

2007

COMPREHENSIVE

SANITARY SURVEY

OF

ALABAMA'S AREA I

SHELLFISH GROWING WATERS

IN

MOBILE & BALDWIN COUNTIES

Survey Dates: 2006-2007-2008

Revision Dates: May - October, 2008

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Definitions

14/43 STANDARD means the NSSP bacteriological water quality standard for fecal coliform bacteria for water approved for direct market of shellfish. The median or geometric mean shall not exceed 14 MPN/100 ml of water, and MPN values of water shall not exceed 43 MPN/100 ml more than 10% of the time.

AMPC means Above Management Plan Conditions. AMPC are those conditions when fecal coliform have historically been demonstrated to be elevated above the 14/43 as determined by regression analysis.

APC means Adverse Pollution Conditions. APC are those conditions when fecal coliform have historically been demonstrated to be elevated.

APPROVED is a shellfish harvesting area classification of the National Shellfish Sanitation Program for the harvest of shellfish for direct consumption. A survey indicates that the approved waters are removed from actual and potential pollution sources so that fecal material, pathogenic microorganisms, and poisonous or deleterious substances are not present in dangerous concentrations. At least fifteen of the most recent samples collected at each station during adverse pollution conditions are used to determine compliance with the 14/43 fecal coliform standard. An approved area must meet the 14/43 fecal coliform standard at all times the area is open to shellfish harvesting, including during adverse pollution conditions.

CONDITIONALLY APPROVED is a shellfish harvesting area classification of the National Shellfish Sanitation Program for the harvest of shellfish for direct consumption. A survey indicates that poisonous and deleterious substances are not present, microbiological pollution is intermittent and conditions associated with the release, persistence, and distribution of bacterial pollution are known. At least fifteen (THIRTY) of the most recent samples collected at each station during ALL TYPES OF SAMPLING conditions are used to determine compliance with the 14/43 fecal coliform standard. The survey must clearly demonstrate that the area will meet approved area classification criteria when the area is used as a source of shellfish for direct market.

CONDITIONALLY RESTRICTED is a shellfish harvesting area classification of the National Shellfish Sanitation Program. A survey indicates that the area is not so contaminated with concentration levels of poisonous, deleterious, or microbiological substances that shellfish consumption would not be hazardous following harvest and subsection to a suitable and effective treatment process of relay or depuration. Since bacteriological pollution is intermittent, the survey must define the conditions associated with release, persistence, and distribution of bacterial pollution. At least fifteen of the most recent samples collected at each station during adverse pollution conditions are used to determine compliance with the 88/260 fecal coliform standard. The survey must clearly demonstrate that the area will meet restricted area classification criteria when the area is used as a source of shellfish. Shellfish harvesting from conditionally restricted areas is allowed only by special license and requires State approved monitoring.

DATE means date that samples are collected.

FC means fecal coliform bacteria (MPN/100 ml for water, MPN/100 g for shellfish meat).

FDA means the U.S. Food and Drug Administration.

HARVEST means removing shellfish from shellfish harvesting areas and its placement on or in a manmade conveyance or other means of transport.

ISSC means the Interstate Shellfish Sanitation Conference.

LOGFC means log(base 10)-transformed fecal coliform value.

ML means milliliter.

MPC means Management Plan Conditions where fecal coliform have not been historically demonstrated to be elevated above the 14/43 STANDARD; as determined by previous analysis.

MPN means Most Probable Number. MPN is a statistical estimate of the number of bacteria.

NSSP means the National Shellfish Sanitation Program.

PRODUCT-MOMENT CORRELATION is a statistical procedure that measures the closeness of linear relationship between two variables.

PROHIBITED is a shellfish harvesting area classification of the National Shellfish Sanitation Program. A survey indicates that sampling results indicate fecal material, pathogenic microorganisms, or poisonous or deleterious substances are consistently or unpredictably present in dangerous concentrations, or the shoreline survey identifies actual or potential pollution sources of high magnitude which may affect the growing area. No shellfish may be harvested from prohibited areas for human consumption.

RANK CORRELATION is a statistical procedure that measures the degree of association between the ranks of two data sets, without considering magnitude of the data values.

REGRESSION is a statistical procedure that defines an equation of a line through a set of paired data points, such that the sum of the squares of the vertical distances from the data points to the line is minimized.

RESTRICTED is a shellfish harvesting area classification of the National Shellfish Sanitation Program. A survey indicates that the area is not so contaminated with poisonous and deleterious substances that the consumption of shellfish would not be hazardous after relaying and/or undergoing a controlled purification process. At least fifteen of the most recent samples collected at each station during adverse pollution conditions are used to determine compliance with the 88/260 fecal coliform standard. The bacteriological water quality of every station in the restricted area must meet the 88/260 standard. Shellfish harvesting from restricted areas is allowed only by special license and requires State approved monitoring.

RIVER STAGE means documented height of the Mobile River as gauged by the Army Corp of Engineers at Barry Steam Plant in Bucks, Alabama .

SHELLFISH means edible species of oysters, clams and mussels.

SHELLFISH HARVESTING AREA means the water extents of an area classified by the Alabama Department of Public Health's Administrative Code for the harvest of shellfish.

SHORELINE SURVEY AREA means the water and land extents where actual or potential pollution sources are determined to impact water quality of the shellfish harvesting area.

TIDE means the tidal stage when samples are collected.

UNCLASSIFIED is a shellfish harvesting area classification. Areas are designated Unclassified in the absence of a comprehensive shellfish harvesting area survey. No shellfish may be harvested for human consumption from Unclassified areas.

INTRODUCTION – AREA I

Shellfish are an important aquatic species with great economic value. (appendix: Table I-1) Shellfish are filter-feeding mollusks usually found abundantly in Alabama's subtidal coastal waters. One shellfish may filter up to 400 gallons of water per day while feeding. Shellfish retain and concentrate up to 100 fold much of the suspended and dissolved materials, including microorganisms, chemical contaminants, bacteria and viruses. They are passive vectors of enteric diseases, including typhoid, hepatitis and salmonellosis. Excluding the shell, the entire animal including the gastrointestinal tract is consumed. If contaminated, shellfish present a potential health hazard to the consumer since they are often eaten raw or partially cooked.

Alabama is a member of the Interstate Shellfish Sanitation Conference (ISSC), a cooperative, voluntary association of the states; U.S. Food and Drug Administration (FDA); National Marine Fisheries Services (NMFS); Environmental Protection Agency (EPA); and the shellfish industry. The ISSC meets every other year to develop and revise methods of shellfish sanitation for adoption by the Conference under guidance from FDA and the National Shellfish Sanitation Program (NSSP).

FDA's responsibilities include reviewing each state's shellfish control program to determine conformity with the NSSP. The FDA incorporates changes into the NSSP Model Ordinance, which defines the standards and guidelines used nationally for the classification of shellfish harvesting areas. NMFS and EPA responsibilities include acting as consultants to the ISSC.

State responsibilities include adopting laws and regulations for sanitary control of the shellfish industry, formulating comprehensive shellfish harvesting area surveys, conducting laboratory investigations, and adopting controls to ensure that shellfish are grown, harvested, and processed in a safe and sanitary manner. The Shellfish Sanitation Rules of the State Board of Health, Bureau of Environmental Services, Division of Food, Milk, and Lodging, Chapter 420-3-18, were revised and adopted on November 19, 2003 and became effective on December 25, 2003. The National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish, 2001 Revision, was simultaneously incorporated by reference and made a part of Alabama's Shellfish Sanitation Rules. These documents contain the criteria applied to Alabama's shellfish growing areas for classification and management purposes.

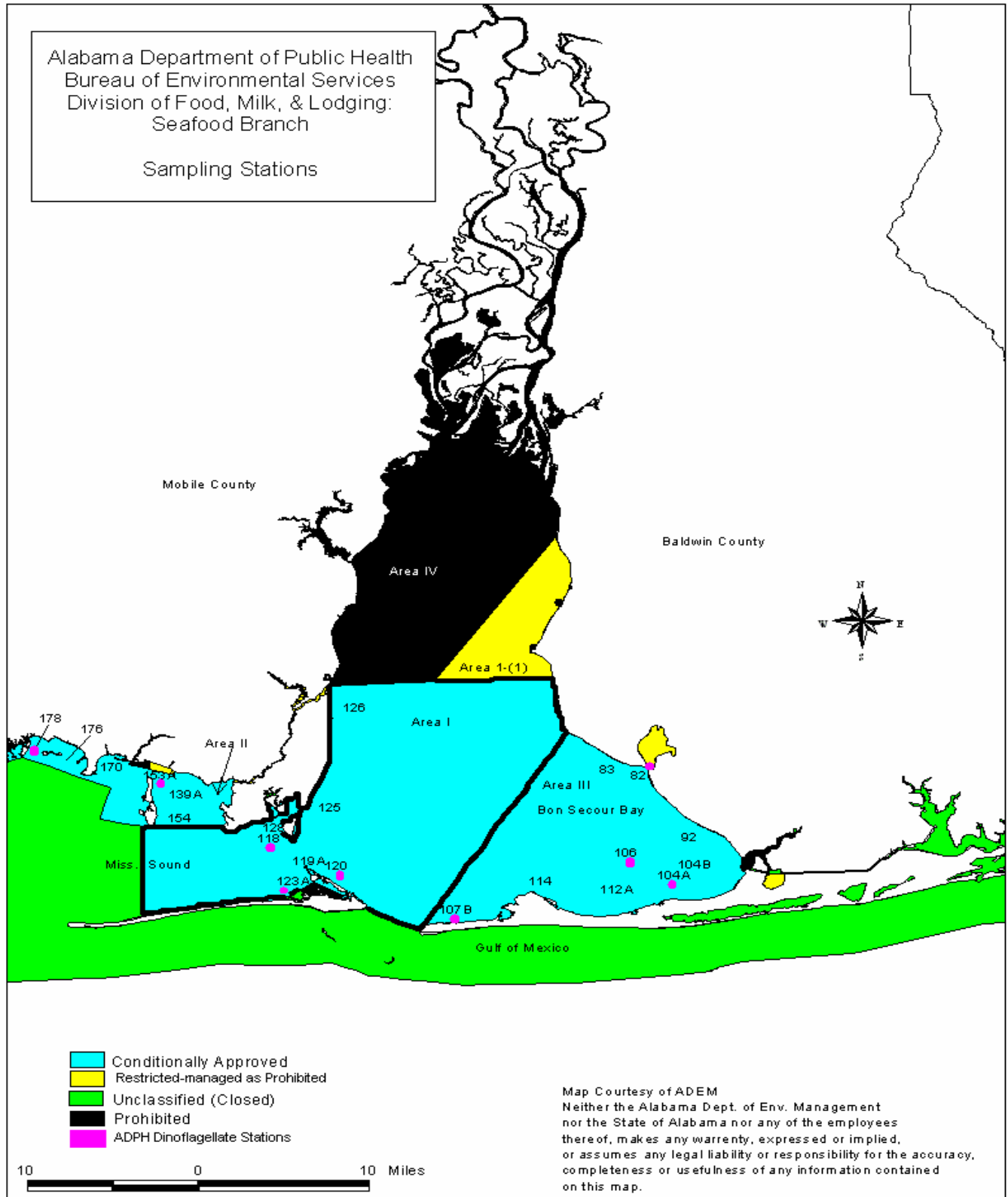
Shellfish industry's responsibilities include cooperating with control authorities by obtaining shellfish only from safe sources, maintaining sanitary operating conditions and practices, and keeping and making available to control authorities records documenting the origin and disposition of all shellfish.

This comprehensive survey is an evaluation and report of all environmental factors, including actual and potential pollution sources which have an impact on the water quality of the shellfish harvesting areas of the state of Alabama. It includes a shoreline survey, an evaluation of the effects of any meteorological, hydrodynamic, and geographic characteristics on the growing areas; a survey of bacteriological water quality, and an analysis of the data. It is the basis for the classification and management of the area as conditionally approved. This classification has been in effect since 1992 and remains the same as a result of routine updates, reviews, and incorporated evaluations of recent information. This survey will be updated through a triennial evaluation and an annual review to assure that the data is current and the classifications remain appropriate. This survey will expire and another complete survey will be performed within twelve years.

CHAPTER II.A. DESCRIPTION OF GROWING AREAS

There are four designated Alabama shellfish growing areas in Mobile Bay; Area I which includes Area I-1 (classified Restricted and managed as Prohibited), Area II, Area III, and Area IV (classified as Prohibited),

LOCATION MAP SHOWING GROWING AREAS



II.B. DESCRIPTION OF AREA I

Area I is classified as **Conditionally Approved**. The northern boundary of Area I is a line extending in an eastward direction from the south shore of East Fowl River at the mouth to East Fowl River Channel Marker No.“2”, then in an eastward direction to Marker No.“51” at the Mobile Ship Channel, then in a northeastward direction to Daphne.

The eastern boundary of Area I is a line that extends from the westernmost tip of Fort Morgan Peninsula to Mullet Point.

The western boundary of Area I is a line that extends from Barron Point westward to the southern tip of Isle Aux Herbes (Coffee Island), then westward to Marker No.“17” at Bayou La Batre Ship Channel, then due south to Dauphin Island.

CLASSIFICATION EXCEPTIONS TO AREA I

1. The area lying south of a line extending from Marker No.“51” at the Mobile Bay Ship Channel, then in a northeastward direction to Daphne. The southern boundary is a line extending due east from Marker No.“51” at the Mobile Bay Ship Channel to intersect the beach. This portion of Area I is designated Restricted.
2. That portion of waters extending 1,000 feet from the Fairhope Sewage Treatment outfall. This portion of Area I is designated Prohibited.
3. That portion of waters extending 1,000 feet from the mouth of the cove containing the marina at the Marriott Grand Hotel. This portion of Area I is designated Prohibited.
4. Access canals to Heron Bay, west of and adjacent to Alabama Highway 193. This portion of Area I is designated Prohibited.
5. That portion of Aloe Bay and adjoining waters, lying south of a line extending eastward from the northeast corner of the Dauphin Island Airstrip to the marked bridge piling (at Bent Cap #AL-P14 54-C) on the west side of Dauphin Island Bridge where it crosses the northwest portion of Little Dauphin Island, then extending south along the bridge to Chaugae Point on Dauphin Island. This area also includes all waters 1,000 feet north of a line extending from the northwest corner of the Dauphin Island Airstrip to the north end of Port Royal Street at Lafitte Bay. This portion of Area I is designated Prohibited.
6. That portion of Dauphin Island Bay and adjoining waters lying south of a line extending southeastward from the marked bridge piling (at Bent Cap #AL-P14 54-C) on the east side of the Dauphin Island Bridge where it crosses the northwest portion of Little Dauphin Island, to Dauphin Island Channel Marker No. “14” at Confederate Pass. This portion of Area I is designated Prohibited.
7. All of Quivera Bay, all of Polaris Lagoon, all of Lafitte Bay, all of Port Royal Lagoon and all of Graveline Bay including Bayou Heron Canal/Salt Creek. This portion of Area I is designated Restricted.
8. The following bays and canals adjoining Dauphin Island Bay are Unclassified, including but not limited to: Indian Bay, Indian Canal, Buchanan Bay, Confederate Pass, British Bay, Columbia Bay, Colony Bay, Spanish Bay, Barcelona Bay, Government Cut, and Billy Goat Hole.

II.C. CLASSIFICATION HISTORY - GROWING AREA I

The conditional management plan for Area I is based on determinations made from regression analyses performed in 1991. A conditional management plan document entitled *A Management Plan for Area I and II of Mobile Bay*, dated July 26, 1991 describes how the eight foot river stage at the Barry Steam Plant on the Mobile River was selected to be the management criteria. Data used in this document to classify Area I came from bay water samples collected from the original Area II /II-C (now Area I) during the period from 1978-1991. A total of 1,024 samples were collected during all river stages and that data was analyzed for the relationships between fecal coliform counts, and high and low river stages, which reflected predictive positive probability conditions of high fecal coliform counts (defined as ≥ 14) existing when high river stages (defined as ≥ 8) were present.

Conditional management plans are required to include performance standards, discussions, and data supporting these performance standards. The performance standards are the environmental conditions identified for the closure and reopening of the growing area. Water and/or oyster sample results are compared to performance standard levels, which in turn, results in the appropriate action being taken, closure or subsequent reopening of the harvest area.

Other criteria for area closures included any pollution source(s) causing the performance standards to fall below acceptable limits, whether it be fecal coliform, marine biotoxins, or other deleterious substances.

The original survey for Alabama's Management Plan was conducted by the Alabama Department of Public Health-Seafood Branch in 1991. This survey superceded a November 20, 1990 fecal coliform monitoring plan. The 1991 survey resulted in the present conditional management plan where closure (for predictive high fecal samples being ≥ 14) was predominantly based on river stage (reaching eight feet at Barry Steam Plant). Annual and Triennial Reevaluation sanitary survey update reports based on the *NSSP Model Ordinance* requirements are on file with ADPH Seafood Branch (1995-2006). The previous comprehensive sanitary survey of Mobile Bay's shellfish growing waters was complete in 1992.

II.D. GENERAL AREA MANAGEMENT PLAN – GROWING AREA I

Temporary closures for Conditionally Approved harvest areas are based on trigger points which are representative of conditions that exist when shellstock are most probably unsafe for human consumption. The present management plan closes a shellfish harvesting area during any of the following conditions: 1) when there is discharge or spillage of any substance that is considered hazardous to public health, 2) when there is the presence of biotoxins in concentration levels deemed to be detrimental to the public health, 3) when the stage of the Mobile River reaches eight (8) feet at Barry Steam Plant, Bucks, Alabama as measured and reported by the Army Corps of Engineers, Mobile District Water Information Center, or 4) any other event such as a tropical storm, hurricane, tidal surge, etc. that could pose any significant potential public health threat. Closures resulting from discharges or spillage of hazardous substances and unusual weather events (tropical storms, hurricanes, heavy rains greater than 5 inches) are defined as Emergency Closures.

II.E. PROCEDURES FOR CLOSURE – GROWING AREA I

1) Hazardous discharge or spillage of any substance which could adversely affect shellfish growing waters would be reported to the Seafood Branch by any one of the following agencies: Alabama Dept. of Environmental Management (ADEM), the U.S. Coast Guard, or the U.S. Army Corps of Engineers. ADPH-Seafood Branch would then notify ADPH-Montgomery who would actually issue the

Closure Order. ADPH-Seafood would then contact ADCNR-MRD (who would physically enforce the *Closure Order*), Alabama's FDA Shellfish Specialist, the Baldwin and/or Mobile County Health Department, and the ISSC. All correspondences will transpire through contacts made by telephone, fax, radio, and/or email. ADPH will continue to answer any phone calls from the general public about the closure.

2) The presence of harmful biotoxins in shellfish growing waters and/or oysters would be reported by ADPH Mobile Laboratory according to the procedures in the *Alabama Harmful Algal Bloom Response Plan 2008*. The lab results would be distributed to State, Local, and Federal Agencies. Once ADPH-Seafood Branch and ADPH Central Office receives results of probable biotoxin contamination, they both would coordinate to prepare for further event monitoring and proceed to area closure protocol. All correspondences will transpire through contacts made by telephone, fax, radio, and/or email. ADPH will continue to answer any phone calls from the general public about the closure.

3) Whenever the Mobile River stage nears 8', particularly during a heavy rain event (according to the U.S. Army Corps of Engineers' web-page or phone information line), ADPH-Seafood will continue to monitor the river stage. The Seafood Branch notifies ADCNR-MRD that the river stage is nearing 8' and probable closure is likely. If the river stage rises above 8', ADPH issues a *Closure Notice and Order*, and contacts ADCNR-MRD by telephone, fax, or radio, so they can enforce the order. Also, Alabama's FDA Shellfish Specialist, the Baldwin and/or Mobile County Health Department, and the ISSC are notified about the closure. ADPH makes public closure notifications via media outlets, phone communications, and a press release posted on the ADPH web page. The Seafood Branch will continue to answer any phone calls from the general public about the closure.

4) A severe tropical storm or hurricane in the region necessitates the monitoring of NOAA's weather services. A *Closure Order* is issued whenever there is a *Hurricane Warning* or *Mandatory Hurricane Evacuation Order* issued by the State. ADPH notifies ADCNR-MRD by telephone, fax, or radio and then issues a *Press Release* and *Closure Order*. The Alabama FDA Shellfish Specialist, local health departments and the ISSC are notified by phone, fax, or email. ADPH will continue to answer any phone calls from the general public about the closure.

II.F. PROCEDURES FOR REOPENING – GROWING AREA I

1) The seawater and/or resident shellfish in the growing area are sampled by the Seafood Branch. When the seawater sample results show that the 14/43 fecal coliform standard is met and the shellfish meet the average fecal coliform level found in shellfish prior to the event, (according to Alabama's *Guide for the Control of Molluscan Shellfish* and the *NSSP Model Ordinance* guidance documents), and examination of the environmental conditions determines the pollution event has ended, the harvesting area will be reopened (appendix Table II-1). A *Press Release* and *Open Order* will be issued by ADPH-Central Office and/or ADPH-Seafood Branch who will also notify the FDA Shellfish Specialist, the ISSC, and the mayor of Bayou La Batre via phone, fax or email. For enforcement reasons, ADCNR-MRD will be notified by phone, fax, or email prior to the reopening order being issued. ADPH will continue to answer any phone calls from the general public about the reopening.

2) Following a Harmful Algal Bloom event, the harvesting waters will be reopened after the area is sampled by the Seafood Branch and the following criteria has been met: the performance standards established in the management plan are again fully met (see *Alabama HAB Response Plan*, Version 6.08.02 on file); the flushing time for dissipation of the bloom is adequate; a time interval has elapsed which is sufficient to permit reduction of the toxic concentration levels which will be exhibited by shellfish sample results and mouse bio-assays. A *Press Release* and *Open Order* will be issued by ADPH-Central Office and/or ADPH-Seafood Branch who will also notify the FDA Shellfish Specialist, the ISSC, and the mayor of Bayou La Batre via phone, fax or email. For enforcement reasons, ADCNR-MRD

will be notified by phone, fax, or email prior to the reopening order being issued. ADPH will continue to answer any phone calls from the general public about the reopening.

3) ADPH-Seafood Branch monitors the Army Corps of Engineers web page for current and predicted river readings. When the Mobile River Stage falls below 8', which is shown by previous studies to be enough allowable time for shellfish to properly purge, ADPH-Seafood samples the shellfish growing area. If the sample results show that the 14/43 fecal coliform standard is met, the harvest area will be reopened. A *Press Release* and *Open Order* will be issued by ADPH-Central Office and/or ADPH-Seafood Branch who will also notify the FDA Shellfish Specialist, the ISSC, and the mayor of Bayou La Batre via phone, fax or email. For enforcement reasons, ADCNR-MRD will be notified by phone, fax, or email prior to the reopening order being issued. ADPH will continue to answer any phone calls from the general public about the reopening.

4) The reopening procedure for a *Hurricane Closure* begins once the warning and evacuation warnings have expired. The U.S. Coast Guard will first open the bay for boat traffic. Then ADPH will conduct seawater and shellfish sampling in the growing area. If the seawater sample results show that the 14/43 fecal coliform standard is met, and the shellfish sample results show that the shellfish meet the average fecal coliform level in the shellfish prior to the emergency closure the harvest area will be reopened. A *Press Release* and *Open Order* will be issued by ADPH-Central Office and/or ADPH-Seafood Branch who will also notify the FDA Shellfish Specialist, the ISSC, and the mayor of Bayou La Batre via phone, fax or email. For enforcement reasons, ADCNR-MRD will be notified by phone, fax, or email prior to the reopening order being issued. ADPH will continue to answer any phone calls from the general public about the reopening.

II.G. CLOSINGS AND OPENINGS-AREA I

2007 – Closed 4 working days

2006 – Closed 16 working days

2005 – Closed 48 working days

2004 – Closed 40 working days

2003 – Closed 68 working days

2002 - Closed 15 working days

2001 – Closed 39 working days

(For details see Appendix table II-2)

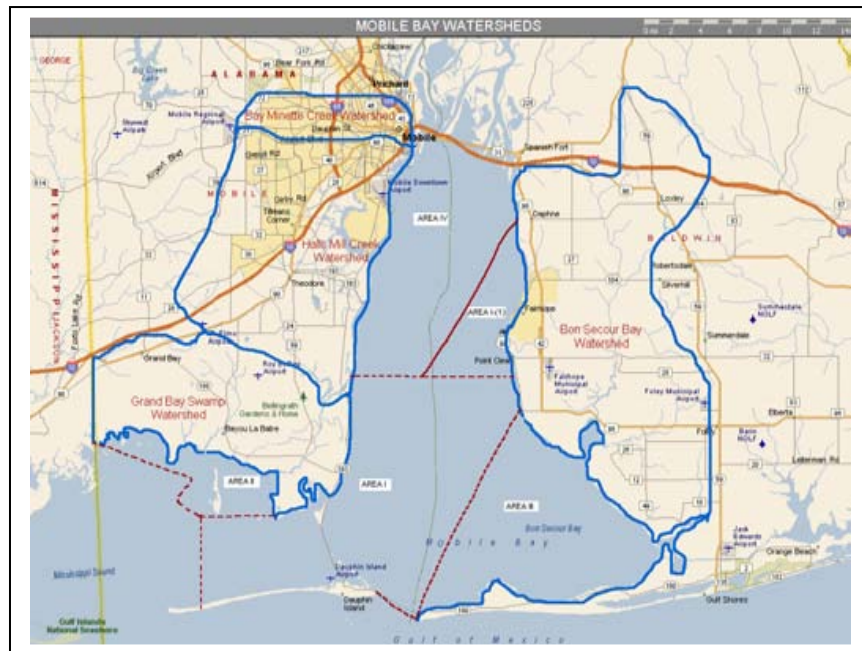
CHAPTER III. POLLUTION SOURCE SURVEY - AREA I

Shellfish harvesting areas classified as approved, conditionally approved, restricted, or conditionally restricted must be sufficiently removed from sources of pollution in order to prevent the harvest of potentially contaminated shellfish. The results of geographic, pollution source, and hydrographic surveys complement water quality studies in developing classifications. Drainage patterns, pollution source locations, and water circulation are evaluated to establish water quality stations. Water quality sample results are generally useful in characterizing the effects of actual and potential point and non-point pollution sources. However, certain conditions, such as the discharge of human waste from boats in marinas or interruption in chlorination of wastewater treatment plant effluent, warrant classification based primarily or exclusively on pollution source survey results.

The impact as direct or indirect was identified for pollution sources adversely impacting the growing area. A pollution source having direct impact was defined as any waste discharge which has immediate impact on the growing area. A pollution source having indirect impact was defined as any waste discharge which lacks immediate impact on the growing area, because the waste discharge reaches the growing area in a roundabout way.

The pollution source survey for Growing Area I was conducted on August 22, 2008 by Seafood staff personnel, Jeff McCool and Chris Collins.

(Drainage Systems)



A.1. Domestic Wastewater Treatment Plants

A.2. Septic Systems

A.3. Marinas and Moorings

A.4. Marine Biotoxins

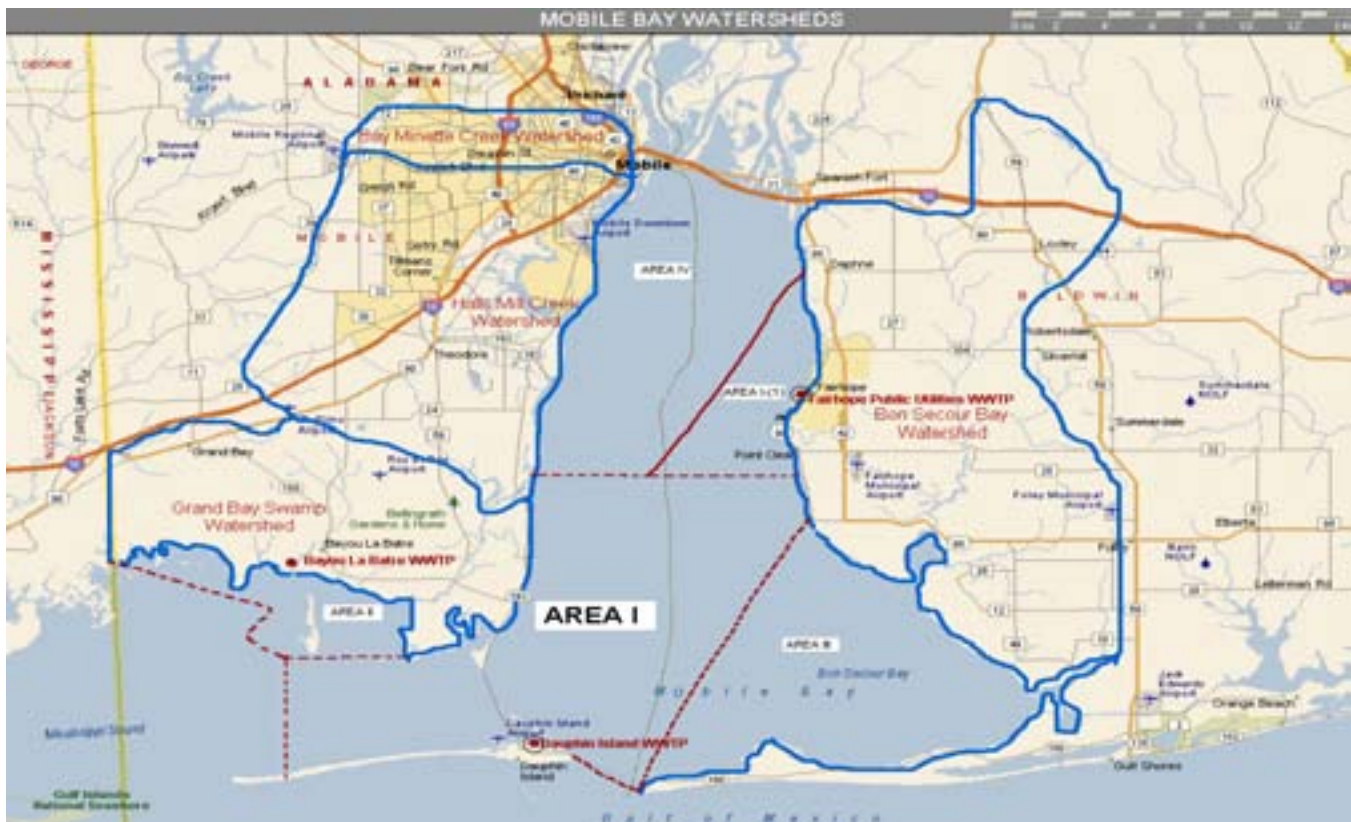
A.5. Gas Platforms

III.A.1. DOMESTIC WASTEWATER TREATMENT PLANTS – AREA I

There are two domestic wastewater treatment plants (WWTP) located in the shellfish harvesting area, Dauphin Island WWTP, in Area I, and Fairhope Public Utilities WWTP, in Area I-(1). Both have established prohibited zones (1,000 foot radii) around their outfalls, even though Fairhope WWTP is located in a body of water that is managed as prohibited and remains in closed status.

The Alabama Department of Environmental Management (ADEM) is responsible for monitoring the sewage treatment plants in Alabama. The impacts of domestic wastewater treatment plant systems includes checking for elevated levels of wastewater entering the growing area(s), by checking the WWTPs collection systems, plant design and operation, and effluent and sludge disposal. In the rare event that tropical storms and/or hurricanes cause coastal flooding or interruptions in lift station functions, emergency closures of the growing area are applied as appropriate. Dauphin Island and Fairhope WWTP's were inspected by ADEM on May 21, 2008. Results of site evaluations and review of monthly operating reports are summarized in the following table.

WWTP	Flow MGD	Type	Disposal	Impact
Dauphin Island	0.98	Secondary	Outfall	Some
Fairhope	4.00	Secondary	Outfall	None



EXISTING WASTEWATER TREATMENT FACILITIES INVENTORY
SOUTH ALABAMA REGION

COUNTY: Mobile
DATE OF SURVEY: 5/21/08
NPDES PERMIT NO.: AL0050547

GENERAL INFORMATION

FACILITY: Dauphin Island WWTP
PHYSICAL ADDRESS: LeMayne Drive
MAILING ADDRESS: P.O. Box 400 Dauphin Island, AL 36528
PRIMARY CONTACT PERSON: Vaile Feemster
PHONE: (251) 861-2363
LOCATION (LATITUDE/LONGITUDE): 30° 15' 41" N / 88° 06' 52" W
EXISTING DEMAND (MGAL/DAY): 0.32
EXISTING CAPACITY (MGAL/DAY): 0.98
AREA SERVED: Dauphin Island
TOTAL NUMBER OF CUSTOMERS: 1767
RESIDENTIAL: _____
NON-RESIDENTIAL: _____
TYPE OF TREATMENT: Secondary
METHOD OF SLUDGE DISPOSAL: Class A Land application Mobile Co.
EFFLUENT RECEIVING WATERS: Mississippi Sound
TREATMENT SYSTEM PROBLEMS/FUTURE PLANS:

EXISTING WASTEWATER TREATMENT FACILITIES INVENTORY
SOUTH ALABAMA REGION

COUNTY: Baldwin
DATE OF SURVEY: 5/21/08
NPDES PERMIT NO.: AL0020842

GENERAL INFORMATION

FACILITY: Fairhope public utilities WWTP
PHYSICAL ADDRESS: 300 North Church St.
MAILING ADDRESS: P.O. Box 429 Fairhope, AL 36533
PRIMARY CONTACT PERSON: Dan McCrory
PHONE: (251) 990-0120
LOCATION (LATITUDE/LONGITUDE): _____
EXISTING DEMAND (MGAL/DAY): 1.85
EXISTING CAPACITY (MGAL/DAY): 4
AREA SERVED: Fairhope ; Pont Clear to Hwy 1
TOTAL NUMBER OF CUSTOMERS: ~ 8000
RESIDENTIAL: _____
NON-RESIDENTIAL: _____
TYPE OF TREATMENT: Secondary
METHOD OF SLUDGE DISPOSAL: Class A, Land application in Theodore
EFFLUENT RECEIVING WATERS: Mobile Bay
TREATMENT SYSTEM PROBLEMS/FUTURE PLANS:
They were considering building an additional plant.

III.A.2. SEPTIC SYSTEMS – AREA I

The impact of septic systems on the shellfish harvesting area has been evaluated yearly. The most recent physical shoreline survey was conducted on August 22, 2008 by Seafood staff personnel, Jeff McCool and Chris Collins.

Soil suitability is of major importance for septic systems to function adequately. Some areas of the shoreline have severe limitations for treatment of waste in their drain fields. These soil conditions indicated that the capacity for disposal of domestic waste was limited. The Mobile County Health Department (MCHD) is responsible for evaluating the lots with severe limitations. The on-site treatment systems are designed and certified by a registered engineer prior to any new system being installed or for any repair of an existing system. The attached report indicates MCHD’s information logs about the on-site systems located in the Area I shoreline.

Septic systems were identified as either having a direct impact if the septic system discharged directly to the surface water of the area or an indirect impact if the property serviced by a septic tank was within 100 feet of the shoreline area. The majority of the on-site systems were more than a 100 feet from the shoreline. Much of the area surveyed was well removed from shellfish growing resources.

The shoreline survey of Area I, along Dauphin Island Parkway and Mobile Bay included septic systems in TRAV Parks Mobile Home Park: 1 office, 1 bait shop, 4 individual mobile homes, and 1 huge septic tank (which could seasonally carry 20-25 campers); 138 houses along Dauphin Island Parkway and the Bay; 9 houses on the Bay along Gregory St.; and 23 houses on the Bay along Old Shipyard Road. All had indirect pollution sources consisting of private septic tanks that had field lines running away from the shoreline as well as the huge travel park septic tank had a local pump out contract during high occupancy seasons.

In summary, the septic systems in the shoreline survey present a potential source of fecal coliform bacteria which could enter Growing Area I. Groundwater may contribute fecal coliform bacteria from waterfront septic systems functioning properly as well as storm water may contribute fecal coliform bacteria from failing septic systems. However, bacteriological sample results taken by the MCHD and the ADPH-Seafood Branch have not shown any problems.

Number of waterfront septic systems

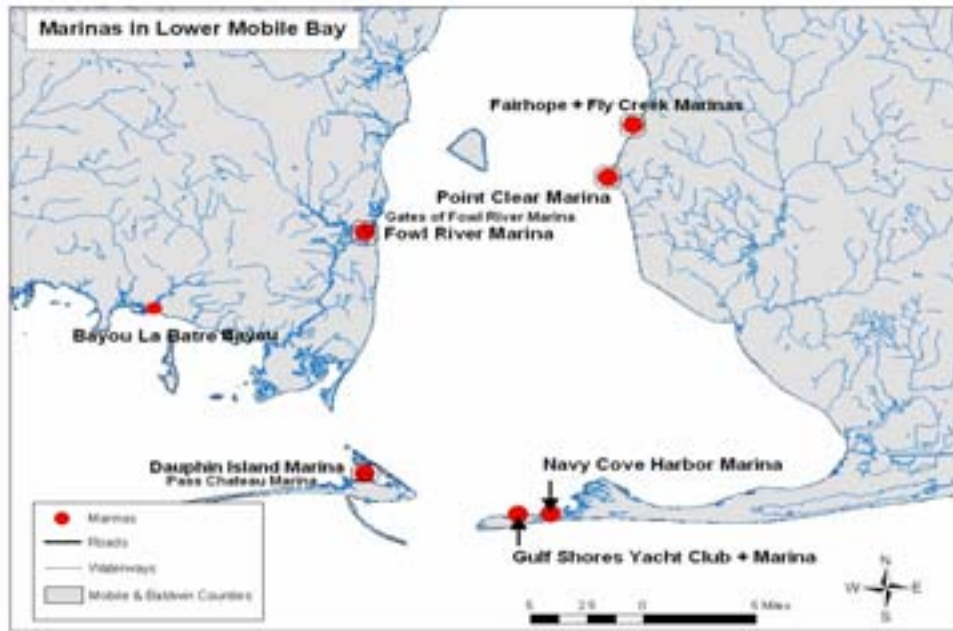
Type	Direct	Indirect
Single family residences	0	174
Businesses: RV office, bait shop	0	2



AREA I SEPTIC SYSTEMS

Mobile County Watersheds													
Watershed Name	County Acres	Acres in Watershed	Estimated Number of Households or Businesses in Watershed	Is Entire Watershed Sewered?	If NOT, Est. % of HH or Bus on Managed Sewer Systems	Est. No. on Sewer	Est. No. NOT on Sewer	Est. % of non-sewered HH or Bus with Improper Onsite Disposal	Est. No. of Improper Onsite Systems	Est. No. of HH or Bus on Advanced Systems	No. of HH or Bus Rural Water Supply	Est. No. of Private Wells	Water Tests Provided through ADPH in this County
Bay Minette Creek	1,004,912	26,343	11,453	Yes	0	11,453	0	0	0	0	0	0	Bacteria
Halls Mill Creek	1,004,912	116,141	79,566	Yes	0	79,566	0	0	0	0	0	0	Bacteria
Grand Bay Swamp	1,004,912	57,436	500	No	10	643	5,783	10	578	180	0	0	Bacteria

III.A.3. AREA I MARINAS AND MOORINGS



The impact of marinas and moorings on the shellfish harvesting area was evaluated. The distance of classification boundaries from marinas was determined to provide for the reduction of fecal coliform to safe levels from a hypothetical discharge of human waste from boats in marinas and moorings in the shoreline survey area. A prohibited buffer zone was defined in the vicinity of each marina where fecal coliform from the hypothetical discharge exceeded 14 MPN/100 ml.

The hypothetical discharge assumed that there were two people per boat and the contribution of fecal coliform was 2×10^9 fecal coliform per person per day. Unless the number of boats capable of discharging waste from marine sanitation devices was quantified, full occupancy of all slips in the marina was assumed.

Impacts for the marinas and moorings were determined by dilution analysis calculations. For buffer zones determined by calculation, the hypothetical discharge of fecal coliform in human feces from boats in the marina was assumed to mix uniformly into the volume of water in the marina and vicinity. The resulting buffer zones provide sufficient reduction in fecal coliform such that any discharge from marinas and moorings has no impact on the shellfish harvesting area.

This basic FDA marina buffer zone formula was used:

$$\text{Volume} = \frac{(\text{Boat occupancy})(\text{fecal coliform contribution/person/day})(\text{Number of boats or wet slips})}{(14 \text{ MPN}/100 \text{ ml}) (283.1605 \text{ dl/cubic feet})}$$

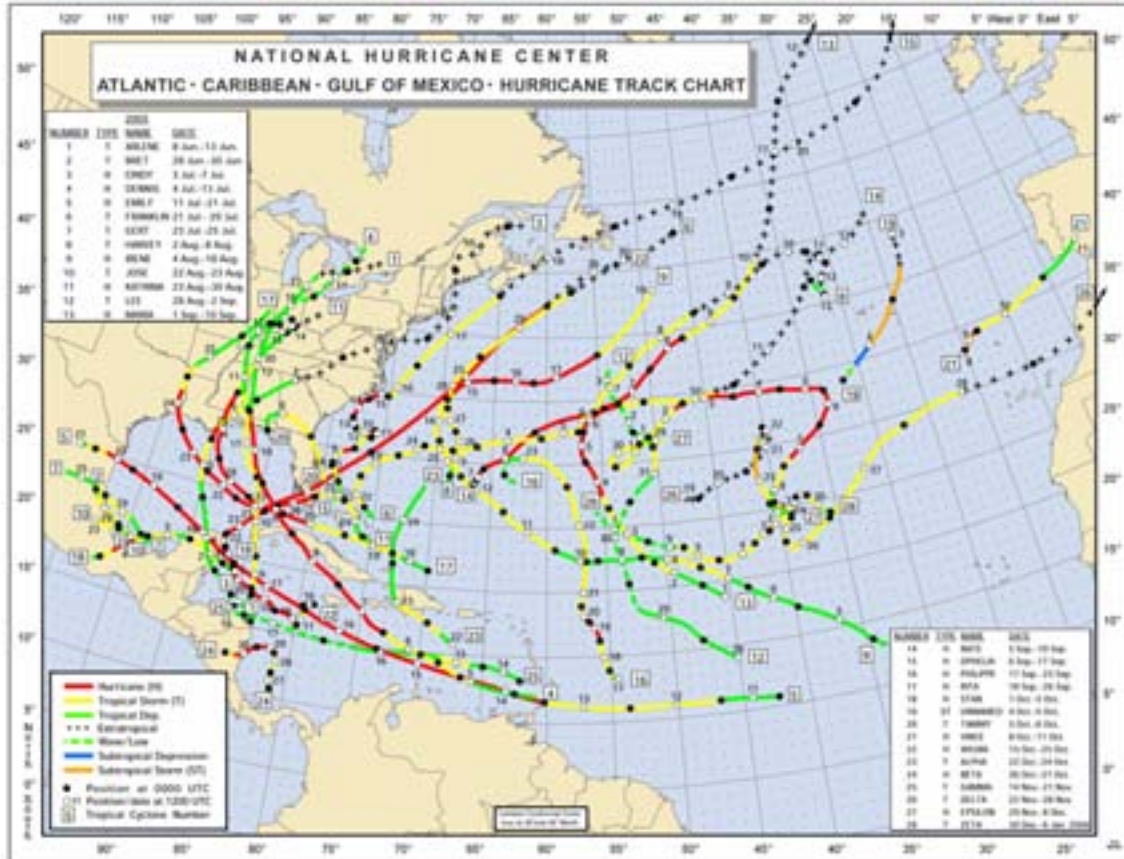
$$\text{Radius} = \text{Square root}((180^\circ/\text{Shoreline angle})(V \text{ cubic feet})/(3.14)(\text{Water depth in feet}))$$

NAME OF MARINA	NUMBER OF SLIPS OR BOATS	PUMP-OUT	FUELING	SHORE-LINE ANGLE (DEGREES)	MEAN WATER DEPTH	MINIMUM BUFFER ZONE VOLUME (CUBIC FEET)	MINIMUM BUFFER ZONE RADIUS (FEET)
Dauphin Island Marina	85	No	No	180	5'	85,000,000	3,338
Fairhope Yacht Club & Fly Creek Marina	212	No	No	180	8'	212,000,000	4,126
(temporarily managed as prohibited which includes the marina buffer zone radius)							
Fowl River Marina	68	No	No	180	5'	68,000,000	2,966
Pass Chateau Harbor Homes Marina	19	No	No	180	5'	19,000,000	1,578
Point Clear Marina	23	No	No	180	8'	23,000,000	1,359
(temporarily managed as prohibited which includes the marina buffer zone radius)							
The Gates of Fowl River	2	No	No	180	5'	2,000,000	512

III.A.4. HURRICANES

The Alabama coastal area was not affected by the 2007, 2006, 2003, 2002, 2001, 2000, 1999, Atlantic Hurricane storm seasons.

2005 Atlantic Hurricane Season

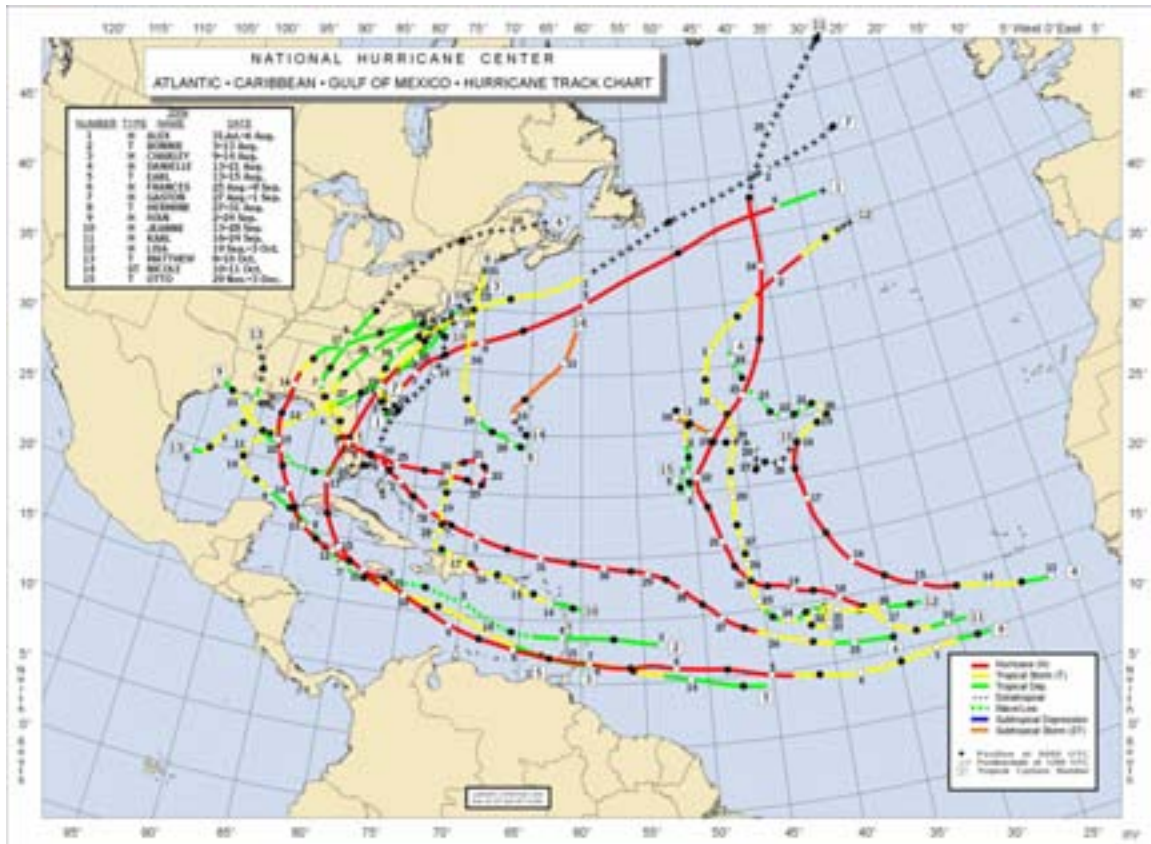


July 10, 2005 - Hurricane Dennis was the fourth named storm, first hurricane, and first major hurricane of the 2005 Atlantic Hurricane Season. Dennis made landfall as a Category 3 hurricane (wind speed 120 mph) at Santa Rosa Island, between Pensacola and Navarre Beach, Florida. Damage was lessened due to the fast forward movement and hurricane force winds extending only 40 miles from the center of the storm. Alabama coastal counties received minimal damage. Shellfish harvesting was ordered closed as a precautionary measure and reopened after it was determined growing waters met required standards.

August 25, 2005 – Hurricane Katrina first made landfall just north of Miami, Florida as a Category 1 hurricane (wind speed 90 mph.) Katrina then moved into the Gulf of Mexico and made landfall August 29, 2005 as a Category 4 hurricane (wind speed 145 mph) near the Louisiana and Mississippi state line. Katrina was the most destructive and costliest natural disaster in the history of the United States. This was not only due to wind speed but more so with the 30 foot storm surge. Mobile and Baldwin counties of Alabama

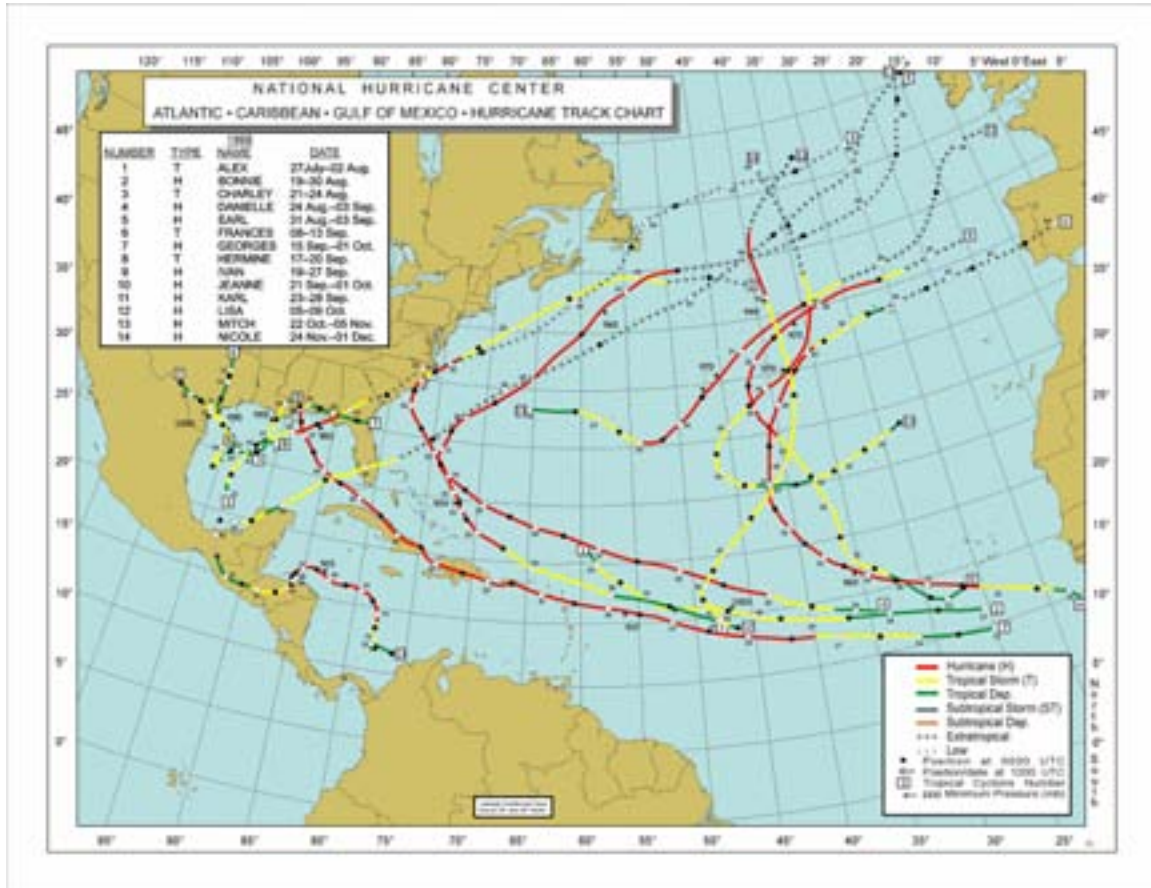
experienced a 15 foot storm surge, the highest recorded since 1917. Homes and businesses located on the immediate coast received major damage. The majority of the seafood processors were badly damaged or destroyed; however, most have been repaired or rebuilt and are permitted to operate. Shellfish harvesting was ordered closed as a precautionary measure and reopened after determining growing waters met required standards.

2004 Hurricane Season



September 16, 2004 – Hurricane Ivan was the strongest hurricane of the 2004 Atlantic hurricane season. Just before landfall near Gulf Shores, Alabama, Ivan’s eye wall weakened considerably to a Category 3 hurricane (winds 120 mph.) Ivan’s storm surge of 14 feet high with high surf and wind brought extensive damage to Orange Beach and Gulf Shores. Evacuation in the areas of Mobile and Baldwin counties south of Interstate 10 was ordered, including a third of the incorporated territory of the City of Mobile. The heaviest damage as Ivan made landfall on the U.S. coastline was observed in Baldwin County, which lies east of Alabama’s shellfish growing areas and most of Alabama’s seafood processing facilities.

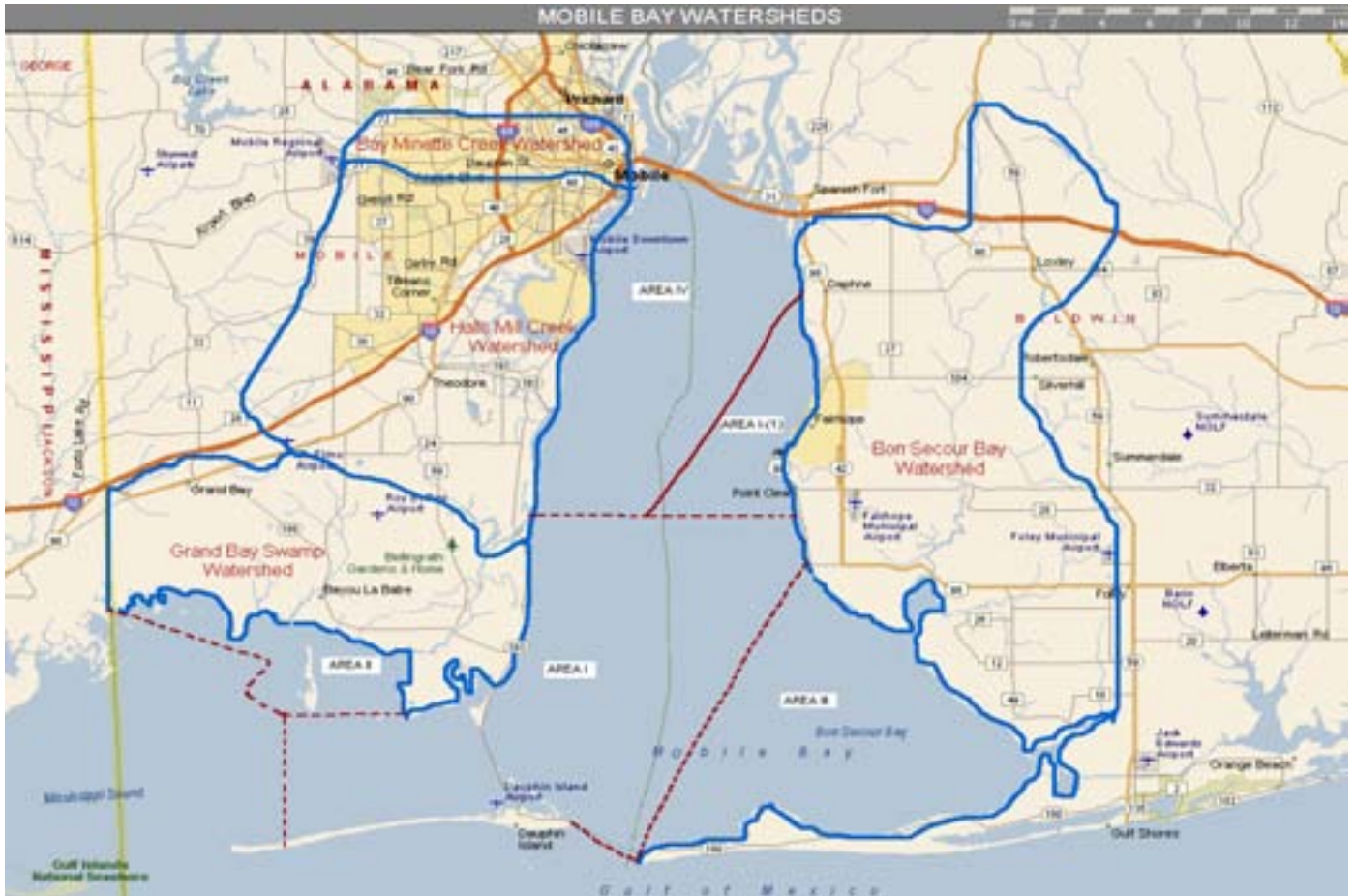
1998 Hurricane Season



September 26 – 30, 1998 – Hurricane Georges made landfall on the central Gulf Coast near Biloxi, Mississippi. The Alabama coastline received winds in excess of 90 mph, and a storm surge between 5-12 feet. In Bayou La Batre and Coden, Alabama, many seafood processing facilities were severely flooded. The roads leading into Bayou La Batre and Coden were officially opened to traffic September 30, 1998. Shellfish harvesting was ordered closed as a precautionary measure and reopened after determining growing waters met required standards.

AREA I

STORMWATER - AGRICULTURAL WASTE - WILDLIFE - INDUSTRIAL OPERATIONS



III.A.4. Storm water

The impact of storm water on the shellfish harvesting area was evaluated. There is no treatment of storm water runoff in the study area. The area receives discharge from Dog River, Fowl River, and drainage from the Mobile River delta. There are also numerous tidal creeks and man-made canals that discharge into the area.

The main drainage basins for this area are the Bay Minette Creek Watershed, Halls Mill Creek Watershed and the Grand Bay Swamp Watershed.

No additional storm water discharge structures have been installed since the 2000 pollution source survey. With the exception of routine cleaning of drainage ditches, no significant alterations have been made that would require a different area classification than that of being Conditionally Approved.

III.A.5. Agricultural Waste

Impacts of agricultural operations on the shellfish harvesting area were evaluated. There are no domestic farm animals in the study area.

III.A.6. Wildlife Areas

The impact of wildlife on the shellfish harvesting area was evaluated. Wildlife populations throughout the study area have the potential to increase fecal coliform in the nearshore waters of the shellfish harvesting area. Bacteriological sampling stations are located throughout the shellfish harvesting area in order to monitor the direct and indirect impacts of wildlife. No wildlife impact was noted.

III.A.7. Industrial Operations

There are no industrial waste discharges in the study area.

AREA I

III.A.8. MARINE BIOTOXINS

Karenia brevis is a toxic dinoflagellate associated with Gulf Coast saltwater fish kills, neurotoxic shellfish poisoning, and an airborne irritant in sea spray, that can cause respiratory discomfort in humans and other animals. The phenomenon, known as "red tide," occurs when *K. brevis* concentrations increase above normal background levels of 1,000 cells/liter. Red tide concentrations above 250,000 cells/liter can cause fish kills. Concentrations as low as 5,000 cells/liter may cause shellfish to become toxic if the animals are exposed over long periods of time. Shellfish become toxic by feeding on dinoflagellates and absorbing toxin into their digestive tissues. Toxic shellfish may cause illness in humans and other animals when ingested.

Shellfish harvesting areas are closed when *K. brevis* concentrations exceed 5,000 cells/liter. Field studies indicate that shellfish may retain toxicity for two to four weeks; therefore, after *K. brevis* concentrations return to normal in the water, shellfish meats must be tested for toxicity before the area may be reopened to shellfish harvesting. The Alabama Harmful Algal Bloom Response Plan 2008, Version 6.08.02, and the Contingency Plan for Control of Shellfish Potentially Contaminated by Marine Biotoxins, are on file at the ADPH-Seafood Branch office and explain the procedures used in greater details.

For the first time in history, all shellfish growing waters in Mobile Bay were closed for shellfish harvesting on November 10, 1996 due to the presence of Red Tide (then *Gymnodinium breve*). During November there were 85 bay water samples and 33 bay shellfish samples collected and analyzed for the presence of *G. breve* and biotoxins. The samples met the required standards to allow shellfish harvesting to resume on December 6, 1996.

The second Red Tide event in Alabama's history began in the coastal waters of northwest Florida and was transported by the Gulf of Mexico counter-current into coastal waters of Alabama in September, 1999. Red Tide organisms were first noted in September of 1999 at Fort Morgan. Very low numbers of the organisms appeared from Gulf Shores east to Fort Morgan into October. *G. breve* was detected in some shellfish growing waters, however, well below action levels. Monitoring of gulf waters and shellfish waters continued. Samples collected October 17, 1999 showed substantial increases at Gulf Shores State Park and the West end of Gulf Shores. Counts had moved from a low range to a medium range. Shellfish growing water samples showed no presence of the Red Tide organism. On November 9, *G. breve* was detected in some shellfish growing waters, again well below action levels. Samples collected on November 15 and November 23 showed no red tide organisms at Gulf Shores or Mobile Bay.

On October 3, 2005 low levels of *Karenia brevis* were detected at Gulf Shores and Orange Beach in Alabama. The bloom started in the coastal waters of northwest Florida and was transported by the Gulf of Mexico counter-current into coastal waters of Alabama. Sampling sites were expanded to include shellfish growing waters, and testing increased from monthly to biweekly. On October 5, 2005 levels on beaches had reached medium levels. No shellfish growing waters exceeded standards for closure. On October 17, 2005 one sample site in shellfish growing water Area II had levels of 29,000 cells per liter. The area was immediately closed to shellfish harvesting. Samples collected in Area II, October 20 and 25, showed very low levels or no *Karenia brevis*. Shellfish were also collected for toxin analysis, and after none was found, the area was reopened for shellfish harvesting. Levels at beaches were also very low, and sampling was returned to routine status.

The most recent *K. brevis* bloom in Alabama's coastal waters occurred from October 2007 through January 2008. Samples with concentration levels above the 5,000 cells/liter action level, ranging from 7,000 cells/liter to 2,100,000 cells/liter, were collected in swimming waters along Fort Morgan's beaches and the Bon Secour Bay coastline in Baldwin County. Some sample points were adjacent to and a few within the Area III oyster harvesting area. On October 19, 2007, when cell concentrations climbed to 2,400 cells/liter at Ft. Morgan Ferry Landing near Sample Station 107B, (maximum *K. brevis* concentrations at this sampling station rose to 34,000 cells/liter), ADPH took the precautionary measure of closing Area III to shellfish harvesting. Cooperative sampling, monitoring, and reporting were performed by these state agencies: AL Department of Environmental Management (ADEM), ADEM's beach monitoring program, AL Department of Conservation and Natural Resources-Marine Resources Division (ADCNR-MRD), AL Department of Public Health (ADPH-Mobile County and Baldwin County), AL Department of Public Health-Seafood Branch (ADPH-Seafood), and AL Department of Public Health Lab (ADPH-Lab). The closure remained in force from October 23 through February 19, 2008. Final toxin analysis and mouse bioassay for shellfish testing was performed by Florida Fish and Wildlife Research Institute. (appendix: Table III-2)

ADPH ROUTINE DINOFLAGELLATE TESTING
MOBILE BAY - AREA I

DINOFLAGELLATE RESULTS 2007

DINOFLAGELLATE RESULTS 2006

DINOFLAGELLATE RESULTS 2005

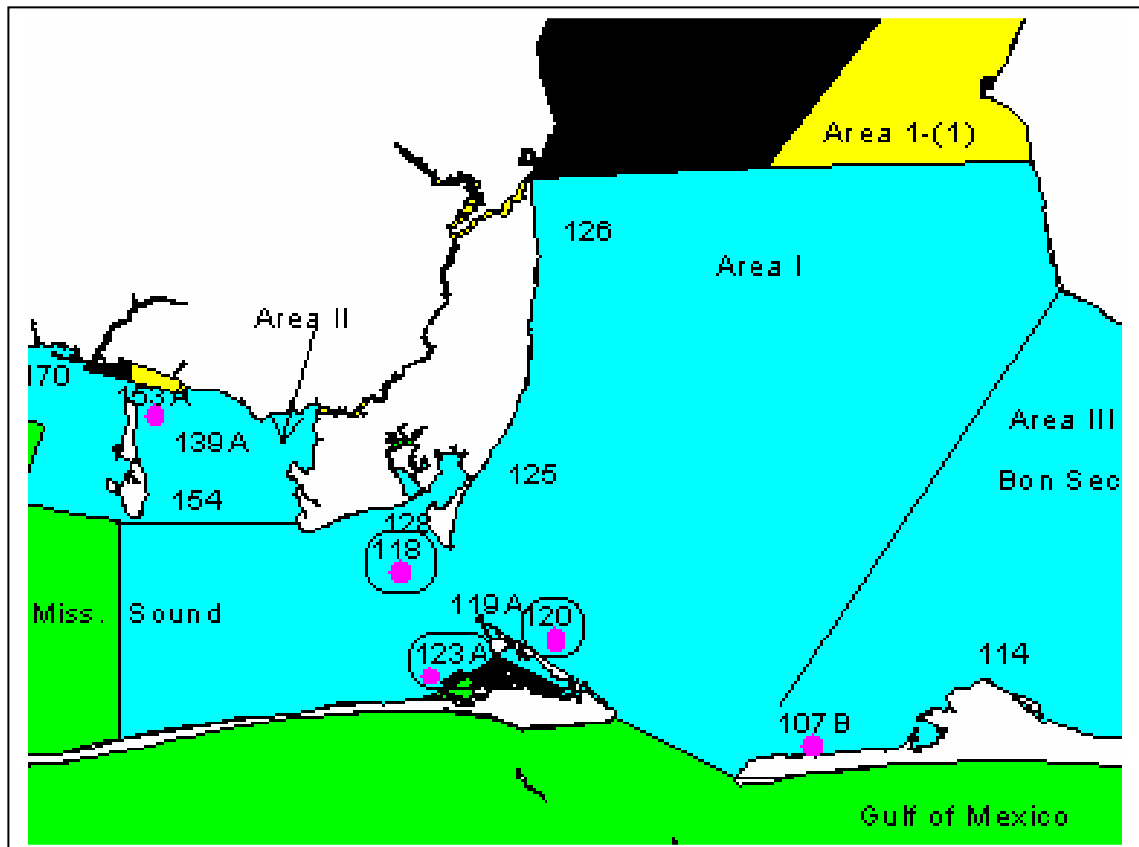
DINOFLAGELLATE RESULTS 2004

DINOFLAGELLATE RESULTS 2003

DINOFLAGELLATE RESULTS 2002

DINOFLAGELLATE RESULTS 2001

(appendix: Table III-3)



MOBILE BAY, ALABAMA AREA MAP



- Shipping fairways
- Bay pipelines
- EXXON
- LEGACY
- MOBIL
- OTHERS
- SHELL
- Plant locations
- OCS pipelines
- OCS platforms
- Mobile Bay wells
- Mobile Bay platforms
- Field Boundaries
- Mississippi Lease Blocks
- Islands
- State Lease Blocks
- OCS Lease Blocks
- Manned N



By
Henry E. Moore, Jr.

Mobile Bay, Alabama

STATE OF ALABAMA

OIL AND GAS BOARD

NATURAL GAS PLATFORMS

There are a total of eight natural gas platforms located within the conditionally approved harvesting waters of Alabama. Six are located in Area I (on map: #1, #5, #6, #7, #8 and #9). There are no platforms in Area II, and two platforms in Area III (on map: #3 and #4).

AREA I

- The North Dauphin Island Platform (#1) was de-manned in April of 2008. The platform is now used only as a metering station for gas storage fields.
- The unmanned Goose Bayou Field Platform (#2) was removed by Legacy in 2005 and moved to Area III, Saxon Bay Field (#3).
- The only manned platform is the Exxon/Mobil – A/A Aux Platform for the Mary Ann Field, east of Billy Goat Hole channel (#5). There is zero discharge. All rainwater and waste are pipelined ashore and injected into the ground via a well.
- The remaining four wells have been removed and capped off.

None of the platforms or wells is located near commercial quantities of shellfish.

AREA II

There are no natural gas platforms in the study area.

AREA III

There are two natural gas platforms located in Area III (#3 and #4).

- The Goose Bayou Field Platform (#2) was relocated from Area I to the Saxon Bay Field (#3).
- The other platform is the Exxon/Mobil 95E Platform in Mary Ann Field (#4).

Both platforms are unmanned with zero waste discharge.

The platforms are permitted to discharge rainwater runoff.

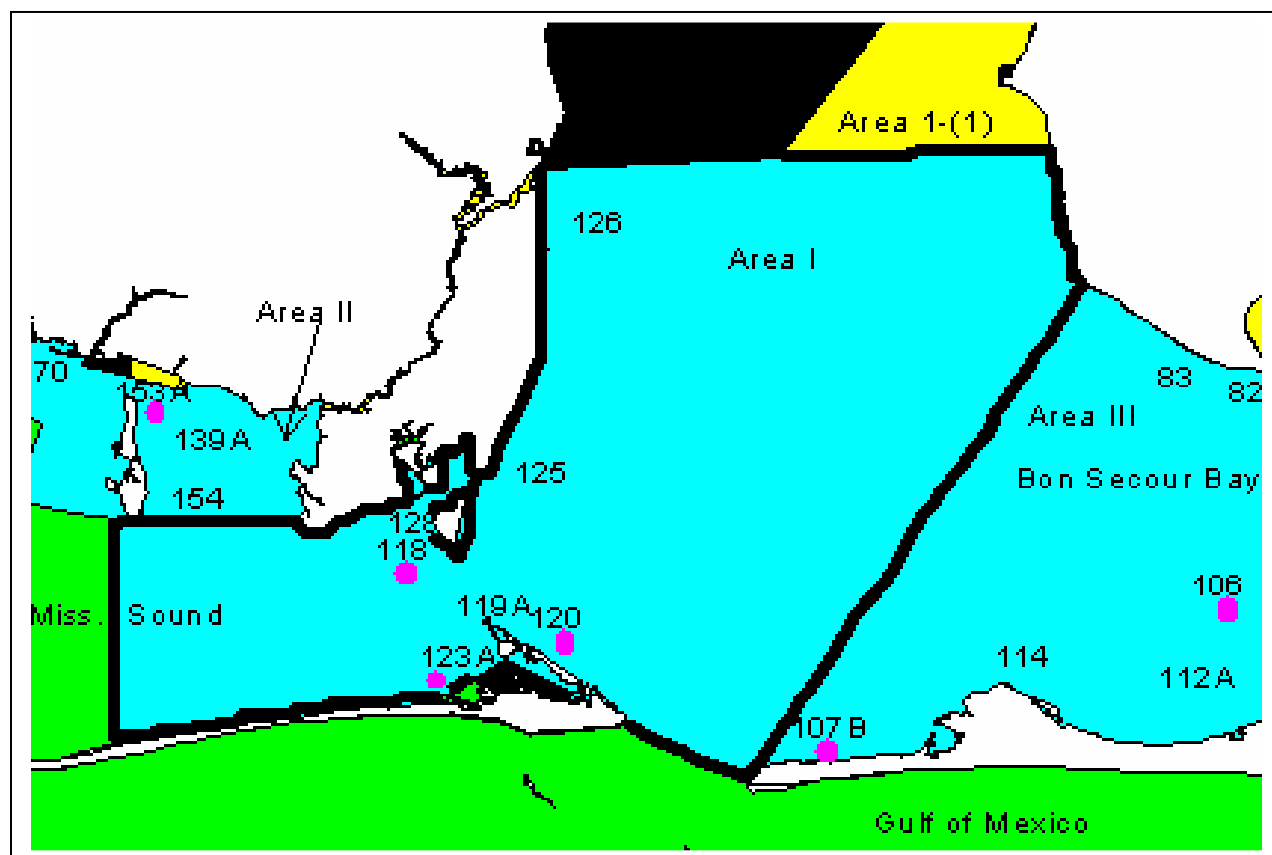
Neither platform is located near any commercial quantities of shellfish.

IV.A. BACTERIOLOGICAL WATER QUALITY – AREA I

There are seven (7) bacteriological water quality sampling stations in Area I. The number and location of sampling stations were established based on the locations of actual or potential pollution sources, freshwater drainage, shellfish classification boundary lines, and landmarks. The location of sampling stations is illustrated in the map of Area I below and in the following table.

The locations of the 7 sampling stations used to develop the current classification are:

Station	Latitude	Longitude	Common Name/Location	Current Classification
118	30°18.12'	88°08.45'	Cedar Point	Conditionally Approved
119A	30°17.25'	88°08.56'	North of Intercoastal WW	Conditionally Approved
120	30°17.98'	88°07.56'	South Side Ship Cannel/East of CP	Conditionally Approved
123A	30°16.52'	88°09.18'	Dauphin Island Bay North End	Conditionally Approved
125	30°18.40'	88°06.40'	NE of Heron Bay/S of AL Port	Conditionally Approved
126	30°26.85'	88°04.98'	East-SE of East Fowl River	Conditionally Approved
128	30°19.54'	88°08.76'	Heron Bay	Conditionally Approved



IV. A. BACTERIOLOGICAL DATA ANALYSIS – AREA I

Results of water sample analysis from each water sampling station must meet *NSSP Model Ordinance* requirements for the indicator bacteria fecal coliform. The acceptable level of fecal coliform in shellfish growing area waters in open status that are impacted by non-point pollution sources is the most probable number (MPN), 14 fecal coliforms per 100 milliliters (14 FC/100 ml) with not more than 10% of the samples exceeding 43 FC/100 ml MPN. ADPH uses the Adverse Pollution Condition Standard for bacteriological sample collection. Samples are collected during conditions when fecal coliforms may be elevated due to high river stage and/or recent rainfall. At least thirty (30) water samples from each sampling station are required to classify a shellfish growing area.

Thereafter, five (5) bacteriological water quality samples must be collected annually at each established sampling station in a Conditionally Approved area. Each annual reevaluation of the growing area's classification status must include an analysis of at least the previous fifteen (15) water sample results from each sampling station.

For this Comprehensive Survey, ADPH analyzed the last thirty (30) samples collected at each station except for stations 125 and 126. Stations 125 and 126 were added in the past three to four years at FDA's recommendation, and ADPH has not yet collected 30 samples at these two stations. Twenty-three samples were analyzed for Station 125 and fifteen samples were analyzed for Station 126. The results of the fecal coliform analyses for each station are found in the "Mobile Bay Bacteriological Sample Results Area I" section of this survey report.

Five (5) water samples were collected from each sampling station in Area I during calendar year 2007.

All established water quality sampling station results in Area I met the *NSSP Model Ordinance* water quality requirements.

ANALYSIS CONFIRMING THE CONDITIONAL MANAGEMENT PLAN ESTABLISHED FOR GROWING AREA I

FDA Regional Shellfish Specialist, John Veasey, performed a correlation and regression analysis using Alabama's Area I 2002-2005 sample data, US ACOE's Mobile River stage records, and NOAA's Mobile Regional Airport rainfall accumulation records.

Significant coefficients representing rises in fecal coliform levels positively associated the elevations with both local rainfall and river stages. The correlations between log fecal coliforms and rainfall were slightly higher than the correlations between log fecal coliforms and river stages. This is logical since the samples utilized for this study were taken during times when the river stage was below or at 8 feet – the trigger point for closure.

It was noted through other comparisons that samples collected during closed status, even though the river stage was below 8 feet, had higher fecal counts, rainfall amounts, and river stages than fecal counts observed in samples taken during open status.

The analysis indicated that ADPH's river stage management criteria are effective in managing Area I's growing waters. The correlations between river stage and fecal coliform levels were minimal. While stronger correlations existed between rainfall and fecal coliforms, they too were minimal and likely addressed by ADPH's river stage management plan. No failure to meet the *NSSP Model Ordinance* fecal coliform requirements at each station has occurred since ADPH implemented its current management plan.

(appendix: Table IV-1)

MOBILE BAY

BACTERIOLOGICAL SAMPLE RESULTS

AREA I

2001 - 2007

Sta 118	Sta119A	Sta 120	Sta 123A	Sta 125	Sta 126	Sta 128
1.8	7.8	1.8	2.0	2.0	1.8	1.8
33.0	1.8	1.8	2.0	1.8	1.8	70.0
1.8	1.8	1.8	1.8	1.8	1.8	1.8
2.0	1.8	1.8	1.8	1.8	1.8	1.8
1.8	1.8	1.8	1.8	1.8	1.8	2.0
1.8	1.8	1.8	1.8	1.8	1.8	1.8
1.8	1.8	1.8	4.5	1.8	1.8	4.5
1.8	1.8	1.8	1.8	1.8	1.8	1.8
1.8	1.8	1.8	2.0	1.8	1.8	7.8
1.8	1.8	1.8	2.0	1.8	1.8	1.8
13.0	1.8	1.8	1.8	1.8	1.8	1.8
1.8	1.8	1.8	1.8	1.8	1.8	1.8
2.0	1.8	1.8	2.0	1.8	1.8	6.8
1.8	1.8	1.8	1.8	1.8	4.5	1.8
1.8	1.8	1.8	2.0	2.0	4.0	4.5
1.8	1.8	1.8	9.3	13.0		1.8
6.8	1.8	1.8	1.8	1.8		4.5
1.8	4.5	1.8	7.8	1.8		17.0
14.0	1.8	1.8	1.8	1.8		4.5
1.8	1.8	2.0	1.8	1.8		1.8
2.0	1.8	1.8	1.8	1.8		1.8
1.8	7.8	1.8	2.0	1.8		2.0
2.0	1.8	1.8	1.8	2.0		1.8
4.5	1.8	1.8	7.8			4.5
1.8	1.8	1.8	1.8			4.5
1.8	1.8	1.8	1.8			1.8
1.8	1.8	1.8	1.8			1.8
1.8	1.8	1.8	2.0			1.8
1.8	1.8	1.8	2.0			1.8
1.8	6.8	1.8	1.8			1.8

TOTAL SAMPLES ANALYZED: 188

MEDIAN FECAL COLIFORM: 1.8

GEO MEAN FECAL COLIFORM: 2.2

% > 43 FECAL COLIFORM: < 1%

STATION:118**AREA I****30 MOST RECENT SAMPLES**

DATE	TEMP	SAL	RIV	FEC	STATUS
11/5/2007	69.1	26.9	2.4	1.8	O
10/25/2007	62.1	24.0	2.6	33.0	O
8/29/2007	86.0	22.5	2.2	1.8	O
7/10/2007	87.1	28.5	1.7	2.0	O
6/11/2007	87.1	28.0	2.0	1.8	O
4/17/2007	66.0	27.0	2.1	1.8	O
12/18/2006	60.1	18.9	2.6	1.8	O
11/1/2006	69.1	20.2	3.1	1.8	O
8/15/2006	88.2	22.0	1.9	1.8	O
7/25/2006	83.1	29.0	3.7	1.8	O
6/27/2006	85.1	29.0	3.7	13.0	O
5/23/2006	81.1	27.0	3.4	1.8	O
1/19/2006	56.1	19.0	3.5	2.0	O
10/17/2005	74.1	21.0	3.1	1.8	O
5/18/2005	78.1	12.0	3.7	1.8	O
3/29/2005	69.1	17.0	6.7	1.8	O
1/4/2005	66.0	3.0	4.5	6.8	O
10/5/2004	82.0	8.0	2.6	1.8	O
7/28/2004	89.1	15.0	1.7	14.0	O
5/25/2004	82.0	23.0	4.0	1.8	O
1/14/2004	48.0	9.0	4.3	2.0	O
11/12/2003	69.1	16.0	3.8	1.8	O
9/24/2003	76.1	18.0	3.7	2.0	O
12/17/2002	55.0	8.0	6.9	4.5	O
10/1/2002	82.0	12.0	5.8	1.8	O
8/27/2002	87.1	22.0	2.5	1.8	O
6/12/2002	85.1	18.0	2.2	1.8	O
5/23/2002	72.1	10.0	2.5	1.8	O
4/16/2002	78.1	10.0	3.8	1.8	O
11/27/2001	75.0	20.0	3.3	1.8	O

No. of Samples: 30**Number > 43: 0****Geo. Mean FEC: 2.5****% > 43: 0%**

**STATION:119A
AREA I**

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
10/25/2007	65.1	27.5	2.6	7.8	O
8/29/2007	86.0	23.3	2.2	1.8	O
7/10/2007	88.2	29.4	1.7	1.8	O
6/11/2007	88.2	28.0	2.0	1.8	O
4/17/2007	66.0	29.0	2.1	1.8	O
12/18/2006	63.1	17.4	2.6	1.8	O
11/1/2006	69.1	20.6	3.1	1.8	O
8/15/2006	88.2	21.0	1.9	1.8	O
7/25/2006	85.1	31.0	3.7	1.8	O
6/27/2006	84.0	29.0	3.7	1.8	O
5/23/2006	82.0	14.0	3.4	1.8	O
1/19/2006	56.1	18.0	3.5	1.8	O
10/17/2005	75.0	22.0	3.1	1.8	O
5/18/2005	78.1	12.0	3.7	1.8	O
3/29/2005	69.1	18.0	6.7	1.8	O
1/4/2005	63.1	5.0	4.5	1.8	O
10/5/2004	82.0	10.0	2.6	1.8	O
7/28/2004	89.1	15.0	1.7	4.5	O
5/25/2004	80.1	22.0	4.0	1.8	O
11/12/2003	70.2	17.0	3.8	1.8	O
9/24/2003	78.1	18.0	3.7	1.8	O
12/17/2002	55.0	8.0	6.9	7.8	O
10/1/2002	82.0	15.0	5.8	1.8	O
8/27/2002	92.1	18.0	2.5	1.8	O
6/12/2002	87.1	22.0	2.2	1.8	O
5/23/2002	75.0	12.0	2.5	1.8	O
4/16/2002	78.1	10.0	3.8	1.8	O
11/27/2001	74.1	22.0	3.3	1.8	O
9/18/2001	84.0	18.0	2.4	1.8	O
7/17/2001	87.1	16.0	2.7	6.8	O

No. of Samples: 30 Number > 43: 0
Geo. Mean FEC: 2.1 % > 43: 0%

STATION:120**AREA I****30 MOST RECENT SAMPLES**

DATE	TEMP	SAL	RIV	FEC	STATUS
10/25/2007	64.0	29.4	2.6	1.8	O
8/29/2007	85.1	23.6	2.2	1.8	O
7/10/2007	89.1	27.8	1.7	1.8	O
6/11/2007	86.0	27.0	2.0	1.8	O
4/17/2007	67.1	29.0	2.1	1.8	O
12/18/2006	60.1	23.2	2.6	1.8	O
11/1/2006	70.2	19.5	3.1	1.8	O
8/15/2006	87.1	21.0	1.9	1.8	O
7/25/2006	85.1	32.0	3.7	1.8	O
6/27/2006	84.0	26.0	3.7	1.8	O
5/23/2006	82.0	10.0	3.4	1.8	O
1/19/2006	56.1	20.0	3.5	1.8	O
10/17/2005	75.0	23.0	3.1	1.8	O
5/18/2005	78.1	11.0	3.7	1.8	O
3/29/2005	67.1	6.0	6.7	1.8	O
1/4/2005	64.0	4.0	4.5	1.8	O
10/5/2004	82.0	10.0	2.6	1.8	O
7/28/2004	90.1	15.0	1.7	1.8	O
5/25/2004	80.1	22.0	4.0	1.8	O
1/14/2004	49.1	9.0	4.3	2.0	O
11/12/2003	70.2	18.0	3.8	1.8	O
9/24/2003	78.1	10.0	3.7	1.8	O
12/17/2002	56.1	14.0	6.9	1.8	O
10/1/2002	82.0	15.0	5.8	1.8	O
8/27/2002	86.0	22.0	2.5	1.8	O
6/12/2002	87.1	18.0	2.2	1.8	O
5/23/2002	73.0	14.0	2.5	1.8	O
4/16/2002	75.0	8.0	3.8	1.8	O
11/27/2001	72.1	25.0	3.3	1.8	O
9/18/2001	84.0	22.0	2.4	1.8	O

No. of Samples: 30**Number > 43: 0****Geo. Mean FEC: 1.8****% > 43: 0%**

**STATION:123A
AREA I**

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
10/25/2007	64.0	29.5	2.6	2.0	O
8/29/2007	86.0	26.5	2.2	2.0	O
7/10/2007	90.1	30.1	1.7	1.8	O
6/11/2007	89.1	33.0	2.0	1.8	O
4/17/2007	66.0	29.0	2.1	1.8	O
12/18/2006	60.1	24.8	2.6	1.8	O
11/1/2006	73.0	26.3	3.1	4.5	O
8/15/2006	89.1	29.0	1.9	1.8	O
7/25/2006	85.1	30.0	3.7	2.0	O
6/27/2006	84.0	26.0	3.7	2.0	O
5/23/2006	83.1	27.0	3.4	1.8	O
1/19/2006	56.1	22.0	3.5	1.8	O
10/17/2005	69.1	22.0	3.1	2.0	O
5/18/2005	78.1	14.0	3.7	1.8	O
3/29/2005	68.0	16.0	6.7	2.0	O
1/4/2005	65.1	10.0	4.5	9.3	O
10/5/2004	82.0	15.0	2.6	1.8	O
7/28/2004	90.1	15.0	1.7	7.8	O
5/25/2004	80.1	22.0	4.0	1.8	O
1/14/2004	50.0	11.0	4.3	1.8	O
11/12/2003	71.1	22.0	3.8	1.8	O
9/24/2003	78.1	18.0	3.7	2.0	O
12/17/2002	56.1	15.0	6.9	1.8	O
10/1/2002	82.0	18.0	5.8	7.8	O
8/27/2002	89.1	25.0	2.5	1.8	O
6/12/2002	88.2	20.0	2.2	1.8	O
5/23/2002	73.0	14.0	2.5	1.8	O
4/16/2002	78.1	15.0	3.8	2.0	O
11/27/2001	75.0	25.0	3.3	2.0	O
9/18/2001	84.0	16.0	2.4	1.8	O

No. of Samples: 30 Number > 43: 0
Geo. Mean FEC: 2.2 % > 43: 0%

STATION:125

AREA I

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
10/25/2007	64.0	26.2	2.6	2.0	O
8/29/2007	87.1	22.5	2.2	1.8	O
7/10/2007	88.2	26.2	1.7	1.8	O
6/11/2007	87.1	25.0	2.0	1.8	O
4/17/2007	66.0	21.0	2.1	1.8	O
12/18/2006	60.1	18.6	2.6	1.8	O
11/1/2006	71.1	19.2	3.1	1.8	O
8/15/2006	88.2	20.0	1.9	1.8	O
7/25/2006	84.0	26.0	3.7	1.8	O
6/27/2006	85.1	26.0	3.7	1.8	O
5/23/2006	81.1	7.0	3.4	1.8	O
1/19/2006	56.1	19.0	3.5	1.8	O
10/17/2005	74.1	22.0	3.1	1.8	O
5/18/2005	78.1	11.0	3.7	1.8	O
3/29/2005	67.1	6.0	6.7	2.0	O
1/4/2005	63.1	3.0	4.5	13.0	O
10/5/2004	82.0	12.0	2.6	1.8	O
7/28/2004	90.1	15.0	1.7	1.8	O
5/25/2004	80.1	23.0	4.0	1.8	O
11/12/2003	72.1	15.0	3.8	1.8	O
9/24/2003	74.1	15.0	3.7	1.8	O
12/17/2002	55.0	10.0	6.9	1.8	O
10/1/2002	83.1	10.0	5.8	2.0	O

No. of Samples: 23

Number > 43: 0

Geo. Mean FEC: 2.0

% > 43: 0%

STATION:126
AREA I

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
10/25/2007	68.0	25.3	2.6	1.8	O
8/29/2007	87.1	21.5	2.2	1.8	O
7/10/2007	88.2	22.9	1.7	1.8	O
6/11/2007	88.2	24.0	2.0	1.8	O
4/17/2007	66.0	17.0	2.1	1.8	O
12/18/2006	63.1	13.1	2.6	1.8	O
11/1/2006	71.1	12.1	3.1	1.8	O
7/25/2006	86.0	19.0	3.7	1.8	O
5/23/2006	82.0	4.0	3.4	1.8	O
1/19/2006	55.0	18.0	3.5	1.8	O
10/17/2005	74.1	21.0	3.1	1.8	O
5/18/2005	78.1	12.0	3.7	1.8	O
3/29/2005	69.1	4.0	6.7	1.8	O
1/26/2005	59.0	10.0	3.8	4.5	O
1/4/2005	63.1	3.0	4.5	4.0	O

No. of Samples: 15 **Number > 43: 0**
Geo. Mean FEC: 2.0 **% > 43: 0%**

**STATION:128
AREA I**

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
11/5/2007	69.1	26.3	2.4	1.8	O
10/25/2007	62.1	21.1	2.6	70.0	O
8/29/2007	84.0	21.4	2.2	1.8	O
7/10/2007	89.1	29.1	1.7	1.8	O
6/11/2007	87.1	31.0	2.0	2.0	O
4/17/2007	65.1	26.0	2.1	1.8	O
12/18/2006	65.1	13.4	2.6	4.5	O
11/1/2006	71.1	16.1	3.1	1.8	O
8/15/2006	88.2	20.0	1.9	7.8	O
7/25/2006	83.1	27.0	3.7	1.8	O
6/27/2006	84.0	26.0	3.7	1.8	O
5/23/2006	81.1	23.0	3.4	1.8	O
1/19/2006	54.1	20.0	3.5	6.8	O
10/17/2005	73.0	20.0	3.1	1.8	O
5/18/2005	78.1	5.0	3.7	4.5	O
3/29/2005	67.1	14.0	6.7	1.8	O
1/4/2005	66.0	4.0	4.5	4.5	O
10/5/2004	82.0	10.0	2.6	17.0	O
7/28/2004	89.1	15.0	1.7	4.5	O
5/25/2004	78.1	20.0	4.0	1.8	O
1/14/2004	50.0	10.0	4.3	1.8	O
11/12/2003	72.1	15.0	3.8	2.0	O
9/24/2003	78.1	18.0	3.7	1.8	O
12/17/2002	55.0	8.0	6.9	4.5	O
10/1/2002	83.1	10.0	5.8	4.5	O
8/27/2002	87.1	23.0	2.5	1.8	O
6/12/2002	88.2	18.0	2.2	1.8	O
5/23/2002	70.2	8.0	2.5	1.8	O
4/16/2002	78.1	8.0	3.8	1.8	O
11/27/2001	75.0	20.0	3.3	1.8	O

No. of Samples: 30

Number > 43: 1

Geo. Mean FEC: 2.9

% > 43: 3%

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
118	11/5/2007	69	27	2.4	1.8	O	
	10/25/2007	62	24	2.6	33.0	O	
	8/29/2007	86	23	2.2	1.8	O	
	7/10/2007	87	29	1.7	2.0	O	
	6/11/2007	87	28	2.0	1.8	O	
	4/17/2007	66	27	2.1	1.8	O	
	1/15/2007	63	4	7.5	2.0	C	closed on 1/12/07 Riv 7.81' - 8.12' opened on 1/19/07
	12/18/2006	60	19	2.6	1.8	O	
	11/1/2006	69	20	3.1	1.8	O	
	8/15/2006	88	22	1.9	1.8	O	
	7/25/2006	83	29	3.7	1.8	O	
	6/27/2006	85	29	3.7	13.0	O	
	5/23/2006	81	27	3.4	1.8	O	
	3/30/2006	65	7	7.8	1.8	C	closed on 3/28/06 Riv 8.02' - 8.19' opened 4/2/06
	3/8/2006	62	6	7.1	1.8	C	closed on 3/2/06 Riv 8.24' - 8.74' opened on 3/11/06
	2/18/2006	57	3	7.7	7.8	C	closed on 2/15/06 Riv 8.09' - 8.21' opened 2/21/06
	2/3/2006	60	7	7.8	2.0	C	closed on 1/30/06 Riv 8.25' - 8.25' opened 2/6/06
	1/19/2006	56	19	3.5	2.0	O	
	12/13/2005	54	18	2.8		O	no FEC data available due to lab accident
	10/17/2005	74	21	3.1	1.8	O	
	9/13/2005	82	16	2.6	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	7/26/2005	88	2	6.7	1.8	C	closed on 7/10/05 emergency closure (Dennis) opened on 7/29/05
	5/18/2005	78	12	3.7	1.8	O	
	4/22/2005	74	7	7.3	2.0	C	closed on 4/1/05 Riv 8.16' - 8.78' opened on 4/24/05
	3/29/2005	69	17	6.7	1.8	O	
	1/4/2005	66	3	4.5	6.8	O	
	12/26/2004	50	8	7.3	2.0	C	closed on 11/28/04 Riv 7.82' - 8.30' opened 12/30/04
	10/5/2004	82	8	2.6	1.8	O	
	7/28/2004	89	15	1.7	14.0	O	
	5/25/2004	82	23	4.0	1.8	O	
	3/5/2004	63	3	7.4	13.0	C	still closed from 2/12/04
	2/26/2004	50	4	7.9	17.0	C	closed on 2/12/04 Riv 7.73' - 8.46' opened 3/9/04
	1/14/2004	48	9	4.3	2.0	O	

LEGEND

STATION= Station
 DATE= Sampling Date
 TEMP= Temperature (° Fahrenheit)

SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	11/12/2003	69	16	3.8	1.8	O	
	9/24/2003	76	18	3.7	2.0	O	
	7/14/2003	82	5	7.7	2.0	C	closed on 7/6/03 Riv 8.17' - 8.54' 7/17/03
	6/26/2003	82	3	8.0	1.8	C	closed on 6/24/03 Riv 8.00' - 8.21' opened on 6/28/03
	6/4/2003	82	3	7.4	2.0	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	5/6/2003	81	3	7.5	1.8	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	4/19/2003	76	4	7.3	2.0	C	closed on 4/14/03 Riv 9.15' - 9.51' opened on 4/22/03
	3/25/2003	67	5	7.9	7.8	C	closed on 2/26/03 Riv 7.97' - 8.60' opened on 3/28/03
	1/9/2003	57	10	6.9	1.8	C	closed on 12/27/02 Riv > 8.00' opened on 1/14/03
	12/17/2002	55	8	6.9	4.5	O	
	10/1/2002	82	12	5.8	1.8	O	
	8/27/2002	87	22	2.5	1.8	O	
	6/12/2002	85	18	2.2	1.8	O	
	5/23/2002	72	10	2.5	1.8	O	
	4/16/2002	78	10	3.8	1.8	O	
	2/9/2002	50	9	7.7	4.5	C	closed on 1/29/02 Riv 8.04' - 8.43' opened on 2/12/02
	12/27/2001	47	14	7.7	1.8	C	closed on 12/23/01 Riv 8.18' - 8.36' opened on 12/31/01
	11/27/2001	75	20	3.3	1.8	O	
	9/18/2001	84	14	2.4	1.8	O	
	7/17/2001	87	16	2.7	1.8	O	
	6/27/2001	83	10	1.8	1.8	O	
	5/16/2001	80	20	2.1	1.8	O	
	4/19/2001	68	1	6.2	4.5	C	closed on 4/9/01 Riv 8.36' - 9.03' opened on 4/21/01
	4/4/2001	69	4	7.2	1.8	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/17/2001	53	15	2.4	2.0	O	
119A							
	10/25/2007	65	28	2.6	7.8	O	
	8/29/2007	86	23	2.2	1.8	O	
	7/10/2007	88	29	1.7	1.8	O	
	6/11/2007	88	28	2.0	1.8	O	
	4/17/2007	66	29	2.1	1.8	O	
	1/15/2007	62	8	7.5	11.0	C	closed on 1/12/07 Riv 7.81' - 8.12' opened on 1/19/07
	12/18/2006	63	17	2.6	1.8	O	
	11/1/2006	69	21	3.1	1.8	O	
	8/15/2006	88	21	1.9	1.8	O	

LEGEND

STATION= Station
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 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	7/25/2006	85	31	3.7	1.8	O	
	6/27/2006	84	29	3.7	1.8	O	
	5/23/2006	82	14	3.4	1.8	O	
	3/30/2006	65	8	7.8	1.8	C	closed on 3/28/06 Riv 8.02' - 8.19' opened 4/2/06
	3/8/2006	63	7	7.1	6.8	C	closed on 3/2/06 Riv 8.24' - 8.74' opened on 3/11/06
	2/18/2006	58	19	7.7	6.8	C	closed on 2/15/06 Riv 8.09' - 8.21' opened 2/21/06
	2/3/2006	60	7	7.8	7.8	C	closed on 1/30/06 Riv 8.25' - 8.25' opened 2/6/06
	1/19/2006	56	18	3.5	1.8	O	
	12/13/2005	54	18	2.8		O	no FEC data available due to lab accident
	10/17/2005	75	22	3.1	1.8	O	
	9/13/2005	82	17	2.6	2.0	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	7/26/2005	87	3	6.7	1.8	C	closed on 7/10/05 emergency closure (Dennis) opened on 7/29/05
	5/18/2005	78	12	3.7	1.8	O	
	4/22/2005	74	7	7.3	1.8	C	closed on 4/1/05 Riv 8.16' - 8.78' opened on 4/24/05
	3/29/2005	69	18	6.7	1.8	O	
	1/4/2005	63	5	4.5	1.8	O	
	12/26/2004	50	12	7.3	2.0	C	closed on 11/28/04 Riv 7.82' - 8.30' opened 12/30/04
	10/5/2004	82	10	2.6	1.8	O	
	7/28/2004	89	15	1.7	4.5	O	
	5/25/2004	80	22	4.0	1.8	O	
	3/5/2004	63	3	7.4	7.8	C	still closed from 2/12/04
	2/26/2004	50	5	7.9	13.0	C	closed on 2/12/04 Riv 7.73' - 8.46' opened 3/9/04
	11/12/2003	70	17	3.8	1.8	O	
	9/24/2003	78	18	3.7	1.8	O	
	7/14/2003	79	6	7.7	1.8	C	closed on 7/6/03 Riv 8.17' - 8.54' 7/17/03
	6/26/2003	83	3	8.0	13.0	C	closed on 6/24/03 Riv 8.00' - 8.21' opened on 6/28/03
	6/4/2003	82	3	7.4	1.8	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	5/6/2003	80	3	7.5	1.8	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	4/19/2003	76	5	7.3	2.0	C	closed on 4/14/03 Riv 9.15' - 9.51' opened on 4/22/03
	3/25/2003	66	5	7.9	1.8	C	closed on 2/26/03 Riv 7.97' - 8.60' opened on 3/28/03
	1/9/2003	56	8	6.9	1.8	C	closed on 12/27/02 Riv > 8.00' opened on 1/14/03
	12/17/2002	55	8	6.9	7.8	O	
	10/1/2002	82	15	5.8	1.8	O	
	8/27/2002	92	18	2.5	1.8	O	
	6/12/2002	87	22	2.2	1.8	O	

LEGEND

STATION= Station
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 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	5/23/2002	75	12	2.5	1.8	O	
	4/16/2002	78	10	3.8	1.8	O	
	2/9/2002	50	9	7.7	13.0	C	closed on 1/29/02 Riv 8.04' - 8.43' opened on 2/12/02
	12/27/2001	45	14	7.7	4.5	C	closed on 12/23/01 Riv 8.18' - 8.36' opened on 12/31/01
	11/27/2001	74	22	3.3	1.8	O	
	9/18/2001	84	18	2.4	1.8	O	
	7/17/2001	87	16	2.7	6.8	O	
	6/27/2001	83	10	1.8	1.8	O	
	5/16/2001	80	20	2.1	1.8	O	
	4/19/2001	68	0	6.2	1.8	C	closed on 4/9/01 Riv 8.36' - 9.03' opened on 4/21/01
	4/4/2001	69	4	7.2	1.8	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/17/2001	54	17	2.4	2.0	O	
120	10/25/2007	64	29	2.6	1.8	O	
	8/29/2007	85	24	2.2	1.8	O	
	7/10/2007	89	28	1.7	1.8	O	
	6/11/2007	86	27	2.0	1.8	O	
	4/17/2007	67	29	2.1	1.8	O	
	1/15/2007	62	19	7.5	13.0	C	closed on 1/12/07 Riv 7.81' - 8.12' opened on 1/19/07
	12/18/2006	60	23	2.6	1.8	O	
	11/1/2006	70	20	3.1	1.8	O	
	8/15/2006	87	21	1.9	1.8	O	
	7/25/2006	85	32	3.7	1.8	O	
	6/27/2006	84	26	3.7	1.8	O	
	5/23/2006	82	10	3.4	1.8	O	
	3/30/2006	65	8	7.8	1.8	C	closed on 3/28/06 Riv 8.02' - 8.19' opened 4/2/06
	3/8/2006	63	9	7.1	1.8	C	closed on 3/2/06 Riv 8.24' - 8.74' opened on 3/11/06
	2/18/2006	57	3	7.7	17.0	C	closed on 2/15/06 Riv 8.09' - 8.21' opened 2/21/06
	2/3/2006	60	9	7.8	4.5	C	closed on 1/30/06 Riv 8.25' - 8.25' opened 2/6/06
	1/19/2006	56	20	3.5	1.8	O	
	12/13/2005	54	20	2.8		O	no FEC data available due to lab accident
	10/17/2005	75	23	3.1	1.8	O	
	9/13/2005	83	14	2.6	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	7/26/2005	89	2	6.7	1.8	C	closed on 7/10/05 emergency closure (Dennis) opened on 7/29/05
	5/18/2005	78	11	3.7	1.8	O	

LEGEND

STATION= Station
 DATE= Sampling Date
 TEMP= Temperature (° Fahrenheit)

SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	4/22/2005	74	6	7.3	1.8	C	closed on 4/1/05 Riv 8.16' - 8.78' opened on 4/24/05
	3/29/2005	67	6	6.7	1.8	O	
	1/4/2005	64	4	4.5	1.8	O	
	12/26/2004	50	10	7.3	6.8	C	closed on 11/28/04 Riv 7.82' - 8.30' opened 12/30/04
	10/5/2004	82	10	2.6	1.8	O	
	7/28/2004	90	15	1.7	1.8	O	
	5/25/2004	80	22	4.0	1.8	O	
	3/5/2004	63	8	7.4	7.8	C	still closed from 2/12/04
	2/26/2004	50	4	7.9	7.8	C	closed on 2/12/04 Riv 7.73' - 8.46' opened 3/9/04
	1/14/2004	49	9	4.3	2.0	O	
	11/12/2003	70	18	3.8	1.8	O	
	9/24/2003	78	10	3.7	1.8	O	
	7/14/2003	79	6	7.7	1.8	C	closed on 7/6/03 Riv 8.17' - 8.54' 7/17/03
	6/26/2003	83	3	8.0	11.0	C	closed on 6/24/03 Riv 8.00' - 8.21' opened on 6/28/03
	6/4/2003	82	3	7.4	1.8	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	5/6/2003	81	5	7.5	1.8	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	4/19/2003	76	4	7.3	11.0	C	closed on 4/14/03 Riv 9.15' - 9.51' opened on 4/22/03
	3/25/2003	69	6	7.9	1.8	C	closed on 2/26/03 Riv 7.97' - 8.60' opened on 3/28/03
	1/9/2003	57	5	6.9	2.0	C	closed on 12/27/02 Riv > 8.00' opened on 1/14/03
	12/17/2002	56	14	6.9	1.8	O	
	10/1/2002	82	15	5.8	1.8	O	
	8/27/2002	86	22	2.5	1.8	O	
	6/12/2002	87	18	2.2	1.8	O	
	5/23/2002	73	14	2.5	1.8	O	
	4/16/2002	75	8	3.8	1.8	O	
	2/9/2002	50	10	7.7	4.0	C	closed on 1/29/02 Riv 8.04' - 8.43' opened on 2/12/02
	12/27/2001	43	15	7.7	4.5	C	closed on 12/23/01 Riv 8.18' - 8.36' opened on 12/31/01
	11/27/2001	72	25	3.3	1.8	O	
	9/18/2001	84	22	2.4	1.8	O	
	7/17/2001	85	15	2.7	1.8	O	
	6/27/2001	83	14	1.8	1.8	O	
	5/16/2001	80	25	2.1	1.8	O	
	4/19/2001	64	3	6.2	1.8	C	closed on 4/9/01 Riv 8.36' - 9.03' opened on 4/21/01
	4/4/2001	69	4	7.2	1.8	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/17/2001	54	17	2.4	1.8	O	

LEGEND

STATION= Station
 DATE= Sampling Date
 TEMP= Temperature (° Fahrenheit)

SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
123A	10/25/2007	64	30	2.6	2.0	O	
	8/29/2007	86	27	2.2	2.0	O	
	7/10/2007	90	30	1.7	1.8	O	
	6/11/2007	89	33	2.0	1.8	O	
	4/17/2007	66	29	2.1	1.8	O	
	1/15/2007	63	18	7.5	4.5	C	closed on 1/12/07 Riv 7.81' - 8.12' opened on 1/19/07
	12/18/2006	60	25	2.6	1.8	O	
	11/1/2006	73	26	3.1	4.5	O	
	8/15/2006	89	29	1.9	1.8	O	
	7/25/2006	85	30	3.7	2.0	O	
	6/27/2006	84	26	3.7	2.0	O	
	5/23/2006	83	27	3.4	1.8	O	
	3/30/2006	69	15	7.8	1.8	C	closed on 3/28/06 Riv 8.02' - 8.19' opened 4/2/06
	3/8/2006	64	10	7.1	1.8	C	closed on 3/2/06 Riv 8.24' - 8.74' opened on 3/11/06
	2/18/2006	58	15	7.7	2.0	C	closed on 2/15/06 Riv 8.09' - 8.21' opened 2/21/06
	2/3/2006	62	13	7.8	4.5	C	closed on 1/30/06 Riv 8.25' - 8.25' opened 2/6/06
	1/19/2006	56	22	3.5	1.8	O	
	12/13/2005	54	19	2.8		O	no FEC data available due to lab accident
	10/17/2005	69	22	3.1	2.0	O	
	9/13/2005	83	20	2.6	2.0	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	7/26/2005	90	4	6.7	4.5	C	closed on 7/10/05 emergency closure (Dennis) opened on 7/29/05
	5/18/2005	78	14	3.7	1.8	O	
	4/22/2005	74	6	7.3	1.8	C	closed on 4/1/05 Riv 8.16' - 8.78' opened on 4/24/05
	3/29/2005	68	16	6.7	2.0	O	
	1/4/2005	65	10	4.5	9.3	O	
	12/26/2004	50	13	7.3	1.8	C	closed on 11/28/04 Riv 7.82' - 8.30' opened 12/30/04
	10/5/2004	82	15	2.6	1.8	O	
	7/28/2004	90	15	1.7	7.8	O	
	5/25/2004	80	22	4.0	1.8	O	
	3/5/2004	63	8	7.4	1.8	C	still closed from 2/12/04
	2/26/2004	50	8	7.9	7.8	C	closed on 2/12/04 Riv 7.73' - 8.46' opened 3/9/04
	1/14/2004	50	11	4.3	1.8	O	
	11/12/2003	71	22	3.8	1.8	O	
	9/24/2003	78	18	3.7	2.0	O	

LEGEND

STATION= Station
 DATE= Sampling Date
 TEMP= Temperature (° Fahrenheit)

SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	7/14/2003	79	5	7.7	49.0	C	closed on 7/6/03 Riv 8.17' - 8.54' 7/17/03
	6/26/2003	83	2	8.0	1.8	C	closed on 6/24/03 Riv 8.00' - 8.21' opened on 6/28/03
	6/4/2003	82	4	7.4	7.8	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	5/6/2003	80	5	7.5	1.8	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	4/19/2003	76	8	7.3	1.8	C	closed on 4/14/03 Riv 9.15' - 9.51' opened on 4/22/03
	3/25/2003	68	5	7.9	1.8	C	closed on 2/26/03 Riv 7.97' - 8.60' opened on 3/28/03
	1/9/2003	56	6	6.9	4.5	C	closed on 12/27/02 Riv > 8.00' opened on 1/14/03
	12/17/2002	56	15	6.9	1.8	O	
	10/1/2002	82	18	5.8	7.8	O	
	8/27/2002	89	25	2.5	1.8	O	
	6/12/2002	88	20	2.2	1.8	O	
	5/23/2002	73	14	2.5	1.8	O	
	4/16/2002	78	15	3.8	2.0	O	
	2/9/2002	51	10	7.7	7.8	C	closed on 1/29/02 Riv 8.04' - 8.43' opened on 2/12/02
	12/27/2001	44	15	7.7	1.8	C	closed on 12/23/01 Riv 8.18' - 8.36' opened on 12/31/01
	11/27/2001	75	25	3.3	2.0	O	
	9/18/2001	84	16	2.4	1.8	O	
	7/17/2001	85	18	2.7	1.8	O	
	6/27/2001	83	15	1.8	1.8	O	
	5/16/2001	80	20	2.1	1.8	O	
	4/19/2001	65	3	6.2	1.8	C	closed on 4/9/01 Riv 8.36' - 9.03' opened on 4/21/01
	4/4/2001	70	10	7.2	4.8	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/23/2001	52	25	5.7	1.8	O	
	1/17/2001	54	24	2.4	23.0	O	
125							
	10/25/2007	64	26	2.6	2.0	O	
	8/29/2007	87	23	2.2	1.8	O	
	7/10/2007	88	26	1.7	1.8	O	
	6/11/2007	87	25	2.0	1.8	O	
	4/17/2007	66	21	2.1	1.8	O	
	1/15/2007	63	7	7.5	7.8	C	closed on 1/12/07 Riv 7.81' - 8.12' opened on 1/19/07
	12/18/2006	60	19	2.6	1.8	O	
	11/1/2006	71	19	3.1	1.8	O	
	8/15/2006	88	20	1.9	1.8	O	
	7/25/2006	84	26	3.7	1.8	O	

LEGEND

STATION= Station
 DATE= Sampling Date
 TEMP= Temperature (° Fahrenheit)

SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	6/27/2006	85	26	3.7	1.8	O	
	5/23/2006	81	7	3.4	1.8	O	
	3/30/2006	65	7	7.8	1.8	C	closed on 3/28/06 Riv 8.02' - 8.19' opened 4/2/06
	3/8/2006	62	5	7.1	6.8	C	closed on 3/2/06 Riv 8.24' - 8.74' opened on 3/11/06
	2/18/2006	57	2	7.7	7.8	C	closed on 2/15/06 Riv 8.09' - 8.21' opened 2/21/06
	2/3/2006	60	7	7.8	11.0	C	closed on 1/30/06 Riv 8.25' - 8.25' opened 2/6/06
	1/19/2006	56	19	3.5	1.8	O	
	12/13/2005	54	17	2.8		O	no FEC data available due to lab accident
	10/17/2005	74	22	3.1	1.8	O	
	9/13/2005	83	14	2.6	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	7/26/2005	89	2	6.7	1.8	C	closed on 7/10/05 emergency closure (Dennis) opened on 7/29/05
	5/18/2005	78	11	3.7	1.8	O	
	4/22/2005	74	2	7.3	4.5	C	closed on 4/1/05 Riv 8.16' - 8.78' opened on 4/24/05
	3/29/2005	67	6	6.7	2.0	O	
	1/4/2005	63	3	4.5	13.0	O	
	12/26/2004	50	10	7.3	6.8	C	closed on 11/28/04 Riv 7.82' - 8.30' opened 12/30/04
	10/5/2004	82	12	2.6	1.8	O	
	7/28/2004	90	15	1.7	1.8	O	
	5/25/2004	80	23	4.0	1.8	O	
	3/5/2004	63	5	7.4	7.8	C	still closed from 2/12/04
	2/26/2004	50	4	7.9	17.0	C	closed on 2/12/04 Riv 7.73' - 8.46' opened 3/9/04
	11/12/2003	72	15	3.8	1.8	O	
	9/24/2003	74	15	3.7	1.8	O	
	7/14/2003	79	5	7.7	7.8	C	closed on 7/6/03 Riv 8.17' - 8.54' 7/17/03
	6/26/2003	83	4	8.0	2.0	C	closed on 6/24/03 Riv 8.00' - 8.21' opened on 6/28/03
	5/6/2003	81	2	7.5	1.8	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	3/25/2003	67	3	7.9	4.5	C	closed on 2/26/03 Riv 7.97' - 8.60' opened on 3/28/03
	1/9/2003	56	5	6.9	1.8	C	closed on 12/27/02 Riv > 8.00' opened on 1/14/03
	12/17/2002	55	10	6.9	1.8	O	
	10/1/2002	83	10	5.8	2.0	O	
126	10/25/2007	68	25	2.6	1.8	O	
	8/29/2007	87	22	2.2	1.8	O	
	7/10/2007	88	23	1.7	1.8	O	
	6/11/2007	88	24	2.0	1.8	O	

LEGEND

STATION= Station
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SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	4/17/2007	66	17	2.1	1.8	O	
	1/15/2007	63	6	7.5	7.8	C	closed on 1/12/07 Riv 7.81' - 8.12' opened on 1/19/07
	12/18/2006	63	13	2.6	1.8	O	
	11/1/2006	71	12	3.1	1.8	O	
	7/25/2006	86	19	3.7	1.8	O	
	5/23/2006	82	4	3.4	1.8	O	
	3/30/2006	65	7	7.8	1.8	C	closed on 3/28/06 Riv 8.02' - 8.19' opened 4/2/06
	2/18/2006	56	2	7.7	13.0	C	closed on 2/15/06 Riv 8.09' - 8.21' opened 2/21/06
	2/3/2006	59	4	7.8	33.0	C	closed on 1/30/06 Riv 8.25' - 8.25' opened 2/6/06
	1/19/2006	55	18	3.5	1.8	O	
	12/13/2005	53	17	2.8		O	no FEC data available due to lab accident
	10/17/2005	74	21	3.1	1.8	O	
	9/13/2005	83	17	2.6	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	7/26/2005	90	2	6.7	1.8	C	closed on 7/10/05 emergency closure (Dennis) opened on 7/29/05
	5/18/2005	78	12	3.7	1.8	O	
	3/29/2005	69	4	6.7	1.8	O	
	1/26/2005	59	10	3.8	4.5	O	
	1/4/2005	63	3	4.5	4.0	O	
128	11/5/2007	69	26	2.4	1.8	O	
	10/25/2007	62	21	2.6	70.0	O	
	8/29/2007	84	21	2.2	1.8	O	
	7/10/2007	89	29	1.7	1.8	O	
	6/11/2007	87	31	2.0	2.0	O	
	4/17/2007	65	26	2.1	1.8	O	
	1/15/2007	63	3	7.5	4.5	C	closed on 1/12/07 Riv 7.81' - 8.12' opened on 1/19/07
	12/18/2006	65	13	2.6	4.5	O	
	11/1/2006	71	16	3.1	1.8	O	
	8/15/2006	88	20	1.9	7.8	O	
	7/25/2006	83	27	3.7	1.8	O	
	6/27/2006	84	26	3.7	1.8	O	
	5/23/2006	81	23	3.4	1.8	O	
	3/30/2006	68		7.8	1.8	C	closed on 3/28/06 Riv 8.02' - 8.19' opened 4/2/06
	3/8/2006	63	6	7.1	1.8	C	closed on 3/2/06 Riv 8.24' - 8.74' opened on 3/11/06
	2/18/2006	58	3	7.7	6.8	C	closed on 2/15/06 Riv 8.09' - 8.21' opened 2/21/06

LEGEND

STATION= Station
 DATE= Sampling Date
 TEMP= Temperature (° Fahrenheit)

SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	2/3/2006	60	7	7.8	4.0	C	closed on 1/30/06 Riv 8.25' - 8.25' opened 2/6/06
	1/19/2006	54	20	3.5	6.8	O	
	12/13/2005	54	20	2.8		O	no FEC data available due to lab accident
	10/17/2005	73	20	3.1	1.8	O	
	9/13/2005	82	11	2.6	2.0	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	7/26/2005	89	2	6.7	2.0	C	closed on 7/10/05 emergency closure (Dennis) opened on 7/29/05
	5/18/2005	78	5	3.7	4.5	O	
	4/22/2005	74	2	7.3	1.8	C	closed on 4/1/05 Riv 8.16' - 8.78' opened on 4/24/05
	3/29/2005	67	14	6.7	1.8	O	
	1/4/2005	66	4	4.5	4.5	O	
	12/26/2004	50	8	7.3	4.5	C	closed on 11/28/04 Riv 7.82' - 8.30' opened 12/30/04
	10/5/2004	82	10	2.6	17.0	O	
	7/28/2004	89	15	1.7	4.5	O	
	5/25/2004	78	20	4.0	1.8	O	
	3/5/2004	63	3	7.4	23.0	C	still closed from 2/12/04
	2/26/2004	50	2	7.9	23.0	C	closed on 2/12/04 Riv 7.73' - 8.46' opened 3/9/04
	1/14/2004	50	10	4.3	1.8	O	
	11/12/2003	72	15	3.8	2.0	O	
	9/24/2003	78	18	3.7	1.8	O	
	7/14/2003	78	4	7.7	1.8	C	closed on 7/6/03 Riv 8.17' - 8.54' 7/17/03
	6/26/2003	82	1	8.0	1.8	C	closed on 6/24/03 Riv 8.00' - 8.21' opened on 6/28/03
	6/4/2003	82	5	7.4	2.0	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	5/6/2003	80	3	7.5	2.0	C	closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03
	4/19/2003	76	3	7.3	4.5	C	closed on 4/14/03 Riv 9.15' - 9.51' opened on 4/22/03
	3/25/2003	68	5	7.9	2.0	C	closed on 2/26/03 Riv 7.97' - 8.60' opened on 3/28/03
	1/9/2003	55	14	6.9	2.0	C	closed on 12/27/02 Riv > 8.00' opened on 1/14/03
	12/17/2002	55	8	6.9	4.5	O	
	10/1/2002	83	10	5.8	4.5	O	
	8/27/2002	87	23	2.5	1.8	O	
	6/12/2002	88	18	2.2	1.8	O	
	5/23/2002	70	8	2.5	1.8	O	
	4/16/2002	78	8	3.8	1.8	O	
	2/9/2002	51	8	7.7	4.5	C	closed on 1/29/02 Riv 8.04' - 8.43' opened on 2/12/02
	12/27/2001	47	15	7.7	1.8	C	closed on 12/23/01 Riv 8.18' - 8.36' opened on 12/31/01
	11/27/2001	75	20	3.3	1.8	O	

LEGEND

STATION= Station
 DATE= Sampling Date
 TEMP= Temperature (° Fahrenheit)

SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

AREA I BACTERIOLOGICAL SAMPLE RESULTS

From: 01/01/01 To: 12/31/07

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	9/18/2001	84	10	2.4	1.8	O	
	7/17/2001	86	12	2.7	7.8	O	
	6/27/2001	83	8	1.8	1.8	O	
	5/16/2001	80	22	2.1	1.8	O	
	4/19/2001	64	3	6.2	7.8	C	closed on 4/9/01 Riv 8.36' - 9.03' opened on 4/21/01
	4/4/2001	72	4	7.2	4.5	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/17/2001	54	15	2.4	2.0	O	

LEGEND

STATION= Station
 DATE= Sampling Date
 TEMP= Temperature (° Fahrenheit)

SAL= Salinity (ppT)
 RIV= River Stage (feet)
 FEC= Fecal Coliform (MPN/100ml)

O= Open Status
 C= Closed Status
 BLANK SPACE= No Data Available

SUMMARY – AREA I

This comprehensive sanitary survey shows that:

- shellfish harvested from Area I during *open status* meet *NSSP Model Ordinance* requirements for allowing direct harvest for human consumption.
- human or animal fecal matter is not present in Area I at levels that present an actual or potential public health hazard.
- Area I is sufficiently removed from major sources of pollution so that shellfish are not exposed to pathogenic organisms, poisonous or deleterious substances, or marine biotoxins in quantities which are dangerous to public health.
- the 14/43 STANDARD (geometric mean of fecal coliform not exceeding 14 MPN/100 ml, with no more than 10% of the samples exceeding 43 MPN/100 ml) was met, with at least 15 samples (actually 30) collected under routine sampling conditions.
- the regression models indicate that both river stage and rainfall have impacts on the amounts of fecal coliform contributed by rainfall, storm water runoff, or storm winds and surge. Managing area closures on the 8 foot river stage, more than adequately closes all harvesting waters in ample time to prevent fecal coliform contamination.

Since Area I meets all of the criteria for a **CONDITIONALLY APPROVED** harvest area, it is deemed as being appropriately classified and managed by ADPH – Seafood Branch.

OYSTER LANDINGS

TABLE I-1

OYSTER LANDINGS

As Reported by:

Alabama Department of Conservation and Natural Resources-Marine Resource Division

Alabama Reported Oyster Landings
Landings in Pounds of Meat

SPECIES	YEAR	MEAT LBS	VALUE	REPORTED TRIPS
Oyster	2001	621,193	\$1,313,639.	12,663
Oyster	2002	759,336	\$1,596,336.	14,213
Oyster	2003	810,865	\$1,620,541.	10,861
Oyster	2004	918,116	\$2,103,746.	12,719
Oyster	2005	1,041,342	\$3,020,278.	14,216
Oyster	2006	939,605	\$3,639,217.	17,292
Oyster	2007*	768,792	\$2,697,787.	17,734

*Preliminary Data Subject to Change

Alabama Processed Oyster Products

PRODUCT	YEAR	LBS PRODUCT	VALUES
Oyster-Shucked Meat	2001	5,501,400	\$24,568,600.
Oyster-Shucked Meat	2002	3,384,568	\$14,367,900.
Oyster-Shucked Meat	2003	4,673,208	\$20,333,889.
Oyster-Shucked Meat	2004	5,897,976	\$28,518,200.
Oyster-Shucked Meat	2005	3,807,200	\$20,712,000.
Oyster-Shucked Meat	2006	3,793,680	\$24,220,100.
Oyster-Shucked Meat	2007*	4,048,800	\$24,200,000

*Preliminary Data Subject to Change

Table I-1

OYSTER CLEANSING PROCESS

TABLE II-1

(Table II-1)

SUMMARY OF SHELLFISH CLEANSING DATA

DATE by Month	RIVER STAGE	STATION/STATUS O=Open C=Closed	BAY WATER FEC	SHELLSTOCK FEC	SHELLSTOCK E COLI	SHELLSTOCK SPC
<i>August 2007</i>						
8/29/2007	2.2 feet	118 / O	1.8	18.0	18.0	
<i>July 2007</i>						
7/10/2007	1.7 feet	118 / O	2.0	45.0	45.0	
<i>June 2007</i>						
6/11/2007	2.0 feet	118 / O	1.8	18.0	18.0	
<i>January 2007</i>						
closed on 1/12/07 Riv 7.81' - 8.12' opened on 1/19/07						
1/15/2007	7.5 feet	118 / C	2.0	18.0	18.0	
<i>November 2006</i>						
11/1/2006	3.1 feet	118 / O	1.8	18.0	18.0	
<i>August 2006</i>						
8/15/2006	1.9 feet	118 / O	1.8	18.0	18.0	
<i>July 2006</i>						
7/25/2006	3.7 feet	118 / O	1.8	18.0	18.0	

DATE by Month	RIVER STAGE	STATION/STATUS O=Open C=Closed	BAY WATER FEC	SHELLSTOCK FEC	SHELLSTOCK E COLI	SHELLSTOCK SPC
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June 2006

6/27/2006	3.7 feet	118 / O	13.0	20.0	18.0	
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May 2006

5/23/2006	3.4 feet	118 / O	1.8	18.0	18.0	
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March 2006

closed on 3/28/06 Riv 8.02' - 8.19' opened on 4/2/06

3/30/2006	7.8 feet	118 / C	1.8	18.0	18.0	43,000.0
-----------	----------	---------	-----	------	------	----------

closed on 3/2/06 Riv 8.24' - 8.74' opened on 3/11/06

3/8/2006	7.1 feet	118 / C	1.8	20.0	18.0	3,000.0
----------	----------	---------	-----	------	------	---------

February 2006

closed on 2/15/06 Riv 8.09' - 8.21' opened on 2/21/06

2/18/2006	7.7 feet	118 / C	7.8	18.0	18.0	3,000.0
-----------	----------	---------	-----	------	------	---------

closed on 1/30/06 Riv 8.25' - 8.25' opened on 2/6/06

2/3/2006	7.8 feet	118 / C	2.0	20.0	20.0	30,000.0
----------	----------	---------	-----	------	------	----------

October 2005

10/17/2005	3.1 feet	118 / O	1.8	18.0	18.0	3,000.0
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September 2005

closed on 8/29/05 emergency closure (Katrina) opened on 9/22/05

9/14/2005	2.8 feet	153A / C	4.0	18.0	18.0	3,000.0
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9/13/2005	2.6 feet	123A / C	2.0	18.0	18.0	3,000.0
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9/13/2005	2.6 feet	118 / C	1.8	18.0	18.0	4,800.0
-----------	----------	---------	-----	------	------	---------

DATE by Month	RIVER STAGE	STATION/STATUS O=Open C=Closed	BAY WATER FEC	SHELLSTOCK FEC	SHELLSTOCK E COLI	SHELLSTOCK SPC
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July 2005

closed on 7/10/05 emergency closure (Dennis) opened on 7/29/05

7/26/2005	6.7 feet	118 / C	1.8	18.0	18.0	14,000.0
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May 2005

5/18/2005	3.7 feet	118 / O	1.8	18.0	18.0	620.0
-----------	----------	---------	-----	------	------	-------

April 2005

closed on 4/1/05 Riv 8.16' - 8.78' opened on 4/24/05

4/22/2005	7.3 feet	118 / C	2.0	20.0	20.0	240,000.0
-----------	----------	---------	-----	------	------	-----------

March 2005

3/29/2005	6.7 feet	118 / O	1.8	20.0	20.0	300.0
-----------	----------	---------	-----	------	------	-------

January 2005

1/4/2005	4.5 feet	118 / O	6.8	18.0	18.0	3,000.0
----------	----------	---------	-----	------	------	---------

December 2004

closed on 11/28/04 Riv 7.82' - 8.30' opened on 12/30/04

12/26/2004	7.3 feet	118 / C	2.0	18.0	18.0	15,000.0
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October 2004

10/5/2004	2.6 feet	118 / O	1.8	18.0	18.0	370.0
-----------	----------	---------	-----	------	------	-------

July 2004

7/28/2004	1.7 feet	118 / O	14.0	18.0	18.0	910.0
-----------	----------	---------	------	------	------	-------

DATE by Month	RIVER STAGE	STATION/STATUS O=Open C=Closed	BAY WATER FEC	SHELLSTOCK FEC	SHELLSTOCK E COLI	SHELLSTOCK SPC
---------------	-------------	-----------------------------------	------------------	-------------------	----------------------	-------------------

May 2004

5/25/2004	4.0 feet	118 / O	1.8	18.0	18.0	1,100.0
-----------	----------	---------	-----	------	------	---------

March 2004

still closed from 2/12/04

3/5/2004	7.4 feet	118 / C	13.0	20.0	20.0	6,300.0
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February 2004

closed on 2/12/04 Riv 7.73' - 8.46' opened on 3/9/04

2/26/2004	7.9 feet	118 / C	17.0	18.0	18.0	2,500.0
-----------	----------	---------	------	------	------	---------

January 2004

1/14/2004	4.3 feet	118 / O	2.0	18.0	18.0	460.0
-----------	----------	---------	-----	------	------	-------

November 2003

11/12/2003	3.8 feet	118 / O	1.8	18.0	18.0	500.0
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September 2003

9/24/2003	3.7 feet	118 / O	2.0	18.0	18.0	580.0
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June 2003

closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03

6/4/2003	7.4 feet	118 / C	2.0	18.0	18.0	24,000.0
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May 2003

closed on 5/1/03 Riv 8.30' - 8.81' opened on 5/9/03

5/6/2003	7.5 feet	118 / C	1.8	1.8	1.8	3,000.0
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DATE by Month	RIVER STAGE	STATION/STATUS O=Open C=Closed	BAY WATER FEC	SHELLSTOCK FEC	SHELLSTOCK E COLI	SHELLSTOCK SPC
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April 2003

closed on 4/14/03 Riv 9.15' - 9.51' opened on 4/22/03

4/19/2003	7.3 feet	118 / C	2.0	18.0	18.0	13,000.0
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March 2003

closed on 2/26/03 Riv 7.97' - 8.60' opened on 3/28/03

3/25/2003	7.9 feet	118 / C	7.8	18.0	18.0	13,000.0
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January 2003

closed on 12/27/02 Riv > 8.00' opened on 1/14/03

1/9/2003	6.9 feet	118 / C	1.8	20.0	20.0	760.0
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December 2002

12/17/2002	6.9 feet	118 / O	4.5	20.0	20.0	780.0
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October 2002

10/1/2002	5.8 feet	118 / O	1.8	18.0	18.0	1,700.0
-----------	----------	---------	-----	------	------	---------

August 2002

8/27/2002	2.5 feet	118 / O	1.8	18.0	18.0	300.0
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June 2002

6/12/2002	2.2 feet	118 / O	1.8	18.0	18.0	600.0
-----------	----------	---------	-----	------	------	-------

May 2002

5/23/2002	2.5 feet	118 / O	1.8	18.0	18.0	1,500.0
-----------	----------	---------	-----	------	------	---------

DATE by Month	RIVER STAGE	STATION/STATUS O=Open C=Closed	BAY WATER FEC	SHELLSTOCK FEC	SHELLSTOCK E COLI	SHELLSTOCK SPC
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April 2002

4/16/2002	3.8 feet	118 / O	1.8	18.0	18.0	360.0
-----------	----------	---------	-----	------	------	-------

February 2002

closed on 1/29/02 Riv 8.04' - 8.43' opened on 2/12/02

2/9/2002	7.7 feet	118 / C	4.5	78.0	45.0	3,400.0
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December 2001

closed on 12/23/01 Riv 8.18' - 8.36' opened on 12/31/01

12/27/2001	7.7 feet	118 / C	1.8	18.0	18.0	300.0
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November 2001

11/27/2001	3.3 feet	118 / O	1.8	20.0	20.0	230.0
------------	----------	---------	-----	------	------	-------

September 2001

9/18/2001	2.4 feet	118 / O	1.8	18.0	18.0	350.0
-----------	----------	---------	-----	------	------	-------

July 2001

7/17/2001	2.7 feet	118 / O	1.8	18.0	18.0	300.0
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June 2001

6/27/2001	1.8 feet	118 / O	1.8	18.0	18.0	1,000.0
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May 2001

5/16/2001	2.1 feet	118 / O	1.8	18.0	18.0	900.0
-----------	----------	---------	-----	------	------	-------

DATE by Month	RIVER STAGE	STATION/STATUS O=Open C=Closed	BAY WATER FEC	SHELLSTOCK FEC	SHELLSTOCK E COLI	SHELLSTOCK SPC
---------------	-------------	-----------------------------------	------------------	-------------------	----------------------	-------------------

April 2001

closed on 4/9/01 Riv 8.36' - 9.03' opened on 4/21/01

4/19/2001	6.2 feet	118 / C	4.5	18.0	18.0	7,600.0
-----------	----------	---------	-----	------	------	---------

closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01

4/4/2001	7.2 feet	118 / C	1.8	20.0	18.0	6,600.0
----------	----------	---------	-----	------	------	---------

January 2001

1/17/2001	2.4 feet	118 / O	2.0	18.0	18.0	530.0
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CLOSURE/REOPENING DETAILS

TABLE II-2

**Shellfish Harvesting Area Openings and Closings
2007**

Areas I & II

Opened: January 1 - January 12 (3 PM)

Notice date: January 12

Closed: January 12 (3 PM) - January 19 (6 AM) = 4 Working Days
(possible bacteriological contamination
of oyster beds due to recent rainfall)

Notice date: January 18

Opened: January 19 (6 AM) - October 23 (3 PM)

Notice dates: October 22 & 23

Still Opened: October 23 (3 PM) - December 31

Total Closed Working Days = 4

**Shellfish Harvesting Area Openings and Closings
2007
Area III**

Opened: January 1 - January 12 (3 PM)

Notice date: January 12

Closed: January 12 (3 PM) - January 19 (6 AM) = 4 Working Days
(possible bacteriological contamination
of oyster beds due to recent rainfall)

Notice date: January 18

Opened: January 19 (6 AM) - October 23 (3 PM)

Notice dates: October 22 & 23

Closed: October 23 (3 PM) - December 31 = 49 Working Days
(the presence of red tide cells, *Karenia
brevis*, exceeding standards)

Total Closed Working Days = 53

Shellfish Harvesting Area Openings and Closings 2006 Area II

Opened:	January 1 - January 30 (3 PM)		
Notice date:	January 30		
Closed:	January 30 (3 PM) - February 6 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	=	4 Working Days
Notice date:	February 5		
Still Closed:	February 6 (6 AM) - February 15 (3 PM) (continued monitoring of bay waters and shellfish to ensure bacteriological safety)	=	8 Working Days
Notice date:	February 15		
Still Closed:	February 15 (3 PM) - February 21 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	=	3 Working Days
Notice date:	February 20		
Opened:	February 21 (6 AM) - March 2 (3 PM)		
Notice date:	March 2		
Closed:	March 2 (3 PM) - March 11 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	=	6 Working Days
Notice date:	March 10		
Opened:	March 11 (6 AM) - March 28 (3 PM)		
Notice date:	March 28		
Closed:	March 28 (3 PM) - April 2 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	=	3 Working Days
Notice date:	April 1		
Opened:	April 2 (6 AM) - December 31		

Total Closed Working Days = 24

Shellfish Harvesting Area Openings and Closings 2006 Areas I & III

Opened:	January 1 - January 30 (3 PM)		
Notice date:	January 30		
Closed:	January 30 (3 PM) - February 6 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	=	4 Working Days
Notice date:	February 5		
Opened:	February 6 (6 AM) - February 15 (3 PM)		
Notice date:	February 15		
Closed:	February 15 (3 PM) - February 21 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	=	3 Working Days
Notice date:	February 20		
Opened:	February 21 (6 AM) - March 2 (3 PM)		
Notice date:	March 2		
Closed:	March 2 (3 PM) - March 11 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	=	6 Working Days
Notice date:	March 10		
Opened:	March 11 (6 AM) - March 28 (3 PM)		
Notice date:	March 28		
Closed:	March 28 (3 PM) - April 2 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	=	3 Working Days
Notice date:	April 1		
Opened:	April 2 (6 AM) - December 31		

Total Closed Working Days = 16

Shellfish Harvesting Area Openings and Closings 2005 Areas I, II, III

Opened:	January 1 - April 1 (4 PM)	
Notice date:	April 1	
Closed:	April 1 (4 PM) - April 25 (6 AM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 15 Working Days
Notice date:	April 24	
Opened:	April 25 (6 AM) - July 10 (4 PM)	
Notice date:	July 10	
Closed:	July 10 (4 PM) - July 29 (6 AM) (possible bacteriological contamination of the oyster beds due to expected heavy rainfall associated with Hurricane Dennis)	= 14 Working Days
Notice date:	July 28	
Opened:	July 29 (6 AM) - August 29 (4 PM)	
Notice date:	August 29	
Closed:	August 29 (4 PM) - September 22 (6 AM) (possible bacteriological contamination of the oyster beds due to expected heavy rainfall associated with Hurricane Katrina)	= 17 Working Days
Notice date:	September 21	
Opened:	September 22 (6 AM) - October 18 (4 PM)	
Notice date:	October 18	
Closed:	October 18 (4 PM) - October 21 (6 AM) (the presence of red tide cells, <i>Karenia brevis</i> , possibly exceeding standards)	= 2 Working Days Areas I & III only
Closed:	October 18 (4 PM) - October 27 (6 AM) (the presence of red tide cells, <i>Karenia brevis</i> , exceeding standards)	= 6 Working Days Area II only
Notice date:	October 20	
Opened:	October 21 (6 AM) - December 31	Areas I & III only
Notice date:	October 26	
Opened:	October 27 (6 AM) - December 31	Area II only

Total Closed Working Days = 52

**Shellfish Harvesting Area Openings and Closings
2004
Areas I, II, III**

Opened: January 1 - February 12 (4 PM)

Notice date: February 12

Closed: February 12 (4 PM) - March 9 (6 AM) = 17 Working Days
(possible bacteriological contamination
of the oyster beds due to recent rainfall)

Notice date: March 8

Opened: March 9 (6 AM) - November 28 (4 PM)

Notice date: November 28, 2004

Closed: November 28 (4 PM) - December 30 (6 AM) = 23 Working Days
(possible bacteriological contamination
of the oyster beds due to recent rainfall)

Notice date: December 29, 2004

Opened: December 30 (6 AM) - December 31

Total Closed Working Days = 40

**Shellfish Harvesting Area Openings and Closings
2003
Areas I, II, III**

Closed:	January 1 - January 13 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 9 Working Days
Notice date:	January 13	
Opened:	January 14 (6 AM) - February 25	
Notice date:	February 26	
Closed:	February 26 (4 PM) - March 27 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 21 Working Days
Notice date:	March 27	
Opened:	March 28 (6 AM) - April 13	
Notice date:	April 14	
Closed:	April 14 (4 PM) - April 21 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 5 Working Days
Notice date:	April 21	
Opened:	April 22 (6 AM) - April 30	
Notice date:	May 1	
Closed:	May 1 (4 PM) - May 8 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 5 Working Days
Notice date:	May 8	
Opened:	May 9 (6 AM) - May 13	

**Shellfish Harvesting Area Openings and Closings
2003
Areas I, II, III**

Notice date: May 14

Closed: May 14 (4 PM) - June 6 = 17 Working Days
(possible bacteriological contamination
of the oyster beds due to recent rainfall)

Notice date: June 6

Opened: June 7 (6 AM) - June 23

Notice date: June 24

Closed: June 24 (4 PM) - June 27 = 3 Working Days
(possible bacteriological contamination
of the oyster beds due to recent rainfall)

Notice date: June 27

Opened: June 28 (6 AM) - July 5

Notice date: July 6

Closed: July 6 (4 PM) - July 16 = 8 Working Days
(possible bacteriological contamination
of the oyster beds due to recent rainfall)

Notice date: July 16

Opened: July 17 (6 AM) - December 31

Total Closed Working Days = 68

Shellfish Harvesting Area Openings and Closings 2002 Areas I, II, III

Opened:	January 1 - January 29 (4 PM)	
Notice date:	January 29	
Closed:	January 29 (4 PM) - February 11 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 9 Working Days
Notice date:	February 11	
Opened:	February 12 (6 AM) - September 26 (4 PM)	
Notice date:	September 26	
Closed:	September 26 (4 PM) - October 2 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 4 Working Days
Notice date:	October 2	
Opened:	October 3 (6 AM) - December 27 (4 PM)	
Notice date:	December 27	
Closed:	December 27 (4 PM) - December 31 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 2 Working Days

Total Closed Working Days = 15

Shellfish Harvesting Area Openings and Closings 2001 Areas I, II, III

Opened:	January 1 - March 4 (4 PM)	
Notice date:	March 4	
Closed:	March 4 (4 PM) - April 6 (4 PM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 25 Working Days
Notice date:	April 5	
Opened:	April 6 (4 PM) - April 9 (4 PM)	
Notice date:	April 9	
Closed:	April 9 (4 PM) - April 21 (4 PM) (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 9 Working Days
Notice date:	April 20	
Opened:	April 21 (4 PM) - December 23 (4 PM)	
Notice date:	December 23	
Closed:	December 23 (4 PM) - December 30 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 5 Working Days
Notice date:	December 30	
Opened:	December 31 (6 AM) - December 31 (4 PM)	

Total Closed Working Days = 39

**Shellfish Harvesting Area Openings and Closings
2000
Areas I, II, III**

Opened:

January 1 - April 9

Notice date:

April 9

Closed:

April 10 (6 AM) - April 23

= 10 Working Days

(possible bacteriological contamination
of the oyster beds due to recent rainfall)

Notice date:

April 23

Opened:

April 24 (6 AM) - December 31 (4 PM)

Total Closed Working Days = 10

2005 RED TIDE EVENT

TABLE III-1

Seafood Branch
 4168 Commander's Drive
 Mobile, AL 36615
 (251) 432-7618

ADPH DINOFLAGELLATE SAMPLING 2005 RED TIDE EVENT

Between: 10/03/05 And: 10/26/05

DATE	TIME	AREA	STA / SITE	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	KARENIA B. >5000
10/25/2005	2:45 AM	I	118	Cedar Point	62	25	F	NW 10	0.4	O	0
10/25/2005	2:18 AM	II	153A	Upper Portersville Bay	62	28	F	NW 10	0.4	C	410
10/25/2005	2:00 AM	II	178	Grand Bay	63	26	F	NW 10-15	0.4	C	0
10/25/2005	3:07 AM	I	123A	D. I. Bay North End	62	25	F	NW 10	0.4	O	0
10/20/2005	11:15 AM		* ell	East Little Lagoon (gulf)					2.4		68,000
10/20/2005	10:35 AM		* gspb	Gulf Shores Public Beach					2.4		24,000
10/20/2005	10:00 AM		* pp	Perdido Pass					2.4		69,000
10/12/2005	11:20 AM		* pp	Perdido Pass				SE	2.3		130,000
10/12/2005	11:00 AM		* ell	East Little Lagoon (gulf)				SE	2.3		87,000
10/12/2005	12:00 PM		* gspb	Gulf Shores Public Beach				SE	2.3		54,000
10/10/2005	9:53 AM	I	119A	North of Intercoastal Waterway	75	16	F	NE 5	2.3	O	0
10/10/2005	9:59 AM	I	118	Cedar Point	74	13	F	NE 5	2.3	O	0
10/10/2005	10:43 AM	I	123A	D. I. Bay North End	74	17	F		2.3	O	0
10/10/2005	10:23 AM	II	154	Lower Portersville Bay	74	26	F	NE 5	2.3	O	
10/10/2005	10:10 AM	I	128	Heron Bay	74	16	F	NE 5	2.3	O	0
10/7/2005	10:05 AM	I	119A	North of Intercoastal Waterway	77	13	H-F	NW 10-15	2.0	O	0
10/7/2005	10:12 AM	I	118	Cedar Point	77	10	H-F	NE 10-15	2.0	O	0

Seafood Branch
 4168 Commander's Drive
 Mobile, AL 36615
 (251) 432-7618

ADPH DINOFLAGELLATE SAMPLING 2005 RED TIDE EVENT

Between: 10/03/05 And: 10/26/05

DATE	TIME	AREA	STA / SITE	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	KARENIA B. >5000
10/7/2005	10:55 AM	I	123A	D. I. Bay North End	76	18	H-F	NE 10-15	2.0	O	0
10/7/2005	10:33 AM	II	154	Lower Portersville Bay	85	21	H-F	NW 10-15	2.0	O	220
10/7/2005	10:20 AM	I	128	Heron Bay	76	9	H-F	NW 10-15	2.0	O	0
10/5/2005	3:25 PM	I	128	Heron Bay	82	7	H	NE 10	3.5	O	0
10/5/2005	3:50 PM	II	154	Lower Portersville Bay	82	19	H	N 15	3.5	O	0
10/5/2005	4:10 PM	I	123A	D. I. Bay North End	81	21	H-F	NE 10	3.5	O	1,100
10/5/2005	3:25 PM	I	118	Cedar Point	82	10	H	NE 10	3.5	O	0
10/5/2005	3:00 AM	I	119A	North of Intercoastal Waterway	82	15	H	NE 11	3.5	O	0
10/4/2005	2:00 PM	I	123A	D. I. Bay North End	82	22	H	E 10	4.3	O	0
10/3/2005		I	128	Heron Bay					4.9	O	64,000

2007 RED TIDE EVENT

TABLE III-2

Seafood Branch
 4168 Commander's Drive
 Mobile, AL 36615
 (251) 432-7618

ADPH DINOFLAGELLATE SAMPLING RED TIDE EVENT 2007

Between: 10/16/07 And: 12/31/07

DATE	TIME	AREA	STA / SITE	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	KARENIA B. >5000
12/31/2007	10:10 AM	I	123A	D. I. Bay North End	56	24	low	10 E	2.5	O	210
12/31/2007	10:50 AM	I	118	Cedar Point	56	20	low	5E	2.5	O	0
12/31/2007	11:32 AM	II	153A	Upper Portersville Bay	59	28	low	6 E	2.5	O	0
12/27/2007	12:14 PM	II	153A	Upper Portersville Bay	63	27	neap	calm	2.5	O	0
12/27/2007	11:02 AM	I	118	Cedar Point	56	27	low-falling	N 10-12	2.5	O	410
12/27/2007	10:15 AM	I	123A	D. I. Bay North End	57	29	low-falling	N 5-10	2.5	O	100
12/20/2007	10:25 AM	I	118	Cedar Point	60	25	rising	SE 10-15	3.2	O	0
12/20/2007	9:35 AM	I	123A	D. I. Bay North End	61	28	rising	SE 2-7	3.2	O	0
12/20/2007	11:02 AM	II	153A	Upper Portersville Bay	62	25	rising	SE 10-15	3.2	O	0
12/17/2007	9:28 AM	III	112A	The Pines Ft. Morgan Boat Launch	43	27	low-falling	N 18-20	1.1	C	0
12/17/2007	8:45 AM	I	118	Cedar Point	56	26	low	NE 20+	1.1	O	0
12/17/2007	10:15 AM	II	153A	Upper Portersville Bay	53	30	low	NE 10	1.1	O	0
12/17/2007	10:28 AM	III	107B	Ft. Morgan Ferry Landing	49	33	low-falling	N 15-20	1.1	C	720
12/17/2007	9:25 AM	I	123A	D. I. Bay North End	73	30	low	NE 20+	1.1	O	0
12/12/2007	10:30 AM	II	153A	Upper Portersville Bay	75	28	low	SE 10	3.7	O	0
12/12/2007	11:00 AM	I	118	Cedar Point	65	23	low	SE 10	3.7	O	100
12/12/2007	11:45 AM	I	123A	D. I. Bay North End	67	27	low	SE 10	3.7	O	520

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ADPH DINOFLAGELLATE SAMPLING RED TIDE EVENT 2007

Between: 10/16/07 And: 12/31/07

DATE	TIME	AREA	STA / SITE	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	KARENIA B. >5000
12/10/2007	9:25 AM	I	118	Cedar Point	62	24	falling	SE 5	2.7	O	210
12/10/2007	10:00 AM	I	123A	D. I. Bay North End	64	27	falling	SE 10	2.7	O	100
12/10/2007	8:45 AM	II	153A	Upper Portersville Bay	69	27	low, falling	SE 10	2.7	O	0
11/29/2007	11:20 AM	I	118	Cedar Point	59	25	low	NE 10	1.6	O	0
11/29/2007	10:20 AM	II	153A	Upper Portersville Bay	65	28	low	N 5	1.6	O	0
11/29/2007	10:25 AM	III	107B	Ft. Morgan Ferry Landing	64	32	falling	9.2 NNE	1.6	C	310
11/29/2007	9:32 AM	III	112A	The Pines Ft. Morgan Boat Launch	61	25	falling	3.2 NNE	1.6	C	0
11/29/2007	11:45 AM	I	123A	D. I. Bay North End	60	28	low	NE 10	1.6	O	0
11/26/2007	11:00 AM	I	123A	D. I. Bay North End	63	31	low	SW 5	3.1	O	210
11/26/2007	10:30 AM	I	118	Cedar Point	61	29	low	SW 15-20	3.1	O	310
11/26/2007	11:30 AM	II	153A	Upper Portersville Bay	63	23	low	SW 15-20	3.1	O	0
11/14/2007	11:15 AM	III	106	Intercoastal Waterway	69	24	falling	SW 3	2.8	C	0
11/14/2007	11:27 AM	III	104A	Bon Secour Bay	69	23	falling	SW 3	2.8	C	0
11/14/2007	12:00 PM	III	82	Weeks Bay	71	19	falling	SW 3	2.8	C	0
11/14/2007	12:50 PM	I	123A	D. I. Bay North End	71	28	falling	SW 3	2.8	O	0
11/14/2007	10:25 AM	III	107B	Ft. Morgan Ferry Landing	70	31	falling	SW 3	2.8	C	34,000
11/13/2007	11:58 AM	I	118	Cedar Point	68	24	low	SE 1.3	2.6	C	0

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ADPH DINOFLAGELLATE SAMPLING RED TIDE EVENT 2007

Between: 10/16/07 And: 12/31/07

DATE	TIME	AREA	STA / SITE	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	KARENIA B. >5000
11/13/2007	12:38 PM	II	153A	Upper Portersville Bay	74	30	low-rising	3.9 SE	2.6	C	0
11/7/2007	11:00 AM	I	118	Cedar Point	61	25	low	NE 20+	2.0	O	0
11/7/2007	2:20 PM	II	153A	Upper Portersville Bay	65	30	low	NE 10	2.0	O	0
11/5/2007	12:00 PM	I	123A	D. I. Bay North End	68	23	neap	calm	2.4	O	0
11/5/2007	11:50 AM	I	120	South Side Ship Channel/East of Cedar Point	69	25	neap	calm	2.4	O	410
11/5/2007	11:40 AM	I	118	Cedar Point	69	27	neap	calm	2.4	O	410
11/5/2007	9:32 AM	III	112A	The Pines Ft. Morgan Boat Launch	68	10	neap	2-4 NNW	2.4	C	310
11/5/2007	11:05 AM	II	153A	Upper Portersville Bay	68	29	neap	calm	2.4	O	100
10/31/2007	9:37 AM	III	107B	Ft. Morgan Ferry Landing	66	29	falling	11.6 NE	2.1	C	1,500
10/31/2007	10:40 AM	III	112A	The Pines Ft. Morgan Boat Launch	68	17	falling	6.1 NE	2.1	C	0
10/25/2007	11:30 AM	III	112A	The Pines Ft. Morgan Boat Launch	60	30		NW	2.6	C	210
10/25/2007	1:19 PM	I	123A	D. I. Bay North End	64	30	rising	4.6 NW	2.6	O	0
10/25/2007	1:04 PM	I	120	South Side Ship Channel/East of Cedar Point	64	29	rising	9.0 NW	2.6	O	0
10/25/2007	12:18 PM	I	118	Cedar Point	62	24	rising	15.1NW	2.6	O	0
10/25/2007	11:41 AM	II	153A	Upper Portersville Bay	63	22	rising	14.3NW	2.6	O	0
10/25/2007	11:14 AM	II	178	Grand Bay	64	25	rising	11.2NW	2.6	O	0
10/25/2007	12:20 PM	III	107B	Ft. Morgan Ferry Landing	75	31		NW	2.6	C	210

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ADPH DINOFLAGELLATE SAMPLING RED TIDE EVENT 2007

Between: 10/16/07 And: 12/31/07

DATE	TIME	AREA	STA / SITE	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	KARENIA B. >5000
10/22/2007	12:40 PM	I	118	Cedar Point	75	26	high/falling	SE20	2.3	O	0
10/22/2007	1:30 PM	II	153A	Upper Portersville Bay	76	22	high/falling	SE 20	2.3	O	0
10/19/2007	10:58 AM	I	118	Cedar Point	77	29	falling	7.4 NW	3.0	O	0
10/19/2007	8:15 AM	III	107B	Ft. Morgan Ferry Landing				NW	3.0	O	2,400
10/17/2007	9:30 AM	III	107B	Ft. Morgan Ferry Landing	78	0		SSE windy	3.5	O	100
10/17/2007	10:30 AM	I	118	Cedar Point	77	30	rising	SE 20.4	3.5	O	0

2001-2007 DINO SAMPLING

TABLE III-3

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RESULTS OF ADPH
 DINOFLAGELLATE SAMPLING
 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
12/31/2007	10:10 AM	123A	D. I. Bay North End	56	24	L	10 E	2.5	O	0	310	100	0	0	210	7,300	410
12/31/2007	10:50 AM	118	Cedar Point	56	20	L	5E	2.5	O	0	0	0	0	0	0	5,800	210
12/27/2007	10:15 AM	123A	D. I. Bay North End	57	29	L-F	N 5-10	2.5	O	0	0	0	0	0	100	2,400	100
12/27/2007	11:02 AM	118	Cedar Point	56	27	L-F	N 10-12	2.5	O	0	0	100	0	0	410	17,000	520
12/20/2007	10:25 AM	118	Cedar Point	60	25	R	SE 10-15	3.2	O	0	0	0	0	0	0	720	410
12/20/2007	9:35 AM	123A	D. I. Bay North End	61	28	R	SE 2-7	3.2	O	0	0	0	0	0	0	9,900	930
12/17/2007	8:45 AM	118	Cedar Point	56	26	L	NE 20+	1.1	O	0	0	0	0	0	0	100	310
12/17/2007	9:25 AM	123A	D. I. Bay North End	73	30	L	NE 20+	1.1	O	0	0	0	0	0	0	2,600	410
12/12/2007	11:00 AM	118	Cedar Point	65	23	L	SE 10	3.7	O	0	0	620	0	100	100	7,200	1,900
12/12/2007	11:45 AM	123A	D. I. Bay North End	67	27	L	SE 10	3.7	O	0	100	310	0	0	520	22,000	520
12/10/2007	9:25 AM	118	Cedar Point	62	24	F	SE 5	2.7	O	0	0	410	0	0	210	1,400	620
12/10/2007	10:00 AM	123A	D. I. Bay North End	64	27	F	SE 10	2.7	O	0	100	520	0	0	100	18,000	620
11/29/2007	11:20 AM	118	Cedar Point	59	25	L	NE 10	1.6	O	0	0	100	0	0	0	2,300	210

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RESULTS OF ADPH
 DINOFLAGELLATE SAMPLING
 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
11/29/2007	11:45 AM	123A	D. I. Bay North End	60	28	L	NE 10	1.6	O	0	0	0	0	0	0	210	0
11/26/2007	11:00 AM	123A	D. I. Bay North End	63	31	L	SW 5	3.1	O	0	0	100	0	0	210	930	100
11/26/2007	10:30 AM	118	Cedar Point	61	29	L	SW 15-20	3.1	O	0	0	200	0	0	310	2,700	310
11/14/2007	12:50 PM	123A	D. I. Bay North End	71	28	F	SW 3	2.8	O	0	0	0	0	100	0	3,800	1,500
11/13/2007	11:58 AM	118	Cedar Point	68	24	L	SE 1.3	2.6	C	0	0	100	0	0	0	7,300	310
11/7/2007	11:00 AM	118	Cedar Point	61	25	L	NE 20+	2.0	O	0	0	0	0	410	0	2,600	410
11/5/2007	11:40 AM	118	Cedar Point	69	27	neap	calm	2.4	O	0	0	0	0	720	410	2,400	1,000
11/5/2007	11:50 AM	120	S Side of Channel/E of CP	69	25	neap	calm	2.4	O	0	0	0	0	0	410	2,500	720
11/5/2007	12:00 PM	123A	D. I. Bay North End	68	23	neap	calm	2.4	O	0	0	0	0	1,000	0	1,100	620
10/25/2007	1:19 PM	123A	D. I. Bay North End	64	30	R	4.6 NW	2.6	O	0	0	0	0	0	0	520	310
10/25/2007	1:04 PM	120	S Side of Channel/E of CP	64	29	R	9.0 NW	2.6	O	0	0	0	0	100	0	820	100
10/25/2007	12:18 PM	118	Cedar Point	62	24	R	15.1NW	2.6	O	0	0	0	0	100	0	820	0
10/22/2007	12:40 PM	118	Cedar Point	75	26	H-F	SE20	2.3	O	0	0	0	0	0	0	1,800	0

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RESULTS OF ADPH
 DINOFLAGELLATE SAMPLING
 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
10/19/2007	10:58 AM	118	Cedar Point	77	29	F	7.4 NW	3.0	O	0	0	0	0	100	0	410	100
10/17/2007	10:30 AM	118	Cedar Point	77	30	R	SE 20.4	3.5	O	0	0	0	0	720	0	100	100
10/10/2007	1:35 PM	118	Cedar Point	82	24	neap	NNE 10-15	3.1	O	0	0	0	0	210	0	100	210
8/29/2007		120	S Side of Channel/E of CP	85	24	H	NNE 3	2.2	O	0	0	0	0	0	0	33,000	2,700
8/29/2007	11:08 AM	123A	D. I. Bay North End	86	27	H	NE 3-5	2.2	O	0	0	310	0	1,600	0	2,000	71,000
8/29/2007	9:55 AM	118	Cedar Point	86	23	H	NE 3-5	2.2	O	0	0	100	0	310	0	22,000	930
7/10/2007	2:30 AM	123A	D. I. Bay North End	90	30	H-F	calm	1.7	O	0	0	0	0	100	0	310	210
7/10/2007	2:17 AM	120	S Side of Channel/E of CP	89	28	H-F	SW 3	1.7	O	0	0	0	0	0	0	720	0
7/10/2007	1:17 AM	118	Cedar Point	87	29	H-F	SW 3	1.7	O	0	0	0	0	0	0		0
6/11/2007	12:30 PM	118	Cedar Point	87	28	H-F	calm	2.0	O	210	0	0	0	13,000	0	2,400	310
6/11/2007	1:40 AM	123A	D. I. Bay North End	89	33	H-F	2 S	2.0	O	0	100	720	0	16,000	100	1,100	1,000
6/11/2007	1:27 AM	120	S Side of Channel/E of CP	86	27	H-F	2 S	2.0	O	0	0	100	0	4,300	0	620	210
4/17/2007	1:16 PM	123A	D. I. Bay North End	66	29	H-F	calm	2.1	O	0	0	100	0	620	100	1,800	210

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 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
4/17/2007	12:27 PM	118	Cedar Point	66	27	H	NE 5	2.1	O	0	0	0	0	0	0	5,300	410
4/17/2007	1:05 PM	120	S Side of Channel/E of CP	67	29	H	NE 3	2.1	O	0	0	0	0	310	0	412	100
11/1/2006	12:56 PM	118	Cedar Point	69	20	F	SE 5	3.1	O	0	0	310	0	0	0	7,300	0
11/1/2006	3:25 AM	123A	D. I. Bay North End	73	26	F	SE-5	3.1	O	0	100	0	0	0	0	3,400	520
11/1/2006	2:57 AM	120	S Side of Channel/E of CP	70	20	F	SE-5	3.1	O	0	0	100	0	100	0	410	100
8/15/2006	11:11 AM	120	S Side of Channel/E of CP	87	21	H	N 8	1.9	O	0	210	0	0	0	0	3,100	210
8/15/2006	11:00 AM	118	Cedar Point	88	22	H	N 5	1.9	O	2,000	210	100	0	0	0	3,000	0
8/15/2006	11:26 AM	123A	D. I. Bay North End	89	29	H	N 5	1.9	O	0	0	0	0	0	0	210	55,000
7/25/2006	11:12 AM	118	Cedar Point	83	29	R	calm	3.7	O	0	0	0	0	0	0	310	410
7/25/2006	12:18 PM	120	S Side of Channel/E of CP	85	32	R	S 5	3.7	O	0	0	0	0	100	0	820	3,800
7/25/2006	11:30 AM	123A	D. I. Bay North End	85	30	R	S 5	3.7	O	0	0	0	0	100	0	210	1,900
6/27/2006	11:30 AM	123A	D. I. Bay North End	84	26	R	N 3	3.7	O	0	0	100	0	100	0	930	4,100
6/27/2006	11:05 AM	118	Cedar Point	85	29	R	N 5	3.7	O	0	0	0	0	100	0	310	100

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DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
6/27/2006	11:20 AM	120	S Side of Channel/E of CP	84	26	R	N 10	3.7	O	0	0	0	0	0	0	720	310
5/23/2006	12:33 PM	120	S Side of Channel/E of CP	82	10	R	SW10	3.4	O	0	0	210	0	0	0	2,300	2,800
5/23/2006	12:36 PM	123A	D. I. Bay North End	83	27	R	SW 10	3.4	O	0	100	410	0	2,200	0	5,600	1,100
5/23/2006	11:35 AM	118	Cedar Point	81	27	R	SW 5	3.4	O	0	0	100	0	0	0	620	520
3/30/2006	1:15 PM	120	S Side of Channel/E of CP	65	8	H	SE 10	7.8	C	0	0	0	0	210	0	930	2,200
3/30/2006	12:30 PM	118	Cedar Point	65	7	H	SE 5	7.8	C	0	0	0	0	310	0	820	1,300
3/30/2006	1:26 PM	123A	D. I. Bay North End	69	15	H	se 10	7.8	C	0	0	0	0	0	0	100	410
2/3/2006	12:42 PM	120	S Side of Channel/E of CP	60	9	R	SSE 2-3	7.8	C	0	0	160,000	0	0	0	100	410
2/3/2006	11:20 AM	118	Cedar Point	60	7	R	SSE 5	7.8	C	0	0	31,000	0	210	0	0	520
2/3/2006	12:58 PM	123A	D. I. Bay North End	62	13	R	SSE 5	7.8	C	0	0	120,000	0	210	0	510	310
1/23/2006	11:20 AM	118	Cedar Point	61	6	R	SE 10	6.4	O	0	0	19,000	0	22,000	0	4,800	2,700
1/19/2006	11:45 AM	118	Cedar Point	56	19	neap	SE 10-15	3.5	O	0	0	950,000	210	210	0	520	820
1/19/2006	12:25 PM	120	S Side of Channel/E of CP	56	20	neap	SE 10	3.5	O	0	0	2,900	0	0	0	1,000	620

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DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
1/19/2006	12:40 PM	123A	D. I. Bay North End	56	22	neap	SE 10	3.5	O	0	0	210	0	210	0	100	100
12/13/2005	12:50 PM	120	S Side of Channel/E of CP	54	20	L-R	ENE 2	2.8	O	0	0	100	0	100	0	88,000	310
12/13/2005	12:10 PM	118	Cedar Point	54	18	L-R	ENE 2	2.8	O	0	0	100	0	0	0	330,000	520
12/13/2005	1:10 PM	123A	D. I. Bay North End	54	19	L-R	ENE 2	2.8	O	0	0	100	0	0	0	67,000	3,500
10/25/2005	2:45 AM	118	Cedar Point	62	25	F	NW 10	0.4	O	0	0	0	0	0	0	930	100
10/25/2005	3:07 AM	123A	D. I. Bay North End	62	25	F	NW 10	0.4	O	0	0	0	0	0	0	1,100	0
10/10/2005	9:53 AM	119A	North of Intercoastal Waterway	75	16	F	NE 5	2.3	O	0	0	0	0	0	0	4,400	360
10/10/2005	9:59 AM	118	Cedar Point	74	13	F	NE 5	2.3	O	0	0	0	360	91	0	14,000	180
10/10/2005	10:10 AM	128	Heron Bay	74	16	F	NE 5	2.3	O	0	0	0	0	0	0	5,100	2,400
10/10/2005	10:43 AM	123A	D. I. Bay North End	74	17	F		2.3	O	0	0	91	0	0	0	91	1,800
10/7/2005	10:20 AM	128	Heron Bay	76	9	H-F	NW 10-15	2.0	O	0	0	0	0	0	0	1,000	1,900
10/7/2005	10:12 AM	118	Cedar Point	77	10	H-F	NE 10-15	2.0	O	0	0	0	0	90	0	0	140
10/7/2005	10:55 AM	123A	D. I. Bay North End	76	18	H-F	NE 10-15	2.0	O	0	0	40	40	40	0	230	840

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DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
10/7/2005	10:05 AM	119A	North of Intercoastal Waterway	77	13	H-F	NW 10-15	2.0	O	0	200	0	0	0	0	2,700	0
10/5/2005	3:25 PM	118	Cedar Point	82	10	H	NE 10	3.5	O	0	0	0	0	0	0	2,100	520
10/5/2005	3:00 AM	119A	North of Intercoastal Waterway	82	15	H	NE 11	3.5	O	0	0	0	0	0	0	680	0
10/5/2005	3:25 PM	128	Heron Bay	82	7	H	NE 10	3.5	O	0	0	0	0	0	0	2,000	510
10/5/2005	4:10 PM	123A	D. I. Bay North End	81	21	H-F	NE 10	3.5	O	0	0	270	0	0	1,100	450	2,200
10/4/2005	2:00 PM	123A	D. I. Bay North End	82	22	H	E 10	4.3	O	0	0	0	0	410	0	610	1,700
10/3/2005		128	Heron Bay					4.9	O	0	0	0	0	0	64,000	0	0
7/26/2005	11:30 AM	123A	D. I. Bay North End	90	4	H-F	0	6.7	C	0	0	0	0	0	0	0	840
7/26/2005	11:20 AM	120	S Side of Channel/E of CP	89	2	H-F	1.	6.7	C	0	0	0	0	0	0	0	0
7/26/2005	10:32 AM	118	Cedar Point	88	2	H-F	0	6.7	C	0	0	0	0	0	0	0	490
5/18/2005	10:50 AM	123A	D. I. Bay North End	78	14	R	ESE 5	3.7	O	0	0	0	0	0	0	4,700	2,400
5/18/2005	11:15 AM	118	Cedar Point	78	12	R	ESE 5	3.7	O	0	0	440	0	0	0	3,800	1,600
5/18/2005	11:35 AM	120	S Side of Channel/E of CP	78	11	R	ESE 5	3.7	O	0	0	0	0	0	0	1,000	1,200

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RESULTS OF ADPH
 DINOFLAGELLATE SAMPLING
 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
3/29/2005	1:52 PM	123A	D. I. Bay North End	68	16	R	SE 3.9	6.7	O	0	0	0	1,400	0	0	88,000	1,800
3/29/2005	12:30 PM	118	Cedar Point	69	17	R	SE 6.1	6.7	O	0	0	0	0	0	0	100,000	310
3/29/2005	1:38 PM	120	S Side of Channel/E of CP	67	6	R	SE 2.0	6.7	O	0	0	0	0	0	0	1,800	0
1/4/2005	1:28 PM	118	Cedar Point	66	3	L	SE 4	4.5	O	0	0	0	0	0	0	640	160
1/4/2005	1:50 PM	120	S Side of Channel/E of CP	64	4	L	SE 4	4.5	O	0	0	0	0	0	0	2,600	0
1/4/2005	1:58 PM	123A	D. I. Bay North End	65	10	L	SE 8	4.5	O	0	0	0	0	0	0	2,300	410
10/5/2004	12:26 PM	120	S Side of Channel/E of CP	82	10	H-F	1.6 N NE	2.6	O	0	360	0	0	0	0	3,800	180
10/5/2004	12:42 PM	123A	D. I. Bay North End	82	15	H-F	3.9 N NE	2.6	O	0	0	0	410	0	0	620	2,900
10/5/2004	12:02 PM	118	Cedar Point	82	8	H-F	8.8 NE	2.6	O	0	200	0	0	0	0	3,000	0
7/28/2004	11:05 AM	118	Cedar Point	89	15	H-F	2.5 S	1.7	O	0	0	140	0	0	0	3,500	1,300
7/28/2004	11:41 AM	120	S Side of Channel/E of CP	90	15	H-F	1.1 S	1.7	O	0	0	0	150	150	0	150	770
7/28/2004	11:56 AM	123A	D. I. Bay North End	90	15	H-F	calm	1.7	O	0	0	0	0	190	0	7,500	580
5/25/2004	12:05 PM	120	S Side of Channel/E of CP	80	22	R	SW 5-4	4.0	O	0	0	0	0	0	0	2,400	0

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RESULTS OF ADPH
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 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
5/25/2004	12:15 PM	123A	D. I. Bay North End	80	22	R	4.2 SW	4.0	O	0	0	0	0	0	0	5,000	350
5/25/2004	11:12 AM	118	Cedar Point	82	23	R	SW 6.3	4.0	O	0	0	0	0	0	0	4,200	670
2/26/2004	11:40 AM	118	Cedar Point	50	4	R	7.2 NE	7.9	C	0	0	0	0	0	0	2,600	860
2/26/2004	12:00 PM	120	S Side of Channel/E of CP	50	4	R	7.9 NE	7.9	C	0	0	0	0	210	0	6,800	410
2/26/2004	12:10 PM	123A	D. I. Bay North End	50	8	R	9.4 NE	7.9	C	0	0	190	190	0	0	16,000	190
1/14/2004	12:11 PM	120	S Side of Channel/E of CP	49	9	L-R	calm	4.3	O	0	0	0	190	370	0	120,000	370
1/14/2004	12:18 PM	123A	D. I. Bay North End	50	11	L-R	S 3	4.3	O	0	0	0	150	0	0	1,200,000	1,200
1/14/2004	11:49 AM	118	Cedar Point	48	9	L-R	S 3	4.3	O	0	0	0	0	0	0	880,000	490
11/12/2003	1:17 PM	123A	D. I. Bay North End	71	22	L	0.7 S	3.8	O	3,500	0	0	0	0	0	0	2,000
11/12/2003	1:04 PM	120	S Side of Channel/E of CP	70	18	L	0.8 S	3.8	O	530	0	350	5,500	2,900	180	890	1,800
11/12/2003	12:31 PM	118	Cedar Point	69	16	L	0.5 S	3.8	O	0	0	0	170	510	170	4,600	340
9/24/2003	11:15 AM	118	Cedar Point	76	18	H	7.4 NE	3.7	O	0	0	200	0	600	0	15,000	600
9/24/2003	11:51 AM	123A	D. I. Bay North End	78	18	H	2.2 NE	3.7	O	0	0	0	340	690	0	10,000	2,100

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RESULTS OF ADPH
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 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
9/24/2003	11:42 AM	120	S Side of Channel/E of CP	78	10	H	13.6	3.7	O	0	0	0	220	650	220	4,400	1,100
6/4/2003	12:10 PM	120	S Side of Channel/E of CP	82	3	R	7.6 NE	7.4	C	0	0	0	42,000	0	0	240	240
6/4/2003	11:43 AM	118	Cedar Point	82	3	R	13.9 NE	7.4	C	0	0	0	0	0	0	380	190
6/4/2003	12:24 PM	123A	D. I. Bay North End	82	4	R	10.7 NE	7.4	C	0	0	190	72,000	0	0	0	1,700
5/6/2003		120	S Side of Channel/E of CP	81	5	R	8 SW	7.8	C	0	0	0	4,000	250	0	42,000	21,000
5/6/2003	12:03 PM	123A	D. I. Bay North End	80	5	R	8.7 SW	7.8	C	0	0	0	1,000	0	170	11,000	500
5/6/2003	11:37 AM	118	Cedar Point	81	3	R	14.4 SW	7.8	C	0	0	0	0	0	0	0	0
4/19/2003	1:15 PM	123A	D. I. Bay North End	76	8	R	12.7 SE	7.3	C	0	0	0	4,600	0	0	9,800	7,300
4/19/2003	12:50 PM	120	S Side of Channel/E of CP	76	4	R	15.4 SE	7.3	C	0	0	0	62,000	0	0	5,200	3,200
4/19/2003	12:30 PM	118	Cedar Point	76	4	R	11.7 SE	7.3	C	0	0	0	5,200	0	0	130,000	1,400
3/25/2003	10:42 AM	118	Cedar Point	67	5	L-R	1.1 SE	7.9	C	0	0	0	180	0	0	1,200	13,000
3/25/2003	11:09 AM	123A	D. I. Bay North End	68	5	L-R	6.6 SE	7.9	C	0	0	0	17,000	0	0	1,900	1,300
3/25/2003	10:59 AM	120	S Side of Channel/E of CP	69	6	L-R	3.3 SE	7.9	C	0	0	0	240,000	1,700	0	2,600	20,000

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RESULTS OF ADPH
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 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
1/9/2003	11:23 AM	123A	D. I. Bay North End	56	6	L	4 SW	7.3	C	0	0	0	1,100	0	0	13,000	7,700
1/9/2003	12:55 PM	120	S Side of Channel/E of CP	57	5	L-R	12 W	7.3	C	0	0	0	8,600	0	0	180,000	5,600
1/9/2003	12:25 PM	118	Cedar Point	57	10	L	6.5 SW	7.3	C	0	0	680	19,000	0	0	100,000	22,000
12/17/2002	1:00 PM	123A	D. I. Bay North End	56	15	L	6.8 SE	6.9	O	0	0	1,300	2,800	280	0	1,100	3,500
12/17/2002	12:47 PM	120	S Side of Channel/E of CP	56	14	L	1.5 SE	6.9	O	0	0	1,100	1,600	2,900	0	5,300	5,800
12/17/2002	12:30 PM	118	Cedar Point	55	8	L	1.6 SE	6.9	O	0	0	0	1,100	0	0	0	450
10/1/2002	11:38 AM	123A	D. I. Bay North End	82	18	F	4.8 E	5.8	O	190	0	0	940	1,700	0	3,400	750
10/1/2002	11:19 AM	120	S Side of Channel/E of CP	82	15	F	9.5 E	5.8	O	0	0	0	370	740	0	740	370
10/1/2002	10:54 AM	118	Cedar Point	82	12	F	9.3 E	5.8	O	0	0	0	140	560	0	2,300	0
8/27/2002	1:08 PM	123A	D. I. Bay North End	89	25	H	2.5 SSE	2.5	O	0	0	1,200	170	340	0	0	1,000
8/27/2002	12:19 PM	118	Cedar Point	87	22	H	WNW 5.4	2.5	O	0	0	0	0	580	0	140	140
8/27/2002	12:55 PM	120	S Side of Channel/E of CP	86	22	H	3.9 E-NE	2.5	O	0	0	0	570	760	0	190	950
6/12/2002		118	Cedar Point	85	18	H-F	calm	2.2	O	0	0	720	360	710	0	1,800	0

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RESULTS OF ADPH
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 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
6/12/2002	1:19 PM	123A	D. I. Bay North End	88	20	H-F	calm	2.2	O	0	0	140	0	140	0	0	140
5/23/2002	12:12 PM	123A	D. I. Bay North End	73	14	R	10 E	2.5	O	0	0	1,800	0	0	0	4,200	980
5/23/2002	12:03 PM	120	S Side of Channel/E of CP	73	14	R	13 NE	2.5	O	0	0	0	2,400	0	0	1,000	2,400
5/23/2002	11:40 AM	118	Cedar Point	72	10	R	10 E	2.5	O	0	0	0	0	0	0	0	0
4/16/2002	1:17 PM	123A	D. I. Bay North End	78	15	H	12 E	3.8	O	0	0	0	34,000	0	0	7,100	20,000
4/16/2002	1:09 PM	120	S Side of Channel/E of CP	75	8	H	9.5 E	3.8	O	0	0	1,300	40,000	0	0	330	1,600
4/16/2002	12:52 PM	118	Cedar Point	78	10	H	10.5 SE	3.8	O	0	0	350	7,400	0	0	170	520
11/27/2001	11:55 AM	118	Cedar Point	75	20	R	SE 5-10	3.3	O	0	0	160	160	160	0	0	160
11/27/2001	12:25 PM	123A	D. I. Bay North End	75	25	R	SE 10	3.3	O	0	0	0	300	0	0	740	740
11/27/2001	12:14 PM	120	S Side of Channel/E of CP	72	25	R	SE 10	3.3	O	0	0	130	660	0	130	800	270
9/18/2001	12:00 PM	118	Cedar Point	84	14	H	SE 5-10	2.5	O	250	0	0	510	0	0	1,500	640
9/18/2001	12:30 PM	123A	D. I. Bay North End	84	16	H	SE 5-10	2.5	O	6,000	1,100	930	370	0	0	5,600	0
9/18/2001	12:20 PM	120	S Side of Channel/E of CP	84	22	H	SE 5-10	2.5	O	1,200	600	290	1,200	0	0	3,700	290

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RESULTS OF ADPH
 DINOFLAGELLATE SAMPLING
 AREA I

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
7/17/2001	1:38 PM	120	S Side of Channel/E of CP	85	15	H	NE 10	2.7	O	0	0	0	110	670	0	780	0
7/17/2001	1:49 PM	123A	D. I. Bay North End	85	18	H	NE 5	2.7	O	0	160	320	800	160	0	480	0
7/17/2001	12:52 PM	118	Cedar Point	87	16	H	NE 5-10	2.7	O	0	670	210	210	0	0	1,400	0
6/27/2001	10:49 AM	118	Cedar Point	83	10	R	E 10	1.8	O	0	0	880	2,600	0	0	2,500	440
6/27/2001	11:07 AM	120	S Side of Channel/E of CP	83	14	R	E 10	1.8	O	330	830	660	740	2,100	0	4,100	330
6/27/2001	11:13 AM	123A	D. I. Bay North End	83	15	R	E 10	1.8	O	0	0	360	0	2,700	0	540	180
5/16/2001	12:13 PM	118	Cedar Point	80	20	R	SW 10	2.1	O	0	800	200	800	200	0	19,000	400
5/16/2001	12:25 PM	120	S Side of Channel/E of CP	80	25	R	SW 10	2.1	O	0	2,100	610	460	0	0	19,000	620
5/16/2001	1:09 PM	123A	D. I. Bay North End	80	20	R	SW-10	2.1	O	0	0	0	330	0	0	5,300	330
4/4/2001	11:50 AM	123A	D. I. Bay North End	70	10	R	S 5	7.2	C	0	0	2,300	0	0	0	3,600	6,700
4/4/2001	11:42 AM	120	S Side of Channel/E of CP	69	4	R	SE 5	7.2	C	0	0	0	250	0	0	0	1,900
4/4/2001		118	Cedar Point	69	4	R	S 5	7.2	C	0	0	0	180	0	0	0	0
1/17/2001		123A	D. I. Bay North End	54	24	R	NE 0-5	2.4	O	0	0	180	0	550	0	180	360

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**RESULTS OF ADPH
 DINOFLAGELLATE SAMPLING
 AREA I**

Between: 01/01/01 And: 12/31/07

DATE	TIME	STA	LOCATION	TEMP °F	SAL	TIDE	WIND	RIVER	STATUS	ALEX	DINO	GONY	GYMN	GYRO	KARE	PROR	PROT
1/17/2001	12:46 PM	120	S Side of Channel/E of CP	54	17	R	NE 5-10	2.4	O	0	0	830	0	0	0	410	280
1/17/2001	12:35 PM	118	Cedar Point	53	15	R	NE 5-10	2.4	O	0	0	0	140	0	0	0	690

2006 DATA ANALYSIS

TABLE IV-1

AREA I
(2006 Data Analysis)

Table (IV-1)

Station	LogFc	Date	WTemp	River	Accum0	Accum1	Accum2	Accum3	Accum4	Accum5
118	0.255272505	4/16/2002	78	3.8	0	0	0.33	0.331	0.571	0.631
118	0.255272505	5/23/2002	72	2.5	0	0	0	0	0.12	0.85
118	0.255272505	6/12/2002	85	2.2	0	0.13	0.13	0.131	0.131	0.132
118	0.255272505	8/27/2002	87	2.5	0	0.15	0.32	0.32	0.32	0.46
118	0.255272505	10/1/2002	82	5.8	0	0	0	0	0	1
118	0.255272505	1/9/2003	57	6.9	0	0	0	0	0	0
118	0.255272505	5/6/2003	81	7.5	0.001	0.051	0.051	0.061	0.061	0.061
118	0.255272505	6/26/2003	82	8	0	0	0.02	0.07	1.47	2.95
118	0.255272505	11/12/2003	69	3.8	0	0	0	0	0	0
118	0.255272505	5/25/2004	82	4	0	0	0	0	0	0
118	0.255272505	10/5/2004	82	2.6	0.05	0.05	0.05	0.05	0.05	0.05
118	0.255272505	3/29/2005	69	6.7	0	0	0.27	0.72	0.74	0.74
118	0.255272505	5/18/2005	78	3.7	0	0	0	0.01	0.01	0.01
118	0.255272505	7/26/2005	88	6.7	0.04	0.04	0.041	0.101	0.101	1.171
118	0.255272505	9/13/2005	82	2.6	0	0	0	0	0	0
118	0.255272505	10/17/2005	74	3.1	0	0	0	0	0	0
118	0.301029996	4/19/2003	76	7.3	0	0	0	0	0	0
118	0.301029996	6/4/2003	82	7.4	0	0.35	0.351	0.351	0.351	0.351
118	0.301029996	7/14/2003	82	7.7	0.001	0.001	0.002	0.002	0.002	0.003
118	0.301029996	9/24/2003	76	3.7	0	0	0.21	0.84	0.84	0.84
118	0.301029996	1/14/2004	48	4.3	0	0	0	0	0	0.09
118	0.301029996	12/26/2004	50	7.3	0	0.17	0.17	0.171	1.121	1.141
118	0.301029996	4/22/2005	74	7.3	0	0	0	0.001	0.001	0.001
118	0.653212514	2/9/2002	50	7.7	0	0	0.03	0.72	1.19	1.19
118	0.653212514	12/17/2002	55	6.9	0	0	0	0.001	0.002	0.922
118	0.832508913	1/4/2005	66	4.5	0	0	0	0.001	0.001	0.001
118	0.892094603	3/25/2003	67	7.9	0	0	0.001	0.001	0.001	0.001
118	1.113943352	3/5/2004	63	7.4	0.001	0.001	0.001	0.011	0.012	0.013
118	1.146128036	7/28/2004	89	1.7	0	0.01	0.011	0.341	0.341	0.341
118	1.230448921	2/26/2004	50	7.9	0.03	4.43	4.62	6.33	6.33	6.33
119A	0.255272505	4/16/2002	78	3.8	0	0	0.33	0.331	0.571	0.631
119A	0.255272505	5/23/2002	75	2.5	0	0	0	0	0.12	0.85
119A	0.255272505	6/12/2002	87	2.2	0	0.13	0.13	0.131	0.131	0.132
119A	0.255272505	8/27/2002	92	2.5	0	0.15	0.32	0.32	0.32	0.46
119A	0.255272505	10/1/2002	82	5.8	0	0	0	0	0	1
119A	0.255272505	1/9/2003	56	6.9	0	0	0	0	0	0
119A	0.255272505	3/25/2003	66	7.9	0	0	0.001	0.001	0.001	0.001
119A	0.255272505	5/6/2003	80	7.5	0.001	0.051	0.051	0.061	0.061	0.061
119A	0.255272505	6/4/2003	82	7.4	0	0.35	0.351	0.351	0.351	0.351
119A	0.255272505	7/14/2003	79	7.7	0.001	0.001	0.002	0.002	0.002	0.003
119A	0.255272505	9/24/2003	78	3.7	0	0	0.21	0.84	0.84	0.84
119A	0.255272505	11/12/2003	70	3.8	0	0	0	0	0	0
119A	0.255272505	5/25/2004	80	4	0	0	0	0	0	0
119A	0.255272505	10/5/2004	82	2.6	0.05	0.05	0.05	0.05	0.05	0.05
119A	0.255272505	1/4/2005	63	4.5	0	0	0	0.001	0.001	0.001
119A	0.255272505	3/29/2005	69	6.7	0	0	0.27	0.72	0.74	0.74
119A	0.255272505	4/22/2005	74	7.3	0	0	0	0.001	0.001	0.001
119A	0.255272505	5/18/2005	78	3.7	0	0	0	0.01	0.01	0.01

119A	0.255272505	7/26/2005	87	6.7	0.04	0.04	0.041	0.101	0.101	1.171
119A	0.255272505	10/17/2005	75	3.1	0	0	0	0	0	0
119A	0.301029996	4/19/2003	76	7.3	0	0	0	0	0	0
119A	0.301029996	12/26/2004	50	7.3	0	0.17	0.17	0.171	1.121	1.141
119A	0.301029996	9/13/2005	82	2.6	0	0	0	0	0	0
119A	0.653212514	7/28/2004	89	1.7	0	0.01	0.011	0.341	0.341	0.341
119A	0.892094603	12/17/2002	55	6.9	0	0	0	0.001	0.002	0.922
119A	0.892094603	3/5/2004	63	7.4	0.001	0.001	0.001	0.011	0.012	0.013
119A	1.113943352	2/9/2002	50	7.7	0	0	0.03	0.72	1.19	1.19
119A	1.113943352	6/26/2003	83	8	0	0	0.02	0.07	1.47	2.95
119A	1.113943352	2/26/2004	50	7.9	0.03	4.43	4.62	6.33	6.33	6.33
120	0.255272505	4/16/2002	75	3.8	0	0	0.33	0.331	0.571	0.631
120	0.255272505	5/23/2002	73	2.5	0	0	0	0	0.12	0.85
120	0.255272505	6/12/2002	87	2.2	0	0.13	0.13	0.131	0.131	0.132
120	0.255272505	8/27/2002	86	2.5	0	0.15	0.32	0.32	0.32	0.46
120	0.255272505	10/1/2002	82	5.8	0	0	0	0	0	1
120	0.255272505	12/17/2002	56	6.9	0	0	0	0.001	0.002	0.922
120	0.255272505	3/25/2003	69	7.9	0	0	0.001	0.001	0.001	0.001
120	0.255272505	5/6/2003	81	7.5	0.001	0.051	0.051	0.061	0.061	0.061
120	0.255272505	6/4/2003	82	7.4	0	0.35	0.351	0.351	0.351	0.351
120	0.255272505	7/14/2003	79	7.7	0.001	0.001	0.002	0.002	0.002	0.003
120	0.255272505	9/24/2003	78	3.7	0	0	0.21	0.84	0.84	0.84
120	0.255272505	11/12/2003	70	3.8	0	0	0	0	0	0
120	0.255272505	5/25/2004	80	4	0	0	0	0	0	0
120	0.255272505	7/28/2004	90	1.7	0	0.01	0.011	0.341	0.341	0.341
120	0.255272505	10/5/2004	82	2.6	0.05	0.05	0.05	0.05	0.05	0.05
120	0.255272505	1/4/2005	64	4.5	0	0	0	0.001	0.001	0.001
120	0.255272505	3/29/2005	67	6.7	0	0	0.27	0.72	0.74	0.74
120	0.255272505	4/22/2005	74	7.3	0	0	0	0.001	0.001	0.001
120	0.255272505	5/18/2005	78	3.7	0	0	0	0.01	0.01	0.01
120	0.255272505	7/26/2005	89	6.7	0.04	0.04	0.041	0.101	0.101	1.171
120	0.255272505	9/13/2005	83	2.6	0	0	0	0	0	0
120	0.255272505	10/17/2005	75	3.1	0	0	0	0	0	0
120	0.301029996	1/9/2003	57	6.9	0	0	0	0	0	0
120	0.301029996	1/14/2004	49	4.3	0	0	0	0	0	0.09
120	0.602059991	2/9/2002	50	7.7	0	0	0.03	0.72	1.19	1.19
120	0.832508913	12/26/2004	50	7.3	0	0.17	0.17	0.171	1.121	1.141
120	0.892094603	2/26/2004	50	7.9	0.03	4.43	4.62	6.33	6.33	6.33
120	0.892094603	3/5/2004	63	7.4	0.001	0.001	0.001	0.011	0.012	0.013
120	1.041392685	4/19/2003	76	7.3	0	0	0	0	0	0
120	1.041392685	6/26/2003	83	8	0	0	0.02	0.07	1.47	2.95
123A	0.255272505	5/23/2002	73	2.5	0	0	0	0	0.12	0.85
123A	0.255272505	6/12/2002	88	2.2	0	0.13	0.13	0.131	0.131	0.132
123A	0.255272505	8/27/2002	89	2.5	0	0.15	0.32	0.32	0.32	0.46
123A	0.255272505	12/17/2002	56	6.9	0	0	0	0.001	0.002	0.922
123A	0.255272505	3/25/2003	68	7.9	0	0	0.001	0.001	0.001	0.001
123A	0.255272505	4/19/2003	76	7.3	0	0	0	0	0	0
123A	0.255272505	5/6/2003	80	7.5	0.001	0.051	0.051	0.061	0.061	0.061
123A	0.255272505	6/26/2003	83	8	0	0	0.02	0.07	1.47	2.95
123A	0.255272505	11/12/2003	71	3.8	0	0	0	0	0	0
123A	0.255272505	1/14/2004	50	4.3	0	0	0	0	0	0.09
123A	0.255272505	3/5/2004	63	7.4	0.001	0.001	0.001	0.011	0.012	0.013

123A	0.255272505	5/25/2004	80	4	0	0	0	0	0	0
123A	0.255272505	10/5/2004	82	2.6	0.05	0.05	0.05	0.05	0.05	0.05
123A	0.255272505	12/26/2004	50	7.3	0	0.17	0.17	0.171	1.121	1.141
123A	0.255272505	4/22/2005	74	7.3	0	0	0	0.001	0.001	0.001
123A	0.255272505	5/18/2005	78	3.7	0	0	0	0.01	0.01	0.01
123A	0.301029996	4/16/2002	78	3.8	0	0	0.33	0.331	0.571	0.631
123A	0.301029996	9/24/2003	78	3.7	0	0	0.21	0.84	0.84	0.84
123A	0.301029996	3/29/2005	68	6.7	0	0	0.27	0.72	0.74	0.74
123A	0.301029996	9/13/2005	83	2.6	0	0	0	0	0	0
123A	0.301029996	10/17/2005	69	3.1	0	0	0	0	0	0
123A	0.653212514	1/9/2003	56	6.9	0	0	0	0	0	0
123A	0.653212514	7/26/2005	90	6.7	0.04	0.04	0.041	0.101	0.101	1.171
123A	0.892094603	2/9/2002	51	7.7	0	0	0.03	0.72	1.19	1.19
123A	0.892094603	10/1/2002	82	5.8	0	0	0	0	0	1
123A	0.892094603	6/4/2003	82	7.4	0	0.35	0.351	0.351	0.351	0.351
123A	0.892094603	2/26/2004	50	7.9	0.03	4.43	4.62	6.33	6.33	6.33
123A	0.892094603	7/28/2004	90	1.7	0	0.01	0.011	0.341	0.341	0.341
123A	0.968482949	1/4/2005	65	4.5	0	0	0	0.001	0.001	0.001
123A	1.69019608	7/14/2003	79	7.7	0.001	0.001	0.002	0.002	0.002	0.003
125	0.255272505	12/17/2002	55	6.9	0	0	0	0.001	0.002	0.922
125	0.255272505	1/9/2003	56	6.9	0	0	0	0	0	0
125	0.255272505	5/6/2003	81	7.5	0.001	0.051	0.051	0.061	0.061	0.061
125	0.255272505	9/24/2003	74	3.7	0	0	0.21	0.84	0.84	0.84
125	0.255272505	11/12/2003	72	3.8	0	0	0	0	0	0
125	0.255272505	5/25/2004	80	4	0	0	0	0	0	0
125	0.255272505	7/28/2004	90	1.7	0	0.01	0.011	0.341	0.341	0.341
125	0.255272505	10/5/2004	82	2.6	0.05	0.05	0.05	0.05	0.05	0.05
125	0.255272505	5/18/2005	78	3.7	0	0	0	0.01	0.01	0.01
125	0.255272505	7/26/2005	89	6.7	0.04	0.04	0.041	0.101	0.101	1.171
125	0.255272505	9/13/2005	83	2.6	0	0	0	0	0	0
125	0.255272505	10/17/2005	74	3.1	0	0	0	0	0	0
125	0.301029996	10/1/2002	83	5.8	0	0	0	0	0	1
125	0.301029996	6/26/2003	83	8	0	0	0.02	0.07	1.47	2.95
125	0.301029996	3/29/2005	67	6.7	0	0	0.27	0.72	0.74	0.74
125	0.653212514	3/25/2003	67	7.9	0	0	0.001	0.001	0.001	0.001
125	0.653212514	4/22/2005	74	7.3	0	0	0	0.001	0.001	0.001
125	0.832508913	12/26/2004	50	7.3	0	0.17	0.17	0.171	1.121	1.141
125	0.892094603	7/14/2003	79	7.7	0.001	0.001	0.002	0.002	0.002	0.003
125	0.892094603	3/5/2004	63	7.4	0.001	0.001	0.001	0.011	0.012	0.013
125	1.113943352	1/4/2005	63	4.5	0	0	0	0.001	0.001	0.001
125	1.230448921	2/26/2004	50	7.9	0.03	4.43	4.62	6.33	6.33	6.33
126	0.255272505	3/29/2005	69	6.7	0	0	0.27	0.72	0.74	0.74
126	0.255272505	5/18/2005	78	3.7	0	0	0	0.01	0.01	0.01
126	0.255272505	7/26/2005	90	6.7	0.04	0.04	0.041	0.101	0.101	1.171
126	0.255272505	9/13/2005	83	2.6	0	0	0	0	0	0
126	0.255272505	10/17/2005	74	3.1	0	0	0	0	0	0
126	0.602059991	1/4/2005	63	4.5	0	0	0	0.001	0.001	0.001
126	0.653212514	1/26/2005	59	3.8	0	0	0	0	0.001	0.001
128	0.255272505	4/16/2002	78	3.8	0	0	0.33	0.331	0.571	0.631
128	0.255272505	5/23/2002	70	2.5	0	0	0	0	0.12	0.85
128	0.255272505	6/12/2002	88	2.2	0	0.13	0.13	0.131	0.131	0.132
128	0.255272505	8/27/2002	87	2.5	0	0.15	0.32	0.32	0.32	0.46

128	0.255272505	6/26/2003	82	8	0	0	0.02	0.07	1.47	2.95
128	0.255272505	7/14/2003	78	7.7	0.001	0.001	0.002	0.002	0.002	0.003
128	0.255272505	9/24/2003	78	3.7	0	0	0.21	0.84	0.84	0.84
128	0.255272505	1/14/2004	50	4.3	0	0	0	0	0	0.09
128	0.255272505	5/25/2004	78	4	0	0	0	0	0	0
128	0.255272505	3/29/2005	67	6.7	0	0	0.27	0.72	0.74	0.74
128	0.255272505	4/22/2005	74	7.3	0	0	0	0.001	0.001	0.001
128	0.255272505	10/17/2005	73	3.1	0	0	0	0	0	0
128	0.301029996	1/9/2003	55	6.9	0	0	0	0	0	0
128	0.301029996	3/25/2003	68	7.9	0	0	0.001	0.001	0.001	0.001
128	0.301029996	5/6/2003	80	7.5	0.001	0.051	0.051	0.061	0.061	0.061
128	0.301029996	6/4/2003	82	7.4	0	0.35	0.351	0.351	0.351	0.351
128	0.301029996	11/12/2003	72	3.8	0	0	0	0	0	0
128	0.301029996	7/26/2005	89	6.7	0.04	0.04	0.041	0.101	0.101	1.171
128	0.301029996	9/13/2005	82	2.6	0	0	0	0	0	0
128	0.653212514	2/9/2002	51	7.7	0	0	0.03	0.72	1.19	1.19
128	0.653212514	10/1/2002	83	5.8	0	0	0	0	0	1
128	0.653212514	12/17/2002	55	6.9	0	0	0	0.001	0.002	0.922
128	0.653212514	4/19/2003	76	7.3	0	0	0	0	0	0
128	0.653212514	7/28/2004	89	1.7	0	0.01	0.011	0.341	0.341	0.341
128	0.653212514	12/26/2004	50	7.3	0	0.17	0.17	0.171	1.121	1.141
128	0.653212514	1/4/2005	66	4.5	0	0	0	0.001	0.001	0.001
128	0.653212514	5/18/2005	78	3.7	0	0	0	0.01	0.01	0.01
128	1.230448921	10/5/2004	82	2.6	0.05	0.05	0.05	0.05	0.05	0.05
128	1.361727836	2/26/2004	50	7.9	0.03	4.43	4.62	6.33	6.33	6.33
128	1.361727836	3/5/2004	63	7.4	0.001	0.001	0.001	0.011	0.012	0.013

	LogFc	Date	WTemp	River	Accum0	Accum1	Accum2	Accum3	Accum4
LogFc	1								
Date	-0.0419103	1							
WTemp	-0.3227628	0.07896	1						
River	0.30468084	-0.1526	-0.4236	1					
Accum0	0.13080451	0.27023	0.1186	0.006	1				
Accum1	0.41430431	0.01103	-0.3382	0.2263	0.3836	1			
Accum2	0.39617269	-0.0036	-0.3311	0.2141	0.3707	0.9948	1		
Accum3	0.40899033	-0.007	-0.3491	0.2155	0.356	0.9778	0.9882	1	
Accum4	0.42933788	-0.0351	-0.3783	0.2895	0.3169	0.9408	0.9511	0.965	1
Accum5	0.39932490	-0.0916	-0.2938	0.3401	0.3559	0.8589	0.8649	0.8737	0.9453

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CV 0.147136733