07/14/00	10.53	17	179	14	147	7.29	0.02	18		
		07/15/00	10.97	18	197	15	165	7.80	0.08	10		
		07/16/00	10.46	23	241	20	209	7.78	0.22	10		
		07/17/00	11.19	22	246	16	179	7.44	0.13	10		
		07/18/00	10.37	24	249	31	321	7.56	0.12	10		
		07/19/00	11.02	20	220	19	209	7.64	0.1	10		
		07/20/00	10.18	21	214	16	163	7.85	0.04	10		
		07/21/00	7.83	21	164	20	157	7.63	0.09	10		
		07/22/00	9.2	18	166	12	110	7.54	0	10		
		07/23/00	22.91	33	756	36	825	7.19	0.41	10		
		07/24/00	9.53	75	715	83	791	7.34	0.17	10		
		07/25/00	8.23	60	494	68	560	7.41	0.01	36		
		07/26/00	9.8	48	470	50	490	7.26	0.02	99		
		07/27/00	15.13	25	378	32	484	7.40	0.04	10		
		07/28/00	14.33	20	287	24	344	7.33	0.02	10		
		07/29/00	14.58	20	292	16	233	7.43	0	10		
		07/30/00	15.23	18	274	14	213	7.71	0.04	10		
		07/31/00	15.05	30	452	28	421	7.21	0.27	18		
2000	August	08/01/00	13.83	20	277	17	235	7.69	0	10		
		08/02/00	13.91	16	223	14	195	7.58	0	10		
		08/03/00	14.1	21	296	7	99	7.28	0	10		
		08/04/00	12.96	20	259	12	156	7.59	0	10		
		08/05/00	13.18	20	264	5	66	7.34	0	18		
		08/06/00	11.31	20	226	16	181	7.29	0.02	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		08/07/00	13.26	15	199	9	119	7.59	0.05	270		
		08/08/00	15.19	18	273	10	152	7.45	0	10		
		08/09/00	14.86	18	267	22	327	7.91	0	10		
		08/10/00	25.91	21	544	17	440	7.44	0.05	10		
		08/11/00	22.21	23	511	17	378	7.02	0.01	10		
		08/12/00	23.4	17	398	14	328	7.45	0	10		
		08/13/00	13.57	18	244	23	312	7.67	0	10		
		08/14/00	15.24	20	305	17	259	7.08	0.04	10		
		08/15/00	16.3	14	228	22	359	7.45	0	10		
		08/16/00	15.01	14	210	10	150	7.58	0.07	10		
		08/17/00	14.26	15	214	22	314	7.61	0	10		
		08/18/00	12.63	15	189	14	177	7.07	0	10		
		08/19/00	13.94	20	279	17	237	7.62	0	10		
		08/20/00	14.59	23	336	22	321	7.13	0.01	10		
		08/21/00	13.79	22	303	19	262	8.14	0	10		
		08/22/00	14.87	15	223	17	253	7.98	0	18		
		08/23/00	15.12	16	242	20	302	7.75	0	10		
		08/24/00	18.8	13	244	15	282	7.59	0	10		
		08/25/00	14.3	15	215	14	200	7.61	0	10		
		08/26/00	15.22	17	259	12	183	7.54	0.01	10		
		08/27/00	13.92	17	237	12	167	7.36	0.03	10		
		08/28/00	14.07	23	324	16	225	7.91	0.02	10		
		08/29/00	14.31	33	472	22	315	7.59	0.03	10		
		08/30/00	13.86	22	305	22	305	7.54	0.03	10		
		08/31/00	14.85	18	267	18	267	7.62	0.03	10		
2000	September	09/01/00	14.12	22	311	10	141	7.68	0.02	10		
		09/02/00	13.87	23	319	14	194	7.86	0.04	10		
		09/03/00	13.43	16	215	16	215	7.63	0.04	10		
		09/04/00	14.79	14	207	13	192	7.63	0.1	10		
		09/05/00	12.9	16	206	9	116	7.63	0.03	10		
		09/06/00	14.56	20	291	22	320	7.50	0.04	10		
		09/07/00	14.17	16	227	16	227	7.60	0.06	10		
		09/08/00	24.32	21	511	25	608	7.60	0	10		
		09/09/00	20.87	25	522	26	543	7.57	0.16	10		
		09/10/00	18.8	18	338	16	301	7.34	0.03	10		
		09/11/00	16.1	21	338	19	306	7.48	0	10		
		09/12/00	22.77	19	433	20	455	7.37	0	10		
		09/13/00	23.08	22	508	15	346	7.64	0.04	10		
		09/14/00	17.17	16	275	9	155	7.47	0	10		
		09/15/00	13.03	27	352	12	156	7.20	0	10		
		09/16/00	13.11	24	315	16	210	7.53	0.02	36		
		09/17/00	13.52	21	284	18	243	7.62	0.07	10		
		09/18/00	13.18	17	224	19	250	7.59	0	10		
		09/19/00	13.35	25	334	24	320	7.81	0	10		
		09/20/00	14.47	26	376	20	289	7.68	0.09	10		
		09/21/00	16.63	20	333	19	316	7.76	0.16	10		
		09/22/00	14.9	22	328	13	194	7.77	0.12	10		
		09/23/00	12.86	28	360	13	167	7.73	0.01	10		
		09/24/00	14.32	30	430	16	229	7.68	0.04	10		
		09/25/00	13.38	21	281	17	227	7.72	0.04	10		
		09/26/00	13.88	30	416	28	389	7.79	0.1	10		
		09/27/00	13.46	24	323	21	283	7.88	0.08	10		
		09/28/00	12.87	16	206	16	206	7.22	0.16	10		
		09/29/00	12.97	24	311	13	169	6.10	0	10		
		09/30/00	13.78	21	289	13	179	7.32	0.24	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
2000	October	10/01/00	14.03	16	224	6	84	7.32	0.13	10		
		10/02/00	13.04	19	248	14	183	7.42	0.16	10		
		10/03/00	12.01	24	288	22	264	7.51	0.15	10		
		10/04/00	13.44	19	255	20	269	7.67	0.01	10		
		10/05/00	14.56	22	320	20	291	7.44	0.04	10		
		10/06/00	19.9	24	478	20	398	6.92	0.03	10		
		10/07/00	14.7	18	265	22	323	7.43	0.06	10		
		10/08/00	14.44	18	260	22	318	6.93	0	10		
		10/09/00	14.04	23	323	15	211	7.29	0.14	10		
		10/10/00	13.85	21	291	18	249	7.55	0.07	10		
		10/11/00	13.58	19	258	16	217	7.33	0.03	10		
		10/12/00	13.89	25	347	18	250	7.53	0.04	10		
		10/13/00	12.05	20	241	16	193	7.41	0.01	10		
		10/14/00	13.4	23	308	14	188	7.38	0.24	10		
		10/15/00	13.06	20	261	17	222	7.28	0.04	10		
		10/16/00	13.36	22	294	16	214	7.68	0.06	10		
		10/17/00	12.56	30	377	14	176	7.10	0.01	10		
		10/18/00	13.89	18	250	12	167	7.68	0.04	10		
		10/19/00	12.46	19	237	13	162	7.57	0.05	10		
		10/20/00	12.77	23	294	26	332	7.47	0.08	10		
		10/21/00	13.5	19	257	19	257	7.36	0.05	10		
		10/22/00	14.58	23	335	19	277	7.25	0.01	10		
		10/23/00	13.54	22	298	18	244	8.03	0.1	10		
		10/24/00	13.26	36	477	26	345	7.83	0.12	10		
		10/25/00	13.91	22	306	16	223	7.89	0.06	10		
		10/26/00	13.26	22	292	20	265	7.74	0.03	10		
		10/27/00	14.06	24	337	20	281	7.65	0	10		
		10/28/00	14.1	22	310	20	282	7.55	0.04	10		
		10/29/00	13.92	23	320	22	306	7.39	0	10		
		10/30/00	13.26	22	292	20	265	7.07	0.05	10		
		10/31/00	13.68	--	--	20	274	7.16	0.05	10		
2000	November	11/01/00	12.75	30	383	18	230	7.36	0.02	10		
		11/02/00	13.05	28	365	21	274	7.52	0.01	10		
		11/03/00	12.14	22	267	14	170	7.67	0	10		
		11/04/00	12.87	22	283	12	154	7.5	0.05	10		
		11/05/00	14.92	23	343	22	328	7.40	0	10		
		11/06/00	22.38	28	627	24	537	7.65	0	2,200		
		11/07/00	13.8	22	304	36	497	7.19	0.26	10		
		11/08/00	31.17	30	935	24	748	7.32	0.06	10		
		11/09/00	24.86	20	497	20	497	7.04	0	54		
		11/10/00	13.58	21	285	22	299	6.99	0.01	10		
		11/11/00	14.34	22	315	13	186	7.27	0.21	10		
		11/12/00	14.16	29	411	20	283	7.00	0.25	10		
		11/13/00	14.6	24	350	10	146	7.59	0.04	10		
		11/14/00	14.47	7	101	25	362	7.40	0.08	10		
		11/15/00	13.93	22	306	28	390	7.29	0.17	10		
		11/16/00	34.96	34	1,189	21	734	7.59	0.15	10		
		11/17/00	23.83	19	453	16	381	7.67	0.01	10		
		11/18/00	83.29	17	1,416	26	2,166	7.68	0	108		
		11/19/00	46.76	14	655	19	888	7.60	0.01	144		
		11/20/00	17.12	20	342	43	736	7.38	0.2	10		
		11/21/00	14.83	30	445	24	356	7.21	0.1	10		
		11/22/00	15	23	345	12	180	7.45	0	10		
		11/23/00	14.18	23	326	18	255	7.38	0	10		
		11/24/00	30.6	28	857	22	673	7.39	0	23,000		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		11/25/00	16.35	18	294	20	327	7.16	0.03	10		
		11/26/00	15.16	18	273	20	303	7.10	0	10		
		11/27/00	14.13	20	283	5	71	7.26	0.01	18		
		11/28/00	14.49	--	--	28	406	7.29	0.04	10		
		11/29/00	15.83	--	--	20	317	7.42	0	10		
		11/30/00	13.62	--	--	21	286	7.40	0.1	10		
2000	December	12/01/00	23.18	38	881	28	649	7.5	0.17	10		
		12/02/00	16.4	26	426	14	230	7.15	0	10		
		12/03/00	15.83	26	412	28	443	7.17	0.1	10		
		12/04/00	14.87	40	595	23	342	7.29	0.01	10		
		12/05/00	14.27	39	557	22	314	7.49	0.34	10		
		12/06/00	17.41	42	731	20	348	7.57	0.26	10		
		12/07/00	15.88	42	667	24	381	7.26	0.01	10		
		12/08/00	13.28	24	319	23	305	7.23	0.01	10		
		12/09/00	13.95	30	419	24	335	7.08	0.2	10		
		12/10/00	14.65	40	586	21	308	7.23	0.13	10		
		12/11/00	13.04	44	574	18	235	7.61	0.02	10		
		12/12/00	14.13	54	763	20	283	7.49	0.04	10		
		12/13/00	28.32	76	2,152	40	1,133	7.49	0.02	10		
		12/14/00	18.46	58	1,071	28	517	7.32	0.42	10		
		12/15/00	15.07	33	497	18	271	7.56	0.01	18		
		12/16/00	18.68	34	635	12	224	7.42	0.18	10		
		12/17/00	13.32	--	--	18	240	7.30	0.23	10		
		12/18/00	17.46	62	1,083	23	402	7.35	0.06	10		
		12/19/00	15.55	70	1,089	18	280	7.27	0.17	10		
		12/20/00	14.13	64	904	22	311	7.27	0.08	10		
		12/21/00	28.74	51	1,466	15	431	7.79	0.01	10		
		12/22/00	16.26	55	894	20	325	7.33	0.01	10		
		12/23/00	15.17	29	440	16	243	7.40	0.06	10		
		12/24/00	13.94	24	335	14	195	7.31	0.1	10		
		12/25/00	12.67	26	329	20	253	7.17	0.09	10		
		12/26/00	13.57	26	353	17	231	7.40	0.38	10		
		12/27/00	43.55	36	1,568	23	1,002	6.98	0	46,000		
		12/28/00	26.89	27	726	15	403	6.98	0.05	135		
		12/29/00	15.59	25	390	18	281	7.08	0.05	10		
		12/30/00	15.76	29	457	20	315	7.16	0.18	10		
		12/31/00	14.38	20	288	18	259	7.09	0.3	10		
2001	January	01/01/01	14.7	27	397	20	294	7.3	0.01	10		
		01/02/01	14.67	--	--	18	264	7.24	0.23	10		
		01/03/01	14.42	30	433	12	173	7.12	0.08	10		
		01/04/01	14.06	26	366	20	281	7.33	0.02	10		
		01/05/01	12.27	29	356	26	319	7.45	0.11	10		
		01/06/01	13.01	30	390	25	325	8.09	0.07	10		
		01/07/01	15.36	34	522	30	461	8.00	0.19	10		
		01/08/01	13.1	68	891	28	367	7.46	0.04	10		
		01/09/01	11.99	68	815	30	360	7.41	0.19	10	20.0	68.0
		01/10/01	13.11	36	472	29	380	7.49	0.01	10	14.9	58.8
		01/11/01	19.42	44	854	40	777	7.27	0	18	17.8	64.0
		01/12/01	13.78	36	496	33	455	7.91	0.01	10	19.1	66.4
		01/13/01	13.91	32	445	17	236	7.62	0.02	10	19.3	66.7
		01/14/01	12.81	28	359	26	333	7.98	0.01	10	17.5	63.5
		01/15/01	18.64	38	708	36	671	7.62	0.01	10	19.6	67.3
		01/16/01	52.98	41	2,172	42	2,225	7.75	0.21	10	17.4	63.3
		01/17/01	23.94	27	646	27	646	7.34	0	54	17.3	63.1
		01/18/01	23.86	27	644	19	453	7.51	0.05	10	17.8	64.0

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/19/01	58.37	26	1,518	26	1,518	6.73	0	10	13.2	55.8
		01/20/01	20.71	33	683	49	1,015	7.19	0.08	45	12.5	54.5
		01/21/01	17.13	21	360	24	411	7.37	0.06	10	14.1	57.4
		01/22/01	14.53	24	349	12	174	7.16	0.1	10	16.3	61.3
		01/23/01	13.72	32	439	28	384	7.21	0.28	10	16.7	62.1
		01/24/01	14.17	25	354	28	397	7.56	0.07	10	17.9	64.2
		01/25/01	12.01	27	324	29	348	7.36	0.12	10	19.8	67.6
		01/26/01	11.77	30	353	29	341	7.38	0.29	10	20.1	68.2
		01/27/01	13.17	30	395	17	224	7.39	0.03	10	20.2	68.4
		01/28/01	12.97	32	415	27	350	7.52	0.03	10	20.0	68.0
		01/29/01	43.19	40	1,728	34	1,468	7.53	0.04	10	19.3	66.7
		01/30/01	21.25	27	574	19	404	7.62	0.01	27	16.3	61.3
		01/31/01	14.54	22	320	19	276	7.65	0.03	10	16.7	62.1
2001	February	02/01/01	13.01	21	273	15	195	7.32	0.11	10	18.6	65.5
		02/02/01	12.96	27	350	30	389	7.14	0.03	10	18.2	64.8
		02/03/01	13.8	30	414	34	469	7.39	0.04	10	18.0	64.4
		02/04/01	13.47	28	377	26	350	7.12	0.06	10	16.3	61.3
		02/05/01	11.5	36	414	28	322	7.53	0.02	10	20.2	68.4
		02/06/01	11.67	40	467	31	362	7.56	0.11	10	19.9	67.8
		02/07/01	13.66	66	902	34	464	7.40	0	189	18.5	65.3
		02/08/01	12.93	36	465	26	336	7.72	0	19,000	19.0	66.2
		02/09/01	34.82	45	1,567	26	905	7.41	0	10	21.1	70.0
		02/10/01	15.75	26	410	9	142	6.85	0	91	18.5	65.3
		02/11/01	12.94	23	298	14	181	7.06	0.01	10	17.2	63.0
		02/12/01	13.82	28	387	20	276	7.25	0.01	10	18.6	65.5
		02/13/01	15.46	38	587	26	402	7.65	0	1,091	19.6	67.3
		02/14/01	14.34	30	430	28	402	7.58	0	16,000	21.4	70.5
		02/15/01	11.51	34	391	28	322	7.34	0	10	22.4	72.3
		02/16/01	27.74	38	1,054	33	915	7.21	0	144	21.8	71.2
		02/17/01	18.62	26	484	22	410	7.20	0.01	54	18.8	65.8
		02/18/01	12.91	25	323	8	103	7.32	0	10	15.3	59.5
		02/19/01	13.48	24	324	15	202	7.34	0.45	10	20.7	69.3
		02/20/01	13.64	28	382	26	355	7.46	0.15	10	19.0	66.2
		02/21/01	10.9	24	262	30	327	7.31	0	10	20.8	69.4
		02/22/01	12.76	22	281	24	306	7.47	0.04	10	22.1	71.8
		02/23/01	12.06	24	289	27	326	7.59	0.12	10	21.4	70.5
		02/24/01	14.04	22	309	22	309	7.70	0.03	10	22.5	72.5
		02/25/01	13.87	24	333	24	333	7.52	0.33	10	21.5	70.7
		02/26/01	26.57	38	1,010	30	797	7.50	0.07	10	20.5	68.9
		02/27/01	21.52	32	689	24	516	7.27	0	108	21.2	70.2
		02/28/01	32.63	20	653	10	326	7.71	0.02	10	20.5	68.9
2001	March	03/01/01	17.31	28	485	39	675	7.58	0	10	20.9	69.6
		03/02/01	49.91	25	1,248	22	1,098	7.68	0.01	10	22.2	72.0
		03/03/01	76.99	15	1,155	18	1,386	7.36	0	60,000	20.1	68.2
		03/04/01	25.08	20	502	34	853	7.49	0	10	19.8	67.6
		03/05/01	16.9	18	304	22	372	7.45	0.06	18	19.5	67.1
		03/06/01	14.73	20	295	15	221	7.43	0	10	20.1	68.2
		03/07/01	12.44	18	224	16	199	7.51	0.06	10	21.5	70.7
		03/08/01	18.41	22	405	22	405	7.37	0.01	10	20.9	69.6
		03/09/01	30.99	19	589	18	558	7.27	0.04	18	20.5	68.9
		03/10/01	14.9	15	224	9	134	7.25	0.12	10	18.8	65.8
		03/11/01	16.59	14	232	10	166	7.33	0.15	10	20.2	68.4
		03/12/01	51.78	31	1,605	20	1,036	7.49	0	30,000	20.5	68.9
		03/13/01	20.12	14	282	8	161	6.98	0.03	700	22.3	72.1
		03/14/01	44.19	40	1,768	48	2,121	7.17	0	100	21.6	70.9

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		03/15/01	35.31	17	600	22	777	7.25	0	5,600	20.3	68.5
		03/16/01	16.55	13	215	13	215	7.29	0	27	19.3	66.7
		03/17/01	14.33	17	244	18	258	7.44	0.03	10	18.3	64.9
		03/18/01	14	17	238	14	196	7.49	0	10	18.3	64.9
		03/19/01	13.49	16	216	10	135	7.07	0.07	10	21.0	69.8
		03/20/01	13.06	18	235	12	157	7.29	0	3,200	19.0	66.2
		03/21/01	12.81	22	282	18	231	7.21	0.05	10	19.7	67.5
		03/22/01	12.79	22	281	24	307	7.26	0.07	10	21.3	70.3
		03/23/01	12.71	19	241	18	229	7.31	0.08	63	21.4	70.5
		03/24/01	15.28	32	489	18	275	7.30	0.05	10	20.9	69.6
		03/25/01	14.03	28	393	18	253	7.30	0.02	10	20.7	69.3
		03/26/01	11.92	30	358	16	191	7.07	0.05	10	19.0	66.2
		03/27/01	14.66	34	498	22	323	7.02	0.13	10	18.2	64.8
		03/28/01	60.29	34	2,050	41	2,472	7.52	0	60,000	17.1	62.8
		03/29/01	27.36	17	465	10	274	7.18	0.03	10	19.0	66.2
		03/30/01	18.59	17	316	12	223	7.22	0.02	10	19.8	67.6
		03/31/01	15.53	18	280	10	155	7.24	0.04	10	20.8	69.4
2001	April	04/01/01	15.31	18	276	16	245	7.3	0.21	10	19.7	67.5
		04/02/01	16.64	22	366	18	300	7.29	0.06	10	21.2	70.2
		04/03/01	15.98	60	959	30	479	7.37	0.16	10	23.1	73.6
		04/04/01	15.45	25	386	24	371	7.3	0.03	250	26.1	79.0
		04/05/01	15.3	27	413	27	413	7.32	0.02	10	24.0	75.2
		04/06/01	16.29	19	310	20	326	6.78	0.07	10	23.3	73.9
		04/07/01	16.8	20	336	18	302	7.79	0.12	10	22.3	72.1
		04/08/01	16.84	19	320	16	269	7.38	0.07	10	23.8	74.8
		04/09/01	16.85	20	337	20	337	7.48	0.03	10	25.5	77.9
		04/10/01	16.25	26	423	22	358	7.43	0.02	10	23.9	75.0
		04/11/01	15.32	26	398	20	306	7.40	0.09	10	23.5	74.3
		04/12/01	12.22	28	342	26	318	7.35	0.03	10	25.6	78.1
		04/13/01	11.08	28	310	23	255	7.23	0.02	10	25.1	77.2
		04/14/01	10.44	27	282	18	188	7.42	0	18	24.1	75.4
		04/15/01	9.86	25	247	24	237	7.61	0.13	10	14.4	57.9
		04/16/01	10.11	28	283	24	243	6.82	0.07	10	24.9	76.8
		04/17/01	8.8	33	290	30	264	7.45	0.05	300	23.0	73.4
		04/18/01	8.64	32	276	36	311	7.44	0.09	250	20.2	68.4
		04/19/01	9.36	32	300	28	262	7.45	0.02	10	21.6	70.9
		04/20/01	10.08	32	323	24	242	7.48	0	10	24.8	76.6
		04/21/01	10.64	29	309	26	277	7.51	0.06	18	22.9	73.2
		04/22/01	10.62	28	297	30	319	7.52	0.04	10	23.8	74.8
		04/23/01	10.71	28	300	24	257	7.45	0.01	10	25.3	77.5
		04/24/01	14.24	26	370	26	370	7.44	0	72	22.7	72.9
		04/25/01	9.31	25	233	28	261	7.37	0.09	10	22.4	72.3
		04/26/01	9.35	27	252	24	224	7.52	0.01	10	22.6	72.7
		04/27/01	9.3	25	233	31	288	7.42	0	10	23.7	74.7
		04/28/01	9.95	28	279	22	219	7.50	0.04	10	23.9	75.0
		04/29/01	10.26	20	205	25	257	7.57	0.04	10	23.7	74.7
		04/30/01	10.11	25	253	39	394	7.74	0.01	10	24.6	76.3
2001	May	05/01/01	9.51	22	209	26	247	7.5	0.02	36	23.0	73.4
		05/02/01	9.51	26	247	26	247	7.81	0	54	23.5	74.3
		05/03/01	11.17	25	279	20	223	7.53	0	310	24.5	76.1
		05/04/01	10.22	22	225	26	266	7.8	0	10	24.8	76.6
		05/05/01	10.43	30	313	30	313	7.68	0.08	10	23.9	75.0
		05/06/01	10.44	24	251	24	251	7.06	0.1	10	24.1	75.4
		05/07/01	10.64	30	319	32	340	7.66	0.01	10	24.5	76.1
		05/08/01	12.82	35	449	32	410	7.43	0.02	10	24.5	76.1

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		05/09/01	10.86	26	282	29	315	7.67	0	10	25.1	77.2
		05/10/01	10.28	22	226	24	247	7.32	0	90	25.0	77.0
		05/11/01	9.79	22	215	20	196	7.56	0.03	10	25.0	77.0
		05/12/01	14.36	28	402	21	302	7.64	0.06	10	24.6	76.3
		05/13/01	11.91	21	250	26	310	7.52	0.05	10	25.5	77.9
		05/14/01	10.52	20	210	23	242	7.38	0.07	10	25.9	78.6
		05/15/01	9.64	31	299	24	231	7.32	0.01	10	25.2	77.4
		05/16/01	11.06	22	243	28	310	7.32	0.04	10	24.3	75.7
		05/17/01	10.91	20	218	23	251	7.45	0.07	10	25.4	77.7
		05/18/01	10.64	12	128	20	213	7.28	0.01	10	25.9	78.6
		05/19/01	12.29	26	320	26	320	7.38	0.02	10	25.8	78.4
		05/20/01	12.73	22	280	28	356	7.30	0.03	45	26.0	78.8
		05/21/01	12.41	22	273	16	199	7.55	0.4	10	26.9	80.4
		05/22/01	10.02	35	351	20	200	7.36	0.01	10	24.4	75.9
		05/23/01	10.81	27	292	24	259	7.20	0.17	10	24.9	76.8
		05/24/01	11.55	29	335	26	300	7.48	0	10	24.0	75.2
		05/25/01	10.56	27	285	25	264	6.75	0.13	10	24.0	75.2
		05/26/01	11.75	26	306	30	353	7.25	0.02	10	25.5	77.9
		05/27/01	11.71	32	375	37	433	7.44	0.02	45	26.7	80.1
		05/28/01	12.63	30	379	38	480	7.70	0.05	10	25.9	78.6
		05/29/01	12.61	36	454	29	366	7.48	0	10	27.4	81.3
		05/30/01	12.11	18	218	25	303	7.46	0	10	26.8	80.2
		05/31/01	13.18	18	237	13	171	7.57	0.04	10	25.5	77.9
2001	June	06/01/01	9.9	19	188	20	198	7.37	0.42	10	26.9	80.4
		06/02/01	11.16	17	190	25	279	7.51	0.09	10	26.7	80.1
		06/03/01	10.91	18	196	20	218	7.46	0.12	10	27.3	81.1
		06/04/01	11.82	19	225	28	331	7.34	0.16	10	26.4	79.5
		06/05/01	46.72	34	1,588	37	1,729	7.49	0.06	63	26.3	79.3
		06/06/01	88.49	11	973	20	1,770	7.08	0	60,000	24.0	75.2
		06/07/01	92.55	9	833	25	2,314	7.01	0	38,000	23.6	74.5
		06/08/01	72.2	8	578	14	1,011	6.98	0	13,000	24.1	75.4
		06/09/01	61.32	7	429	12	736	7.08	0.01	8,000	24.6	76.3
		06/10/01	62.07	12	745	28	1,738	7.16	0.01	32,000	23.6	74.5
		06/11/01	27.13	7	190	12	326	7.32	0	5,600	26.1	79.0
		06/12/01	16.28	18	293	24	391	7.28	0	32,000	26.3	79.3
		06/13/01	15.97	14	224	28	447	7.16	0.03	10	26.9	80.4
		06/14/01	13.54	18	244	28	379	7.14	0.01	60,000	26.3	79.3
		06/15/01	11.52	16	184	22	253	7.56	0.1	10	26.0	78.8
		06/16/01	11.66	19	222	15	175	7.29	0.06	10	26.5	79.7
		06/17/01	10.91	17	185	18	196	7.31	0.07	10	25.5	77.9
		06/18/01	11.13	18	200	16	178	7.67	0.02	18	27.2	81.0
		06/19/01	16.54	21	347	24	397	7.29	0.02	10	27.3	81.1
		06/20/01	11.58	18	208	21	243	7.38	0.02	99	28.9	84.0
		06/21/01	13.59	22	299	18	245	7.24	0.18	10	27.1	80.8
		06/22/01	12.09	21	254	17	206	7.44	0.17	10	27.0	80.6
		06/23/01	11.54	20	231	20	231	6.97	0.42	10	26.5	79.7
		06/24/01	11.26	17	191	17	191	7.10	0.35	10	22.5	72.5
		06/25/01	11.49	21	241	26	299	7.77	0	10	27.0	80.6
		06/26/01	11.74	30	352	24	282	7.36	0.15	10	28.7	83.7
		06/27/01	13.22	20	264	20	264	7.59	0.09	10	26.7	80.1
		06/28/01	11.92	18	215	18	215	7.57	0.06	10	24.9	76.8
		06/29/01	15.18	18	273	20	304	7.51	0.01	10	27.3	81.1
		06/30/01	16.08	20	322	18	289	7.39	0.28	10	26.8	80.2
2001	July	07/01/01	13.82	10	138	16	221	7.34	0.23	10	27.3	81.1
		07/02/01	12.78	20	256	22	281	7.48	0.03	2,100	27.6	81.7

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		07/03/01	22.4	27	605	16	358	7.31	0.04	90	27.3	81.1
		07/04/01	16.18	18	291	24	388	7.36	0.01	18	27.1	80.8
		07/05/01	24.27	24	582	20	485	7.47	0.03	10	27.7	81.9
		07/06/01	15.21	12	183	13	198	7.58	0.01	10	25.8	78.4
		07/07/01	12.55	15	188	10	126	7.27	0.03	10	23.8	74.8
		07/08/01	11.66	15	175	10	117	7.12	0.35	10	16.5	61.7
		07/09/01	12.14	17	206	14	170	7.34	0.1	162	27.8	82.0
		07/10/01	11.34	19	215	12	136	7.73	0.13	10	28.9	84.0
		07/11/01	21.87	23	503	20	437	7.63	0.14	27	28.4	83.1
		07/12/01	16.18	19	307	23	372	7.28	0.23	10	28.4	83.1
		07/13/01	13.18	16	211	10	132	7.31	0.14	10	27.3	81.1
		07/14/01	11.54	14	162	14	162	7.24	0.1	10	24.7	76.5
		07/15/01	10.64	18	192	14	149	7.34	0.19	10	27.7	81.9
		07/16/01	11.62	16	186	13	151	7.34	0.02	10	27.9	82.2
		07/17/01	10.81	21	227	18	195	7.39	0.07	10	22.8	73.0
		07/18/01	10.77	18	194	18	194	7.37	0.07	10	28.1	82.6
		07/19/01	10.75	22	237	21	226	7.45	0.04	10	29.5	85.1
		07/20/01	10.7	21	225	20	214	7.56	0.03	10	28.9	84.0
		07/21/01	22.02	20	440	24	528	7.56	0.02	18	29.3	84.7
		07/22/01	12.94	14	181	16	207	7.16	0.03	10	29.1	84.4
		07/23/01	10.98	16	176	20	220	7.81	0	10	28.2	82.8
		07/24/01	10.98	19	209	18	198	7.54	0.04	10	27.9	82.2
		07/25/01	11.31	15	170	18	204	7.46	0	909	24.3	75.7
		07/26/01	12.75	17	217	13	166	7.39	0.14	10	25.2	77.4
		07/27/01	10.96	18	197	12	132	7.01	0.19	10	25.3	77.5
		07/28/01	14.22	18	256	15	213	7.46	0.07	10	25.9	78.6
		07/29/01	11.98	16	192	12	144	7.26	0.13	10	27.7	81.9
		07/30/01	10.86	18	195	18	195	7.48	0.12	10	28.3	82.9
		07/31/01	10.8	25	270	12	130	7.44	0.06	10	26.1	79.0
2001	August	08/01/01	10.78	19	205	18	194	7.5	0.17	10		
		08/02/01	12.9	20	258	32	413	7.41	0	10		
		08/03/01	10.87	17	185	14	152	7.48	0.12	63		
		08/04/01	12.84	16	205	8	103	7.19	0.09	10		
		08/05/01	21.94	22	483	18	395	7.54	0.05	10		
		08/06/01	15.24	16	244	13	198	7.24	0.14	10		
		08/07/01	13.04	12	156	8	104	7.32	0.14	10		
		08/08/01	30.05	20	601	18	541	7.42	0.15	10		
		08/09/01	12.92	11	142	5	65	6.86	0.15	10		
		08/10/01	12.27	13	160	18	221	7.20	0.16	10		
		08/11/01	21.12	18	380	20	422	7.58	0.02	10		
		08/12/01	25.76	17	438	22	567	7.36	0.12	10		
		08/13/01	15.06	14	211	10	151	7.33	0.1	60,000		
		08/14/01	25	32	800	16	400	7.18	0.11	18		
		08/15/01	15.67	16	251	20	313	7.31	0.12	18		
		08/16/01	14.32	14	200	11	158	7.24	0.12	10		
		08/17/01	11.39	16	182	12	137	7.31	0.19	10		
		08/18/01	11.82	16	189	12	142	7.12	0.09	10		
		08/19/01	11.97	15	180	18	215	7.34	0.1	10		
		08/20/01	10.91	22	240	15	164	7.33	0.09	10		
		08/21/01	10.91	24	262	16	175	7.37	0.31	10		
		08/22/01	10.76	--	--	14	151	7.37	0.31	10		
		08/23/01	10.82	--	--	18	195	7.18	0	10		
		08/24/01	10.23	--	--	16	164	7.48	0.08	27		
		08/25/01	11.1	--	--	14	155	7.41	0.03	10		
		08/26/01	--	--	--	--	--	--	--	--		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		08/27/01	--	--	--	--	--	--	--	--		
		08/28/01	--	--	--	--	--	--	--	--		
		08/29/01	--	--	--	--	--	--	--	--		
		08/30/01	--	--	--	--	--	--	--	--		
		08/31/01	--	--	--	--	--	--	--	--		
2001	September	09/01/01	41.55	20	831	18	748	7.18	0.25	18		
		09/02/01	65.53	13	852	14	917	7.12	0	909		
		09/03/01	38.97	17	662	22	857	7.03	0	36		
		09/04/01	41.88	15	628	21	879	7.53	0	43,000		
		09/05/01	24.25	14	340	6	146	7.29	0.01	210		
		09/06/01	15.78	18	284	20	316	7.05	0.02	10		
		09/07/01	13.9	11	153	22	306	7.38	0.07	10		
		09/08/01	18.73	12	225	19	356	7.53	0.03	10		
		09/09/01	46.45	22	1,022	30	1,394	7.36	0.25	27		
		09/10/01	20.45	13	266	16	327	7.18	0	10		
		09/11/01	14.64	15	220	16	234	7.25	0.08	10		
		09/12/01	13.64	13	177	14	191	7.24	0.1	10		
		09/13/01	12.64	16	202	17	215	7.27	0.22	18		
		09/14/01	11.85	18	213	12	142	7.39	0.13	10		
		09/15/01	12.17	16	195	16	195	7.43	0.28	10		
		09/16/01	12.14	20	243	14	170	7.33	0.08	10		
		09/17/01	12	20	240	19	228	7.46	0.27	10		
		09/18/01	11.48	28	321	13	149	7.45	0.43	10		
		09/19/01	14.4	18	259	14	202	7.35	0.21	10		
		09/20/01	12.23	14	171	10	122	7.26	0.01	10		
		09/21/01	11.56	14	162	18	208	7.4	0.12	18		
		09/22/01	11.74	15	176	13	153	7.03	0.18	10		
		09/23/01	12.38	14	173	9	111	7.17	0.12	10		
		09/24/01	11.57	16	185	14	162	7.52	0.23	10		
		09/25/01	11.15	28	312	12	134	7.25	0.13	10		
		09/26/01	11.09	25	277	20	222	7.49	0.23	10		
		09/27/01	11.18	24	268	16	179	7.37	0.44	10		
		09/28/01	10.67	20	213	18	192	7.37	0.18	10		
		09/29/01	11.29	19	215	16	181	7.09	0.14	10		
		09/30/01	11.61	20	232	12	139	7.36	0.17	10		
2001	October	10/01/01	11.1	14	155	10	111	6.96	0.07	10		
		10/02/01	10.87	25	272	8	87	7.47	0.07	10		
		10/03/01	11.15	15	167	17	190	7.4	0.42	10		
		10/04/01	11.26	14	158	12	135	7.15	0.23	10		
		10/05/01	14.1	18	254	22	310	7.41	0.12	10		
		10/06/01	16.57	21	348	14	232	7.46	0.01	117		
		10/07/01	12.05	14	169	18	217	7.13	0.08	10		
		10/08/01	11.64	18	210	13	151	7.19	0.19	10		
		10/09/01	11.4	21	239	14	160	7.23	0.13	10		
		10/10/01	19.87	31	616	16	318	7.15	0.17	10		
		10/11/01	33.5	26	871	25	838	7.33	0.12	10		
		10/12/01	17.73	14	248	15	266	7.15	0.02	10		
		10/13/01	66.96	26	1,741	22	1,473	7.15	0.01	18		
		10/14/01	24.23	12	291	13	315	7.06	0.02	12,000		
		10/15/01	14.46	16	231	24	347	7.47	0.01	7,000		
		10/16/01	11.14	14	156	24	267	7.01	0.28	10		
		10/17/01	11.85	15	178	15	178	7.07	0.19	10		
		10/18/01	11.79	15	177	26	307	7.23	0.36	10		
		10/19/01	11.97	18	215	20	239	7.1	0.36	10		
		10/20/01	12.8	17	218	19	243	7.19	0.18	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		10/21/01	13.99	22	308	10	140	7.07	0.15	10		
		10/22/01	12.78	48	613	28	358	7.35	0.14	10		
		10/23/01	13.68	28	383	15	205	7.13	0.15	18		
		10/24/01	14.65	16	234	10	147	7.1	0.11	18		
		10/25/01	12.21	17	208	23	281	7.59	0.16	54		
		10/26/01	11.39	15	171	16	182	7.17	0.37	10		
		10/27/01	10.96	25	274	29	318	7.12	0.13	10		
		10/28/01	9.45	29	274	31	293	7.1	0.23	10		
		10/29/01	10.98	27	296	26	285	7.24	0.35	10		
		10/30/01	10.86	30	326	16	174	7.42	0.27	10		
		10/31/01	11.84	25	296	20	237	7.42	0.2	10		
2001	November	11/01/01	13.44	24	323	16	215	7.22	0.39	10	26.2	79.2
		11/02/01	13.07	19	248	20	261	7.15	0.16	36	26.0	78.8
		11/03/01	13.9	25	348	27	375	7.15	0.09	10	25.2	77.4
		11/04/01	12.96	24	311	18	233	7.22	0.11	10	25.8	78.4
		11/05/01	11.71	24	281	20	234	7.47	0.3	10	26.6	79.9
		11/06/01	11.46	27	309	24	275	7.18	0.1	10	27.0	80.6
		11/07/01	11.44	21	240	20	229	7.23	0.37	10	27.5	81.5
		11/08/01	11.82	22	260	28	331	7.64	0.2	10	26.4	79.5
		11/09/01	11.45	20	229	18	206	7.35	0.2	10	26.7	80.1
		11/10/01	11.75	21	247	18	212	7.21	0.4	10	25.0	77.0
		11/11/01	12.29	25	307	20	246	7.24	0.14	10	25.2	77.4
		11/12/01	12.34	26	321	26	321	7.11	0.03	10	22.6	72.7
		11/13/01	11.95	28	335	105	1,255	7.12	0.3	10	25.6	78.1
		11/14/01	12.14	23	279	23	279	7.12	0.09	10	26.7	80.1
		11/15/01	11.65	--	--	20	233	7.16	0.11	10	25.9	78.6
		11/16/01	10.84	--	--	18	195	7.21	0.31	10	26.3	79.3
		11/17/01	11.23	--	--	20	225	7.42	0.03	10	26.5	79.7
		11/18/01	11.5	--	--	20	230	7.41	0.2	10	26.2	79.2
		11/19/01	11.96	--	--	21	251	7.48	0.04	10	26.4	79.5
		11/20/01	--	--	--	--	--	--	--	--	26.1	79.0
		11/21/01	--	--	--	--	--	--	--	--	25.9	78.6
		11/22/01	--	--	--	--	--	--	--	--	26.0	78.8
		11/23/01	--	--	--	--	--	--	--	--	26.7	80.1
		11/24/01	--	--	--	--	--	--	--	--	26.9	80.4
		11/25/01	--	--	--	--	--	--	--	--	24.3	75.7
		11/26/01	--	--	--	--	--	--	--	--	23.6	74.5
		11/27/01	--	--	--	--	--	--	--	--	23.0	73.4
		11/28/01	--	--	--	--	--	--	--	--	22.1	71.8
		11/29/01	--	--	--	--	--	--	--	--	21.1	70.0
		11/30/01	--	--	--	--	--	--	--	--	17.9	64.2
2001	December	12/01/01	11.69	26	304	26	304	7.42	0.12	10		
		12/02/01	12	33	396	34	408	7.3	0.15	10		
		12/03/01	11.48	29	333	18	207	7.21	0.19	10		
		12/04/01	11.67	32	373	22	257	7.17	0.09	10		
		12/05/01	11.92	29	346	22	262	7.3	0.09	10		
		12/06/01	12.27	31	380	16	196	7.19	0.3	10		
		12/07/01	12.13	22	267	20	243	7.2	0.07	10		
		12/08/01	12.02	21	252	22	264	7.49	0.13	10		
		12/09/01	10.86	26	282	22	239	7.15	0.02	10		
		12/10/01	10.65	26	277	22	234	7.23	0.22	10		
		12/11/01	10.68	25	267	19	203	7.16	0.26	10		
		12/12/01	13.87	26	361	22	305	7.15	0.04	10		
		12/13/01	51.8	34	1,761	25	1,295	7.15	0	10		
		12/14/01	16.92	20	338	16	271	7.27	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		12/15/01	13.67	20	273	31	424	7.03	0.07	10		
		12/16/01	14.95	22	329	20	299	7.09	0	10		
		12/17/01	27.72	24	665	14	388	7.65	0.03	15,000		
		12/18/01	12.18	19	231	32	390	7.24	0.17	10		
		12/19/01	11.34	23	261	33	374	7.26	0.11	10		
		12/20/01	10.51	36	378	34	357	7.57	0.38	10		
		12/21/01	10.88	22	239	19	207	7.32	0.15	10		
		12/22/01	14.57	26	379	15	219	7.39	0.12	10		
		12/23/01	12.73	28	356	22	280	7.39	0.15	10		
		12/24/01	10.75	28	301	22	237	7.21	0.32	10		
		12/25/01	12.4	24	298	16	198	7.27	0.23	10		
		12/26/01	13.04	34	443	28	365	7.3	0.34	10		
		12/27/01	12.8	28	358	30	384	7.55	0.4	10		
		12/28/01	20.26	42	851	36	729	7.44	0.36	10		
		12/29/01	13.52	34	460	22	297	7.32	0.23	54		
		12/30/01	10.15	27	274	20	203	7.34	0.41	63		
		12/31/01	9.39	21	197	20	188	7.33	0.33	10		
2002	January	01/01/02	9.89	29	287	26	257	7.43	0.38	10		
		01/02/02	10.29	53	545	22	226	7.59	0.27	10		
		01/03/02	11.84	29	343	23	272	7.47	0.18	10		
		01/04/02	11.97	31	371	25	299	7.42	0.43	10		
		01/05/02	44	39	1,716	26	1,144	7.4	0.35	10		
		01/06/02	21.76	26	566	18	392	7.22	0.03	10		
		01/07/02	14.86	26	386	44	654	7.25	0.21	10		
		01/08/02	13.35	52	694	26	347	7.59	0.44	10		
		01/09/02	12.66	22	279	20	253	7.35	0.08	10		
		01/10/02	13.26	24	318	21	278	7.32	0.14	10		
		01/11/02	12.21	20	244	17	208	7.34	0.12	10		
		01/12/02	30.64	23	705	15	460	7.22	0.05	10		
		01/13/02	15.59	17	265	13	203	7.56	0.09	18		
		01/14/02	13.24	16	212	20	265	7.45	0.07	10		
		01/15/02	12.78	27	345	18	230	7.65	0.26	10		
		01/16/02	12.36	24	297	29	358	7.42	0.39	10		
		01/17/02	12.39	27	335	23	285	7.46	0.3	10		
		01/18/02	12.25	22	270	22	270	7.5	0.16	10		
		01/19/02	38.14	34	1,297	32	1,220	7.98	0.01	10		
		01/20/02	18.15	24	436	34	617	7.33	0.02	10		
		01/21/02	14.62	18	263	10	146	7.3	0.14	10		
		01/22/02	14.14	18	255	16	226	7.37	0.27	10		
		01/23/02	13.56	20	271	14	190	7.56	0.18	10		
		01/24/02	21.84	23	502	14	306	7.57	0.13	10		
		01/25/02	18.34	22	403	24	440	7.47	0.03	27		
		01/26/02	13.66	23	314	26	355	7.44	0.15	10		
		01/27/02	13.35	36	481	38	507	7.32	0.2	36		
		01/28/02	12.78	26	332	26	332	7.39	0.28	10		
		01/29/02	13.55	36	488	38	515	7.28	0.17	10		
		01/30/02	13.32	30	400	22	293	7.35	0.19	10		
		01/31/02	30.44	46	1,400	26	791	7.46	0.14	10		
2002	Febuary	02/01/02	33.68	26	876	25	842	7.42	0.01	60,000		
		02/02/02	15.5	16	248	30	465	7.3	0.12	10		
		02/03/02	13.94	20	279	28	390	7.41	0.27	10		
		02/04/02	13.76	33	454	48	660	7.43	0.41	10		
		02/05/02	18.05	38	686	42	758	7.43	0.3	10		
		02/06/02	24.53	30	736	39	957	7.48	0.14	10		
		02/07/02	13.31	27	359	40	532	7.34	0.36	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		02/08/02	10.51	28	294	34	357	7.59	0.4	10		
		02/09/02	11.94	20	239	16	191	7.45	0.14	10		
		02/10/02	11.02	26	287	24	264	7.61	0.3	10		
		02/11/02	10.92	31	339	24	262	7.54	0.32	10		
		02/12/02	11.84	46	545	42	497	7.55	0.23	10		
		02/13/02	11.46	39	447	32	367	7.54	0.28	10		
		02/14/02	10.71	34	364	42	450	7.58	0.29	10		
		02/15/02	11.81	37	437	32	378	7.41	0.37	10		
		02/16/02	11.33	34	385	24	272	7.26	0.01	10		
		02/17/02	12.08	38	459	40	483	7.28	0.15	10		
		02/18/02	12.16	44	535	30	365	7.24	0.3	10		
		02/19/02	18.34	27	495	17	312	7.44	0.05	18		
		02/20/02	21.06	36	758	38	800	7.59	0.01	60,000		
		02/21/02	12.96	25	324	20	259	7.2	0.45	10		
		02/22/02	11.07	32	354	29	321	7.19	0.33	10		
		02/23/02	11.24	27	303	18	202	7.38	0.04	10		
		02/24/02	12.14	23	279	11	134	7.31	0.01	10		
		02/25/02	12.88	23	296	18	232	7.38	0.02	10		
		02/26/02	10.57	26	275	20	211	7.41	0.19	10		
		02/27/02	10.21	20	204	16	163	7.38	0.1	10		
		02/28/02	10.94	29	317	30	328	7.38	0.02	153		
2002	March	03/01/02	68.22	34	2,319	32	2,183	7.2	0.06	10		
		03/02/02	39.39	15	591	30	1,182	6.95	0.01	81		
		03/03/02	14.45	20	289	20	289	7.1	0.04	10		
		03/04/02	13.57	20	271	16	217	7.18	0.16	10		
		03/05/02	13.08	44	576	44	576	7.15	0.19	10		
		03/06/02	13.71	29	398	22	302	7.08	0.39	10		
		03/07/02	13.68	28	383	28	383	7.06	0.2	10		
		03/08/02	13.76	36	495	36	495	7.47	0.07	10		
		03/09/02	15.3	15	230	18	275	7.13	0.02	10		
		03/10/02	12.35	28	346	17	210	7.18	0	10		
		03/11/02	21.65	38	823	33	714	7.1	0.09	10		
		03/12/02	29.24	38	1,111	31	906	7.21	0.02	3,200		
		03/13/02	14.78	20	296	23	340	7.1	0.03	10		
		03/14/02	15.09	25	377	18	272	7.09	0.08	10		
		03/15/02	15.45	16	247	18	278	7.4	0	10		
		03/16/02	16.28	17	277	18	293	7.13	0.01	10		
		03/17/02	15.83	20	317	21	332	7.06	0.03	10		
		03/18/02	15.12	16	242	14	212	7.3	0.04	10		
		03/19/02	14.81	25	370	28	415	7.02	0.26	117		
		03/20/02	15.66	20	313	18	282	7.1	0.08	10		
		03/21/02	12.98	34	441	26	337	7.1	0.07	10		
		03/22/02	10.5	25	263	20	210	7.12	0.19	10		
		03/23/02	11.64	34	396	24	279	7.07	0.06	10		
		03/24/02	13.21	24	317	26	343	7.1	0.03	18		
		03/25/02	18.18	24	436	16	291	7.09	0.04	27		
		03/26/02	57.82	32	1,850	22	1,272	7.16	0	10		
		03/27/02	16.68	21	350	25	417	6.97	0.02	10		
		03/28/02	14.78	12	177	10	148	6.95	0.05	54		
		03/29/02	15.53	20	311	13	202	7.3	0.01	10		
		03/30/02	15.4	17	262	18	277	7.49	0.04	10		
		03/31/02	68.02	31	2,109	40	2,721	7.42	0.06	10		
2002	April	04/01/02	23.68	16	379	32	758	7.12	0.04	230		
		04/02/02	17.79	16	285	22	391	7.29	0.02	10		
		04/03/02	14.64	14	205	14	205	7.29	0.05	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		04/04/02	12.91	16	207	10	129	7.15	0.08	10		
		04/05/02	12.58	15	189	14	176	7.06	0.2	10		
		04/06/02	12.58	16	201	15	189	7.3	0.03	10		
		04/07/02	14.76	16	236	38	561	7.21	0.04	10		
		04/08/02	82.45	24	1,979	24	1,979	7.2	0.04	10		
		04/09/02	38	14	532	14	532	7.08	0.02	27,000		
		04/10/02	19.84	22	436	32	635	7.13	0.03	10		
		04/11/02	32.97	26	857	21	692	7.5	0.07	10		
		04/12/02	26.65	15	400	20	533	6.99	0.01	90		
		04/13/02	18.03	14	252	13	234	7.02	0.03	10		
		04/14/02	16.22	14	227	12	195	7.16	0.03	10		
		04/15/02	15.5	16	248	20	310	7.28	0.02	10		
		04/16/02	14.23	18	256	8	114	7.39	0.07	10		
		04/17/02	12.12	19	230	12	145	7.46	0.44	10		
		04/18/02	11.94	23	275	22	263	7.26	0.01	10		
		04/19/02	11.39	12	137	10	114	7.17	0.22	10		
		04/20/02	12.05	13	157	8	96	7.42	0.1	10		
		04/21/02	12.14	16	194	18	219	7.12	0.12	10		
		04/22/02	12.8	22	282	26	333	7.16	0.17	216		
		04/23/02	16.55	24	397	14	232	7	0.16	10		
		04/24/02	14.28	27	386	19	271	7.1	0.28	10		
		04/25/02	13.05	–	–	25	326	7.08	0.13	10		
		04/26/02	13.61	18	245	16	218	7.62	0.37	10		
		04/27/02	14.37	17	244	15	216	7.07	0.04	10		
		04/28/02	14.94	17	254	14	209	7.1	0.02	10		
		04/29/02	14.58	18	262	28	408	7.11	0.17	10		
		04/30/02	12.26	24	294	22	270	7.08	0.09	63		
2002	May	05/01/02	12.15	20	243	15	182	7.06	0.03	18		
		05/02/02	12.13	15	182	16	194	7.1	0.11	10		
		05/03/02	11.91	17	202	10	119	7.1	0.14	10		
		05/04/02	12.21	16	195	21	256	7.18	0.07	10		
		05/05/02	12.35	16	198	16	198	7.18	0.01	10		
		05/06/02	12	17	204	14	168	7.1	0.05	10		
		05/07/02	11.99	21	252	22	264	7.48	0.11	10		
		05/08/02	11.75	26	306	24	282	7.15	0.04	10		
		05/09/02	11.83	21	248	10	118	7.12	0.05	10		
		05/10/02	12.04	17	205	8	96	7.07	0	10		
		05/11/02	12.34	15	185	10	123	7.4	0	10		
		05/12/02	12.21	16	195	12	147	7.06	0.02	10		
		05/13/02	11.44	12	137	14	160	7.1	0	10		
		05/14/02	10.2	17	173	18	184	7.14	0.07	10		
		05/15/02	10.82	16	173	19	206	7.12	0	10		
		05/16/02	11.85	15	178	10	119	7.16	0.02	10		
		05/17/02	20.33	29	590	29	590	7.27	0.01	10		
		05/18/02	9.97	16	160	16	160	7.19	0	10		
		05/19/02	9.2	18	166	12	110	7.02	0	10		
		05/20/02	10.12	20	202	12	121	7.14	0	10		
		05/21/02	9.97	21	209	24	239	7.14	0.03	10		
		05/22/02	10.29	22	226	18	185	7.09	0.07	10		
		05/23/02	10.7	17	182	18	193	7.28	0.02	10		
		05/24/02	11.22	20	224	12	135	7.22	0.01	240		
		05/25/02	11.21	14	157	13	146	7.32	0.05	10		
		05/26/02	12.23	19	232	19	232	7.3	0.11	10		
		05/27/02	11.67	18	210	24	280	7.16	0.03	10		
		05/28/02	10.96	19	208	15	164	7.17	0.01	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data									
			Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		05/29/02	11.1	20	222	12	133	7.17	0.06	10		
		05/30/02	14.5	25	363	14	203	7.1	0	10		
		05/31/02	11.83	11	130	18	213	7.11	0.02	10		
2002	June	06/01/02	11.81	14	165	20	236	7.12	0.03	10		
		06/02/02	11.73	16	188	12	141	7.12	0.44	45		
		06/03/02	12	15	180	17	204	7.05	0.15	10		
		06/04/02	11.85	15	178	14	166	7.16	0.29	10		
		06/05/02	12.78	18	230	20	256	7.17	0.03	18		
		06/06/02	12.5	17	213	42	525	7.03	0.02	10		
		06/07/02	13.77	12	165	10	138	7.05	0.02	10		
		06/08/02	12.83	14	180	11	141	7.1	0.01	10		
		06/09/02	18.87	20	377	16	302	6.97	0	72		
		06/10/02	13.13	12	158	15	197	6.98	0.03	10		
		06/11/02	12.22	10	122	14	171	7.02	0.02	10		
		06/12/02	12.18	13	158	12	146	7.06	0.23	10		
		06/13/02	12.11	17	206	9	109	7.04	0.01	10		
		06/14/02	12.29	12	147	12	147	7.06	0.02	2,700		
		06/15/02	11.52	21	242	10	115	7.09	0.01	10		
		06/16/02	11.37	16	182	12	136	7.11	0	10		
		06/17/02	11.76	19	223	16	188	7.04	0.02	10		
		06/18/02	12.43	18	224	19	236	7.13	0	10		
		06/19/02	12.35	16	198	14	173	7.07	0	18		
		06/20/02	19.96	27	539	24	479	7.08	0	10		
		06/21/02	12.09	14	169	14	169	7	0.03	72		
		06/22/02	11.84	15	178	11	130	7.38	0	36		
		06/23/02	11.59	16	185	20	232	7.19	0.12	54		
		06/24/02	14.06	22	309	25	352	7.06	0.09	10		
		06/25/02	24.4	23	561	25	610	7.11	0	27		
		06/26/02	30.98	26	805	12	372	6.92	0	81		
		06/27/02	20.09	14	281	13	261	6.86	0.23	10		
		06/28/02	35.31	20	706	24	847	6.95	0.05	10		
		06/29/02	15.49	7	108	14	217	7.64	0	36		
		06/30/02	13.24	9	119	6	79	7.65	0	10		
2002	July	07/01/02	19.91	14	279	16	319	7.44	0	10		
		07/02/02	27.96	18	503	16	447	7.25	0.01	10		
		07/03/02	18.7	9	168	10	187	7.14	0.02	10		
		07/04/02	14.34	13	186	12	172	7.23	0.01	10		
		07/05/02	16.26	14	228	12	195	7.27	0	18		
		07/06/02	13.65	12	164	12	164	7.32	0.01	10		
		07/07/02	14.94	13	194	10	149	7.25	0	10		
		07/08/02	14.01	10	140	11	154	7.33	0.14	10		
		07/09/02	13.77	18	248	13	179	7.28	0.07	10		
		07/10/02	13.52	20	270	18	243	7.48	0.12	10		
		07/11/02	11.91	23	274	21	250	7.37	0.04	10		
		07/12/02	12.81	20	256	24	307	7.18	0.01	10		
		07/13/02	11.87	26	309	33	392	7.36	0	10		
		07/14/02	23.83	20	477	28	667	7.2	0	54		
		07/15/02	14.08	18	253	18	253	6.94	0.04	10		
		07/16/02	14.05	30	422	24	337	7.07	0.14	81		
		07/17/02	13.28	68	903	32	425	7.2	0.18			
		07/18/02	13.17	50	659	22	290	7.13	0.14	72		
		07/19/02	13.34	20	267	25	334	6.99	0.08	230		
		07/20/02	13.6	20	272	16	218	7.4	0.01	10		
		07/21/02	13.39	19	254	16	214	7.42	0.01	10		
		07/22/02	12.86	16	206	21	270	7.4	0.02	27		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		07/23/02	16.47	21	346	27	445	7.16	0.01	1,636		
		07/24/02	13.23	16	212	13	172	7.06	0.01	10		
		07/25/02	12.72	35	445	21	267	7.1	0	10		
		07/26/02	14.54	17	247	20	291	7.05	0	10		
		07/27/02	13.73	13	178	10	137	7.23	0.08	10		
		07/28/02	15.14	15	227	12	182	7.27	0.13	10		
		07/29/02	13.93	15	209	13	181	7.1	0.01	10		
		07/30/02	17.08	14	239	13	222	7	0.01	10		
		07/31/02	13.17	12	158	18	237	7.12	0.12	10		
2002	August	08/01/02	13.07	--	--	13	170	7.12	0.2	10		
		08/02/02	13.26	--	--	11	146	7.04	0.04	10		
		08/03/02	13.75	--	--	14	193	7.18	0.02	10		
		08/04/02	13.41	--	--	10	134	7.12	0.13	10		
		08/05/02	13.83	--	--	16	221	7.14	0.19	90		
		08/06/02	15.45	18	278	16	247	7.47	0.07	2,091		
		08/07/02	13.83	20	277	18	249	7.43	0.01	182		
		08/08/02	15.45	20	309	16	247	7.5	0.01	10		
		08/09/02	13.88	--	--	31	430	7.24	0.06	10		
		08/10/02	13.37	--	--	18	241	7.13	0.2	10		
		08/11/02	25.78	--	--	43	1,109	7.16	0.08	10		
		08/12/02	17.33	--	--	10	173	6.97	0.19	10		
		08/13/02	16.3	--	--	16	261	7.08	0.19	10		
		08/14/02	14.98	19	285	13	195	7.08	0.36	10		
		08/15/02	33.25	--	--	26	865	7.25	0.09	545		
		08/16/02	16.81	12	202	12	202	7.04	0.01	10		
		08/17/02	15.1	--	--	12	181	7.2	0.16	36		
		08/18/02	14.16	--	--	7	99	7.14	0.12	10		
		08/19/02	15.22	--	--	10	152	7.15	0.05	18		
		08/20/02	14.31	16	229	19	272	7.14	0.06	18		
		08/21/02	15.86	13	206	12	190	7.12	0.06	27		
		08/22/02	23.11	15	347	12	277	7.1	0.05	144		
		08/23/02	16	--	--	6	96	7.01	0.25	10		
		08/24/02	14.53	--	--	8	116	7.01	0.07	10		
		08/25/02	14.69	--	--	4	59	7.09	0.01	290		
		08/26/02	13.96	7	98	10	140	7.21	0.11	10		
		08/27/02	13.88	12	167	12	167	7.12	0.01	18		
		08/28/02	14.06	13	183	18	253	7.14	0.06	10		
		08/29/02	14.14	13	184	16	226	7.19	0.05	10		
		08/30/02	13.4	30	402	6	80	7.13	0	10		
		08/31/02	14.19	50	710	14	199	7.14	0.05	10		
2002	September	09/01/02	13.38	14	187	18	241	7.06	0.11	10		
		09/02/02	15.43	6	93	16	247	7.06	0.17	10		
		09/03/02	14.81	6	89	8	118	7.07	0.05	10		
		09/04/02	18.25	17	310	14	256	7.15	0.12	10		
		09/05/02	14.49	16	232	18	261	7.1	0.09	10		
		09/06/02	14.84	20	297	16	237	6.97	0.17	10		
		09/07/02	17.93	14	251	14	251	7.1	0.04	10		
		09/08/02	19.44	13	253	30	583	7.11	0.02	10		
		09/09/02	15.41	14	216	16	247	7.17	6	10		
		09/10/02	14.05	12	169	16	225	7.06	0.02	10		
		09/11/02	13.62	17	232	18	245	7.29	0.44	189		
		09/12/02	13.3	11	146	12	160	7.03	0.13	240		
		09/13/02	14.46	7	101	14	202	7.18	0.22	10		
		09/14/02	14	6	84	12	168	7.15	0.01	10		
		09/15/02	14.31	7	100	18	258	7.1	0.02	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data									
			Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		09/16/02	17.71	7	124	16	283	7.13	0.09	10		
		09/17/02	21.64	13	281	22	476	7.43	0.03	10		
		09/18/02	14.81	9	133	16	237	6.97	0.16	10		
		09/19/02	13.88	12	167	17	236	7.1	0.014	10		
		09/20/02	17.43	8	139	12	209	7.05	0.1	10		
		09/21/02	16.62	7	116	12	199	7.07	0.27	10		
		09/22/02	15.97	11	176	9	144	7.27	0.02	10		
		09/23/02	13.91	14	195	14	195	7.2	0.04	10		
		09/24/02	16.6	11	183	14	232	7.14	0.05	10		
		09/25/02	66.42	10	664	38	2,524	7.42	0	60,000		
		09/26/02	45.7	24	1,097	20	914	7.19	0	60,000		
		09/27/02	19	10	190	8	152	7.02	0.01	126		
		09/28/02	14.84	13	193	17	252	7	0.13	10		
		09/29/02	15.06	13	196	10	151	7.06	0.02	10		
		09/30/02	15.12	16	242	12	181	7.13	0.14	10		
2002	October	10/01/02	14.42	18	260	10	144	7.03	0.16	10		
		10/02/02	20.59	18	371	18	371	7.12	0.33	10		
		10/03/02	57.55	20	1,151	13	748	7.22	0	2,500		
		10/04/02	21.12	16	338	30	634	6.88	0.15	10		
		10/05/02	28.97	20	579	22	637	7.15	0.12	10		
		10/06/02	19.06	18	343	14	267	7	0.03	10		
		10/07/02	16.71	14	234	12	201	7.02	0.15	10		
		10/08/02	14.81	16	237	14	207	7.16	0.16	450		
		10/09/02	42.66	32	1,365	17	725	7.2	0.2	10		
		10/10/02	28.01	14	392	16	448	6.95	0.01	45		
		10/11/02	17.79	18	320	20	356	7.08	0.14	171		
		10/12/02	15.71	19	298	16	251	7.26	0.07	10		
		10/13/02	15.37	15	231	10	154	7.18	0.17	10		
		10/14/02	14.17	19	269	18	255	7.26	0.31	10		
		10/15/02	14.17	21	298	12	170	7.27	0.15	10		
		10/16/02	14.14	23	325	14	198	7.27	0.2	10		
		10/17/02	13.51	28	378	22	297	7.21	0.05	10		
		10/18/02	13.38	20	268	13	174	7.09	0.34	10		
		10/19/02	14.16	15	212	9	127	7.21	0.4	10		
		10/20/02	14.64	16	234	8	117	7.21	0.41	10		
		10/21/02	14.01	18	252	14	196	7.24	0.37	10		
		10/22/02	14.22	20	284	16	228	7.15	0.11	10		
		10/23/02	13.79	20	276	24	331	7.3	0.03	10		
		10/24/02	12.33	--	--	18	222	7.48	0.03	10		
		10/25/02	34.82	--	--	36	1,254	7.25	0.01	10		
		10/26/02	26.99	19	513	24	648	6.99	0	90		
		10/27/02	71.48	--	--	30	2,144	7.05	0.08	10		
		10/28/02	37.74	--	--	16	604	7.24	0.03	24,000		
		10/29/02	64.32	--	--	10	643	7.56	0	28,000		
		10/30/02	20.38	15	306	29	591	7.28	0	290		
		10/31/02	14.31	12	172	13	186	7.3	0.03	27		
2002	November	11/01/02	11.51	16	184	20	230	7.45	0.18	10		
		11/02/02	12.01	19	228	14	168	7.41	0.19	10		
		11/03/02	18.24	19	347	15	274	7.38	0.26	10		
		11/04/02	21.87	19	416	24	525	7.17	0.13	10		
		11/05/02	62.83	16	1,005	18	1,131	7.21	0	1,000		
		11/06/02	20.21	11	222	9	182	7.09	0.06	10		
		11/07/02	13.92	14	195	12	167	7.2	0.16	10		
		11/08/02	13.1	17	223	15	197	7.15	0.15	10		
		11/09/02	16.97	19	322	14	238	7.22	0.06	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		11/10/02	19.82	20	396	19	377	7.19	0.03	10		
		11/11/02	24.94	21	524	15	374	7.56	0.03	10		
		11/12/02	16.04	19	305	20	321	7.13	0.02	10		
		11/13/02	15.6	20	312	16	250	7.02	0.4	10		
		11/14/02	15.37	20	307	14	215	7.04	0.2	10		
		11/15/02	24.23	27	654	12	291	7.19	0.13	10		
		11/16/02	16.12	21	339	20	322	7.17	0.17	10		
		11/17/02	15.39	16	246	6	92	7.24	0.44	10		
		11/18/02	14.64	--	--	14	205	7.24	0.44	10		
		11/19/02	16.53	21	347	10	165	7.15	0.31	10		
		11/20/02	42	46	1,932	54	2,268	7.11	0.3	10		
		11/21/02	42	18	756	14	588	7.33	0.02	10		
		11/22/02	11.9	18	214	14	167	7.04	0.25	10		
		11/23/02	11.13	18	200	14	156	7.08	0.16	10		
		11/24/02	12.09	20	242	14	169	6.95	0.14	10		
		11/25/02	12.17	20	243	13	158	7.27	0.2	10		
		11/26/02	11.99	20	240	14	168	7.28	0.06	10		
		11/27/02	11.19	26	291	20	224	7.19	0.13	10		
		11/28/02	9.9	32	317	18	178	7.3	0.01	90		
		11/29/02	10.51	23	242	16	168	7.29	0.03	10		
		11/30/02	12.24	26	318	20	245	7.31	0.02	10		
2002	December	12/01/02	10.12	26	263	18	182	7.02	0.14	10	18.8	65.8
		12/02/02	10.45	26	272	20	209	7.08	0.02	10	18.3	64.9
		12/03/02	38.53	39	1,503	34	1,310	7.02	0.37	10	18.7	65.7
		12/04/02	57.97	20	1,159	24	1,391	7.08	0	30,000	19.1	66.4
		12/05/02	27.26	12	327	19	518	7.01	0	60,000	16.7	62.1
		12/06/02	12.22	19	232	15	183	7.22	0.1	10	12.3	54.1
		12/07/02	16.38	22	360	28	459	7.17	0.11	10	15.1	59.2
		12/08/02	10.69	18	192	19	203	7.20	0.12	10	15.6	60.1
		12/09/02	15.52	24	372	19	295	7.16	0.04	10	16.8	62.2
		12/10/02	17.42	29	505	26	453	7.17	0.03	10	17.9	64.2
		12/11/02	11.13	20	223	16	178	7.07	0.06	10	16.5	61.7
		12/12/02	17.29	17	294	9	156	7.04	0.04	10	16.4	61.5
		12/13/02	15.49	19	294	24	372	7.41	0.04	10	18.7	65.7
		12/14/02	10.41	17	177	13	135	7.17	0.3	10	16.8	62.2
		12/15/02	10.27	20	205	18	185	7.35	0.4	10	16.3	61.3
		12/16/02	10.99	20	220	17	187	7.12	0.43	10	16.3	61.3
		12/17/02	13.7	20	274	14	192	7.29	0.17	10	19.8	67.6
		12/18/02	12.83	26	334	31	398	7.25	0.11	10	21.2	70.2
		12/19/02	13.64	24	327	18	246	7.13	0.19	10	22.2	72.0
		12/20/02	10.26	27	277	19	195	7.18	0.08	10	19.0	66.2
		12/21/02	11.67	26	303	18	210	7.20	0.12	10	18.5	65.3
		12/22/02	12.31	24	295	14	172	7.15	0.1	10	19.4	66.9
		12/23/02	58.69	50	2,935	34	1,995	7.30	0.19	10	20.1	68.2
		12/24/02	51.67	22	1,137	30	1,550	7.11	0	60,000	18.7	65.7
		12/25/02	16.16	20	323	25	404	7.11	0.07	10	15.7	60.3
		12/26/02	13.75	22	303	30	413	7.12	0.4	10	15.0	59.0
		12/27/02	11.5	27	311	29	334	7.17	0.09	10	18.3	64.9
		12/28/02	11.78	28	330	32	377	7.21	0.2	10	17.6	63.7
		12/29/02	12.44	27	336	22	274	7.18	0.08	10	19.0	66.2
		12/30/02	21.99	30	660	18	396	7.14	0.1	10	17.3	63.1
		12/31/02	60.68	33	2,002	36	2,184	7.14	0	60,000	19.4	66.9
2003	January	01/01/03	20.35	18	366	18	366	7.11	0.02	10	16.9	62.4
		01/02/03	14.18	16	227	12	170	7.11	0.27	10	16.8	62.2
		01/03/03	11.43	20	229	17	194	7.17	0.27	10	15.4	59.7

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/04/03	11.57	23	266	16	185	7.16	0.16	10	15.9	60.6
		01/05/03	12.04	27	325	18	217	7.24	0.02	10	17.3	63.1
		01/06/03	11.01	--	--	16	176	7.24	0.36	10	17.9	64.2
		01/07/03	9.84	25	246	16	157	7.39	0.39	10	16.8	62.2
		01/08/03	10.9	25	273	19	207	8.00	0.06	10	7.7	45.9
		01/09/03	12.33	26	321	16	197	7.40	0.08	10	17.8	64.0
		01/10/03	10.21	26	265	20	204	7.40	0.11	10	19.5	67.1
		01/11/03	10.06	36	362	13	131	7.80	0.11	10	15.9	60.6
		01/12/03	10.15	27	274	10	102	7.83	0.08	10	15.1	59.2
		01/13/03	9.69	28	271	19	184	7.63	0.3	10	14.3	57.7
		01/14/03	9.17	24	220	15	138	7.62	0.06	10	15.3	59.5
		01/15/03	9.15	32	293	21	192	7.65	0.1	10	14.4	57.9
		01/16/03	10.05	44	442	28	281	7.58	0.21	10	16.8	62.2
		01/17/03	8.7	28	244	20	174	7.47	0.1	10	14.0	57.2
		01/18/03	9.7	27	262	17	165	7.40	0.19	18	12.8	55.0
		01/19/03	9.91	25	248	18	178	7.51	0.25	10	16.3	61.3
		01/20/03	12.23	26	318	18	220	7.70	0.16	10	17.3	63.1
		01/21/03	11.92	22	262	8	95	7.63	0.25	18	19.2	66.6
		01/22/03	9.66	27	261	18	174	7.45	0.03	10	18.3	64.9
		01/23/03	8.75	34	298	21	184	7.69	0.13	10	15.6	60.1
		01/24/03	9.24	39	360	24	222	7.66	0.08	10	13.6	56.5
		01/25/03	10.79	32	345	25	270	7.81	0.05	10	15.2	59.4
		01/26/03	20.89	40	836	24	501	7.56	0.03	10	17.8	64.0
		01/27/03	11.06	30	332	21	232	7.44	0.08	10	14.5	58.1
		01/28/03	11.7	19	222	12	140	7.37	0.16	10	16.8	62.2
		01/29/03	19.72	28	552	14	276	7.22	0.14	10	18.8	65.8
		01/30/03	14.96	28	419	21	314	7.40	0	45	18.6	65.5
		01/31/03	10.89	20	218	12	131	7.80	0.21	10	--	--
2003	February	02/01/03	10.99	20	220	12	132	7.14	0.03	10	16.9	62.4
		02/02/03	11.94	24	287	18	215	7.3	0.05	10	16.8	62.2
		02/03/03	12.88	24	309	19	245	7.39	0.21	10	15.4	59.7
		02/04/03	10.34	34	352	26	269	7.44	0.02	10	15.9	60.6
		02/05/03	10.16	29	295	16	163	7.44	0.03	10	17.3	63.1
		02/06/03	44.98	50	2,249	42	1,889	7.22	0.05	10	17.9	64.2
		02/07/03	18.01	23	414	20	360	7.05	0	10	16.8	62.2
		02/08/03	12.59	19	239	10	126	7.55	0.04	10	7.7	45.9
		02/09/03	15.76	26	410	12	189	7.07	0.03	10	17.8	64.0
		02/10/03	12.79	22	281	14	179	7.30	0.01	10	19.5	67.1
		02/11/03	11.51	24	276	6	69	7.30	0.02	10	15.9	60.6
		02/12/03	11.64	28	326	21	244	7.26	0.12	10	15.1	59.2
		02/13/03	12.12	27	327	14	170	7.22	0.01	10	14.3	57.7
		02/14/03	12.53	25	313	20	251	7.20	0.03	10	15.3	59.5
		02/15/03	55.72	36	2,006	34	1,894	7.27	0	10	14.4	57.9
		02/16/03	28.4	18	511	22	625	7.17	0	18	16.8	62.2
		02/17/03	13.93	14	195	14	195	7.03	0.09	10	14.0	57.2
		02/18/03	12.13	20	243	14	170	7.32	0.25	10	12.8	55.0
		02/19/03	13.17	21	277	12	158	7.02	0.34	10	16.3	61.3
		02/20/03	33.89	30	1,017	20	678	7.30	0.11	27	17.3	63.1
		02/21/03	96.67	38	3,673	76	7,347	7.39	0	3,100	19.2	66.6
		02/22/03	43.83	16	701	18	789	7.38	0	1,636	18.3	64.9
		02/23/03	20.86	20	417	32	668	7.27	0.12	10	15.6	60.1
		02/24/03	17.45	36	628	60	1,047	7.10	0.04	10	13.6	56.5
		02/25/03	17.57	30	527	36	633	7.07	0.29	10	15.2	59.4
		02/26/03	39.84	35	1,394	26	1,036	7.27	0.14	10	17.8	64.0
		02/27/03	26.58	17	452	12	319	7.23	0.04	54	14.5	58.1

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		02/28/03	16.81	19	319	22	370	7.42	0.27	10	16.8	62.2
2003	March	03/01/03	15.85	28	444	32	507	7.36	0.11	10	16.9	62.4
		03/02/03	14	22	308	14	196	7.61	0.15	10	16.8	62.2
		03/03/03	15.04	26	391	24	361	7.4	0.01	10	15.4	59.7
		03/04/03	15.63	34	531	30	469	7.78	0.04	10	15.9	60.6
		03/05/03	16.94	21	356	15	254	7.31	0.04	10	17.3	63.1
		03/06/03	39.81	30	1,194	16	637	7.32	0	13,000	17.9	64.2
		03/07/03	36.87	24	885	26	959	7.25	0	23,000	16.8	62.2
		03/08/03	21.31	21	448	28	597	7.10	0.27	10	7.7	45.9
		03/09/03	21.14	18	381	15	317	7.19	0.04	90	17.8	64.0
		03/10/03	16.72	19	318	15	251	7.43	0.09	33,000	19.5	67.1
		03/11/03	14.59	22	321	17	248	7.33	0.22	10	15.9	60.6
		03/12/03	15.08	24	362	26	392	7.25	0.35	10	15.1	59.2
		03/13/03	34.14	33	1,127	29	990	7.46	0.02	10	14.3	57.7
		03/14/03	19.76	23	454	22	435	7.08	0.01	10	15.3	59.5
		03/15/03	16.52	17	281	14	231	7.08	0.05	10	14.4	57.9
		03/16/03	18.1	21	380	12	217	7.15	0.06	10	16.8	62.2
		03/17/03	16.68	19	317	14	234	7.08	0.03	10	14.0	57.2
		03/18/03	25.91	28	725	18	466	7.12	0.05	10	12.8	55.0
		03/19/03	20.54	24	493	22	452	7.33	0.01	225	16.3	61.3
		03/20/03	16.45	39	642	37	609	7.25	0.04	10	17.3	63.1
		03/21/03	12.88	–	–	–	–	7.15	0.15	10	19.2	66.6
		03/22/03	13.73	32	439	25	343	7.11	0.09	10	18.3	64.9
		03/23/03	14.13	38	537	31	438	7.18	0.12	10	15.6	60.1
		03/24/03	13.37	25	334	15	201	7.16	0.16	10	13.6	56.5
		03/25/03	13.81	21	290	14	193	7.18	0.3	10	15.2	59.4
		03/26/03	17.36	20	347	16	278	7.40	0.09	10	17.8	64.0
		03/27/03	14	17	238	12	168	7.24	0.06	10	14.5	58.1
		03/28/03	13.05	17	222	12	157	7.20	0.2	10	16.8	62.2
		03/29/03	12.3	29	357	44	541	7.54	0.3	10	18.8	65.8
		03/30/03	11.37	21	239	20	227	7.33	0.26	10	18.6	65.5
		03/31/03	11.86	31	368	42	498	7.17	0.13	10	–	–
2003	April	04/01/03	12.21	25	305	18	220	7.24	0.04	10	16.9	62.4
		04/02/03	13.02	23	299	13	169	7.2	0.05	10	16.8	62.2
		04/03/03	13.43	23	309	18	242	7.3	0.04	10	15.4	59.7
		04/04/03	13.24	21	278	24	318	7.26	0.07	10	15.9	60.6
		04/05/03	41.67	39	1,625	48	2,000	7.20	0.2	10	17.3	63.1
		04/06/03	21.1	22	464	20	422	7.00	0.03	10	17.9	64.2
		04/07/03	72.14	24	1,731	44	3,174	7.28	0.02	10	16.8	62.2
		04/08/03	69.22	13	900	34	2,353	7.11	0	300	7.7	45.9
		04/09/03	21.96	22	483	23	505	7.31	0.11	10	17.8	64.0
		04/10/03	16.51	27	446	34	561	7.21	0.15	10	19.5	67.1
		04/11/03	14.66	20	293	24	352	7.21	0.24	10	15.9	60.6
		04/12/03	15	19	285	24	360	7.20	0.13	10	15.1	59.2
		04/13/03	14.56	20	291	14	204	7.22	0.12	10	14.3	57.7
		04/14/03	13.76	22	303	16	220	7.17	0.15	10	15.3	59.5
		04/15/03	14.09	21	296	18	254	7.21	0.08	10	14.4	57.9
		04/16/03	14.6	20	292	19	277	7.28	0.07	10	16.8	62.2
		04/17/03	13.85	20	277	22	305	7.34	0.03	10	14.0	57.2
		04/18/03	14.17	19	269	20	283	7.29	0.02	10	12.8	55.0
		04/19/03	14.58	24	350	19	277	7.28	0.01	10	16.3	61.3
		04/20/03	13.51	26	351	45	608	7.39	0.02	27	17.3	63.1
		04/21/03	13.25	22	292	15	199	7.24	0	10	19.2	66.6
		04/22/03	12.9	24	310	15	194	7.13	0.25	10	18.3	64.9
		04/23/03	13.32	22	293	16	213	7.22	0.24	10	15.6	60.1

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		04/24/03	14.04	24	337	18	253	7.33	0.41	10	13.6	56.5
		04/25/03	13.57	22	299	14	190	7.31	0.3	10	15.2	59.4
		04/26/03	12.4	27	335	24	298	7.22	0.03	10	17.8	64.0
		04/27/03	12.26	21	257	16	196	7.38	0.01	10	14.5	58.1
		04/28/03	13.41	30	402	31	416	7.31	0.01	10	16.8	62.2
		04/29/03	13.24	34	450	22	291	7.45	0.02	10	18.8	65.8
		04/30/03	14.53	29	421	30	436	7.29	0.05	10	18.6	65.5
2003	May	05/01/03	14.75	26	384	21	310	7.21	0.27	10	16.9	62.4
		05/02/03	13.14	25	329	11	145	7.22	0.15	10	16.8	62.2
		05/03/03	14.24	22	313	18	256	7.2	0.2	10	15.4	59.7
		05/04/03	14.38	19	273	16	230	7.28	0.02	10	15.9	60.6
		05/05/03	14.5	28	406	32	464	7.31	0.01	10	17.3	63.1
		05/06/03	14.16	32	453	22	312	7.19	0.06	10	17.9	64.2
		05/07/03	12.64	39	493	44	556	7.23	0.08	10	16.8	62.2
		05/08/03	12.7	32	406	24	305	7.18	0.02	10	7.7	45.9
		05/09/03	12.45	25	311	17	212	7.61	0.02	10	17.8	64.0
		05/10/03	13.02	24	312	19	247	7.70	0.04	10	19.5	67.1
		05/11/03	12.99	26	338	25	325	7.27	0.16	10	15.9	60.6
		05/12/03	12.56	35	440	32	402	7.23	0.24	10	15.1	59.2
		05/13/03	12.56	27	339	21	264	7.08	0.07	10	14.3	57.7
		05/14/03	12.52	27	338	19	238	7.30	0.05	10	15.3	59.5
		05/15/03	12.61	36	454	46	580	7.41	0.07	10	14.4	57.9
		05/16/03	12.3	38	467	24	295	7.25	0.13	10	16.8	62.2
		05/17/03	13.48	58	782	35	472	7.28	0.02	10	14.0	57.2
		05/18/03	12.4	34	422	20	248	7.21	0.03	10	12.8	55.0
		05/19/03	12.96	29	376	32	415	7.25	0.23	10	16.3	61.3
		05/20/03	14.15	22	311	23	325	7.28	0.01	10	17.3	63.1
		05/21/03	13.92	16	223	19	264	7.28	0.05	10	19.2	66.6
		05/22/03	13.17	23	303	14	184	7.26	0.07	10	18.3	64.9
		05/23/03	12.85	18	231	15	193	7.35	0.09	18	15.6	60.1
		05/24/03	12.1	21	254	22	266	7.30	0.04	10	13.6	56.5
		05/25/03	13.08	22	288	28	366	7.21	0.01	10	15.2	59.4
		05/26/03	14.13	30	424	68	961	7.48	0.01	18	17.8	64.0
		05/27/03	12.6	28	353	32	403	7.45	0.06	10	14.5	58.1
		05/28/03	12.34	21	259	21	259	7.27	0.2	10	16.8	62.2
		05/29/03	12.64	20	253	18	228	7.31	0.29	45	18.8	65.8
		05/30/03	13.18	22	290	18	237	7.05	0.09	10	18.6	65.5
		05/31/03	13.7	19	260	21	288	7.23	0.17	18		
Average			15.95	24	379	21	346	7.29	0.10	1,461	20.2	68.4
Maximum			96.67	76	3,673	140	7,347	8.14	6.00	454,545	29.5	85.1
Minimum			6.42	6	84	4	59	6.10	0.00	10	7.7	45.9

APPENDIX B-3

BATON ROUGE CITY/PARISH WWTPS – MONTHLY EFFLUENT DMR DATA – CENTRAL WWTP - DECEMBER 1999 TO MAY 2003

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
1999	December	12/01/99	7.66	42	322	24	184	6.93	0	10		
		12/02/99	8.13	62	504	24	195	6.81	0	10		
		12/03/99	7.82	36	282	16	125	7.02	0	10		
		12/04/99	8.27	26	215	13	108	7.08	0	10		
		12/05/99	8.29	25	207	10	83	7.06	0	10		
		12/06/99	6.96	29	202	19	132	7.06	0	10		
		12/07/99	7.68	29	223	18	138	7.13	0	10		
		12/08/99	7.73	39	301	30	232	6.99	0	10		
		12/09/99	9.08	34	309	18	163	6.91	0	10		
		12/10/99	8.15	30	245	18	147	6.75	0	10		
		12/11/99	7.39	26	192	20	148	7.01	0	10		
		12/12/99	15.61	37	578	33	515	6.89	0	27		
		12/13/99	8.98	25	225	14	126	6.68	0	10		
		12/14/99	7.99	29	232	21	168	6.96	0	10		
		12/15/99	7.59	34	258	20	152	7	0	10		
		12/16/99	7.37	42	310	24	177	7.06	0	10		
		12/17/99	7.78	42	327	23	179	7.03	0	10		
		12/18/99	24.39	22	537	32	780	7.07	0	63		
		12/19/99	10.25	25	256	15	154	6.86	0	10		
		12/20/99	25.96	36	935	34	883	6.94	0	10		
		12/21/99	20.02	28	561	26	521	6.91	0	10		
		12/22/99	12.21	42	513	24	293	7.04	0	10		
		12/23/99	7.19	48	345	20	144	7.33	0	320		
		12/24/99	8.4	41	344	20	168	6.96	0	10		
		12/25/99	7.11	30	213	18	128	6.9	0	10		
		12/26/99	7.45	34	253	24	179	6.9	0	10		
		12/27/99	8.46	48	406	32	271	6.87	0	10		
		12/28/99	7.25	41	297	31	225	6.78	0	10		
		12/29/99	7.97	41	327	26	207	7.07	0	10		
		12/30/99	7.94	50	397	30	238	6.89	0	10		
		12/31/99	7.37	40	295	30	221	6.82	0	18		
2000	January	01/01/00	6.59	37	244	27	178	7.07	0	10		
		01/02/00	7.7	42	323	24	185	6.94	0	10		
		01/03/00	20.03	55	1,102	42	841	6.92	0	10		
		01/04/00	11.24	46	517	36	405	6.56	0	10		
		01/05/00	9.05	57	516	36	326	7.02	0	–		
		01/06/00	8.48	63	534	33	280	6.89	0	10		
		01/07/00	7.86	65	511	36	283	6.82	0	18		
		01/08/00	8.43	72	607	28	236	7.21	0	10		
		01/09/00	16.98	78	1,324	52	883	7.03	0	10		
		01/10/00	10.57	42	444	24	254	6.8	0	10		
		01/11/00	9.2	42	386	24	221	6.98	0	10		
		01/12/00	8.68	40	347	19	165	6.94	0	10		
		01/13/00	8.58	36	309	18	154	6.98	0	10		
		01/14/00	8.32	40	333	22	183	7.06	0	10		
		01/15/00	7.82	41	321	16	125	6.94	0	10		
		01/16/00	6.9	32	221	16	110	6.91	0	10		
		01/17/00	7.72	32	247	20	154	7.02	0	10		
		01/18/00	8.29	34	282	26	216	7.03	0	10		
		01/19/00	9.49	39	370	28	266	6.94	0	10		
		01/20/00	8.13	37	301	22	179	6.96	0.01	10		
		01/21/00	7.66	32	245	21	161	7.16	0	10		
		01/22/00	8.77	26	228	29	254	7.02	0	10		
		01/23/00	14.96	31	464	42	628	7.24	0.08	10		
		01/24/00	9.02	39	352	50	451	6.95	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/25/00	8.29	44	365	32	265	7.1	0	18		
		01/26/00	10.54	34	358	26	274	6.81	0	10		
		01/27/00	10.9	39	425	26	283	6.94	0	10		
		01/28/00	12.14	45	546	29	352	6.97	0	10		
		01/29/00	8.84	81	716	30	265	7.23	0	10		
		01/30/00	8.14	32	260	26	212	7.11	0	18		
		01/31/00	7.09	38	269	32	227	7.07	0	10		
2000	Febuary	02/01/00	7.65	30	230	23	176	7.12	0	45		
		02/02/00	8.18	34	278	18	147	7.08	0	18		
		02/03/00	8.08	28	226	22	178	7.08	0	10		
		02/04/00	7.96	21	167	20	159	6.96	0	10		
		02/05/00	7.25	30	218	14	102	7.14	0	10		
		02/06/00	6.91	23	159	20	138	7.13	0	10		
		02/07/00	7.92	27	214	24	190	6.97	0	10		
		02/08/00	7.61	28	213	20	152	6.99	0	10		
		02/09/00	7.63	30	229	15	114	7.02	0	10		
		02/10/00	7.73	26	201	22	170	7	0	10		
		02/11/00	8.08	30	242	14	113	6.9	0	10		
		02/12/00	7.67	24	184	15	115	6.92	0	10		
		02/13/00	7.97	22	175	21	167	6.89	0	10		
		02/14/00	8.18	27	221	24	196	6.77	0	10		
		02/15/00	7.93	28	222	21	167	6.92	0	10		
		02/16/00	7.96	26	207	25	199	6.83	0	10		
		02/17/00	8.3	31	257	20	166	6.92	0	10		
		02/18/00	8.12	36	292	23	187	6.88	0	10		
		02/19/00	7.58	30	227	16	121	6.96	0	10		
		02/20/00	7.07	28	198	24	170	6.67	0	10		
		02/21/00	7.77	33	256	20	155	7.02	0	10		
		02/22/00	7.88	33	260	29	229	6.97	0	10		
		02/23/00	8.17	30	245	22	180	6.98	0	10		
		02/24/00	8.26	32	264	19	157	6.95	0	10		
		02/25/00	8.11	32	260	10	81	6.99	0	10		
		02/26/00	12.54	38	477	26	326	6.77	0	10		
		02/27/00	8.03	33	265	22	177	6.99	0	10		
		02/28/00	9.33	33	308	19	177	6.9	0	10		
		02/29/00	7.97	44	351	27	215	6.9	0	18		
2000	March	03/01/00	8.28	39	323	26	215	6.97	0	18		
		03/02/00	7.71	32	247	22	170	7.01	0	10		
		03/03/00	8.01	30	240	14	112	6.9	0	10		
		03/04/00	6.66	26	173	17	113	6.98	0	10		
		03/05/00	6.03	24	145	13	78	6.96	0	10		
		03/06/00	7.09	26	184	26	184	6.94	0	10		
		03/07/00	6.7	22	147	10	67	6.98	0	10		
		03/08/00	7.71	32	247	24	185	6.98	0	10		
		03/09/00	8.12	30	244	22	179	7.06	0	10		
		03/10/00	7.9	26	205	16	126	7	0	10		
		03/11/00	8.77	32	281	20	175	6.95	0	18		
		03/12/00	6.8	26	177	24	163	6.71	0	10		
		03/13/00	7.91	28	221	22	174	6.94	0	10		
		03/14/00	7.92	33	261	25	198	7.05	0	10		
		03/15/00	14.97	40	599	31	464	7.05	0	545		
		03/16/00	8.86	26	230	12	106	6.68	0	10		
		03/17/00	7.59	27	205	26	197	6.94	0	10		
		03/18/00	17.24	32	552	40	690	6.95	0	10		
		03/19/00	12.89	22	284	21	271	6.75	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		03/20/00	9.12	32	292	22	201	6.88	0	10		
		03/21/00	8.59	33	283	15	129	7.01	0	10		
		03/22/00	8.24	31	255	20	165	6.96	0	10		
		03/23/00	7.91	24	190	16	127	7.04	0	10		
		03/24/00	7.59	25	190	19	144	7.13	0.03	10		
		03/25/00	7.01	27	189	19	133	7.15	0.02	10		
		03/26/00	9.71	27	262	20	194	6.98	0	10		
		03/27/00	13.53	32	433	30	406	7.03	0	10		
		03/28/00	8.4	28	235	24	202	7.05	0	10		
		03/29/00	8.05	24	193	22	177	7.02	0	10		
		03/30/00	8.01	21	168	16	128	6.98	0	10		
		03/31/00	7.19	21	151	19	137	6.86	0	10		
2000	May	05/01/00	7.77	23	179	14	109	7.1	0	10		
		05/02/00	7.01	26	182	18	126	7.25	0	18		
		05/03/00	8.48	25	212	19	161	7.18	0	18		
		05/04/00	7.74	21	163	26	201	7.24	0	10		
		05/05/00	13.51	32	432	22	297	7.21	0	18		
		05/06/00	7.59	19	144	16	121	7.25	0	10		
		05/07/00	6.37	14	89	13	83	7.14	0	10		
		05/08/00	7.79	15	117	13	101	7.47	0	36,036		
		05/09/00	7.83	18	141	10	78	7.29	0	36		
		05/10/00	7.86	18	141	16	126	7.17	0	18		
		05/11/00	11.95	21	251	10	120	7.22	0	--		
		05/12/00	8.22	18	148	8	66	7.19	0	10		
		05/13/00	7.26	13	94	10	73	7.3	0	10		
		05/14/00	6.79	12	81	9	61	7.2	0	10		
		05/15/00	8.27	20	165	15	124	7.23	0	10		
		05/16/00	7.01	14	98	15	105	7.28	0.04	45		
		05/17/00	7.93	28	222	20	159	7.17	0	10		
		05/18/00	7.93	34	270	19	151	7.84	0	530,000		
		05/19/00	7.68	25	192	19	146	7.79	0	280,000		
		05/20/00	7.14	18	129	13	93	7.65	0	90,090		
		05/21/00	6.91	22	152	14	97	7.6	0	126,126		
		05/22/00	7.64	24	183	19	145	7.62	0	27,027		
		05/23/00	7.95	21	167	14	111	7.78	0	162,162		
		05/24/00	8.06	19	153	13	105	7.3	0	280,000		
		05/25/00	7.7	17	131	12	92	7.24	0	108		
		05/26/00	7.45	16	119	12	89	7.18	0	117		
		05/27/00	7.03	14	98	16	112	7.26	0	36		
		05/28/00	6.88	13	89	16	110	7.17	0	10		
		05/29/00	6.81	22	150	20	136	7.19	0	18		
		05/30/00	7.87	16	126	22	173	7.17	0	18		
		05/31/00	6.74	21	142	14	94	7.24	0	10		
2000	June	06/01/00	7.86	20	157	20	157	7.24	0	10		
		06/02/00	7.19	22	158	14	101	7.26	0	18		
		06/03/00	6.34	13	82	11	70	7.24	0	18		
		06/04/00	6.77	15	102	16	108	7.32	0	27		
		06/05/00	8.2	14	115	17	139	6.87	0	81		
		06/06/00	7.65	16	122	16	122	7.21	0	54		
		06/07/00	6.26	20	125	16	100	7.42	0	18		
		06/08/00	7.6	18	137	11	84	7.14	0.03	36		
		06/09/00	8.06	14	113	12	97	7.12	0	10		
		06/10/00	6.89	11	76	12	83	7.26	0	45		
		06/11/00	6.61	13	86	8	53	7.17	0	10		
		06/12/00	7.4	15	111	19	141	7.24	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		06/13/00	7.43	16	119	22	163	7.09	0	10		
		06/14/00	7.92	24	190	15	119	7.28	0	10		
		06/15/00	8.49	23	195	18	153	7.36	0	10		
		06/16/00	8.2	14	115	6	49	7.23	0	27		
		06/17/00	7.1	14	99	16	114	7.21	0	10		
		06/18/00	8.04	14	113	8	64	7.21	0	10		
		06/19/00	9.28	16	148	13	121	7.18	0	10		
		06/20/00	15.75	25	394	18	284	7.27	0	10		
		06/21/00	11.5	24	276	19	219	6.96	0	27		
		06/22/00	8.75	14	123	10	88	7.13	0	45		
		06/23/00	7.92	12	95	13	103	7.36	0	36		
		06/24/00	7.32	10	73	17	124	7.38	0	10		
		06/25/00	7.5	12	90	12	90	7.14	0	10		
		06/26/00	8.32	12	100	16	133	7.24	0	10		
		06/27/00	9.22	18	166	19	175	7.15	0	10		
		06/28/00	8.21	13	107	14	115	7.16	0	10		
		06/29/00	8.12	18	146	18	146	7.16	0	10		
		06/30/00	7.2	19	137	12	86	7.27	0	10		
2000	July	07/01/00	12.6	23	290	16	202	7.33	0	54		
		07/02/00	8.21	11	90	13	107	6.84	0	10		
		07/03/00	7.46	10	75	10	75	7.03	0	10		
		07/04/00	6.95	15	104	10	70	7.25	0	10		
		07/05/00	8.44	20	169	8	68	7.04	0	36		
		07/06/00	7.96	20	159	18	143	7.02	0	10		
		07/07/00	7.91	16	127	16	127	7.19	0	45		
		07/08/00	7.66	14	107	10	77	7.37	0	27		
		07/09/00	8.17	15	123	20	163	7.31	0	18		
		07/10/00	8.11	15	122	23	187	7.18	0	54		
		07/11/00	7.86	12	94	26	204	7.18	0	90		
		07/12/00	7.78	14	109	26	202	7.08	0	27		
		07/13/00	7.77	21	163	14	109	7.18	0	18		
		07/14/00	7.38	14	103	12	89	7.15	0	36		
		07/15/00	6.92	12	83	10	69	7.22	0	36		
		07/16/00	7.28	12	87	18	131	7.16	0	10		
		07/17/00	7.59	13	99	10	76	7.22	0	45		
		07/18/00	6.85	14	96	22	151	7.24	0	18		
		07/19/00	7.83	20	157	18	141	7.17	0	36		
		07/20/00	7.34	16	117	12	88	7.2	0	45		
		07/21/00	7.26	12	87	7	51	7.15	0	36		
		07/22/00	7.38	16	118	14	103	7.3	0	36		
		07/23/00	12.12	21	255	25	303	7.08	0	10		
		07/24/00	7.45	12	89	16	119	6.84	0	18		
		07/25/00	7.32	12	88	14	102	7.09	0	10		
		07/26/00	10.09	16	161	21	212	7.34	0	18		
		07/27/00	7.25	12	87	16	116	7.27	0	10		
		07/28/00	7.95	11	87	14	111	7.23	0	10		
		07/29/00	6.46	11	71	16	103	7.24	0	10		
		07/30/00	6.94	11	76	9	62	7.23	0	18		
		07/31/00	7.25	14	102	6	44	7.23	0	18		
2000	August	08/01/00	7.12	16	114	14	100	7.26	0	18		
		08/02/00	7	14	98	13	91	7.28	0	10		
		08/03/00	7.18	12	86	3	22	7.25	0	90		
		08/04/00	7.03	11	77	10	70	7.22	0	18		
		08/05/00	9.76	10	98	3	29	7.26	0	18		
		08/06/00	6.18	8	49	12	74	7.22	0	18		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		08/07/00	7.22	9	65	11	79	7.17	0	126		
		08/08/00	7.1	12	85	24	170	7.17	0	36		
		08/09/00	7.24	19	138	16	116	7.16	0	10		
		08/10/00	12.15	30	365	34	413	7.55	0	10		
		08/11/00	9.96	14	139	14	139	6.79	0	27		
		08/12/00	6.65	13	86	8	53	7.07	0	10		
		08/13/00	6.36	14	89	23	146	7.18	0	10		
		08/14/00	8.21	15	123	18	148	7.22	0	18		
		08/15/00	7.77	14	109	18	140	7.15	0	10		
		08/16/00	7.86	17	134	14	110	7.13	0	63		
		08/17/00	7.69	21	161	17	131	7.24	0	36		
		08/18/00	7.46	15	112	11	82	7.46	0	54		
		08/19/00	7.1	12	85	10	71	7.24	0	45		
		08/20/00	7.16	12	86	16	115	7.16	0	10		
		08/21/00	7.63	14	107	13	99	7.17	0	10		
		08/22/00	7.47	14	105	11	82	7.09	0	10		
		08/23/00	9.44	23	217	14	132	7.2	0	10		
		08/24/00	7.96	10	80	11	88	7.12	0	10		
		08/25/00	7.68	11	84	15	115	7.12	0	10		
		08/26/00	7.46	11	82	7	52	7.16	0	18		
		08/27/00	6.81	10	68	19	129	7.26	0	10		
		08/28/00	7.31	14	102	14	102	7.1	0	10		
		08/29/00	7.36	26	191	15	110	7.08	0	18		
		08/30/00	10.8	21	227	18	194	7.18	0	18		
		08/31/00	8.16	14	114	20	163	7.13	0	36		
2000	September	09/01/00	7.54	12	90	10	75	7.12	0	18		
		09/02/00	7.47	11	82	6	45	7.16	0	10		
		09/03/00	6.54	10	65	10	65	7.15	0	36		
		09/04/00	7.2	10	72	15	108	7.19	0	10		
		09/05/00	7.59	15	114	12	91	7.22	0	10		
		09/06/00	7.7	16	123	17	131	7.24	0	636		
		09/07/00	8.22	17	140	14	115	7.15	0	180		
		09/08/00	11.29	17	192	28	316	7.17	0	10		
		09/09/00	16.03	20	321	19	305	7.24	0	10		
		09/10/00	8.44	11	93	10	84	6.94	0	10		
		09/11/00	8.41	16	135	24	202	7.13	0	10		
		09/12/00	9.7	14	136	8	78	7.34	0	45		
		09/13/00	13.35	40	534	28	374	7.13	0	10		
		09/14/00	10.34	16	165	14	145	7.03	0	10		
		09/15/00	8.2	13	107	16	131	7	0	10		
		09/16/00	6.51	16	104	12	78	7.32	0	10		
		09/17/00	6.96	18	125	9	63	7.27	0	10		
		09/18/00	6.82	15	102	13	89	7.22	0	10		
		09/19/00	7.71	26	200	19	146	7.25	0	27		
		09/20/00	8.05	30	242	18	145	7.31	0	36		
		09/21/00	10.71	26	278	19	203	7.3	0	10		
		09/22/00	8.67	16	139	13	113	7.14	0	18		
		09/23/00	7.73	15	116	12	93	7.29	0	10		
		09/24/00	7.25	14	102	10	73	7.13	0	10		
		09/25/00	7.83	14	110	12	94	7.25	0	10		
		09/26/00	8.71	19	165	15	131	7.16	0	10		
		09/27/00	7.02	20	140	19	133	7.2	0	18		
		09/28/00	7.11	26	185	18	128	7.1	0	10		
		09/29/00	4.92	25	123	10	49	7.19	0	10		
		09/30/00	6.35	25	159	22	140	7.29	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data										
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
2000	October	10/01/00	6.77	14	95	10	68	7.25	0	10		
		10/02/00	7.73	18	139	12	93	7.12	0	27		
		10/03/00	7.13	15	107	13	93	7.1	0	81		
		10/04/00	7.66	17	130	14	107	7.15	0	10		
		10/05/00	9.5	24	228	15	143	7.21	0	10		
		10/06/00	8.93	20	179	12	107	7.14	0	10		
		10/07/00	6.45	12	77	14	90	7.02	0	10		
		10/08/00	6.4	11	70	16	102	7.35	0	10		
		10/09/00	7.36	21	155	12	88	7.24	0	10		
		10/10/00	7.45	19	142	16	119	7.04	0	54		
		10/11/00	11.08	19	211	14	155	7.14	0	54		
		10/12/00	7.02	23	161	13	91	7.15	0	10		
		10/13/00	7.81	24	187	12	94	7.34	0	10		
		10/14/00	6.69	18	120	16	107	7.13	0	10		
		10/15/00	6.49	14	91	10	65	7.12	0	45		
		10/16/00	7.18	19	136	10	72	7.22	0	10		
		10/17/00	7.25	18	131	14	102	7.35	0	10		
		10/18/00	7.14	18	129	18	129	7.33	0	10		
		10/19/00	7.4	19	141	18	133	7.18	0	10		
		10/20/00	7.24	26	188	18	130	7.2	0	10		
		10/21/00	7.02	20	140	18	126	7.12	0	10		
		10/22/00	6.88	18	124	16	110	7.28	0	10		
		10/23/00	7.56	21	159	21	159	7.04	0	10		
		10/24/00	7.53	23	173	16	120	7.24	0	250		
		10/25/00	7.4	20	148	14	104	7.23	0	10		
		10/26/00	7.52	22	165	15	113	7.33	0	10		
		10/27/00	7.66	22	169	16	123	7.23	0	10		
		10/28/00	6.62	20	132	12	79	7.05	0	10		
		10/29/00	6.22	19	118	17	106	7.12	0	10		
		10/30/00	7.55	24	181	9	68	7.13	0	10		
		10/31/00	7.38	26	192	15	111	7.09	0	10		
2000	November	11/01/00	7.81	22	172	14	109	7.26	0	10		
		11/02/00	7.97	19	151	10	80	7.08	0	27		
		11/03/00	7.13	18	128	7	50	7.13	0	10		
		11/04/00	8.01	20	160	12	96	7.15	0	10		
		11/05/00	7.27	14	102	10	73	7.14	0	90		
		11/06/00	12.59	24	302	18	227	7.09	0	45		
		11/07/00	8.85	14	124	16	142	6.86	0	10		
		11/08/00	19.24	54	1,039	12	231	7.02	0	240		
		11/09/00	11.54	12	138	22	254	6.71	0	81		
		11/10/00	7.96	12	96	8	64	7.05	0	27		
		11/11/00	7.18	22	158	12	86	6.85	0	10		
		11/12/00	7.34	16	117	12	88	7.1	0	54		
		11/13/00	9.15	20	183	8	73	7.09	0	81		
		11/14/00	7.84	20	157	12	94	7.18	0	36		
		11/15/00	7.72	22	170	20	154	7.03	0	10		
		11/16/00	18.71	30	561	28	524	7	0	400		
		11/17/00	14.69	18	264	18	264	6.89	0	10		
		11/18/00	38.22	14	535	25	956	7.04	0	10		
		11/19/00	21.77	15	327	18	392	6.91	0	10		
		11/20/00	11.41	32	365	23	262	7.18	0	10		
		11/21/00	9.49	26	247	18	171	6.93	0	10		
		11/22/00	8.92	37	330	16	143	7.09	0	10		
		11/23/00	8.05	22	177	13	105	6.7	0	10		
		11/24/00	13.93	35	488	22	306	7.27	0	144		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		11/25/00	8.37	18	151	16	134	7.3	0	10		
		11/26/00	7.85	20	157	24	188	7.28	0	10		
		11/27/00	8.44	29	245	18	152	6.99	0	10		
		11/28/00	8.25	--	--	24	198	7.01	0	10		
		11/29/00	8.65	--	--	17	147	7.08	0	18		
		11/30/00	8.09	--	--	27	218	7.23	0	10		
2000	December	12/01/00	8.69	30	261	18	156	7.21	0	10		
		12/02/00	7.62	28	213	16	122	7.25	0	10		
		12/03/00	7.57	25	189	20	151	7.31	0	10		
		12/04/00	8.13	42	341	21	171	7.03	0	10		
		12/05/00	7.97	50	399	26	207	7.48	0	10		
		12/06/00	11.29	50	565	22	248	7.43	0	10		
		12/07/00	8.29	48	398	28	232	7.23	0	18		
		12/08/00	7.96	32	255	16	127	7.12	0	10		
		12/09/00	7.41	24	178	21	156	7.1	0	10		
		12/10/00	6.91	20	138	14	97	7.35	0	10		
		12/11/00	7.56	26	197	17	129	6.88	0.01	10		
		12/12/00	7.58	54	409	21	159	7.3	0.01	10		
		12/13/00	14.24	52	740	39	555	7.29	0	10		
		12/14/00	9.07	30	272	20	181	7.06	0	10		
		12/15/00	8.62	30	259	19	164	7.1	0	10		
		12/16/00	8.83	30	265	12	106	7.15	0	10		
		12/17/00	7.08	24	170	15	106	6.92	0	10		
		12/18/00	10.22	32	327	16	164	7.19	0	10		
		12/19/00	8.6	26	224	16	138	6.82	0	10		
		12/20/00	8.59	56	481	26	223	7.1	0	10		
		12/21/00	11.94	36	430	18	215	7.01	0.06	10		
		12/22/00	8.15	32	261	20	163	6.83	0	10		
		12/23/00	7.29	32	233	16	117	7.09	0	18		
		12/24/00	7.14	27	193	15	107	7.1	0	10		
		12/25/00	6.79	23	156	14	95	7.16	0	10		
		12/26/00	7.45	23	171	24	179	7.23	0	10		
		12/27/00	25.26	34	859	30	758	7.2	0	18		
		12/28/00	13.4	19	255	15	201	6.66	0	10		
		12/29/00	9.18	22	202	8	73	7.12	0	10		
		12/30/00	8.14	25	204	16	130	7.1	0	10		
		12/31/00	7.98	23	184	15	120	7.02	0	10		
2001	January	01/01/01	7.53	25	188	18	136	7.05	0	10		
		01/02/01	9.29	30	279	25	232	7.08	0	10		
		01/03/01	9.52	29	276	11	105	7.24	0	10		
		01/04/01	9.18	30	275	28	257	7.14	0	10		
		01/05/01	8.32	26	216	20	166	7.04	0	10		
		01/06/01	7.27	23	167	14	102	7.06	0	10		
		01/07/01	9.92	30	298	30	298	7.03	0	10		
		01/08/01	8.59	29	249	22	189	6.89	0	10		
		01/09/01	8.27	35	289	22	182	7.05	0	10	9.2	48.6
		01/10/01	8.84	32	283	26	230	7.07	0	10	9.5	49.0
		01/11/01	10.58	31	328	29	307	6.99	0	10	11.3	52.3
		01/12/01	8.58	30	257	19	163	7.09	0	10	9.3	48.8
		01/13/01	7.7	26	200	13	100	7.05	0	10	8.4	47.2
		01/14/01	7.75	24	186	20	155	7	0	10	8.4	47.1
		01/15/01	9.64	30	289	35	337	6.88	0	10	21.0	69.8
		01/16/01	20.87	46	960	40	835	6.93	0	10	20.3	68.5
		01/17/01	12.44	26	323	20	249	7.12	0	10	19.9	67.8
		01/18/01	14.67	30	440	24	352	7.2	0	10	21.2	70.2

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/19/01	25.72	22	566	25	643	6.97	0	10	15.7	60.3
		01/20/01	11.47	21	241	17	195	7.32	0	10	18.1	64.6
		01/21/01	9.66	22	213	21	203	7.32	0	10	18.0	64.4
		01/22/01	14.88	28	417	12	179	7.26	0	10	19.6	67.3
		01/23/01	9.39	26	244	18	169	7.16	0	10	20.7	69.3
		01/24/01	9.39	26	244	22	207	7.25	0	10	21.2	70.2
		01/25/01	9.18	27	248	21	193	7.29	0	10	22.0	71.6
		01/26/01	9.29	30	279	18	167	7.29	0	10	20.7	69.3
		01/27/01	8.83	23	203	10	88	7.16	0	10	21.9	71.4
		01/28/01	8.74	22	192	18	157	7.16	0	10	22.0	71.6
		01/29/01	21.63	40	865	44	952	7.26	0	10	21.4	70.5
		01/30/01	12.15	27	328	22	267	7.22	0	10	22.4	72.3
		01/31/01	10.46	29	303	17	178	7.12	0	10	21.7	71.1
2001	February	02/01/01	9.93	25	248	20	199	7.15	0	10	20.9	69.6
		02/02/01	9.43	28	264	27	255	7.19	0	10	20.9	69.6
		02/03/01	8.65	23	199	22	190	7.17	0.08	10	20.7	69.3
		02/04/01	8.14	23	187	16	130	7.16	0.32	10	21.4	70.5
		02/05/01	8.77	27	237	19	167	7.28	0.15	10	21.6	70.9
		02/06/01	8.77	30	263	20	175	7.41	0	10	22.4	72.3
		02/07/01	8.7	28	244	18	157	7.29	0.03	10	23.0	73.4
		02/08/01	8.94	30	268	20	179	7.28	0.08	10	23.4	74.1
		02/09/01	21.98	42	923	38	835	7.33	0.02	10	23.1	73.6
		02/10/01	11.65	21	245	14	163	7.13	0	10	19.8	67.6
		02/11/01	9.14	21	192	14	128	7.22	0.16	10	21.5	70.7
		02/12/01	10.15	28	284	19	193	7.02	0	10	22.0	71.6
		02/13/01	10.26	29	298	15	154	7.1	0	10	23.2	73.8
		02/14/01	9.76	25	244	18	176	6.91	0.01	10	24.1	75.4
		02/15/01	9.61	30	288	18	173	7.13	0	10	24.0	75.2
		02/16/01	13.02	43	560	24	312	7.21	0	10	25.1	77.2
		02/17/01	8.93	24	214	18	161	7.1	0	10	20.3	68.5
		02/18/01	8	25	200	7	56	7.19	0.04	10	21.9	71.4
		02/19/01	9.11	17	155	12	109	7.16	0.04	10	22.2	72.0
		02/20/01	8.76	32	280	18	158	7.19	0	10	23.9	75.0
		02/21/01	8.92	28	250	21	187	7.2	0	10	24.1	75.4
		02/22/01	9.03	23	208	20	181	7.22	0	10	23.5	74.3
		02/23/01	8.68	24	208	16	139	7.19	0	10	22.7	72.9
		02/24/01	8.6	24	206	20	172	7.15	0	10	23.9	75.0
		02/25/01	8.64	20	173	14	121	7.12	0.06	10	22.9	73.2
		02/26/01	10.34	34	352	20	207	7.09	0	10	23.4	74.1
		02/27/01	8.91	26	232	15	134	7.19	0.03	10	24.1	75.4
		02/28/01	17.6	35	616	28	493	7.15	0	10	21.7	71.1
2001	March	03/01/01	11.58	27	313	20	232	7.2	0	10	21.1	70.0
		03/02/01	22.46	40	898	35	786	7.11	0	10	23.1	73.6
		03/03/01	36.32	21	763	40	1,453	6.77	0	189	20.7	69.3
		03/04/01	16.23	20	325	18	292	7.03	0	10	20.7	69.3
		03/05/01	11.99	28	336	12	144	7.15	0	10	21.4	70.5
		03/06/01	10.94	38	416	24	263	7.1	0	54	22.2	72.0
		03/07/01	10.16	34	345	27	274	7.21	0	10	21.5	70.7
		03/08/01	11.81	34	402	28	331	7.18	0	10	23.1	73.6
		03/09/01	19.2	32	614	25	480	6.58	0	10	18.5	65.3
		03/10/01	10.49	26	273	12	126	6.84	0	10	20.3	68.5
		03/11/01	10.31	20	206	18	186	6.81	0	10	21.3	70.3
		03/12/01	27.22	22	599	30	817	6.77	0	230	21.1	70.0
		03/13/01	14.28	26	371	20	286	6.69	0	30	22.4	72.3
		03/14/01	24.79	34	843	36	892	6.91	0	200	23.0	73.4

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		03/15/01	21.62	22	476	26	562	6.8	0	10	21.2	70.2
		03/16/01	12.77	27	345	22	281	7.01	0	10	21.6	70.9
		03/17/01	11.48	26	298	22	253	6.98	0	10	19.0	66.2
		03/18/01	10.34	25	259	18	186	7.33	0.003	10	21.4	70.5
		03/19/01	10.47	32	335	21	220	7.01	0	10	21.3	70.3
		03/20/01	10.31	32	330	18	186	7.38	0	10	19.9	67.8
		03/21/01	9.45	30	284	18	170	7.04	0	10	21.0	69.8
		03/22/01	9.42	26	245	20	188	7.12	0.01	10	21.3	70.3
		03/23/01	10.04	29	291	17	171	6.86	0	10	21.4	70.5
		03/24/01	10.19	28	285	16	163	7.3	0	18	20.9	69.6
		03/25/01	9.99	25	250	14	140	7.28	0	10	20.7	69.3
		03/26/01	8.82	30	265	20	176	7.24	0	10	19.0	66.2
		03/27/01	10.42	36	375	29	302	7.42	0	81	18.2	64.8
		03/28/01	35.96	25	899	35	1,259	7.04	0	18	16.4	61.5
		03/29/01	16.63	39	649	22	366	7.41	0	10	20.4	68.7
		03/30/01	12.23	24	294	22	269	6.86	0.003	10	20.9	69.6
		03/31/01	10	27	270	24	240	7.21	0	10	22.5	72.5
2001	April	04/01/01	9.46	22	208	19	180	7.52	0	10	22.7	72.9
		04/02/01	10.4	28	291	16	166	6.84	0	10	22.9	73.2
		04/03/01	10.41	29	302	16	167	7	0	10	24.2	75.6
		04/04/01	10.54	26	274	20	211	7.42	0	10	25.5	77.9
		04/05/01	8.29	27	224	19	158	7.43	0	10	25.4	77.7
		04/06/01	9.02	22	198	16	144	7.81	0	10	25.5	77.9
		04/07/01	7.93	22	174	18	143	7.18	0	10	25.7	78.3
		04/08/01	8.57	19	163	16	137	7.32	0.05	10	24.9	76.8
		04/09/01	9.95	23	229	17	169	7.34	0.08	10	25.1	77.2
		04/10/01	9.22	24	221	18	166	7.36	0.04	10	26.0	78.8
		04/11/01	9.29	26	242	17	158	7.46	0.01	10	25.2	77.4
		04/12/01	9.18	26	239	16	147	7.45	0	10	27.4	81.3
		04/13/01	8.29	24	199	16	133	7.48	0	10	26.5	79.7
		04/14/01	8.13	20	163	10	81	7.42	0.16	10	27.0	80.6
		04/15/01	8.03	18	145	15	120	7.31	0.04	10	27.0	80.6
		04/16/01	8.55	22	188	18	154	7.66	0.01	10	25.7	78.3
		04/17/01	8.45	24	203	11	93	7.73	0.03	10	24.0	75.2
		04/18/01	8.05	32	258	14	113	6.7	0.04	10	22.0	71.6
		04/19/01	8.43	26	219	18	152	7.38	0.15	10	23.3	73.9
		04/20/01	8.48	23	195	12	102	7.07	0.13	10	25.0	77.0
		04/21/01	8.14	20	163	12	98	7.36	0.08	10	25.7	78.3
		04/22/01	6.99	19	133	20	140	7.26	0.46	10	25.8	78.4
		04/23/01	9.17	21	193	18	165	7.32	0.62	10	26.6	79.9
		04/24/01	14.5	24	348	21	305	7.24	0.48	36	23.9	75.0
		04/25/01	9.05	17	154	18	163	7	0.15	10	22.8	73.0
		04/26/01	7.98	19	152	18	144	7.05	0	10	24.9	76.8
		04/27/01	8.33	16	133	15	125	7.07	0.02	10	25.1	77.2
		04/28/01	7.9	21	166	13	103	7.1	0.04	10	25.2	77.4
		04/29/01	7.75	11	85	11	85	7.24	0	10	25.1	77.2
		04/30/01	9.08	17	154	17	154	7.12	0	10	25.9	78.6
2001	May	05/01/01	8.35	20	167	16	134	7.25	0	10	26.2	79.2
		05/02/01	8.67	21	182	22	191	7.7	0.04	10	26.8	80.2
		05/03/01	8.48	18	153	15	127	7.13	0.19	10	26.4	79.5
		05/04/01	7.86	19	149	16	126	7.05	0	10	27.1	80.8
		05/05/01	7.56	15	113	12	91	7.2	0	10	26.6	79.9
		05/06/01	7.58	15	114	9	68	7.27	0	10	26.9	80.4
		05/07/01	8.21	16	131	12	99	7.11	0	10	26.5	79.7
		05/08/01	15.32	40	613	36	552	7.17	0	81	27.3	81.1

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		05/09/01	10.31	16	165	9	93	7	0	45	27.8	82.0
		05/10/01	9.26	14	130	10	93	7.13	0	10	26.0	78.8
		05/11/01	9.2	16	147	20	184	7.03	0	10	26.8	80.2
		05/12/01	10.33	19	196	40	413	7.26	0.04	10	27.6	81.7
		05/13/01	8.27	11	91	13	108	7.17	0	10	27.2	81.0
		05/14/01	8.03	17	137	14	112	7.22	0	10	27.8	82.0
		05/15/01	8.24	16	132	14	115	7.41	0	10	28.1	82.6
		05/16/01	8.31	17	141	14	116	7.06	0	10	27.1	80.8
		05/17/01	8.11	16	130	12	97	7.13	0	36	26.8	80.2
		05/18/01	8.23	13	107	10	82	7.12	0	10	27.6	81.7
		05/19/01	7.83	15	117	12	94	7.2	0	18	28.3	82.9
		05/20/01	7.66	13	100	14	107	7.29	0	10	27.6	81.7
		05/21/01	8.86	22	195	19	168	7.08	0	10	28.8	83.8
		05/22/01	8.51	20	170	16	136	7.13	0	10	26.1	79.0
		05/23/01	8.23	20	165	20	165	7.18	0	10	26.8	80.2
		05/24/01	8.34	15	125	12	100	7.11	0	10	27.2	81.0
		05/25/01	8.01	15	120	14	112	7.12	0.01	10	26.6	79.9
		05/26/01	7.72	14	108	10	77	7.12	0	10	27.6	81.7
		05/27/01	7.44	13	97	11	82	7.14	0	10	28.3	82.9
		05/28/01	7.98	13	104	14	112	7.12	0	10	27.6	81.7
		05/29/01	8.36	19	159	19	159	7.21	0	10	29.4	84.9
		05/30/01	8.26	15	124	24	198	7.21	0	10	29.8	85.6
		05/31/01	10.37	18	187	14	145	7.25	0	10	27.1	80.8
2001	June	06/01/01	8.55	13	111	14	120	7.15	0	10	26.8	80.2
		06/02/01	7.86	13	102	15	118	7.16	0	10	29.1	84.4
		06/03/01	7.63	12	92	10	76	7.1	0	10	29.0	84.2
		06/04/01	9.25	15	139	12	111	7.19	0	18	29.1	84.4
		06/05/01	27.9	19	530	38	1,060	7.06	0	10	28.3	82.9
		06/06/01	43.68	11	480	37	1,616	6.93	0	370	23.8	74.8
		06/07/01	48.5	8	388	32	1,552	6.76	0	54	25.0	77.0
		06/08/01	41.2	17	700	47	1,936	6.96	0	10	26.4	79.5
		06/09/01	28.34	9	255	15	425	7.03	0.04	108	25.2	77.4
		06/10/01	33.38	16	534	32	1,068	6.96	0.04	135	24.9	76.8
		06/11/01	24.15	16	386	22	531	7.05	0	10	26.1	79.0
		06/12/01	15.24	18	274	18	274	7.11	0	36	29.3	84.7
		06/13/01	12.29	18	221	23	283	7.16	0	27	28.3	82.9
		06/14/01	11.35	17	193	27	306	7.23	0	9	28.9	84.0
		06/15/01	10.66	16	171	14	149	7.08	0	45	29.5	85.1
		06/16/01	9.41	16	151	14	132	7.13	0	27	30.0	86.0
		06/17/01	8.45	14	118	20	169	7.12	0	10	30.0	86.0
		06/18/01	9.17	16	147	13	119	7.07	0	99	30.3	86.5
		06/19/01	13.48	26	350	31	418	7.15	0	500	29.2	84.6
		06/20/01	10.57	23	243	20	211	6.87	0	27	28.6	83.5
		06/21/01	9.94	34	338	26	258	7.16	0	54	29.3	84.7
		06/22/01	9.73	30	292	17	165	7.19	0	430	28.7	83.7
		06/23/01	8.45	22	186	14	118	7.09	0	27	27.1	80.8
		06/24/01	6.66	18	120	14	93	7.2	0	36	28.3	82.9
		06/25/01	8.87	23	204	23	204	7.11	0	117	28.9	84.0
		06/26/01	8.9	23	205	22	196	7.14	0	240	30.8	87.4
		06/27/01	10.71	24	257	24	257	7.01	0.04	220	27.8	82.0
		06/28/01	9.53	17	162	18	172	7.05	0	27	28.0	82.4
		06/29/01	9.42	15	141	16	151	7.13	0	10	29.4	84.9
		06/30/01	8.97	15	135	13	117	7.24	0	63	29.8	85.6
2001	July	07/01/01	10.69	15	160	15	160	7.09	0	36	29.8	85.6
		07/02/01	9.51	13	124	12	114	7.18	0	10	28.8	83.8

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		07/03/01	15.21	24	365	20	304	7.25	0	27	30.0	86.0
		07/04/01	9.73	10	97	10	97	6.65	0	45	30.0	86.0
		07/05/01	13.74	19	261	18	247	7.03	0	10	29.5	85.1
		07/06/01	10.72	14	150	15	161	6.77	0	72	30.0	86.0
		07/07/01	10.12	18	182	14	142	7.14	0	10	29.2	84.6
		07/08/01	8.53	22	188	15	128	7.2	0	72	28.5	83.3
		07/09/01	9.55	19	181	12	115	7.05	0	90	31.0	87.8
		07/10/01	9.12	19	173	16	146	7.11	0.02	454	30.3	86.5
		07/11/01	11.78	26	306	19	224	6.97	0	72	31.3	88.3
		07/12/01	11.92	16	191	13	155	7.1	0	189	30.6	87.1
		07/13/01	10.53	16	168	7	74	7.16	0	90	29.9	85.8
		07/14/01	8.99	14	126	10	90	7.15	0	54	30.9	87.6
		07/15/01	8.62	15	129	14	121	7.12	0	18	29.3	84.7
		07/16/01	9.85	18	177	14	138	6.89	0	10	30.1	86.2
		07/17/01	9.48	22	209	15	142	7.04	0	36	31.1	88.0
		07/18/01	9.57	18	172	11	105	7.27	0	10	29.8	85.6
		07/19/01	9.59	21	201	14	134	7.02	0	10	30.3	86.5
		07/20/01	9.62	18	173	13	125	7.11	0.08	10	29.9	85.8
		07/21/01	16.52	24	396	26	430	7.22	0.08	10	30.1	86.2
		07/22/01	10.65	14	149	18	192	6.85	0	63	28.5	83.3
		07/23/01	9.78	14	137	17	166	7.1	0	63	29.5	85.1
		07/24/01	9.75	19	185	18	176	7.17	0	10	31.7	89.1
		07/25/01	11.57	26	301	20	231	7.15	0	18	30.1	86.2
		07/26/01	10.23	21	215	14	143	7.16	0	36	27.6	81.7
		07/27/01	10.69	17	182	10	107	7.18	0.08	10	28.8	83.8
		07/28/01	15.27	24	366	22	336	7.19	0.06	10	28.6	83.5
		07/29/01	10.09	11	111	8	81	7.11	0.15	10	26.9	80.4
		07/30/01	9.95	13	129	10	100	7.1	0	10	26.5	79.7
		07/31/01	9.48	18	171	10	95	7.19	0	10	28.4	83.1
2001	August	08/01/01	10	19	190	23	230	7.21	0.13	72		
		08/02/01	9.39	22	207	22	207	7.25	0.26	10		
		08/03/01	9.36	13	122	12	112	7.24	0.31	10		
		08/04/01	8.97	19	170	12	108	7.33	0.14	10		
		08/05/01	13.61	28	381	23	313	7.13	0.6	10		
		08/06/01	15.51	24	372	16	248	7.04	0	108		
		08/07/01	16.02	17	272	14	224	7.17	0	72		
		08/08/01	19.36	20	387	22	426	7.19	0	99		
		08/09/01	10.67	12	128	12	128	7.2	0	230		
		08/10/01	10.59	13	138	10	106	7.32	0	10		
		08/11/01	17.54	22	386	28	491	7.16	0	10		
		08/12/01	25.76	13	335	29	747	7.11	0	36		
		08/13/01	15.96	17	271	16	255	7.16	0	60,000		
		08/14/01	21.06	19	400	20	421	7.27	0	27		
		08/15/01	14.49	14	203	17	246	7.15	0	36		
		08/16/01	16.14	17	274	22	355	7.3	0	117		
		08/17/01	11.77	15	177	10	118	7.14	0	99		
		08/18/01	10.6	12	127	10	106	7.32	0.03	36		
		08/19/01	10.39	16	166	14	145	7.28	0.04	10		
		08/20/01	10.44	17	177	14	146	7.22	0.19	10		
		08/21/01	10.61	14	149	12	127	7.16	0.08	10		
		08/22/01	10.06	--	--	14	141	7.25	0.3	10		
		08/23/01	10.12	--	--	22	223	7.27	0.27	10		
		08/24/01	9.89	--	--	12	119	7.28	0.48	10		
		08/25/01	9.15	--	--	22	201	7.46	0.28	10		
		08/26/01	--	--	--	--	--	--	--	--		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		08/27/01	--	--	--	--	--	--	--	--		
		08/28/01	--	--	--	--	--	--	--	--		
		08/29/01	--	--	--	--	--	--	--	--		
		08/30/01	--	--	--	--	--	--	--	--		
		08/31/01	--	--	--	--	--	--	--	--		
2001	September	09/01/01	17.34	49	850	25	434	7.12	0.19	135		
		09/02/01	31.73	15	476	20	635	7	0.41	171		
		09/03/01	21.13	16	338	18	380	6.75	0	10		
		09/04/01	17.32	16	277	17	294	7.07	0	63		
		09/05/01	16.62	17	283	10	166	6.93	0.35	10		
		09/06/01	12.72	16	204	22	280	7.05	0.33	99		
		09/07/01	11.55	13	150	16	185	7.27	0.08	10		
		09/08/01	11.76	15	176	18	212	6.95	0	10		
		09/09/01	22.56	20	451	25	564	7.23	0.08	10		
		09/10/01	14.11	14	198	19	268	7.24	0	18		
		09/11/01	11.91	14	167	17	202	7.18	0	36		
		09/12/01	11.56	16	185	16	185	7.17	0.03	10		
		09/13/01	10.38	14	145	11	114	7.15	0	10		
		09/14/01	10.06	18	181	10	101	7.2	0	18		
		09/15/01	9.3	15	140	14	130	7.09	0	10		
		09/16/01	9.3	14	130	9	84	7.23	0.11	10		
		09/17/01	9.95	23	229	14	139	7.21	0.03	10		
		09/18/01	9.7	18	175	16	155	7.19	0	10		
		09/19/01	10.37	17	176	11	114	7.28	0.19	10		
		09/20/01	8.61	18	155	12	103	7.23	0	18		
		09/21/01	9.76	20	195	14	137	7.18	0.02	10		
		09/22/01	8.73	18	157	14	122	7.29	0.03	10		
		09/23/01	9	18	162	10	90	7.2	0.18	10		
		09/24/01	9.13	16	146	14	128	7.12	0.17	10		
		09/25/01	8.98	24	216	15	135	7.17	0.01	10		
		09/26/01	10.03	28	281	18	181	7.24	0.22	27		
		09/27/01	9.69	33	320	10	97	7.28	0.23	10		
		09/28/01	7.82	18	141	16	125	7.3	0.43	10		
		09/29/01	7.8	19	148	16	125	7.31	0.37	10		
		09/30/01	7.85	20	157	10	79	7.28	0.53	10		
2001	October	10/01/01	8.89	22	196	14	124	6.8	0.13	10		
		10/02/01	8.26	16	132	6	50	7.28	0	27		
		10/03/01	8.93	22	196	14	125	7.26	0	10		
		10/04/01	8.82	24	212	10	88	7.21	0.2	10		
		10/05/01	9.8	19	186	16	157	7.28	0.08	10		
		10/06/01	12.32	19	234	16	197	7.09	0.73	10		
		10/07/01	8.47	11	93	13	110	7.04	0.24	10		
		10/08/01	8.86	20	177	10	89	7.08	0.57	10		
		10/09/01	9.3	22	205	14	130	7.27	0	15000		
		10/10/01	11.42	28	320	18	206	7.18	0.14	54		
		10/11/01	15.7	28	440	23	361	7.15	0.02	10		
		10/12/01	11.14	17	189	14	156	6.68	0	36		
		10/13/01	28.51	22	627	24	684	7.12	0	18		
		10/14/01	14.28	12	171	19	271	7.32	0	10		
		10/15/01	11.47	18	206	20	229	7.24	0	10		
		10/16/01	10.95	23	252	23	252	7.23	0	36		
		10/17/01	9.94	20	199	14	139	7.32	0	3500		
		10/18/01	9.75	17	166	32	312	7.3	0	10		
		10/19/01	9.7	25	243	16	155	7.28	0	135		
		10/20/01	8.77	18	158	14	123	7.25	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		10/21/01	8.86	25	222	13	115	7.21	0	10		
		10/22/01	10.06	21	211	9	91	7.16	0.03	10		
		10/23/01	10.09	22	222	12	121	7.15	0	36		
		10/24/01	10.06	21	211	12	121	7.13	0.03	10		
		10/25/01	9.18	19	174	14	129	7.24	0.1	10		
		10/26/01	9	21	189	16	144	7.24	0.39	10		
		10/27/01	9.24	18	166	20	185	7.25	0.32	10		
		10/28/01	8.37	23	193	12	100	7.16	0	10		
		10/29/01	9.42	28	264	14	132	7.22	0.22	10		
		10/30/01	8.78	22	193	10	88	7.23	0	10		
		10/31/01	9.47	22	208	16	152	7.2	0	36		
2001	November	11/01/01	9.39	21	197	14	131	7.24	0	63	18.7	65.7
		11/02/01	9.49	18	171	14	133	7.27	0	36	20.2	68.4
		11/03/01	8.75	15	131	12	105	7.25	0	10	22.2	72.0
		11/04/01	8.31	18	150	9	75	7.25	0.22	10	20.3	68.5
		11/05/01	9.02	22	198	16	144	7.21	0.02	18	16.6	61.9
		11/06/01	9.06	24	217	13	118	7.18	0	10	17.3	63.1
		11/07/01	9.33	20	187	14	131	7.15	0	45	18.0	64.4
		11/08/01	9.32	22	205	27	252	7.18	0.04	10	19.2	66.6
		11/09/01	9.08	19	173	14	127	7.22	0.19	10	18.5	65.3
		11/10/01	8.93	29	259	10	89	7.26	0.19	18	18.9	66.0
		11/11/01	8.53	14	119	14	119	7.26	0.52	10	18.9	66.0
		11/12/01	9.22	22	203	18	166	7.32	0.08	10	17.8	64.0
		11/13/01	9.34	18	168	18	168	7.22	0.01	10	19.8	67.6
		11/14/01	6.71	21	141	12	81	7.27	0.27	10	20.1	68.2
		11/15/01	9.81	--	--	20	196	7.16	0.11	10	21.0	69.8
		11/16/01	9.03	--	--	16	144	7.24	0.22	10	19.9	67.8
		11/17/01	8.1	--	--	23	186	7.27	0.06	18	21.2	70.2
		11/18/01	8.12	--	--	23	187	7.22	0.04	10	21.4	70.5
		11/19/01	8.78	--	--	16	140	7.15	0.02	10	22.3	72.1
		11/20/01	--	--	--	--	--	--	--	--	20.5	68.9
		11/21/01	--	--	--	--	--	--	--	--	18.8	65.8
		11/22/01	--	--	--	--	--	--	--	--	21.7	71.1
		11/23/01	--	--	--	--	--	--	--	--	22.9	73.2
		11/24/01	--	--	--	--	--	--	--	--	18.5	65.3
		11/25/01	--	--	--	--	--	--	--	--	17.0	62.6
		11/26/01	--	--	--	--	--	--	--	--	17.6	63.7
		11/27/01	--	--	--	--	--	--	--	--	18.5	65.3
		11/28/01	--	--	--	--	--	--	--	--	19.3	66.7
		11/29/01	--	--	--	--	--	--	--	--	19.7	67.5
		11/30/01	--	--	--	--	--	--	--	--	19.8	67.6
2001	December	12/01/01	8.75	16	140	14	123	7.09	0.08	10		
		12/02/01	8.61	29	250	10	86	6.98	0.29	10		
		12/03/01	8.67	27	234	18	156	7.2	0.07	10		
		12/04/01	9.06	26	236	13	118	7.13	0.19	10		
		12/05/01	9.63	23	221	12	116	7.17	0	10		
		12/06/01	8.95	20	179	13	116	7.2	0.46	10		
		12/07/01	9.09	14	127	12	109	6.86	0.21	10		
		12/08/01	8.17	14	114	14	114	7.28	0.07	10		
		12/09/01	8.51	16	136	10	85	7.18	0.11	10		
		12/10/01	8.69	22	191	12	104	7.1	0.02	10		
		12/11/01	9.13	18	164	14	128	7.1	0	18		
		12/12/01	8.59	21	180	14	120	7.14	0	10		
		12/13/01	25.67	28	719	60	1,540	7.25	0.31	10		
		12/14/01	12.5	15	188	13	163	6.91	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		12/15/01	9.69	15	145	22	213	7.03	0	10		
		12/16/01	9.1	22	200	12	109	7.04	0	10		
		12/17/01	13.45	22	296	16	215	7.19	0.07	180		
		12/18/01	9.41	16	151	11	104	7.17	0	54		
		12/19/01	9.21	19	175	12	111	7.2	0	10		
		12/20/01	8.65	22	190	14	121	7.23	0	10		
		12/21/01	8.34	22	183	20	167	7.16	0	10		
		12/22/01	9.41	20	188	12	113	7.16	0	10		
		12/23/01	8.55	18	154	10	86	7.29	0	10		
		12/24/01	8.45	21	177	17	144	7.3	0.37	10		
		12/25/01	7.53	18	136	10	75	7.2	0.01	10		
		12/26/01	8.77	22	193	13	114	7.03	0.09	10		
		12/27/01	8.33	24	200	15	125	7.19	0	162		
		12/28/01	12.94	32	414	28	362	7.13	0	135		
		12/29/01	8.58	27	232	9	77	7.24	0	10		
		12/30/01	7.86	37	291	20	157	6.68	0	54		
		12/31/01	8.45	27	228	23	194	7.16	0.07	10		
2002	January	01/01/02	9.65	32	309	22	212	7.16	0	10		
		01/02/02	11.08	36	399	22	244	7.06	0.4	10		
		01/03/02	9.74	40	390	24	234	7.11	0	108		
		01/04/02	9.4	38	357	23	216	7.2	0	72		
		01/05/02	21.77	30	653	36	784	7.22	0	10		
		01/06/02	12.11	22	266	22	266	7.11	0	10		
		01/07/02	10.67	32	341	27	288	7.2	0	10		
		01/08/02	9.99	41	410	24	240	7.25	0	15000		
		01/09/02	9.39	29	272	23	216	7.07	0	6000		
		01/10/02	9.87	34	336	28	276	7.3	0	54		
		01/11/02	9.68	29	281	20	194	7.22	0	135		
		01/12/02	18.86	34	641	30	566	7.37	0	1454		
		01/13/02	9.95	28	279	16	159	7.2	0	10		
		01/14/02	10.31	24	247	24	247	7.18	0	10		
		01/15/02	9.27	46	426	16	148	7.19	0	10		
		01/16/02	9.8	27	265	28	274	7.23	0	144		
		01/17/02	8.57	38	326	28	240	7.23	0	117		
		01/18/02	9.34	36	336	30	280	7.29	0	10		
		01/19/02	20.3	34	690	33	670	7.24	0	63		
		01/20/02	11.37	28	318	30	341	7.19	0	10		
		01/21/02	10.94	48	525	28	306	7.24	0	10		
		01/22/02	10.8	39	421	26	281	7.24	0	60000		
		01/23/02	10.88	38	413	27	294	7.2	0	29		
		01/24/02	12.48	42	524	23	287	7.25	0	454		
		01/25/02	10.47	29	304	24	251	7.16	0	10		
		01/26/02	10.46	26	272	26	272	7.23	0.03	10		
		01/27/02	9.57	28	268	17	163	7.11	0.05	18		
		01/28/02	10.25	28	287	26	267	7.08	0	10		
		01/29/02	10.56	30	317	18	190	7.01	0	72		
		01/30/02	10.63	34	361	16	170	7.04	0	63		
		01/31/02	16.49	41	676	26	429	7.12	0	63		
2002	Febuary	02/01/02	14.29	25	357	26	372	6.69	0.26	10		
		02/02/02	10.78	28	302	30	323	6.37	0	10		
		02/03/02	10.05	23	231	17	171	7	0.19	10		
		02/04/02	10.64	27	287	20	213	7.16	0	10		
		02/05/02	13.34	31	414	22	293	7.16	0	10		
		02/06/02	14.63	18	263	20	293	7.16	0.31	10		
		02/07/02	11.72	27	316	20	234	7.26	0.59	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		02/08/02	9.71	24	233	21	204	7.09	0.01	10		
		02/09/02	9.86	27	266	19	187	7.12	0	10		
		02/10/02	8.86	19	168	12	106	7.05	0.06	10		
		02/11/02	9.67	29	280	28	271	6.91	0	--		
		02/12/02	8.84	24	212	21	186	7	0	18		
		02/13/02	9.65	32	309	16	154	7.09	0	18		
		02/14/02	9.63	26	250	22	212	7.05	0	108		
		02/15/02	10.25	23	236	19	195	7	0	27		
		02/16/02	8.82	23	203	18	159	7.17	0	10		
		02/17/02	8.58	25	215	28	240	7.16	0	10		
		02/18/02	9.49	30	285	22	209	6.98	0	10		
		02/19/02	12.7	32	406	31	394	7.01	0	18		
		02/20/02	11.99	32	384	36	432	7.13	0	10		
		02/21/02	9.81	25	245	23	226	6.95	0	10		
		02/22/02	9.64	28	270	21	202	7.2	0	10		
		02/23/02	8.97	25	224	20	179	7.14	0	10		
		02/24/02	8.71	20	174	18	157	7.09	0.11	10		
		02/25/02	9.57	21	201	22	211	7.08	0.14	10		
		02/26/02	9.72	22	214	18	175	7.05	0	10		
		02/27/02	10.33	22	227	28	289	7.11	0	10		
		02/28/02	9.88	21	207	22	217	7.18	0	10		
2002	March	03/01/02	33.68	15	505	50	1,684	7.02	0	10		
		03/02/02	21.8	28	610	26	567	7.02	0.05	10		
		03/03/02	13.18	24	316	22	290	7.3	0.02	10		
		03/04/02	11.27	24	270	22	248	6.6	0.03	10		
		03/05/02	10.66	29	309	22	235	7.1	0	10		
		03/06/02	10.13	21	213	26	263	7.12	0	10		
		03/07/02	9.79	23	225	24	235	7.1	0	18		
		03/08/02	9.99	24	240	25	250	7.04	0	10		
		03/09/02	11.37	25	284	25	284	7.28	0	10		
		03/10/02	8.81	24	211	20	176	7.04	0	10		
		03/11/02	11.82	26	307	27	319	7.07	0	10		
		03/12/02	11.26	32	360	26	293	7.16	0	10		
		03/13/02	9.8	27	265	24	235	7.05	0	18		
		03/14/02	9.76	32	312	17	166	7.12	0	36		
		03/15/02	9.62	26	250	16	154	7.14	0	10		
		03/16/02	9.05	21	190	20	181	7.24	0.03	81		
		03/17/02	8.78	21	184	21	184	7.26	0	210		
		03/18/02	9.4	34	320	26	244	7.08	0	11000		
		03/19/02	9.19	27	248	21	193	7.08	0	10		
		03/20/02	9.45	24	227	12	113	7.12	0	10		
		03/21/02	8.72	31	270	20	174	7.16	0	10		
		03/22/02	8.35	26	217	24	200	7.25	0	10		
		03/23/02	7.91	22	174	19	150	7.16	0	10		
		03/24/02	7.94	18	143	12	95	6.96	0	10		
		03/25/02	9.65	36	347	30	290	7.12	0	10		
		03/26/02	30.27	25	757	29	878	6.88	0.01	10		
		03/27/02	14.29	26	372	22	314	7.16	0	10		
		03/28/02	11.87	18	214	16	190	7.22	0	10		
		03/29/02	10.51	24	252	14	147	7.18	0	10		
		03/30/02	9.51	17	162	16	152	7.16	0	10		
		03/31/02	29.12	18	524	23	670	7.3	0	45		
2002	April	04/01/02	15.25	23	351	20	305	7.15	0.24	10		
		04/02/02	12.41	24	298	27	335	7.11	0	10		
		04/03/02	10.27	20	205	20	205	7.12	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data									
			Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		04/04/02	9.83	27	265	18	177	7.18	0	230		
		04/05/02	9.78	30	293	25	245	7.16	0	2400		
		04/06/02	8.54	24	205	24	205	7.11	0	45		
		04/07/02	9.08	26	236	46	418	7.14	0	10		
		04/08/02	40.02	17	680	32	1,281	7.07	0	27		
		04/09/02	22.51	23	518	25	563	7.04	0.37	10		
		04/10/02	15.6	34	530	29	452	7.19	0	10		
		04/11/02	17.86	33	589	28	500	6.99	0	2000		
		04/12/02	15.05	24	361	31	467	7.1	0	36		
		04/13/02	11.83	26	308	18	213	7.18	0	10		
		04/14/02	10.71	27	289	26	278	7.19	0	10		
		04/15/02	11.43	42	480	38	434	7.22	0	72		
		04/16/02	10.63	34	361	27	287	7.18	0	60000		
		04/17/02	11.11	32	356	22	244	7.13	0	16000		
		04/18/02	10.13	27	274	22	223	7.21	0	60000		
		04/19/02	9.5	22	209	15	143	7.22	0	60000		
		04/20/02	9.2	20	184	10	92	7.22	0	440		
		04/21/02	8.75	21	184	19	166	7.22	0	171		
		04/22/02	9.6	26	250	20	192	7.04	0	180		
		04/23/02	9.44	26	245	20	189	7.26	0	108		
		04/24/02	9.49	25	237	18	171	7.25	0	10		
		04/25/02	9.56	--	--	22	210	7.03	0	10		
		04/26/02	9.43	19	179	18	170	7.04	0	10		
		04/27/02	8.92	18	161	12	107	7.11	0	10		
		04/28/02	8.92	19	169	20	178	7.1	0	10		
		04/29/02	9.48	23	218	17	161	7.02	0	27		
		04/30/02	9.39	23	216	17	160	7	0	18		
2002	May	05/01/02	9.17	21	193	19	174	7.03	0	18		
		05/02/02	9.69	22	213	16	155	7.08	0	10		
		05/03/02	9.78	19	186	9	88	7.06	0	10		
		05/04/02	8.26	16	132	23	190	7.07	0	10		
		05/05/02	9.4	14	132	10	94	7.03	0	10		
		05/06/02	9.42	19	179	16	151	7.04	0	10		
		05/07/02	9.1	17	155	24	218	7.02	0	10		
		05/08/02	9.14	17	155	16	146	7.1	0	10		
		05/09/02	9.07	16	145	12	109	7.12	0	10		
		05/10/02	8.44	18	152	12	101	7.12	0.1	10		
		05/11/02	7.86	16	126	14	110	7.14	0.02	10		
		05/12/02	7.79	16	125	16	125	7.16	0.04	10		
		05/13/02	10.24	17	174	22	225	7.1	0	370		
		05/14/02	7.98	18	144	13	104	7.08	0	18		
		05/15/02	8.28	17	141	18	149	7.03	0	10		
		05/16/02	8.35	18	150	16	134	7.07	0	10		
		05/17/02	14.86	27	401	29	431	7.09	0	10		
		05/18/02	8.46	9	76	12	102	6.82	0.03	10		
		05/19/02	7.33	15	110	18	132	7.05	0	10		
		05/20/02	7.73	19	147	10	77	7.02	0	10		
		05/21/02	7.69	18	138	12	92	7.06	0	10		
		05/22/02	7.98	17	136	17	136	7.09	0	10		
		05/23/02	7.56	16	121	14	106	7.05	0	10		
		05/24/02	7.96	15	119	12	96	7.02	0	180		
		05/25/02	7.35	12	88	14	103	7.2	0	10		
		05/26/02	7.11	15	107	18	128	7.16	0	10		
		05/27/02	7.66	14	107	10	77	7.1	0.02	10		
		05/28/02	7.87	16	126	22	173	7.17	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data									
			Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		05/29/02	7.87	20	157	16	126	7.16	0	10		
		05/30/02	15.41	44	678	30	462	7.17	0	10		
		05/31/02	10.83	13	141	24	260	6.85	0	10		
2002	June	06/01/02	8.08	15	121	18	145	6.99	0	27		
		06/02/02	7.55	13	98	22	166	7.09	0	10		
		06/03/02	8.43	20	169	20	169	6.95	0	10		
		06/04/02	8.26	18	149	15	124	7.1	0	10		
		06/05/02	15.73	32	503	33	519	7.13	0	10		
		06/06/02	12.65	14	177	19	240	6.94	0.04	10		
		06/07/02	11.43	18	206	15	171	7.01	0	108		
		06/08/02	9.01	13	117	12	108	7.07	0	18		
		06/09/02	9.38	14	131	16	150	7.13	0	10		
		06/10/02	9.35	15	140	18	168	7.08	0.01	27		
		06/11/02	8.5	14	119	20	170	7.04	0	144		
		06/12/02	8.46	21	178	16	135	7.03	0	10		
		06/13/02	8.16	18	147	16	131	7.07	0	72		
		06/14/02	8.05	16	129	15	121	7.06	0	18		
		06/15/02	7.27	17	124	14	102	7.1	0	10		
		06/16/02	7.19	13	93	18	129	7.09	0	10		
		06/17/02	7.79	17	132	20	156	7.01	0	10		
		06/18/02	8.11	18	146	23	187	7.02	0	182		
		06/19/02	9.04	17	154	24	217	7.04	0	36		
		06/20/02	15.04	29	436	30	451	7	0	18		
		06/21/02	9.04	15	136	18	163	6.6	0	10		
		06/22/02	7.83	11	86	7	55	6.98	0	45		
		06/23/02	7.83	14	110	13	102	7.06	0	36		
		06/24/02	8.51	21	179	16	136	6.98	0	10		
		06/25/02	15.56	18	280	26	405	7.05	0	10		
		06/26/02	19.3	16	309	31	598	6.84	0.02	10		
		06/27/02	14.69	18	264	23	338	6.89	0	45		
		06/28/02	22.67	13	295	28	635	6.98	0	81		
		06/29/02	12.64	10	126	25	316	6.78	0	10		
		06/30/02	8.99	13	117	10	90	6.91	0	10		
2002	July	07/01/02	11.17	21	235	19	212	7.02	0	10		
		07/02/02	15.47	23	356	19	294	6.56	0.1	10		
		07/03/02	10.42	16	167	19	198	7.11	0.05	10		
		07/04/02	8.65	15	130	18	156	7.2	0.1	10		
		07/05/02	10.73	20	215	23	247	6.99	0	10		
		07/06/02	9	10	90	16	144	7	0.02	81		
		07/07/02	13.2	20	264	24	317	7.05	0	10		
		07/08/02	14.78	19	281	20	296	6.75	0	18		
		07/09/02	20.9	20	418	33	690	6.9	0	18		
		07/10/02	12.48	18	225	16	200	6.94	0	10		
		07/11/02	11.06	15	166	16	177	6.97	0	72		
		07/12/02	10.06	14	141	10	101	6.95	0	18		
		07/13/02	8.08	16	129	26	210	7.12	0	45		
		07/14/02	16.06	25	402	34	546	7.01	0.02	2400		
		07/15/02	10.16	16	163	20	203	6.93	0.02	10		
		07/16/02	9.56	15	143	18	172	7	0	10		
		07/17/02	9.6	17	163	19	182	7.04	0	--		
		07/18/02	8.85	16	142	14	124	7.04	0	27		
		07/19/02	8.33	16	133	13	108	6.92	0	18		
		07/20/02	7.98	16	128	12	96	7.03	0	18		
		07/21/02	7.65	14	107	6	46	7.12	0	10		
		07/22/02	10.23	21	215	18	184	6.99	0	54		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		07/23/02	9.17	16	147	15	138	7.16	0	18		
		07/24/02	11.82	22	260	15	177	6.97	0	18		
		07/25/02	9.15	12	110	10	92	6.94	0	10		
		07/26/02	8.65	15	130	16	138	7	0	27		
		07/27/02	7.65	16	122	8	61	6.92	0	10		
		07/28/02	7.65	15	115	13	99	6.95	0.04	18		
		07/29/02	8.62	18	155	16	138	6.96	0.04	636		
		07/30/02	9.82	21	206	18	177	6.77	0	99		
		07/31/02	16.75	27	452	32	536	6.93	0	90		
2002	August	08/01/02	9.89	--	--	16	158	6.68	0.02	54		
		08/02/02	9.08	--	--	16	145	6.92	0	117		
		08/03/02	7.78	--	--	14	109	7.02	0	72		
		08/04/02	7.49	--	--	10	75	7.06	0	45		
		08/05/02	8.97	--	--	14	126	6.99	0.01	99		
		08/06/02	8.53	20	171	14	119	7.04	0	182		
		08/07/02	8.57	16	137	14	120	6.9	0	54		
		08/08/02	14.16	27	382	22	312	7.02	0	27		
		08/09/02	9.09	--	--	24	218	6.94	0	10		
		08/10/02	7.54	--	--	12	90	7.13	0	18		
		08/11/02	7.96	--	--	14	111	7.01	0	18		
		08/12/02	8.15	--	--	11	90	7.01	0	10		
		08/13/02	8.49	--	--	18	153	7.05	0	10		
		08/14/02	8.59	19	163	15	129	7.04	0	45		
		08/15/02	13.6	--	--	24	326	7.04	0	126		
		08/16/02	8.89	14	124	13	116	6.82	0	36		
		08/17/02	8.33	--	--	16	133	7.15	0	36		
		08/18/02	7.69	--	--	10	77	7.04	0	10		
		08/19/02	9.37	--	--	12	112	7.09	0	10		
		08/20/02	15	29	435	22	330	7.15	0	380		
		08/21/02	10.72	10	107	16	172	7.07	0.12	10		
		08/22/02	19.65	7	138	23	452	7.08	0	18		
		08/23/02	12.12	--	--	12	145	6.94	0	10		
		08/24/02	9.04	--	--	12	108	7.12	0	10		
		08/25/02	8.74	--	--	5	44	7.12	0	10		
		08/26/02	9.21	13	120	11	101	7.03	0	10		
		08/27/02	8.17	14	114	12	98	7.08	0	10		
		08/28/02	8.57	18	154	18	154	7.16	0	90		
		08/29/02	9.3	7	65	14	130	7.15	0	10		
		08/30/02	8.17	35	286	10	82	7.18	0	10		
		08/31/02	11.84	22	260	11	130	7.17	0	36		
2002	September	09/01/02	7.33	12	88	15	110	7.16	0	10		
		09/02/02	8.19	5	41	11	90	7.13	0	10		
		09/03/02	9.27	8	74	12	111	7.21	0	18		
		09/04/02	11.24	14	157	22	247	7.1	0	153		
		09/05/02	9.34	11	103	14	131	6.98	0	162		
		09/06/02	9.26	10	93	14	130	7.03	0	27		
		09/07/02	12.4	16	198	14	174	7.02	0	144		
		09/08/02	14.83	8	119	19	282	6.91	0.42	18		
		09/09/02	9.9	11	109	16	158	7.12	0	81		
		09/10/02	8.99	12	108	15	135	7.18	0	36		
		09/11/02	9.11	14	128	16	146	7.09	0	1,000		
		09/12/02	8.56	11	94	9	77	7.21	0	63		
		09/13/02	9.38	8	75	9	84	7.19	0	27		
		09/14/02	9.41	9	85	6	56	7.23	0	10		
		09/15/02	8.54	5	43	10	85	7.19	0.09	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		09/16/02	12.43	13	162	24	298	7.15	0.02	10		
		09/17/02	10.37	11	114	13	135	7.1	0	81		
		09/18/02	9.49	8	76	15	142	7.09	0	54		
		09/19/02	9.52	14	133	20	190	7.17	0	36		
		09/20/02	11.35	5	57	14	159	7.12	0	18		
		09/21/02	8.86	6	53	12	106	7.1	0	27		
		09/22/02	8.71	8	70	8	70	7.09	0	10		
		09/23/02	9.41	16	151	12	113	7.01	0	10		
		09/24/02	12.75	35	446	24	306	6.95	0	18		
		09/25/02	34.88	18	628	32	1,116	7.12	0	117		
		09/26/02	27.63	20	553	30	829	6.82	0.14	36		
		09/27/02	13.23	18	238	14	185	7.22	0	250		
		09/28/02	10.89	14	152	10	109	7.25	0	10		
		09/29/02	9.74	15	146	8	78	7.26	0.02	10		
		09/30/02	10.78	17	183	16	172	7.22	0	10		
2002	October	10/01/02	10.05	19	191	15	151	7.24	0	10		
		10/02/02	13.93	28	390	28	390	7.27	0	10		
		10/03/02	28.94	16	463	25	724	6.51	0.41	10		
		10/04/02	15.11	16	242	28	423	7.14	0	10		
		10/05/02	15.41	20	308	24	370	7.21	0	72		
		10/06/02	11.88	12	143	8	95	6.96	0	10		
		10/07/02	10.93	18	197	18	197	7.23	0	10		
		10/08/02	10.82	28	303	22	238	7.25	0	72		
		10/09/02	24.79	17	421	18	446	7.25	0	1,000		
		10/10/02	14.35	15	215	22	316	7.03	0.04	10		
		10/11/02	12.07	16	193	12	145	7.15	0	10		
		10/12/02	10.05	17	171	12	121	7.29	0	10		
		10/13/02	9.63	17	164	12	116	7.25	0	10		
		10/14/02	10.03	21	211	10	100	7.28	0	10		
		10/15/02	9.8	20	196	14	137	7.28	0	10		
		10/16/02	9.06	20	181	6	54	7.3	0	10		
		10/17/02	9.11	24	219	12	109	7.32	0	10		
		10/18/02	9.35	20	187	15	140	7.31	0	10		
		10/19/02	9.21	19	175	17	157	7.2	0.21	10		
		10/20/02	9.26	17	157	17	157	7.04	0.03	10		
		10/21/02	10.01	17	170	20	200	7.11	0.13	10		
		10/22/02	9.59	19	182	11	105	7.15	0	10		
		10/23/02	9.36	20	187	36	337	7.17	0.08	10		
		10/24/02	9.78	--	--	13	127	7.18	0.05	10		
		10/25/02	20.05	--	--	35	702	7.21	0.04	10		
		10/26/02	18.36	16	294	27	496	6.87	0.3	10		
		10/27/02	28.14	--	--	23	647	7.17	0	10		
		10/28/02	20.55	--	--	19	390	7.28	0.41	171		
		10/29/02	36.3	--	--	25	908	7.48	0.48	18		
		10/30/02	10.97	30	329	15	165	7.17	0.19	10		
		10/31/02	12.06	23	277	18	217	7.25	0	10		
2002	November	11/01/02	10.73	23	247	18	193	7.26	0	10		
		11/02/02	9.55	22	210	12	115	7.31	0	250		
		11/03/02	11.93	28	334	17	203	7.09	0	10		
		11/04/02	12.31	28	345	25	308	7.28	0	153		
		11/05/02	27.79	28	778	30	834	7.21	0	1,545		
		11/06/02	13.25	23	305	18	239	7.24	0.04	10		
		11/07/02	10.7	24	257	12	128	7.25	0	30,000		
		11/08/02	10.4	26	270	18	187	7.17	0	13,000		
		11/09/02	9.95	22	219	12	119	7.2	0	55,000		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data									
			Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		11/10/02	9.33	21	196	16	149	7.21	0	54		
		11/11/02	13.01	34	442	24	312	7.18	0	290		
		11/12/02	10.03	24	241	17	171	7.12	0	6,182		
		11/13/02	9.14	30	274	12	110	7.14	0	60,000		
		11/14/02	9.12	24	219	13	119	7.2	0	27		
		11/15/02	10.74	38	408	22	236	7.17	0	90		
		11/16/02	9.05	26	235	26	235	7.05	0.04	10		
		11/17/02	8.03	26	209	18	145	7.22	0.02	10		
		11/18/02	8.75	--	--	16	140	7.22	0	10		
		11/19/02	10.23	28	286	15	153	7.2	0	2,273		
		11/20/02	16.4	36	590	30	492	7.23	0	360		
		11/21/02	10.23	27	276	16	164	7.06	0	10		
		11/22/02	9.29	24	223	17	158	7.17	0	430		
		11/23/02	8.57	25	214	18	154	7.17	0	10		
		11/24/02	9.1	22	200	15	137	7.11	0.2	10		
		11/25/02	8.74	27	236	12	105	7.13	0.34	10		
		11/26/02	8.77	28	246	14	123	6.83	0	54		
		11/27/02	7.67	28	215	18	138	7.25	0	36		
		11/28/02	6.14	28	172	16	98	7.32	0	380		
		11/29/02	6.39	28	179	18	115	7.25	0.06	10		
		11/30/02	8.09	28	227	24	194	7.25	0.06	36		
2002	December	12/01/02	6.62	23	152	8	53	7.25	0	10	19.5	67.1
		12/02/02	7.18	28	201	16	115	7.17	0	63	17.8	64.0
		12/03/02	15.61	56	874	42	656	7.2	0	22,000	17.6	63.7
		12/04/02	27.43	40	1,097	44	1,207	6.77	0	10	18.3	64.9
		12/05/02	15.28	24	367	20	306	7.23	0.38	10	16.9	62.4
		12/06/02	10.43	32	334	32	334	7.1	0	10	18.5	65.3
		12/07/02	8.76	27	237	18	158	7.19	0	72	18.5	65.3
		12/08/02	8.74	34	297	19	166	7.06	0.15	10	16.6	61.9
		12/09/02	11.17	40	447	28	313	7.18	0.14	10	17.8	64.0
		12/10/02	11.81	32	378	26	307	7.21	0	10	19.0	66.2
		12/11/02	9.84	30	295	21	207	7.22	0	126	19.3	66.7
		12/12/02	11.7	55	644	31	363	7.23	0	60,000	17.3	63.1
		12/13/02	10.03	32	321	26	261	7.16	0	108	16.5	61.7
		12/14/02	8.02	26	209	14	112	6.99	0	10	16.5	61.7
		12/15/02	7.13	24	171	11	78	7.39	0	10	17.0	62.6
		12/16/02	11.62	34	395	20	232	7.09	0	63	17.2	63.0
		12/17/02	8.69	32	278	19	165	6.99	0	135	18.9	66.0
		12/18/02	7.39	36	266	22	163	7.16	0	5,000	14.6	58.3
		12/19/02	10.27	32	329	19	195	7.14	0	36	15.8	60.4
		12/20/02	7.89	33	260	18	142	7.1	0	230	16.8	62.2
		12/21/02	7.89	33	260	17	134	7.25	0	144	18.0	64.4
		12/22/02	7.5	36	270	24	180	7.07	0	10	20.1	68.2
		12/23/02	26.62	51	1,358	58	1,544	7.15	0.06	10	19.3	66.7
		12/24/02	27.37	19	520	31	848	6.91	0	10	14.4	57.9
		12/25/02	12.04	24	289	22	265	7.33	0.74	10	13.4	56.1
		12/26/02	10.65	38	405	27	288	7.13	0	10	15.9	60.6
		12/27/02	9.99	36	360	24	240	7.22	0	10	16.8	62.2
		12/28/02	9.25	30	278	18	167	7.1	0	10	17.0	62.6
		12/29/02	8.67	28	243	18	156	7.18	0	10	17.3	63.1
		12/30/02	10.12	45	455	31	314	7.25	0	180	20.2	68.4
		12/31/02	21.05	32	674	38	800	7.31	0	29,000	19.3	66.7
2003	January	01/01/03	12.69	25	317	24	305	7.08	0.11	10		–
		01/02/03	11.08	30	332	22	244	7.18	0	10	17.8	64.0
		01/03/03	10.14	32	324	17	172	7.03	0	18	17.6	63.7

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

Year	Month	Date	Effluent Data Flow (MGD)	BOD5 (mg/L)	BOD5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/04/03	9.36	32	300	20	187	7.25	0	27	18.3	64.9
		01/05/03	8.81	26	229	15	132	7.57	0.02	10	16.9	62.4
		01/06/03	9.31		--	22	205	7.11	0	10	18.5	65.3
		01/07/03	8.74	36	315	22	192	7.23	0	200	18.5	65.3
		01/08/03	8.47	36	305	23	195	7.17	0	10	16.6	61.9
		01/09/03	9.76	34	332	18	176	6.94	0	10	17.8	64.0
		01/10/03	8.5	32	272	20	170	7.12	0.02	72	19.0	66.2
		01/11/03	8.81	36	317	18	159	7.33	0	56,000	19.3	66.7
		01/12/03	8.44	28	236	22	186	7.04	0.16	10	17.3	63.1
		01/13/03	9.2	29	267	25	230	7.01	0.03	10	16.5	61.7
		01/14/03	8.71	26	226	25	218	7.08	0	10	16.5	61.7
		01/15/03	8.7	32	278	28	244	7.11	0	10	17.0	62.6
		01/16/03	9.08	30	272	21	191	7.21	0	2,000	17.2	63.0
		01/17/03	8.88	30	266	22	195	7.14	0	10	18.9	66.0
		01/18/03	8.82	25	221	20	176	7.07	0	10	14.6	58.3
		01/19/03	8.05	25	201	30	242	7.06	0.09	10	15.8	60.4
		01/20/03	9.28	30	278	20	186	7.06	0.01	10	16.8	62.2
		01/21/03	9.1	35	319	18	164	7.09	0	10	18.0	64.4
		01/22/03	9.29	30	279	20	186	7.14	0	117	20.1	68.2
		01/23/03	9.69	39	378	18	174	7.14	0	10	19.3	66.7
		01/24/03	10.44	36	376	24	251	7.07	0.48	10	14.4	57.9
		01/25/03	10.06	24	241	20	201	7.21	0	10	13.4	56.1
		01/26/03	12.77	28	358	24	306	7.15	0	10	15.9	60.6
		01/27/03	10.1	28	283	24	242	7.03	0.06	10	16.8	62.2
		01/28/03	9.21	30	276	20	184	7.14	0	10	17.0	62.6
		01/29/03	10.69	34	363	22	235	7.09	0	18	17.3	63.1
		01/30/03	9.85	35	345	24	236	7.06	0	10	17.8	64.0
		01/31/03	9.3	38	353	18	167	7.01	0	1,273	17.6	63.7
2003	February	02/01/03	8.52	34	290	20	170	6.94	0	10	18.3	64.9
		02/02/03	9.27	27	250	20	185	6.91	0.7	10	16.9	62.4
		02/03/03	9.05	40	362	20	181	6.96	0.29	10	18.5	65.3
		02/04/03	8.94	36	322	20	179	6.94	0	10	18.5	65.3
		02/05/03	8.89	40	356	20	178	6.93	0.42	10	16.6	61.9
		02/06/03	18.8	50	940	51	959	7.32	0.61	10	17.8	64.0
		02/07/03	12.05	42	506	26	313	7.26	0.28	10	19.0	66.2
		02/08/03	9.76	40	390	22	215	6.81	0.65	10	19.3	66.7
		02/09/03	11.04	48	530	27	298	7.28	0	10	17.3	63.1
		02/10/03	10.15	54	548	30	305	6.93	0	10	16.5	61.7
		02/11/03	9.32	48	447	25	233	6.95	0	273	16.5	61.7
		02/12/03	9.08	42	381	23	209	7.1	0	3,000	17.0	62.6
		02/13/03	9.22	48	443	23	212	7.05	0	2,182	17.2	63.0
		02/14/03	8.52	40	341	26	222	7.06	0	10	18.9	66.0
		02/15/03	24.39	33	805	43	1,049	7.3	0.75	10	14.6	58.3
		02/16/03	17.48	28	489	22	385	7.19	0.4	10	15.8	60.4
		02/17/03	12.86	24	309	16	206	7.24	0.38	10	16.8	62.2
		02/18/03	11.69	36	421	16	187	7.29	0	10	18.0	64.4
		02/19/03	10.94	30	328	18	197	7.22	0	51,000	20.1	68.2
		02/20/03	17.23	34	586	26	448	7.11	0	2,200	19.3	66.7
		02/21/03	38.77	22	853	34	1,318	7.76	0	153	14.4	57.9
		02/22/03	24.7	15	371	17	420	7.33	0	10	13.4	56.1
		02/23/03	15.13	18	272	16	242	7.21	0	10	15.9	60.6
		02/24/03	13.15	24	316	14	184	7.29	0	36	16.8	62.2
		02/25/03	14.03	23	323	18	253	7.17	0	4,100	17.0	62.6
		02/26/03	22.59	22	497	22	497	7.1	0.17	54	17.3	63.1
		02/27/03	10.93	24	262	18	197	6.9	0.13	10	20.2	68.4

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		02/28/03	13.16	22	290	20	263	7.01	0	10	19.3	66.7
2003	March	03/01/03	11.15	19	212	12	134	7.02	0	10		--
		03/02/03	9.91	67	664	38	377	6.88	0	10	17.8	64.0
		03/03/03	12	25	300	14	168	7.12	0	10	17.6	63.7
		03/04/03	10.45	20	209	16	167	7.11	0.33	63	18.3	64.9
		03/05/03	11.28	22	248	16	180	7.23	0.16	10	16.9	62.4
		03/06/03	22.14	30	664	31	686	7.34	0	380	18.5	65.3
		03/07/03	18.76	23	431	20	375	6.93	0.03	10	18.5	65.3
		03/08/03	14.53	25	363	21	305	7.18	0.46	10	16.6	61.9
		03/09/03	14.5	23	334	22	319	7.31	0.26	10	17.8	64.0
		03/10/03	12.02	33	397	24	288	7.3	0	10	19.0	66.2
		03/11/03	26.61	36	958	25	665	7.33	0	10	19.3	66.7
		03/12/03	13.02	28	365	20	260	7.16	0	10	17.3	63.1
		03/13/03	15.23	28	426	26	396	7.1	0	10	16.5	61.7
		03/14/03	11.39	22	251	22	251	7.14	0	10	16.5	61.7
		03/15/03	10.18	22	224	16	163	7.33	0	10	17.0	62.6
		03/16/03	13.17	25	329	21	277	7.36	0	10	17.2	63.0
		03/17/03	12.06	30	362	28	338	7.09	0.2	10	18.9	66.0
		03/18/03	14.28	35	500	28	400	7.21	0	1,364	14.6	58.3
		03/19/03	11.97	50	599	20	239	7.11	0	310	15.8	60.4
		03/20/03	10.84	42	455	20	217	7.22	0	10	16.8	62.2
		03/21/03	9.8	32	314	26	255	7.29	0	10	18.0	64.4
		03/22/03	9.24	29	268	18	166	7.27	0	36	20.1	68.2
		03/23/03	8.84	27	239	16	141	7.21	0	27	19.3	66.7
		03/24/03	9.35	35	327	19	178	7.25	0	10	14.4	57.9
		03/25/03	9.17	36	330	21	193	7.17	0	90	13.4	56.1
		03/26/03	10.37	20	207	22	228	7.19	0.17	10	15.9	60.6
		03/27/03	9.55	32	306	17	162	7.15	0.7	10	16.8	62.2
		03/28/03	9.04	30	271	17	154	7.08	0.04	10	17.0	62.6
		03/29/03	8.65	31	268	17	147	7.15	0.04	10	17.3	63.1
		03/30/03	8.19	32	262	20	164	7.03	0	10	20.2	68.4
		03/31/03	8.62	35	302	14	121	7.03	0	10	19.3	66.7
2003	April	04/01/03	8.74	38	332	22	192	7.13	0	6,000	17.8	64.0
		04/02/03	12.93	38	491	20	259	7.16	0.01	27	17.6	63.7
		04/03/03	8.92	36	321	17	152	7.23	0.5	10	18.3	64.9
		04/04/03	9.04	32	289	21	190	7.14	0.13	10	16.9	62.4
		04/05/03	18.11	38	688	46	833	7.06	0.04	10	18.5	65.3
		04/06/03	12.76	31	396	16	204	6.92	0.21	10	18.5	65.3
		04/07/03	29.87	30	896	38	1,135	7.01	0.44	10	16.6	61.9
		04/08/03	35.64	17	606	32	1,140	6.88	0.2	10	17.8	64.0
		04/09/03	18.22	22	401	21	383	7.3	0	10	19.0	66.2
		04/10/03	15.1	20	302	17	257	7.3	0	45	19.3	66.7
		04/11/03	11.93	26	310	20	239	7.27	0	27	17.3	63.1
		04/12/03	10.56	23	243	16	169	7.06	0.4	10	16.5	61.7
		04/13/03	9.51	11	105	10	95	7.06	0.41	10	16.5	61.7
		04/14/03	10.05	14	141	11	111	7.25	0	10	17.0	62.6
		04/15/03	9.57	27	258	17	163	7.25	0	10	17.2	63.0
		04/16/03	9.59	24	230	20	192	7.21	0	10	18.9	66.0
		04/17/03	9.56	22	210	20	191	7.11	0	10	14.6	58.3
		04/18/03	8.65	24	208	19	164	7.24	0	10	15.8	60.4
		04/19/03	8.51	22	187	18	153	7.21	0	10	16.8	62.2
		04/20/03	8.1	21	170	12	97	7.2	0	10	18.0	64.4
		04/21/03	9.04	29	262	20	181	7.13	0	10	20.1	68.2
		04/22/03	9.23	34	314	24	222	7.21	0	10	19.3	66.7
		04/23/03	9.11	31	282	20	182	7.3	0	10	14.4	57.9

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Monthly DMR Data Summary
December 1999 to May 2003

			Effluent Data									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		04/24/03	9.66	29	280	24	232	7.2	0	10	13.4	56.1
		04/25/03	9.13	30	274	21	192	7.2	0	10	15.9	60.6
		04/26/03	8.23	16	132	24	198	7.16	0	10	16.8	62.2
		04/27/03	8	26	208	17	136	7.2	0	10	17.0	62.6
		04/28/03	8.61	15	129	14	121	7.23	0	10	17.3	63.1
		04/29/03	8.96	18	161	16	143	7.28	0	10	20.2	68.4
		04/30/03	8.01	24	192	18	144	7.28	0	72	19.3	66.7
2003	May	05/01/03	8.8	23	202	20	176	7.24	0	10		
		05/02/03	8.6	21	181	14	120	7.24	0	10		
		05/03/03	8.01	22	176	19	152	7.24	0	10		
		05/04/03	8.15	20	163	18	147	7.2	0	10		
		05/05/03	8.69	23	200	22	191	6.95	0	10		
		05/06/03	8.94	24	215	18	161	7.06	0	10		
		05/07/03	9.68	23	223	22	213	7.08	0	10		
		05/08/03	8.22	21	173	16	132	7.22	0	10		
		05/09/03	8.25	30	248	20	165	7.2	0	10		
		05/10/03	8.16	23	188	18	147	7.22	0	10		
		05/11/03	7.83	23	180	19	149	7.19	0	10		
		05/12/03	8.31	30	249	20	166	7.15	0	45		
		05/13/03	8.11	23	187	15	122	7.06	0	10		
		05/14/03	8.24	22	181	20	165	7.08	0	10		
		05/15/03	8.45	20	169	16	135	7.23	0	10		
		05/16/03	8.38	18	151	19	159	7.23	0	10		
		05/17/03	8.46	23	195	14	118	7.08	0	10		
		05/18/03	7.34	20	147	14	103	7.19	0	10		
		05/19/03	7.89	18	142	16	126	7.03	0	10		
		05/20/03	9.12	21	192	22	201	7.08	0	10		
		05/21/03	8.77	23	202	24	210	7.26	0	10		
		05/22/03	8.21	18	148	12	99	7.24	0	10		
		05/23/03	7.99	21	168	18	144	7.21	0	10		
		05/24/03	7.4	23	170	20	148	7.08	0	27		
		05/25/03	7.32	22	161	28	205	7.07	0	10		
		05/26/03	8.08	19	154	16	129	7.15	0	10		
		05/27/03	7.86	21	165	15	118	7.17	0	10		
		05/28/03	7.94	32	254	22	175	7.1	0	10		
		05/29/03	7.95	20	159	16	127	7.13	0	10		
		05/30/03	8.47	22	186	18	152	7.18	0	10		
		05/31/03	7.78	20	156	22	171	7.13	0	10		
Average			10.43	23.81	251	18.82	213	7.12	0.03	1,922	21.48	70.7
Maximum			48.50	81.00	1,358	60.00	1,936	7.84	0.75	530,000	31.70	89.1
Minimum			4.92	5.00	41	3.00	22	6.37	0.00	9	8.41	47.1

APPENDIX B-4

BATON ROUGE CITY/PARISH WWTPS – MONTHLY EFFLUENT DMR DATA – SOUTH WWTP - DECEMBER 1999 TO MAY 2003

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
1999	December	12/01/99	25.65	50	1,283	42	1,077	6.73	0.25	10		
		12/02/99	30.96	18	557	22	681	7.9	0.25	10		
		12/03/99	24.61	24	591	18	443	6.79	0.23	10		
		12/04/99	24.28	44	1,068	30	728	6.87	0	340		
		12/05/99	25.69	32	822	16	411	7.11	0	27		
		12/06/99	24.87	29	721	22	547	6.83	0	210		
		12/07/99	23.61	24	567	22	519	6.91	0.01	144		
		12/08/99	22.49	42	945	36	810	7.05	0	135		
		12/09/99	25.96	21	545	18	467	7.02	0	90		
		12/10/99	23.86	27	644	24	573	6.87	0	90		
		12/11/99	24.5	34	833	36	882	7.56	0	54		
		12/12/99	36.25	48	1,740	32	1,160	6.79	0.04	310		
		12/13/99	29.98	28	839	24	720	6.62	0	36		
		12/14/99	23.34	18	420	24	560	7.07	0.19	54		
		12/15/99	20.6	29	597	23	474	7.05	0	10		
		12/16/99	23.75	31	736	12	285	7.56	0	81		
		12/17/99	24.58	39	959	36	885	6.98	0	10		
		12/18/99	65.58	50	3,279	53	3,476	7.18	0.02	162		
		12/19/99	32.69	20	654	26	850	6.85	0.11	18		
		12/20/99	75.68	70	5,298	35	2,649	7.1	0.11	63		
		12/21/99	58.53	18	1,054	21	1,229	7.42	0.09	10		
		12/22/99	33.36	33	1,101	46	1,535	7.03	0	10		
		12/23/99	42.57	66	2,810	34	1,447	6.56	0.05	10		
		12/24/99	39.9	56	2,234	34	1,357	7.79	0	10		
		12/25/99	25.74	39	1,004	28	721	6.88	0.15	18		
		12/26/99	29.29	40	1,172	40	1,172	6.99	0.32	18		
		12/27/99	31.77	22	699	21	667	7.22	0	144		
		12/28/99	19.62	18	353	24	471	7.02	0	18,000		
		12/29/99	21.64	25	541	31	671	6.89	0.45	10		
		12/30/99	28.51	54	1,540	52	1,483	6.34	0.21	72		
		12/31/99	25.33	31	785	44	1,115	6.69	0.04	27		
2000	January	01/01/00	21.39	45	963	38	813	6.62	0	18		
		01/02/00	37.31	42	1,567	38	1,418	6.38	0	10		
		01/03/00	54.12	34	1,840	30	1,624	6.2	0	18		
		01/04/00	45.78	24	1,099	24	1,099	6	0	10		
		01/05/00	32.58	26	847	34	1,108	7.02	0.03			
		01/06/00	27.78	20	556	24	667	7.44	0	10		
		01/07/00	23.17	75	1,738	49	1,135	7.14	0	63		
		01/08/00	36.22	30	1,087	18	652	7.92	0	4,000		
		01/09/00	40.92	21	859	8	327	7.26	0	1,545		
		01/10/00	41.5	66	2,739	54	2,241	7.05	0	230		
		01/11/00	38.2	53	2,025	53	2,025	6.99	0	230		
		01/12/00	36.41	31	1,129	18	655	6.83	0	63		
		01/13/00	30.75	48	1,476	24	738	7.19	0	18		
		01/14/00	31.32	33	1,034	26	814	7.21	0	210		
		01/15/00	29.47	69	2,033	34	1,002	6.77	0.06	72		
		01/16/00	36.64	56	2,052	29	1,063	6.81	0	126		
		01/17/00	33.85	36	1,219	16	542	7.41	0			
		01/18/00	31.71	29	920	21	666	7.52	0	81		
		01/19/00	32.33	50	1,617	22	711	6.5	0	10		
		01/20/00	34.35	22	756	10	344	6.53	0	10		
		01/21/00	34.72	18	625	18	625	6.15	0.06	10		
		01/22/00	35.72	37	1,322	24	857	6.16	0.44	10		
		01/23/00	50.67	14	709	16	811	7.87	0	10		
		01/24/00	36.63	22	806	26	952	6.51	0	72		
		01/25/00	29.76	15	446	18	536	6.04	0	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

			Parameter									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/26/00	30.04	32	961	32	961	7.52	0	63		
		01/27/00	32.63	29	946	17	555	6.7	0.02	10		
		01/28/00	40.6	18	731	52	2,111	6.85	0	72		
		01/29/00	32.81	49	1,608	32	1,050	7.38	0	10		
		01/30/00	44.58	38	1,694	41	1,828	6.62	0	10		
		01/31/00	43.24	10	432	10	432	7.4	0	10		
2000	Febuary	02/01/00	32.74	10	327	14	458	6.56	0.03	10		
		02/02/00	29.06	24	697	24	697	6.55	0	10		
		02/03/00	33.54	24	805	18	604	6.54	0.02	10		
		02/04/00	30.06	22	661	11	331	7.68	0	72		
		02/05/00	30.33	34	1,031	15	455	7.41	0.02	27		
		02/06/00	30.12	22	663	13	392	7.32	0	10		
		02/07/00	30.18	18	543	16	483	7.75	0			
		02/08/00	35.83	24	860	21	752	6.8	0	24,000		
		02/09/00	28.83	47	1,355	28	807	6.47	0	54		
		02/10/00	30.56	24	733	16	489	6.37	0	234		
		02/11/00	31	50	1,550	37	1,147	6.94	0	10		
		02/12/00	32.28	48	1,549	30	968	6.3	0	10		
		02/13/00	30.15	56	1,688	44	1,327	6.44	0	10		
		02/14/00	28.91	26	752	20	578	7.46	0			
		02/15/00	30.44	26	791	20	609	7.3	0	390,000		
		02/16/00	32.58	20	652	17	554	6.43	0	10		
		02/17/00	31.42	14	440	8	251	6.46	0	10		
		02/18/00	30.04	52	1,562	32	961	6.39	0.03	27		
		02/19/00	31.3	53	1,659	30	939	7.37	0	10		
		02/20/00	27.85	27	752	22	613	7.28	0	10		
		02/21/00	30.94	20	619	18	557	6.47	0	27		
		02/22/00	30.1	21	632	18	542	6.68	0	27		
		02/23/00	30.44	21	639	24	731	7.16	0	10		
		02/24/00	30.42	15	456	9	274	7.35	0			
		02/25/00	29.77	50	1,489	28	834	6.6	0	10		
		02/26/00	44.18	44	1,944	38	1,679	6.5	0	27		
		02/27/00	35.18	21	739	10	352	6.48	0	10		
		02/28/00	29.58	12	355	7	207	6.5	0	10		
		02/29/00	32.92	18	593	10	329	6.92	0.01	10		
2000	March	03/01/00	30.61	26	796	16	490	6.53	0	10		
		03/02/00	30.11	22	662	17	512	7.34	0	10		
		03/03/00	32.13	60	1,928	36	1,157	6.81	0	10		
		03/04/00	29.46	61	1,797	24	707	6.93	0	18		
		03/05/00	28.44	24	683	12	341	6.6	0	10		
		03/06/00	30.64	42	1,287	34	1,042	6.81	0.08	10		
		03/07/00	27.46	16	439	10	275	7.44	0			
		03/08/00	28.21	22	621	17	480	7.32	0			
		03/09/00	29.38	57	1,675	40	1,175	7.49	0	636,364		
		03/10/00	29.4	102	2,999	22	647	7.35	0	545,455		
		03/11/00	34.09	46	1,568	24	818	7.12	0	1,000,000		
		03/12/00	31.21	24	749	26	811	7.15	0	1,090,909		
		03/13/00	31.26	17	531	17	531	7.46	0	3,000,000		
		03/14/00	32.42	20	648	18	584	7.48	0	320,000		
		03/15/00	46.95	65	3,052	51	2,394	7.49	0	727,273		
		03/16/00	31.99	49	1,568	34	1,088	6.85	0	1,000		
		03/17/00	27.39	52	1,424	36	986	7.4	0	1,818,182		
		03/18/00	60.3	66	3,980	58	3,497	7.14	0	2,545,454		
		03/19/00	53.84	31	1,669	22	1,184	7.05	0	454,545		
		03/20/00	34.48	32	1,103	24	828	7.59	0	454,545		
		03/21/00	34.43	48	1,653	36	1,239	7.65	0	363,636		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

			Parameter									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		03/22/00	34.14	46	1,570	29	990	7.49	0	560,000		
		03/23/00	31.74	46	1,460	44	1,397	7.21	0	460,000		
		03/24/00	29.89	54	1,614	54	1,614	7.45	0	560,000		
		03/25/00	26.88	78	2,097	47	1,263	7.07	0	530,000		
		03/26/00	34.03	62	2,110	42	1,429	7.55	0	545,454		
		03/27/00	41.55	69	2,867	51	2,119	7.64	0	727,273		
		03/28/00	33.42	48	1,604	32	1,069	7.4	0	1,363,636		
		03/29/00	31.36	58	1,819	56	1,756	7.04	0	909,091		
		03/30/00	30.51	34	1,037	25	763	7.05	0	460,000		
		03/31/00	30.11	25	753	46	1,385	7.57	0	20,000		
2000	May	05/01/00	29.2	51	1,489	32	934	7.63	0.01	189		
		05/02/00	24.12	77	1,857	45	1,085	7.38	0.03	1,364		
		05/03/00	25.3	68	1,720	35	886	7.39	0	270		
		05/04/00	24.16	38	918	46	1,111	7.34	0.02	108		
		05/05/00	43.43	39	1,694	42	1,824	7.11	0	135		
		05/06/00	36.94	37	1,367	48	1,773	6.77	0.12	135		
		05/07/00	31.72	34	1,078	32	1,015	6.76	0.01	340		
		05/08/00	30.51	40	1,220	37	1,129	7.28	0.03	290		
		05/09/00	29.16	40	1,166	26	758	7.48	0	14,000		
		05/10/00	30.3	39	1,182	46	1,394	7.19	0.04	290		
		05/11/00	29.06	37	1,075	34	988	7.39	0			
		05/12/00	28.99	34	986	27	783	7.21	0	2,000		
		05/13/00	29.77	38	1,131	36	1,072	7.09	0.01	4,500		
		05/14/00	27.42	27	740	30	823	7.12	0.24	220		
		05/15/00	29.82	40	1,193	66	1,968	6.93	0			
		05/16/00	28.62	37	1,059	43	1,231	7.17	0			
		05/17/00	27.65	44	1,217	42	1,161	6.92	0			
		05/18/00	28.46	44	1,252	40	1,138	7.49	0.01	901		
		05/19/00	27.27	51	1,391	39	1,064	7.19	0	410,000		
		05/20/00	31.96	53	1,694	34	1,087	7.27	0.01	10		
		05/21/00	28.51	58	1,654	46	1,311	7.26	0	27		
		05/22/00	28.31	37	1,047	28	793	7.27	0.01	10		
		05/23/00	28.12	55	1,547	28	787	7.07	0.43	10		
		05/24/00	28.51	42	1,197	45	1,283	7.53	0.03	18,018		
		05/25/00	29.07	40	1,163	36	1,047	7.22	0.01	16,000		
		05/26/00	27.78	39	1,083	30	833	7.04	0			
		05/27/00	32.01	50	1,601	41	1,312	6.92	0.02	163,636		
		05/28/00	29.37	37	1,087	32	940	6.87	0.04	991		
		05/29/00	29.92	47	1,406	34	1,017	6.94	0.01	36		
		05/30/00	26.74	52	1,390	48	1,284	7.25	0			
		05/31/00	26.28	47	1,235	51	1,340	7.3	0.01	2,900		
2000	June	06/01/00	26.81	50	1,341	38	1,019	7.26	0.02	727		
		06/02/00	26.1	52	1,357	43	1,122	6.88	0			
		06/03/00	27.43	16	439	36	987	6.95	0	50,000		
		06/04/00	26.11	43	1,123	40	1,044	6.97	0.02	4,400		
		06/05/00	31.47	49	1,542	58	1,825	7.26	0.01	320		
		06/06/00	26.75	36	963	52	1,391	6.93	0.2	340		
		06/07/00	26.08	47	1,226	44	1,148	7.01	0	45		
		06/08/00	25.78	58	1,495	36	928	7.16	0			
		06/09/00	27.26	33	900	34	927	6.97	0	189		
		06/10/00	26.11	40	1,044	24	627	6.92	0.29	135		
		06/11/00	23.01	33	759	24	552	6.76	0.32	126		
		06/12/00	24.18	40	967	46	1,112	6.78	0.3	108		
		06/13/00	23.75	39	926	35	831	6.74	0	27		
		06/14/00	27.66	45	1,245	51	1,411	6.64	0	144		
		06/15/00	39.69	38	1,508	44	1,746	7.07	0.02	360		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Parameter									
			Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		06/16/00	33.78	29	980	29	980	6.88	0.03	63		
		06/17/00	38	36	1,368	40	1,520	6.74	0.02	72		
		06/18/00	32.4	28	907	32	1,037	6.55	0.17	36		
		06/19/00	32.05	29	929	25	801	6.77	0	315		
		06/20/00	35.85	34	1,219	36	1,291	7.2	0	315		
		06/21/00	32.02	33	1,057	33	1,057	6.68	0	10		
		06/22/00	31.07	32	994	34	1,056	7.15	0.01	10		
		06/23/00	26.56	36	956	34	903	7.02	0.17	10		
		06/24/00	31.16	36	1,122	40	1,246	6.82	0	10		
		06/25/00	34.38	33	1,135	32	1,100	6.95	0	126		
		06/26/00	32.98	34	1,121	39	1,286	6.71	0	81		
		06/27/00	35.11	38	1,334	34	1,194	6.85	0.05	81		
		06/28/00	34.56	17	588	34	1,175	7.11	0	144		
		06/29/00	33.36	42	1,401	54	1,801	7.31	0.01	216		
		06/30/00	39.93	41	1,637	41	1,637	6.94	0.04	108		
2000	July	07/01/00	44.54	50	2,227	52	2,316	6.84	0.16	81		
		07/02/00	34.02	35	1,191	57	1,939	6.92	0.43	10		
		07/03/00	34.55	31	1,071	52	1,797	7.14	0	10		
		07/04/00	31.6	42	1,327	48	1,517	7.16	0.26	10		
		07/05/00	33.47	46	1,540	44	1,473	6.91	0	90		
		07/06/00	32.65	37	1,208	45	1,469	6.84	0.12	54		
		07/07/00	31.55	54	1,704	34	1,073	7.17	0.08	90		
		07/08/00	30.97	39	1,208	30	929	7.14	0	27		
		07/09/00	34.28	35	1,200	43	1,474	7	0.26	27		
		07/10/00	33.48	32	1,071	78	2,611	6.98	0.16	45		
		07/11/00	30.21	32	967	52	1,571	7.02	0	220		
		07/12/00	32.29	48	1,550	68	2,196	7.06	0	5,500		
		07/13/00	30.8	50	1,540	52	1,602	7.06	0	180		
		07/14/00	32.05	36	1,154	41	1,314	7.05	0	210		
		07/15/00	30.79	37	1,139	39	1,201	6.94	0	99		
		07/16/00	30.98	31	960	42	1,301	6.76	0	99		
		07/17/00	27.8	33	917	44	1,223	7.07	0	72		
		07/18/00	34.06	36	1,226	61	2,078	7.38	0	270		
		07/19/00	32.7	48	1,570	54	1,766	7.26	0	280		
		07/20/00	32.3	44	1,421	46	1,486	7.32	0	126		
		07/21/00	30.73	29	891	36	1,106	7.11	0	45		
		07/22/00	35.74	26	929	32	1,144	7.21	0	1,091		
		07/23/00	34.1	32	1,091	44	1,500	7.2	0	135		
		07/24/00	32.14	35	1,125	36	1,157	7.04	0.08	99		
		07/25/00	33.22	39	1,296	28	930	6.69	0	117		
		07/26/00	30.74	36	1,107	32	984	6.89	0.14	220		
		07/27/00	30.7	18	553	21	645	6.84	0.05	200		
		07/28/00	32.52	22	715	38	1,236	6.97	0.13	99		
		07/29/00	33.84	32	1,083	34	1,151	6.99	0.31	126		
		07/30/00	33.11	22	728	22	728	6.91	0	370		
		07/31/00	31.78	34	1,081	30	953	6.62	0	117		
2000	August	08/01/00	30.36	42	1,275	40	1,214	6.78	0	320		
		08/02/00	32.45	26	844	48	1,558	7.07	0	54		
		08/03/00	65.98	28	1,847	22	1,452	6.77	0.02	63		
		08/04/00	34.38	24	825	16	550	6.84	0	36		
		08/05/00	34.67	28	971	20	693	7.1	0.1	81		
		08/06/00	30.04	14	421	18	541	6.94	0	81		
		08/07/00	25.89	28	725	34	880	6.73	0.03	230		
		08/08/00	43.16	24	1,036	28	1,208	6.43	0	135		
		08/09/00	33.21	30	996	26	863	7.04	0	18		
		08/10/00	40.49	33	1,336	34	1,377	6.78	0	60,000		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

			Parameter									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		08/11/00	38.66	29	1,121	36	1,392	6.75	0	10		
		08/12/00	34.43	35	1,205	11	379	6.92	0	10		
		08/13/00	32.07	43	1,379	46	1,475	6.99	0	460		
		08/14/00	35.44	27	957	26	921	7.03	0.09	63		
		08/15/00	34.78	26	904	26	904	6.98	0.07	10		
		08/16/00	31.92	28	894	42	1,341	6.94	0.03	360		
		08/17/00	28.69	39	1,119	24	689	6.88	0.31	72		
		08/18/00	28.39	29	823	28	795	7.05	0	350		
		08/19/00	28.92	37	1,070	34	983	7.06	0.02	162		
		08/20/00	32.11	35	1,124	32	1,028	7	0.04	144		
		08/21/00	31.68	36	1,140	27	855	6.89	0	900		
		08/22/00	33.99	33	1,122	24	816	6.86	0.01	72		
		08/23/00	33.34	29	967	24	800	6.92	0	18		
		08/24/00	32.01	21	672	18	576	6.96	0.01	10		
		08/25/00	31.61	23	727	37	1,170	7.3	0	10		
		08/26/00	31.07	29	901	23	715	7.21	0	10		
		08/27/00	31.93	25	798	29	926	6.95	0.14	36		
		08/28/00	30.82	27	832	30	925	7.17	0	144		
		08/29/00	33.11	36	1,192	14	464	7.33	0	81		
		08/30/00	32.95	24	791	18	593	7.21	0	909		
		08/31/00	33.23	18	598	24	798	7.36	0	18		
2000	September	09/01/00	33.4	18	601	15	501	7.28	0.03	72		
		09/02/00	31.98	40	1,279	32	1,023	7.12	0.07	144		
		09/03/00	36.1	27	975	16	578	7.2	0.21	220		
		09/04/00	35.84	28	1,004	40	1,434	7.17	0.02	18		
		09/05/00	31.74	33	1,047	32	1,016	7.02	0.15	54		
		09/06/00	27.17	14	380	21	571	7.15	0	10		
		09/07/00	28.19	38	1,071	40	1,128	7.24	0.09	90		
		09/08/00	37.61	31	1,166	29	1,091	7.47	0	135		
		09/09/00	53.43	36	1,923	29	1,549	7.71	0	18		
		09/10/00	37.08	19	705	14	519	7.79	0.25	36		
		09/11/00	33.14	31	1,027	20	663	7.05	0	27		
		09/12/00	38.18	18	687	16	611	7.06	0.01	45		
		09/13/00	39.48	32	1,263	25	987	6.97	0.05	45		
		09/14/00	37.2	14	521	14	521	6.7	0	10		
		09/15/00	32.52	12	390	13	423	7.02	0.18	10		
		09/16/00	34.63	34	1,177	34	1,177	6.95	0	10		
		09/17/00	32.26	26	839	22	710	7.2	0.03	10		
		09/18/00	30.7	11	338	14	430	7.18	0	17,000		
		09/19/00	33.61	50	1,681	30	1,008	7.19	0.06	45		
		09/20/00	32.46	32	1,039	24	779	6.87	0.02	10		
		09/21/00	38.61	20	772	15	579	7.09	0	81		
		09/22/00	38.1	10	381	14	533	7	0	45		
		09/23/00	33.32	35	1,166	28	933	7.03	0	108		
		09/24/00	34.72	17	590	13	451	7.22	0	126		
		09/25/00	33.37	23	768	16	534	6.72	0	90		
		09/26/00	32.93	20	659	15	494	6.95	0.02	10		
		09/27/00	31.12	18	560	18	560	6.96	0.24	10		
		09/28/00	31.12	20	622	17	529	6.99	0.01	18		
		09/29/00	31.21	17	531	6	187	7.17	0.02	10		
		09/30/00	31.66	18	570	14	443	7.08	0	45		
2000	October	10/01/00	33.74	15	506	10	337	7.1	0	153		
		10/02/00	30.16	19	573	12	362	7.49	0	45		
		10/03/00	25.83	20	517	13	336	7.68	0.01	72		
		10/04/00	28.91	23	665	24	694	7.22	0.04	10		
		10/05/00	29.3	28	820	22	645	7.65	0.06	54		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		10/06/00	34.69	52	1,804	27	937	7.23	0.08	10		
		10/07/00	28.83	34	980	27	778	7.31	0.21	10		
		10/08/00	28.96	23	666	32	927	7.03	0.4	10		
		10/09/00	29.31	35	1,026	24	703	7.74	0.41	10		
		10/10/00	28.33	26	737	20	567	7.07	0.01	18		
		10/11/00	29.04	16	465	19	552	7.1	0.12	10		
		10/12/00	28.9	23	665	25	723	7.14	0	260		
		10/13/00	27.18	15	408	12	326	7.28	0.21	10		
		10/14/00	27.48	17	467	19	522	7.12	0.12	36		
		10/15/00	27.24	23	627	30	817	7.06	0	54		
		10/16/00	28.51	35	998	24	684	7.52	0.1	54		
		10/17/00	24.64	42	1,035	32	788	7.48	0.13	10		
		10/18/00	27.36	28	766	24	657	7.31	0.03	10		
		10/19/00	29.04	31	900	28	813	7.03	0.25	18		
		10/20/00	27.6	46	1,270	33	911	7.06	0.32	10		
		10/21/00	28.07	44	1,235	37	1,039	6.83	0	10		
		10/22/00	28.7	29	832	27	775	6.8	0	10		
		10/23/00	28.58	33	943	18	514	6.7	0.14	27		
		10/24/00	27.31	31	847	18	492	6.48	0.04	90		
		10/25/00	27.18	24	652	20	544	6.7	0.04	380		
		10/26/00	28.36	18	510	18	510	6.56	0	117		
		10/27/00	27.12	23	624	5	136	7.52	0	117		
		10/28/00	27.93	16	447	5	140	6.53	0.12	18		
		10/29/00	28.58	16	457	19	543	7.18	0	117		
		10/30/00	27.06	37	1,001	28	758	7.34	0	27		
		10/31/00	27.86	24	669	20	557	7	0	18		
2000	November	11/01/00	28.55	25	714	26	742	6.82	0.02	18		
		11/02/00	25.42	53	1,347	27	686	6.83	0.02	81		
		11/03/00	26.83	33	885	18	483	6.8	0.08	490		
		11/04/00	29.42	25	736	16	471	6.78	0.02	10		
		11/05/00	29.98	20	600	19	570	6.96	0.16	727		
		11/06/00	40.41	47	1,899	42	1,697	7.11	0.09	10		
		11/07/00	28.34	25	709	33	935	6.98	0	45		
		11/08/00	46.88	27	1,266	30	1,406	6.99	0.03	120		
		11/09/00	44.67	32	1,429	49	2,189	6.64	0	63		
		11/10/00	28.36	24	681	32	908	6.75	0.16	10		
		11/11/00	29.3	32	938	34	996	6.64	0.15	10		
		11/12/00	28.98	26	753	39	1,130	7	0.08	10		
		11/13/00	35.67	23	820	24	856	6.88	0.01	18		
		11/14/00	29.03	16	464	18	523	6.73	0.27	10		
		11/15/00	29.72	18	535	25	743	6.9	0	10		
		11/16/00	58.08	28	1,626	60	3,485	6.88	0.44	27		
		11/17/00	50.94	32	1,630	50	2,547	6.88	0	10		
		11/18/00	83.45	21	1,752	57	4,757	6.98	0	10		
		11/19/00	54.69	18	984	48	2,625	6.71	0	18		
		11/20/00	45.03	27	1,216	43	1,936	7.09	0.07	10		
		11/21/00	33.34	22	733	20	667	7.14	0.26	10		
		11/22/00	31.26	42	1,313	18	563	7.1	0.26	10		
		11/23/00	29.59	38	1,124	30	888	7.1	0.1	10		
		11/24/00	48.7	52	2,532	28	1,364	6.96	0.2	117		
		11/25/00	34.06	15	511	10	341	6.7	0.35	10		
		11/26/00	29.62	48	1,422	62	1,836	7.06	0.1	10		
		11/27/00	30.57	20	611	16	489	6.96	0.32	10		
		11/28/00	31.41	--	--	22	691	7.04	0	10		
		11/29/00	33.38	--	--	22	734	7.26	0.27	10		
		11/30/00	29.32	--	--	30	880	6.95	0.11	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

			Parameter									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
2000	December	12/01/00	25.7	32	822	33	848	6.88	0.04	10		
		12/02/00	30.54	55	1,680	26	794	6.77	0.44	10		
		12/03/00	31.72	22	698	26	825	6.85	0.24	10		
		12/04/00	30.1	61	1,836	32	963	6.89	0	18		
		12/05/00	30.51	68	2,075	28	854	6.98	0	36		
		12/06/00	36.63	36	1,319	21	769	7.16	0	10		
		12/07/00	28.42	43	1,222	22	625	7.23	0.22	10		
		12/08/00	24.58	32	787	22	541	7.25	0.26	18		
		12/09/00	23.67	36	852	36	852	7.35	0.2	10		
		12/10/00	23.04	34	783	16	369	7.38	0.23	10		
		12/11/00	23.87	36	859	14	334	7.59	0.05	10		
		12/12/00	28.68	54	1,549	27	774	6.9	0.04	10		
		12/13/00	47.1	64	3,014	16	754	7	0.44	18		
		12/14/00	35.18	64	2,252	14	493	6.95	0.32	10		
		12/15/00	32.26	30	968	20	645	6.82	0	10		
		12/16/00	36.35	41	1,490	30	1,091	6.93	0	10		
		12/17/00	31.54	30	946	11	347	7.07	0	10		
		12/18/00	35.04	28	981	16	561	7.19	0	36		
		12/19/00	31.29	50	1,565	18	563	6.83	0.05	10		
		12/20/00	32.89	65	2,138	20	658	7.09	0	10		
		12/21/00	41.95	35	1,468	18	755	7.17	0.01	10		
		12/22/00	32.41	50	1,621	23	745	6.69	0.33	10		
		12/23/00	31.28	44	1,376	24	751	7.11	0.33	10		
		12/24/00	26.42	33	872	28	740	7.13	0.44	10		
		12/25/00	23.76	18	428	11	261	7.15	0	10		
		12/26/00	31.01	22	682	14	434	7.18	0	10		
		12/27/00	66.23	26	1,722	36	2,384	7.42	0.08			
		12/28/00	48.91	23	1,125	26	1,272	7.37	0.12	10		
		12/29/00	34.5	27	932	8	276	6.92	0.06	18		
		12/30/00	37.37	40	1,495	26	972	7.38	0.03	10		
		12/31/00	31.47	23	724	20	629	7.07	0.3	10		
2001	January	01/01/01	30.93	19	588	16	495	7.1	0.42	10		
		01/02/01	31.61	37	1,170	22	695	6.9	0	10		
		01/03/01	33.08	24	794	12	397	7.28	0	10		
		01/04/01	31.36	33	1,035	22	690	7.19	0	10		
		01/05/01	29.32	34	997	26	762	7.25	0.14	10		
		01/06/01	31.53	25	788	26	820	7.2	0	10		
		01/07/01	34.69	20	694	28	971	7.29	0.11	10		
		01/08/01	31.41	25	785	22	691	7.31	0.05	10		
		01/09/01	30.46	46	1,401	24	731	7.19	0.2	10	20.2	68.4
		01/10/01	30.9	22	680	27	834	7.2	0.8	3,700	21.0	69.8
		01/11/01	34.13	33	1,126	23	785	7.1	0	10	20.8	69.4
		01/12/01	30.42	42	1,278	28	852	6.88	0	10	20.7	69.3
		01/13/01	30.6	26	796	19	581	6.98	0	10	20.7	69.3
		01/14/01	30.07	31	932	28	842	7.16	0	27	20.6	69.1
		01/15/01	38.01	25	950	26	988	6.93	0.11	10	21.3	70.3
		01/16/01	59.57	24	1,430	28	1,668	6.84	0.19	10	21.1	70.0
		01/17/01	41.26	16	660	23	949	6.82	0.02	10	18.5	65.3
		01/18/01	40.38	25	1,010	26	1,050	6.73	0	10	21.0	69.8
		01/19/01	59.19	36	2,131	43	2,545	7.54	0.37	10	15.4	59.7
		01/20/01	35.22	37	1,303	42	1,479	7.1	0	10	19.3	66.7
		01/21/01	34.93	24	838	28	978	6.81	0.03	10	19.4	66.9
		01/22/01	32.75	24	786	17	557	7.12	0	10	20.0	68.0
		01/23/01	32.56	15	488	24	781	6.51	0	10	21.0	69.8
		01/24/01	32.35	21	679	26	841	6.9	0.2	10	21.1	70.0
		01/25/01	29.37	24	705	18	529	6.85	0.09	10	21.6	70.9

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/26/01	29.49	36	1,062	28	826	6.78	0	10	20.6	69.1
		01/27/01	31.4	34	1,068	27	848	6.57	0	10	22.0	71.6
		01/28/01	30.58	22	673	24	734	6.75	0.42	10	21.7	71.1
		01/29/01	54.34	35	1,902	32	1,739	7.21	0	10	20.3	68.5
		01/30/01	37.58	33	1,240	30	1,127	6.65	0.05	10	20.3	68.5
		01/31/01	31.17	16	499	19	592	6.97	0	63	20.8	69.4
2001	February	02/01/01	34.32	18	618	12	412	6.8	0	10	21.3	70.3
		02/02/01	32.25	18	581	21	677	6.56	0.21	10	21.5	70.7
		02/03/01	30.84	36	1,110	36	1,110	6.85	0.26	10	21.4	70.5
		02/04/01	29.66	27	801	16	475	6.93	0.16	10	21.1	70.0
		02/05/01	29.26	19	556	16	468	6.87	0.04	10	21.5	70.7
		02/06/01	29.1	17	495	18	524	7.01	0	10	21.0	69.8
		02/07/01	30.02	39	1,171	12	360	6.67	0	10	22.3	72.1
		02/08/01	30.05	20	601	14	421	7.26	0	10	23.1	73.6
		02/09/01	27.89	39	1,088	24	669	7.12	0	108	20.1	68.2
		02/10/01	31.24	48	1,500	35	1,093	7.07	0	27	22.5	72.5
		02/11/01	31.44	15	472	16	503	7.09	0	10	22.6	72.7
		02/12/01	29.85	22	657	16	478	7.09	0.17	10	22.2	72.0
		02/13/01	29.85	20	597	12	358	7.12	0	10	22.7	72.9
		02/14/01	27.65	20	553	14	387	6.92	0.17	10	22.5	72.5
		02/15/01	27.79	18	500	16	445	6.89	0.19	10	23.3	73.9
		02/16/01	27.64	42	1,161	34	940	6.87	0.03	10	23.4	74.1
		02/17/01	27.16	37	1,005	25	679	6.88	0.08	10	22	71.6
		02/18/01	26.61	25	665	6	160	7.02	0.05	10	23.4	74.1
		02/19/01	26.72	36	962	34	908	7.03	0	10	21	69.8
		02/20/01	28.68	26	746	17	488	7.14	0	27	23.1	73.6
		02/21/01	27.27	12	327	20	545	7.15	0.12	10	20.1	68.2
		02/22/01	24.93	10	249	24	598	7.06	0	10	22.7	72.9
		02/23/01	27.83	46	1,280	22	612	7.04	0	10	22.3	72.1
		02/24/01	31.03	34	1,055	35	1,086	6.77	0.16	10	22.3	72.1
		02/25/01	29.97	8	240	9	270	6.91	0.22	10	23.2	73.8
		02/26/01	31.93	31	990	18	575	7.41	0.02	10	22.9	73.2
		02/27/01	31.93	18	575	7	224	7.1	0	27	23.5	74.3
		02/28/01	30.68	16	491	10	307	6.91	0	10	23.2	73.8
2001	March	03/01/01	32.18	13	418	12	386	6.78	0	10	22.6	72.7
		03/02/01	51.06	20	1,021	14	715	6.79	0.23	10	23.2	73.8
		03/03/01	71.56	37	2,648	47	3,363	6.75	0.28	10	20.8	69.4
		03/04/01	48.16	16	771	14	674	7.19	0	10	18.9	66.0
		03/05/01	36.73	19	698	13	477	7.15	0.01	10	20.7	69.3
		03/06/01	30.4	24	730	19	578	6.9	0.32	10	19.5	67.1
		03/07/01	31.28	24	751	20	626	7.35	0	10	21.6	70.9
		03/08/01	31.28	23	719	22	688	7	0	10	21.0	69.8
		03/09/01	48.38	33	1,597	30	1,451	7.24	0	10	19.0	66.2
		03/10/01	46.97	35	1,644	29	1,362	7.23	0.28	10	16.6	61.9
		03/11/01	33.89	19	644	18	610	7.18	0	10	21.4	70.5
		03/12/01	53.01	22	1,166	25	1,325	7.4	0.29	130	20.7	69.3
		03/13/01	45.05	13	586	19	856	7.09	0	10	21.1	70.0
		03/14/01	52.04	22	1,145	16	833	7.39	0.03	100	23.4	74.1
		03/15/01	52.02	14	728	19	988	7.17	0.12	10	21.4	70.5
		03/16/01	35.77	42	1,502	44	1,574	7.23	0.14	10	20.7	69.3
		03/17/01	36.31	14	508	19	690	7.21	0.22	10	17.5	63.5
		03/18/01	36.31	37	1,343	26	944	7.29	0.1	10	20.2	68.4
		03/19/01	26.43	28	740	22	581	7.17	0.12	340	21.4	70.5
		03/20/01	33.27	25	832	21	699	7.3	0.03	90	19.6	67.3
		03/21/01	30.89	38	1,174	37	1,143	7.74	0.02	144	20.4	68.7
		03/22/01	30.59	21	642	22	673	7.26	0	210	21.0	69.8

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		03/23/01	29.48	13	383	8	236	7.53	0	200	22.4	72.3
		03/24/01	31.77	48	1,525	34	1,080	7.38	0.04	135	22.6	72.7
		03/25/01	34.41	36	1,239	18	619	7.41	0.15	126	21.4	70.5
		03/26/01	30.21	26	785	22	665	7.27	0.01	99	19.0	66.2
		03/27/01	33.64	27	908	24	807	7.69	0	410	20.0	68.0
		03/28/01	83.68	38	3,180	70	5,858	7.48	0.01	454	18.4	65.1
		03/29/01	43.59	27	1,177	28	1,221	7.55	0	18	21.3	70.3
		03/30/01	35.09	32	1,123	14	491	7.39	0.07	10	20.8	69.4
		03/31/01	35.09	37	1,298	34	1,193	7.49	0.08	36	22.1	71.8
2001	April	04/01/01	34.43	23	792	19	654	7.37	0.01	250	21.6	70.9
		04/02/01	34.17	25	854	22	752	7.43	0.04	380	22.4	72.3
		04/03/01	34.17	45	1,538	20	683	7.49	0.03	108	23.5	74.3
		04/04/01	30.52	36	1,099	26	794	7.32	0.03	10	23.8	74.8
		04/05/01	30.52	48	1,465	34	1,038	6.87	0.01	1,000	28.4	83.1
		04/06/01	30.23	48	1,451	39	1,179	7.37	0.02	12,000	25.3	77.5
		04/07/01	31.91	45	1,436	40	1,276	7.14	0.16	63	25.4	77.7
		04/08/01	31.26	34	1,063	23	719	7.34	0.23	18	24.6	76.3
		04/09/01	30.94	19	588	20	619	7.55	0.01	1,000	24.8	76.6
		04/10/01	30.96	31	960	26	805	7.23	0.01	600	25.3	77.5
		04/11/01	30.62	30	919	22	674	7.23	0.02	470	24.8	76.6
		04/12/01	29.6	43	1,273	36	1,066	7.66	0.04	162	26.1	79.0
		04/13/01	29.7	56	1,663	35	1,040	7.51	0.02	15,000	25.2	77.4
		04/14/01	28.88	44	1,271	30	866	7.36	0.06	27	24.4	75.9
		04/15/01	28.88	44	1,271	29	838	7.39	0.12	108	26.2	79.2
		04/16/01	27.45	19	522	31	851	7.36	0	1,091	24.7	76.5
		04/17/01	28.16	23	648	16	451	7.26	0	10	22.7	72.9
		04/18/01	27.51	27	743	25	688	7.77	0.38	144	19.5	67.1
		04/19/01	28.95	25	724	16	463	7.64	0.01	10	23.7	74.7
		04/20/01	28.1	46	1,293	34	955	7.4	0.14	108	26.4	79.5
		04/21/01	29	54	1,566	40	1,160	7.38	0.04	200	24.3	75.7
		04/22/01	28.43	24	682	17	483	7.27	0.05	1,091	24.6	76.3
		04/23/01	28.5	27	770	27	770	7.38	0.01	2,636	25.6	78.1
		04/24/01	28.5	44	1,254	18	513	7.21	0.04	99	23.2	73.8
		04/25/01	31.91	21	670	16	511	7.45	0.02	27	21.1	70.0
		04/26/01	28.61	26	744	26	744	7.27	0.2	10	23.8	74.8
		04/27/01	27.6	17	469	13	359	7.11	0.28	10	24.8	76.6
		04/28/01	28.91	48	1,388	34	983	7.31	0.16	10	24.5	76.1
		04/29/01	28.38	18	511	22	624	6.97	0.17	300	23.7	74.7
		04/30/01	28.86	30	866	32	924	7.33	0.29	63	23.2	73.8
2001	May	05/01/01	28.59	43	1,229	23	658	7.16	0.34	330	24.6	76.3
		05/02/01	28.76	24	690	14	403	7.33	0.16	10	24.9	76.8
		05/03/01	28.62	26	744	32	916	7.34	0.18	36	24.8	76.6
		05/04/01	28.12	23	647	20	562	7.39	0.17	18	25.5	77.9
		05/05/01	28.58	37	1,057	23	657	7.35	0.26	10	25.3	77.5
		05/06/01	28.8	30	864	20	576	7	0.23	10	21.9	71.4
		05/07/01	28.29	19	538	13	368	6.99	0.41	290	25.1	77.2
		05/08/01	37.84	27	1,022	22	832	6.8	0.34	180	25.3	77.5
		05/09/01	28.88	16	462	9	260	7.13	0.29	63	26.3	79.3
		05/10/01	27.95	11	307	12	335	7.56	0.44	10	24.0	75.2
		05/11/01	29.06	16	465	15	436	6.81	0.15	10	25.3	77.5
		05/12/01	29.35	48	1,409	25	734	7.31	0.16	10	26.9	80.4
		05/13/01	27.23	20	545	13	354	7.2	0.33	10	26.3	79.3
		05/14/01	27.78	29	806	11	306	7.46	0.22	10	25.4	77.7
		05/15/01	27.92	26	726	14	391	7.21	0.35	1,091	26.6	79.9
		05/16/01	27.4	18	493	14	384	7.29	0.37	126	26.1	79.0
		05/17/01	27.61	16	442	12	331	7.67	0.33	117	25.6	78.1

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		05/18/01	27.63	13	359	10	276	7.18	0	1,182	27.1	80.8
		05/19/01	28	20	560	16	448	7.35	0.02	364	26.6	79.9
		05/20/01	26.51	14	371	10	265	7.28	0.23	171	27.1	80.8
		05/21/01	32.22	19	612	16	516	7.14	0	210	25.7	78.3
		05/22/01	30.46	17	518	14	426	7.29	0	320	24.8	76.6
		05/23/01	30.93	20	619	13	402	7.01	0	72	24.1	75.4
		05/24/01	27.55	18	496	15	413	6.93	0.22	18	25.8	78.4
		05/25/01	27.55	28	771	24	661	7.15	0.02	162	25.5	77.9
		05/26/01	26.24	25	656	20	525	7.22	0.01	454	25.8	78.4
		05/27/01	25.62	22	564	18	461	6.95	0	135	26.8	80.2
		05/28/01	28.23	16	452	20	565	7.01	0	27	26.5	79.7
		05/29/01	27.23	24	654	24	654	7.04	0.06	54	26.8	80.2
		05/30/01	27.11	25	678	24	651	7.22	0.15	36	26.6	79.9
		05/31/01	31.14	25	779	16	498	7.19	0.06	430	26.3	79.3
2001	June	06/01/01	27.05	23	622	20	541	7.22	0.07	54	24.4	75.9
		06/02/01	26.35	37	975	28	738	7.13	0.16	10	27.3	81.1
		06/03/01	26.35	21	553	12	316	7.31	0.08	10	25.2	77.4
		06/04/01	27.97	17	475	12	336	7.13	0.18	126	26.7	80.1
		06/05/01	76.37	27	2,062	30	2,291	7.15	0.07	10	27.1	80.8
		06/06/01	94.28	33	3,111	72	6,788	7.05	0.1	10	25.2	77.4
		06/07/01	92.72	21	1,947	76	7,047	6.87	0.17	10	24.9	76.8
		06/08/01	79.95	26	2,079	70	5,597	6.77	0.23	126	25.5	77.9
		06/09/01	69.38	28	1,943	55	3,816	6.88	0.26	36	24.8	76.6
		06/10/01	63.78	38	2,424	60	3,827	7.01	0.18	3,000	25.1	77.2
		06/11/01	56.69	25	1,417	48	2,721	6.98	0.26	54	25.8	78.4
		06/12/01	44.15	32	1,413	42	1,854	6.99	0.37	10	26.8	80.2
		06/13/01	39.38	24	945	40	1,575	7.13	0.17	135	27.2	81.0
		06/14/01	37.25	20	745	32	1,192	7.13	0.28	260	27.8	82.0
		06/15/01	33	18	594	12	396	7.18	0.11	108	28.5	83.3
		06/16/01	30.57	29	887	36	1,101	7.1	0.28	240	27.6	81.7
		06/17/01	28.92	19	549	18	521	6.95	0.38	10	24.3	75.7
		06/18/01	31.8	12	382	14	445	7.12	0.29	117	27.3	81.1
		06/19/01	30.2	22	664	24	725	7.41	0.31	727	27.1	80.8
		06/20/01	30.65	20	613	25	766	7.11	0.2	63	28.2	82.8
		06/21/01	30.16	25	754	21	633	7.42	0.26	454	27.7	81.9
		06/22/01	31.73	33	1,047	12	381	7.09	0.2	450	26.6	79.9
		06/23/01	27.2	25	680	27	734	7.36	0.15	420	27.2	81.0
		06/24/01	25.13	33	829	22	553	7.16	0.22	10	26.7	80.1
		06/25/01	26.88	27	726	27	726	7.23	0.19	144	26.7	80.1
		06/26/01	29.65	23	682	24	712	7.21	0.21	270	26.3	79.3
		06/27/01	32.23	18	580	15	483	7.1	0.3	10	26.2	79.2
		06/28/01	32.65	18	588	24	784	7.14	0.2	36	27.4	81.3
		06/29/01	30.17	44	1,327	46	1,388	7.27	0.29	81	27.6	81.7
		06/30/01	31.38	36	1,130	40	1,255	7.02	0.29	36	27.3	81.1
2001	July	07/01/01	27	17	459	28	756	7.17	0	10	27.6	81.7
		07/02/01	28.2	30	846	34	959	7.56	0.34	18	27.3	81.1
		07/03/01	29.77	40	1,191	38	1,131	7.27	0.37	10	24.8	76.6
		07/04/01	28.2	36	1,015	36	1,015	6.86	0.36	10	25.7	78.3
		07/05/01	51.16	56	2,865	55	2,814	6.89	0.13	153	27.8	82.0
		07/06/01	33.68	34	1,145	42	1,415	7.08	0.01	27	28.2	82.8
		07/07/01	29.43	34	1,001	26	765	7.06	0	63	28.9	84.0
		07/08/01	29.59	39	1,154	40	1,184	7.3	0	10	28.8	83.8
		07/09/01	28.39	26	738	22	625	7.15	0	171	28.7	83.7
		07/10/01	28.47	35	996	26	740	7.1	0	727	28.7	83.7
		07/11/01	39.68	18	714	15	595	7.47	0.37	10	26.8	80.2
		07/12/01	43.91	31	1,361	32	1,405	7.09	0.11	117	28.5	83.3

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

			Parameter									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		07/13/01	47.07	20	941	13	612	6.98	0.22	18	26.7	80.1
		07/14/01	29.56	56	1,655	22	650	7.03	0.15	27	26.6	79.9
		07/15/01	25.69	25	642	18	462	7.12	0.23	280	25.9	78.6
		07/16/01	32.49	26	845	22	715	7.15	0	290	28.8	83.8
		07/17/01	28.23	27	762	18	508	7.3	0.12	250	26.2	79.2
		07/18/01	31.31	11	344	15	470	6.72	0	10	28.6	83.5
		07/19/01	28.65	24	688	16	458	7.31	0.21	126	29.0	84.2
		07/20/01	25.58	24	614	20	512	7.48	0.16	818	27.1	80.8
		07/21/01	33.65	26	875	28	942	6.72	0.19	10	29.0	84.2
		07/22/01	28.61	39	1,116	22	629	7.72	0.3	10	29.0	84.2
		07/23/01	29.36	26	763	20	587	6.93	0.26	63	28.3	82.9
		07/24/01	29.12	24	699	25	728	6.93	0.3	10	29.3	84.7
		07/25/01	34.18	42	1,436	23	786	7.19	0.03	10	29.9	85.8
		07/26/01	32.44	10	324	14	454	7.11	0.31	27	27.5	81.5
		07/27/01	29.24	15	439	12	351	7	0.22	10	24.0	75.2
		07/28/01	47.41	15	711	18	853	7.02	0.25	10	28.1	82.6
		07/29/01	30.42	18	548	14	426	7.03	0.24	10	28.0	82.4
		07/30/01	31.39	25	785	11	345	7.1	0.17	10	26.9	80.4
		07/31/01	34.39	19	653	12	413	7.05	0.11	10	26.1	79.0
2001	August	08/01/01	31.96	16	511	10	320	7.63	0.1	10		
		08/02/01	28.37	17	482	22	624	7.21	0.2	10		
		08/03/01	29.36	17	499	16	470	7.26	0.19	10		
		08/04/01	28.44	23	654	18	512	7.12	0.23	10		
		08/05/01	38.44	20	769	18	692	6.88	0.45	10		
		08/06/01	38.68	35	1,354	17	658	7.03	0.26	10		
		08/07/01	36.06	18	649	14	505	7	0.25	10		
		08/08/01	58.21	26	1,513	24	1,397	6.84	0.19	10		
		08/09/01	38.46	24	923	19	731	6.77	0.25	18		
		08/10/01	31.08	17	528	20	622	6.67	0.2	10		
		08/11/01	43.3	39	1,689	40	1,732	6.61	0.18	10		
		08/12/01	52.22	31	1,619	30	1,567	6.43	0.33	10		
		08/13/01	26.18	12	314	10	262	6.65	0.33	18		
		08/14/01	42.29	24	1,015	28	1,184	6.58	0.05	10		
		08/15/01	35.02	20	700	20	700	6.97	0.28	18		
		08/16/01	36.62	20	732	16	586	7.04	0.3	450		
		08/17/01	31.5	18	567	12	378	6.76	0.41	250		
		08/18/01	30.56	15	458	17	520	7.12	0.38	10		
		08/19/01	30.57	30	917	18	550	6.84	0.12	10		
		08/20/01	29.34	30	880	12	352	6.87	0.22	10		
		08/21/01	30.37	30	911	20	607	6.33	0.07	10		
		08/22/01	30.36	--	--	18	546	6.33	0.07	36		
		08/23/01	30	--	--	24	720	7.22	0.23	81		
		08/24/01	28.06	--	--	21	589	6.98	0.2	10		
		08/25/01	28.06	--	--	12	337	7.02	0.25	10		
		08/26/01	--	--	--	--	--	--	--	--		
		08/27/01	--	--	--	--	--	--	--	--		
		08/28/01	--	--	--	--	--	--	--	--		
		08/29/01	--	--	--	--	--	--	--	--		
		08/30/01	--	--	--	--	--	--	--	--		
		08/31/01	--	--	--	--	--	--	--	--		
2001	September	09/01/01	54.4	26	1,414	29	1,578	6.61	0.23	45		
		09/02/01	72.8	20	1,456	24	1,747	6.68	0	162		
		09/03/01	55.06	19	1,046	38	2,092	7.02	0.31	10		
		09/04/01	51.73	23	1,190	30	1,552	7.04	0.22	10		
		09/05/01	40.49	23	931	23	931	6.52	0.35	10		
		09/06/01	29.74	24	714	34	1,011	6.7	0.24	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		09/07/01	34.17	28	957	34	1,162	6.72	0.2	45		
		09/08/01	36.85	30	1,106	27	995	6.51	0	90		
		09/09/01	50.45	29	1,463	32	1,614	6.7	0.3	27		
		09/10/01	34.64	27	935	41	1,420	6.77	0.29	10		
		09/11/01	34.29	28	960	34	1,166	7.25	0.13	10		
		09/12/01	32.82	20	656	25	821	7.04	0.23	10		
		09/13/01	33.39	29	968	20	668	7.02	0.28	10		
		09/14/01	31.92	28	894	18	575	6.85	0.42	10		
		09/15/01	32.13	22	707	26	835	6.96	0.32	10		
		09/16/01	31.94	17	543	11	351	6.81	0.17	10		
		09/17/01	31.68	25	792	15	475	6.89	0.16	540		
		09/18/01	28.04	36	1,009	15	421	6.98	0.34	27		
		09/19/01	37.71	32	1,207	14	528	6.85	0.19	10		
		09/20/01	28.73	26	747	30	862	6.77	0.14	10		
		09/21/01	34.89	24	837	16	558	7.01	0.2	10		
		09/22/01	31.36	36	1,129	32	1,004	7.16	0.08	10		
		09/23/01	31.92	29	926	21	670	7.05	0.3	10		
		09/24/01	31.47	26	818	24	755	6.98	0.27	27		
		09/25/01	30.61	25	765	18	551	6.88	0.41	10		
		09/26/01	32.29	42	1,356	33	1,066	6.9	0.26	18		
		09/27/01	30.44	40	1,218	24	731	6.72	0.41	10		
		09/28/01	30.02	37	1,111	28	841	6.91	0.28	10		
		09/29/01	29.69	32	950	23	683	7.25	0.25	10		
		09/30/01	28.45	26	740	15	427	6.99	0.44	10		
2001	October	10/01/01	29.58	35	1,035	24	710	6.97	0.4	10		
		10/02/01	29.61	25	740	16	474	7	0.31	10		
		10/03/01	29.76	27	804	17	506	6.89	0.37	10		
		10/04/01	30.6	27	826	16	490	6.98	0.19	10		
		10/05/01	34.71	36	1,250	27	937	6.87	0.27	10		
		10/06/01	36.79	32	1,177	22	809	6.47	0.38	10		
		10/07/01	27.74	37	1,026	40	1,110	6.6	0.31	10		
		10/08/01	29.99	41	1,230	30	900	6.84	0.12	27		
		10/09/01	29.96	28	839	22	659	7.08	0.1	63		
		10/10/01	39.76	27	1,074	17	676	7.03	0.19	10		
		10/11/01	54.53	32	1,745	36	1,963	6.99	0.21	10		
		10/12/01	39.1	24	938	24	938	6.92	0.17	10		
		10/13/01	57.92	38	2,201	40	2,317	6.94	0.27	10		
		10/14/01	41.62	12	499	18	749	6.5	0.23	10		
		10/15/01	35.33	29	1,025	28	989	6.88	0.22	18		
		10/16/01	35.07	27	947	25	877	6.7	0.32	10		
		10/17/01	31.71	18	571	23	729	6.86	0.05	10		
		10/18/01	31.35	16	502	32	1,003	7.03	0.11	10		
		10/19/01	30.35	38	1,153	24	728	7.02	0.26	10		
		10/20/01	19.86	20	397	16	318	7.03	0.25	10		
		10/21/01	33.57	29	974	18	604	7.04	0.3	10		
		10/22/01	32.87	24	789	14	460	6.89	0.39	10		
		10/23/01	31.16	20	623	12	374	7.08	0.22	10		
		10/24/01	30.83	18	555	19	586	7.2	0.25	10		
		10/25/01	31.85	14	446	18	573	7.5	0.07	340		
		10/26/01	30.89	35	1,081	30	927	7.06	0.1	10		
		10/27/01	31.55	30	947	32	1,010	6.95	0.27	10		
		10/28/01	31.16	28	872	20	623	7.07	0.34	10		
		10/29/01	30.78	37	1,139	18	554	7.13	0.03	99		
		10/30/01	30.39	27	821	22	669	7.13	0.19	10		
		10/31/01	30.68	27	828	22	675	7.13	0.35	10		
2001	November	11/01/01	31.05	19	590	16	497	7.22	0.31	10	27.5	81.5

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Parameter									
			Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		11/02/01	30.87	30	926	28	864	7	0.3	10	27.2	81.0
		11/03/01	30.71	32	983	28	860	6.86	0.26	10	26.0	78.8
		11/04/01	30.73	25	768	12	369	7.04	0.38	10	26.2	79.2
		11/05/01	27.89	39	1,088	22	614	7.12	0.2	10	24.5	76.1
		11/06/01	28.82	29	836	26	749	7.04	0.35	10	25.6	78.1
		11/07/01	28.23	22	621	17	480	6.99	0.3	10	26.2	79.2
		11/08/01	30.69	34	1,043	36	1,105	6.99	0.35	10	26.8	80.2
		11/09/01	30.19	22	664	24	725	6.84	0.23	10	26.7	80.1
		11/10/01	29.92	40	1,197	26	778	7	0.2	10	24.9	76.8
		11/11/01	30.66	38	1,165	26	797	7.06	0.15	10	25.9	78.6
		11/12/01	30.06	23	691	20	601	7.44	0.15	10	28.1	82.6
		11/13/01	30.3	29	879	26	788	7.1	0.18	10	27.8	82.0
		11/14/01	31.63	18	569	22	696	7.41	0.3	10	25.8	78.4
		11/15/01	30.51	--	--	24	732	7.51	0.2	10	24.3	75.7
		11/16/01	30.25	--	--	20	605	7.01	0.27	10	24.3	75.7
		11/17/01	30.33	--	--	22	667	7.23	0.32	10	25.9	78.6
		11/18/01	30.89	--	--	26	803	7.02	0.26	10	24.7	76.5
		11/19/01	30.44	--	--	18	548	7.06	0.18	10	25.1	77.2
		11/20/01	--	--	--	--	--	--	--	--	24.7	76.5
		11/21/01	--	--	--	--	--	--	--	--	28.3	82.9
		11/22/01	--	--	--	--	--	--	--	--	26.7	80.1
		11/23/01	--	--	--	--	--	--	--	--	26.6	79.9
		11/24/01	--	--	--	--	--	--	--	--	26.3	79.3
		11/25/01	--	--	--	--	--	--	--	--	24.3	75.7
		11/26/01	--	--	--	--	--	--	--	--	18.3	64.9
		11/27/01	--	--	--	--	--	--	--	--	20.3	68.5
		11/28/01	--	--	--	--	--	--	--	--	21.7	71.1
		11/29/01	--	--	--	--	--	--	--	--	21.3	70.3
		11/30/01	--	--	--	--	--	--	--	--	23.3	73.9
2001	December	12/01/01	31.23	46	1,437	32	999	7.67	0.23	10		
		12/02/01	31.58	42	1,326	20	632	7.77	0.35	10		
		12/03/01	30.85	44	1,357	22	679	7.13	0.04	10		
		12/04/01	31.36	42	1,317	33	1,035	6.81	0.02	10		
		12/05/01	32.07	34	1,090	22	706	7.04	0.3	10		
		12/06/01	28.29	26	736	8	226	7.05	0.32	10		
		12/07/01	28.67	38	1,089	28	803	6.97	0.41	10		
		12/08/01	31.45	40	1,258	32	1,006	7.04	0.41	10		
		12/09/01	31.51	37	1,166	32	1,008	7.07	0.36	10		
		12/10/01	31.13	16	498	14	436	7.3	0.25	10		
		12/11/01	32.16	26	836	18	579	7.18	0.13	18		
		12/12/01	32.98	29	956	22	726	6.9	0.45	10		
		12/13/01	68.92	40	2,757	78	5,376	7.13	0.15	10		
		12/14/01	45.38	24	1,089	13	590	7.06	0.28	10		
		12/15/01	33.46	--	--	--	--	7.06	0.22	18		
		12/16/01	33.61	29	975	22	739	7.03	0.17	10		
		12/17/01	45.92	18	827	22	1,010	7.1	0.27	27		
		12/18/01	33.33	26	867	18	600	7.44	0.3	18		
		12/19/01	32.47	24	779	37	1,201	7.39	0.4	10		
		12/20/01	32.36	22	712	19	615	6.9	0.11	18		
		12/21/01	32.1	48	1,541	32	1,027	7	0.28	10		
		12/22/01	33.27	48	1,597	38	1,264	7.34	0.07	10		
		12/23/01	32.02	33	1,057	23	736	7.48	0.14	10		
		12/24/01	32.08	64	2,053	42	1,347	7.01	0.22	45		
		12/25/01	30.05	33	992	22	661	6.98	0.17	10		
		12/26/01	32.21	37	1,192	38	1,224	7.52	0.09	10		
		12/27/01	31.99	28	896	18	576	7.6	0.06	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

			Parameter									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		12/28/01	41.87	64	2,680	44	1,842	7.3	0.16	10		
		12/29/01	31.87	62	1,976	28	892	7.38	0.04	10		
		12/30/01	31.07	62	1,926	40	1,243	7.09	0.06	18		
		12/31/01	33.02	58	1,915	37	1,222	6.95	0.8	10		
2002	January	01/01/02	35.28	40	1,411	27	953	7.37	0.02	10		
		01/02/02	36.76	42	1,544	23	845	7	0.05	10		
		01/03/02	35.54	26	924	26	924	7.05	0.08	10		
		01/04/02	33.15	31	1,028	20	663	7.41	0.06	10		
		01/05/02	67.89	54	3,666	34	2,308	7.29	0.1	10		
		01/06/02	43.08	26	1,120	14	603	7.6	0.15	10		
		01/07/02	35.25	24	846	16	564	7.16	0.4	10		
		01/08/02	33.35	62	2,068	38	1,267	7.54	0.11	18		
		01/09/02	32.28	30	968	24	775	7.45	0	240		
		01/10/02	29.89	25	747	22	658	7.3	0.03	45		
		01/11/02	29.15	37	1,079	31	904	7.3	0.08	250		
		01/12/02	46.58	52	2,422	76	3,540	7.32	0.07	10		
		01/13/02	40.3	21	846	16	645	7.01	0.08	10		
		01/14/02	34.23	12	411	16	548	7.42	0.1	10		
		01/15/02	29.58	26	769	21	621	7.38	0.11	10		
		01/16/02	29.1	24	698	16	466	7.3	0.09	10		
		01/17/02	30.2	24	725	18	544	7.18	0.08	10		
		01/18/02	30.01	12	360	27	810	7.35	0.1	10		
		01/19/02	44.37	37	1,642	36	1,597	7.38	0.28	10		
		01/20/02	33.6	18	605	30	1,008	7.05	0.42	10		
		01/21/02	33.11	27	894	22	728	7.03	0.08	18		
		01/22/02	31.3	30	939	21	657	7.29	0.3	240		
		01/23/02	30.76	29	892	15	461	7.06	0.27	10		
		01/24/02	41.48	68	2,821	38	1,576	7.18	0.12	18		
		01/25/02	36.5	46	1,679	38	1,387	7.17	0.32	10		
		01/26/02	34.3	38	1,303	32	1,098	7.21	0.16	10		
		01/27/02	34.38	29	997	10	344	7.22	0.35	10		
		01/28/02	35.07	31	1,087	22	772	7.22	0.44	10		
		01/29/02	36.77	42	1,544	16	588	7.25	0.21	10		
		01/30/02	27.08	29	785	6	162	7.07	0.24	10		
		01/31/02	50.32	44	2,214	29	1,459	7.02	0.28	10		
2002	Febuary	02/01/02	50.25	54	2,714	54	2,714	7.08	0.31	10		
		02/02/02	36.05	50	1,803	40	1,442	7.06	0.29	10		
		02/03/02	35.47	58	2,057	34	1,206	7.28	0.21	10		
		02/04/02	34.19	28	957	18	615	7.32	0.41	10		
		02/05/02	42.03	32	1,345	24	1,009	7.36	0.38	10		
		02/06/02	46.7	37	1,728	40	1,868	7.52	0.42	10		
		02/07/02	34.69	37	1,284	31	1,075	7.29	0.21	10		
		02/08/02	33.73	30	1,012	40	1,349	7.03	0.18	10		
		02/09/02	32.05	54	1,731	36	1,154	7	0.21	10		
		02/10/02	30.34	40	1,214	27	819	7.04	0.15	10		
		02/11/02	31.47	62	1,951	36	1,133	7.35	0.37	10		
		02/12/02	29.96	56	1,678	23	689	7.12	0.41	10		
		02/13/02	31.18	34	1,060	26	811	6.94	0.39	10		
		02/14/02	32.84	42	1,379	25	821	7.35	0.16	10		
		02/15/02	32.65	62	2,024	38	1,241	7.17	0.32	10		
		02/16/02	32.02	34	1,089	31	993	7.15	0.1	10		
		02/17/02	31.63	48	1,518	30	949	7.18	0.23	10		
		02/18/02	31.63	52	1,645	38	1,202	7.32	0.18	10		
		02/19/02	34.43	36	1,239	23	792	6.44	0.15	10		
		02/20/02	37.63	30	1,129	34	1,279	7.35	0.1	144		
		02/21/02	31.18	25	780	26	811	7.03	0.4	10		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

			Parameter									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		02/22/02	33.81	54	1,826	36	1,217	7.14	0.41	10		
		02/23/02	31.36	56	1,756	31	972	7.16	0.16	10		
		02/24/02	31.72	62	1,967	40	1,269	7.24	0.12	10		
		02/25/02	32.82	60	1,969	42	1,378	7.19	0.33	10		
		02/26/02	33.18	58	1,924	38	1,261	7.15	0.1	144		
		02/27/02	35.08	51	1,789	50	1,754	7.02	0.2	10		
		02/28/02	30.55	56	1,711	42	1,283	7.05	0.15	10		
2002	March	03/01/02	82.52	54	4,456	45	3,713	6.88	0.16	10		
		03/02/02	53.68	33	1,771	52	2,791	7.06	0.36	10		
		03/03/02	39.25	59	2,316	55	2,159	6.97	0.27	10		
		03/04/02	37.05	58	2,149	46	1,704	7.18	0.16	10		
		03/05/02	35.89	63	2,261	42	1,507	7.37	0.1	10		
		03/06/02	35.95	55	1,977	47	1,690	7.19	0.16	63		
		03/07/02	35.95	51	1,833	41	1,474	6.84	0.03	72		
		03/08/02	35.29	60	2,117	36	1,270	7.22	0.1	10		
		03/09/02	37.03	49	1,814	37	1,370	7.01	0.15	10		
		03/10/02	30.73	70	2,151	44	1,352	7.04	0.18	10		
		03/11/02	55.95	64	3,581	33	1,846	7.06	0.1	10		
		03/12/02	40.54	40	1,622	32	1,297	6.47	0.2	10		
		03/13/02	35.75	75	2,681	68	2,431	7.07	0.32	10		
		03/14/02	34.06	62	2,112	41	1,396	7.18	0.34	10		
		03/15/02	34.4	66	2,270	38	1,307	7.32	0.01	10		
		03/16/02	35.24	62	2,185	38	1,339	7.01	0.11	10		
		03/17/02	35.66	60	2,140	48	1,712	7.11	0.22	10		
		03/18/02	35.16	72	2,532	49	1,723	7.01	0.18	10		
		03/19/02	35.16	90	3,164	44	1,547	7	0.2	10		
		03/20/02	35.22	14	493	6	211	7.22	0.15	10		
		03/21/02	34.85	32	1,115	17	592	7.1	0.22	36		
		03/22/02	32.86	66	2,169	32	1,052	7.34	0.42	10		
		03/23/02	32.79	54	1,771	36	1,180	7.04	0.38	10		
		03/24/02	33.54	46	1,543	40	1,342	7.2	0.21	10		
		03/25/02	39.49	62	2,448	29	1,145	7.48	0.32	10		
		03/26/02	68.26	54	3,686	42	2,867	7.46	0.03	10		
		03/27/02	44.55	48	2,138	39	1,737	7.04	0.24	10		
		03/28/02	36.03	30	1,081	30	1,081	7.01	0.33	10		
		03/29/02	37.38	58	2,168	26	972	7.19	0.38	10		
		03/30/02	35.66	34	1,212	25	892	7.41	0.3	10		
		03/31/02	75.72	27	2,044	20	1,514	7.24	0.16	10		
2002	April	04/01/02	47.03	24	1,129	30	1,411	7.08	0.4	10		
		04/02/02	37.6	37	1,391	40	1,504	7.11	0.42	10		
		04/03/02	34.71	37	1,284	28	972	7.36	0.23	10		
		04/04/02	36.18	54	1,954	38	1,375	7.44	0.16	210		
		04/05/02	34.71	42	1,458	39	1,354	7.04	0.25	10		
		04/06/02	34.45	41	1,412	34	1,171	6.98	0.15	10		
		04/07/02	30.81	48	1,479	52	1,602	6.99	0.17	10		
		04/08/02	83.84	27	2,264	32	2,683	7.57	0.32	10		
		04/09/02	60.92	21	1,279	26	1,584	7.08	0.29	27		
		04/10/02	42.07	36	1,515	34	1,430	7.26	0.43	10		
		04/11/02	38.1	44	1,676	33	1,257	7.5	0.31	10		
		04/12/02	46.42	42	1,950	40	1,857	7.07	0.11	10		
		04/13/02	36.14	56	2,024	31	1,120	7.24	0.25	10		
		04/14/02	36.03	54	1,946	39	1,405	7.34	0.3	10		
		04/15/02	35.51	64	2,273	36	1,278	6.99	0.2	10		
		04/16/02	35.6	62	2,207	37	1,317	7.02	0.25	171		
		04/17/02	33.76	24	810	19	641	7.12	0.41	10		
		04/18/02	33.65	59	1,985	36	1,211	7.32	0.1	818		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		04/19/02	34.42	46	1,583	35	1,205	7.43	0.4	10		
		04/20/02	33.53	50	1,677	32	1,073	7.2	0.32	10		
		04/21/02	33.6	54	1,814	30	1,008	7.2	0.09	10		
		04/22/02	34.27	48	1,645	32	1,097	7.05	0.28	153		
		04/23/02	34.27	53	1,816	31	1,062	7.21	0.03	10		
		04/24/02	33.01	46	1,518	30	990	7	0.1	10		
		04/25/02	33.6	--	--	38	1,277	7.04	0.13	10		
		04/26/02	32.39	38	1,231	32	1,036	7.27	0.39	10		
		04/27/02	33.06	40	1,322	30	992	7.17	0.29	10		
		04/28/02	29.57	44	1,301	26	769	7.28	0.33	10		
		04/29/02	30.59	49	1,499	27	826	7.38	0.12	18		
		04/30/02	29.83	86	2,565	32	955	7.35	0.32	10		
2002	May	05/01/02	29.93	45	1,347	35	1,048	7.26	0.13	90		
		05/02/02	27.9	37	1,032	31	865	7.42	0.35	10		
		05/03/02	29.36	38	1,116	22	646	7.19	0.07	10		
		05/04/02	29.06	44	1,279	24	697	7	0.3	10		
		05/05/02	28.43	34	967	28	796	7	0.29	10		
		05/06/02	30	24	720	10	300	7.28	0.01	10		
		05/07/02	29.84	43	1,283	33	985	7.19	0.17	10		
		05/08/02	28.73	46	1,322	35	1,006	7.31	0.27	108		
		05/09/02	29.92	39	1,167	24	718	7.28	0.23	10		
		05/10/02	28.3	43	1,217	30	849	7.2	0.23	10		
		05/11/02	31.27	49	1,532	20	625	7.05	0.12	10		
		05/12/02	31.27	35	1,094	22	688	7.25	0.42	18		
		05/13/02	28.93	35	1,013	34	984	7.17	0.03	10		
		05/14/02	34.58	64	2,213	70	2,421	7.06	0.11	72		
		05/15/02	31.11	29	902	34	1,058	7.07	0.46	10		
		05/16/02	31.62	40	1,265	30	949	7.24	0.44	18		
		05/17/02	46.5	54	2,511	42	1,953	7.11	0.39	10		
		05/18/02	34.31	37	1,269	36	1,235	7.1	0.11	18		
		05/19/02	31.5	40	1,260	40	1,260	7.01	0.23	18		
		05/20/02	31.03	110	3,413	55	1,707	7.01	0.11	18		
		05/21/02	30.88	40	1,235	28	865	7.21	0.04	10		
		05/22/02	30.94	56	1,733	38	1,176	6.9	0.22	10		
		05/23/02	27.78	44	1,222	38	1,056	6.95	0.15	10		
		05/24/02	27.88	36	1,004	30	836	7.16	0.04	6,000		
		05/25/02	26.54	41	1,088	24	637	7.03	0.08	220		
		05/26/02	26.28	37	972	28	736	7.14	0.06	10		
		05/27/02	27.17	38	1,032	22	598	7.08	0.15	10		
		05/28/02	27.97	48	1,343	39	1,091	7.1	0.1	10		
		05/29/02	27.71	52	1,441	31	859	7.13	0.25	27		
		05/30/02	35.22	52	1,831	33	1,162	7.19	0.38	63		
		05/31/02	30.78	40	1,231	36	1,108	7.1	0.1	10		
2002	June	06/01/02	27.67	46	1,273	29	802	7.04	0.14	10		
		06/02/02	26.63	41	1,092	17	453	7.04	0.15	10		
		06/03/02	28.04	50	1,402	36	1,009	7.02	0.11	10		
		06/04/02	27.82	44	1,224	38	1,057	7.19	0.46	10		
		06/05/02	30.15	51	1,538	42	1,266	7.28	0.42	10		
		06/06/02	28.29	56	1,584	40	1,132	7.04	0.1	10		
		06/07/02	29.06	44	1,279	28	814	7.16	0.35	10		
		06/08/02	29.04	46	1,336	36	1,045	6.97	0.08	450		
		06/09/02	29.04	51	1,481	44	1,278	7.15	0.22	63		
		06/10/02	33.37	45	1,502	44	1,468	7.11	0.28	10		
		06/11/02	28.08	40	1,123	38	1,067	7.31	0.25	10		
		06/12/02	27.97	54	1,510	40	1,119	7.21	0.42	63		
		06/13/02	27.56	52	1,433	32	882	7.24	0.45	45		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Parameter: Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		06/14/02	27.32	54	1,475	34	929	7.32	0.25	10		
		06/15/02	26.41	58	1,532	44	1,162	7.16	0.31	10		
		06/16/02	26.99	48	1,296	30	810	7.19	0.28	81		
		06/17/02	30.13	58	1,748	40	1,205	7.4	0.03	10		
		06/18/02	28.74	48	1,380	40	1,150	7.41	0	36		
		06/19/02	28.94	47	1,360	43	1,244	6.98	0.2	10		
		06/20/02	32.26	52	1,678	40	1,290	7.01	0.12	10		
		06/21/02	28.26	26	735	22	622	7.03	0.41	18		
		06/22/02	26.79	34	911	25	670	6.99	0.2	3,300		
		06/23/02	28.48	54	1,538	44	1,253	7.06	0.42	10		
		06/24/02	28.48	58	1,652	40	1,139	7.32	0.41	10		
		06/25/02	30.53	45	1,374	38	1,160	7.13	0.26	18		
		06/26/02	38.38	60	2,303	36	1,382	7.17	0.08	99		
		06/27/02	35.54	48	1,706	34	1,208	7.3	0.02	10		
		06/28/02	43.78	44	1,926	42	1,839	6.98	0.27	10		
		06/29/02	32.63	28	914	38	1,240	6.97	0.18	10		
		06/30/02	29.07	40	1,163	29	843	6.99	0.23	10		
2002	July	07/01/02	37.26	29	1,081	26	969	7.32	0.09	10		
		07/02/02	60.22	50	3,011	28	1,686	7	0.42	10		
		07/03/02	58.31	27	1,574	24	1,399	6.99	0.41	10		
		07/04/02	53.85	31	1,669	32	1,723	7.26	0.26	10		
		07/05/02	60.74	31	1,883	22	1,336	6.98	0.1	10		
		07/06/02	57.44	42	2,412	16	919	7.38	0.4	10		
		07/07/02	71.76	60	4,306	36	2,583	6.98	0.38	10		
		07/08/02	34.97	31	1,084	29	1,014	7.28	0.38	10		
		07/09/02	39.96	32	1,279	24	959	7	0.2	10		
		07/10/02	34.86	15	523	14	488	7.14	0.07	72		
		07/11/02	33.16	24	796	22	730	7.27	0.4	10		
		07/12/02	33.82	36	1,218	25	846	7.03	0.42	18		
		07/13/02	26.99	30	810	36	972	7.21	0.13	36		
		07/14/02	43.08	34	1,465	38	1,637	6.96	0.01	10		
		07/15/02	30.69	35	1,074	28	859	7.31	0.1	36		
		07/16/02	29.61	31	918	34	1,007	7.04	0.33	10		
		07/17/02	28.46	44	1,252	31	882	6.92	0.27			
		07/18/02	28.02	38	1,065	29	813	6.97	0.15	10		
		07/19/02	28.1	46	1,293	24	674	7.24	0.15	2,800		
		07/20/02	27.82	50	1,391	23	640	7.19	0.05	380		
		07/21/02	26.08	42	1,095	26	678	7	0.45	10		
		07/22/02	34.89	42	1,465	30	1,047	7.09	0.21	45		
		07/23/02	29.83	45	1,342	24	716	7.16	0.2	10		
		07/24/02	29.5	40	1,180	33	974	7.1	0.27	290		
		07/25/02	35.7	48	1,714	38	1,357	7.22	0.03	144		
		07/26/02	34.24	58	1,986	32	1,096	7	0.1	10		
		07/27/02	29.16	40	1,166	28	816	7	0.2	10		
		07/28/02	29.16	42	1,225	30	875	6.99	0.24	27		
		07/29/02	32.86	48	1,577	30	986	7.29	0.44	1,636		
		07/30/02	32.86	24	789	32	1,052	7.07	0.38	10		
		07/31/02	36.78	38	1,398	32	1,177	7.12	0.3	10		
2002	August	08/01/02	35.03	--	--	35	1,226	7.34	0.4	27		
		08/02/02	32.36	--	--	38	1,230	7.28	0.06	10		
		08/03/02	32.44	--	--	33	1,071	7.51	0.03	420		
		08/04/02	30.02	--	--	33	991	7.35	0.35	10		
		08/05/02	29.86	--	--	30	896	7	0.24	10		
		08/06/02	31.67	53	1,679	24	760	7.02	0.33	18		
		08/07/02	31.68	37	1,172	26	824	7.27	0.33	1,909		
		08/08/02	36.22	43	1,557	35	1,268	7.32	0.34	54		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		08/09/02	31.49	--	--	45	1,417	7.16	0.41	10		
		08/10/02	31.05	--	--	27	838	7.18	0.38	27		
		08/11/02	34.63	--	--	38	1,316	7.22	0.08	390		
		08/12/02	32.71	--	--	30	981	7.36	0.29	10		
		08/13/02	32.98	--	--	28	923	7.2	0.31	10		
		08/14/02	30.8	48	1,478	26	801	6.98	0.35	10		
		08/15/02	46.9	--	--	38	1,782	6.98	0.4	10		
		08/16/02	42.49	55	2,337	28	1,190	7.03	0.45	10		
		08/17/02	33.03	--	--	34	1,123	7.22	0.39	90		
		08/18/02	31.14	--	--	28	872	7.08	0.41	10		
		08/19/02	32.39	--	--	24	777	7.15	0.1	10		
		08/20/02	32.63	42	1,370	26	848	7.08	0.14	10		
		08/21/02	34.76	44	1,529	28	973	7.2	0.19	36		
		08/22/02	39.75	37	1,471	30	1,193	7.11	0.03	27		
		08/23/02	33.92	--	--	28	950	7	0.3	10		
		08/24/02	32.76	--	--	26	852	7	0.24	10		
		08/25/02	32.42	--	--	26	843	7.01	0.19	10		
		08/26/02	30.16	37	1,116	28	844	7.16	0.42	36		
		08/27/02	26.82	40	1,073	26	697	7.12	0.07	10		
		08/28/02	27.55	56	1,543	26	716	7.1	0.42	10		
		08/29/02	27.91	27	754	26	726	7.15	0.18	10		
		08/30/02	27.95	--	--	33	922	6.93	0.28	1,000		
		08/31/02	27.64	61	1,686	28	774	7.08	0.05	36		
2002	September	09/01/02	26.4	64	1,690	30	792	7.07	0.02	430		
		09/02/02	28.29	24	679	29	820	7	0.25	189		
		09/03/02	30.39	36	1,094	26	790	7.02	0.18	10		
		09/04/02	36.81	59	2,172	31	1,141	7.19	0.12	18		
		09/05/02	31.01	54	1,675	28	868	7.11	0.11	10		
		09/06/02	31.22	52	1,623	28	874	7.13	0.4	10		
		09/07/02	35.63	58	2,067	28	998	7.14	0.36	10		
		09/08/02	40.82	54	2,204	36	1,470	7.4	0.13	10		
		09/09/02	32.47	48	1,559	36	1,169	6.72	0.19	10		
		09/10/02	27.32	32	874	36	984	7.02	0.3	27		
		09/11/02	25.44	38	967	32	814	7.01	0.28	10		
		09/12/02	25.44	40	1,018	32	814	7.03	0.24	10		
		09/13/02	25.53	30	766	22	562	7.18	0.21	1,364		
		09/14/02	25.94	24	623	18	467	7.12	0.29	18		
		09/15/02	25.45	31	789	34	865	7.11	0.17	10		
		09/16/02	33	42	1,386	43	1,419	7	0.36	10		
		09/17/02	29.43	36	1,059	38	1,118	6.71	0.16	10		
		09/18/02	28.99	27	783	32	928	6.96	0.21	220		
		09/19/02	26.03	22	573	34	885	7	0.22	10		
		09/20/02	28.19	65	1,832	38	1,071	6.97	0.28	10		
		09/21/02	35.56	24	853	44	1,565	6.99	0.35	10		
		09/22/02	31.43	33	1,037	39	1,226	7	0.24	10		
		09/23/02	26.14	33	863	31	810	7.13	0.34	10		
		09/24/02	33.71	33	1,112	32	1,079	7.69	0.39	10		
		09/25/02	82.83	34	2,816	40	3,313	7.21	0.18	10		
		09/26/02	74.03	37	2,739	39	2,887	6.62	0.21	10		
		09/27/02	35.55	34	1,209	30	1,067	6.88	0.43	10		
		09/28/02	30.24	36	1,089	30	907	7.16	0.16	10		
		09/29/02	29.09	38	1,105	22	640	6.97	0.03	10		
		09/30/02	29.07	44	1,279	28	814	7.01	0.27	10		
2002	October	10/01/02	26.25	41	1,076	28	735	6.99	0.3	10		
		10/02/02	32.21	33	1,063	31	999	7.08	0.03	10		
		10/03/02	69.72	47	3,277	40	2,789	7.56	0.14	1,727		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		10/04/02	39.23	27	1,059	31	1,216	7.02	0.33	10		
		10/05/02	42.14	28	1,180	30	1,264	7.1	0.41	10		
		10/06/02	37.38	31	1,159	30	1,121	7.14	0.22	10		
		10/07/02	31.08	36	1,119	30	932	7.23	0.03	10		
		10/08/02	30.8	52	1,602	31	955	7.16	0.03	10		
		10/09/02	57.9	54	3,127	31	1,795	6.82	0.35	10		
		10/10/02	51.53	30	1,546	30	1,546	6.98	0.28	10		
		10/11/02	33.01	25	825	22	726	7.12	0.08	63		
		10/12/02	30.78	42	1,293	30	923	7.25	0.12	10		
		10/13/02	29.37	42	1,234	25	734	7.11	0.09	10		
		10/14/02	26.15	41	1,072	24	628	7.26	0.11	10		
		10/15/02	26.15	49	1,281	24	628	7.03	0.22	10		
		10/16/02	23.54	46	1,083	24	565	6.88	0.25	10		
		10/17/02	23.78	48	1,141	20	476	7.2	0.32	10		
		10/18/02	23.98	48	1,151	30	719	6.99	0.18	10		
		10/19/02	24.46	50	1,223	31	758	6.98	0.21	10		
		10/20/02	25.17	38	956	28	705	7	0.2	10		
		10/21/02	25.17	38	956	27	680	7.35	0.02	580		
		10/22/02	32.69	43	1,406	26	850	7.03	0.17	220		
		10/23/02	32.73	43	1,407	45	1,473	7.4	0.06	54		
		10/24/02	32.69	--	--	32	1,046	7.25	0.18	27		
		10/25/02	58.12	--	--	50	2,906	7.14	0.03	99		
		10/26/02	62.84	47	2,953	38	2,388	7.28	0.03	60,000		
		10/27/02	89	--	--	40	3,560	7.14	0.18	10		
		10/28/02	40.21	--	--	22	885	7.12	0.03	727		
		10/29/02	87.16	--	--	39	3,399	6.89	0.2	81		
		10/30/02	47.6	32	1,523	25	1,190	7.27	0.25	36		
		10/31/02	31.13	36	1,121	34	1,058	7.39	0.31	10		
2002	November	11/01/02	34.88	44	1,535	30	1,046	7.42	0.32	10		
		11/02/02	31.83	36	1,146	24	764	7.35	0.24	10		
		11/03/02	42.24	45	1,901	34	1,436	7.38	0.01	99		
		11/04/02	48.51	46	2,231	32	1,552	7.26	0.22	18		
		11/05/02	88.61	39	3,456	32	2,836	7.32	0.06	545		
		11/06/02	45.36	30	1,361	26	1,179	7	0.26	10		
		11/07/02	34.85	33	1,150	22	767	6.99	0.17	10		
		11/08/02	32.03	46	1,473	35	1,121	7.34	0.37	10		
		11/09/02	34.27	67	2,296	40	1,371	7.14	0.16	10		
		11/10/02	35.48	54	1,916	32	1,135	7.08	0.02	27		
		11/11/02	41.63	58	2,415	29	1,207	7.47	0.07	10		
		11/12/02	36.53	41	1,498	30	1,096	7.11	0.28	10		
		11/13/02	32.79	40	1,312	29	951	7.01	0.04	10		
		11/14/02	32.86	46	1,512	26	854	7.11	0.1	10		
		11/15/02	35.59	66	2,349	29	1,032	7.02	0.2	10		
		11/16/02	34.97	56	1,958	33	1,154	7.01	0.3	72		
		11/17/02	31.85	46	1,465	29	924	7.01	0.34	10		
		11/18/02	32.54	--	--	30	976	7.15	0.43	10		
		11/19/02	35.47	51	1,809	30	1,064	7.23	0	10		
		11/20/02	46.68	76	3,548	32	1,494	7.17	0.33	10		
		11/21/02	32.99	40	1,320	32	1,056	7.15	0.42	10		
		11/22/02	31.3	22	689	33	1,033	7.03	0.28	18		
		11/23/02	31.16	46	1,433	33	1,028	7	0.28	27		
		11/24/02	31.16	54	1,683	34	1,059	7.32	0.2	10		
		11/25/02	31.54	47	1,482	26	820	7.34	0.31	10		
		11/26/02	31.68	50	1,584	30	950	6.98	0.4	10		
		11/27/02	33.2	51	1,693	36	1,195	7.19	0.18	10		
		11/28/02	28.52	43	1,226	34	970	7.37	0.32	207		

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		11/29/02	28.49	45	1,282	30	855	7.53	0.22	27		
		11/30/02	34.36	58	1,993	39	1,340	7.38	0.37	10		
2002	December	12/01/02	30.88	42	1,297	25	772	7.12	0.39	10	18.0	64.4
		12/02/02	30.44	40	1,218	32	974	7.19	0.4	10	15.5	59.9
		12/03/02	44.32	47	2,083	43	1,906	7.23	0.22	36	20.5	68.9
		12/04/02	71.4	38	2,713	42	2,999	6.96	0.41	10	21.6	70.9
		12/05/02	52.11	23	1,199	32	1,668	6.8	0.35	10	17.4	63.3
		12/06/02	34.81	39	1,358	34	1,184	7.32	0.16	10	16.4	61.5
		12/07/02	33.47	42	1,406	43	1,439	7.19	0.29	10	18.6	65.5
		12/08/02	34.14	34	1,161	35	1,195	7.09	0.25	27	17.9	64.2
		12/09/02	41.97	49	2,057	32	1,343	7.3	0.2	10	18.4	65.1
		12/10/02	49.65	52	2,582	40	1,986	7.31	0.29	10	18.4	65.1
		12/11/02	34.48	38	1,310	38	1,310	7.63	0.27	10	15.7	60.3
		12/12/02	43.92	43	1,889	28	1,230	7.1	0.24	10	18.4	65.1
		12/13/02	37.3	42	1,567	28	1,044	6.89	0.4	10	19.3	66.7
		12/14/02	32.72	50	1,636	30	982	6.96	0.25	10	17.5	63.5
		12/15/02	32.17	42	1,351	30	965	6.89	0.23	10	17.3	63.1
		12/16/02	32.13	62	1,992	38	1,221	7.36	0.15	10	19.3	66.7
		12/17/02	31.84	54	1,719	30	955	7.31	0.23	10	21.0	69.8
		12/18/02	33.77	48	1,621	32	1,081	7.33	0.17	10	21.9	71.4
		12/19/02	33.49	54	1,808	24	804	7.28	0.35	10	22.9	73.2
		12/20/02	28.92	52	1,504	32	925	7.32	0.26	10	19.3	66.7
		12/21/02	31.62	52	1,644	31	980	7.37	0.09	10	17.9	64.2
		12/22/02	34.3	68	2,332	28	960	7.4	0.07	10	21.4	70.5
		12/23/02	79.88	66	5,272	48	3,834	6.96	0.2	10	20.6	69.1
		12/24/02	61.35	28	1,718	42	2,577	6.92	0.17	10	19.8	67.6
		12/25/02	39.7	30	1,191	45	1,787	7.28	0.24	10	14.7	58.5
		12/26/02	37.74	34	1,283	28	1,057	7.31	0.34	10	16.2	61.2
		12/27/02	34.63	39	1,351	36	1,247	7.46	0.24	10	18.5	65.3
		12/28/02	32.23	44	1,418	38	1,225	7.35	0.27	10	18.0	64.4
		12/29/02	32.95	52	1,713	44	1,450	7.38	0.07	10	19.3	66.7
		12/30/02	41.65	54	2,249	36	1,499	7.35	0.1	10	20.1	68.2
		12/31/02	64.86	54	3,502	62	4,021	7.11	0.01	2,000	20.3	68.5
2003	January	01/01/03	41.43	36	1,491	32	1,326	6.87	0.32	10	18.4	65.1
		01/02/03	40.2	40	1,608	29	1,166	6.98	0.23	10	18.9	66.0
		01/03/03	33	44	1,452	37	1,221	7.4	0.37	10	17.6	63.7
		01/04/03	36.78	51	1,876	39	1,434	7.23	0.45	10	18.7	65.7
		01/05/03	31.91	52	1,659	36	1,149	6.98	0.37	10	18.0	64.4
		01/06/03	31.88	--	--	41	1,307	7.4	0.4	10	19.2	66.6
		01/07/03	31.46	56	1,762	39	1,227	7.33	0.09	10	18.6	65.5
		01/08/03	30.88	55	1,698	38	1,173	7.79	0.36	10	18.2	64.8
		01/09/03	32.79	62	2,033	30	984	6.65	0.38	10	18.8	65.8
		01/10/03	32.24	58	1,870	40	1,290	6.97	0.17	10	20.2	68.4
		01/11/03	32.42	64	2,075	45	1,459	7	0.12	36	16.4	61.5
		01/12/03	32.82	57	1,871	40	1,313	6.97	0.15	10	18.2	64.8
		01/13/03	30.27	45	1,362	42	1,271	7.57	0.21	10	17.5	63.5
		01/14/03	29.07	55	1,599	42	1,221	7.57	0.13	10	17.9	64.2
		01/15/03	29.97	58	1,738	39	1,169	7.6	0.34	10	18.1	64.6
		01/16/03	31.18	49	1,528	38	1,185	7.43	0.31	10	19.3	66.7
		01/17/03	29.1	56	1,630	33	960	7.44	0.06	10	18.2	64.8
		01/18/03	30.63	52	1,593	36	1,103	7.45	0.03	10	15.9	60.6
		01/19/03	32.51	67	2,178	47	1,528	7.39	0.04	90	18.3	64.9
		01/20/03	39.18	78	3,056	43	1,685	6.98	0.1	10	15.4	59.7
		01/21/03	31.96	71	2,269	47	1,502	6.96	0.17	10	20.7	69.3
		01/22/03	31.47	54	1,699	36	1,133	7.45	0.34	10	20.5	68.9
		01/23/03	30.84	72	2,220	54	1,665	6.91	0.21	10	16.1	61.0

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

			Parameter									
Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		01/24/03	30.83	90	2,775	64	1,973	7.78	0.38	10	17.4	63.3
		01/25/03	32.71	66	2,159	48	1,570	7.19	0	60,000	17.6	63.7
		01/26/03	42.82	56	2,398	38	1,627	7.53	0.34	10	18.2	64.8
		01/27/03	31.44	51	1,603	34	1,069	7.29	0.21	10	16.1	61.0
		01/28/03	32.58	48	1,564	38	1,238	7.34	0.03	54	18.1	64.6
		01/29/03	32.88	48	1,578	28	921	6.98	0.18	10	19.5	67.1
		01/30/03	33.06	48	1,587	34	1,124	6.97	0.19	10	19.0	66.2
		01/31/03	31.57	51	1,610	24	758	7.97	0.16	10		
2003	February	02/01/03	29.83	46	1,372	30	895	7.36	0.1	63	18.4	65.1
		02/02/03	30.5	48	1,464	25	763	7.35	0.39	10	18.9	66.0
		02/03/03	33.09	47	1,555	24	794	7.4	0.38	10	17.6	63.7
		02/04/03	29.82	33	984	22	656	7.39	0.39	10	18.7	65.7
		02/05/03	31.28	35	1,095	26	813	7.42	0.41	10	18.0	64.4
		02/06/03	32.28	42	1,356	34	1,098	7.44	0.4	10	19.2	66.6
		02/07/03	39.49	33	1,303	20	790	6.89	0.28	10	18.6	65.5
		02/08/03	33.65	28	942	19	639	7.05	0.13	10	18.2	64.8
		02/09/03	37.38	34	1,271	25	935	7.53	0.18	10	18.8	65.8
		02/10/03	34.19	31	1,060	20	684	7.27	0.13	10	20.2	68.4
		02/11/03	31.02	29	900	16	496	7.35	0.18	10	16.4	61.5
		02/12/03	30.56	34	1,039	24	733	7.36	0.4	10	18.2	64.8
		02/13/03	31.23	31	968	18	562	7.39	0.41	10	17.5	63.5
		02/14/03	31.24	36	1,125	32	1,000	7.42	0.14	10	17.9	64.2
		02/15/03	69.99	46	3,220	41	2,870	7.44	0.16	10	18.1	64.6
		02/16/03	46.22	28	1,294	25	1,156	6.89	0.19	10	19.3	66.7
		02/17/03	34.89	28	977	26	907	6.9	0.08	81	18.2	64.8
		02/18/03	33.25	25	831	18	599	6.97	0.11	10	15.9	60.6
		02/19/03	33.25	28	931	20	665	7.52	0.23	10	18.3	64.9
		02/20/03	43.53	32	1,393	22	958	7.5	0.37	99	15.4	59.7
		02/21/03	86.57	40	3,463	52	4,502	7.66	0.12	320	20.7	69.3
		02/22/03	48.95	24	1,175	29	1,420	7.37	0.13	10	20.5	68.9
		02/23/03	43.35	26	1,127	20	867	7.48	0.33	27	16.1	61.0
		02/24/03	40.91	34	1,391	21	859	7.47	0.13	10	17.4	63.3
		02/25/03	41.59	35	1,456	27	1,123	7.25	0.03	10	17.6	63.7
		02/26/03	51.13	41	2,096	32	1,636	6.98	0.1	10	18.2	64.8
		02/27/03	49.59	31	1,537	29	1,438	7.2	0.16	10	16.1	61.0
		02/28/03	38.42	32	1,229	25	961	7.62	0.4	10	18.1	64.6
2003	March	03/01/03	35.27	30	1,058	22	776	7.66	0.39	10	18.4	65.1
		03/02/03	33.28	33	1,098	19	632	7.49	0.31	10	18.9	66.0
		03/03/03	35.91	34	1,221	18	646	7.43	0.36	10	17.6	63.7
		03/04/03	34.38	37	1,272	24	825	7.55	0.38	10	18.7	65.7
		03/05/03	35.79	48	1,718	26	931	7.43	0.02	54	18.0	64.4
		03/06/03	66.6	52	3,463	38	2,531	7.51	0.13	10	19.2	66.6
		03/07/03	57.49	31	1,782	30	1,725	7.18	0.34	10	18.6	65.5
		03/08/03	42.7	33	1,409	24	1,025	7.04	0.15	10	18.2	64.8
		03/09/03	43.29	32	1,385	28	1,212	7	0.18	10	18.8	65.8
		03/10/03	36.81	38	1,399	28	1,031	7.46	0.25	126	20.2	68.4
		03/11/03	36.94	34	1,256	26	960	7.4	0.42	10	16.4	61.5
		03/12/03	36.94	35	1,293	26	960	7.26	0.4	10	18.2	64.8
		03/13/03	45.54	38	1,731	34	1,548	6.96	0.39	10	17.5	63.5
		03/14/03	36.7	40	1,468	34	1,248	7.47	0.13	10	17.9	64.2
		03/15/03	34.53	40	1,381	30	1,036	7.52	0.12	10	18.1	64.6
		03/16/03	33.39	36	1,202	32	1,068	7.42	0.1	18	19.3	66.7
		03/17/03	36.44	52	1,895	32	1,166	7.46	0.05	10	18.2	64.8
		03/18/03	50.26	51	2,563	40	2,010	7.33	0.05	10	15.9	60.6
		03/19/03	37.95	38	1,442	32	1,214	6.83	0.12	45	18.3	64.9
		03/20/03	34.92	36	1,257	26	908	7.11	0.42	10	15.4	59.7

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		03/21/03	32.59	45	1,467	30	978	7.83	0.07	18	20.7	69.3
		03/22/03	32.64	42	1,371	30	979	7.46	0.24	10	20.5	68.9
		03/23/03	32.31	50	1,616	26	840	7.44	0.29	10	16.1	61.0
		03/24/03	32.17	50	1,609	26	836	7.37	0.03	10	17.4	63.3
		03/25/03	34.98	38	1,329	35	1,224	7.44	0.01	10	17.6	63.7
		03/26/03	34.19	38	1,299	34	1,162	6.98	0.15	10	18.2	64.8
		03/27/03	31.8	41	1,304	30	954	7.03	0.18	10	16.1	61.0
		03/28/03	31.49	54	1,700	21	661	7.46	0.37	10	18.1	64.6
		03/29/03	33.43	41	1,371	27	903	7.25	0.22	36	19.5	67.1
		03/30/03	30.89	48	1,483	30	927	7.24	0.29	10	19.0	66.2
		03/31/03	30.64	50	1,532	36	1,103	7.53	0.12	31,000		
2003	April	04/01/03	30.84	38	1,172	32	987	7.48	0.29	18	18.4	65.1
		04/02/03	31.73	42	1,333	32	1,015	7.32	0.24	10	18.9	66.0
		04/03/03	32.45	41	1,330	32	1,038	7.24	0.05	10	17.6	63.7
		04/04/03	32.22	58	1,869	40	1,289	7.1	0.25	171	18.7	65.7
		04/05/03	51.02	55	2,806	44	2,245	7.02	0.3	162	18.0	64.4
		04/06/03	35.72	50	1,786	34	1,214	7.05	0.1	36	19.2	66.6
		04/07/03	98.42	48	4,724	46	4,527	7.29	0.11	81	18.6	65.5
		04/08/03	89.03	21	1,870	37	3,294	6.62	0.23	10	18.2	64.8
		04/09/03	55.88	26	1,453	24	1,341	7.32	0.25	10	18.8	65.8
		04/10/03	39.45	33	1,302	32	1,262	7.29	0.29	45	20.2	68.4
		04/11/03	36.82	36	1,326	31	1,141	7.4	0.05	10	16.4	61.5
		04/12/03	33.57	40	1,343	32	1,074	7.23	0.27	10	18.2	64.8
		04/13/03	32.37	41	1,327	34	1,101	7.61	0.23	36	17.5	63.5
		04/14/03	32.12	46	1,478	41	1,317	7.03	0.22	126	17.9	64.2
		04/15/03	32.34	38	1,229	34	1,100	7.1	0.15	10	18.1	64.6
		04/16/03	32.98	43	1,418	38	1,253	7.37	0.38	10	19.3	66.7
		04/17/03	28.68	42	1,205	44	1,262	7.54	0.18	10	18.2	64.8
		04/18/03	31.06	46	1,429	32	994	7.38	0.2	18	15.9	60.6
		04/19/03	31.44	34	1,069	35	1,100	7.48	0.15	10	18.3	64.9
		04/20/03	28.07	38	1,067	25	702	7.37	0.02	63	15.4	59.7
		04/21/03	32	44	1,408	28	896	7.38	0.33	10	20.7	69.3
		04/22/03	33.4	40	1,336	30	1,002	7.41	0.11	10	20.5	68.9
		04/23/03	31.46	43	1,353	31	975	6.8	0.19	10	16.1	61.0
		04/24/03	17.51	64	1,121	38	665	6.9	0.3	10	17.4	63.3
		04/25/03	31.65	60	1,899	36	1,139	7.49	0.3	10	17.6	63.7
		04/26/03	29.77	57	1,697	44	1,310	7.42	0.43	10	18.2	64.8
		04/27/03	29.77	52	1,548	32	953	7.46	0.45	10	16.1	61.0
		04/28/03	30.6	60	1,836	33	1,010	7.31	0.4	10	18.1	64.6
		04/29/03	30.41	46	1,399	31	943	7.48	0.2	10	19.5	67.1
		04/30/03	30.38	38	1,154	27	820	7.33	0.03	10	19.0	66.2
2003	May	05/01/03	30.37	51	1,549	40	1,215	7.32	0.47	10	18.4	65.1
		05/02/03	30.28	50	1,514	30	908	7.36	0.33	10	18.9	66.0
		05/03/03	33.29	40	1,332	46	1,531	6.92	0.37	10	17.6	63.7
		05/04/03	31.18	42	1,310	35	1,091	7.06	0.22	10	18.7	65.7
		05/05/03	31.2	44	1,373	30	936	7.11	0.29	18	18.0	64.4
		05/06/03	31.31	36	1,127	23	720	7.42	0.43	10	19.2	66.6
		05/07/03	31.16	31	966	24	748	7.35	0.22	10	18.6	65.5
		05/08/03	30.81	36	1,109	24	739	7.36	0.16	10	18.2	64.8
		05/09/03	30.95	37	1,145	23	712	7.37	0.37	10	18.8	65.8
		05/10/03	33.79	32	1,081	28	946	7.03	0.17	10	20.2	68.4
		05/11/03	30.59	36	1,101	32	979	7.09	0.27	10	16.4	61.5
		05/12/03	31.75	36	1,143	26	826	7.08	0.2	18	18.2	64.8
		05/13/03	31.61	37	1,170	20	632	7.02	0.16	10	17.5	63.5
		05/14/03	30.79	40	1,232	25	770	7.03	0.19	10	17.9	64.2
		05/15/03	30.2	39	1,178	18	544	7.43	0.32	10	18.1	64.6

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Monthly DMR Data Summary
January 2001 to April 2003

Year	Month	Date	Flow (MGD)	BOD_5 (mg/L)	BOD_5 (lb/day)	TSS (mg/L)	TSS (lb/day)	pH (su)	Total Residual Chlorine (mg/L)	Fecal Coliform	Temp °C	Temp °F
		05/16/03	31.26	44	1,375	24	750	7.4	0.29	10	19.3	66.7
		05/17/03	32.22	39	1,257	24	773	7.42	0.22	10	18.2	64.8
		05/18/03	30.4	40	1,216	26	790	7.42	0.37	10	15.9	60.6
		05/19/03	31.63	36	1,139	36	1,139	7.17	0.04	10	18.3	64.9
		05/20/03	32.71	39	1,276	39	1,276	7.43	0.37	10	15.4	59.7
		05/21/03	31.13	52	1,619	34	1,058	7.04	0.22	10	20.7	69.3
		05/22/03	31.05	34	1,056	34	1,056	6.98	0.19	10	20.5	68.9
		05/23/03	26.69	36	961	35	934	7.44	0.25	10	16.1	61.0
		05/24/03	28.64	37	1,060	35	1,002	7.36	0.46	10	17.4	63.3
		05/25/03	28.17	37	1,042	42	1,183	7.43	0.38	10	17.6	63.7
		05/26/03	31.09	44	1,368	36	1,119	7.47	0.34	10	18.2	64.8
		05/27/03	31	41	1,271	29	899	7.21	0.4	10	16.1	61.0
		05/28/03	29.42	38	1,118	21	618	7.46	0.02	10	18.1	64.6
		05/29/03	30.75	39	1,199	24	738	7.19	0.09	10	19.5	67.1
		05/30/03	29.78	57	1,697	42	1,251	7.15	0.24	10	19.0	66.2
		05/31/03	30.24	44	1,331	30	907	7.12	0.22	10		
Average			34.31	36.41	1,251	29.08	1,029	7.12	0.16	16,952	21.63	70.93
Maximum			98.42	110.00	5,298	78.00	7,047	7.97	0.80	3,000,000	29.90	85.82
Minimum			17.51	8.00	240	5.00	136	6.00	0.00	10	14.70	58.46

APPENDIX C

BATON ROUGE CITY/PARISH WWTPS – SEMIANNUAL TESTING RESULTS – 2001 AND 2002

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North, Central and South Wastewater Treatment Plants
Semiannual Priority Pollutant Testing

Parameter	North WWTP				Central WWTP				South WWTP			
	Concentration (µg/L or as noted)											
	01/24/01	07/12/01	11/01/01 to 4/30/02	4/01/02 to 9/30/02	01/24/01	07/12/01	11/01/01 to 4/30/02	5/01/02 to 10/31/02	01/24/01	07/12/01	5/01/02 to 10/31/02	6/01/02 to 11/30/02 [1]
pH (s.u.)	7.2	7.3	NR	NR	7.1	7.0	NR	NR	7.2	7.1	NR	NR
BOD_5 (mg/L)	17	16	NR	NR	22	16	NR	NR	25	30	NR	NR
TSS (mg/L)	8	10	NR	NR	10	13	NR	NR	13	29	NR	NR
Nitrates (mg/L)	11.75	11.7	10.6	10.1	7.65	6.3	10.6	6.8	6.05	9.8	1.45	1.45
Cyanide (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenols (mg/L)	0.01	<0.002	<0.002	0.024	0.006	<0.002	<0.002	0.005	0.014	0.004	0.007	0.007
Fluoride (mg/L)	0.4	1.06	0.55	0.45	0.4	1.24	0.6	0.45	0.36	1.14	0.45	0.45
Oil & grease (mg/L)	<5.0	<5.0	NR	NR	<5.0	<5.0	NR	NR	<5.0	<5.0	NR	NR
Metals												
Antimony	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Arsenic	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Barium	13	<10	22	<10	15	<10	24	20	19	<10	<10	<10
Beryllium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cadmium	<4.0	<4.0	<4.0	<1.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Chromium	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chromium, Hexavalent	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chromium, Trivalent	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Copper	<10	<10	<10	<10	12	20	<10	<10	14	<10	<10	<10
Lead	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	<0.2	<0.2	NR	NR	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	<20	<20	<20	<21	<20	<20	<20	<20	<20	<20	<20	<20
Selenium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	<10	<10	<10	<2.0	<10	<10	<10	<10	<10	<10	<10	<10
Thallium	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Zinc	26	30	30	60	36	30	31	60	44	36	70	70

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North, Central and South Wastewater Treatment Plants
Semiannual Priority Pollutant Testing

Parameter	North WWTP				Central WWTP				South WWTP			
	Concentration (µg/L or as noted)											
	01/24/01	07/12/01	11/01/01 to 4/30/02	4/01/02 to 9/30/02	01/24/01	07/12/01	11/01/01 to 4/30/02	5/01/02 to 10/31/02	01/24/01	07/12/01	5/01/02 to 10/31/02	6/01/02 to 11/30/02 [1]
Volatile Organics												
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorobromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	**6.0**	ND	**8.0**	**8**	**19 (23 dup**	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl chloride)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
para-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-trichlorophenoxyproprionic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Base Neutrals												

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North, Central and South Wastewater Treatment Plants
Semiannual Priority Pollutant Testing

Parameter	North WWTP Concentration (µg/L or as noted)				Central WWTP				South WWTP			
	01/24/01	07/12/01	11/01/01 to 4/30/02	4/01/02 to 9/30/02	01/24/01	07/12/01	11/01/01 to 4/30/02	5/01/02 to 10/31/02	01/24/01	07/12/01	5/01/02 to 10/31/02	6/01/02 to 11/30/02 [1]
Anthracine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis 2-chloroethyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis chloromethyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis-2-ethylhexyl Phthalate	**11**	ND	**14**	**24**	**10**	ND	**11**	**12**	**15**	ND	**13**	**13**
di-n-butyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acid Compounds												
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North, Central and South Wastewater Treatment Plants
Semiannual Priority Pollutant Testing

Parameter	North WWTP				Central WWTP				South WWTP			
	Concentration (µg/L or as noted)											
	01/24/01	07/12/01	11/01/01 to 4/30/02	4/01/02 to 9/30/02	01/24/01	07/12/01	11/01/01 to 4/30/02	5/01/02 to 10/31/02	01/24/01	07/12/01	5/01/02 to 10/31/02	6/01/02 to 11/30/02 [1]
2,3-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,5-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides												
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD, p,p-DDD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE, p,p-DDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDT, p,p-DDT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A-enfdosulfan-alpha	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-endosulfan-beta	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated biphenyls (PCBs)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Herbicides												
2,4-Dichlorophenyoxyacetic acid	ND	NA	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND

City of Baton Rouge and Parish of East Baton Rouge
Historical Wastewater Treatment Plant Effluent Data

North, Central and South Wastewater Treatment Plants
Semiannual Priority Pollutant Testing

	North WWTP				Central WWTP				South WWTP			
	Concentration (µg/L or as noted)											
Parameter	**01/24/01**	**07/12/01**	**11/01/01 to 4/30/02**	**4/01/02 to 9/30/02**	**01/24/01**	**07/12/01**	**11/01/01 to 4/30/02**	**5/01/02 to 10/31/02**	**01/24/01**	**07/12/01**	**5/01/02 to 10/31/02**	**6/01/02 to 11/30/02 [1]**
2,4,5-TP, Silvex	ND	NA	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND
Dioxin												
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ND	NA	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND

[1] Appears to be a duplicate of previous report
NA = Not Analyzed/Available
ND = Not Detected
NR = Not Reported

APPENDIX D

BATON ROUGE CITY/PARISH WWTPS – SUPPLEMENTAL SAMPLING PROGRAM – JUNE/JULY 2003

APPENDIX D-1

BATON ROUGE CITY/PARISH WWTPS – SUPPLEMENTAL SAMPLING PROGRAM – JUNE/JULY 2003 – SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

URS

June 6, 2003

Jerome M. Klier, P.E., P.L.S.
Deputy Director – Department of Public Works
City of Baton Rouge/Parish of East Baton Rouge
P.O. Box 1471
Baton Rouge, LA 70821

Re: Feasibility Study for Alternative Water Supply for Industrial Users
Supplemental Sampling and Analysis Plan
URS Project No. 19226619.00001

Dear Mr. Klier:

As discussed in my email correspondence of May 7, 2003, URS has developed a sampling and analysis program to provide supplemental effluent wastewater quality data at the three City-Parish wastewater treatment plants (WWTPs) in support of the above referenced project. The purpose of the supplemental sampling and analysis program is to provide additional WWTP effluent quality data required to complete the assessment of the feasibility of direct or indirect reuse of the wastewater for various industrial purposes. Attached please find the proposed Scope of Work for the supplemental sampling and analysis program.

As outlined in the attached, we are proposing to complete a total of six (6) separate sampling events over a three week period at each of the City-Parish WWTPs (Central, North and South Plants). Per our previous conversations, URS assumes that the samples will be collected by DPW personnel, the analysis will be performed by the laboratory currently under contract to the City-Parish (ENTEK Environmental Laboratories, Inc.) and the analytical costs will be billed directly to the City-Parish.

We would like to begin the sampling and analysis program as soon as possible. Please call me at (225)756-4232 to discuss any questions or comments you may have regarding the proposed sampling plan. Thank you in advance for your cooperation in this matter.

Sincerely,

URS Corporation

Edgar J. Oubre, P.E.
Senior Project Engineer

Attachment

cc: Robert Groht – City-Parish Department of Public Works
Joey Hebert – CAGWCC
David Jessup – URS Corporation
Ken Thomas – URS Corporation

URS Corporation
2822 O'Neal Lane
Baton Rouge, LA 70816
Tel: 225.751.1873
Fax: 225.753.3616

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS
CAPITAL AREA GROUNDWATER COMMISSION (CAGWCC)
URS PROJECT NO. 19226619.00001

SCOPE OF WORK

SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN
CITY OF BATON ROUGE & PARISH OF EAST BATON ROUGE
CENTRAL, NORTH AND SOUTH WWTP

Introduction

The Capital Area Ground Water Conservation Commission (CAGWCC) and the City of Baton Rouge-Parish of East Baton Rouge (City-Parish) have engaged the services of URS Corporation (URS) to conduct a preliminary feasibility study concerning alternative water supplies for industrial use. One of the tasks associated with this study includes determining both the quantity and quality of the effluent wastewater currently being discharged from the three (3) City-Parish wastewater treatment plants (WWTPs) and assessing the suitability of the plant effluent as a potential industrial water source. The City-Parish has provided URS with monthly discharge monitoring report (DMR) data for the past two years (2001 and 2002) and the first five months of 2003 and also semiannual priority pollutant data for 2001 and 2002. In order to support our assessment of the potential reuse of the WWTP effluent for industrial purposes, additional wastewater characterization data is required. Based on our review of the data provided to date and the water quality requirements of the various potential industrial water uses, URS has developed a supplemental wastewater sampling and analysis program for the City-Parish WWTPs. Discussions of the details of the program; sample collection locations, procedures and frequency; the target analytical parameters and quality assurance/quality control measures are presented in the sections that follow.

Sample Collection Frequency and Locations

Department of Public Works (DPW) personnel will collect all samples as part of routine rounds at the Central, North and South WWTP. It is proposed that a total of six (6) sampling events be performed at each of the three plants over a three (3) week period (i.e. – two sampling events per week per plant). It is suggested that the sampling events to be performed as part of this program be coordinated so as to supplement weekly routine compliance monitoring sampling (i.e. – simply provide additional sample volumes for these special sampling events). All samples to be collected as part of this program will be 24-hour composite samples collected from the existing composite samplers utilized for routine effluent compliance monitoring at each of the three plants.

Analyte/Parameter Selection

The samples collected as part of this program will be analyzed for the parameters presented in Table 1 below.

TABLE 1

SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	353.2
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	365.1
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	130.2
Comprehensive metals scan (TAL/HSL Metals including Mercury)	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	325.1
Silica (SiO_2)	370.1
Sulfate (SO_4)	375.4
Sulfide (total)	376.1
Sulfite	377.1

As stated previously, it is proposed that six (6) samples be collected at each WWTP for a total of eighteen (18) target samples requiring analysis for each of the parameters listed in Table 1. In addition, it is proposed that two (2) field duplicate samples be collected at each WWTP for a total of six (6) duplicates, as described below. A total of twenty-four (24) effluent wastewater samples will be collected and analyzed for the parameters listed in Table 1 as part of this program.

Sample Collection, Preservation, Storage and Shipment

All samples collected during this program will be analyzed by the laboratory currently under contract with the City-Parish (ENTEK Environmental Laboratories, Inc.). The contract laboratory (ENTEK) will provide all sample containers. Substitution in the field with sample containers other than those provided by the contract laboratory shall not be permitted. All sample containers must be prepared by the contract laboratory and be certified clean per standard laboratory quality assurance procedures. Any required standard method preservative must be added to the sample containers by the contract laboratory prior to sample collection.

Samples will be collected in prescribed containers, prepared as described above, following conventional sampling practices. Collected samples will be immediately packed in bubble wrap, or similar packing material, and then placed into a cooler packed with a sufficient amount of ice or ice packs to maintain sample temperature at or below 4°C from the time of collection until the samples arrive at the contract laboratory. All samples will be packed in a manner that will minimize the possibility of breakage or leakage during handling, storage and transport of sample coolers. Wastewater samples will be packed and shipped according to the methods that follow.

- The lid on each filled sample bottle will be tightened and the sample bottle will be wiped dry with a clean cloth or paper towel.

- Each sample container will be pre-labeled according to the procedures below and the label filled out immediately upon sample collection.

- All sample containers will be sealed in bubble-wrap plastic storage bags, or similar material, and placed in the sample cooler immediately upon sample collection.

- Packing material, such as bubble wrap or vermiculite, will be placed in each sample cooler surrounding the sealed sample containers and ice or ice packs.

- A sufficient amount of ice or ice packs will be placed in sample cooler to maintain the required temperature during storage and transit to the contract laboratory. Any additional space will be filled with packing material.

- The completed Chain of Custody form will be sealed in a plastic bag and taped securely to the inside of the sample cooler lid. The filled sample cooler will be closed and sealed with tape to prevent unintentional opening. The cooler drain plug, if present, will also be taped.

- A custody seal will be placed across the opening of the cooler to ensure it is not opened prior to being received at the contract laboratory.

- After packaging, the sample cooler(s) will be transported to the contract laboratory by DPW personnel as soon as possible after sample collection. Analysis for parameters having short hold time limitations (BOD_5 for example) should commence as soon as possible upon receipt at the laboratory facility.

Sample Labels and Recordkeeping

Each sample will be encoded with a unique sample number for subsequent tracking and identification. Sample containers will be pre-labeled using indelible ink, if possible, before sample collection. The self-adhesive label affixed to each sample container will contain the following information:

- Sample ID number
- Sampler's initials
- Time and date of sample collection
- Analytical methods to be performed from the specified container
- Preservative used (if required)

The sample identification numbers will be assigned as follows:

- **CTP-XXX, NTP-XXX and STP-XXX -** with the XXX digits referring to the sequential sampling event number for the Central, North and South WWTP, respectively.

For example, the sample identification number **CTP-001** would refer to a sample collected during the first sampling event at the Central WWTP.

Chain of Custody

In order to maintain a formal record of sample collection, transfer between personnel, shipment, and receipt by the contract laboratory, a Chain of Custody Record (CCR) will accompany all samples sent to the contract laboratory. This form will be used to document sample custody transfer from the field to the laboratory.

One CCR will be used for each shipment to the laboratory and each CCR will have a unique number for tracking purposes. The contract laboratory will be requested to return a copy of the completed CCR with the analytical data reports.

Quality Assurance/Quality Control

A field duplicate sample will be collected during two of the six sampling events at each WWTP (for a total of 6 duplicate samples) and analyzed for all selected parameters in order to assess the overall precision of the sampling and analytical methodologies for detectable analytes. This duplicate sample will be collected in the field as an identical sample aliquot to one of the target samples from a single homogenized sample.

The contract laboratory will be requested to provide to the City-Parish DPW with a copy of all batch control surrogate, matrix spike, and laboratory control sample results conducted at the time of the analysis of the special event samples, in order to provide quality control and assurance of laboratory procedures at the time of sample analysis.

URS # Memorandum

Date: June 11, 2003

To: Jerome M. Klier, Deputy Director, Baton Rouge DPW

From: Edgar J. Oubre

Subject: **Feasibility Study for Alternate Water Supply**
URS Project No. 19226619
Supplemental Sampling and Analysis Plan
Amendment No. 1

Pursuant to the meeting held on Tuesday, June 10, 2003 between Mr. Mitch O'Brien (Baton Rouge DPW) and Mr. Sayi Malineni (ENTEK Environmental Laboratory), the scope of work for supplemental sampling and analysis program (dated June 6, 2003) shall be amended as follows (changes shown in bold on the attached revised Table 1):

- The analytical test methods proposed in the original scope of work will be changed as recommended by ENTEK as presented in the attached revised Table 1 for the following parameters:
    - Nitrate plus Nitrite ($NO_3 + NO_2$)
    - Orthophosphate (OPO_4)
    - Hardness – total, calcium, magnesium, bicarbonate, carbonate (as $CaCO_3$)
    - Chloride (Cl)
    - Silica (SiO_2)
    - Sulfate (SO_4)
- The comprehensive metals scan shall include the metals listed in Table 1.
- As a point of clarification, all samples will be 24-hour composite samples with the exception that the samples collected for oil and grease analysis will be manual grab samples.

Please call if you have any questions.

cc: Robert Groht – Baton Rouge DPW
Joey Hebert – CAGWCC
David Jessup – URS
Sayi Malineni – ENTEK Environmental Laboratories
Mitch O'Brien – Baton Rouge DPW
Edgar Oubre – URS
Ken Thomas - URS

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	**2340**
Comprehensive metals scan **(aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

APPENDIX D-2

BATON ROUGE CITY/PARISH WWTPS – SUPPLEMENTAL SAMPLING PROGRAM – JUNE/JULY 2003 – ANALYTICAL RESULTS SUMMARY

City of Baton Rouge and Parish of East Baton Rouge
Wastewater Treatment Plant Effluent Data

North Wastewater Treatment Plant (NWWTP)
Sampling Program June/July 2003

Parameter	Concentration (mg/L or as noted) 06/30/03 to 07/01/03	07/02/03 to 07/03/03	07/21/03 to 07/22/03	07/23/03 to 07/24/03	07/23/03 to 07/24/03 (Duplicate)	07/28/03 to 07/29/03	07/30/03 to 07/31/03	Average	Maximum	Minimum
pH (s.u.)	7.8	7.6	7.7	8.0	8.1	7.8	7.8	7.8	8.1	7.6
BOD_5	19	20	10	18	13	17	10	15	20	10
TSS	22	25	11	10	10	6	3	12	25	3
TDS	310	320	465	425	440	475	490	418	490	310
Oil & grease	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
Total Solids	330	345	475	435	450	480	495	430	495	330
COD	79	83	60	66	67	66	73	71	83	60
Color	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Turbidity (NTU)	21	13.1	6.5	9.5	9.9	8.2	9.2	11.1	21.0	6.5
Total Alkalinity (as $CaCO_3$)	120	136	144	152	148	164	156	146	164	120
Nitrate-N	5.7	6	10	8.4	8.4	10.7	9.5	8.4	10.7	5.7
Nitrite-N	0.111	0.148	0.058	0.088	0.088	0.212	0.075	0.111	0.212	0.058
TKN	7.17	7.76	15.8	14.4	15	15.1	12.1	12.48	15.80	7.17
NH_3-N	<0.10	<0.10	1.09	1.27	1.24	1.83	1.42	0.99	1.83	1.09
Cyanide	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			
Chloride	26.2	30	35	35	35	39.5	39.5	34	40	26
Fluoride	0.26	0.3	0.34	0.39	0.4	0.34	0.42	0.35	0.42	0.26
Sulfate	15.8	16.9	18.5	16	16.5	16.5	19.5	17.1	19.5	15.8
Sulfite	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Sulfide	<2.0	<2.0	1100	<2.0	<2.0	<2.0	<2.0			
Total Phosphorous	2.01	2.42	2.68	2.68	2.77	3.71	3.85	2.87	3.85	2.01
Orhtophoshate	1.58	1.85	2.57	2.51	2.54	3.11	3.13	2.47	3.13	1.58
TOC	10	57	21	15	16	17	18	22	57	10
Total Hardness (as $CaCO_3$)	33	40	41.5	36.8	37.6	30.4	34.2	36.2	41.5	30.4
Aluminum	0.65	0.62	0.2	0.23	0.21	0.24	0.25	0.34	0.65	0.20
Antimony	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Barium	0.02	0.02	0.02	<0.01	<0.01	<0.01	0.02	0.01	0.02	0.02
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Calcium	10	12	12.2	10.7	10.9	9.2	9.9	10.7	12.2	9.2
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cobalt	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Iron	0.58	0.67	0.19	0.23	0.26	0.2	0.22	0.34	0.67	0.19
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Magnesium	2	2.6	2.69	2.46	2.53	1.81	2.29	2.34	2.69	1.81
Manganese	0.04	0.04	0.02	0.02	0.02	<0.01	<0.01	0.02	0.04	0.02
Mercury	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Potassium	7.9	8.8	6.2	6.4	6.5	6.8	7.3	7.1	8.8	6.2
Selenium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Silica	26	26	30	30	28	34	31	29	34	26
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Sodium	66	74	98	99	100	110	108	94	110	66
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Vanadium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Zinc	0.04	0.04	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.02

City of Baton Rouge and Parish of East Baton Rouge
Wastewater Treatment Plant Effluent Data

Central Wastewater Treatment Plant (CWWTP)
Sampling Program June/July 2003

Parameter	Concentration (mg/L or as noted)							Average	Maximum	Minimum
	06/30/03 to 07/01/03	07/02/03 to 07/03/03	07/21/03 to 07/22/03	07/21/03 to 07/22/03 (Duplicate)	07/23/03 to 07/24/03	07/28/03 to 07/29/03	07/30/03 to 07/31/03			
pH (s.u.)	7.6	7.5	7.6	7.6	7.5	7.5	7.6	7.6	7.6	7.5
BOD_5	22	20	13	11	15	16	10	15	22	10
TSS	30	18	15	17	13	18	11	17	30	11
TDS	330	410	415	400	440	445	470	416	470	330
Oil & grease	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
Total Solids	360	430	430	415	455	465	480	434	480	360
COD	83	66	58	69	71	73	85	72	85	58
Color	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Turbidity (NTU)	26.2	11.5	9.1	9.3	13.1	14.4	9.2	13.3	26.2	9.1
Total Alkalinity (as $CaCO_3$)	108	132	140	136	128	140	136	131	140	108
Nitrate-N	6.1	6.7	8.7	8.7	8.3	9.3	8.4	8.0	9.3	6.1
Nitrite-N	0.219	0.465	0.012	0.011	0.016	0.097	0.078	0.128	0.465	0.011
TKN	9.4	7.9	18.1	18.6	10.4	14.9	13.4	13.24	18.60	7.90
NH_3-N	<0.10	0.2	1.15	1.1	1.48	2.81	1.83	1.23	2.81	0.20
Cyanide	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			
Chloride	42.4	65.8	47	46	50.5	51	51	51	66	42
Fluoride	0.5	0.45	0.39	0.39	0.53	0.44	0.47	0.45	0.53	0.39
Sulfate	20	24.4	25.5	24	22	20.5	20	22.3	25.5	20.0
Sulfite	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Sulfide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Total Phosphorous	1.94	2.5	1.69	1.74	2.16	3.38	2.4	2.26	3.38	1.69
Orhtophoshate	1.51	1.91	1.87	1.84	1.97	2.39	2.24	1.96	2.39	1.51
TOC	17	42	21	21	14	16	15	21	42	14
Total Hardness (as $CaCO_3$)	40	46	53.9	54.6	45.4	35.8	41	45.2	54.6	35.8
Aluminum	0.6	0.2	0.18	0.18	0.18	0.21	0.16	0.24	0.60	0.16
Antimony	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Barium	0.3	0.02	0.02	0.03	0.02	0.02	0.02	0.06	0.30	0.02
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Calcium	12	13	15.9	16.1	13.4	10.3	12.1	13.3	16.1	10.3
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cobalt	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Iron	0.96	0.49	0.4	0.42	0.37	0.33	0.34	0.47	0.96	0.33
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Magnesium	2.4	3.2	3.44	3.5	2.89	2.45	2.61	2.93	3.50	2.40
Manganese	0.1	0.08	0.04	0.04	0.04	0.05	0.04	0.06	0.10	0.04
Mercury	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Potassium	7.5	9.3	5.6	5.9	6.4	5.9	7.2	6.8	9.3	5.6
Selenium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Silica	23	25	28	28	27	28	28	27	28	23
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Sodium	69	100	96	100	99	107	112	98	112	69
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Vanadium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Zinc	0.04	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.04	0.03

City of Baton Rouge and Parish of East Baton Rouge
Wastewater Treatment Plant Effluent Data

South Wastewater Treatment Plant (SWWTP)
Sampling Program June/July 2003

Parameter	Concentration (mg/L or as noted)									
	06/30/03 to 07/01/03	07/02/03 to 07/03/03	07/21/03 to 07/22/03	07/23/03 to 07/24/03	07/28/03 to 07/29/03	07/28/03 to 07/29/03 (Duplicate)	07/30/03 to 07/31/03	Average	Maximum	Minimum
pH (s.u.)	7.7	7.9	7.8	7.8	7.8	7.8	7.6	7.8	7.9	7.6
BOD_5	39	32	33	39	37	37	20	34	39	20
TSS	31	23	26	29	22	21	23	25	31	21
TDS	325	365	470	395	430	410	420	402	470	325
Oil & grease	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
Total Solids	355	390	495	425	450	430	445	427	495	355
COD	419	96	92	100	87	96	81	139	419	81
Color	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Turbidity (NTU)	27.4	21.5	18.9	21.6	20.3	19.8	22.1	21.7	27.4	18.9
Total Alkalinity (as $CaCO_3$)	156	208	176	172	196	184	172	181	208	156
Nitrate-N	1.45	1.6	3.2	2.5	3.7	3.6	4.3	2.9	4.3	1.5
Nitrite-N	0.941	0.878	1.58	1.369	2.046	20.96	1.85	4.232	20.960	0.878
TKN	11	14.11	17.5	16.9	21.5	22.4	19.3	17.53	22.40	11.00
NH_3-N	<0.10	<0.10	11.5	10.6	11.9	12.2	10.6	11.36	12.20	10.60
Cyanide	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			
Chloride	28.2	36	37	29	36.5	36.5	36.5	34	37	28
Fluoride	0.6	0.24	0.31	0.3	0.27	0.28	0.35	0.34	0.60	0.24
Sulfate	16.6	18.6	18	17	15.5	15.5	16.5	16.8	18.6	15.5
Sulfite	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Sulfide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Total Phosphorous	2.95	3.66	2.5	3.71	3.34	3.43	3.1	3.24	3.71	2.50
Orhtophoshate	2.13	2.72	2.42	2.37	2.87	2.88	2.78	2.60	2.88	2.13
TOC	20	46	23	17	17	16	16	22	46	16
Total Hardness (as $CaCO_3$)	35	39	42.81	43.8	41.7	40.8	43.4	40.9	43.8	35.0
Aluminum	0.64	0.4	0.4	0.49	0.34	0.34	0.32	0.42	0.64	0.32
Antimony	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Barium	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Calcium	10	11	12.1	12.1	11.8	11.6	12.5	11.6	12.5	10.0
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cobalt	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Iron	0.68	0.56	0.81	0.72	0.49	0.5	0.73	0.64	0.81	0.49
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Magnesium	2.4	2.8	3.06	3.29	2.98	2.88	2.95	2.91	3.29	2.40
Manganese	0.08	0.08	0.05	0.04	0.04	0.05	0.05	0.06	0.08	0.04
Mercury	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Potassium	9.8	11	6.7	6.3	6.9	6.9	7	7.8	11.0	6.3
Selenium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Silica	26	27	29	26	30	31	30	28	31	26
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Sodium	70	90	88	77	95	94	100	88	100	70
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Vanadium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Zinc	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.03

City of Baton Rouge and Parish of East Baton Rouge
Wastewater Treatment Plant Effluent Data

Supplemental Sampling Program Results Summary
Sampling Program June/July 2003

Parameter	North WWTP							Central WWTP							South WWTP									
	06/30/03 to 07/01/03	07/02/03 to 07/03/03	07/21/03 to 07/22/03	07/23/03 to 07/24/03	07/23/03 to 07/24/03 (Duplicate)	07/28/03 to 07/29/03	07/30/03 to 07/31/03	06/30/03 to 07/01/03	07/02/03 to 07/03/03	07/21/03 to 07/22/03	07/21/03 to 07/22/03 (Duplicate)	07/23/03 to 07/24/03	07/28/03 to 07/29/03	07/30/03 to 07/31/03	06/30/03 to 07/01/03	07/02/03 to 07/03/03	07/21/03 to 07/22/03	07/23/03 to 07/24/03	07/28/03 to 07/29/03	07/28/03 to 07/29/03 (Duplicate)	07/30/03 to 07/31/03	Average	Maximum	Minimum
pH (s.u.)	7.8	7.6	7.7	8.0	8.1	7.8	7.8	7.6	7.5	7.6	7.6	7.5	7.5	7.6	7.7	7.9	7.8	7.8	7.8	7.8	7.6	7.72	8.10	7.50
BOD_5	19	20	10	18	13	17	10	22	20	13	11	15	16	10	39	32	33	39	37	37	20	21.48	39.00	10.00
TSS	22	25	11	10	10	6	3	30	18	15	17	13	18	11	31	23	26	29	22	21	23	18.29	31.00	3.00
TDS	310	320	465	425	440	475	490	330	410	415	400	440	445	470	325	365	470	395	430	410	420	411.90	490.00	310.00
Oil & grease	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
Total Solids	330	345	475	435	450	480	495	360	430	430	415	455	465	480	355	390	495	425	450	430	445	430.24	495.00	330.00
COD	79	83	60	66	67	66	73	83	66	58	69	71	73	85	419	96	92	100	87	96	81	93.81	419.00	58.00
Color	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Turbidity (NTU)	21	13.1	6.5	9.5	9.9	8.2	9.2	26.2	11.5	9.1	9.3	13.1	14.4	9.2	27.4	21.5	18.9	21.6	20.3	19.8	22.1	15.32	27.40	6.50
Total Alkalinity (as $CaCO_3$)	120	136	144	152	148	164	156	108	132	140	136	128	140	136	156	208	176	172	196	184	172	152.57	208.00	108.00
Nitrate-N	5.7	6	10	8.4	8.4	10.7	9.5	6.1	6.7	8.7	8.7	8.3	9.3	8.4	1.45	1.6	3.2	2.5	3.7	3.6	4.3	6.44	10.70	1.45
Nitrite-N	0.111	0.148	0.058	0.088	0.088	0.212	0.075	0.219	0.465	0.012	0.011	0.016	0.097	0.078	0.941	0.878	1.58	1.369	2.046	20.96	1.85	1.49	20.96	0.01
TKN	7.17	7.76	15.8	14.4	15	15.1	12.1	9.4	7.9	18.1	18.6	10.4	14.9	13.4	11	14.11	17.5	16.9	21.5	22.4	19.3	14.42	22.40	7.17
NH_3-N	<0.10	<0.10	1.09	1.27	1.24	1.83	1.42	<0.10	0.2	1.15	1.1	1.48	2.81	1.83	<0.10	<0.10	11.5	10.6	11.9	12.2	10.6	4.51	12.20	0.20
Cyanide	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			
Chloride	26.2	30	35	35	35	39.5	39.5	42.4	65.8	47	46	50.5	51	51	28.2	36	37	29	36.5	36.5	36.5	39.70	65.80	26.20
Fluoride	0.26	0.3	0.34	0.39	0.4	0.34	0.42	0.5	0.45	0.39	0.39	0.53	0.44	0.47	0.6	0.24	0.31	0.3	0.27	0.28	0.35	0.38	0.60	0.24
Sulfate	15.8	16.9	18.5	16	16.5	16.5	19.5	20	24.4	25.5	24	22	20.5	20	16.6	18.6	18	17	15.5	15.5	16.5	18.75	25.50	15.50
Sulfite	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Sulfide	<2.0	<2.0	1100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	1100.00	1100.00	1100.00
Total Phosphorous	2.01	2.42	2.68	2.68	2.77	3.71	3.85	1.94	2.5	1.69	1.74	2.16	3.38	2.4	2.95	3.66	2.5	3.71	3.34	3.43	3.1	2.79	3.85	1.69
Orhtophoshate	1.58	1.85	2.57	2.51	2.54	3.11	3.13	1.51	1.91	1.87	1.84	1.97	2.39	2.24	2.13	2.72	2.42	2.37	2.87	2.88	2.78	2.34	3.13	1.51
TOC	10	57	21	15	16	17	18	17	42	21	21	14	16	15	20	46	23	17	17	16	16	21.67	57.00	10.00
Total Hardness (as $CaCO_3$)	33	40	41.5	36.8	37.6	30.4	34.2	40	46	53.9	54.6	45.4	35.8	41	35	39	42.81	43.8	41.7	40.8	43.4	40.80	54.60	30.40
Aluminum	0.65	0.62	0.2	0.23	0.21	0.24	0.25	0.6	0.2	0.18	0.18	0.18	0.21	0.16	0.64	0.4	0.4	0.49	0.34	0.34	0.32	0.34	0.65	0.16
Antimony	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Barium	0.02	0.02	0.02	<0.01	<0.01	<0.01	0.02	0.3	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.30	0.02
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Calcium	10	12	12.2	10.7	10.9	9.2	9.9	12	13	15.9	16.1	13.4	10.3	12.1	10	11	12.1	12.1	11.8	11.6	12.5	11.85	16.10	9.20
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cobalt	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Iron	0.58	0.67	0.19	0.23	0.26	0.2	0.22	0.96	0.49	0.4	0.42	0.37	0.33	0.34	0.68	0.56	0.81	0.72	0.49	0.5	0.73	0.48	0.96	0.19
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Magnesium	2	2.6	2.69	2.46	2.53	1.81	2.29	2.4	3.2	3.44	3.5	2.89	2.45	2.61	2.4	2.8	3.06	3.29	2.98	2.88	2.95	2.73	3.50	1.81
Manganese	0.04	0.04	0.02	0.02	0.02	<0.01	<0.01	0.1	0.08	0.04	0.04	0.04	0.05	0.04	0.08	0.08	0.05	0.04	0.04	0.05	0.05	0.05	0.10	0.02
Mercury	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Potassium	7.9	8.8	6.2	6.4	6.5	6.8	7.3	7.5	9.3	5.6	5.9	6.4	5.9	7.2	9.8	11	6.7	6.3	6.9	6.9	7	7.25	11.00	5.60
Selenium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Silica	26	26	30	30	28	34	31	23	25	28	28	27	28	28	26	27	29	26	30	31	30	28.14	34.00	23.00
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Sodium	66	74	98	99	100	110	108	69	100	96	100	99	107	112	70	90	88	77	95	94	100	92.95	112.00	66.00
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Vanadium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Zinc	0.04	0.04	0.02	0.02	0.02	0.02	0.03	0.04	0.03	0.04	0.04	0.03	0.03	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.04	0.02

APPENDIX D-3

BATON ROUGE CITY/PARISH WWTPS – SUPPLEMENTAL SAMPLING PROGRAM – JUNE/JULY 2003 – NORTH WWTP ANALYTICAL REPORTS

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory
LELAP
02039
Accrediation Program

Study for Alternative Water Supply for Industrial Users
NTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/01/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 11, 2003
PROJECT NO.: 3-2215

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2215

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the North Treatment Plant was received July 1, 2003. The samples were analyzed for specified parameters as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2215

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 06/30-07/01/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-10285	pH (units)	7.8	--	6.1/6.0
03-10285	Biochemical Oxygen Demand	19	<1.0	19.2/19.8
03-10285	Total Suspended Solids	22	<2.0	77/76
03-10286	Total Dissolved Solids	310	<2.0	490/500
03-10290	Oil & Grease	<5.0	<5.0	39.4/40.0
03-10286	Total Solids	330	<2.0	245/200
03-10289	Chemical Oxygen Demand	79	<5.0	102/100
03-10287	Color	<1.0	<1.0	50/50
03-10287	Turbidity as NTU	21	<1.0	0.90/0.89
03-10288	Total Alkalinity (as $CaCO_3$)	120	<1.0	31.0/29.2
03-10291	Nitrate-N	5.7	<0.05	3.00/3.00
03-10291	Nitrite-N	0.111	<0.002	0.200/0.200
03-10291	Total Kjeldahl Nitrogen	7.17	<0.10	3.17/3.22
03-10292	Ammonia-N	<0.10	<0.10	1.94/2.00
03-10295	Cyanide	<0.02	<0.02	0.250/0.252
03-10296	Chloride	26.2	<0.05	3.04/3.00
03-10296	Fluoride	0.26	<0.05	3.05/3.00
03-10296	Sulfate	15.8	<0.05	2.99/3.00
03-10296	Sulfite	<2.0	<2.0	2025/2000
03-10297	Sulfide	<2.0	<2.0	230/240
03-10292	Total Phosphorous	2.01	<0.10	9.85/9.91
03-10293	Orthophosphate	1.58	<0.01	0.52/0.50
03-10289	Total Organic Carbon	10	<1.0	10.3/10.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2215

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 06/30-07/01/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/01/03/1300/SAS	07/01/03/1315/SAS
BOD	EPA 405.1	07/01/03/1310/SR	07/06/03/1330/SR
TSS	EPA 160.2	07/04/03/1200/SG	07/05/03/1100/SG
TDS	EPA 160.1	07/04/03/1100/SG	07/08/03/1200/SG
O&G	EPA 1664	07/05/03/1500/SG	07/06/03/1400/SG
Total Solids	EPA 160.4	07/04/03/1000/SG	07/08/03/1200/SG
COD	EPA 410.1	07/03/03/1530/LA	07/08/03/0930/LA
Color	EPA 110.2	07/01/03/1500/SK	07/01/03/1700/SK
Turbidity	EPA 180.1	07/01/03/1500/SK	07/01/03/1700/SK
T. Alkalinity	EPA 310.1	07/07/03/1400/SK	07/07/03/1700/SK
Nitrate-N	EPA 300.1	07/02/03/0800/SK	07/02/03/1400/SK
Nitrite-N	EPA 354.1	07/01/03/1700/SK	07/01/03/1800/SK
TKN-N	EPA 351.4	07/14/03/0800/SK	07/14/03/1730/SK
Ammonia-N	EPA 350.3	07/10/03/0800/SK	07/10/03/1430/SK
Cyanide	EPA 335.2	07/02/03/1600/SK	07/02/03/1900/SK
Chloride	EPA 300.1	07/21/03/0800/SK	07/21/03/1600/SK
Fluoride	EPA 300.1	07/25/03/0800/SK	07/25/03/1500/SK
Sulfate	EPA 300.1	07/21/03/0800/SK	07/21/03/1600/SK
Sulfite	EPA 377.1	07/01/03/1630/SK	07/01/03/1745/SK
Sulfide	SW846, 9030	07/08/03/1000/SK	07/08/03/1400/SK
T. Phosphorous	EPA 365.2	07/11/03/1200/SK	07/11/03/1800/SK
Orthophosphate	EPA 365.2	07/01/03/1700/SK	07/01/03/1830/SK
TOC	EPA 415.1	07/02/03/1310/DD	07/02/03/1315/DD

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2215

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 06/30-07/01/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-10294 NTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.65	<0.01	5.1/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	5.1/5.0
Barium	0.02	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	10	<0.01	26/25
Chromium	<0.01	<0.01	5.1/5.0
Cobalt	<0.01	<0.01	5.3/5.0
Copper	<0.01	<0.01	5.2/5.0
Iron	0.58	<0.01	5.4/5.0
Lead	<0.01	<0.01	5.2/5.0
Magnesium	2.0	<0.01	25/25
Manganese	0.04	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	7.9	<0.01	25/25
Selenium	<0.01	<0.01	5.0/5.0
Silica	26	<0.02	11/10
Silver	<0.01	<0.01	0.96/1.0
Sodium	66	<0.01	5.0/5.0
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.1/5.0
Zinc	0.04	<0.01	5.1/5.0
Total Hardness as ($CaCO_3$)	33	<0.10	160/160

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: enteklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2215

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 06/30-07/01/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Antimony	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Arsenic	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Barium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Beryllium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cadmium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Calcium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Chromium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cobalt	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Copper	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Iron	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Lead	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Magnesium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Manganese	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Mercury	EPA 7470A	07/03/03/1500/ZN	07/03/03/1700/ZN
Nickel	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Potassium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Selenium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silica	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silver	EPA 7760A	07/14/03/0900/ZN	07/14/03/0930/ZN
Sodium	EPA 7770	07/14/03/0930/ZN	07/14/03/1000/ZN
Thallium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Vanadium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Zinc	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Total Hardness	EPA 314A	07/11/03/1000/ZN	07/11/03/1400/ZN

CHAIN OF CUSTODY RECORD

COMPANY:
CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802
ATTN: **Garcia Dailekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:
North Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2215

TURNAROUND TIME: (circle one) Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	063003/0600 – 070103/0600
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	arrived on ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC...	ANALYSES REQUESTED	STORAGE #
NTP EFFLUENT	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No		Color, Turbidity	
	No		Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes		COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes		Ammonia as N, Total Phosphorous	
	No		Orthophosphate	
	Yes		Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes		Cyanide	
	No		Fluoride, Chloride, Sulfate, Sulfite	
	Yes		Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: Rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Richard A. Piper	Doris Kruegel Entek	070103 1105

Entek Environmental Laboratories, Inc., **14285 Airline Highway**, Baton Rouge, **LA 70817**
Phone: **(225) 752-2900** Fax: **(225) 756-2706**

URS

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY
FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	**2340**
Comprehensive metals scan **(aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

Study for Alternative Water Supply for Industrial Users
NTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/03/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 13, 2003
PROJECT NO.: 3-2278

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2278

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the North Treatment Plant was received July 3, 2003. The samples were analyzed for specified parameters as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2278

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/02,03/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-10511	pH (units)	7.6	--	6.1/6.0
03-10511	Biochemical Oxygen Demand	20	<1.0	19.8/19.8
03-10511	Total Suspended Solids	25	<2.0	77/76
03-10512	Total Dissolved Solids	320	<2.0	490/500
03-10516	Oil & Grease	<5.0	<5.0	39.4/40.0
03-10512	Total Solids	345	<2.0	245/200
03-10515	Chemical Oxygen Demand	83	<5.0	102/100
03-10513	Color	<1.0	<1.0	49/50
03-10513	Turbidity as NTU	13.1	<1.0	0.86/0.89
03-10514	Total Alkalinity (as $CaCO_3$)	136	<1.0	31.0/29.2
03-10517	Nitrate-N	6.0	<0.05	3.00/3.00
03-10517	Nitrite-N	0.148	<0.002	0.198/0.200
03-10517	Total Kjeldahl Nitrogen	7.76	<0.10	3.27/3.22
03-10518	Ammonia-N	<0.10	<0.10	1.94/2.00
03-10521	Cyanide	<0.02	<0.02	0.253/0.252
03-10522	Chloride	30.0	<0.05	2.97/3.00
03-10522	Fluoride	0.30	<0.05	2.98/3.00
03-10522	Sulfate	16.9	<0.05	2.98/3.00
03-10522	Sulfite	<2.0	<2.0	1975/2000
03-10523	Sulfide	<2.0	<2.0	230/240
03-10518	Total Phosphorous	2.42	<0.10	9.85/9.91
03-10519	Orthophosphate	1.85	<0.01	0.98/1.00
03-10515	Total Organic Carbon	57	<1.0	5.1/5.0

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2278

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/02,03/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/03/03/1500/SAS	07/03/03/1530/SAS
BOD	EPA 405.1	07/03/03/1200/SR	07/08/03/1200/SR
TSS	EPA 160.2	07/04/03/1200/SG	07/05/03/1100/SG
TDS	EPA 160.1	07/04/03/1100/SG	07/08/03/1200/SG
O&G	EPA 1664	07/05/03/1500/SG	07/06/03/1400/SG
Total Solids	EPA 160.4	07/04/03/1000/SG	07/08/03/1200/SG
COD	EPA 410.1	07/03/03/1530/LA	07/08/03/0930/LA
Color	EPA 110.2	07/03/03/1400/SK	07/03/03/1600/SK
Turbidity	EPA 180.1	07/03/03/1400/SK	07/03/03/1600/SK
T. Alkalinity	EPA 310.1	07/07/03/1400/SK	07/07/03/1700/SK
Nitrate-N	EPA 300.1	07/05/03/0700/SK	07/05/03/1200/SK
Nitrite-N	EPA 354.1	07/03/03/1500/SK	07/03/03/1730/SK
TKN-N	EPA 351.4	07/18/03/0800/SK	07/18/03/1700/SK
Ammonia-N	EPA 350.3	07/10/03/0800/SK	07/10/03/1430/SK
Cyanide	EPA 335.2	07/11/03/0900/SK	07/11/03/1600/SK
Chloride	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Fluoride	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Sulfate	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Sulfite	EPA 377.1	07/03/03/1600/SK	07/03/03/1730/SK
Sulfide	SW846, 9030	07/08/03/1000/SK	07/08/03/1400/SK
T. Phosphorous	EPA 365.2	07/11/03/1200/SK	07/11/03/1800/SK
Orthophosphate	EPA 365.2	07/03/03/1630/SK	07/03/03/1830/SK
TOC	EPA 415.1	07/08/03/1235/DD	07/08/03/1240/DD

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2278

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/02,03/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-10520 NTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.62	<0.01	5.1/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	5.1/5.0
Barium	0.02	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	12	<0.01	26/25
Chromium	<0.01	<0.01	5.1/5.0
Cobalt	<0.01	<0.01	5.3/5.0
Copper	<0.01	<0.01	5.2/5.0
Iron	0.67	<0.01	5.4/5.0
Lead	<0.01	<0.01	5.2/5.0
Magnesium	2.6	<0.01	25/25
Manganese	0.04	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	8.8	<0.01	25/25
Selenium	<0.01	<0.01	5.0/5.0
Silica	26	<0.02	11/10
Silver	<0.01	<0.01	0.96/1.0
Sodium	74	<0.01	5.0/5.0
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.1/5.0
Zinc	0.04	<0.01	5.1/5.0
Total Hardness as ($CaCO_3$)	40	<0.10	160/160

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2278

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/02,03/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Antimony	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Arsenic	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Barium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Beryllium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cadmium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Calcium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Chromium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cobalt	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Copper	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Iron	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Lead	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Magnesium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Manganese	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Mercury	EPA 7470A	07/03/03/1500/ZN	07/03/03/1700/ZN
Nickel	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Potassium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Selenium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silica	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silver	EPA 7760A	07/14/03/0900/ZN	07/14/03/0930/ZN
Sodium	EPA 7770	07/14/03/0930/ZN	07/14/03/1000/ZN
Thallium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Vanadium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Zinc	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Total Hardness	EPA 314A	07/11/03/1000/ZN	07/11/03/1400/ZN

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN: **Garcia Dailekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:

North Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2278

TURNAROUND TIME: (circle one) Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	070203 - 070303
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	Arrived on ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC...	ANALYSES REQUESTED	STORAGE #
NTP ~~INFLUENT~~ Effluent	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No		Color, Turbidity	
	No		Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes		COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes		Ammonia as N, Total Phosphorous	
	No		Orthophosphate	
	Yes		Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes		Cyanide	
	No		Fluoride, Chloride, Sulfate, Sulfite	
	Yes		Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Warren Brandon	Doris Kruegel - Entek	070303 1044

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

URS

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY
FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	2340
Comprehensive metals scan (**aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc**)	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
NTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/22/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2512

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2512

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the North Treatment Plant was received July 22, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2512

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/21,22/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-11920	pH (units)	7.7	--	6.1/6.0
03-11920	Biochemical Oxygen Demand	10	<1.0	18.9/19.8
03-11920	Total Suspended Solids	11	<2.0	58/56
03-11921	Total Dissolved Solids	465	<2.0	510/500
03-11925	Oil & Grease	<5.0	<5.0	39.7/40.0
03-11921	Total Solids	475	<2.0	505/500
03-11924	Chemical Oxygen Demand	60	<5.0	104/100
03-11922	Color	<1.0	<1.0	52/50
03-11922	Turbidity as NTU	6.5	<1.0	8.86/8.90
03-11923	Total Alkalinity (as $CaCO_3$)	144	<1.0	32.0/29.2
03-11926	Nitrate-N	10	<0.05	3.05/3.00
03-11926	Nitrite-N	0.058	<0.002	0.200/0.200
03-11926	Total Kjeldahl Nitrogen	15.8	<0.10	3.11/3.22
03-11927	Ammonia-N	1.09	<0.10	1.97/2.00
03-11932	Cyanide	<0.02	<0.02	0.249/0.252
03-11933	Chloride	35	<0.05	3.03/3.00
03-11933	Fluoride	0.34	<0.05	3.04/3.00
03-11933	Sulfate	18.5	<0.05	2.98/3.00
03-11933	Sulfite	<2.0	<2.0	2050/2000
03-11934	Sulfide	1100	<2.0	224/240
03-11927	Total Phosphorous	2.68	<0.10	9.85/9.91
03-11928	Orthophosphate	2.57	<0.01	1.03/1.00
03-11924	Total Organic Carbon	21	<1.0	5.1/5.0

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2512

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/21,22/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/22/03/1145/SAS	07/22/03/1200/SAS
BOD	EPA 405.1	07/22/03/1400/SR	07/27/03/1230/LA
TSS	EPA 160.2	07/23/03/1000/SG	07/24/03/1100/SG
TDS	EPA 160.1	07/28/03/1300/SG	07/30/03/1400/SG
O&G	EPA 1664	07/25/03/0900/SG	07/26/03/1000/SG
Total Solids	EPA 160.4	07/28/03/1200/SG	07/30/03/1200/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/22/03/1500/SK	07/22/03/1630/SK
Turbidity	EPA 180.1	07/22/03/1500/SK	07/22/03/1630/SK
T. Alkalinity	EPA 310.1	07/25/03/1300/SK	07/25/03/1630/SK
Nitrate-N	EPA 300.1	07/23/03/0800/SK	07/23/03/1200/SK
Nitrite-N	EPA 354.1	07/22/03/1600/SK	07/22/03/1700/SK
TKN-N	EPA 351.4	07/28/03/0800/SK	07/28/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/24/03/0900/SK	07/24/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/22/03/1330/SK	07/22/03/1600/SK
Sulfide	SW846, 9030	07/23/03/1200/SK	07/23/03/1400/SK
T. Phosphorous	EPA 365.2	07/30/03/0800/SK	07/30/03/1700/SK
Orthophosphate	EPA 365.2	07/22/03/1830/SK	07/22/03/1930/SK
TOC	EPA 415.1	07/29/03/0955/DD	07/29/03/1000/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2512

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/21,22/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-11931 NTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.20	<0.01	4.8/5.0
Antimony	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	4.6/5.0
Barium	0.02	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	5.0/5.0
Calcium	12.2	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.19	<0.01	5.0/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	2.69	<0.01	0.96/1.00
Manganese	0.02	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.0/5.0
Potassium	6.2	<0.01	0.99/1.00
Selenium	<0.01	<0.01	4.8/5.0
Silica	30	<0.02	9.6/11
Silver	<0.01	<0.01	1.00/1.00
Sodium	98	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.0/5.0
Zinc	0.02	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	41.5	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2512

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/21,22/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	07/29/03/0800/ZN	07/29/03/1200/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE

Wastewater T & D

2433 River Road

Baton Rouge, Louisiana 70802

ATTN: **Garcia Dailekwa** ia

PHONE: (225) 389-3240

FAX: (225) 389-3111

P.O.#

SAMPLE LOCATION:

North Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2512

(circle one)

TURNAROUND TIME: Reg / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	7/21 - 7/23/03
Number & Type of Containers:	~~(12)~~ 14 KNS plastic, (1) glass
Matrix:	water
Transporting Cooler Temperature:	on Ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
NTP EFFLUENT	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as $CaCO_3$)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as $CaCO_3$), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: recd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Richard A. Piper	Kristen N. Stevens - Entek	07.22.03 1015

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

3CBR2512

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY
FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	**Method**
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	2340
Comprehensive metals scan **(aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

Study for Alternative Water Supply for Industrial Users
NTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/24/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2575

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2575

Study for Alternative Water Supply for Industrial Users

Two sets of water samples collected by URS from the North Treatment Plant were received July 24, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: enteklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2575

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/23,24/03

Parameters (concentration mg/L)	NTP Sample	NTP Duplicate	Lab Blank	LCS/ QC (observed/true)
pH (units)	8.0	8.1	--	6.1/6.0
Biochemical Oxygen Demand	18	13	<1.0	19.8/19.8
Total Suspended Solids	10	10	<2.0	90/93
Total Dissolved Solids	425	440	<2.0	510/500
Oil & Grease	<5.0	<5.0	<5.0	39.7/40.0
Total Solids	435	450	<2.0	505/500
Chemical Oxygen Demand	66	67	<5.0	104/100
Color	<1.0	<1.0	<1.0	48/50
Turbidity as NTU	9.5	9.9	<1.0	9.0/8.9
Total Alkalinity (as $CaCO_3$)	152	148	<1.0	32.0/29.2
Nitrate-N	8.4	8.4	<0.05	3.02/3.00
Nitrite-N	0.088	0.088	<0.002	0.198/0.200
Total Kjeldahl Nitrogen	14.4	15.0	<0.10	3.11/3.22
Ammonia-N	1.27	1.24	<0.10	1.97/2.00
Cyanide	<0.02	<0.02	<0.02	0.249/0.252
Chloride	35	35	<0.05	3.03/3.00
Fluoride	0.39	0.40	<0.05	3.04/3.00
Sulfate	16	16.5	<0.05	2.98/3.00
Sulfite	<2.0	<2.0	<2.0	1950/2000
Sulfide	<2.0	<2.0	<2.0	230/240
Total Phosphorous	2.68	2.77	<0.10	9.85/9.91
Orthophosphate	2.51	2.54	<0.01	1.95/2.00
Total Organic Carbon	15	16	<1.0	10.1/10.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2575

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/23,24/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/24/03/1230/SAS	07/24/03/1250/SAS
BOD	EPA 405.1	07/24/03/1330/LA	07/29/03/1330/LA
TSS	EPA 160.2	07/25/03/1530/SG	07/28/03/1230/SG
TDS	EPA 160.1	07/28/03/1300/SG	07/30/03/1400/SG
O&G	EPA 1664	07/25/03/0900/SG	07/26/03/1000/SG
Total Solids	EPA 160.4	07/28/03/1200/SG	07/30/03/1200/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/24/03/1500/SK	07/24/03/1600/SK
Turbidity	EPA 180.1	07/24/03/1500/SK	07/24/03/1600/SK
T. Alkalinity	EPA 310.1	07/25/03/1300/SK	07/25/03/1630/SK
Nitrate-N	EPA 300.1	07/25/03/0800/SK	07/25/03/1230/SK
Nitrite-N	EPA 354.1	07/24/03/1430/SK	07/24/03/1530/SK
TKN-N	EPA 351.4	07/28/03/0800/SK	07/28/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/24/03/1300/SK	07/24/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/24/03/1400/SK	07/24/03/1500/SK
Sulfide	SW846, 9030	07/29/03/1300/SK	07/29/03/1600/SK
T. Phosphorous	EPA 365.2	07/30/03/0800/SK	07/30/03/1700/SK
Orthophosphate	EPA 365.2	07/24/03/1400/SK	07/24/03/1600/SK
TOC	EPA 415.1	08/01/03/0955/DD	08/01/03/1005/DD

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2575

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/23,24/03

Parameters (concentration mg/L)	NTP Sample	NTP Duplicate	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.23	0.21	<0.01	4.8/5.0
Antimony	<0.01	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	<0.01	4.6/5.0
Barium	<0.01	<0.01	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	<0.01	5.0/5.0
Calcium	10.7	10.9	<0.01	1.01/1.00
Chromium	<0.01	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	<0.01	5.1/5.0
Iron	0.23	0.26	<0.01	5.0/5.0
Lead	<0.01	<0.01	<0.01	5.1/5.0
Magnesium	2.46	2.53	<0.01	0.96/1.00
Manganese	0.02	0.02	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	<0.01	5.0/5.0
Potassium	6.4	6.5	<0.01	0.99/1.00
Selenium	<0.01	<0.01	<0.01	4.8/5.0
Silica	30	28	<0.02	9.6/11
Silver	<0.01	<0.01	<0.01	1.00/1.00
Sodium	99	100	<0.01	1.00/1.00
Thallium	<0.01	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	<0.01	5.0/5.0
Zinc	0.02	0.02	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	36.8	37.6	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2575

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/23,24/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	07/29/03/0800/ZN	07/29/03/1200/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2575

Entek Sample Container Id. No.

Parameters	NTP Sample	NTP Duplicate
pH (units)	03-12185	03-12198
Biochemical Oxygen Demand	03-12185	03-12198
Total Suspended Solids	03-12185	03-12198
Total Dissolved Solids	03-12186	03-12199
Oil & Grease	03-12190	03-12203
Total Solids	03-12186	03-12199
Chemical Oxygen Demand	03-12189	03-12202
Color	03-12187	03-12200
Turbidity	03-12187	03-12200
Total Alkalinity (as $CaCO_3$)	03-12188	03-12201
Nitrate-N	03-12191	03-12204
Nitrite-N	03-12191	03-12204
Total Kjeldahl Nitrogen	03-12191	03-12204
Ammonia-N	03-12192	03-12205
Cyanide	03-12195	03-12208
Chloride	03-12196	03-12209
Fluoride	03-12196	03-12209
Sulfate	03-12196	03-12209
Sulfite	03-12196	03-12209
Sulfide	03-12197	03-12210
Total Phosphorous	03-12192	03-12205
Orthophosphate	03-12193	03-12206
Total Organic Carbon	03-12189	03-12202
Metals	03-12194	03-12207

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN: **Garcia Dialekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:

North Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2575

TURNAROUND TIME: (circle one) Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	072303 to 072403
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	<4°C

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
NTP ~~INFLUENT~~ Effluent &	No	pH is a Grab	BOD, TSS, pH	
Blind Duplicate #2	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Patricia A. Smith	Doris Kruegl Entek	072403
		1147

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 **Fax:** (225) 756-2706

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

Study for Alternative Water Supply for Industrial Users
NTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/29/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2620

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2620

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the North Treatment Plant was received July 29, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2620

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/28,29/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-12435	pH (units)	7.8	--	6.1/6.0
03-12435	Biochemical Oxygen Demand	17	<1.0	18.9/19.8
03-12435	Total Suspended Solids	6.0	<2.0	39/41
03-12436	Total Dissolved Solids	475	<2.0	480/500
03-12440	Oil & Grease	<5.0	<5.0	38.1/40.0
03-12436	Total Solids	480	<2.0	475/500
03-12439	Chemical Oxygen Demand	66	<5.0	104/100
03-12437	Color	<1.0	<1.0	49/50
03-12437	Turbidity as NTU	8.2	<1.0	9.00/8.90
03-12438	Total Alkalinity (as $CaCO_3$)	164	<1.0	33/29.2
03-12441	Nitrate-N	10.7	<0.05	2.96/3.00
03-12441	Nitrite-N	0.212	<0.002	0.196/0.200
03-12441	Total Kjeldahl Nitrogen	15.1	<0.10	3.20/3.22
03-12442	Ammonia-N	1.83	<0.10	1.97/2.00
03-12445	Cyanide	<0.02	<0.02	0.254/0.252
03-12446	Chloride	39.5	<0.05	3.03/3.00
03-12446	Fluoride	0.34	<0.05	3.04/3.00
03-12446	Sulfate	16.5	<0.05	2.98/3.00
03-12446	Sulfite	<2.0	<2.0	1975/2000
03-12447	Sulfide	<2.0	<2.0	230/240
03-12442	Total Phosphorous	3.71	<0.10	10.01/9.91
03-12443	Orthophosphate	3.11	<0.01	2.05/2.00
03-12439	Total Organic Carbon	17	<1.0	20.2/20.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2620

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/28,29/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/29/03/1153/SAS	07/29/03/1203/SAS
BOD	EPA 405.1	07/29/03/1300/LA	08/03/03/1130/LA
TSS	EPA 160.2	08/01/03/1600/SG	08/02/03/1200/SG
TDS	EPA 160.1	08/01/03/1715/SG	08/05/03/1500/SG
O&G	EPA 1664	08/01/03/1300/SG	08/02/03/1230/SG
Total Solids	EPA 160.4	08/01/03/1700/SG	08/05/03/1500/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/29/03/1600/SK	07/29/03/1700/SK
Turbidity	EPA 180.1	07/29/03/1600/SK	07/29/03/1700/SK
T. Alkalinity	EPA 310.1	08/01/03/1200/SK	08/01/03/1430/SK
Nitrate-N	EPA 300.1	07/30/03/0800/SK	07/30/03/1300/SK
Nitrite-N	EPA 354.1	07/29/03/1500/SK	07/29/03/1700/SK
TKN-N	EPA 351.4	08/08/03/0730/SK	08/08/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/31/03/1000/SK	07/31/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/29/03/1330/SK	07/29/03/1430/SK
Sulfide	SW846, 9030	07/29/03/1300/SK	07/29/03/1600/SK
T. Phosphorous	EPA 365.2	08/07/03/0800/SK	08/07/03/1830/SK
Orthophosphate	EPA 365.2	07/29/03/1430/SK	07/29/03/1630/SK
TOC	EPA 415.1	08/01/03/1055/DD	08/01/03/1100/DD

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2620

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/28,29/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-12444 NTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.24	<0.01	4.8/5.0
Antimony	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	4.6/5.0
Barium	<0.01	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	5.0/5.0
Calcium	9.2	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.20	<0.01	5.0/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	1.81	<0.01	0.96/1.00
Manganese	<0.01	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.0/5.0
Potassium	6.8	<0.01	0.99/1.00
Selenium	<0.01	<0.01	4.8/5.0
Silica	34	<0.02	9.6/11
Silver	<0.01	<0.01	1.00/1.00
Sodium	110	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.0/5.0
Zinc	0.02	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	30.4	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2620

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/28,29/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	08/01/03/0800/ZN	08/01/03/1200/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN: **Garcia Dialekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:

North Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2620

(circle one)

TURNAROUND TIME: Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	0728, 2903
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	ICE

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC..	ANALYSES REQUESTED	STORAGE #
NTP ~~INFLUENT~~ EFFLUENT	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Patricia Smith	Doris Kruegel Entek	072903 1133

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

Study for Alternative Water Supply for Industrial Users
NTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/31/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2647

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entekl abs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2647

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the North Treatment Plant was received July 31, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2647

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/30,31/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-12586	pH (units)	7.8	--	6.1/6.0
03-12586	Biochemical Oxygen Demand	10	<1.0	19.2/19.8
03-12586	Total Suspended Solids	3.0	<2.0	39/41
03-12587	Total Dissolved Solids	490	<2.0	480/500
03-12591	Oil & Grease	<5.0	<5.0	38.1/40.0
03-12587	Total Solids	495	<2.0	475/500
03-12590	Chemical Oxygen Demand	73	<5.0	104/100
03-12588	Color	<1.0	<1.0	48/50
03-12588	Turbidity as NTU	9.2	<1.0	9.00/8.90
03-12589	Total Alkalinity (as $CaCO_3$)	156	<1.0	33/29.2
03-12592	Nitrate-N	9.5	<0.05	2.96/3.00
03-12592	Nitrite-N	0.075	<0.002	0.198/0.200
03-12592	Total Kjeldahl Nitrogen	12.1	<0.10	3.20/3.22
03-12593	Ammonia-N	1.42	<0.10	1.97/2.00
03-12596	Cyanide	<0.02	<0.02	0.254/0.252
03-12597	Chloride	39.5	<0.05	3.03/3.00
03-12597	Fluoride	0.42	<0.05	3.04/3.00
03-12597	Sulfate	19.5	<0.05	2.98/3.00
03-12597	Sulfite	<2.0	<2.0	1975/2000
03-12598	Sulfide	<2.0	<2.0	230/240
03-12593	Total Phosphorous	3.85	<0.10	10.01/9.91
03-12594	Orthophosphate	3.13	<0.01	1.94/2.00
03-12590	Total Organic Carbon	18	<1.0	20.2/20.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2647

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/30,31/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/31/03/1107/SAS	07/31/03/1122/SAS
BOD	EPA 405.1	07/31/03/1300/LA	08/05/03/1300/LA
TSS	EPA 160.2	08/01/03/1600/SG	08/02/03/1200/SG
TDS	EPA 160.1	08/01/03/1715/SG	08/05/03/1500/SG
O&G	EPA 1664	08/01/03/1300/SG	08/02/03/1230/SG
Total Solids	EPA 160.4	08/01/03/1700/SG	08/05/03/1500/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/31/03/1730/SK	07/31/03/1830/SK
Turbidity	EPA 180.1	07/31/03/1730/SK	07/31/03/1830/SK
T. Alkalinity	EPA 310.1	08/01/03/1200/SK	08/01/03/1430/SK
Nitrate-N	EPA 300.1	08/01/03/0800/SK	08/01/03/1500/SK
Nitrite-N	EPA 354.1	07/31/03/1700/SK	07/31/03/1800/SK
TKN-N	EPA 351.4	08/08/03/0730/SK	08/08/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/31/03/1400/SK	07/31/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/31/03/1330/SK	07/31/03/1430/SK
Sulfide	SW846, 9030	07/31/03/1400/SK	07/31/03/1630/SK
T. Phosphorous	EPA 365.2	08/07/03/0800/SK	08/07/03/1830/SK
Orthophosphate	EPA 365.2	07/31/03/1500/SK	07/31/03/1630/SK
TOC	EPA 415.1	08/01/03/1150/DD	08/01/03/1155/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2647

Study for Alternative Water Supply for Industrial Users
Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/30,31/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-12595 NTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.25	<0.01	4.9/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	4.8/5.0
Barium	0.02	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	9.9	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.2/5.0
Cobalt	<0.01	<0.01	5.4/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.22	<0.01	5.2/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	2.29	<0.01	0.96/1.00
Manganese	<0.01	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	7.3	<0.01	0.99/1.00
Selenium	<0.01	<0.01	5.0/5.0
Silica	31	<0.02	9.8/11
Silver	<0.01	<0.01	0.97/1.00
Sodium	108	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.2/5.0
Vanadium	<0.01	<0.01	5.2/5.0
Zinc	0.03	<0.01	5.2/5.0
Hardness (as $CaCO_3$)	34.2	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entekl abs@att.net

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2647

Sample Id: North Treatment Plant (NTP Effluent)
Sample Date: 07/30,31/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Antimony	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Arsenic	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Barium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Beryllium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Cadmium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Cobalt	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Copper	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Iron	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Lead	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Mercury	EPA 7470A	08/01/03/0800/ZN	08/01/03/1000/ZN
Nickel	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Silica	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Vanadium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Zinc	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN: **Garcia Dialekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:
North Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2647

(circle one)
TURNAROUND TIME: Reg. / Rush
NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	07/30, 31/03
Number & Type of Containers:	(14) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	ICE

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC...	ANALYSES REQUESTED	STORAGE #
NTP ~~INFLUENT~~ Effluent	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY	DATE/TIME
Patricia Smith	Dolores Kruegel-Entek	073103 1050

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

APPENDIX D-4

BATON ROUGE CITY/PARISH WWTPS – SUPPLEMENTAL SAMPLING PROGRAM – JUNE/JULY 2003 – CENTRAL WWTP ANALYTICAL REPORTS

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
CTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/01/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 11, 2003
PROJECT NO.: 3-2216

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 11, 2003
Project No.: 3-2216

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the Central Treatment Plant was received July 1, 2003. The samples were analyzed for specified parameters as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 11, 2003
Project No.: 3-2216

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 06/30-07/01/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-10298	pH (units)	7.6	--	6.1/6.0
03-10298	Biochemical Oxygen Demand	22	<1.0	19.2/19.8
03-10298	Total Suspended Solids	30	<2.0	77/76
03-10299	Total Dissolved Solids	330	<2.0	490/500
03-13136	Oil & Grease	<5.0	<5.0	39.4/40.0
03-10299	Total Solids	360	<2.0	245/200
03-10302	Chemical Oxygen Demand	83	<5.0	102/100
03-10300	Color	<1.0	<1.0	50/50
03-10300	Turbidity as NTU	26.2	<1.0	0.90/0.89
03-10301	Total Alkalinity (as $CaCO_3$)	108	<1.0	31.0/29.2
03-10303	Nitrate-N	6.1	<0.05	3.00/3.00
03-10303	Nitrite-N	0.219	<0.002	0.200/0.200
03-10303	Total Kjeldahl Nitrogen	9.4	<0.10	3.17/3.22
03-10304	Ammonia-N	<0.10	<0.10	1.94/2.00
03-10307	Cyanide	<0.02	<0.02	0.250/0.252
03-10308	Chloride	42.4	<0.05	3.04/3.00
03-10308	Fluoride	0.50	<0.05	2.95/3.00
03-10308	Sulfate	20	<0.05	2.99/3.00
03-10308	Sulfite	<2.0	<2.0	2025/2000
03-10309	Sulfide	<2.0	<2.0	230/240
03-10304	Total Phosphorous	1.94	<0.10	9.85/9.91
03-10305	Orthophosphate	1.51	<0.01	0.52/0.50
03-10302	Total Organic Carbon	17	<1.0	20.2/20.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 11, 2003
Project No.: 3-2216

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 06/30-07/01/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/01/03/1300/SAS	07/01/03/1315/SAS
BOD	EPA 405.1	07/01/03/1310/SR	07/06/03/1330/SR
TSS	EPA 160.2	07/04/03/1200/SG	07/05/03/1100/SG
TDS	EPA 160.1	07/04/03/1100/SG	07/08/03/1200/SG
O&G	EPA 1664	07/05/03/1500/SG	07/06/03/1400/SG
Total Solids	EPA 160.4	07/04/03/1000/SG	07/08/03/1200/SG
COD	EPA 410.1	07/03/03/1530/LA	07/08/03/0930/LA
Color	EPA 110.2	07/01/03/1500/SK	07/01/03/1700/SK
Turbidity	EPA 180.1	07/01/03/1500/SK	07/01/03/1700/SK
T. Alkalinity	EPA 310.1	07/07/03/1400/SK	07/07/03/1700/SK
Nitrate-N	EPA 300.1	07/02/03/0800/SK	07/02/03/1400/SK
Nitrite-N	EPA 354.1	07/01/03/1700/SK	07/01/03/1800/SK
TKN-N	EPA 351.4	07/14/03/0800/SK	07/14/03/1730/SK
Ammonia-N	EPA 350.3	07/10/03/0800/SK	07/10/03/1430/SK
Cyanide	EPA 335.2	07/02/03/1600/SK	07/02/03/1900/SK
Chloride	EPA 300.1	07/21/03/0800/SK	07/21/03/1600/SK
Fluoride	EPA 300.1	07/21/03/0800/SK	07/21/03/1600/SK
Sulfate	EPA 300.1	07/21/03/0800/SK	07/21/03/1600/SK
Sulfite	EPA 377.1	07/01/03/1630/SK	07/01/03/1745/SK
Sulfide	SW846, 9030	07/08/03/1000/SK	07/08/03/1400/SK
T. Phosphorous	EPA 365.2	07/11/03/1200/SK	07/11/03/1800/SK
Orthophosphate	EPA 365.2	07/01/03/1700/SK	07/01/03/1830/SK
TOC	EPA 415.1	07/02/03/1320/DD	07/02/03/1325/DD

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 11, 2003
Project No.: 3-2216

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 06/30-07/01/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-10306 CTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.60	<0.01	5.1/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	5.1/5.0
Barium	0.03	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	12	<0.01	26/25
Chromium	<0.01	<0.01	5.1/5.0
Cobalt	<0.01	<0.01	5.3/5.0
Copper	<0.01	<0.01	5.2/5.0
Iron	0.96	<0.01	5.4/5.0
Lead	<0.01	<0.01	5.2/5.0
Magnesium	2.4	<0.01	25/25
Manganese	0.10	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	7.5	<0.01	25/25
Selenium	<0.01	<0.01	5.0/5.0
Silica	23	<0.02	11/10
Silver	<0.01	<0.01	0.96/1.0
Sodium	69	<0.01	5.0/5.0
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.1/5.0
Zinc	0.04	<0.01	5.1/5.0
Total Hardness as ($CaCO_3$)	40	<0.10	160/160

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entekIabs@att.net

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 11, 2003
Project No.: 3-2216

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 06/30-07/01/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Antimony	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Arsenic	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Barium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Beryllium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cadmium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Calcium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Chromium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cobalt	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Copper	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Iron	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Lead	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Magnesium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Manganese	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Mercury	EPA 7470A	07/03/03/1500/ZN	07/03/03/1700/ZN
Nickel	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Potassium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Selenium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silica	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silver	EPA 7760A	07/14/03/0900/ZN	07/14/03/0930/ZN
Sodium	EPA 7770	07/14/03/0930/ZN	07/14/03/1000/ZN
Thallium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Vanadium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Zinc	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Total Hardness	EPA 314A	07/11/03/1000/ZN	07/11/03/1400/ZN

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN: Garcia Dailekwa
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:
Central Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2214

TURNAROUND TIME: (circle one) Reg. / Rush
NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	06/30 - 070103 0600-0600
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	arrived on ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC...	ANALYSES REQUESTED	STORAGE #
CTP EFFLUENT	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No		Color, Turbidity	
	No		Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes		COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes		Ammonia as N, Total Phosphorous	
	No		Orthophosphate	
	Yes		Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes		Cyanide	
	No		Fluoride, Chloride, Sulfate, Sulfite	
	Yes		Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Richard A. Piper	[illegible] - Entek	070103 1105

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY
FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	**Method**
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	**2340**
Comprehensive metals scan **(aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

Study for Alternative Water Supply for Industrial Users
CTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/03/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 13, 2003
PROJECT NO.: 3-2280

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2280

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the Central Treatment Plant was received July 3, 2003. The samples were analyzed for specified parameters as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2280

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/02,03/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-10536	pH (units)	7.5	--	6.1/6.0
03-10536	Biochemical Oxygen Demand	20	<1.0	19.8/19.8
03-10536	Total Suspended Solids	18	<2.0	77/76
03-10537	Total Dissolved Solids	410	<2.0	490/500
03-10541	Oil & Grease	<5.0	<5.0	39.4/40.0
03-10537	Total Solids	430	<2.0	245/200
03-10540	Chemical Oxygen Demand	66	<5.0	102/100
03-10538	Color	<1.0	<1.0	49/50
03-10538	Turbidity as NTU	11.5	<1.0	0.86/0.89
03-10539	Total Alkalinity (as $CaCO_3$)	132	<1.0	31.0/29.2
03-10542	Nitrate-N	6.7	<0.05	3.00/3.00
03-10542	Nitrite-N	0.465	<0.002	0.198/0.200
03-10542	Total Kjeldahl Nitrogen	7.90	<0.10	3.27/3.22
03-10543	Ammonia-N	0.20	<0.10	1.94/2.00
03-10546	Cyanide	<0.02	<0.02	0.253/0.252
03-10547	Chloride	65.8	<0.05	2.97/3.00
03-10547	Fluoride	0.45	<0.05	2.98/3.00
03-10547	Sulfate	24.4	<0.05	2.98/3.00
03-10547	Sulfite	<2.0	<2.0	1975/2000
03-10548	Sulfide	<2.0	<2.0	230/240
03-10543	Total Phosphorous	2.50	<0.10	9.85/9.91
03-10544	Orthophosphate	1.91	<0.01	0.98/1.00
03-10540	Total Organic Carbon	42	<1.0	5.1/5.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2280

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/02,03/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/03/03/1500/SAS	07/03/03/1530/SAS
BOD	EPA 405.1	07/03/03/1200/SR	07/08/03/1200/SR
TSS	EPA 160.2	07/04/03/1200/SG	07/05/03/1100/SG
TDS	EPA 160.1	07/04/03/1100/SG	07/08/03/1200/SG
O&G	EPA 1664	07/05/03/1500/SG	07/06/03/1400/SG
Total Solids	EPA 160.4	07/04/03/1000/SG	07/08/03/1200/SG
COD	EPA 410.1	07/03/03/1530/LA	07/08/03/0930/LA
Color	EPA 110.2	07/03/03/1400/SK	07/03/03/1600/SK
Turbidity	EPA 180.1	07/03/03/1400/SK	07/03/03/1600/SK
T. Alkalinity	EPA 310.1	07/07/03/1400/SK	07/07/03/1700/SK
Nitrate-N	EPA 300.1	07/05/03/0700/SK	07/05/03/1200/SK
Nitrite-N	EPA 354.1	07/03/03/1500/SK	07/03/03/1730/SK
TKN-N	EPA 351.4	07/18/03/0800/SK	07/18/03/1700/SK
Ammonia-N	EPA 350.3	07/10/03/0800/SK	07/10/03/1430/SK
Cyanide	EPA 335.2	07/11/03/0900/SK	07/11/03/1600/SK
Chloride	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Fluoride	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Sulfate	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Sulfite	EPA 377.1	07/03/03/1600/SK	07/03/03/1730/SK
Sulfide	SW846, 9030	07/08/03/1000/SK	07/08/03/1400/SK
T. Phosphorous	EPA 365.2	07/11/03/1200/SK	07/11/03/1800/SK
Orthophosphate	EPA 365.2	07/03/03/1630/SK	07/03/03/1830/SK
TOC	EPA 415.1	07/08/03/1245/DD	07/08/03/1250/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2280

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/02,03/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-10545 CTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.20	<0.01	5.1/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	5.1/5.0
Barium	0.02	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	13	<0.01	26/25
Chromium	<0.01	<0.01	5.1/5.0
Cobalt	<0.01	<0.01	5.3/5.0
Copper	<0.01	<0.01	5.2/5.0
Iron	0.49	<0.01	5.4/5.0
Lead	<0.01	<0.01	5.2/5.0
Magnesium	3.2	<0.01	25/25
Manganese	0.08	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	9.3	<0.01	25/25
Selenium	<0.01	<0.01	5.0/5.0
Silica	25	<0.02	11/10
Silver	<0.01	<0.01	0.96/1.0
Sodium	100	<0.01	5.0/5.0
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.1/5.0
Zinc	0.03	<0.01	5.1/5.0
Total Hardness as ($CaCO_3$)	46	<0.10	160/160

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2280

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/02,03/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Antimony	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Arsenic	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Barium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Beryllium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cadmium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Calcium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Chromium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cobalt	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Copper	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Iron	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Lead	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Magnesium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Manganese	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Mercury	EPA 7470A	07/03/03/1500/ZN	07/03/03/1700/ZN
Nickel	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Potassium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Selenium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silica	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silver	EPA 7760A	07/14/03/0900/ZN	07/14/03/0930/ZN
Sodium	EPA 7770	07/14/03/0930/ZN	07/14/03/1000/ZN
Thallium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Vanadium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Zinc	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Total Hardness	EPA 314A	07/11/03/1000/ZN	07/11/03/1400/ZN

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN: Garcia Dailekwa
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:
Central Treatment Plant

ENTEK PROJECT NUMBER: 3CBR228C

TURNAROUND TIME: (circle one) Reg. / Rush
NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	070203-070303
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	Arrived on ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC...	ANALYSES REQUESTED	STORAGE #
CTP ~~INFLUENT~~ Effluent	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No		Color, Turbidity	
	No		Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes		COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes		Ammonia as N, Total Phosphorous	
	No		Orthophosphate	
	Yes		Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes		Cyanide	
	No		Fluoride, Chloride, Sulfate, Sulfite	
	Yes		Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Warren Brandon	Noresa Kruegel-Entek	070303 1044

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY
FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	4110B
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	4110B
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	2340
Comprehensive metals scan (**aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc**)	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	4110B
Silica (SiO_2)	6010B
Sulfate (SO_4)	4110B
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
CTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/22/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2513

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2513

Study for Alternative Water Supply for Industrial Users

Two sets of water samples collected by URS from the Central Treatment Plant were received July 22, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2513

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/21,22/03

Parameters (concentration mg/L)	CTP Sample	CTP Duplicate	Lab Blank	LCS/ QC (observed/true)
pH (units)	7.6	7.6	--	6.1/6.0
Biochemical Oxygen Demand	13	11	<1.0	18.9/19.8
Total Suspended Solids	15	17	<2.0	58/56
Total Dissolved Solids	415	400	<2.0	510/500
Oil & Grease	<5.0	<5.0	<5.0	39.7/40.0
Total Solids	430	415	<2.0	505/500
Chemical Oxygen Demand	58	69	<5.0	104/100
Color	<1.0	<1.0	<1.0	52/50
Turbidity as NTU	9.1	9.3	<1.0	8.86/8.90
Total Alkalinity (as $CaCO_3$)	140	136	<1.0	32.0/29.2
Nitrate-N	8.7	8.7	<0.05	3.05/3.00
Nitrite-N	0.012	0.011	<0.002	0.200/0.200
Total Kjeldahl Nitrogen	18.1	18.6	<0.10	3.11/3.22
Ammonia-N	1.15	1.10	<0.10	1.97/2.00
Cyanide	<0.02	<0.02	<0.02	0.249/0.252
Chloride	47	46	<0.05	3.03/3.00
Fluoride	0.39	0.39	<0.05	3.04/3.00
Sulfate	25.5	24	<0.05	2.98/3.00
Sulfite	<2.0	<2.0	<2.0	2050/2000
Sulfide	<2.0	<2.0	<2.0	224/240
Total Phosphorous	1.69	1.74	<0.10	9.85/9.91
Orthophosphate	1.87	1.84	<0.01	1.03/1.00
Total Organic Carbon	21	21	<1.0	5.1/5.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2513

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/21,22/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/22/03/1145/SAS	07/22/03/1200/SAS
BOD	EPA 405.1	07/22/03/1400/SR	07/27/03/1230/LA
TSS	EPA 160.2	07/23/03/1000/SG	07/24/03/1100/SG
TDS	EPA 160.1	07/28/03/1300/SG	07/30/03/1400/SG
O&G	EPA 1664	07/25/03/0900/SG	07/26/03/1000/SG
Total Solids	EPA 160.4	07/28/03/1200/SG	07/30/03/1200/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/22/03/1500/SK	07/22/03/1630/SK
Turbidity	EPA 180.1	07/22/03/1500/SK	07/22/03/1630/SK
T. Alkalinity	EPA 310.1	07/25/03/1300/SK	07/25/03/1630/SK
Nitrate-N	EPA 300.1	07/23/03/0800/SK	07/23/03/1200/SK
Nitrite-N	EPA 354.1	07/22/03/1600/SK	07/22/03/1700/SK
TKN-N	EPA 351.4	07/28/03/0800/SK	07/28/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/24/03/0900/SK	07/24/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/22/03/1330/SK	07/22/03/1600/SK
Sulfide	SW846, 9030	07/23/03/1200/SK	07/23/03/1400/SK
T. Phosphorous	EPA 365.2	07/30/03/0800/SK	07/30/03/1700/SK
Orthophosphate	EPA 365.2	07/22/03/1830/SK	07/22/03/1930/SK
TOC	EPA 415.1	07/29/03/1005/DD	07/29/03/1020/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2513

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/21,22/03

Parameters (concentration mg/L)	CTP Sample	CTP Duplicate	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.18	0.18	<0.01	4.8/5.0
Antimony	<0.01	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	<0.01	4.6/5.0
Barium	0.02	0.03	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	<0.01	5.0/5.0
Calcium	15.9	16.1	<0.01	1.01/1.00
Chromium	<0.01	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	<0.01	5.1/5.0
Iron	0.40	0.42	<0.01	5.0/5.0
Lead	<0.01	<0.01	<0.01	5.1/5.0
Magnesium	3.44	3.50	<0.01	0.96/1.00
Manganese	0.04	0.04	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	<0.01	5.0/5.0
Potassium	5.6	5.9	<0.01	0.99/1.00
Selenium	<0.01	<0.01	<0.01	4.8/5.0
Silica	28	28	<0.02	9.6/11
Silver	<0.01	<0.01	<0.01	1.00/1.00
Sodium	96	100	<0.01	1.00/1.00
Thallium	<0.01	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	<0.01	5.0/5.0
Zinc	0.04	0.04	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	53.9	54.6	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2513

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/21,22/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	07/29/03/0800/ZN	07/29/03/1200/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2513

Entek Sample Container Id. No.

Parameters	CTP Sample	CTP Duplicate
pH (units)	03-11935	03-11950
Biochemical Oxygen Demand	03-11935	03-11950
Total Suspended Solids	03-11935	03-11950
Total Dissolved Solids	03-11936	03-11951
Oil & Grease	03-11940	03-11955
Total Solids	03-11936	03-11951
Chemical Oxygen Demand	03-11939	03-11954
Color	03-11937	03-11952
Turbidity	03-11937	03-11952
Total Alkalinity (as $CaCO_3$)	03-11938	03-11953
Nitrate-N	03-11941	03-11956
Nitrite-N	03-11941	03-11956
Total Kjeldahl Nitrogen	03-11941	03-11956
Ammonia-N	03-11942	03-11957
Cyanide	03-11947	03-11962
Chloride	03-11948	03-11963
Fluoride	03-11948	03-11963
Sulfate	03-11948	03-11963
Sulfite	03-11948	03-11963
Sulfide	03-11949	03-11964
Total Phosphorous	03-11942	03-11957
Orthophosphate	03-11943	03-11958
Total Organic Carbon	03-11939	03-11954
Metals	03-11946	03-11961

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN:	**Garcia Dailekwa**
PHONE:	(225) 389-3240
FAX:	(225) 389-3111
P.O.#	

SAMPLE LOCATION:

Central Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2513

(circle one)

TURNAROUND TIME: Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	2 set
Date/Time Sampled:	7/21-22/03
Number & Type of Containers:	(~~2~~4) plastic, (2) glass KNS
Matrix:	water
Transporting Cooler Temperature:	Rec'd on Ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
CTP EFFLUENT	No	pH is a Grab	BOD, TSS, pH	
& Duplicate	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: recd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Richard A. Piper	Kristen N Stevens - Entek	07.22.03 1015

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

URS

3CBN2513

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	**Method**
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	2340
Comprehensive metals scan **(aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
CTP EFFFLUENT SAMPLES
SAMPLES RECEIVED: 07/24/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2573

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2573

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the Central Treatment Plant was received July 24, 2003. The samples were analyzed for specified parameters as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entecklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2573

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/23,24/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-12159	pH (units)	7.5	--	6.1/6.0
03-12159	Biochemical Oxygen Demand	15	<1.0	19.8/19.8
03-12159	Total Suspended Solids	13	<2.0	90/93
03-12160	Total Dissolved Solids	440	<2.0	510/500
03-12164	Oil & Grease	<5.0	<5.0	39.7/40.0
03-12160	Total Solids	455	<2.0	505/500
03-12163	Chemical Oxygen Demand	71	<5.0	104/100
03-12161	Color	<1.0	<1.0	48/50
03-12161	Turbidity as NTU	13.1	<1.0	9.0/8.9
03-12162	Total Alkalinity (as $CaCO_3$)	128	<1.0	32.0/29.2
03-12165	Nitrate-N	8.3	<0.05	3.02/3.00
03-12165	Nitrite-N	0.016	<0.002	0.198/0.200
03-12165	Total Kjeldahl Nitrogen	10.4	<0.10	3.11/3.22
03-12166	Ammonia-N	1.48	<0.10	1.97/2.00
03-12169	Cyanide	<0.02	<0.02	0.249/0.252
03-12170	Chloride	50.5	<0.05	3.03/3.00
03-12170	Fluoride	0.53	<0.05	3.04/3.00
03-12170	Sulfate	22	<0.05	2.98/3.00
03-12170	Sulfite	<2.0	<2.0	1950/2000
03-12171	Sulfide	<2.0	<2.0	230/240
03-12166	Total Phosphorous	2.16	<0.10	9.85/9.91
03-12167	Orthophosphate	1.97	<0.01	1.95/2.00
03-12163	Total Organic Carbon	14	<1.0	10.1/10.0

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2573

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/23,24/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/24/03/1230/SAS	07/24/03/1250/SAS
BOD	EPA 405.1	07/24/03/1330/LA	07/29/03/1330/LA
TSS	EPA 160.2	07/25/03/1530/SG	07/28/03/1230/SG
TDS	EPA 160.1	07/28/03/1300/SG	07/30/03/1400/SG
O&G	EPA 1664	07/25/03/0900/SG	07/26/03/1000/SG
Total Solids	EPA 160.4	07/28/03/1200/SG	07/30/03/1200/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/24/03/1500/SK	07/24/03/1600/SK
Turbidity	EPA 180.1	07/24/03/1500/SK	07/24/03/1600/SK
T. Alkalinity	EPA 310.1	07/25/03/1300/SK	07/25/03/1630/SK
Nitrate-N	EPA 300.1	07/25/03/0800/SK	07/25/03/1230/SK
Nitrite-N	EPA 354.1	07/24/03/1430/SK	07/24/03/1530/SK
TKN-N	EPA 351.4	07/28/03/0800/SK	07/28/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/24/03/1300/SK	07/24/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/24/03/1400/SK	07/24/03/1500/SK
Sulfide	SW846, 9030	07/29/03/1300/SK	07/29/03/1600/SK
T. Phosphorous	EPA 365.2	07/30/03/0800/SK	07/30/03/1700/SK
Orthophosphate	EPA 365.2	07/24/03/1400/SK	07/24/03/1600/SK
TOC	EPA 415.1	08/01/03/1035/DD	08/01/03/1040/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2573

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/23,24/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-12168 CTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.18	<0.01	4.8/5.0
Antimony	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	4.6/5.0
Barium	0.02	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	5.0/5.0
Calcium	13.4	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.37	<0.01	5.0/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	2.89	<0.01	0.96/1.00
Manganese	0.04	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.0/5.0
Potassium	6.4	<0.01	0.99/1.00
Selenium	<0.01	<0.01	4.8/5.0
Silica	27	<0.02	9.6/11
Silver	<0.01	<0.01	1.00/1.00
Sodium	99	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.0/5.0
Zinc	0.03	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	45.4	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2573

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/23,24/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	07/29/03/0800/ZN	07/29/03/1200/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:
CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802
ATTN: **Garcia Dialekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:
Central Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2573

(circle one)
TURNAROUND TIME: Reg. / Rush
NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	072303 to 072403
Number & Type of Containers:	~~(12)~~ 14 DR plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	<4°C

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC...	ANALYSES REQUESTED	STORAGE #
CTP ~~INFLUENT~~ Effluent	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as $CaCO_3$)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as $CaCO_3$), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Patricia A Smith	[signature]-Entek	072403
		1147

URS

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS) pH, BOD	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	2340
Comprehensive metals scan (**aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc**)	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
CTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/29/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2619

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2619

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the Central Treatment Plant was received July 29, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2619

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/28,29/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-12422	pH (units)	7.5	--	6.1/6.0
03-12422	Biochemical Oxygen Demand	16	<1.0	18.9/19.8
03-12422	Total Suspended Solids	18	<2.0	39/41
03-12423	Total Dissolved Solids	445	<2.0	480/500
03-12427	Oil & Grease	<5.0	<5.0	38.1/40.0
03-12423	Total Solids	465	<2.0	475/500
03-12426	Chemical Oxygen Demand	73	<5.0	104/100
03-12424	Color	<1.0	<1.0	49/50
03-12424	Turbidity as NTU	14.4	<1.0	9.00/8.90
03-12425	Total Alkalinity (as $CaCO_3$)	140	<1.0	33/29.2
03-12428	Nitrate-N	9.3	<0.05	2.96/3.00
03-12428	Nitrite-N	0.097	<0.002	0.196/0.200
03-12428	Total Kjeldahl Nitrogen	14.9	<0.10	3.20/3.22
03-12429	Ammonia-N	2.81	<0.10	1.97/2.00
03-12432	Cyanide	<0.02	<0.02	0.254/0.252
03-12433	Chloride	51	<0.05	3.03/3.00
03-12433	Fluoride	0.44	<0.05	3.04/3.00
03-12433	Sulfate	20.5	<0.05	2.98/3.00
03-12433	Sulfite	<2.0	<2.0	1975/2000
03-12434	Sulfide	<2.0	<2.0	230/240
03-12429	Total Phosphorous	3.38	<0.10	10.01/9.91
03-12430	Orthophosphate	2.39	<0.01	2.05/2.00
03-12426	Total Organic Carbon	16	<1.0	20.2/20.0

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2619

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/28,29/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/29/03/1153/SAS	07/29/03/1203/SAS
BOD	EPA 405.1	07/29/03/1300/LA	08/03/03/1130/LA
TSS	EPA 160.2	08/01/03/1600/SG	08/02/03/1200/SG
TDS	EPA 160.1	08/01/03/1715/SG	08/05/03/1500/SG
O&G	EPA 1664	08/01/03/1300/SG	08/02/03/1230/SG
Total Solids	EPA 160.4	08/01/03/1700/SG	08/05/03/1500/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/29/03/1600/SK	07/29/03/1700/SK
Turbidity	EPA 180.1	07/29/03/1600/SK	07/29/03/1700/SK
T. Alkalinity	EPA 310.1	08/01/03/1200/SK	08/01/03/1430/SK
Nitrate-N	EPA 300.1	07/30/03/0800/SK	07/30/03/1300/SK
Nitrite-N	EPA 354.1	07/29/03/1500/SK	07/29/03/1700/SK
TKN-N	EPA 351.4	08/08/03/0730/SK	08/08/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/31/03/1000/SK	07/31/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/29/03/1330/SK	07/29/03/1430/SK
Sulfide	SW846, 9030	07/29/03/1300/SK	07/29/03/1600/SK
T. Phosphorous	EPA 365.2	08/07/03/0800/SK	08/07/03/1830/SK
Orthophosphate	EPA 365.2	07/29/03/1430/SK	07/29/03/1630/SK
TOC	EPA 415.1	08/01/03/1105/DD	08/01/03/1110/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2619

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/28,29/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-12431 CTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.21	<0.01	4.8/5.0
Antimony	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	4.6/5.0
Barium	0.02	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	5.0/5.0
Calcium	10.3	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.33	<0.01	5.0/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	2.45	<0.01	0.96/1.00
Manganese	0.05	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.0/5.0
Potassium	5.9	<0.01	0.99/1.00
Selenium	<0.01	<0.01	4.8/5.0
Silica	28	<0.02	9.6/11
Silver	<0.01	<0.01	1.00/1.00
Sodium	107	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.0/5.0
Zinc	0.03	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	35.8	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2619

Sample Id: Central Treatment Plant (CTP Effluent)
Sample Date: 07/28,29/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	08/01/03/0800/ZN	08/01/03/1000/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:
CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802
ATTN: **Garcia Dialekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:
Central Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2619

(circle one)
TURNAROUND TIME: Reg. / Rush
NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	0728,2903
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	ICE

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
CTP ~~INFLUENT~~	No	pH is a Grab	BOD, TSS, pH	
Effluent	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: Rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Patricia Smith	[signature] Entek	072903 1133

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entekIabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
CTP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/31/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2649

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2649

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the Central Treatment Plant was received July 31, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2649

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP EFfluent)
Sample Date: 07/30,31/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-12612	pH (units)	7.6	--	6.1/6.0
03-12612	Biochemical Oxygen Demand	10	<1.0	19.2/19.8
03-12612	Total Suspended Solids	11	<2.0	39/41
03-12613	Total Dissolved Solids	470	<2.0	480/500
03-12618	Oil & Grease	<5.0	<5.0	38.1/40.0
03-12613	Total Solids	480	<2.0	475/500
03-12617	Chemical Oxygen Demand	85	<5.0	104/100
03-12615	Color	<1.0	<1.0	48/50
03-12615	Turbidity as NTU	9.2	<1.0	9.00/8.90
03-12616	Total Alkalinity (as $CaCO_3$)	136	<1.0	33/29.2
03-12619	Nitrate-N	8.4	<0.05	2.96/3.00
03-12619	Nitrite-N	0.078	<0.002	0.198/0.200
03-12619	Total Kjeldahl Nitrogen	13.4	<0.10	3.20/3.22
03-12620	Ammonia-N	1.83	<0.10	1.97/2.00
03-12623	Cyanide	<0.02	<0.02	0.254/0.252
03-12624	Chloride	51	<0.05	3.03/3.00
03-12624	Fluoride	0.47	<0.05	3.04/3.00
03-12624	Sulfate	20	<0.05	2.98/3.00
03-12624	Sulfite	<2.0	<2.0	1975/2000
03-12625	Sulfide	<2.0	<2.0	230/240
03-12620	Total Phosphorous	2.40	<0.10	10.01/9.91
03-12621	Orthophosphate	2.24	<0.01	1.94/2.00
03-12617	Total Organic Carbon	15	<1.0	10.01/10.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2649

Sample Id: Central Treatment Plant (CTP EFfluent)
Sample Date: 07/30,31/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/31/03/1107/SAS	07/31/03/1122/SAS
BOD	EPA 405.1	07/31/03/1300/LA	08/05/03/1300/LA
TSS	EPA 160.2	08/01/03/1600/SG	08/02/03/1200/SG
TDS	EPA 160.1	08/01/03/1715/SG	08/05/03/1500/SG
O&G	EPA 1664	08/01/03/1300/SG	08/02/03/1230/SG
Total Solids	EPA 160.4	08/01/03/1700/SG	08/05/03/1500/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/31/03/1730/SK	07/31/03/1830/SK
Turbidity	EPA 180.1	07/31/03/1730/SK	07/31/03/1830/SK
T. Alkalinity	EPA 310.1	08/01/03/1200/SK	08/01/03/1430/SK
Nitrate-N	EPA 300.1	08/01/03/0800/SK	08/01/03/1500/SK
Nitrite-N	EPA 354.1	07/31/03/1700/SK	07/31/03/1800/SK
TKN-N	EPA 351.4	08/08/03/0730/SK	08/08/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/31/03/1400/SK	07/31/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/31/03/1330/SK	07/31/03/1430/SK
Sulfide	SW846, 9030	07/31/03/1400/SK	07/31/03/1630/SK
T. Phosphorous	EPA 365.2	08/07/03/0800/SK	08/07/03/1830/SK
Orthophosphate	EPA 365.2	07/31/03/1500/SK	07/31/03/1630/SK
TOC	EPA 415.1	08/01/03/1200/DD	08/01/03/1205/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2649

Study for Alternative Water Supply for Industrial Users
Sample Id: Central Treatment Plant (CTP EFfluent)
Sample Date: 07/30,31/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-12622 CTP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.16	<0.01	4.9/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	4.8/5.0
Barium	0.02	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	12.1	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.2/5.0
Cobalt	<0.01	<0.01	5.4/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.34	<0.01	5.2/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	2.61	<0.01	0.96/1.00
Manganese	0.04	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	7.2	<0.01	0.99/1.00
Selenium	<0.01	<0.01	5.0/5.0
Silica	28	<0.02	9.8/11
Silver	<0.01	<0.01	0.97/1.00
Sodium	112	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.2/5.0
Vanadium	<0.01	<0.01	5.2/5.0
Zinc	0.03	<0.01	5.2/5.0
Hardness (as $CaCO_3$)	41	<0.10	6.48/6.62

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2649

Sample Id: Central Treatment Plant (CTP EFfluent)
Sample Date: 07/30,31/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Antimony	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Arsenic	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Barium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Beryllium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Cadmium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Cobalt	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Copper	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Iron	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Lead	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Mercury	EPA 7470A	08/01/03/0800/ZN	08/01/03/1000/ZN
Nickel	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Silica	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Vanadium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Zinc	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN: **Garcia Dialekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:

Central Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2649

TURNAROUND TIME: (circle one) Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	0730,3103
Number & Type of Containers:	(14) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	ICE

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
CTP ~~INFLUENT~~ Effluent	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: Rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Patricia Smith	Dores Kruegel - EEL	073103
		1050

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

APPENDIX D-5

BATON ROUGE CITY/PARISH WWTPS – SUPPLEMENTAL SAMPLING PROGRAM – JUNE/JULY 2003 – SOUTH WWTP ANALYTICAL REPORTS

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
STP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/01/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 13, 2003
PROJECT NO.: 3-2214

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2214

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the South Treatment Plant was received July 1, 2003. The samples were analyzed for specified parameters as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2214

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 06/30-07/01/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/LQC (observed/true)
03-10272	pH (units)	7.7	--	6.1/6.0
03-10272	Biochemical Oxygen Demand	39	<1.0	19.2/19.8
03-10272	Total Suspended Solids	31	<2.0	77/76
03-10273	Total Dissolved Solids	325	<2.0	490/500
03-10277	Oil & Grease	<5.0	<5.0	39.4/40.0
03-10273	Total Solids	355	<2.0	245/200
03-10276	Chemical Oxygen Demand	419	<5.0	204/200
03-10274	Color	<1.0	<1.0	50/50
03-10274	Turbidity as NTU	27.4	<1.0	0.90/0.89
03-10275	Total Alkalinity (as $CaCO_3$)	156	<1.0	31.0/29.2
03-10278	Nitrate-N	1.45	<0.05	3.00/3.00
03-10278	Nitrite-N	0.941	<0.002	0.200/0.200
03-10278	Total Kjeldahl Nitrogen	11	<0.10	3.17/3.22
03-10279	Ammonia-N	<0.10	<0.10	1.94/2.00
03-10282	Cyanide	<0.02	<0.02	0.250/0.252
03-10283	Chloride	28.2	<0.05	3.04/3.00
03-10283	Fluoride	0.60	<0.05	2.95/3.00
03-10283	Sulfate	16.6	<0.05	2.99/3.00
03-10283	Sulfite	<2.0	<2.0	2025/2000
03-10284	Sulfide	<2.0	<2.0	230/240
03-10279	Total Phosphorous	2.95	<0.10	9.85/9.91
03-10280	Orthophosphate	2.13	<0.01	0.52/0.50
03-10276	Total Organic Carbon	20	<1.0	20.2/20.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2214

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 06/30-07/01/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/01/03/1300/SAS	07/01/03/1315/SAS
BOD	EPA 405.1	07/01/03/1310/SR	07/06/03/1330/SR
TSS	EPA 160.2	07/04/03/1200/SG	07/05/03/1100/SG
TDS	EPA 160.1	07/04/03/1100/SG	07/08/03/1200/SG
O&G	EPA 1664	07/05/03/1500/SG	07/06/03/1400/SG
Total Solids	EPA 160.4	07/04/03/1000/SG	07/08/03/1200/SG
COD	EPA 410.1	07/03/03/1530/LA	07/08/03/0930/LA
Color	EPA 110.2	07/01/03/1500/SK	07/01/03/1700/SK
Turbidity	EPA 180.1	07/01/03/1500/SK	07/01/03/1700/SK
T. Alkalinity	EPA 310.1	07/07/03/1400/SK	07/07/03/1700/SK
Nitrate-N	EPA 300.1	07/02/03/0800/SK	07/02/03/1400/SK
Nitrite-N	EPA 354.1	07/01/03/1700/SK	07/01/03/1800/SK
TKN-N	EPA 351.4	07/14/03/0800/SK	07/14/03/1730/SK
Ammonia-N	EPA 350.3	07/10/03/0800/SK	07/10/03/1430/SK
Cyanide	EPA 335.2	07/02/03/1600/SK	07/02/03/1900/SK
Chloride	EPA 300.1	07/21/03/0800/SK	07/21/03/1600/SK
Fluoride	EPA 300.1	07/21/03/0800/SK	07/21/03/1600/SK
Sulfate	EPA 300.1	07/21/03/0800/SK	07/21/03/1600/SK
Sulfite	EPA 377.1	07/01/03/1630/SK	07/01/03/1745/SK
Sulfide	SW846, 9030	07/08/03/1000/SK	07/08/03/1400/SK
T. Phosphorous	EPA 365.2	07/11/03/1200/SK	07/11/03/1800/SK
Orthophosphate	EPA 365.2	07/01/03/1700/SK	07/01/03/1830/SK
TOC	EPA 415.1	07/02/03/1335/DD	07/02/03/1340/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2214

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 06/30-07/01/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-10281 STP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.64	<0.01	5.1/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	5.1/5.0
Barium	0.02	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	10	<0.01	26/25
Chromium	<0.01	<0.01	5.1/5.0
Cobalt	<0.01	<0.01	5.3/5.0
Copper	<0.01	<0.01	5.2/5.0
Iron	0.68	<0.01	5.4/5.0
Lead	<0.01	<0.01	5.2/5.0
Magnesium	2.4	<0.01	25/25
Manganese	0.08	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	9.8	<0.01	25/25
Selenium	<0.01	<0.01	5.0/5.0
Silica	26	<0.02	11/10
Silver	<0.01	<0.01	0.96/1.0
Sodium	70	<0.01	5.0/5.0
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.1/5.0
Zinc	0.04	<0.01	5.1/5.0
Total Hardness as ($CaCO_3$)	35	<0.10	160/160

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2214

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 06/30-07/01/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Antimony	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Arsenic	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Barium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Beryllium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cadmium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Calcium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Chromium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cobalt	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Copper	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Iron	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Lead	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Magnesium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Manganese	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Mercury	EPA 7470A	07/03/03/1500/ZN	07/03/03/1700/ZN
Nickel	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Potassium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Selenium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silica	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silver	EPA 7760A	07/14/03/0900/ZN	07/14/03/0930/ZN
Sodium	EPA 7770	07/14/03/0930/ZN	07/14/03/1000/ZN
Thallium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Vanadium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Zinc	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Total Hardness	EPA 314A	07/11/03/1000/ZN	07/11/03/1400/ZN

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE

Wastewater T & D

2433 River Road

Baton Rouge, Louisiana 70802

ATTN: **Garcia Dailekwa**

PHONE: (225) 389-3240

FAX: (225) 389-3111

P.O.#

SAMPLE LOCATION:

South Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2214

TURNAROUND TIME: (circle one) Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	062003/0600 - 070103/0600
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	Arrived on ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
STP EFFLUENT	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No		Color, Turbidity	
	No		Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes		COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes		Ammonia as N, Total Phosphorous	
	No		Orthophosphate	
	Yes		Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes		Cyanide	
	No		Fluoride, Chloride, Sulfate, Sulfite	
	Yes		Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Rahal A. Piper	[illegible] - Entek	070103 1105

URS

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	**2340**
Comprehensive metals scan **(aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA
Environmental Lead and Industrial Hygiene
ACCREDITED LABORATORY

Louisiana Environmental Laboratory
LELAP
02039
Accreditation Program

Study for Alternative Water Supply for Industrial Users
STP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/03/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 13, 2003
PROJECT NO.: 3-2279

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2279

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the South Treatment Plant was received July 3, 2003. The samples were analyzed for specified parameters as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2279

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/02,03/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-10524	pH (units)	7.9	--	6.1/6.0
03-10524	Biochemical Oxygen Demand	32	<1.0	19.8/19.8
03-10524	Total Suspended Solids	23	<2.0	77/76
03-13259	Total Dissolved Solids	365	<2.0	490/500
03-10528	Oil & Grease	<5.0	<5.0	39.4/40.0
03-13259	Total Solids	390	<2.0	245/200
03-10527	Chemical Oxygen Demand	96	<5.0	102/100
03-10525	Color	<1.0	<1.0	49/50
03-10525	Turbidity as NTU	21.5	<1.0	0.86/0.89
03-10526	Total Alkalinity (as $CaCO_3$)	208	<1.0	31.0/29.2
03-10529	Nitrate-N	1.6	<0.05	3.00/3.00
03-10529	Nitrite-N	0.878	<0.002	0.198/0.200
03-10529	Total Kjeldahl Nitrogen	14.11	<0.10	3.27/3.22
03-10530	Ammonia-N	<0.10	<0.10	1.94/2.00
03-10533	Cyanide	<0.02	<0.02	0.253/0.252
03-10534	Chloride	36	<0.05	2.97/3.00
03-10534	Fluoride	0.24	<0.05	2.98/3.00
03-10534	Sulfate	18.6	<0.05	2.98/3.00
03-10534	Sulfite	<2.0	<2.0	1975/2000
03-10535	Sulfide	<2.0	<2.0	230/240
03-10530	Total Phosphorous	3.66	<0.10	9.85/9.91
03-10531	Orthophosphate	2.72	<0.01	0.98/1.00
03-10527	Total Organic Carbon	46	<1.0	5.1/5.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2279

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/02,03/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/03/03/1500/SAS	07/03/03/1530/SAS
BOD	EPA 405.1	07/03/03/1200/SR	07/08/03/1200/SR
TSS	EPA 160.2	07/04/03/1200/SG	07/05/03/1100/SG
TDS	EPA 160.1	07/04/03/1100/SG	07/08/03/1200/SG
O&G	EPA 1664	07/05/03/1500/SG	07/06/03/1400/SG
Total Solids	EPA 160.4	07/04/03/1000/SG	07/08/03/1200/SG
COD	EPA 410.1	07/03/03/1530/LA	07/08/03/0930/LA
Color	EPA 110.2	07/03/03/1400/SK	07/03/03/1600/SK
Turbidity	EPA 180.1	07/03/03/1400/SK	07/03/03/1600/SK
T. Alkalinity	EPA 310.1	07/07/03/1400/SK	07/07/03/1700/SK
Nitrate-N	EPA 300.1	07/05/03/0700/SK	07/05/03/1200/SK
Nitrite-N	EPA 354.1	07/03/03/1500/SK	07/03/03/1730/SK
TKN-N	EPA 351.4	07/18/03/0800/SK	07/18/03/1700/SK
Ammonia-N	EPA 350.3	07/10/03/0800/SK	07/10/03/1430/SK
Cyanide	EPA 335.2	07/11/03/0900/SK	07/11/03/1600/SK
Chloride	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Fluoride	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Sulfate	EPA 300.1	07/15/03/0800/SK	07/15/03/1100/SK
Sulfite	EPA 377.1	07/03/03/1600/SK	07/03/03/1730/SK
Sulfide	SW846, 9030	07/08/03/1000/SK	07/08/03/1400/SK
T. Phosphorous	EPA 365.2	07/11/03/1200/SK	07/11/03/1800/SK
Orthophosphate	EPA 365.2	07/03/03/1630/SK	07/03/03/1830/SK
TOC	EPA 415.1	07/08/03/1255/DD	07/08/03/1300/DD

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2279

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/02,03/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-10532 STP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.40	<0.01	5.1/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	5.1/5.0
Barium	0.02	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	11	<0.01	26/25
Chromium	<0.01	<0.01	5.1/5.0
Cobalt	<0.01	<0.01	5.3/5.0
Copper	<0.01	<0.01	5.2/5.0
Iron	0.56	<0.01	5.4/5.0
Lead	<0.01	<0.01	5.2/5.0
Magnesium	2.8	<0.01	25/25
Manganese	0.08	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	11	<0.01	25/25
Selenium	<0.01	<0.01	5.0/5.0
Silica	27	<0.02	11/10
Silver	<0.01	<0.01	0.96/1.0
Sodium	90	<0.01	5.0/5.0
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.1/5.0
Zinc	0.03	<0.01	5.1/5.0
Total Hardness as ($CaCO_3$)	39	<0.10	160/160

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 13, 2003
Project No.: 3-2279

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/02,03/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Antimony	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Arsenic	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Barium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Beryllium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cadmium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Calcium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Chromium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Cobalt	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Copper	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Iron	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Lead	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Magnesium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Manganese	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Mercury	EPA 7470A	07/03/03/1500/ZN	07/03/03/1700/ZN
Nickel	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Potassium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Selenium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silica	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Silver	EPA 7760A	07/14/03/0900/ZN	07/14/03/0930/ZN
Sodium	EPA 7770	07/14/03/0930/ZN	07/14/03/1000/ZN
Thallium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Vanadium	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Zinc	EPA 6010B	07/11/03/1000/ZN	07/11/03/1400/ZN
Total Hardness	EPA 314A	07/11/03/1000/ZN	07/11/03/1400/ZN

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE

Wastewater T & D

2433 River Road

Baton Rouge, Louisiana 70802

ATTN: Garcia Dailekwa

PHONE: (225) 389-3240

FAX: (225) 389-3111

P.O.#

SAMPLE LOCATION:

South Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2279

(circle one)

TURNAROUND TIME: Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	070203-070303
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	Arrived on ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC...	ANALYSES REQUESTED	STORAGE #
STP ~~INFLUENT~~ Effluent	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No		Color, Turbidity	
	No		Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes		COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes		Ammonia as N, Total Phosphorous	
	No		Orthophosphate	
	Yes		Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes		Cyanide	
	No		Fluoride, Chloride, Sulfate, Sulfite	
	Yes		Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION: SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Warren Brandon	Nores Kruegel-Entek	070303 1044

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY
FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	**2340**
Comprehensive metals scan (**aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
STP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/22/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2511

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entekIabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2511

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the South Treatment Plant was received July 22, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2511

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/21,22/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-11905	pH (units)	7.8	--	6.1/6.0
03-11905	Biochemical Oxygen Demand	33	<1.0	18.9/19.8
03-11905	Total Suspended Solids	26	<2.0	58/56
03-11906	Total Dissolved Solids	470	<2.0	510/500
03-11910	Oil & Grease	<5.0	<5.0	39.7/40.0
03-11906	Total Solids	495	<2.0	505/500
03-11909	Chemical Oxygen Demand	92	<5.0	104/100
03-11907	Color	<1.0	<1.0	52/50
03-11907	Turbidity as NTU	18.9	<1.0	8.86/8.90
03-11908	Total Alkalinity (as $CaCO_3$)	176	<1.0	32.0/29.2
03-11911	Nitrate-N	3.2	<0.05	3.05/3.00
03-11911	Nitrite-N	1.58	<0.002	0.200/0.200
03-11911	Total Kjeldahl Nitrogen	17.5	<0.10	3.11/3.22
03-11912	Ammonia-N	11.5	<0.10	1.97/2.00
03-11917	Cyanide	<0.02	<0.02	0.249/0.252
03-11918	Chloride	37	<0.05	3.03/3.00
03-11918	Fluoride	0.31	<0.05	3.04/3.00
03-11918	Sulfate	18	<0.05	2.98/3.00
03-11918	Sulfite	<2.0	<2.0	2050/2000
03-11919	Sulfide	<2.0	<2.0	224/240
03-11912	Total Phosphorous	2.5	<0.10	9.85/9.91
03-11913	Orthophosphate	2.42	<0.01	1.03/1.00
03-11909	Total Organic Carbon	23	<1.0	5.1/5.0

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2511

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/21,22/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/22/03/1145/SAS	07/22/03/1200/SAS
BOD	EPA 405.1	07/22/03/1400/SR	07/27/03/1230/LA
TSS	EPA 160.2	07/23/03/1000/SG	07/24/03/1100/SG
TDS	EPA 160.1	07/28/03/1300/SG	07/30/03/1400/SG
O&G	EPA 1664	07/25/03/0900/SG	07/26/03/1000/SG
Total Solids	EPA 160.4	07/28/03/1200/SG	07/30/03/1200/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/22/03/1500/SK	07/22/03/1630/SK
Turbidity	EPA 180.1	07/22/03/1500/SK	07/22/03/1630/SK
T. Alkalinity	EPA 310.1	07/25/03/1300/SK	07/25/03/1630/SK
Nitrate-N	EPA 300.1	07/23/03/0800/SK	07/23/03/1200/SK
Nitrite-N	EPA 354.1	07/22/03/1600/SK	07/22/03/1700/SK
TKN-N	EPA 351.4	07/28/03/0800/SK	07/28/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/24/03/0900/SK	07/24/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/22/03/1330/SK	07/22/03/1600/SK
Sulfide	SW846, 9030	07/23/03/1200/SK	07/23/03/1400/SK
T. Phosphorous	EPA 365.2	07/30/03/0800/SK	07/30/03/1700/SK
Orthophosphate	EPA 365.2	07/22/03/1830/SK	07/22/03/1930/SK
TOC	EPA 415.1	07/29/03/0945/DD	07/29/03/0950/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2511

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/21,22/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-11916 STP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.40	<0.01	4.8/5.0
Antimony	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	4.6/5.0
Barium	0.02	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	5.0/5.0
Calcium	12.1	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.81	<0.01	5.0/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	3.06	<0.01	0.96/1.00
Manganese	0.05	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.0/5.0
Potassium	6.7	<0.01	0.99/1.00
Selenium	<0.01	<0.01	4.8/5.0
Silica	29	<0.02	9.6/11
Silver	<0.01	<0.01	1.00/1.00
Sodium	88	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.0/5.0
Zinc	0.03	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	42.81	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2511

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/21,22/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	07/29/03/0800/ZN	07/29/03/1200/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE

Wastewater T & D

2433 River Road

Baton Rouge, Louisiana 70802

ATTN: **Garcia Dailekwa**

PHONE: (225) 389-3240

FAX: (225) 389-3111

P.O.#

SAMPLE LOCATION:

South Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2511

(circle one)

TURNAROUND TIME: Reg / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	7/21-7/22/03
Number & Type of Containers:	(12) plastic, (1) glass
Matrix:	water
Transporting Cooler Temperature:	on Ice

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC...	ANALYSES REQUESTED	STORAGE #
STP EFFLUENT	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Richard H. Piper	Kristen N Stevens - Entek	07.22.03 1015

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 756-2706

3CBR2511

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	Method
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS)	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	**2340**
Comprehensive metals scan **(aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

Study for Alternative Water Supply for Industrial Users
STP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/24/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2574

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2574

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the South Treatment Plant was received July 24, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2574

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/23,24/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-12172	pH (units)	7.8	--	6.1/6.0
03-12172	Biochemical Oxygen Demand	39	<1.0	19.8/19.8
03-12172	Total Suspended Solids	29	<2.0	90/93
03-12173	Total Dissolved Solids	395	<2.0	510/500
03-12177	Oil & Grease	<5.0	<5.0	39.7/40.0
03-12173	Total Solids	425	<2.0	505/500
03-12176	Chemical Oxygen Demand	100	<5.0	104/100
03-12174	Color	<1.0	<1.0	48/50
03-12174	Turbidity as NTU	21.6	<1.0	9.0/8.9
03-12175	Total Alkalinity (as $CaCO_3$)	172	<1.0	32.0/29.2
03-12178	Nitrate-N	2.5	<0.05	3.02/3.00
03-12178	Nitrite-N	1.369	<0.002	0.198/0.200
03-12178	Total Kjeldahl Nitrogen	16.9	<0.10	3.11/3.22
03-12179	Ammonia-N	10.6	<0.10	1.97/2.00
03-12182	Cyanide	<0.02	<0.02	0.249/0.252
03-12183	Chloride	29	<0.05	3.03/3.00
03-12183	Fluoride	0.30	<0.05	3.04/3.00
03-12183	Sulfate	17	<0.05	2.98/3.00
03-12183	Sulfite	<2.0	<2.0	1950/2000
03-12184	Sulfide	<2.0	<2.0	230/240
03-12179	Total Phosphorous	3.71	<0.10	9.85/9.91
03-12180	Orthophosphate	2.37	<0.01	1.95/2.00
03-12176	Total Organic Carbon	17	<1.0	20.2/20.0

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2574

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/23,24/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/24/03/1230/SAS	07/24/03/1240/SAS
BOD	EPA 405.1	07/24/03/1330/LA	07/29/03/1330/LA
TSS	EPA 160.2	07/25/03/1530/SG	07/28/03/1230/SG
TDS	EPA 160.1	07/28/03/1300/SG	07/30/03/1400/SG
O&G	EPA 1664	07/25/03/0900/SG	07/26/03/1000/SG
Total Solids	EPA 160.4	07/28/03/1200/SG	07/30/03/1200/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/24/03/1500/SK	07/24/03/1600/SK
Turbidity	EPA 180.1	07/24/03/1500/SK	07/24/03/1600/SK
T. Alkalinity	EPA 310.1	07/25/03/1300/SK	07/25/03/1630/SK
Nitrate-N	EPA 300.1	07/25/03/0800/SK	07/25/03/1230/SK
Nitrite-N	EPA 354.1	07/24/03/1430/SK	07/24/03/1530/SK
TKN-N	EPA 351.4	07/28/03/0800/SK	07/28/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/24/03/1300/SK	07/24/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/24/03/1400/SK	07/24/03/1500/SK
Sulfide	SW846, 9030	07/29/03/1300/SK	07/29/03/1600/SK
T. Phosphorous	EPA 365.2	07/30/03/0800/SK	07/30/03/1700/SK
Orthophosphate	EPA 365.2	07/24/03/1400/SK	07/24/03/1600/SK
TOC	EPA 415.1	08/01/03/1005/DD	08/01/03/1010/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2574

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/23,24/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-12181 STP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.49	<0.01	4.8/5.0
Antimony	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	4.6/5.0
Barium	0.02	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	5.0/5.0
Calcium	12.1	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.72	<0.01	5.0/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	3.29	<0.01	0.96/1.00
Manganese	0.04	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.0/5.0
Potassium	6.3	<0.01	0.99/1.00
Selenium	<0.01	<0.01	4.8/5.0
Silica	26	<0.02	9.6/11
Silver	<0.01	<0.01	1.00/1.00
Sodium	77	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	5.0/5.0
Zinc	0.04	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	43.8	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2574

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/23,24/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	07/29/03/0800/ZN	07/29/03/1200/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE

Wastewater T & D

2433 River Road

Baton Rouge, Louisiana 70802

ATTN: **Garcia Dialekwa**

PHONE: (225) 389-3240

FAX: (225) 389-3111

P.O.#

SAMPLE LOCATION:

South Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2574

TURNAROUND TIME: (circle one) Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	072303 to 072403
Number & Type of Containers:	~~(12)~~ 14DK plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	<4°C

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
STP ~~INFLUENT~~ Effluent	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Patricia A. Smith	[signature] - Entek	072403 1147

URS

FEASIBILITY STUDY FOR ALTERNATIVE WATER SUPPLY FOR INDUSTRIAL USERS
URS PROJECT NO. 19226619.00001

SCOPE OF WORK – AMENDMENT NO. 1
SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN

TABLE 1 (revised)
SELECTED ANALYTICAL PARAMETERS/METHODS

Parameter (mg/L or as noted)	**Method**
pH, S.U.	150.1
Total Solids (TS)	160.3
Total Dissolved Solids (TDS)	160.1
Total Suspended Solids (TSS) pH, BOD	160.2
Turbidity	180.1
Alkalinity - total, bicarbonate, carbonate, hydroxide, (as CaCO3)	310.1
Color (ADMI units)	110.2
Biochemical Oxygen Demand (BOD_5)	405.1
Chemical Oxygen Demand (COD)	410.4
Total Organic Carbon (TOC)	415.1
Oil & Grease (O&G)	1664
Ammonia Nitrogen (NH_3-N)	350.1
Total Kjeldahl Nitrogen (TKN)	351.3
Nitrate plus Nitrite ($NO_3 + NO_2$)	**4110B**
Total Phosphorous (TPhos)	365.4
Orthophosphate (OPO_4)	**4110B**
Hardness - total, calcium, magnesium, bicarbonate, carbonate, (as CaCO3)	**2340**
Comprehensive metals scan **(aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, zinc)**	6010
Cyanide, Available	335.2
Fluoride (F)	300.0
Chloride (Cl)	**4110B**
Silica (SiO_2)	**6010B**
Sulfate (SO_4)	**4110B**
Sulfide (total)	376.1
Sulfite	377.1

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

Study for Alternative Water Supply for Industrial Users
STP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/29/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2621

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2621

Study for Alternative Water Supply for Industrial Users

Two sets of water samples collected by URS from the South Treatment Plant were received July 29, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cnteklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2621

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/28,29/03

Parameters (concentration mg/L)	STP Sample	STP Duplicate	Lab Blank	LCS/ QC (observed/true)
pH (units)	7.8	7.8	--	6.1/6.0
Biochemical Oxygen Demand	37	37	<1.0	18.9/19.8
Total Suspended Solids	22	21	<2.0	39/41
Total Dissolved Solids	430	410	<2.0	480/500
Oil & Grease	<5.0	<5.0	<5.0	38.1/40.0
Total Solids	450	430	<2.0	475/500
Chemical Oxygen Demand	87	96	<5.0	104/100
Color	<1.0	<1.0	<1.0	49/50
Turbidity as NTU	20.3	19.8	<1.0	9.00/8.90
Total Alkalinity (as $CaCO_3$)	196	184	<1.0	33/29.2
Nitrate-N	3.7	3.6	<0.05	2.96/3.00
Nitrite-N	2.046	2.096	<0.002	0.196/0.200
Total Kjeldahl Nitrogen	21.5	22.4	<0.10	3.20/3.22
Ammonia-N	11.9	12.2	<0.10	1.97/2.00
Cyanide	<0.02	<0.02	<0.02	0.254/0.252
Chloride	36.5	36.5	<0.05	3.03/3.00
Fluoride	0.27	0.28	<0.05	3.04/3.00
Sulfate	15.5	15.5	<0.05	2.98/3.00
Sulfite	<2.0	<2.0	<2.0	1975/2000
Sulfide	<2.0	<2.0	<2.0	230/240
Total Phosphorous	3.34	3.43	<0.10	10.01/9.91
Orthophosphate	2.87	2.88	<0.01	2.05/2.00
Total Organic Carbon	17	16	<1.0	20.2/20.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2621

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/28,29/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/29/03/1153/SAS	07/29/03/1203/SAS
BOD	EPA 405.1	07/29/03/1300/LA	08/03/03/1130/LA
TSS	EPA 160.2	08/01/03/1600/SG	08/02/03/1200/SG
TDS	EPA 160.1	08/01/03/1715/SG	08/05/03/1500/SG
O&G	EPA 1664	08/01/03/1300/SG	08/02/03/1230/SG
Total Solids	EPA 160.4	08/01/03/1700/SG	08/05/03/1500/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/29/03/1600/SK	07/29/03/1700/SK
Turbidity	EPA 180.1	07/29/03/1600/SK	07/29/03/1700/SK
T. Alkalinity	EPA 310.1	08/01/03/1200/SK	08/01/03/1430/SK
Nitrate-N	EPA 300.1	07/30/03/0800/SK	07/30/03/1300/SK
Nitrite-N	EPA 354.1	07/29/03/1500/SK	07/29/03/1700/SK
TKN-N	EPA 351.4	08/08/03/0730/SK	08/08/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/31/03/1400/SK	07/31/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/29/03/1330/SK	07/29/03/1430/SK
Sulfide	SW846, 9030	07/29/03/1300/SK	07/29/03/1600/SK
T. Phosphorous	EPA 365.2	08/07/03/0800/SK	08/07/03/1830/SK
Orthophosphate	EPA 365.2	07/29/03/1430/SK	07/29/03/1630/SK
TOC	EPA 415.1	08/01/03/1115/DD	08/01/03/1130/DD

ENTEK

ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2621

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/28,29/03

Parameters (concentration mg/L)	STP Sample	STP Duplicate	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.34	0.34	<0.01	4.8/5.0
Antimony	<0.01	<0.01	<0.01	4.8/5.0
Arsenic	<0.01	<0.01	<0.01	4.6/5.0
Barium	0.02	0.02	<0.01	5.0/5.0
Beryllium	<0.01	<0.01	<0.01	4.9/5.0
Cadmium	<0.01	<0.01	<0.01	5.0/5.0
Calcium	11.8	11.6	<0.01	1.01/1.00
Chromium	<0.01	<0.01	<0.01	5.0/5.0
Cobalt	<0.01	<0.01	<0.01	5.2/5.0
Copper	<0.01	<0.01	<0.01	5.1/5.0
Iron	0.49	0.50	<0.01	5.0/5.0
Lead	<0.01	<0.01	<0.01	5.1/5.0
Magnesium	2.98	2.88	<0.01	0.96/1.00
Manganese	0.04	0.05	<0.01	5.0/5.0
Mercury	<0.0002	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	<0.01	5.0/5.0
Potassium	6.9	6.9	<0.01	0.99/1.00
Selenium	<0.01	<0.01	<0.01	4.8/5.0
Silica	30	31	<0.02	9.6/11
Silver	<0.01	<0.01	<0.01	1.00/1.00
Sodium	95	94	<0.01	1.00/1.00
Thallium	<0.01	<0.01	<0.01	5.1/5.0
Vanadium	<0.01	<0.01	<0.01	5.0/5.0
Zinc	0.04	0.04	<0.01	5.0/5.0
Hardness (as $CaCO_3$)	41.7	40.8	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2621

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/28,29/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Antimony	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Arsenic	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Barium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Beryllium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cadmium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Cobalt	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Copper	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Iron	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Lead	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Mercury	EPA 7470A	08/01/03/0800/ZN	08/01/03/1200/ZN
Nickel	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silica	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Vanadium	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Zinc	EPA 6010B	07/31/03/0900/ZN	07/31/03/1200/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2621

Entek Sample Container Id. No.

Parameters	STP Sample	STP Duplicate
pH (units)	03-12448	03-12461
Biochemical Oxygen Demand	03-12448	03-12461
Total Suspended Solids	03-12448	03-12461
Total Dissolved Solids	03-12449	03-12462
Oil & Grease	03-12453	03-12466
Total Solids	03-12449	03-12462
Chemical Oxygen Demand	03-12452	03-12465
Color	03-12450	03-12463
Turbidity	03-12450	03-12463
Total Alkalinity (as $CaCO_3$)	03-12451	03-12464
Nitrate-N	03-12454	03-12467
Nitrite-N	03-12454	03-12467
Total Kjeldahl Nitrogen	03-12454	03-12467
Ammonia-N	03-12455	03-12468
Cyanide	03-12458	03-12471
Chloride	03-12459	03-12472
Fluoride	03-12459	03-12472
Sulfate	03-12459	03-12472
Sulfite	03-12459	03-12472
Sulfide	03-12460	03-12473
Total Phosphorous	03-12455	03-12468
Orthophosphate	03-12456	03-12469
Total Organic Carbon	03-12452	03-12465
Metals	03-12457	03-12470

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE

Wastewater T & D

2433 River Road

Baton Rouge, Louisiana 70802

ATTN: Garcia Dialekwa

PHONE: (225) 389-3240

FAX: (225) 389-3111

P.O.#

SAMPLE LOCATION:

South Treatment Plant

ENTEK PROJECT NUMBER: 3CBR 2621

TURNAROUND TIME: (circle one) Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	2 sets (Duplicate STP)
Date/Time Sampled:	0728, 2903
Number & Type of Containers:	(24 plastic, (2) glass
Matrix:	Water
Transporting Cooler Temperature:	ICE

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
STP	No	pH is a Grab	BOD, TSS, pH	
& Duplicate	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as CaCO3)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as CaCO3), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

CHAIN OF POSSESSION:

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: rec'd on ice

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Patricia Smith	Norma Kruegel-Entek	072903 1133

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory
LELAP
02039
Accreditation Program

Study for Alternative Water Supply for Industrial Users
STP EFFLUENT SAMPLES
SAMPLES RECEIVED: 07/31/03

FOR

CITY OF BATON ROUGE
WASTEWATER T & D
2443 RIVER ROAD
BATON ROUGE, LA 70802

ATTENTION: GARCIA DIALEKWA

AUGUST 15, 2003
PROJECT NO.: 3-2648

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2648

Study for Alternative Water Supply for Industrial Users

One set of water samples collected by URS from the South Treatment Plant was received July 31, 2003. The samples were analyzed for specified parameters, as requested.

Entek is pleased to have had the opportunity to provide analytical services for parameters as requested. Please do not hesitate to contact our office if you have any questions or require additional information concerning this report.

This information has been reviewed by:

Sayi Malineni
QA Coordinator

Sham L. Sachdev, Ph.D., CHCM
Laboratory Director

kns

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.net

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2648

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/30,31/03

Entek Lab Id No.:	Parameters (concentration mg/L)	Sample Results	Lab Blank	LCS/ QC (observed/true)
03-12599	pH (units)	7.6	--	6.1/6.0
03-12599	Biochemical Oxygen Demand	20	<1.0	19.2/19.8
03-12599	Total Suspended Solids	23	<2.0	39/41
03-12600	Total Dissolved Solids	420	<2.0	480/500
03-12604	Oil & Grease	<5.0	<5.0	38.1/40.0
03-12600	Total Solids	445	<2.0	475/500
03-12603	Chemical Oxygen Demand	81	<5.0	104/100
03-12601	Color	<1.0	<1.0	48/50
03-12601	Turbidity as NTU	22.1	<1.0	9.00/8.90
03-12602	Total Alkalinity (as $CaCO_3$)	172	<1.0	33/29.2
03-12605	Nitrate-N	4.3	<0.05	2.96/3.00
03-12605	Nitrite-N	1.85	<0.002	0.198/0.200
03-12605	Total Kjeldahl Nitrogen	19.3	<0.10	3.20/3.22
03-12606	Ammonia-N	10.6	<0.10	1.97/2.00
03-12609	Cyanide	<0.02	<0.02	0.254/0.252
03-12610	Chloride	36.5	<0.05	3.03/3.00
03-12610	Fluoride	0.35	<0.05	3.04/3.00
03-12610	Sulfate	16.5	<0.05	2.98/3.00
03-12610	Sulfite	<2.0	<2.0	1975/2000
03-12611	Sulfide	<2.0	<2.0	230/240
03-12606	Total Phosphorous	3.10	<0.10	10.01/9.91
03-12607	Orthophosphate	2.78	<0.01	1.94/2.00
03-12603	Total Organic Carbon	16	<1.0	20.2/20.0

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: cntcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accrediation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2648

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/30,31/03

Method of Analyses		DTA Start	DTA Finish
pH (units)	EPA 150.1	07/31/03/1107/SAS	07/31/03/1122/SAS
BOD	EPA 405.1	07/31/03/1300/LA	08/05/03/1300/LA
TSS	EPA 160.2	08/01/03/1600/SG	08/02/03/1200/SG
TDS	EPA 160.1	08/01/03/1715/SG	08/05/03/1500/SG
O&G	EPA 1664	08/01/03/1300/SG	08/02/03/1230/SG
Total Solids	EPA 160.4	08/01/03/1700/SG	08/05/03/1500/SG
COD	EPA 410.1	08/04/03/1600/LA	08/05/03/0930/LA
Color	EPA 110.2	07/31/03/1730/SK	07/31/03/1830/SK
Turbidity	EPA 180.1	07/31/03/1730/SK	07/31/03/1830/SK
T. Alkalinity	EPA 310.1	08/01/03/1200/SK	08/01/03/1430/SK
Nitrate-N	EPA 300.1	08/01/03/0800/SK	08/01/03/1500/SK
Nitrite-N	EPA 354.1	07/31/03/1700/SK	07/31/03/1800/SK
TKN-N	EPA 351.4	08/08/03/0730/SK	08/08/03/1800/SK
Ammonia-N	EPA 350.3	08/01/03/1400/SK	08/01/03/1600/SK
Cyanide	EPA 335.2	07/31/03/1400/SK	07/31/03/1600/SK
Chloride	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Fluoride	EPA 300.1	08/12/03/0800/SK	08/12/03/1900/SK
Sulfate	EPA 300.1	08/11/03/0800/SK	08/11/03/1800/SK
Sulfite	EPA 377.1	07/31/03/1330/SK	07/31/03/1430/SK
Sulfide	SW846, 9030	07/31/03/1400/SK	07/31/03/1630/SK
T. Phosphorous	EPA 365.2	08/07/03/0800/SK	08/07/03/1830/SK
Orthophosphate	EPA 365.2	07/31/03/1500/SK	07/31/03/1630/SK
TOC	EPA 415.1	08/01/03/1210/DD	08/01/03/1215/DD

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2648

Study for Alternative Water Supply for Industrial Users
Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/30,31/03

Entek Lab ID. No.: Parameters (concentration mg/L)	03-12608 STP	Lab Blank	LCS/ QC (observed/true)
Aluminum	0.32	<0.01	4.9/5.0
Antimony	<0.01	<0.01	5.0/5.0
Arsenic	<0.01	<0.01	4.8/5.0
Barium	0.02	<0.01	5.2/5.0
Beryllium	<0.01	<0.01	5.0/5.0
Cadmium	<0.01	<0.01	5.2/5.0
Calcium	12.5	<0.01	1.01/1.00
Chromium	<0.01	<0.01	5.2/5.0
Cobalt	<0.01	<0.01	5.4/5.0
Copper	<0.01	<0.01	5.1/5.0
Iron	0.73	<0.01	5.2/5.0
Lead	<0.01	<0.01	5.1/5.0
Magnesium	2.95	<0.01	0.96/1.00
Manganese	0.05	<0.01	5.2/5.0
Mercury	<0.0002	<0.0002	0.006/0.006
Nickel	<0.01	<0.01	5.2/5.0
Potassium	7.0	<0.01	0.99/1.00
Selenium	<0.01	<0.01	5.0/5.0
Silica	30	<0.02	9.8/11
Silver	<0.01	<0.01	0.97/1.00
Sodium	100	<0.01	1.00/1.00
Thallium	<0.01	<0.01	5.2/5.0
Vanadium	<0.01	<0.01	5.2/5.0
Zinc	0.04	<0.01	5.2/5.0
Hardness (as $CaCO_3$)	43.4	<0.10	6.48/6.62

ENTEK
ENVIRONMENTAL LABORATORIES, INC.
14285 AIRLINE HIGHWAY
BATON ROUGE, LOUISIANA 70817
PHONE: (225) 752-2900 FAX (225) 756-2706
Email: entcklabs@att.nct

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Louisiana Environmental Laboratory LELAP 02039 Accreditation Program

City of Baton Rouge
Wastewater T & D
Attn: Garcia Dialekwa

August 15, 2003
Project No.: 3-2648

Sample Id: South Treatment Plant (STP Effluent)
Sample Date: 07/30,31/03

Method of Analyses		DTA Start	DTA Finish
Aluminum	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Antimony	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Arsenic	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Barium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Beryllium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Cadmium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Calcium	EPA 7140	08/11/03/0930/TMW	08/11/03/1015/TMW
Chromium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Cobalt	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Copper	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Iron	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Lead	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Magnesium	EPA 7450	08/07/03/1530/TMW	08/07/03/1545/TMW
Manganese	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Mercury	EPA 7470A	08/01/03/0800/ZN	08/01/03/1000/ZN
Nickel	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Potassium	EPA 7610	08/11/03/1130/TMW	08/11/03/1215/TMW
Selenium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Silica	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Silver	EPA 7760A	07/31/03/1500/TMW	07/31/03/1600/TMW
Sodium	EPA 7770	08/11/03/1045/TMW	08/11/03/1120/TMW
Thallium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Vanadium	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Zinc	EPA 6010B	08/06/03/1400/ZN	08/06/03/1600/ZN
Hardness	EPA 314A	08/11/03/0930/TMW	08/11/03/1015/TMW

CHAIN OF CUSTODY RECORD

COMPANY:

CITY OF BATON ROUGE
Wastewater T & D
2433 River Road
Baton Rouge, Louisiana 70802

ATTN: **Garcia Dialekwa**
PHONE: (225) 389-3240
FAX: (225) 389-3111
P.O.#

SAMPLE LOCATION:

South Treatment Plant

ENTEK PROJECT NUMBER: 3CBR2648

TURNAROUND TIME: (circle one) Reg. / Rush

NEED BY DATE:

~Sampler Must Complete~

Sampler's Name:	Sampled by URS for City of BR
Number of Sample(s):	1 set
Date/Time Sampled:	0730,3103
Number & Type of Containers:	(14) plastic, (1) glass
Matrix:	Water
Transporting Cooler Temperature:	ICE

SAMPLE IDENTIFICATION	PRSVD Y / N	SAMPLE NOTES ACCEPTABLE CONTAINER, PACKING, ETC.	ANALYSES REQUESTED	STORAGE #
STP ~~INFLUENT~~ Effluent	No	pH is a Grab	BOD, TSS, pH	
	No	Composite	TS, TDS	
	No	Composite	Color, Turbidity	
	No	Composite	Alkalinity- total, bicarbonate, carbonate, hydroxide, (as $CaCO_3$)	
	Yes	Composite	COD, TOC	
	Yes	Grab	Oil & Grease	
	Yes	Composite	Nitrate+Nitrite, TKN	
	Yes	Composite	Ammonia as N, Total Phosphorous	
	No	Composite	Orthophosphate	
	Yes	Composite	Hardness-total, calcium, magnesium, (as $CaCO_3$), Silica, Metals	
	Yes	Composite	Cyanide	
	No	Composite	Fluoride, Chloride, Sulfate, Sulfite	
	Yes	Composite	Sulfide	

SPECIAL INSTRUCTIONS:

**Acceptable headspace criteria for VOC samples Yes___ No___

SAMPLE TEMPERATURE AT SAMPLE RECEIPT: Rec'd on ice

CHAIN OF POSSESSION:

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME
Patricia Smith	[illegible] - Entek	073103 1050

Entek Environmental Laboratories, Inc., 14285 Airline Highway, Baton Rouge, LA 70817
Phone: (225) 752-2900 Fax: (225) 7_6-2706

APPENDIX E

INDUSTRIAL WATER SUPPLY & USAGE SURVEY

APPENDIX E-1

INDUSTRIAL WATER SUPPLY & USAGE SURVEY – SAMPLE QUESTIONNAIRE

Capital Area Ground Water Conservation Commission
Feasibility Study
Alternative Water Supply for Industrial Users

Water Supply/Use Questionnaire

Date: ____________ Time: ____________
Completed by: ____________

SAMPLE

Facility Information		Contact Information	
Name:		Name:	
Address:		Title/Responsibility:	
		Address:	
Facility Type:			
Industry Sector:		Phone:	
SIC Code(s):		FAX:	
		email:	

Water Supply

What are the current and anticipated future sources of water used at this facility (check all that apply)?

Surface Water ________ Waterbody Name(s) Stream Segment No(s).
SW-1 ____________ ____________
SW-2 ____________ ____________

Groundwater ________ Aquifer Name(s) GW-1 ____________
GW-2 ____________

Public Water Supply ________ Municipality/Parish PWS-1 ____________
PWS-2 ____________

Other (please specify) ________ Other 1 ____________
Other 2 ____________

Comments: ____________

Capital Area Ground Water Conservation Commission
Feasibility Study
Alternative Water Supply for Industrial Users

Date: ____________ Time: ____________
Completed by: ____________

Water Supply/Use Questionnaire

SAMPLE

Water Uses

What are the current and anticipated future uses of water at this facility (check all that apply)?

Water Source	Process Water	Boiler Feedwater	Cooling Water Once Through	Cooling Water Recirc. System	Firewater	Potable Water	Irrigation	Non-Potable Utility Water	Other (*)
Surface Water									
SW-1									
SW-2									
Groundwater									
GW-1									
GW-2									
Public Water Supply									
PWS-1									
PWS-2									
Other(s)									
Other 1									
Other 2									

* Specify ____________

Comments: ____________

Capital Area Ground Water Conservation Commission
Feasibility Study
Alternative Water Supply for Industrial Users

Date: ____________ Time: ____________
Completed by: ______________________

Water Supply/Use Questionnaire

SAMPLE

Water Utilization

What are the current and anticipated future water utilization rates at this facility? [Please attach current flow/water balance diagram(s), as available]

Water Source			Process Water	Boiler Feedwater	Cooling Water Once Through	Cooling Water Recirc. System	Firewater	Potable Water	Irrigation	Non-Potable Utility Water	Other
Surface Water											
SW-1	Average	MGD									
	Maximum	MGD									
	Annual	MGY									
SW-2	Average	MGD									
	Maximum	MGD									
	Annual	MGY									
SW Annual Subtotal		MGY									
Groundwater											
GW-1	Average	MGD									
	Maximum	MGD									
	Annual	MGY									
GW-2	Average	MGD									
	Maximum	MGD									
	Annual	MGY									
GW Annual Subtotal		MGY									

Comments: ____

Capital Area Ground Water Conservation Commission
Feasibility Study
Alternative Water Supply for Industrial Users

Date: ____________ Time: ____________
Completed by: ____________________

Water Supply/Use Questionnaire

SAMPLE

Water Utilization (continued)

What are the current and anticipated future water utilization rates at this facility? [Please attach current flow/water balance diagram(s), as available]

Water Source			Process Water	Boiler Feedwater	Cooling Water Once Through	Cooling Water Recirc. System	Firewater	Potable Water	Irrigation	Non-Potable Utility Water	Other
Public Water Supply											
PWS-1	Average	MGD									
	Maximum	MGD									
	Annual	MGY									
PWS-2	Average	MGD									
	Maximum	MGD									
	Annual	MGY									
PWS Annual Subtotal		MGY									
Other(s)											
Other 1	Average	MGD									
	Maximum	MGD									
	Annual	MGY									
Other 2	Average	MGD									
	Maximum	MGD									
	Annual	MGY									
Other Annual Subtotal		MGY									

Comments: ____________________

Capital Area Ground Water Conservation Commission
Feasibility Study
Alternative Water Supply for Industrial Users

Date: ____________ Time: ____________
Completed by: ____________

Water Supply/Use Questionnaire

SAMPLE

Water Treatment

What water treatment processes are currently utilized at this facility to meet individual water use requirements? (check all that apply)
[Please attach simplified flow diagram(s) or PFD(s) for each water use, as available]

Water Treatment Processes	Process Water	Boiler Feedwater	Cooling Water		Firewater	Potable Water	Irrigation	Non-Potable Utility Water	Other
			Once Through	Recirc. System					
Coagulation/Flocculation									
Chemical Precipitation									
Sedimentation/Flotation									
Filtration									
Ion Exchange/Inorganic Adsorption									
Organic Compound Adsorption									
Membrane Processes									
Chemical Oxidation									
Disinfection									
Air Stripping/Aeration									
Other (Please Specify)									

Comments: ____

Capital Area Ground Water Conservation Commission
Feasibility Study
Alternative Water Supply for Industrial Users

Date: ____________ Time: ____________
Completed by: ____________________

Water Supply/Use Questionnaire

SAMPLE

Water Quality Requirements

What are the water quality requirements for each water use at this facility? [Alternatively, please attach water quality spec sheet(s) for each water use]

Water Quality Parameter	Process Water	Boiler Feedwater	Cooling Water		Firewater	Potable Water	Irrigation	Non-Potable Utility Water	Other
			Once Through	Recirc. System					
pH, S.U.									
Total Solids (TS), mg/L									
Total Dissolved Solids (TDS), mg/L									
Total Suspended Solids (TSS), mg/L									
Salinity, ppt									
Turbidity, NTU									
Dissolved Oxygen (DO), mg/L									
Free Carbon Dioxide (CO_2), mg/L									
Total Acidity (as $CaCO_3$), mg/L									
Total Alkalinity (as $CaCO_3$), mg/L									
Color, APHA units									
Biochemical Oxygen Demand (BOD_5), mg/L									
Chemical Oxygen Demand (COD), mg/L									
Total Organic Carbon (TOC), mg/L									
Oil & Grease (O&G), mg/L									
Total Petroleum Hydrocarbons (TPH), mg/L									
Total Kjeldahl Nitrogen (TKN), mg/L									
Ammonia (NH_3-N), mg/L									
Organic Nitrogen, mg/L									
Nitrates (NO_3), mg/L									
Nitrites (NO_2), mg/L									
Total Phosphorous, mg/L									
Orthophosphate, mg/L									

Comments: ____________________

Capital Area Ground Water Conservation Commission
Feasibility Study
Alternative Water Supply for Industrial Users

Date: ____________ Time: ____________
Completed by: ____________

Water Supply/Use Questionnaire

SAMPLE

Water Quality Requirements (continued)

What are the water quality requirements for each water use at this facility? [Alternatively, please attach water quality spec sheet(s) for each water use]

Water Quality Parameter	Process Water	Boiler Feedwater	Cooling Water		Firewater	Potable Water	Irrigation	Non-Potable Utility Water	Other
			Once Through	Recirc. System					
Hardness - Carbonate (as $CaCO_3$), mg/L									
Hardness - Bicarbonate (as $CaCO_3$), mg/L									
Calcium (as $CaCO_3$), mg/L									
Magnesium (as $CaCO_3$), mg/L									
Manganese (as $CaCO_3$), mg/L									
Sodium (as $CaCO_3$), mg/L									
Chloride, mg/L									
Residual Chlorine, mg/L									
Fluoride, mg/L									
Silica (SiO_2), mg/L									
Iron - total, mg/L									
Iron - soluble, mg/L									
Sulfate (SO_4), mg/L									
Sulfide, mg/L									
Sulfite, mg/L									
Thiosulfate, mg/L									
Aluminum (total and soluble), mg/L									
Antimony, mg/L									
Arsenic, mg/L									
Barium, mg/L									
Beryllium, mg/L									
Cadmium, mg/L									
Chromium, mg/L									

Comments: ____________

Capital Area Ground Water Conservation Commission
Feasibility Study
Alternative Water Supply for Industrial Users

Date: ____________ Time: ____________
Completed by: ____________

Water Supply/Use Questionnaire

SAMPLE

Water Quality Requirements (continued)

What are the water quality requirements for each water use at this facility? [Alternatively, please attach water quality spec sheet(s) for each water use]

Water Quality Parameter	Process Water	Boiler Feedwater	Cooling Water: Once Through	Cooling Water: Recirc. System	Firewater	Potable Water	Irrigation	Non-Potable Utility Water	Other
Cobalt, mg/L									
Copper, mg/L									
Lead, mg/L									
Mercury, mg/L									
Nickel, mg/L									
Potassium, mg/L									
Selenium, mg/L									
Silver, mg/L									
Thallium, mg/L									
Tin, mg/L									
Vanadium, mg/L									
Zinc, mg/L									
Other (please specify):									

Comments: ____________

APPENDIX E-2

INDUSTRIAL WATER SUPPLY & USAGE SURVEY – SUMMARY OF INDUSTRIAL WATER USAGE BY SOURCE AND CATEGORY

Capital Area Ground Water Conservation Commission (GAGWCC)
Feasibility Study - Alternative Water Supply for Industrial Users

Industrial Water Use Survey Results
Summary of Industrial Water Usage by Source and Category

	Groundwater (GW) Supply								GW	Surface Water (SW) Supply								SW	Public Water Supply (PWS)								PWS	Total Water Usage
Facilty Designation	Process	BFW	OTCW	RCW	FW	Potable	Utility	Other	Total	Process	BFW	OTCW	RCW	FW	Potable	Utility	Other	Total	Process	BFW	OTCW	RCW	FW	Potable	Utility	Oher	Total	(MGD)
North Baton Rouge Area																												
North Baton Rouge Area Subtotal	32.162	4.425	0.504	3.956	0.280	3.915	0.031	0.400	45.672	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.005	45.677
South Baton Rouge Area																												
South Baton Rouge Area Subtotal	6.409	8.206	0.000	12.015	0.000	1.271	0.540	2.955	31.396	2.290	4.350	0.000	18.110	1.400	0.000	0.100	0.000	26.250	0.058	0.058	0.000	0.000	0.000	0.132	0.000	0.000	0.248	57.894
St. Gabriel/Geismar Area																												
St. Gabriel/Geismar Area Subtotals	1.874	2.351	2.880	2.165	0.101	0.426	1.570	0.087	11.454	12.455	9.567	896.826	7.987	1.910	0.258	10.112	3.430	942.545	0.000	0.000	0.000	0.000	0.000	0.019	0.006	0.000	0.025	954.024
Study Area Totals	40.445	14.982	3.384	18.136	0.381	5.612	2.141	3.442	88.522	14.745	13.917	896.826	26.097	3.310	0.258	10.212	3.430	968.795	0.058	0.058	0.000	0.000	0.000	0.156	0.006	0.000	0.278	1057.594

APPENDIX E-3

INDUSTRIAL WATER SUPPLY & USAGE SURVEY – SUMMARY OF WATER QUALITY REQUIREMENTS BY USE CATEGORY

Capital Area Ground Water Conservation Commission (GAGWCC)
Feasibility Study - Alternative Water Supply for Industrial Users

Industrial Water Use Survey Results Summary
Water Quality Requirements by Use Category

Water Quality Parameter	PW					BFW							OTCW	RCW						FW	PotW	UW	
	Facility A	Facility B	Facility C	Facility D (GW)	Facility E	Facility F	Facility A	Facility G	Facility B	Facility D (GW)	Facility D (SW)	Facility E	Facility B	Facility F	Facility A	Facility B	Facility D (GW)	Facility D (SW)	Facility E	Facility E	Facility E	Facility C	Facility E
pH, S.U.	7.0 - 8.5	9.5 - 10.5	10.2	7 - 9	7 - 9.5	9.8 - 11.0		8.8 - 9.2	7.5	8.5 - 9.6	8.5 - 10.0	8.0 - 9.5	9.5 - 10.5	8.5 - 9.5		9.5 - 10.5	8.0 - 9.0	9	8.3	6.0 - 8.0	10		10
Conductivity, mmho/cm			25	280						<10							<280	313				800	
Total Solids (TS), mg/L					<1000							400 - 2000							<1200	<1000	<5.0		<1000
Total Dissolved Solids (TDS), mg/L		400 umho	8		<500							<0.70	400 umho			400 umho			<500	<500	<5.0		<500
Total Suspended Solids (TSS), mg/L		<1.0		< 10	<100					nil		<150	<1.0			<1.0			<700	<100			<100
Salinity, ppt					Trace														Trace	Trace	Trace		Trace
Turbidity, NTU		<1.0		<5	<100								<1.0			<1.0	<10		<100	<100	<50	20	<100
Dissolved Oxygen (DO), mg/L					Trace					<10 ppb	<0.04	<0.007							Trace	Trace	Trace		Trace
Free Carbon Dioxide (CO_2), mg/L					<1.0					nil									<5.0	<1.0	<1.0		<1.0
Total Acidity (as $CaCO_3$), mg/L					Trace												0						
Total Alkalinity (as $CaCO_3$), mg/L		36			<200					<2		<200	36			36	<150	53	<200	<200	<100		<200
Color, APHA units					<20														<20	<20	<5		<20
Biochemical Oxygen Demand (BOD_5), mg/L				<25						nil							<5		<50	<10			<10
Chemical Oxygen Demand (COD), mg/L					Trace					<0.2	<1	Trace					<5		Trace	Trace			Trace
Total Organic Carbon (TOC), mg/L		<5.0			Trace								<5.0			<5.0	<5		Trace	Trace		13	Trace
Oil & Grease (O&G), mg/L				<5						<0.5	<1	<0.5					<2						
Total Petroleum Hydrocarbons (TPH), mg/L																							
Total Kjeldahl Nitrogen (TKN), mg/L																	<2						
Ammonia (NH_3-N), mg/L																	<2						
Organic Nitrogen, mg/L																	<2						
Nitrates (NO_3), mg/L		4.1			Trace								4.1			4.1		5	Trace	Trace	<0.05		Trace
Nitrites (NO_2), mg/L		45			Trace								45			45			Trace	Trace	<0.05		Trace
Total Phosphorous, mg/L				<1	<1.0	30 - 50								15 - 20			<2	2.4	Trace	<1	Trace		Trace
Orthophosphate, mg/L				<2	<1.0												<2		Trace	<1	Trace		Trace
Total Hardness (as $CaCO_3$), mg/L										<0.1	<0.5						<5						
Hardness - Carbonate (as $CaCO_3$), mg/L		20	0.5		<260		0.1						20		12	20			<400	<250	<3.3		<100
Hardness - Bicarbonate (as $CaCO_3$), mg/L		17											17			17						174	
Calcium (as $CaCO_3$), mg/L		45		<3	<170		0.05						45		11	45	<3	39	<300	<170	<0.5	180	
Magnesium (as $CaCO_3$), mg/L		38		<1.5	<75		0.05						38		1.3	38	<1.5	39	<100	<75	<40	80	<40
Manganese (as $CaCO_3$), mg/L		0.1			<0.5								0.1			0.1	40		<1.0	<1.0	<1.0		<1.0
Sodium (as $CaCO_3$), mg/L		35	2		<340					<0.5		<4.0	35			35	<170	68	<500	<340	<100	95	<340
Chloride, mg/L		30			<100								30			30	<25	38	<200	<100	<100	75	<100
Residual Chlorine, mg/L			1	<0.1						0				0.3 - 0.8					0.3 - 0.8		>1.0		<1.0
Fluoride, mg/L					Trace												<1		Trace	Trace	<0.5		Trace
Silica (SiO_2), mg/L	25	2	0.4	<30	<25	40	0.3			<0.1		<1.0	2	150	25	2	<30		<50	<50	<25		<30
Iron - total, mg/L		0.7			<4.1			<0.005			<0.1		0.7			0.7	<1	0.07	<4.1	<4.1	<0.03		<4.1
Iron - soluble, mg/L		0.7			<4.1			<2 ppb		<0.02			0.7			0.7	<1		<1	<4.1	<0.03		<4.1
Sulfate (SO_4), mg/L		40			<39								40			40			<100	<39	<39	120	<39
Sulfide, mg/L																	<1	54	Trace	Trace			
Sulfite, mg/L																			Trace	Trace			
Thiosulfate, mg/L																	<1						
Aluminum (total and soluble), mg/L		0.1		<1	Trace								0.1			0.1	<1		Trace	Trace	Trace		Trace
Antimony, mg/L					Trace														Trace	Trace	<0.006		Trace
Arsenic, mg/L					Trace														Trace	Trace	<0.05		Trace
Barium, mg/L		0.1			Trace								0.1			0.1			Trace	Trace	<0.01		Trace
Beryllium, mg/L					Trace														Trace	Trace	<0.004		Trace
Cadmium, mg/L					Trace														Trace	Trace	<0.005		Trace
Chromium, mg/L					Trace														Trace	Trace	<0.1		Trace
Cobalt, mg/L	<0.01				Trace	<0.01									<0.01				Trace	Trace	Trace		Trace
Copper, mg/L		0.01			Trace			<2 ppb		<0.02	<0.05	<0.02	0.01		0.05	0.01	<0.01		Trace	Trace	<1.3		Trace
Lead, mg/L	<0.05				Trace	<0.05									<0.05		<0.05		Trace	Trace	<0.015		Trace
Mercury, mg/L					Trace												0		Trace	Trace	<0.002		Trace
Nickel, mg/L	<0.01				Trace	<0.01									<0.01		<0.05		Trace	Trace	<0.1		Trace
Potassium, mg/L	0.8				Trace	0.8					4								Trace	Trace	Trace		Trace
Selenium, mg/L	<0.1				Trace	<0.1									<0.1				Trace	Trace	<0.05		Trace
Silver, mg/L					Trace														Trace	Trace	Trace		Trace
Thallium, mg/L	<0.1				Trace	<0.1									<0.1				Trace	Trace	<0.002		Trace
Tin, mg/L	<0.05				Trace	<0.05									<0.05				Trace	Trace	Trace		Trace
Vanadium, mg/L	<0.01				Trace	<0.01									<0.01		<0.1		Trace	Trace	Trace		Trace
Zinc, mg/L	<0.01				Trace	<0.01									<0.01		<0.5		Trace	Trace	Trace		Trace

APPENDIX F

WATER SUPPLY SOURCE QUALITY DATA

APPENDIX F-1

WATER SUPPLY SOURCE QUALITY DATA – MISSISSIPPI RIVER

Lower Mississippi River Basin
Mississippi River Basin near St. Francisville, LA (USGS Station No. 07373420)
Water Quality Data - Water Year October 2000 to September 2001
Source: "Water Resources Data - Louisiana, Water Year 2001"; Report No. USGS-WDR-LA-01-1; B.B. Goree, et. Al.; USGS Water Resources Division; April 2002

Water Quality Data - Water Year October 2001 to September 2002
Source: excerpted from yet unpublished "Water Resources Data - Louisiana, Water Year 2002"; provided by USGS Water Resources Division

Parameter	Data														
	2000		2001												
	Nov. 28	Dec. 14	Jan. 24	Feb. 27	Mar. 14	Apr. 02	Apr. 16	Apr. 23	May 07	May 21	Jun. 25	Jul. 10	Jul. 18	Aug. 27	Sep. 19
Inst. Discharge (ft^3/s)	337,000	254,000	332,000	744,000	978,000	818,000	571,000	630,000	493,000	431,000	590,000	397,000	380,000	224,000	201,000
Specific Conductance (US/CM)	453	467	375	320	314	347	403	380	403	405	385	414	434	398	356
pH whole field	7.7	7.7	7	7.2	7.8	8	7.4	7.6	7.5	7.7	7.5	7.6	7.8	8.1	7.8
Temperature C	10.6	7.1	4.5	7.9	9.5	10.3	17.1	17.7	20.5	23.8	26.9	29	29.4	30	27.5
Color (platinum cobalt units)	10	10	40	30	20	20	5	5	10	10	20	15	5	5	5
Turbidity Lab HACH 2100AN (NTU)	38	25	420	150	85	120	50	78	58	50	160	320	70	42	33
Dissolved Oxygen (mg/L)	11.5	12.3	9.8	10.2	9.7	10.1	8.5	8.6	—	7.5	6.4	6.6	6.7	6.7	7.6
BOD_5 (mg/L)	1.5	—	0.8	1.8	2.9	1.9	—	2.1	—	1.3	—	0.7	0.8	1.1	2.8
Fecal Coliform (cols./100ml)	520	66k	860	380	91k	150	29k	76k	72	90k	110	130	41k	9k	10k
Fecal Strep (cols./100ml)	62	22	1100	140	170	48k	54k	200	78	310	210	410k	52	15k	62
Total Hardness (mg/L as $CaCO_3$)	160	170	130	—	110	130	—	150	—	160	140	160	180	140	150
Calcium (mg/L as Ca)	40	42.9	33.1	—	30.8	34.2	—	38.2	—	42.1	36.2	42.2	45.8	36.4	38.2
Magnesium (mg/L as Mg)	14.8	14.9	10.6	—	8.44	9.91	—	12.2	—	13.8	11.3	13.4	15.2	12	13
Sodium (mg/L as Na)	3.6	3.48	2.93	2.88	2.97	3.03	—	3.13	3.44	4.07	3.22	3.25	3.48	3.47	3.71
Potassium (mg/L as K)	29.7	28.7	21.1	—	15.2	15.4	—	18.1	14.7	14.3	—	15.7	17.9	18.4	21.2
Unfltrd. ANC Water (mg/L as $CaCO_3$)	119	113	105	79	—	—	—	—	—	—	—	—	—	115	104
Alkalinity (mg/L as $CaCO_3$)	113	124	—	79	80	96	103	109	107	117	107	122	128	115	104
Sulfate (mg/L as SO_4)	56.7	63.2	41.8	32.5	28.7	35.6	—	42.2	43.7	50.5	37.7	39.7	44.8	49	52.7
Chloride (mg/L as Cl)	26.2	28.1	26.6	20.1	21.8	21	—	22.1	23.1	18.3	20.3	19.3	20	20.1	18.8
Fluoride (mg/L as F)	0.2	0.2	E.1	E.2	E.1	E.1	—	0.2	0.2	0.2	0.2	0.2	0.2	0.2	E.1
Silica (mg/L as SiO_2)	6.6	6.8	6.2	4.7	5.9	5.9	—	6.8	6.6	9.2	7	7.9	8.3	3.7	4.5
Dissolved solids residue at 180 C (mg/L)	248	275	233	182	187	212	—	243	241	260	220	253	255	241	225
Dissolved Solids sum of constituents (mg/L)	251	268	210	—	169	187	—	220	—	236	—	228	243	217	217
NO_2-N (mg/L as N)	0.014	0.007	0.009	0.022	0.026	0.013	0.044	E.003	E.003	<.006	0.007	<.006	<.006	E.003	E.003
NO_2+NO_3-N (mg/L as N)	1.04	1.15	1.24	1.7	1.57	0.974	2.46	2.42	2.75	2.97	2.69	2.73	2.4	0.895	0.507
NH3-N (mg/L as N)	E.029	<0.041	0.147	0.069	E.028	<0.041	<0.041	<0.041	<0.041	<0.040	0.042	<0.040	<0.040	<0.040	<0.040
Total Organic N + NH3 (mg/L as N)	0.61	0.44	1.2	1.1	0.98	0.98	0.65	0.82	0.78	0.76	0.71	0.96	0.58	0.47	0.46
Dissolved Organic N + NH3 (mg/L as N)	0.49	0.27	0.53	0.36	0.36	0.16	0.3	0.1	0.33	0.33	0.37	0.33	0.35	0.26	0.23
Total Phosphorous (mg/L as P)	0.237	0.177	0.446	0.43	0.311	0.365	0.237	0.356	0.258	0.243	0.286	0.33	0.215	0.172	0.178
Dissolved Phosphorous (mg/L as P)	0.092	0.085	0.037	0.051	0.062	0.034	0.084	0.094	0.094	0.106	0.094	0.114	0.116	0.089	0.097
Ortho-Phosphate (mg/L as P)	0.089	0.071	0.032	0.045	0.053	0.028	0.075	0.092	0.08	0.095	0.087	0.11	0.106	0.078	0.087
Aluminum (ug/L as Al)	—	—	—	—	—	—	—	—	—	6	—	—	3	—	—
Antimony (ug/L as Sb)	—	—	—	—	—	—	—	—	—	0.19	—	—	0.25	—	—
Arsenic (ug/L as As)	E1.5	1.4	0.9	0.8	0.8	0.9	—	1.2	1.1	1.6	1.5	1.8	2.1	1.8	2.5
Barium (ug/L as Ba)	—	—	—	—	—	—	—	—	—	50.6	—	—	70.5	—	—
Beryllium (ug/L as Be)	—	—	—	—	—	—	—	—	—	<.06	—	—	<.06	—	—
Boron (ug/L as B)	66	66	40	37	26	29	—	31	29	42	32	46	43	49	65
Cadium (ug/L as Cd)	—	—	—	—	—	—	—	—	—	E.03	—	—	E.02	—	—
Chromium (ug/L as Cr)	—	—	—	—	—	—	—	—	—	<.8	—	—	E.05	—	—
Cobalt (ug/L as Co)	—	—	—	—	—	—	—	—	—	0.1	—	—	0.11	—	—
Copper (ug/L as Cu)	—	—	—	—	—	—	—	—	—	1.9	—	—	2	—	—
Iron (ug/L as Fe)	<10	<10	M	M	10	<10	—	M	50	<10	<10	<10	<10	<10	<10
Lead (ug/L as Pb)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lithium (ug/L as Li)	7.8	9.8	5.6	3.1	2.6	3.7	—	4.5	4.7	7.4	4	5.3	6.8	6	10.6
Manganese (ug/L as Mn)	—	—	—	—	—	—	—	—	—	1.8	—	—	0.5	—	—
Molybdenum (ug/L as Mo)	—	—	—	—	—	—	—	—	—	1.5	—	—	2.2	—	—
Nickel (ug/L as Ni)	—	—	—	—	—	—	—	—	—	1.06	—	—	0.53	—	—
Selenium (ug/L as Se)	<2.4	0.6	0.5	0.4	0.4	0.6	—	0.8	0.7	0.9	0.7	0.6	0.7	0.6	2.4
Silver (ug/L as Ag)	—	—	—	—	—	—	—	—	—	<1	—	—	<1	—	—
Strontium (ug/L as Sr)	211	223	163	125	125	142	—	163	141	155	156	185	187	173	194
Vanadium (ug/L as V)	E4.3	2.1	1.3	1.5	1.5	1.3	—	1.5	1.5	2.1	2.1	2.7	2.9	2.4	2.5
Zinc (ug/L as Zn)	—	—	—	—	—	—	—	—	—	7	—	—	3	—	—
Natrual Uranium (ug/L as U)	—	—	—	—	—	—	—	—	1.01	—	—	—	1.76	—	—
Organic Carbon (mg/L as C)	3.3	3.5	3.9	3.8	3.9	3.9	3.6	3.4	4.1	4.8	3.9	4.1	3.9	3.3	3.1
Inorganic Carbon, Particulate (mg/L as C)															
Organic + Inorganic Carbon, Total Particulate (mg/L as C)															
Total Partic. Organic Carbon (mg/L as C)	2.2	1.6	12	5.1	3.2	5.1	3.4	5.6	4.2	4.1	4.7	6	2.2	2.1	2.3
Diss. Atrazine water (ug/L)	0.14	0.087	0.088	0.077	0.089	0.112	0.413	0.423	0.387	1.04	0.606	0.766	0.75	0.26	0.162
Diss. Alachlor water (ug/L)	<.002	<.002	<.002	<.002	<.002	<.006	E.004	E.004	0.008	0.008	0.021	0.021	0.019	<.002	<.004
Diss. Propachlor water (ug/L)	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
Diss. Butylate water (ug/L)	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002
Diss. Simazine water (ug/L)	0.063	0.046	0.041	0.098	0.061	0.025	0.089	0.048	0.041	0.055	0.066	0.041	0.032	0.018	0.014
Diss. Prometon water (ug/L)	E.008	E.003	<.015	<.015	E.004	E.003	E.005	E.004	E.005	E.004	E.004	E.01	E.01	E.013	E.012
Diss. Deethyl atrazine water (ug/L)	E.038	E.032	E.022	E.032	E.016	E.021	E.024	E.029	E.036	E.039	E.262	E.144	E.08	E.045	E.028
Diss. Cyanazine water (ug/L)	E.007	<.018	<.018	<.018	<.018	<.018	E.005	E.005	<.018	<.018	<.018	0.021	0.042	E.01	<.018
Diss. Fonofos water (ug/L)	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003
Dissolved Alpha BHC (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Dissolved DDEP,P' (ug/L)	<.003	E.001	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003
Dissolved Chlorpyrifos (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Dissolved Lindane (ug/L)	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004
Dissolved Dieldrin (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Dissolved MetoLachlor water (ug/L)	0.035	0.024	0.032	0.047	0.059	0.06	0.307	0.271	0.242	0.416	0.501	0.351	0.256	0.057	0.038
Dissolved Malathion (ug/L)	<.027	<.027	E.006	<.027	<.027	<.027	<.027	<.027	<.027	<.027	E.001	E.007	<.027	<.027	E.004

Parameter	Data															Average	Maximum	Minimum
	2001		2002															
	Oct. 30	Dec. 18	Jan. 22	Feb. 04	Feb. 18	Mar. 13	Mar. 25	Apr. 10	Apr. 22	May 07	May 28	Jun. 11	Aug. 05	Aug. 19	Sep. 09			
Inst. Discharge (ft^3/s)	323,000	678,000	361,000	711,000	668,000	411,000	626,000	1,000,000	876,000	775,000	929,000	910,000	248,000	208,000	240,000	544,800	1,000,000	201,000
Specific Conductance (US/CM)	383	272	346	310	266	387	311	264	296	331	288	280	430	443	414	363	467	264
pH whole field	8	7.7	7.2	7.5	7.7	7.8	7.3	7.3	7.2	7.7	7.4	7.3	7.9	7.9	8	7.6	8.1	7.0
Temperature C	17.7	12.3	6.9	10	10.3	8.6	11.5	13.5	19.1	19.8	20.7	25.2	30.3	29.3	28.6	17.9	30.3	4.5
Color (platinum cobalt units)	10	30	15	20	30	10	30	20	20	20	30	20	20	20	20	18	40	5
Turbidity Lab HACH 2100AN (NTU)	36	94	55	140	99	48	160	57	44	120	73	28	33	41	65	93	420	25
Dissolved Oxygen (mg/L)	7.7	—	11	10.3	10.3	—	9.6	8.7	7	7.4	6.3	5.4	8.1	8.6	7.5	8.5	12.3	5.4
BOD_5 (mg/L)	2.5	—	2.6	1.6	2.2	3.1	1.1	1.4	—	0.3	1	—	1.2	0.8	0.7	1.6	3.1	0.3
Fecal Coliform (cols./100ml)	—	1320	829	210	145	180	625	240	62	100	530	110	45k	33k	32k	365	1,320	62
Fecal Strep (cols./100ml)	88	300	220	120	130	58	144	96	170	66k	100	73	18k	24k	21k	178	1,100	22
Total Hardness (mg/L as $CaCO_3$)	130	—	140	—	100	150	—	98	120	140	120	—	170	—	—	140	180	98
Calcium (mg/L as Ca)	34	—	35.8	—	27.7	39.9	—	26.6	32.3	35.4	32.1	—	43.6	—	—	36.55	45.80	26.60
Magnesium (mg/L as Mg)	11.6	7.83	11.6	8.13	7.92	13	8.04	7.52	10.4	11.5	8.83	10.5	15.1	—	—	11.26	15.20	7.52
Sodium (mg/L as Na)	21.4	12.4	13.7	11	10.3	15.8	9.9	9.27	12.5	13	9.52	10.3	18.9	18	16.2	8.58	21.40	2.88
Potassium (mg/L as K)	4.51	3.42	3.03	2.32	2.58	2.77	1.98	2.25	2.44	2.8	3.22	3.17	3.19	2.92	2.66	10.14	29.70	1.98
Unfltrd. ANC Water (mg/L as $CaCO_3$)	102	80	107	83	76	99	87	76	86	105	80	89	127	134	119	99	134	76
Alkalinity (mg/L as $CaCO_3$)	101	79	108	84	76	120	86	77	87	107	82	90	129	136	121	103	136	76
Sulfate (mg/L as SO_4)	52.5	34	36.7	34.5	30.1	38.4	30.4	28	33.5	38.7	27.8	28.8	49.3	48.4	43.6	40.5	63.2	27.8
Chloride (mg/L as Cl)	23.7	16.6	17.1	13.7	14.1	20.8	16.9	13.1	16.1	16.5	13.2	13	18.8	18.8	20.2	19.3	28.1	13.0
Fluoride (mg/L as F)	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	E.1n	0.2	E.1n	0.2	0.2	0.2	0.2	0.2	0.1
Silica (mg/L as SiO_2)	5.24	4.96	7.4	4.77	5.37	5.5	3.95	5.18	4.51	5.16	5.97	7.16	4.44	3.81	4.34	5.79	9.20	3.70
Dissolved solids residue at 180 C (mg/L)	232	176	216	180	164	234	188	159	180	204	177	184	249	258	231	217	275	159
Dissolved Solids sum of constituents (mg/L)	218	—	196	—	150	205	—	143	170	194	156	—	236	—	—	206	268	143
NO_2-N (mg/L as N)	<.008	0.02	0.008	0.014	0.015	<.008	0.021	0.017	0.025	<.008	0.008	—r	<.008	<.008	<.008	0.02	0.04	0.01
NO_2+NO_3-N (mg/L as N)	0.86	0.87	1.22	1.14	1.25	1.9	1.47	1.04	1.32	1.52	1.25	—r	1.17	0.68	0.94	1.52	2.97	0.51
NH3-N (mg/L as N)	<.04	<.04	0.05	E.03	E.03	E.03	E.02	<.04	<.04	<.04	<.04	—r	<.04	<.04	<.04	0.08	0.15	0.04
Total Organic N + NH3 (mg/L as N)	0.62	0.68	0.59	0.76	0.63	0.6	0.94	0.54	0.53	0.83	0.56	0.46	0.55	0.54	0.6	0.70	1.20	0.44
Dissolved Organic N + NH3 (mg/L as N)	0.27	0.32	0.29	0.25	0.31	0.24	0.3	0.25	0.26	0.27	0.26	0.32	0.24	0.23	0.24	0.29	0.53	0.10
Total Phosphorous (mg/L as P)	0.21	0.28	0.18	0.36	0.23	0.17	0.38	0.174	0.167	0.29	0.2	E.161	0.171	0.186	0.2	0.26	0.45	0.17
Dissolved Phosphorous (mg/L as P)	0.102	0.096	0.056	0.054	0.06	0.059	0.055	0.048	0.056	0.067	0.064	0.073	0.083	0.08	0.107	0.08	0.12	0.03
Ortho-Phosphate (mg/L as P)	0.091	0.081	0.05	0.05	0.052	0.045	0.047	0.037	0.045	0.056	0.054	—r	0.07	0.067	0.095	0.07	0.11	0.03
Aluminum (ug/L as Al)	—	7	—	—	—	—	—	7	—	—	—	—	3	—	6	5	7	3
Antimony (ug/L as Sb)	—	0.07	—	—	—	—	—	0.11	—	—	—	—	0.29	—	0.29	0.2	0.3	0.1
Arsenic (ug/L as As)	1.6	0.9	1	0.6	0.7	0.8	0.6	0.7	0.4	1	1.2	1.4	1.8	1.9	1.6	1.2	2.5	0.4
Barium (ug/L as Ba)	—	43	—	—	—	—	—	37	—	—	—	—	64	—	47	52	71	37
Beryllium (ug/L as Be)	—	<.06	—	—	—	—	—	<.06	—	—	—	—	<.06	—	<.06			
Boron (ug/L as B)	65	33	45	34	24	40	27	24	28	28	29	29	55	43	50	40	66	24
Cadium (ug/L as Cd)	—	E.03	—	—	—	—	—	<.04	—	—	—	—	E.03	—	E.02			
Chromium (ug/L as Cr)	—	<.8	—	—	—	—	—	<.8	—	—	—	—	<.8	—	<.8			
Cobalt (ug/L as Co)	—	0.15	—	—	—	—	—	0.12	—	—	—	—	0.14	—	0.13	0.13	0.15	0.10
Copper (ug/L as Cu)	—	2.2	—	—	—	—	—	1.3	—	—	—	—	2	—	1.6	1.8	2.2	1.3
Iron (ug/L as Fe)	<10	21	E9	E6	E9	<10	E8	E9	E9	<10	E6	E5	<10	<10	<10	27	50	10
Lead (ug/L as Pb)	—	0.18	—	—	—	—	—	<.08	—	—	—	—	E.08	–	0.11	0.15	0.18	0.11
Lithium (ug/L as Li)	6.6	4.1	4.3	2.9	2.3	4.7	2.7	2.2	3.6	3.8	2.7	3.1	7.7	6.7	7.1	5.0	10.6	2.2
Manganese (ug/L as Mn)	—	4.5	—	—	—	—	—	3.5	—	—	—	—	2.1	—	3.9	2.7	4.5	0.5
Molybdenum (ug/L as Mo)	—	1.2	—	—	—	—	—	0.9	—	—	—	—	2.5	—	2.2	1.8	2.5	0.9
Nickel (ug/L as Ni)	—	1.87	—	—	—	—	—	1.69	—	—	—	—	1.52	—	2.15	1.47	2.15	0.53
Selenium (ug/L as Se)	0.5	E.3	0.5	E.3	0.5	0.5	E.2	0.5	0.4	0.5	0.4	0.4	0.7	0.4	0.5	0.6	2.4	0.4
Silver (ug/L as Ag)	—	<1	—	—	—	—	—	<1	—	—	—	—	<1	—	<1			
Strontium (ug/L as Sr)	178	123	165	115	112	151	92.1	106	132	139	127	123	175	153	126	150	223	92
Vanadium (ug/L as V)	1.9	1.4	2.5	0.7	0.9	0.2	0.6	1.3	1.3	1.2	1.5	2	2.1	2.4	2.6	1.7	2.9	0.2
Zinc (ug/L as Zn)	—	—	—	—	—	—	—	2	—	—	—	—	2	—	1	3	7	1
Natrual Uranium (ug/L as U)	—	0.52	—	—	—	—	—	0.41	—	—	—	—	1.44	—	0.89	1.01	1.76	0.41
Organic Carbon (mg/L as C)	4.5	4.5	3.9	3.2	3.8	3.5	3.7	3.7	3.6	3.9	4.4	4.4	3.7	3.6	3.9	3.8	4.8	3.1
Inorganic Carbon, Particulate (mg/L as C)	0.2	0.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	0.2	0.2	0.1
Organic + Inorganic Carbon, Total Particulate (mg/L as C)	1.4	3.1	2	4.6	3.3	2.5	5.3	2.1	2.6	4.9	2.4	1.4	2.2	2.1	2.4	2.8	5.3	1.4
Total Partic. Organic Carbon (mg/L as C)	1.3	3	2	4.5	3.3	2.5	5.2	2	2.6	4.8	2.3	1.4	2.2	2	2.3	3.5	12.0	1.3
Diss. Atrazine water (ug/L)	0.137	0.082	.072	0.06	0.087	0.084	0.225	0.162	0.31	2.1	2.7	1.68	0.919	0.491	0.325	0.5	2.7	0.1
Diss. Alachlor water (ug/L)	<.002	<.002	<.004	<.004	<.006	<.004	<.004	<.004	0.009	0.021	0.025	0.015	<.008	<.004	0.005	0.0	0.0	0.0
Diss. Propachlor water (ug/L)	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010			
Diss. Butylate water (ug/L)	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002			
Diss. Simazine water (ug/L)	0.05	0.402	0.108	0.079	0.104	0.061	0.109	0.059	0.053	0.253	0.254	0.158	0.05	0.03	0.021	0.08	0.40	0.01
Diss. Prometon water (ug/L)	E.01	E.01	<.01	E.01	E.01	<.01	E.01n	Mn	E.01n	E.01n	E.01n	E.01n	E.01n	E.01n	E.01n			
Diss. Deethyl atrazine water (ug/L)	E.036	E.021	E.022	E.023	E.026	E.011	E.012	E.009	E.012	E.06	E.139	E.135	E.08	E.053	E.072			
Diss. Cyanazine water (ug/L)	<.018	<.018	<.018	<.018	<.018	<.018	<.018	<.018	<.018	<.018	E.01	<.018	E.018n	<.018	<.018	0.03	0.04	0.02
Diss. Fonofos water (ug/L)	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003			
Dissolved Alpha BHC (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005			
Dissolved DDEP,P' (ug/L)	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003			
Dissolved Chlorpyrifos (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005			
Dissolved Lindane (ug/L)	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004			
Dissolved Dieldrin (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005			
Dissolved MetoLachlor water (ug/L)	0.039	0.024	0.03	0.021	0.033	0.053	0.07	0.043	0.062	0.33	0.516	0.444	0.114	0.057	0.048	0.15	0.52	0.02
Dissolved Malathion (ug/L)	E.005	<.027	<.027	<.027	<.027	<.027	<.027	<.027	<.027	<.027	<.027	E.007n	<.027	<.027	E.006n			

< — Less Than
E — Estimated Value
M — Presence verified, not quantified
k — Counts outside acceptable range
n — Below the NDV
r — Sample ruined in preparation

Lower Mississippi River Basin
Mississippi River Basin near St. Francisville, LA (USGS Station No. 07373420)
Water Quality Data - Water Year October 2000 to September 2001
Source: "Water Resources Data - Louisiana, Water Year 2001"; Report No. USGS-WDR-LA-01-1; B.B. Goree, et. Al.; USGS Water Resources Division; April 2002

Water Quality Data - Water Year October 2001 to September 2002
Source: excerpted from yet unpublished "Water Resources Data - Louisiana, Water Year 2002"; provided by USGS Water Resources Division

	Data																														Average	Maximum	Minimum
	2000		2001															2002															
Parameter	Nov. 28	Dec. 14	Jan. 24	Feb. 27	Mar. 14	Apr. 02	Apr. 16	Apr. 23	May 07	May 21	Jun. 25	Jul. 10	Jul. 18	Aug. 27	Sep. 19	Oct. 30	Dec. 18	Jan. 22	Feb. 04	Feb. 18	Mar. 13	Mar. 25	Apr. 10	Apr. 22	May 07	May 28	Jun. 11	Aug. 05	Aug. 19	Sep. 09			
Dissolved Parathion (ug/L)																<.007	<.007	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010			
Dissolved Diazinon (ug/L)	E.002	E.004	<.005	<.005	<.005	<.005	E.002	E.004	E.002	<.005	E.002	E.003	<.005	<.005	<.005	E.004	<.005	<.005	<.005	<.005	<.005	E.004n	E.003n	E.004n	0.007	0.006	E.005n	<.005	<.005	<.005	0.01	0.01	0.01
Fltrd. Acetochlor water (ug/L)	<.004	0.006	<.004	<.004	<.004	0.03	0.01	0.044	0.047	0.186	0.19	0.157	0.077	0.011	0.008	0.014	<.004	0.016	<.006	0.009	0.029	0.009	<.006	0.01	0.149	0.324	0.227	0.029	0.016	0.012	0.07	0.32	0.01
Diss. Metribuzin Sencor water (ug/L)	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.008	0.012	0.009	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.008	0.012	0.009	<.006	<.006	<.006	0.01	0.01	0.01
2,6-Diethyl Aniline water (ug/L)	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006			
Trifluralin water (ug/L)	<.009	<.009	<.009	<.009	E.003	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	E.003	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009			
Ethyl-Fluralin water (ug/L)	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009	<.009			
Phorate water (ug/L)	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011			
Terbacil water (ug/L)	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034	<.034			
Linuron water (ug/L)	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	E.014	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035	<.035			
Methyl-Parathion water (ug/L)	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006			
EPTC water (ug/L)	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002			
Pebulate water (ug/L)	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004			
Tebuthiuron water (ug/L)	E.009	E.008	E.012	<.016	<.016	<.016	<.016	<.016	E.005	E.008	E.005	E.01	E.01	E.006	E.012	E.01	<.02	E.01	E.01	E.01	E.01	E.01	E.01n	E.01n	E.01n	<.02	E.01n	E.01n	<.02	E.01n			
Molinate water (ug/L)	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002			
Ethoprop water (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005			
Benfluralin water (ug/L)	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010			
Carbofuran water (ug/L)	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02			
Terbufos water (ug/L)	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.017	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02			
Pronamide water (ug/L)	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004			
Disulfoton water (ug/L)	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.021	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02			
Triallate water (ug/L)	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002	<.002			
Propanil water (ug/L)	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011	<.011			
Carbaryl water (ug/L)	<.041	E.005	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041	<.041			
Thiobecarb water (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005			
DCPA water (ug/L)	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003			
Pendimethalin water (ug/L)	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.010	<.010	<.022	<.022	<.022	<.022	<.022	<.022	<.022	<.022	<.022	<.022	<.022	<.022	<.022			
Napropamide water (ug/L)	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007	<.007			
Propargite water (ug/L)	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.023	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02			
Methyl-Azinphos water (ug/L)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05			
Permethrin cis water (ug/L)	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006	<.006			
Chlor-A Phytoplankton ChromoFluorom (ug/L)	0.8	3	1.4	2	1.2	2.3	3.4	3	1.4	4.6	0.7	0.8	2.1	5.5	3	4.2	2.1	3.5	3.1	2.9	6.4	3.1	4.9	5.2	3.9	3.1	'–	12.7	49	7.9	5.1	49.0	0.7
Chlor-B Phytoplankton ChromoFluorom (ug/L)	—	0.1	E.1	<.1	<.1	<.1	–	<.1	<.1	<.1	<.1	<.1	<.1	0.3	0.1																0.17	0.30	0.10
Susp. Sediment (mg/L)	159	67	482	359	287	278	156	291	212	173	230	277	115	83	53	120	242	138	350	258	84	425	145	145	246	160	93	75	88	97	196	482	53
Susp. Discharge Sediment (T/Day)	145000	45900	432000	721000	758000	614000	241000	495000	282000	201000	366000	297000	118000	50200	28800	105000	443000	135000	672000	465000	93200	718000	392000	343000	515000	401000	229000	50200	49400	62900	315,620	758,000	28,800
% finer than 0.062 mm Susp. Sed.	72	85	95	74	75	78	79	83	88	82	85	90	84	85	98	79	70	81	69	60	80	77	54	50	73	60	47	93	98	95	78	98	47
Susp. Sed. Antimony (ug/g)	—	—	—	0.6	—	—	—	—	—	1.1	—	—	1	—	1.4		0.6						0.6					0.8		1	0.9	1.4	0.6
Susp. Sed Arsenic (ug/g)	—	—	—	7.8	—	—	—	—	—	9.4	—	—	8.7	—	15		8.6						7.9					6.8		10	9.3	15.0	6.8
Susp. Sed Barium (ug/g)	—	—	—	610	—	—	—	—	—	640	—	—	630	—	730		670						610					600		670	645	730	600
Susp. Sed Beryllium (ug/g)	—	—	—	2	—	—	—	—	—	2	—	—	2	—	2		1						1					2		2	2	2	1
Susp. Sed Cadmium (ug/g)	—	—	—	0.4	—	—	—	—	0.4	—	—	—	0.5	—	0.7		0.4						0.3					0.3		0.7	0.5	0.7	0.3
Susp. Sed Chromium (ug/g)	—	—	—	60	—	—	—	—	72	—	—	—	70	—	79		69						54					74		73	69	79	54
Susp. Sed Copper (ug/g)	—	—	—	18	—	—	—	—	23	—	—	—	20	—	59		20						15					25		240	53	240	15
Susp. Sed Lead (ug/g)	—	—	—	21	—	—	—	—	27	—	—	—	24	—	30		20						19					25		34	25	34	19
Susp. Sed Manganese (ug/g)	—	—	—	960	—	—	—	—	1200	—	—	—	1200	—	2300		900						700					1900		2000	1,395	2,300	700
Susp. Sed Mercury (ug/g)	—	—	—	0.18	—	—	—	—	0.05	—	—	—	0.15	—	0.29		0.18						<.01					0.08		0.24	0.17	0.29	0.05
Susp. Sed Molybdenum (ug/g)	—	—	—	2	—	—	—	—	2	—	—	—	3	—	3		3						2					3		2	3	3	2
Susp. Sed Nickel (ug/g)	—	—	—	33	—	—	—	—	39	—	—	—	36	—	52		38						33					42		47	40	52	33
Susp. Sed Selenium (ug/g)	—	—	—	M	—	—	—	—	M	—	—	—	M	—	1		M						M					1		1	1	1	1
Susp. Sed Silver (ug/g)	—	—	—	<.5	—	—	—	—	<.5	—	—	—	<.5	—	<.5		<.5						<.5					<.5		<.5			
Susp. Sed Thallium (ug/g)	—	—	—	<50	—	—	—	—	<50	—	—	—	<50	—	<50		<50						<50					<50		<50			
Susp. Sediment Uranium (ug/g)	—	—	—	—	—	—	—	—	<50	—	—	—	<50	—	<50																		
Susp. Sed Vanadium (ug/g)	—	—	—	79	—	—	—	—	97	—	—	—	81	—	110		83						66					87		100	88	110	66
Susp. Sed Zinc (ug/g)	—	—	—	100	—	—	—	—	130	—	—	—	96	—	140		98						92					110		180	118	180	92
%Susp. Sed Aluminum	—	—	—	5.9	—	—	—	—	—	6.3	—	—	5.7	—	6.5		5.9						5.1					5.9		6.5	6.0	6.5	5.1
%Susp. Sed Carbon	—	—	—	1.4	—	—	—	—	2.3	—	—	—	2.3	—	2.6		1.3						1.3					2.5		2.1	2.0	2.6	1.3
%Susp. Sed Cobalt	—	—	—	12	—	—	—	—	14	—	—	—	13	—	16		11						10					14		16	13	16	10
%Susp. Sed Iron	—	—	—	2.6	—	—	—	—	3.1	—	—	—	2.6	—	3.2		2.6						2.1					3		3.3	3	3	2
%Susp. Sed Lithium	—	—	—	30	—	—	—	—	33	—	—	—	33	—	36		29						26					33		35	32	36	26
%Susp. Sed Phosphorous	—	—	—	850	—	—	—	—	940	—	—	—	900	—	1200		0.09						0.07					0.12		0.11	486.3	1,200.0	0.1
%Susp. Sed Strontium	—	—	—	140	—	—	—	—	150	—	—	—	170	—	170		130						140					130		130	145	170	130
%Susp. Sed Titanium	—	—	—	0.34	—	—	—	—	0.38	—	—	—	0.35	—	0.41		0.34						0.27					0.36		0.43	0.36	0.43	0.27
%Susp. Sed Uranium																	<50						<50					<50		<50			
Total % Susp. Organic Carbon	—	—	—	1.3	—	—	—	—	2	—	—	—	1.9	—	2.4		1.2						1.6					2.4		2.2	1.9	2.4	1.2
Flow through a centrifuge Susp. Sed	—	—	—	366	—	—	—	—	185	—	—	—	124	—	66		249						168					84		108	169	366	66

< — Less Than
E — Estimated Value
M — Presence verified, not quantified
k — Counts outside acceptable range
n — Below the NDV
r — Sample ruined in preparation

APPENDIX F-2

WATER SUPPLY SOURCE QUALITY DATA - GROUNDWATER

GROUNDWATER QUALITY SUMMARY 11/3/2003
EAST BATON ROUGE PARISH
RECLAIMED WATER STUDY - PHASE I
AVERAGE DATA BY AQUIFER CATEGORY (OMITTING WELLS WITH SALT WATER INTRUSION)

									Water Quality Parameter (mg/L)										
# Obs Wells	Depth (Ft BGS)	Aquifer	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	# Wells With Salt Water
4	175 to 372	MR Alluvial	568	7.2	21.0	270	20	3.2	ND	0.5	11.5	0.2	30	342	ND	6.53	ND	ND	None
20	25 to 540	Shallow	606	7.3	20.9	133	88	1.7	292	5.2	35.0	0.3	30	374	0.11	0.62	0.50	0.31	None
33	73 to 711	400 Ft Sand	363	6.7	21.6	31	66	2.1	106	5.0	45.5	0.1	37	234	0.02	0.28	0.87	0.11	None
17	384 to 980	600 Ft Sand	294	6.6	20.8	19	59	1.3	93	7.0	21.9	0.2	35	205	0.01	0.43	0.07	0.02	None
7	790 to 1226	800 Ft Sand	324	8.6	25.1	3	75	1.2	162	11.0	3.1	0.5	26	219	0.00	0.06	0.05	0.02	None
4	980 to 1060	1000 Ft Sand	192	5.5	25.0	3	45	0.1	128	6.1	3.3	0.2	20	129	0.00	0.02	0.01	0.01	None
18	1025 to 1480	1200 Ft Sand	258	7.3	24.3	7	59	0.6	118	8.9	7.6	0.2	29	187	0.01	0.33	0.09	0.04	None
30	1054 to 2179	1500 Ft Sand	266	6.1	25.7	4	66	0.6	108	6.6	19.2	0.2	25	174	0.05	0.24	0.15	0.03	None
6	1277 to 1950	1700 Ft Sand	310	8.4	27.5	5	70	1.1	131	9.4	3.3	0.2	33	204	0.05	0.03	0.19	0.02	None
24	1700 to 2586	2000 Ft Sand	280	6.2	26.8	4	64	1.3	148	7.2	9.7	0.3	21	182	0.04	0.38	0.11	0.02	None
20	1861 to 2762	2400 Ft Sand	329	8.2	32.1	8	89	1.6	209	8.6	4.2	0.3	30	253	0.06	0.30	0.06	0.03	None
22	1950 to 2926	2800 Ft Sand	510	8.7	32.6	4	126	0.7	235	8.0	16.9	0.7	23	327	0.06	0.08	0.04	0.01	None
205	25 to 2926		358	7.2	25.3	41	69	1.3	157	6.9	15.1	0.3	28	236	0.04	0.77	0.19	0.05	None

GROUNDWATER QUALITY SUMMARY 11/3/2003
EAST BATON ROUGE PARISH
RECLAIMED WATER STUDY - PHASE I
RAW DATA BY AQUIFER CATEGORY (OMITTING WELLS WITH SALT WATER INTRUSION)

Water Quality Parameter (mg/L)

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB232	175	MR Alluvial	5/3/1955	670	7.1	23	330	16	3.2		0.1	3.8	0.3	40	413		12		
EB256	220	MR Alluvial	5/5/1945	334	7.3	20.5	140	18	2.6		0.5	12	0	22	208		1.3		
EB257	220	MR Alluvial	4/24/1959	389	7.4	20.5	150	27	1.7		0.4	15	0.3	25	235		1.8		
EB586	372	MR Alluvial	3/19/1957	879	7.1	20	460	19	5.2		0.8	15	0.1	33	510		11		
Average	175 to 372	MR Alluvial		568	7.2	21	270	20	3.2		0.5	11.5	0.2	30	342		6.5		

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB100	338	Shallow	5/9/1951	505	7.5	21	230	20	2.4		1	7.2	0.1	34	300		1.3		
EB512	336	Shallow	4/29/1974	497	7.1	21	300	32	1.6	361	0.8	9	0.1	41	407			2.3	0.22
EB583	304	Shallow	4/27/1956	477	7.2	21	100	68	1.7	239	0.2	10	0.4	40	310	0.02	0.58		
EB599	372	Shallow	1/19/1959	433	7.9		28	96	1.5	217	0	12	0.6	26	277	0.05	0.12		
EB631A	325	Shallow	4/5/1957	841	7.4	20	94	160	3		20	21	0.4	19	500		0.55		
EB665	116	Shallow	11/25/1958	879	7	20	360	52	1.3		2.2	72	0.3	31	508		1.5		
EB681	289	Shallow	2/24/1959	759	7.7		94	150	2.2		0	14	0.4	18	477		0.1		
EB719	55	Shallow	8/19/1960	114	5.9	20	12	16	0.9		0.8	25	0	10	67		0.2		
EB747	334	Shallow	7/8/1983	469	7.1	19.5	200	15	2	200	20	25	0.1	29	297			0.12	0.57
EB819	322	Shallow	5/18/1968	519	8.1	20	11	98	1	262	0.2	14	0.3	36	330	0			
EB820	259	Shallow	5/18/1968	483	8	20	120	76	0.9	254	8.2	6.2	0.3	37	320	0.02			
EB898	101	Shallow	4/18/1974	618	6.6	20	250	59	1.4	329	11	21	0.3	33	366			0.21	2
EB902	350	Shallow	4/2/1973	885	8.4	20	30	180	2	184	0.4	170	0.2	26	499			0.03	0.001
EB913	372	Shallow	5/17/1974	1080	7.2	22	95	220	2.6	439	3.4	93	0.2	22	645			0.24	0.025
EB982	540	Shallow	4/12/1976	474	7.9	24.5	11	98	0.8	151	5	52	0.5	26	289			0.02	0.018
EB1005	384	Shallow	5/1/1978	1080	7.6	24.5	100	220	4.8	492	0.1	66	0.2	24	647			0.12	0.1
EB1013	352	Shallow	8/6/1979	808	7.1	20.5	300	70	1.8	418	0.4	15	0.2	34	489			1.5	0.22
EB1014	334	Shallow	8/6/1979	523	7.4	20.5	120	67	1.5	254	7.2	13	0.2	39	333			0.55	0.21
EB1086	25	Shallow	2/19/1985	117	5.3	19.5	11	16	0.4		17	13	0.1	39	99			0.39	0.009
EB1093	36	Shallow	2/19/1985	563	6.8	22	190	40	0.5		5.7	42	0.1	37	317	0.47		0.005	0.003
Average	25 to 540	Shallow		606	7.3	21	133	88	1.7	292	5	35	0.3	30	374	0.11	0.6	0.50	0.31

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB155	412	400 Ft Sand	1/25/1945	229	7.5	21	46	30	4.5	98	7.9	8	0	48	184	0.05	0.04		
EB354	413	400 Ft Sand	1/25/1945	252	7.8	21.5	31	45	4		4.9	6.8	0	50	200		0.37		
EB357	431	400 Ft Sand	6/21/1944	256	8.4	20.5	29	47	5.5		4.5	8	0.1	46	200		0.57		
EB360	442	400 Ft Sand	1/26/1945	291	7.6	20.5	76	31	5.2		6.3	10	0	49	219		0.16		
EB389	287	400 Ft Sand	11/29/1944	229	7.5	19.5	64	22	5		22	10	0.2	44	161		0.89		
EB421	392	400 Ft Sand	2/20/1946	223	7.9		46	28	5.3		4	11	0	48	179		0.05		
EB499	430	400 Ft Sand	1/23/1975	241	7	21.5	30	43	1.8	106	8.1	7.7	0.2	59	195			0.17	0.14
EB513	196	400 Ft Sand	9/21/1950	160	6.7	21	42	10	1.1		7.6	6	0.1	50	140		0.16		
EB638	625	400 Ft Sand	4/1/1958	693	8.2		10	150	0.7		1	110	0.2	35	400		0.17		
EB684	480	400 Ft Sand	3/12/1959	268	7.5	22	30	51	1.4		0.8	6.1	0.1	36	192		0.29		
EB703	695	400 Ft Sand	1/14/1960	662	8.5	24	10	140	0.5		4.8	120	0.2	26	397	0.02	0.13		
EB789A	711	400 Ft Sand	6/25/1965	1250	7.2		44	240	1.4		5.6	280	0.2	24	686			0.31	0.04
EB789A	711	400 Ft Sand	5/24/1967	1220	7.3	23.5	10	260	0.7	160	7.4	290	0.2	22	674				
EB796	640	400 Ft Sand	5/3/1974	479	8		10	100	0.6	156	7.2	54	0.1	32	282			0.01	0.01
EB823	582	400 Ft Sand	5/18/1968	575	8		17	120	0.6	167	0.4	81	0.8	27	338				
EB825	475	400 Ft Sand	5/18/1968	275	7.4		12	60	0.8		7.2	3.3	0.2	40	198	0.02			
EB826	350	400 Ft Sand	6/7/1973	230	6.8		55	26	3.2	100	8	7.8	0.1	56	181			0.32	0.38
EB864	549	400 Ft Sand	8/13/1970		7.5		8			116	5	4.5		42	176			0.2	
EB864	549	400 Ft Sand	6/16/1976	268	7.6	22.5	9	60	0.8	126	7.8	3.6	0.2	38	200			0.05	0.07
EB896	73	400 Ft Sand	4/18/1974	141	5.9	19	42	14	1.2	50	5.3	12	0.1	28	104			0.05	0.01
EB901	325	400 Ft Sand	7/26/1973	140	6.7	21	36	13	2.5	51	1.2	12	0.1	24	104			12	0.19
EB909	142	400 Ft Sand	7/25/1973	342	6.7	21	110	29	4.4	171	1.6	9.4	0.2	56	244			1	0.17
EB910	365	400 Ft Sand	7/26/1973	188	6.7	21	51	19	3.5	76	7.2	10	0.1	63	169			2.2	0.32
EB914	605	400 Ft Sand	12/14/1973	1020	8.3		13	220	1.2	156	4.5	220	0.2	32	573			0.01	0.015
EB931	555	400 Ft Sand	5/20/1974	1160	7.1	24	33	220	1.5	187	1.2	250	0.3	26	623			0.07	0.06
EB934	385	400 Ft Sand	7/9/1974	232	6.3	22	66	25	2.9	107	6.7	9.7	0.1	58	191			0.01	0.4
EB935B	645	400 Ft Sand	6/14/1974	391	8.1	24	4	89	0.8	163	6.4	20	0.4	34	250			0.19	0.01
EB940	244	400 Ft Sand	8/27/1974	175	5.8	20	48	16	2.6	48	2.8	23	0.1	23	113			0.02	0.01
EB940	244	400 Ft Sand	1/24/1975	164	6.1	19.5	43	17	1.8	47	1.8	21	0.1	26	111			0.01	0.01
EB988	390	400 Ft Sand	2/24/1977	221	6.6	22.5	42	33	2.7	105	2.6	9	0.1	58	185			2.2	0.33
EB991B	565	400 Ft Sand	11/24/1980	267	7.2	23	8	60	2	125	7.2	3.2	0.1	41	192			0.05	0.056
EB991B	565	400 Ft Sand	5/15/1985	260	7.3	22.5	10	56	0.7	127	8.1	3.9	0.1	41	190			0.079	0.042
EB992	470	400 Ft Sand	5/5/1977	210	6.5	22	40	30	3.1	98	2.4	7.1	0.1	62	180			1.1	0.26
Average	73 to 711	400 Ft Sand		363	6.7	22	31	66	2.1	106	5.0	46	0.1	37	234	0.02	0.28	0.9	0.1

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB18	671	600 Ft Sand	6/21/1944	264	7.7	23.5	29	45	4.1		8.4	5	0.1	40	193		0.41		
EB60	644	600 Ft Sand	9/29/1944	233	7.9		41	36	3.4		8.2	6	0.2	56	190		0.42		
EB60	644	600 Ft Sand	1/26/1945	233	7.9	22.5	49	30	4.4		8.3	6	0	54	187		0.05		
EB500	710	600 Ft Sand	1/25/1956	576	7.7	26	15	120	0.9		8.7	85	0.3	35	351		0.36		
EB500	710	600 Ft Sand	5/18/1959	846	7.8	23.5	30	170	1.3		5.2	180	0.3	29	482		0.36		
EB518	550	600 Ft Sand	5/6/1952	234	7.4	24.5	39	36	0.8		9.4	7.2	0.2	55	193		2		
EB547	611	600 Ft Sand	1/10/1955	234	7.4	25.5	39	36	1.9		7.7	7.2	0.1	52	176		0.64		
EB597	980	600 Ft Sand	1/19/1959	391	7.9	24.5	7	88	2.1	144	3	36	0.2	59	282	0.02	0.03		
EB793	687	600 Ft Sand	7/13/1965	325	7.7		3	75	0.6		9.6	3.4	0.2	23	212			0.22	0.01
EB806A	663	600 Ft Sand	4/20/1966	351	7.4		6	82	0.3		9.2	3.4	0.4	27	235			0.06	
EB824	581	600 Ft Sand	5/18/1968	297	7.9	22	11	65	1	141	10	4.2	0.3	37	267	0.02			
EB879	664	600 Ft Sand	8/24/1972	300	8.6	24	0	74	0.4		14	3	0.2	34	204	0		0.03	0
EB879	664	600 Ft Sand	7/6/1983		7.9	25	2	68	0.3	140	11	3	0.2	34	206			0.003	0.005
EB886	384	600 Ft Sand	1/31/1975	296	7.3		91	29	2	108	4.6	26	0.1	27				0.03	0.01
EB933	603	600 Ft Sand	7/31/1974	272	8.1	23	8	63	0.5	137	8.7	4.3	0.1	36	212	0.01		0.01	0.01
EB935A	870	600 Ft Sand	6/10/1974	479	7.8	25.5	3	110	1.5	149	3.8	56	0.2	53	318			0.04	0.01
EB1016A	535	600 Ft Sand	6/11/1979	247	7	22.5	13	51	1.4	107	11	3	0.2	54	188			0.26	0.082
Average	384 to 980	600 Ft Sand		294	6.6	21	19	59	1.3	93	7.0	22	0.2	35	205	0.01	0.43	0.07	0.02

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB120	945	800 Ft Sand	1/23/1945	318	8.4	25.5	6	73	2.6		10	3	0.2	23	208		0.04		
EB159	790	800 Ft Sand	3/24/1959	312	9	24.5	3	75	0.9		11	4.9	0.5	29	213		0.09		
EB363	1226	800 Ft Sand	7/20/1944	279	8.2	26	5	65	3.3		9.4	4	0.3	38	206		0.03		
EB596	888	800 Ft Sand	1/13/1960	323	8.9	25.5	2	78	0.3		14	1.7	0.5	22	219		0.06		
EB887	903	800 Ft Sand	5/15/1972	345	8.9	24.5	2	79	0.4		12	3.3	1.2	24	237			0.1	0.02
EB1007	845	800 Ft Sand	8/3/1978	347	8.6	25	2	81	0.4	163	9.6	2	0.3	24	220			0.01	0.01
EB1274	855	800 Ft Sand	12/18/1996	342	8.5	24.6	4	74	0.3	161	11	2.5	0.3	23	233			0.03	0.021
Average	790 to 1226	800 Ft Sand		324	8.6	25.1	3.4	75	1.2	162	11.0	3.1	0.5	26	219		0.06	0.05	0.02

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB632	1060	1000 Ft Sand	11/25/1958	317	8.2		5	74	0.2		10	4.8	0.3	24	205		0.02		
EB926	980	1000 Ft Sand	6/3/1974	269	8.6	26	6	65	0.2	129	9	5.2	0.3	35	195			0.02	0.01
EB926	980	1000 Ft Sand	7/7/1983	280	7.8	24.5	2	67	0.2	126	8.7	4.9	0.2	32	189			0.003	0.011
EB926	980	1000 Ft Sand	5/15/1985	283	8.5	24.5	2	63	0.2	128	8.6	5	0.2	31	185			0.008	0.011
Average	980 to 1189	1000 Ft Sand		192	5.5	25.0	2.5	45	0.1	127.7	6.1	3.3	0.2	20.3	129.0		0.02	0.01	0.01

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB219	1444	1200 Ft Sand	4/30/1959	406	8.9	26.5	3	94	0.8		11	35	0.5	24	261		0.05		
EB326	1480	1200 Ft Sand	4/21/1959	426	9	28	6	96	0.6		11	38	0.4	27	267		0.04		
EB403	1270	1200 Ft Sand	3/23/1953	284	8	27	2	67	0.6		9.2	4.5	0.2	32	201		0.04		
EB535	1221	1200 Ft Sand	6/19/1958		8.3		23	57			12	8.5		48	279				
EB535	1221	1200 Ft Sand	10/20/1960	254	7.5		3	60	0.4		8.4	6	0.2	5.4	194		0.28		
EB584	1414	1200 Ft Sand	4/10/1972	284	8.3		7	66	0.4	138	9.8	4.2	0.2	34	204	0		0.11	0.02
EB584	1414	1200 Ft Sand	6/16/1976	288	8.8		6	66	0.4	138	10	3.6	0.3	32	193			0.01	0.04
EB591	1374	1200 Ft Sand	11/25/1958	278	8.2	28	9	64	0.4		10	5	0.2	29	205		0.02		
EB616	1229	1200 Ft Sand	2/9/1961	256	7.2		3	62	0.8		8.4	6	0.6	43	204		0.02		
EB621	1487	1200 Ft Sand	7/31/1957	299	8.4	28	4	70	0.5		9.8	4.5	0.2	31	202		0.3		
EB629	1025	1200 Ft Sand	2/26/1958	181	6.9	25.5	35	25	3.2		9.8	7.2	0.1	58	165		2.2		
EB653	1153	1200 Ft Sand	11/25/1958	271	8.2	26.5	3	64	0.3		10	5.3	0.2	29	198		0.02		
EB699	1386	1200 Ft Sand	10/19/1971	274	7.7	25.5	11	63	1.2		9.6	5	0.2	44	205	0		0.41	0.1
EB756	1168	1200 Ft Sand	8/9/1968	269	7.8		5	66	0.3	131	9.8	4.3	0.2	31	194	0.02		0.14	
EB756	1168	1200 Ft Sand	1/29/1975	269	8.6		3	62	0.3	129	8.7	3.8	0.1	38	186			0.01	0.015
EB756	1168	1200 Ft Sand	5/1/1985	277	8.4	24	2	62	0.3	127	9.1	4.5	0.2	35	179			0.004	0.013
EB925	1470	1200 Ft Sand	6/4/1974	283	7.6	28	8	66	0.4	131	11	3.2	0.2	34	212			0.08	0.02
EB990	1450	1200 Ft Sand	3/24/1977	312	8.6	28	2	75	0.4	153	11	3.2	0.1	6	196			0.03	0.1
Average	1025 to 1622	1200 Ft Sand		258	7.3	24.3	6.8	59.3	0.6	118	8.9	7.6	0.2	29.0	187.3	0.01	0.33	0.09	0.04

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB157	1552	1500 Ft Sand	5/8/1959	390	8.8		0	96	0.7		12	4.1	0.7	23	250		0.08		
EB371B	1470	1500 Ft Sand	2/9/1961	259	7.6		2	62	1		6.6	4.2	0.7	44	215		0.65		
EB413	1745	1500 Ft Sand	9/26/1949	322	8.7	31	16	73	4.4		13	8	0.2	28	228		0.1		
EB413	1745	1500 Ft Sand	5/6/1952	326	8.6	31	3	77	1.2		9.5	3.5	0.3	31	217		0.25		
EB510	1605	1500 Ft Sand	5/9/1951	279	8.3	29	2	67	0.4		9.6	4	0.1	36	202		0.24		
EB561	1361	1500 Ft Sand	4/10/1958	250	7.8	28.5	7	58	1	118	9	6.5	0.4	56	216	0	0.18		
EB569	2170	1500 Ft Sand	12/26/1954		8.8	32	6	290		330	2	210		34			0.07		
EB585	1331	1500 Ft Sand	2/26/1958	247	7.7	26.5	4	59	0.6	114	8.6	7	0.1	52	196	0.09	0.35		
EB615	1420	1500 Ft Sand	4/1/1958	242	7	26.5	4	55	0.8		9.2	4.8	0.1	54	188		0.71		
EB615	1420	1500 Ft Sand	3/14/1972	260	7.6	26.5	16	60	0.6	127	8.4	4.8	0.4	48	224			0.33	0.15
EB659	1295	1500 Ft Sand	4/1/1987	280	7.6	24	19	52	1.3	131	0.4	4.5	0.2		205			1.8	0.28
EB686	1346	1500 Ft Sand	6/4/1973	297	8.9	27	4	71	0.3	148	10	3.4	0.2	25	248			0.05	0.01
EB771	1739	1500 Ft Sand	8/9/1968	302	8		1	72	0.4	144	11	4.2	0.3	26	201	0.09		0.12	
EB771	1739	1500 Ft Sand	6/25/1974	297	8.4	31	8	70	0.3	129	9.8	3.1	0.3	30	202	0		0.04	0.01
EB771	1739	1500 Ft Sand	5/1/1985	322	8.5	28	2	72	0.4	140	9.9	3.8	0.3	28	204			0.005	0.011
EB771	1739	1500 Ft Sand	11/27/1990	320	8.8	24	0	70	1	148	5.2	2.3	0.4	32	205			0.025	0.02
EB773	1395	1500 Ft Sand	1/29/1975	359	8.4		5	74	0.5	144	8.5	14	0.2	41	227			0.01	0.01
EB777	1795	1500 Ft Sand	3/11/1965	319	8.5	26	4	75	0.5		9.2	3.2	0.5	35	237			0.2	0.03
EB783A	2179	1500 Ft Sand	6/22/1965	807	8.1		7	170	1.6		7.2	120	0.5	26	461			0.16	0.03
EB783A	2179	1500 Ft Sand	6/1/1967	661	8.2		1	150	0.3		7.6	92	0.6	26	388	0.09			
EB789B	1721	1500 Ft Sand	6/25/1965	643	7.7		8	130	1.2		8.6	84	0.2	21	377			0.1	0
EB789B	1721	1500 Ft Sand	5/24/1967	782	7.8		4	170	0.3		8.8	150	0.2	23	443	0.07			
EB792A	1831	1500 Ft Sand	7/14/1965	326	7.7	29	2	78	0.8		12	3.2	0.7	26	253			0.38	0
EB807A	1713	1500 Ft Sand	5/6/1966	356	7.6		1	88	0.3		10	2.6	0.3	31	237			0.11	
EB917	1736	1500 Ft Sand	10/24/1973	302	8.2	29	2	78	0.5	151	11	4	0.2	28	211			0.08	0.01
EB918	1834	1500 Ft Sand	12/12/1973	302	8.3	31	3	76	0.3	148	12	2.4	0.3	19	192			0.06	0.015
EB961	1541	1500 Ft Sand	7/7/1983	295	7.9	29	2	67	0.3	134	9.2	3.9	0.3	32	207			0.003	0.006
EB963	1054	1500 Ft Sand	11/6/1975	229	7.1	24.5	9	50	1.2	100	7.8	4.5	0.1	53	179			0.16	0.07
EB996	1374	1500 Ft Sand	7/7/1977	297	8.7	27.5	2	67	1.3	144	7.8	2.5	0.2	37	192			0.02	0.01
EB1016B	1465	1500 Ft Sand	11/24/1980	301	8.8	29	4	71	0.4	144	11	2.1	0.3	29	209			0	0.02
Average	1054 to 2179	1500 Ft Sand		266	6.1	25.7	3.7	66	0.6	108	6.6	19	0.2	25.0	174	0.05	0.24	0.15	0.03

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB68	1817	1700 Ft Sand	5/20/1944	287	8.4	30.5	3	67	3.4	137	8.6	5	0.3	30	200	0.05	0.04		
EB566	1280	1700 Ft Sand	1/5/1955	360	8	23	1	71	0.4		7.8	3.5	0.3	30	197		0.01		
EB804A	1950	1700 Ft Sand	3/4/1966	367	7.8		0	88	0.3		12	1.4	0.1	24	240			0.04	
EB873	1884	1700 Ft Sand	1/29/1975	307	9		14	72	0.4	146	8.7	3.9	0.2	30	198			0.01	0.01
EB875	1277	1700 Ft Sand	5/18/1971	299	8.9		5	70	0.4		8.2	3	0.2	23	193	0.04		0.6	
EB994	1710	1700 Ft Sand	7/1/1977	239	8	29	5	53	1.6	111	11	3.2	0.2	62	193			0.1	0.02
Average	1277 to 1950	1700 Ft Sand		310	8.4	27.5	4.7	70.2	1.1	131	9.4	3.3	0.2	33	204	0.05	0.03	0.19	0.02

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB69	2141	2000 Ft Sand	5/20/1944	300	8.4	31.5	6	70	4.2	146	9.8	4	0.1	27	199	0.11	0.03		
EB70	2075	2000 Ft Sand	6/20/1944	288	8.4	31.5	5	66	3.8		10	3	0.1	27	195		0.03		
EB96	2254	2000 Ft Sand	1/29/1975	408	9.1		8	100	0.5	208	11	2.5	0.1	23	250	0.01			
EB304	1725	2000 Ft Sand	6/7/1955	209	7.4	27	22	38	1.7		6.3	5	0.2	58	177		2.7		
EB367	2061	2000 Ft Sand	1/10/1955	323	8	31.5	4	77	0.3		7.8	3	0.3	24	213		0		
EB372B	2000	2000 Ft Sand	2/9/1961		7.9		6	69	0.5		13	4.8	0.7	31	212		0.02		
EB396	1700	2000 Ft Sand	4/21/1945	234	7.7		19	46	2.4		8	4	0	25	163		1.7		
EB400C	2350	2000 Ft Sand	4/15/1947	701	8.6		8	160	6.9	328	8	8	2	22	401	0.05	0.05		
EB444	2172	2000 Ft Sand	9/26/1949	392	8	34.5	9	93	5.2		14	9	0.3	23	280		0.1		
EB444	2172	2000 Ft Sand	5/9/1951	383	9	34	4	91	2		11	5	0.3	24	241		0.23		
EB456	1895	2000 Ft Sand	5/9/1951	347	8.8	30	4	83	3.2	169	9	3.8	0.3	23	223	0.02	0.13		
EB550B	2102	2000 Ft Sand	9/12/1960	301	8.3	32	0	72	1.3		11	3.5	0.3	23	197		0.01		
EB774	2143	2000 Ft Sand	8/9/1968	292	7.8		2	69	0.3	139	10	3	0.2	22	189	0.02		0.14	
EB7789	2586	2000 Ft Sand	5/25/1967	972	7.9		1	210	0.4		5.6	150	0.6	22	549				
EB792B	2286	2000 Ft Sand	7/15/1965	393	7.8		3	93	1		10	3.2	0.1	21	255			0.48	0.01
EB807B	2264	2000 Ft Sand	5/6/1966	386	7.8		3	94	0.4		11	2.8	0.3	21	251			0.24	
EB807B	2264	2000 Ft Sand	5/27/1977	375	8.1		0	92	0.6	190	11	3.2	0.3	21	258			0.01	0.01
EB817	2284	2000 Ft Sand	5/13/1969	385	9.1	33	5	90	1.2	193	12	2.5	0.3	19	257			0.07	0.02
EB878	2178	2000 Ft Sand	10/19/1971	289	9	31.5	2	75	0.3		8.4	3.6	0.2	24	201	0		0.09	0.02
EB878	2178	2000 Ft Sand	1/29/1975	286	8.9		8	68	0.4	140	8.5	2.6	0.1	24	196			0.01	0.01
EB878	2178	2000 Ft Sand	5/1/1985	291	8.6	29.5	2	64	0.3	136	8.9	3.4	0.2	23	171			0.01	0.007
EB904	1876	2000 Ft Sand	6/2/1982		7.3		14	46	1.2		6.6	4	0.2	51	184			0.18	0.15
EB1028	2238	2000 Ft Sand	5/20/1981	619	8.2		3	140	1	177	10	74	0.5	35	384			0.04	0.015
EB1029	2043	2000 Ft Sand	6/23/1981	212	7.7	29.5	5	48	0.9	98	9.2	2.6	0.3	54	178			0.42	0.093
Average	1700 to 2586	2000 Ft Sand		280	6.2	26.8	4.5	64.2	1.3	148	7.2	10	0.3	21	182	0.04	0.38	0.11	0.02

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB151	2658	2400 Ft Sand	5/9/1951	344	8.7	35.5	4	82	2.4		11	6.2	0.1	24	219		0.07		
EB294	2278	2400 Ft Sand	1/10/1955	337	8.9	34.5	1	84	0.4		8.9	4.9	0.2	19	215		0.04		
EB352	2413	2400 Ft Sand	6/22/1944	325	8.7	33.5	4	76	5	161	8.1	4	0.1	22	209	0.05	0.03		
EB384	1916	2400 Ft Sand	11/28/1944	383	8.2	30	10	71	3.7	155	7.9	4	0.2	26	209	0.05	0.12		
EB400A	2741	2400 Ft Sand	4/15/1947		8.4		9	390	10	849	0.2	8	2.8	24	948	0.11	0.37		
EB432	1942	2400 Ft Sand	6/4/1973	309	8.8	31	2	74	0.5	153	9.2	4.2	0.2	30	209			0.04	0.01
EB520	2088	2400 Ft Sand	7/3/1951	216	7.4	28	11	44	1.6	96	8.3	5.3	0	59	161	0.05	0.25		
EB578A	1861	2400 Ft Sand	3/8/1956	203	7.5	29	5	48	0.6		8.4	5.8	0.2	56	188		1.2		
EB718	2380	2400 Ft Sand	8/9/1968	292	7.8		6	72	0.6	147	8.6	4.5	0.2	22	197	0.02		0.04	
EB794	2709	2400 Ft Sand	7/30/1965	430	7.8	33	2	100	0.6	210	11	4.1	0.2	22	312	0.05		0.11	0.02
EB804B	2762	2400 Ft Sand	3/3/1966	447	7.8		6	110	0.3		12	1.2	0.3	23	284			0.18	
EB806B	2579	2400 Ft Sand	4/22/1966	358	7.4		10	83	0.5		11	1.4	0.2	21	225			0.14	
EB813	2536	2400 Ft Sand	1/29/1975	377	9.1		13	90	0.5	194	11	2.3	0.1	23	248			0.01	0.01
EB928	2375	2400 Ft Sand	1/29/1975	291	8.8		9	68	0.6	141	7.6	3.6	0.1	27	190			0.01	0.015
EB928	2375	2400 Ft Sand	7/7/1983	288	7.9	34	7	64	0.4	136	8	4	0.2	26	201			0.003	0.012
EB928	2375	2400 Ft Sand	5/1/1985	288	8.6	30.5	7	63	0.4	136	7.4	4.1	0.2	25	185			0.008	0.012
EB1025	2674	2400 Ft Sand	11/24/1980	424	8.6	35.5	5	100	1	203	11	5.4	0.3	24	289			0.03	0.023
EB1027	1926	2400 Ft Sand	4/1/1987	288	8.5	30.5	6	63	0.5	136	7.6	3.5	0.1		195			0.008	0.024
EB1032	2334	2400 Ft Sand	2/5/1982		7.7		16	50	1.3		7.2	4	0.3	45	184			0.1	0.075
EB1033	2138	2400 Ft Sand	6/2/1982		7.8		18	48	1		7.6	3	0.2	50	184			0.13	0.093
Average	1861 to 2762	2400 Ft Sand		329	8.2	32.1	7.6	89.0	1.6	209	8.6	4.2	0.3	30	253	0.06	0.30	0.06	0.03

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB378	2777	2800 Ft Sand	12/22/1954	867	8.7	34.5	4	220	0.9		2.3	23	1.4	28	532		0.13		
EB468	2407	2800 Ft Sand	3/15/1948	373	9.2	33	4	86	0.4		12	2	0.4	23	243		0.05		
EB517C	2590	2800 Ft Sand	8/28/1952	626	8.6	35.5	3	150	0.8		6.7	24	0.8	25	386		0.09		
EB534	2804	2800 Ft Sand	1/10/1955	723	8.2	36.5	4	180	0.8		3.6	33	1.1	26	457		0.05		
EB539	2590	2800 Ft Sand	5/29/1957	448	8.9	32	4	110	0.5		9	5.8	1	28	279		0.03		
EB551	2300	2800 Ft Sand	1/5/1955	452	8.7	31.5	2	120	0.4	232	9	3.5	0.7	24	296	0.11	0.07		
EB568	2457	2800 Ft Sand	1/4/1955	284	7.6	34.5	2	90	0.4		9.4	3.2	0.6	22	236		0.08		
EB572	2511	2800 Ft Sand	4/10/1958	483	9.1	35	3	120	0.4		8.6	4.8	1.2	25	322		0.04		
EB578B	2132	2800 Ft Sand	9/30/1957	299	8.6		2				9	7					0.15		
EB578B	2132	2800 Ft Sand	2/4/1960	307	8.9	30.5	4	74	0.8		8.6	4	0.5	22	205		0.06		
EB578B	2132	2800 Ft Sand	1/24/1975	312	8.5	29.5	7	68	0.7	148	9.1	2.9	0.2	23	184			0.01	0.01
EB581	2590	2800 Ft Sand	5/9/1956	467	8.9	32	3	110	0.5		10	2.8	0.7	24	296		0.1		
EB588	2201	2800 Ft Sand	3/8/1956	271	8.4	31.5	13	63	1.1		9.2	5	0.2	26	191		0.06		
EB623	2652	2800 Ft Sand	4/26/1957	701	8.6		3	180	1		2.4	13	0.9	22	429		0.14		
EB647	1950	2800 Ft Sand	1/7/1958	514	9	26.5	0	130	0.6		8.2	2.5	0.7	17	316		0.07		
EB750	2643	2800 Ft Sand	1/29/1975	658	9		7	160	0.9	297	6.2	35	0.8	23	407			0.01	0.017
EB750	2643	2800 Ft Sand	5/1/1985	710	8.6	33.5	4	160	0.7	279	5.3	48	0.7	21	419			0.007	0.011
EB754	2368	2800 Ft Sand	11/8/1967	347	8.7	33	4	84	0.4		8.8	3.1	0.2	22	225			0.04	
EB770	2080	2800 Ft Sand	11/8/1967	456	8.5	31	1	110	0.3		9.6	3.1	0.7	20	277	0		0.05	
EB798	2647	2800 Ft Sand	8/18/1965	659	8.5		4	150	0.7		6.4	32	0.7	20	409			0.12	0.01
EB892A	2446	2800 Ft Sand	2/28/1974	376	9	33.5	3	95	0.4	179	13	5	0.2	22	242			0.02	0.01
EB1000	2926	2800 Ft Sand	12/18/1977	894	9		5	190	2	274	8.8	110	0.5	16	509			0.04	0.005
Average	1950 to 2926	2800 Ft Sand		510	8.7	32.6	3.9	126	0.7	235	8.0	16.9	0.7	22.8	327	0.06	0.08	0.04	0.01

GROUNDWATER QUALITY SUMMARY 11/3/2003
EAST BATON ROUGE PARISH
RECLAIMED WATER STUDY - PHASE I
AVERAGE DATA BY AQUIFER CATEGORY

# Obs Wells	Depth (Ft BGS)	Aquifer	Cond.	pH	Temp	THardness	Na	K	Water Quality Parameter (mg/L) Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	# Wells With Salt Water
4	175 to 372	MR Alluvial	568	7.2	21.0	270	20	3.2	ND	0.5	11.5	0.2	30	342	ND	6.53	ND	ND	None
20	25 to 540	Shallow	606	7.3	20.9	133	88	1.7	292	5.2	35.0	0.3	30	374	0.11	0.62	0.50	0.31	None
36	73 to 711	400 Ft Sand	957	7.3	21.6	68	182	2.7	121	7.2	231.3	0.2	40	582	0.03	0.28	0.95	0.14	3
20	384 to 980	600 Ft Sand	1008	7.7	24.0	72	183	2.1	139	10.4	233.4	0.2	40	651	0.05	0.79	0.13	0.10	3
7	790 to 1226	800 Ft Sand	324	8.6	25.1	3	75	1.2	162	11.0	3.1	0.5	26	219	0.00	0.06	0.05	0.02	None
6	980 to 1189	1000 Ft Sand	840	8.1	25.0	13	177	0.6	128	7.6	171.7	0.2	28	473	0.00	0.02	0.07	0.02	2
20	1025 to 1622	1200 Ft Sand	437	8.0	24.3	10	93	0.7	138	9.4	51.1	0.2	31	279	0.02	0.33	0.10	0.05	2
40	1054 to 2179	1500 Ft Sand	923	8.1	28.4	18	200	1.1	162	7.3	191.7	0.4	31	539	0.07	0.30	0.16	0.04	10
6	1277 to 1950	1700 Ft Sand	310	8.4	27.5	5	70	1.1	131	9.4	3.3	0.2	33	204	0.05	0.03	0.19	0.02	None
32	1700 to 2586	2000 Ft Sand	1021	8.2	31.8	19	205	1.8	187	8.3	186.9	0.5	26	566	0.04	0.40	0.14	0.04	8
20	1861 to 2762	2400 Ft Sand	329	8.2	32.1	8	89	1.6	209	8.6	4.2	0.3	30	253	0.06	0.30	0.06	0.03	None
22	1950 to 2926	2800 Ft Sand	510	8.7	32.6	4	126	0.7	235	8.0	16.9	0.7	23	327	0.06	0.08	0.04	0.01	None
233	25 to 2926		653	8.0	26.2	52	126	1.5	173	7.7	95.0	0.3	31	401	0.04	0.81	0.22	0.07	28

GROUNDWATER QUALITY SUMMARY 11/3/2003
EAST BATON ROUGE PARISH
RECLAIMED WATER STUDY - PHASE I
RAW DATA BY AQUIFER CATEGORY

									Water Quality Parameter (mg/L)										
Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB232	175	MR Alluvial	5/3/1955	670	7.1	23	330	16	3.2		0.1	3.8	0.3	40	413		12		
EB256	220	MR Alluvial	5/5/1945	334	7.3	20.5	140	18	2.6		0.5	12	0	22	208		1.3		
EB257	220	MR Alluvial	4/24/1959	389	7.4	20.5	150	27	1.7		0.4	15	0.3	25	235		1.8		
EB586	372	MR Alluvial	3/19/1957	879	7.1	20	460	19	5.2		0.8	15	0.1	33	510		11		
Average	175 to 372	MR Alluvial		568	7.2	21	270	20	3.2		0.5	11.5	0.2	30	342		6.5		

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB100	338	Shallow	5/9/1951	505	7.5	21	230	20	2.4		1	7.2	0.1	34	300		1.3		
EB512	336	Shallow	4/29/1974	497	7.1	21	300	32	1.6	361	0.8	9	0.1	41	407			2.3	0.22
EB583	304	Shallow	4/27/1956	477	7.2	21	100	68	1.7	239	0.2	10	0.4	40	310	0.02	0.58		
EB599	372	Shallow	1/19/1959	433	7.9		28	96	1.5	217	0	12	0.6	26	277	0.05	0.12		
EB631A	325	Shallow	4/5/1957	841	7.4	20	94	160	3		20	21	0.4	19	500		0.55		
EB665	116	Shallow	11/25/1958	879	7	20	360	52	1.3		2.2	72	0.3	31	508		1.5		
EB681	289	Shallow	2/24/1959	759	7.7		94	150	2.2		0	14	0.4	18	477		0.1		
EB719	55	Shallow	8/19/1960	114	5.9	20	12	16	0.9		0.8	25	0	10	67		0.2		
EB747	334	Shallow	7/8/1983	469	7.1	19.5	200	15	2	200	20	25	0.1	29	297			0.12	0.57
EB819	322	Shallow	5/18/1968	519	8.1	20	11	98	1	262	0.2	14	0.3	36	330	0			
EB820	259	Shallow	5/18/1968	483	8	20	120	76	0.9	254	8.2	6.2	0.3	37	320	0.02			
EB898	101	Shallow	4/18/1974	618	6.6	20	250	59	1.4	329	11	21	0.3	33	366			0.21	2
EB902	350	Shallow	4/2/1973	885	8.4	20	30	180	2	184	0.4	170	0.2	26	499			0.03	0.001
EB913	372	Shallow	5/17/1974	1080	7.2	22	95	220	2.6	439	3.4	93	0.2	22	645			0.24	0.025
EB982	540	Shallow	4/12/1976	474	7.9	24.5	11	98	0.8	151	5	52	0.5	26	289			0.02	0.018
EB1005	384	Shallow	5/1/1978	1080	7.6	24.5	100	220	4.8	492	0.1	66	0.2	24	647			0.12	0.1
EB1013	352	Shallow	8/6/1979	808	7.1	20.5	300	70	1.8	418	0.4	15	0.2	34	489			1.5	0.22
EB1014	334	Shallow	8/6/1979	523	7.4	20.5	120	67	1.5	254	7.2	13	0.2	39	333			0.55	0.21
EB1086	25	Shallow	2/19/1985	117	5.3	19.5	11	16	0.4		17	13	0.1	39	99			0.39	0.009
EB1093	36	Shallow	2/19/1985	563	6.8	22	190	40	0.5		5.7	42	0.1	37	317	0.47		0.005	0.003
Average	25 to 540	Shallow		606	7.3	21	133	88	1.7	292	5	35	0.3	30	374	0.11	0.6	0.50	0.31

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	
EB155	412	400 Ft Sand	1/25/1945	229	7.5	21	46	30	4.5	98	7.9	8	0	48	184	0.05	0.04			
EB354	413	400 Ft Sand	1/25/1945	252	7.8	21.5	31	45	4		4.9	6.8	0	50	200		0.37			
EB357	431	400 Ft Sand	6/21/1944	256	8.4	20.5	29	47	5.5		4.5	8	0.1	46	200		0.57			
EB360	442	400 Ft Sand	1/26/1945	291	7.6	20.5	76	31	5.2		6.3	10	0	49	219		0.16			
EB389	287	400 Ft Sand	11/29/1944	229	7.5	19.5	64	22	5		22	10	0.2	44	161		0.89			
EB421	392	400 Ft Sand	2/20/1946	223	7.9		46	28	5.3		4	11	0	48	179		0.05			
EB499	430	400 Ft Sand	1/23/1975	241	7	21.5	30	43	1.8	106	8.1	7.7	0.2	59	195			0.17	0.14	
EB513	196	400 Ft Sand	9/21/1950	160	6.7	21	42	10	1.1		7.6	6	0.1	50	140		0.16			
EB638	625	400 Ft Sand	4/1/1958	693	8.2		10	150	0.7		1	110	0.2	35	400		0.17			
EB684	480	400 Ft Sand	3/12/1959	268	7.5	22	30	51	1.4		0.8	6.1	0.1	36	192		0.29			
EB703	695	400 Ft Sand	1/14/1960	662	8.5	24	10	140	0.5		4.8	120	0.2	26	397	0.02	0.13			
EB789A	711	400 Ft Sand	6/25/1965	1250	7.2		44	240	1.4		5.6	280	0.2	24	686			0.31	0.04	
EB789A	711	400 Ft Sand	5/24/1967	1220	7.3	23.5	10	260	0.7	160	7.4	290	0.2	22	674					
EB796	640	400 Ft Sand	5/3/1974	479	8		10	100	0.6	156	7.2	54	0.1	32	282			0.01	0.01	
EB818	615	400 Ft Sand	5/18/1968	7280	7.6		610	1400	3		11	2400	0.3	30	4150	0.02		1.2		Salt Water Intrusion
EB823	582	400 Ft Sand	5/18/1968	575	8		17	120	0.6	167	0.4	81	0.8	27	338					
EB825	475	400 Ft Sand	5/18/1968	275	7.4		12	60	0.8		7.2	3.3	0.2	40	198	0.02				
EB826	350	400 Ft Sand	6/7/1973	230	6.8		55	26	3.2	100	8	7.8	0.1	56	181			0.32	0.38	
EB864	549	400 Ft Sand	8/13/1970		7.5		8			116	5	4.5		42	176			0.2		
EB864	549	400 Ft Sand	6/16/1976	268	7.6	22.5	9	60	0.8	126	7.8	3.6	0.2	38	200			0.05	0.07	
EB871	685	400 Ft Sand	3/15/1971	11600	8.4		670	2300	16	217	68	3800	0.4	29	7350			0.2	0.65	Salt Water Intrusion
EB896	73	400 Ft Sand	4/18/1974	141	5.9	19	42	14	1.2	50	5.3	12	0.1	28	104			0.05	0.01	
EB901	325	400 Ft Sand	7/26/1973	140	6.7	21	36	13	2.5	51	1.2	12	0.1	24	104			12	0.19	
EB909	142	400 Ft Sand	7/25/1973	342	6.7	21	110	29	4.4	171	1.6	9.4	0.2	56	244			1	0.17	
EB910	365	400 Ft Sand	7/26/1973	188	6.7	21	51	19	3.5	76	7.2	10	0.1	63	169			2.2	0.32	
EB914	605	400 Ft Sand	12/14/1973	1020	8.3		13	220	1.2	156	4.5	220	0.2	32	573			0.01	0.015	
EB931	555	400 Ft Sand	5/20/1974	1160	7.1	24	33	220	1.5	187	1.2	250	0.3	26	623			0.07	0.06	
EB934	385	400 Ft Sand	7/9/1974	232	6.3	22	66	25	2.9	107	6.7	9.7	0.1	58	191			0.01	0.4	
EB935B	645	400 Ft Sand	6/14/1974	391	8.1	24	4	89	0.8	163	6.4	20	0.4	34	250			0.19	0.01	
EB940	244	400 Ft Sand	8/27/1974	175	5.8	20	48	16	2.6	48	2.8	23	0.1	23	113			0.02	0.01	
EB940	244	400 Ft Sand	1/24/1975	164	6.1	19.5	43	17	1.8	47	1.8	21	0.1	26	111			0.01	0.01	
EB988	390	400 Ft Sand	2/24/1977	221	6.6	22.5	42	33	2.7	105	2.6	9	0.1	58	185			2.2	0.33	
EB991B	565	400 Ft Sand	11/24/1980	267	7.2	23	8	60	2	125	7.2	3.2	0.1	41	192			0.05	0.056	
EB991B	565	400 Ft Sand	5/15/1985	260	7.3	22.5	10	56	0.7	127	8.1	3.9	0.1	41	190			0.079	0.042	
EB992	470	400 Ft Sand	5/5/1977	210	6.5	22	40	30	3.1	98	2.4	7.1	0.1	62	180			1.1	0.26	
EB1012	565	400 Ft Sand	4/10/1979	1900	7.6		34	380	2.2	156	0.2	490	0.2	40	1030			0.38	0.08	Salt Water Intrusion
Average	73 to 711	400 Ft Sand		957	7.3	22	68	182	2.7	121	7.2	231	0.2	40	582	0.03	0.28	0.9	0.1	

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	
EB18	671	600 Ft Sand	6/21/1944	264	7.7	23.5	29	45	4.1		8.4	5	0.1	40	193		0.41			
EB60	644	600 Ft Sand	9/29/1944	233	7.9		41	36	3.4		8.2	6	0.2	56	190		0.42			
EB60	644	600 Ft Sand	1/26/1945	233	7.9	22.5	49	30	4.4		8.3	6	0	54	187		0.05			
EB493	704	600 Ft Sand	8/29/1952	1060	8	24	56	200	1.6	148	8.4	240	0.3	36	582	0.11	0.03			Salt Water Intrusion
EB493	704	600 Ft Sand	5/18/1959	2110	7.3	23.5	340	280	3.4	122	1.6	590	0.2	35	1300	0.11	3.6			Salt Water Intrusion
EB500	710	600 Ft Sand	1/25/1956	576	7.7	26	15	120	0.9		8.7	85	0.3	35	351		0.36			
EB500	710	600 Ft Sand	5/18/1959	846	7.8	23.5	30	170	1.3		5.2	180	0.3	29	482		0.36			
EB518	550	600 Ft Sand	5/6/1952	234	7.4	24.5	39	36	0.8		9.4	7.2	0.2	55	193		2			
EB547	611	600 Ft Sand	1/10/1955	234	7.4	25.5	39	36	1.9		7.7	7.2	0.1	52	176		0.64			
EB597	980	600 Ft Sand	1/19/1959	391	7.9	24.5	7	88	2.1	144	3	36	0.2	59	282	0.02	0.03			
EB793	687	600 Ft Sand	7/13/1965	325	7.7		3	75	0.6		9.6	3.4	0.2	23	212			0.22	0.01	
EB806A	663	600 Ft Sand	4/20/1966	351	7.4		6	82	0.3		9.2	3.4	0.4	27	235			0.06		
EB824	581	600 Ft Sand	5/18/1968	297	7.9	22	11	65	1	141	10	4.2	0.3	37	267	0.02				
EB869	599	600 Ft Sand	3/16/1971	10400	8.1		660	2000	10	194	58	3400	0.3	33	6590			0.5	0.71	Salt Water Intrusion
EB879	664	600 Ft Sand	8/24/1972	300	8.6	24	0	74	0.4		14	3	0.2	34	204	0		0.03	0	
EB879	664	600 Ft Sand	7/6/1983		7.9	25	2	68	0.3	140	11	3	0.2	34	206			0.003	0.005	
EB886	384	600 Ft Sand	1/31/1975	296	7.3		91	29	2	108	4.6	26	0.1	27				0.03	0.01	
EB933	603	600 Ft Sand	7/31/1974	272	8.1	23	8	63	0.5	137	8.7	4.3	0.1	36	212	0.01		0.01	0.01	
EB935A	870	600 Ft Sand	6/10/1974	479	7.8	25.5	3	110	1.5	149	3.8	56	0.2	53	318			0.04	0.01	
EB1016A	535	600 Ft Sand	6/11/1979	247	7	22.5	13	51	1.4	107	11	3	0.2	54	188			0.26	0.082	
Average	384 to 980	600 Ft Sand		1008	7.7	24	72	183	2.1	139	10.4	233	0.2	40	651	0.05	0.79	0.13	0.10	

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB120	945	800 Ft Sand	1/23/1945	318	8.4	25.5	6	73	2.6		10	3	0.2	23	208		0.04		
EB159	790	800 Ft Sand	3/24/1959	312	9	24.5	3	75	0.9		11	4.9	0.5	29	213		0.09		
EB363	1226	800 Ft Sand	7/20/1944	279	8.2	26	5	65	3.3		9.4	4	0.3	38	206		0.03		
EB596	888	800 Ft Sand	1/13/1960	323	8.9	25.5	2	78	0.3		14	1.7	0.5	22	219		0.06		
EB887	903	800 Ft Sand	5/15/1972	345	8.9	24.5	2	79	0.4		12	3.3	1.2	24	237			0.1	0.02
EB1007	845	800 Ft Sand	8/3/1978	347	8.6	25	2	81	0.4	163	9.6	2	0.3	24	220			0.01	0.01
EB1274	855	800 Ft Sand	12/18/1996	342	8.5	24.6	4	74	0.3	161	11	2.5	0.3	23	233			0.03	0.021
Average	790 to 1226	800 Ft Sand		324	8.6	25.1	3.4	75	1.2	162	11.0	3.1	0.5	26	219		0.06	0.05	0.02

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	
EB632	1060	1000 Ft Sand	11/25/1958	317	8.2		5	74	0.2		10	4.8	0.3	24	205		0.02			
EB782A	1189	1000 Ft Sand	4/22/1965	1410	8		12	290	1.2		3.8	330	0.2	23	754			0.11	0.04	Salt Water Intrusion
EB805	1072	1000 Ft Sand	3/5/1966	2480	7.6		50	500	1.4		5.4	680	0.2	20	1310			0.2		Salt Water Intrusion
EB926	980	1000 Ft Sand	6/3/1974	269	8.6	26	6	65	0.2	129	9	5.2	0.3	35	195			0.02	0.01	
EB926	980	1000 Ft Sand	7/7/1983	280	7.8	24.5	2	67	0.2	126	8.7	4.9	0.2	32	189			0.003	0.011	
EB926	980	1000 Ft Sand	5/15/1985	283	8.5	24.5	2	63	0.2	128	8.6	5	0.2	31	185			0.008	0.011	
Average	980 to 1189	1000 Ft Sand		840	8.1	25.0	12.8	177	0.6	127.7	7.6	171.7	0.2	27.5	473.0		0.02	0.07	0.02	

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	
EB219	1444	1200 Ft Sand	4/30/1959	406	8.9	26.5	3	94	0.8		11	35	0.5	24	261		0.05			
EB326	1480	1200 Ft Sand	4/21/1959	426	9	28	6	96	0.6		11	38	0.4	27	267		0.04			
EB403	1270	1200 Ft Sand	3/23/1953	284	8	27	2	67	0.6		9.2	4.5	0.2	32	201		0.04			
EB535	1221	1200 Ft Sand	6/19/1958		8.3		23	57			12	8.5		48	279					
EB535	1221	1200 Ft Sand	10/20/1960	254	7.5		3	60	0.4		8.4	6	0.2	5.4	194		0.28			
EB584	1414	1200 Ft Sand	4/10/1972	284	8.3		7	66	0.4	138	9.8	4.2	0.2	34	204	0		0.11	0.02	
EB584	1414	1200 Ft Sand	6/16/1976	288	8.8		6	66	0.4	138	10	3.6	0.3	32	193			0.01	0.04	
EB591	1374	1200 Ft Sand	11/25/1958	278	8.2	28	9	64	0.4		10	5	0.2	29	205		0.02			
EB616	1229	1200 Ft Sand	2/9/1961	256	7.2		3	62	0.8		8.4	6	0.6	43	204		0.02			
EB621	1487	1200 Ft Sand	7/31/1957	299	8.4	28	4	70	0.5		9.8	4.5	0.2	31	202		0.3			
EB629	1025	1200 Ft Sand	2/26/1958	181	6.9	25.5	35	25	3.2		9.8	7.2	0.1	58	165		2.2			
EB653	1153	1200 Ft Sand	11/25/1958	271	8.2	26.5	3	64	0.3		10	5.3	0.2	29	198		0.02			
EB699	1386	1200 Ft Sand	10/19/1971	274	7.7	25.5	11	63	1.2		9.6	5	0.2	44	205	0		0.41	0.1	
EB756	1168	1200 Ft Sand	8/9/1968	269	7.8		5	66	0.3	131	9.8	4.3	0.2	31	194	0.02		0.14		
EB756	1168	1200 Ft Sand	1/29/1975	269	8.6		3	62	0.3	129	8.7	3.8	0.1	38	186			0.01	0.015	
EB756	1168	1200 Ft Sand	5/1/1985	277	8.4	24	2	62	0.3	127	9.1	4.5	0.2	35	179			0.004	0.013	
EB780A	1622	1200 Ft Sand	4/19/1965	1770	7.1		64	330	1.2		5.6	460	0	18	963			0.11	0.06	Salt Water Intrusion
EB780A	1622	1200 Ft Sand	5/25/1967	1630	7.4		3	350	0.9	158	3.8	410	0.2	18	879	0.07				Salt Water Intrusion
EB925	1470	1200 Ft Sand	6/4/1974	283	7.6	28	8	66	0.4	131	11	3.2	0.2	34	212			0.08	0.02	
EB990	1450	1200 Ft Sand	3/24/1977	312	8.6	28	2	75	0.4	153	11	3.2	0.1	6	196			0.03	0.1	
Average	1025 to 1622	1200 Ft Sand		437	8.0	24.3	10.1	93.3	0.7	138	9.4	51.1	0.2	30.8	279.4	0.02	0.33	0.10	0.05	

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	
EB157	1552	1500 Ft Sand	5/8/1959	390	8.8		0	96	0.7		12	4.1	0.7	23	250		0.08			
EB280	1955	1500 Ft Sand	8/6/1957	9250	7.7	31	320	2000	8		0	3000	0.6	22	5290		0.53			Salt Water Intrusion
EB371B	1470	1500 Ft Sand	2/9/1961	259	7.6		2	62	1		6.6	4.2	0.7	44	215		0.65			
EB413	1745	1500 Ft Sand	9/26/1949	322	8.7	31	16	73	4.4		13	8	0.2	28	228		0.1			
EB413	1745	1500 Ft Sand	5/6/1952	326	8.6	31	3	77	1.2		9.5	3.5	0.3	31	217		0.25			
EB510	1605	1500 Ft Sand	5/9/1951	279	8.3	29	2	67	0.4		9.6	4	0.1	36	202		0.24			
EB561	1361	1500 Ft Sand	4/10/1958	250	7.8	28.5	7	58	1	118	9	6.5	0.4	56	216	0	0.18			
EB569	2170	1500 Ft Sand	12/22/1954	1170	8.7	33	4	260	0.8		2.2	200	0.8	30	666		0.12			Salt Water Intrusion
EB569	2170	1500 Ft Sand	12/26/1954		8.8	32	6	290		330	2	210		34			0.07			
EB585	1331	1500 Ft Sand	2/26/1958	247	7.7	26.5	4	59	0.6	114	8.6	7	0.1	52	196	0.09	0.35			
EB615	1420	1500 Ft Sand	4/1/1958	242	7	26.5	4	55	0.8		9.2	4.8	0.1	54	188		0.71			
EB615	1420	1500 Ft Sand	3/14/1972	260	7.6	26.5	16	60	0.6	127	8.4	4.8	0.4	48	224			0.33	0.15	
EB659	1295	1500 Ft Sand	4/1/1987	280	7.6	24	19	52	1.3	131	0.4	4.5	0.2		205			1.8	0.28	
EB686	1346	1500 Ft Sand	6/4/1973	297	8.9	27	4	71	0.3	148	10	3.4	0.2	25	248			0.05	0.01	
EB771	1739	1500 Ft Sand	8/9/1968	302	8		1	72	0.4	144	11	4.2	0.3	26	201	0.09		0.12		
EB771	1739	1500 Ft Sand	6/25/1974	297	8.4	31	8	70	0.3	129	9.8	3.1	0.3	30	202	0		0.04	0.01	
EB771	1739	1500 Ft Sand	5/1/1985	322	8.5	28	2	72	0.4	140	9.9	3.8	0.3	28	204			0.005	0.011	
EB771	1739	1500 Ft Sand	11/27/1990	320	8.8	24	0	70	1	148	5.2	2.3	0.4	32	205			0.025	0.02	
EB773	1395	1500 Ft Sand	1/29/1975	359	8.4		5	74	0.5	144	8.5	14	0.2	41	227			0.01	0.01	
EB777	1795	1500 Ft Sand	3/11/1965	319	8.5	26	4	75	0.5		9.2	3.2	0.5	35	237			0.2	0.03	
EB780B	1913	1500 Ft Sand	4/20/1965	2960	7.1		55	610	1.2		1.4	750	0.8	23	1620			0.11	0	Salt Water Intrusion
EB780B	1913	1500 Ft Sand	5/25/1967	1880	7.9		10	420	0.6	297	1.6	440	1	27	1070	0.14				Salt Water Intrusion
EB780B	1913	1500 Ft Sand	5/25/1977	1730	8.4		10	370	1.6	308	0.2	360	1	24	962			0.04	0.012	Salt Water Intrusion
EB782B	1681	1500 Ft Sand	4/22/1965	1430	7.8		16	290	0.8		0.4	340	0.2	24	798			0.21	0.02	Salt Water Intrusion
EB782B	1681	1500 Ft Sand	5/25/1967	1210	7.5		6	250		157	6.6	280	0.3	31	666					Salt Water Intrusion
EB782B	1681	1500 Ft Sand	5/26/1977	2030	8.3		82	390	1.6	141	5.6	530	0.3	25	1060			0.01	0.082	Salt Water Intrusion
EB783A	2179	1500 Ft Sand	6/22/1965	807	8.1		7	170	1.6		7.2	120	0.5	26	461			0.16	0.03	
EB783A	2179	1500 Ft Sand	6/1/1967	661	8.2		1	150	0.3		7.6	92	0.6	26	388	0.09				
EB789B	1721	1500 Ft Sand	6/25/1965	643	7.7		8	130	1.2		8.6	84	0.2	21	377			0.1	0	
EB789B	1721	1500 Ft Sand	5/24/1967	782	7.8		4	170	0.3		8.8	150	0.2	23	443	0.07				
EB789B	1721	1500 Ft Sand	5/26/1977	2670	8		65	510	2.6	150	1	720	0.2	18	1370			0.01	0.055	Salt Water Intrusion
EB792A	1831	1500 Ft Sand	7/14/1965	326	7.7	29	2	78	0.8		12	3.2	0.7	26	253			0.38	0	
EB807A	1713	1500 Ft Sand	5/6/1966	356	7.6		1	88	0.3		10	2.6	0.3	31	237			0.11		
EB807A	1713	1500 Ft Sand	5/27/1977	1310	8		9	270	1.1	182	8.2	280	0.2	25	711			0.01	0.032	Salt Water Intrusion
EB917	1736	1500 Ft Sand	10/24/1973	302	8.2	29	2	78	0.5	151	11	4	0.2	28	211			0.08	0.01	
EB918	1834	1500 Ft Sand	12/12/1973	302	8.3	31	3	76	0.3	148	12	2.4	0.3	19	192			0.06	0.015	
EB961	1541	1500 Ft Sand	7/7/1983	295	7.9	29	2	67	0.3	134	9.2	3.9	0.3	32	207			0.003	0.006	
EB963	1054	1500 Ft Sand	11/6/1975	229	7.1	24.5	9	50	1.2	100	7.8	4.5	0.1	53	179			0.16	0.07	
EB996	1374	1500 Ft Sand	7/7/1977	297	8.7	27.5	2	67	1.3	144	7.8	2.5	0.2	37	192			0.02	0.01	
EB1016B	1465	1500 Ft Sand	11/24/1980	301	8.8	29	4	71	0.4	144	11	2.1	0.3	29	209			0	0.02	
Average	1054 to 2179	1500 Ft Sand		923	8.1	28.4	18.1	200	1.1	162	7.3	192	0.4	31.4	539	0.07	0.30	0.16	0.04	

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	
EB68	1817	1700 Ft Sand	5/20/1944	287	8.4	30.5	3	67	3.4	137	8.6	5	0.3	30	200	0.05	0.04			
EB566	1280	1700 Ft Sand	1/5/1955	360	8	23	1	71	0.4		7.8	3.5	0.3	30	197		0.01			
EB804A	1950	1700 Ft Sand	3/4/1966	367	7.8		0	88	0.3		12	1.4	0.1	24	240			0.04		
EB873	1884	1700 Ft Sand	1/29/1975	307	9		14	72	0.4	146	8.7	3.9	0.2	30	198			0.01	0.01	
EB875	1277	1700 Ft Sand	5/18/1971	299	8.9		5	70	0.4		8.2	3	0.2	23	193	0.04		0.6		
EB994	1710	1700 Ft Sand	7/1/1977	239	8	29	5	53	1.6	111	11	3.2	0.2	62	193			0.1	0.02	
Average	1277 to 1950	1700 Ft Sand		310	8.4	27.5	4.7	70.2	1.1	131	9.4	3.3	0.2	33	204	0.05	0.03	0.19	0.02	

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn	
EB69	2141	2000 Ft Sand	5/20/1944	300	8.4	31.5	6	70	4.2	146	9.8	4	0.1	27	199	0.11	0.03			
EB70	2075	2000 Ft Sand	6/20/1944	288	8.4	31.5	5	66	3.8		10	3	0.1	27	195		0.03			
EB96	2254	2000 Ft Sand	1/29/1975	408	9.1		8	100	0.5	208	11	2.5	0.1	23	250	0.01				
EB304	1725	2000 Ft Sand	6/7/1955	209	7.4	27	22	38	1.7		6.3	5	0.2	58	177		2.7			
EB367	2061	2000 Ft Sand	1/10/1955	323	8	31.5	4	77	0.3		7.8	3	0.3	24	213		0			
EB372B	2000	2000 Ft Sand	2/9/1961		7.9		6	69	0.5		13	4.8	0.7	31	212		0.02			
EB396	1700	2000 Ft Sand	4/21/1945	234	7.7		19	46	2.4		8	4	0	25	163		1.7			
EB400C	2350	2000 Ft Sand	4/15/1947	701	8.6		8	160	6.9	328	8	8	2	22	401	0.05	0.05			
EB444	2172	2000 Ft Sand	9/26/1949	392	8	34.5	9	93	5.2		14	9	0.3	23	280		0.1			
EB444	2172	2000 Ft Sand	5/9/1951	383	9	34	4	91	2		11	5	0.3	24	241		0.23			
EB456	1895	2000 Ft Sand	5/9/1951	347	8.8	30	4	83	3.2	169	9	3.8	0.3	23	223	0.02	0.13			
EB550B	2102	2000 Ft Sand	9/12/1960	301	8.3	32	0	72	1.3		11	3.5	0.3	23	197		0.01			
EB575	2500	2000 Ft Sand	6/1/1955	1110	8.5	36	1	240	1.2		1.7	200	0.6	30	634		0.07			Salt Water Intrusion
EB575	2500	2000 Ft Sand	1/11/1960	1190	8.5		4	260	0.9		1.6	220	0.8	22	674		0.1			Salt Water Intrusion
EB774	2143	2000 Ft Sand	8/9/1968	292	7.8		2	69	0.3	139	10	3	0.2	22	189	0.02		0.14		
EB7789	2586	2000 Ft Sand	3/17/1965	1320	8.1	33.5	6	290	1		1.6	240	0.1	19	735			0.1	0.02	Salt Water Intrusion
EB7789	2586	2000 Ft Sand	5/25/1967	972	7.9		1	210	0.4		5.6	150	0.6	22	549					
EB7789	2586	2000 Ft Sand	5/24/1977	1030	8.8		0	230	1	277	2.8	150	0.6	18	615			0.1	0.01	Salt Water Intrusion
EB781	2286	2000 Ft Sand	4/22/1965	3600	7.7		100	700	2.3		11	1000	0.4	22	1940			0.09	0.16	Salt Water Intrusion
EB781	2286	2000 Ft Sand	6/1/1967	5280	7.6		180	1000	2.7		6.8	1700	0.3	21	2910					Salt Water Intrusion
EB781	2286	2000 Ft Sand	10/31/1977	6670	8.2		170	1300	8.4	235	10	2000	0.6	17	3540			0.1	0.045	Salt Water Intrusion
EB783B	2675	2000 Ft Sand	6/22/1965	2050	8.3		5	500	1.4		0	160	5	19	1250			0.1	0	Salt Water Intrusion
EB792B	2286	2000 Ft Sand	7/15/1965	393	7.8		3	93	1		10	3.2	0.1	21	255			0.48	0.01	
EB807B	2264	2000 Ft Sand	5/6/1966	386	7.8		3	94	0.4		11	2.8	0.3	21	251			0.24		
EB807B	2264	2000 Ft Sand	5/27/1977	375	8.1		0	92	0.6	190	11	3.2	0.3	21	258			0.01	0.01	
EB817	2284	2000 Ft Sand	5/13/1969	385	9.1	33	5	90	1.2	193	12	2.5	0.3	19	257			0.07	0.02	
EB878	2178	2000 Ft Sand	10/19/1971	289	9	31.5	2	75	0.3		8.4	3.6	0.2	24	201	0		0.09	0.02	
EB878	2178	2000 Ft Sand	1/29/1975	286	8.9		8	68	0.4	140	8.5	2.6	0.1	24	196			0.01	0.01	
EB878	2178	2000 Ft Sand	5/1/1985	291	8.6	29.5	2	64	0.3	136	8.9	3.4	0.2	23	171			0.01	0.007	
EB904	1876	2000 Ft Sand	6/2/1982		7.3		14	46	1.2		6.6	4	0.2	51	184			0.18	0.15	
EB1028	2238	2000 Ft Sand	5/20/1981	619	8.2		3	140	1	177	10	74	0.5	35	384			0.04	0.015	
EB1029	2043	2000 Ft Sand	6/23/1981	212	7.7	29.5	5	48	0.9	98	9.2	2.6	0.3	54	178			0.42	0.093	
Average	1700 to 2586	2000 Ft Sand		1021	8.2	31.8	19.0	205.4	1.8	187	8.3	187	0.5	26	566	0.04	0.40	0.14	0.04	

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB151	2658	2400 Ft Sand	5/9/1951	344	8.7	35.5	4	82	2.4		11	6.2	0.1	24	219		0.07		
EB294	2278	2400 Ft Sand	1/10/1955	337	8.9	34.5	1	84	0.4		8.9	4.9	0.2	19	215		0.04		
EB352	2413	2400 Ft Sand	6/22/1944	325	8.7	33.5	4	76	5	161	8.1	4	0.1	22	209	0.05	0.03		
EB384	1916	2400 Ft Sand	11/28/1944	383	8.2	30	10	71	3.7	155	7.9	4	0.2	26	209	0.05	0.12		
EB400A	2741	2400 Ft Sand	4/15/1947		8.4		9	390	10	849	0.2	8	2.8	24	948	0.11	0.37		
EB432	1942	2400 Ft Sand	6/4/1973	309	8.8	31	2	74	0.5	153	9.2	4.2	0.2	30	209			0.04	0.01
EB520	2088	2400 Ft Sand	7/3/1951	216	7.4	28	11	44	1.6	96	8.3	5.3	0	59	161	0.05	0.25		
EB578A	1861	2400 Ft Sand	3/8/1956	203	7.5	29	5	48	0.6		8.4	5.8	0.2	56	188		1.2		
EB718	2380	2400 Ft Sand	8/9/1968	292	7.8		6	72	0.6	147	8.6	4.5	0.2	22	197	0.02		0.04	
EB794	2709	2400 Ft Sand	7/30/1965	430	7.8	33	2	100	0.6	210	11	4.1	0.2	22	312	0.05		0.11	0.02
EB804B	2762	2400 Ft Sand	3/3/1966	447	7.8		6	110	0.3		12	1.2	0.3	23	284			0.18	
EB806B	2579	2400 Ft Sand	4/22/1966	358	7.4		10	83	0.5		11	1.4	0.2	21	225			0.14	
EB813	2536	2400 Ft Sand	1/29/1975	377	9.1		13	90	0.5	194	11	2.3	0.1	23	248			0.01	0.01
EB928	2375	2400 Ft Sand	1/29/1975	291	8.8		9	68	0.6	141	7.6	3.6	0.1	27	190			0.01	0.015
EB928	2375	2400 Ft Sand	7/7/1983	288	7.9	34	7	64	0.4	136	8	4	0.2	26	201			0.003	0.012
EB928	2375	2400 Ft Sand	5/1/1985	288	8.6	30.5	7	63	0.4	136	7.4	4.1	0.2	25	185			0.008	0.012
EB1025	2674	2400 Ft Sand	11/24/1980	424	8.6	35.5	5	100	1	203	11	5.4	0.3	24	289			0.03	0.023
EB1027	1926	2400 Ft Sand	4/1/1987	288	8.5	30.5	6	63	0.5	136	7.6	3.5	0.1		195			0.008	0.024
EB1032	2334	2400 Ft Sand	2/5/1982		7.7		16	50	1.3		7.2	4	0.3	45	184			0.1	0.075
EB1033	2138	2400 Ft Sand	6/2/1982		7.8		18	48	1		7.6	3	0.2	50	184			0.13	0.093
Average	1861 to 2762	2400 Ft Sand		329	8.2	32.1	7.6	89.0	1.6	209	8.6	4.2	0.3	30	253	0.06	0.30	0.06	0.03

Well #	Depth (Ft BGS)	Aquifer	Sample Date	Cond.	pH	Temp	THardness	Na	K	Alk (Field)	SO4	Cl	Fl	Silica	TDS	NO3	T. Iron	D. Iron	Mn
EB378	2777	2800 Ft Sand	12/22/1954	867	8.7	34.5	4	220	0.9		2.3	23	1.4	28	532		0.13		
EB468	2407	2800 Ft Sand	3/15/1948	373	9.2	33	4	86	0.4		12	2	0.4	23	243		0.05		
EB517C	2590	2800 Ft Sand	8/28/1952	626	8.6	35.5	3	150	0.8		6.7	24	0.8	25	386		0.09		
EB534	2804	2800 Ft Sand	1/10/1955	723	8.2	36.5	4	180	0.8		3.6	33	1.1	26	457		0.05		
EB539	2590	2800 Ft Sand	5/29/1957	448	8.9	32	4	110	0.5		9	5.8	1	28	279		0.03		
EB551	2300	2800 Ft Sand	1/5/1955	452	8.7	31.5	2	120	0.4	232	9	3.5	0.7	24	296	0.11	0.07		
EB568	2457	2800 Ft Sand	1/4/1955	284	7.6	34.5	2	90	0.4		9.4	3.2	0.6	22	236		0.08		
EB572	2511	2800 Ft Sand	4/10/1958	483	9.1	35	3	120	0.4		8.6	4.8	1.2	25	322		0.04		
EB578B	2132	2800 Ft Sand	9/30/1957	299	8.6		2				9	7					0.15		
EB578B	2132	2800 Ft Sand	2/4/1960	307	8.9	30.5	4	74	0.8		8.6	4	0.5	22	205		0.06		
EB578B	2132	2800 Ft Sand	1/24/1975	312	8.5	29.5	7	68	0.7	148	9.1	2.9	0.2	23	184			0.01	0.01
EB581	2590	2800 Ft Sand	5/9/1956	467	8.9	32	3	110	0.5		10	2.8	0.7	24	296		0.1		
EB588	2201	2800 Ft Sand	3/8/1956	271	8.4	31.5	13	63	1.1		9.2	5	0.2	26	191		0.06		
EB623	2652	2800 Ft Sand	4/26/1957	701	8.6		3	180	1		2.4	13	0.9	22	429		0.14		
EB647	1950	2800 Ft Sand	1/7/1958	514	9	26.5	0	130	0.6		8.2	2.5	0.7	17	316		0.07		
EB750	2643	2800 Ft Sand	1/29/1975	658	9		7	160	0.9	297	6.2	35	0.8	23	407			0.01	0.017
EB750	2643	2800 Ft Sand	5/1/1985	710	8.6	33.5	4	160	0.7	279	5.3	48	0.7	21	419			0.007	0.011
EB754	2368	2800 Ft Sand	11/8/1967	347	8.7	33	4	84	0.4		8.8	3.1	0.2	22	225			0.04	
EB770	2080	2800 Ft Sand	11/8/1967	456	8.5	31	1	110	0.3		9.6	3.1	0.7	20	277	0		0.05	
EB798	2647	2800 Ft Sand	8/18/1965	659	8.5		4	150	0.7		6.4	32	0.7	20	409			0.12	0.01
EB892A	2446	2800 Ft Sand	2/28/1974	376	9	33.5	3	95	0.4	179	13	5	0.2	22	242			0.02	0.01
EB1000	2926	2800 Ft Sand	12/18/1977	894	9		5	190	2	274	8.8	110	0.5	16	509			0.04	0.005
Average	1950 to 2926	2800 Ft Sand		510	8.7	32.6	3.9	126	0.7	235	8.0	16.9	0.7	22.8	327	0.06	0.08	0.04	0.01