Lake Pontchartrain Basin Foundation
Water Quality Monitoring Programs for Southeast Louisiana
Prepared for the
Senate Subcommittee on Transportation Safety, Infrastructure Security, and Water Quality hearing on "Protecting Water Quality at America's Beaches"
June 27, 2007

In July of 1962, the first "No Swimming" signs were posted because of high levels of pollution along Lake Pontchartrain's New Orleans shoreline. For the next three decades, Pontchartrain waters continued to be further degraded by a multitude of pollution sources including poorly treated and untreated sewage, agricultural runoff, urban runoff, and several industrial operations. The water quality became so bad that the state of Louisiana discontinued sampling of the lake in the late 1970's. By the 1980s, Lake Pontchartrain was literally a brown mess. Then, in 1989, as a result of public outcry to restore Pontchartrain, the Louisiana Legislature created the Lake Pontchartrain Basin Foundation (LPBF). The LPBF's mission is to coordinate the restoration and preservation of the water quality and habitats of Lake Pontchartrain and the entire 10,000 square mile Pontchartrain Basin. The LPBF acts as the public's voice and a catalyst to build partnerships among local, state, and federal agencies, businesses, agriculture, local universities, elected officials, and user groups to focus on the restoration of the Pontchartrain Basin.

The Pontchartrain Basin encompasses 20% of Louisiana's area, including 16 parishes and the state's two largest cities, New Orleans and Baton Rouge. The Basin is home to over two million citizens, about 40% of Louisiana's population. Topography ranges from rolling woodlands in the north to the highly urbanized metro New Orleans surrounding Lake Pontchartrain to coastal wetlands and barrier islands adjoining the Gulf of Mexico in the south. The 630 square mile Lake Pontchartrain (technically an inland bay because of tidal passes to the Gulf) immediately above New Orleans is the heart of the Basin.

As a result of numerous restoration programs and the efforts of many, in the last 18 years, Lake Pontchartrain's health has improved significantly. Water clarity began improving in the mid 1990's. Pelicans began returning to the lake in the late 1990's. Blue crab harvest increased. By 2000, Lake Pontchartrain appeared suitable for swimming again. Record size trout and tarpon are being caught in Pontchartrain. In the summer of 2005, just prior to Hurricane Katrina, over 20 manatees were sighted in Lake Pontchartrain Lake Pontchartrain's come back has become an icon for successful environmental restoration in Louisiana. Monitoring has been instrumental in Pontchartrain's recovery. Monitoring not only indicates the health of water, it also helps identify sources of pollution. A summary of Pontchartrain's monitoring programs follows.

Basin-Wide Water Quality Monitoring Program

The LPBF began monthly sampling of the lake in 1994. By 2000, it was apparent that water quality was improving. Thus, in January 2001, we initiated more intensive and frequent sampling with our Basin-Wide Water Quality Monitoring Program. The program has three goals:

1) Provide weekly water quality reports to the public;
2) Identify pollution sources; and
3) Share data with local, state, and federal agencies

Each week, we sample ten recreational sites utilizing EPA-approved methods. The parameters tested include fecal coliform and *Enterococci* bacteria levels, temperature, dissolved oxygen (DO), salinity (specific conductance), visibility/turbidity, and pH. We sample ten additional sites twice monthly for fecal coliform and *Enterococci* bacteria levels only. All parameters except bacteria are sampled *in-situ* (at the site). For bacteriological analysis, water samples are collected at each site and transported to an EPA-approved lab.

To disseminate this information widely, the LPBF has partnered with newspapers and television and radio stations. The Times-Picayune, the region's largest newspaper, publishes our water quality reports weekly on its weather page (on Fridays). Television and radio stations air the reports during weather and fish and game programs. The reports are also available on the LPBF website, www.saveourlake.org.

To date, the LPBF has collected over 3,500 water quality samples at the ten weekly sites. These data have shown that Lake Pontchartrain is suitable for primary contact recreation (with high fecal coliform and *Enterococci* levels observed only following rain events). With public access to the data, there has been a significant increase in utilization of the Lake for boating, fishing, swimming, and other water activities. In contrast to the health of Lake Pontchartrain, unfortunately, data indicates that many waterways on the lake's north shore (including St. Tammany and Tangipahoa Parishes) are impaired due to rapid growth and resulting overloads in sewage treatment facilities.

BEACH Program: While LPBF had been sampling the beach at Fontainebleau State Park (north shore of Lake Pontchartrain) since 2001, we began testing for the BEACH Program (as a contractor for the Louisiana Department of Health and Hospitals (LDHH)) in 2004. In 2007, the LDHH BEACH Program began preliminary water quality testing for Pontchartrain Beach in New Orleans (another site tested by LPBF since 2001). This area was the primary swimming beach for New Orleans in the 1950s and 60s. The BEACH Program monitoring is the first attempt by DHH to re-evaluate the water quality status of Pontchartrain Beach and re-examine the long-standing swimming advisory for the New Orleans lakefront.

Sub-Basin Pollution Source Tracking Program

To improve the health of rivers and streams discharging into Lake Pontchartrain (particularly those on the north shore), the LPBF developed the Sub-Basin Pollution Source Identification/Tracking Program in 2002. As its name describes, this program's goal is to locate and identify specific sources polluting rivers and bayous. Once sources are identified, we provide technical assistance to attempt to eliminate the pollution. This program was piloted on the Bogue Falaya and Tchefuncte Watersheds (St. Tammany Parish) and is currently underway on the Tangipahoa and Natalbany Watersheds (Tangipahoa Parish).

Water Quality Monitoring: Sites are monitored every two weeks for water temperature, dissolved oxygen, specific conductance, pH, turbidity, and fecal coliform and *E. coli* bacteria year round. Using the water quality data and land use patterns, the LPBF and its partners (Parishes, the Louisiana Department of Environmental Quality's (LDEQ) Small Business Assistance Program, the LDHH and others) track down fecal pollution sources.

Wastewater Treatment Plant Assistance: LPBF works with WWTP owners/operators to insure the plants are functioning properly. This helps reduce the amount of fecal bacteria entering the waterways. We work with the LDEQ Small Business Assistance Program to offer education, technical support, and help with permits to the plant owner/operators.

Dairy Assistance: LPBF works with Natural Resource Conservation Service for installation, maintenance, and closure of dairy waste lagoons. This is important because it is estimated that one cow equals about 15 people in terms of waste. We produce educational materials, promote the use of best management practices, and provide support to farmers with their waste lagoons.

Outreach & Education: Outreach is provided in several ways:

- Technical assistance to WWTP and dairy lagoon owners/operators.
- Public service announcement (PSA) on local television stations.
- In partnership with LDEQ and LDHH, we produced and distributed brochures to educate homeowners on the care and maintenance of home WWTPs.
- Presentations at conferences, publications in journals, and publications on the LPBF website.

To date, this program has collected more than 3,600 water quality samples at 120 sites and provided technical assistance to more than 500 WWTPs and 100 dairies. This has led to reductions in fecal pollution on more than 10 waterways. In 2005, the LDEQ selected the Sub-Basin Program as a model for wastewater surveillance activities and switched to a results-based (reduction in fecal loading) program. Most recently, the LPBF is expanding our partnership with Tangipahoa Parish, incorporating water quality issues into the parish's current land use planning effort.

We intend to continue to partner with private, local, and state entities to coordinate restoration efforts. The LPBF's ultimate program goal is to meet the Clean Water Act's "swimable" criteria for all Pontchartrain Basin water bodies. Monitoring (such as the Beach Program) is critical to reduce pollution and achieve national "swimable and fishable" goals.

Respectfully submitted,

Carlton Dufrechou
Executive Director
Lake Pontchartrain Basin Foundation
P.O. Box 6965
Metairie, Louisiana 70009
(504) 836-2215
carlton@saveourlake.org



Water Quality
LPBF is committed to keeping the public informed about the health of our Basin and Lake Pontchartrain. We are performing rigorous testing of the Lake and water bodies around the Basin. Data is available through our Water Quality page and several local media outlets.

Weekly Water Quality Report

The Lake Pontchartrain Basin Foundation began an EPA approved intensive water quality monitoring in August 2000, in an effort to educate the public about water quality and to lend evidence for the hopeful retraction of current swimming advisories along the shore of Lake Pontchartrain. Ten historically recreational sites are sampled on a weekly basis and another ten sites of interest are sampled on a monthly basis. Several water quality parameters, including fecal coliform bacteria levels, are tested. The weekly sites are tested every Tuesday morning for data to be disseminated on Thursdays and Fridays (due to bacteria analysis- a process that takes 48 hours).

Check out the Office of Public Health's web page on: Health/Fish Consumption/Advisories for Mercury.

Weekly Sampling Sites





This Week's Numbers

Please note that Lincoln Beach is inaccessible and Bayou St. John has replaced it for the time being

This report is based on conditions found on the sampling day (6/19/2007) only.

#	Site	Fecal Coliform (MPN)	Water Temp (F)	Water Visibility (feet)	Salinity (ppt)	Dissolved Oxygen (mg/L)
1	Laketown	8	83.3	0	4.8	6.23
2	Bonnabel Boat Launch	8	83.4	0	5.0	6.25
3	Old Beach	2	83.6	0	4.9	6.25
4	Pontchartrain Beach	50	84.9	0	5.1	5.16
5	Bayou St. John	900	82.5	0	5.4	5.77
6	Bogue Falaya	130	79.7	2.46	0.0	6.54
7	Tchefuncte River	30	84.5	3.28	3.2	5.93
8	Bayou Castine	500	83.4	1.64	5.2	5.24
9	Fontainebleau Beach	900	80.6	0.82	5.4	6.87
10	Northshore Beach	170	80.4	0.82	7.4	6.65

days, the runoff could pollute the Lake.

What Do The Numbers Mean?

The following criteria are based on the Louisiana Department of Environmental Quality

Fecal Coliform	Salinity	Dissolved Oxygen
Mean probable number (MPN) of colonies of bacteria per 100 milliliters of water	Measured in parts per thousand (ppt) of water.	Measured in milligrams per liter (mg/l) of water.
Primary Contact: 0 100 200 300+	0 17.5 35	0 3 4 5 10

Sub-Basin Pollution Source Tracking Program- Tangipahoa and Natalbany Watersheds

