2007

COMPREHENSIVE

SANITARY SURVEY

OF

ALABAMA'S AREA III SHELLFISH GROWING WATERS

IN

MOBILE & BALDWIN COUNTIES

Survey Dates: 2006-2007-2008

Revision Dates: May - October, 2008

Prepared by:
Christine Collins

Maps, Charts and Graphs provided by:
AL Dept. of Conservation and Natural Resources-Marine Resource Division,
AL Dept. of Environmental Management, AL Dept. of Public Health-Mobile County/Baldwin County,
Alabama Department of Public Health Seafood Branch, and AL Oil and Gas Board

Edited by:
Toni Ackerson

Alabama Department of Public Health Seafood Branch
Division of Food, Milk & Lodging
4168 Commanders Drive
Mobile, Alabama 36615

Table of Contents – Area III

			Pages
	Definitions		1 – 2
Chapter I.	Introduction		3
	Oyster Landings: Table (I-1)		Appendix
Chapter II.	Description of Growing Areas		
	A.	Description and Map of Growing Areas	4
	B.	Description of Area III	5
	C.	Classification History – Area III	6
	D.	General Area Management Plan – Area III	6
	E.	Procedures for Closure – Area III	6 - 7
	F.	Procedures for Reopening – Area III	7 - 8
		Oyster Cleansing Process: (Table II-1)	Appendix
	G.	Working Days Closed – Area III (2001-2007)	8
		Closure/Reopening Details – Area III: Table (II-2)	Appendix
Chapter III.	Pollution Source Survey		
	A.	Pollution Source Identification and Evaluation – Area III	9
		1. Domestic Wastewater Treatment Plants – Area III	10
		2. Septic Systems – Area III	11
		a. Watersheds Affecting Area III	12
		3. Marinas and Moorings – Area III	13

4. Hurricanes 14 - 16

5. Storm water – Area III 17

6. Agricultural Waste – Area III 17

7. Wildlife – Area III 17

8. Industrial Operations – Area III 17

9. Marine Biotoxins 18

a. 2005 Red Tide Event: Table (III-1) Appendix

b. 2007 Red Tide Event: Table (III-2) Appendix

10. Routine Dinoflagellate Testing – Area III 19

a. 2001–2007 Dino Sampling: Table (III-3) Appendix

11. Map of Natural Gas Platforms 20

12. Description of Natural Gas Platforms 21

Chapter IV. Water Quality Studies

A. Sampling Plan, Station Descriptions, Map – Area III 22

1. Confirming Survey for Sampling Plan – Area III 23

a. 2006 Data Analysis – Area III: Table (IV-1) Appendix

B. Sample Data Analysis – Area III (2001-2007) 24

1. Last 30 Bacteriological Samples for Each Station 25 - 33

2. 2001-2007 All Bacteriological Samples – Area III 34 - 44

Chapter V. Summary 45

Appendices

Table (I-1)	46 - 47
Table (II-1)	48 - 55
Table (II-2)	56 - 67
Table (III-1)	68 - 70
Table (III-2)	71 - 75
Table (III-3)	76 - 85
Table (IV-1)	86 - 90

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 subjection 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 III

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.

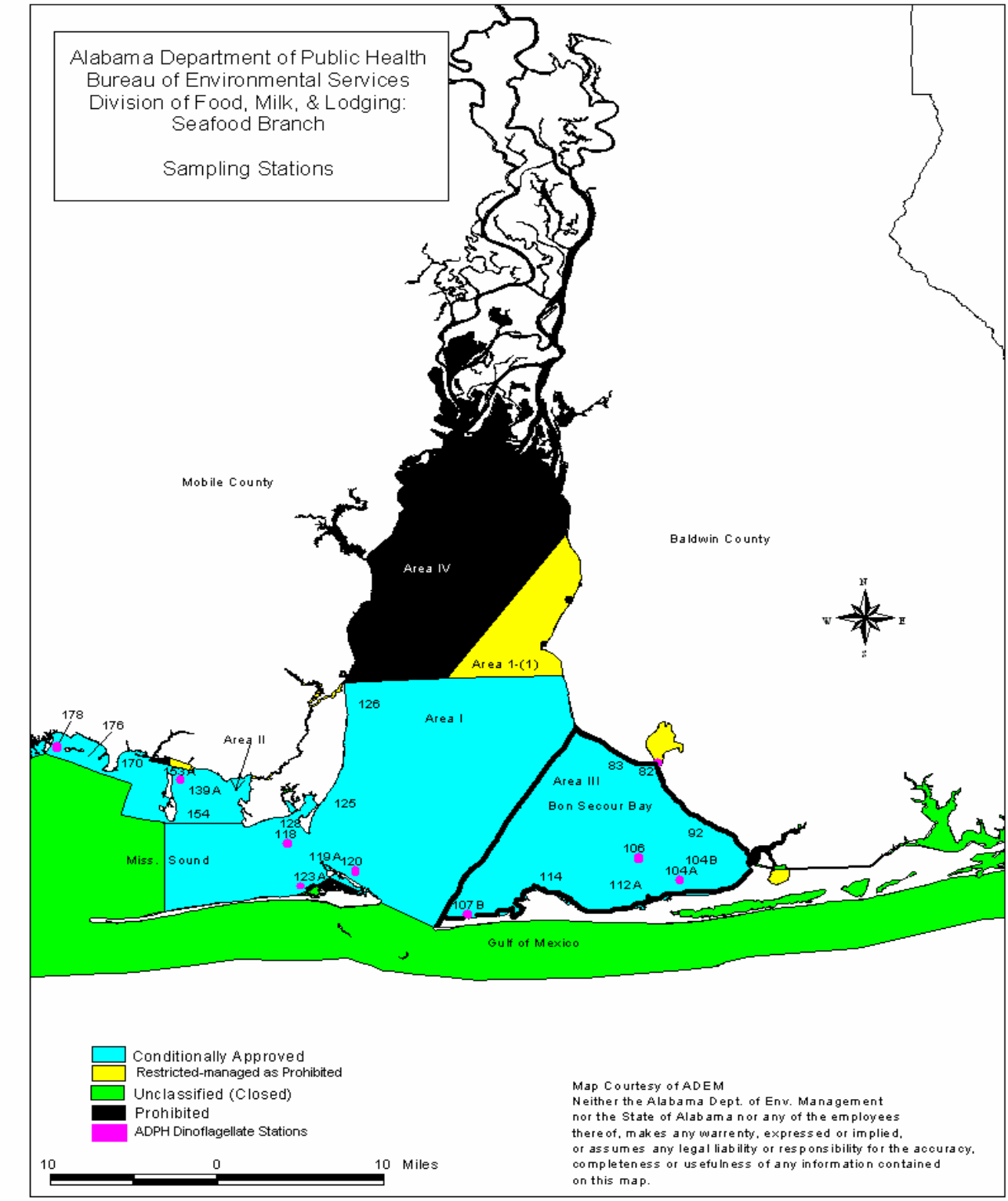
State responsibilities include adopting laws and regulations for sanitary control of the shellfish industry, formulating comprehensive shellfish harvesting area surveys, conducting laboratory investigations, and adopting controls to ensure that shellfish are grown, harvested, and processed in a safe 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 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.

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 III

Area III is designated Conditionally Approved. Area III includes Bon Secour Bay, to include all waters east of a line extending from the westernmost tip of fort Morgan Peninsula to Mullet Point.

CLASSIFICATON EXCEPTIONS TO AREA III

1. All of Weeks Bay. This portion of Area III is Restricted.

2. All of Oyster Bay. This portion of Area III is Restricted.

3. All of Bon Secour River. This portion of Area III is prohibited.

4. All of the Intercoastal Waterway east of Marker No. "2" at the entrance of the Intercoastal Waterway at Oyster Bay. This portion of Area III is Unclassified.

5. All waters east of Oyster Bay to include Wolf Bay, Bay La Launch, Terry Cove, Bayou St. John, Cotton Bayou and Perdido Bay. This portion of Area III is Unclassified.

II.C. CLASSIFICATION HISTORY - GROWING AREA III

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 such as closure or subsequent reopening of the harvest area.

The eight foot closure criteria for Area III is based on a conditional management plan document entitled, *A Sanitary Survey of Area III in Mobile Bay*, dated June 24, 1992. Data used in this document to classify Area III came from bay water samples collected during the period from 1978-1992. A total of 158 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. The only reasonable correlation made during the study was between fecal coliform and river stage. There was little correlation between rainfall and Fecal coliform in this study, except for Weeks Bay, which is managed as prohibited.

The original survey was conducted by the Alabama Department of Public Health Seafood Branch from April of 1991 through June 24, 1992. This survey resulted in the present conditional management plan where closure (for predictive high fecal samples being > =14) was based on river stage (reaching eight feet at Barry Steam Plant). Annual sanitary survey update reports based on the *NSSP Model* Ordinance requirements are on file with ADPH Seafood Branch (1995-2006). The previous total comprehensive sanitary survey of Mobile Bay's shellfish growing waters was complete in 1992, while annual and triennial evaluations have been conducted regularly since that date.

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

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 III

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 III

1) The area is sampled by the Seafood Branch. When fecal coliform or deleterious sample results drop to safe levels, and an examination of the environmental conditions determines the pollution event has ended, and that sufficient time has elapsed to have allowed for the area and the resident shellfish to flush pollutants, (according to Alabama's Guide for the Control of Molluscan Shellfish and the NSSP Model Ordinance guidance documents), the harvesting area will be reopened (appendix Table II-2). 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 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 III

2007 – Closed 53 working days

2006 – Closed 16 working days

2005 – Closed 52 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 III

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 III was conducted on September 4, 2008 by Seafood staff personnel, 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 III

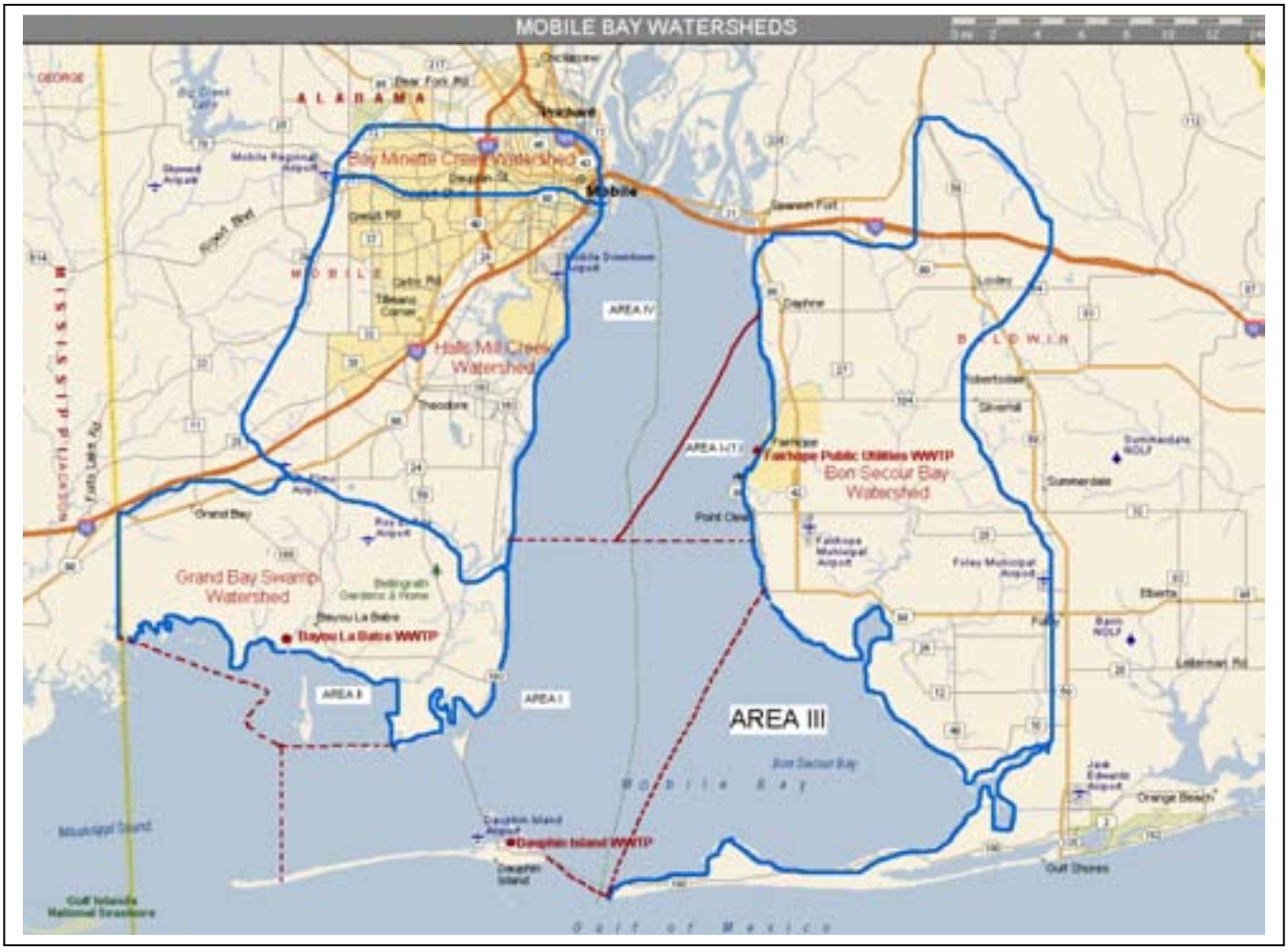
There are no wastewater treatment plants located in the study area.

III.A.2. SEPTIC SYSTEMS – AREA III

The impact of septic systems on the shellfish harvesting area was elevated. Soil suitability is of great 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 in the shoreline survey indicate that the capacity for disposal of domestic waste is limited. The Baldwin County Health Department (BCHD) is responsible for evaluating these lots with severe limitations. These 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 BCHD's information logs about the on-site systems regarding Area III.

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 or on sanitary sewer or not inhabited.

In summary, septic systems in the shoreline survey present a potential source of fecal coliform bacteria which could enter Growing Area III. However, bacteriological sample results taken by the BCHD and the ADPH-Seafood Branch have not shown any problems.



AREA III SEPTIC SYSTEMS

Baldwin 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 on Rural Water Supply	Est. No. of Private Wells	Water Tests Provided through ADPH in this County
Bon Secour Bay	1,220,537	194,477	30,412	NO	30	9,124	21,288	0.25	53.221	60	0	0	Bacteria

III.A.3. AREA III 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 X 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:

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

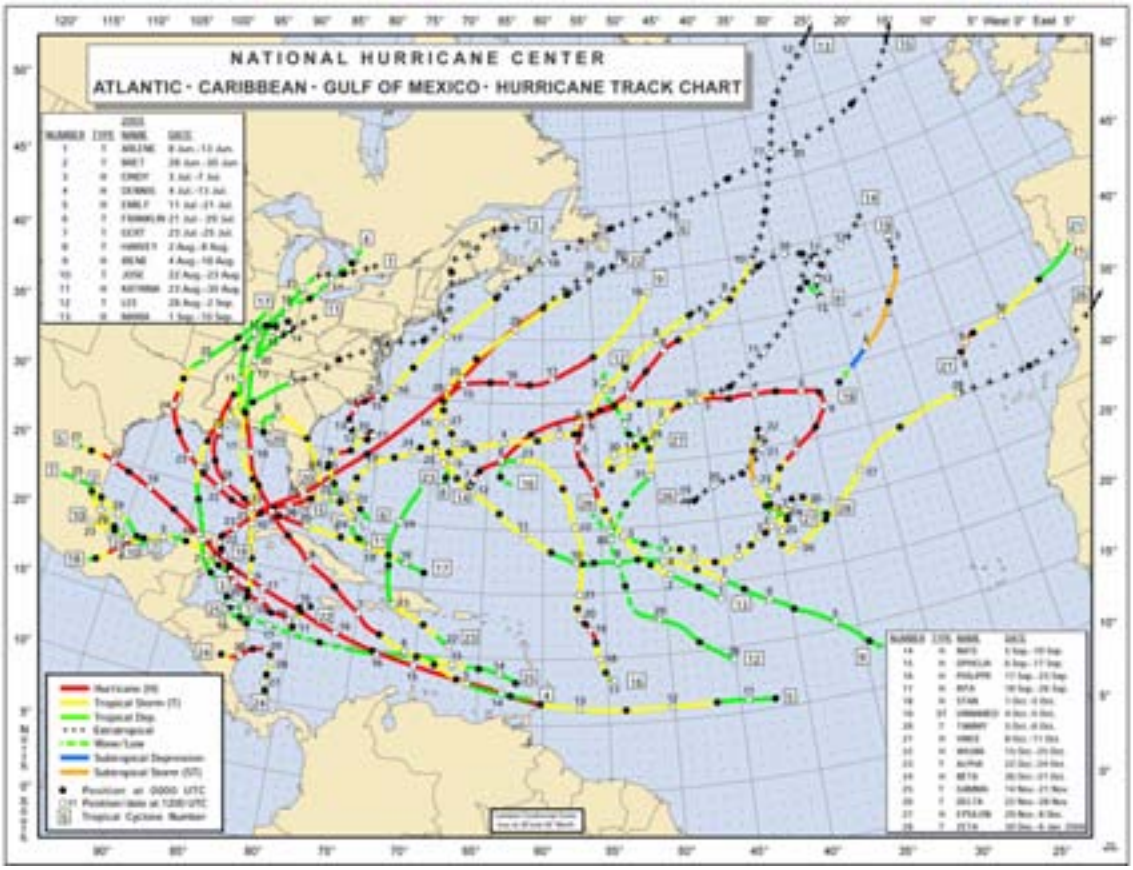
$$\text{Radius} = \text{Square root}((180°/\text{Shoreline angle})(\text{V cubic feet})/(3.14)(\text{Water depth in feet}))$$

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)
Gulf Shores Yacht Club and Marina	5	No	No	180	5´	5,000,000	810
Navy Cove Harbor	8	No	No	180	5´	8,000,000	1024

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

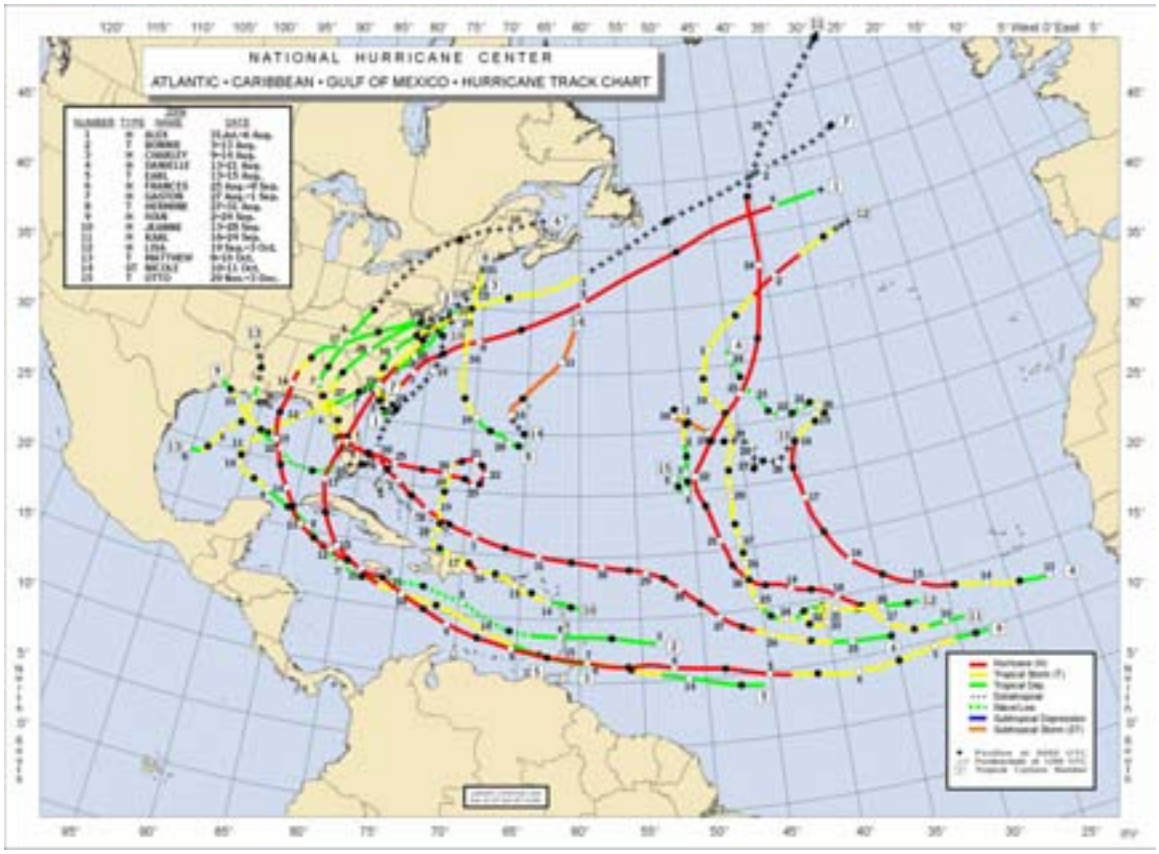


July 10, 2005 - Hurricane Dennis was the fourth named storm, first hurricane, and first major hurricane of the 2005 Atlantic Hurricane Season. Dennis made landfall as a Category 3 hurricane (wind speed 120 mph) at Santa Rosa Island, between Pensacola and Navarre Beach, Florida. Damage was lessened due 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

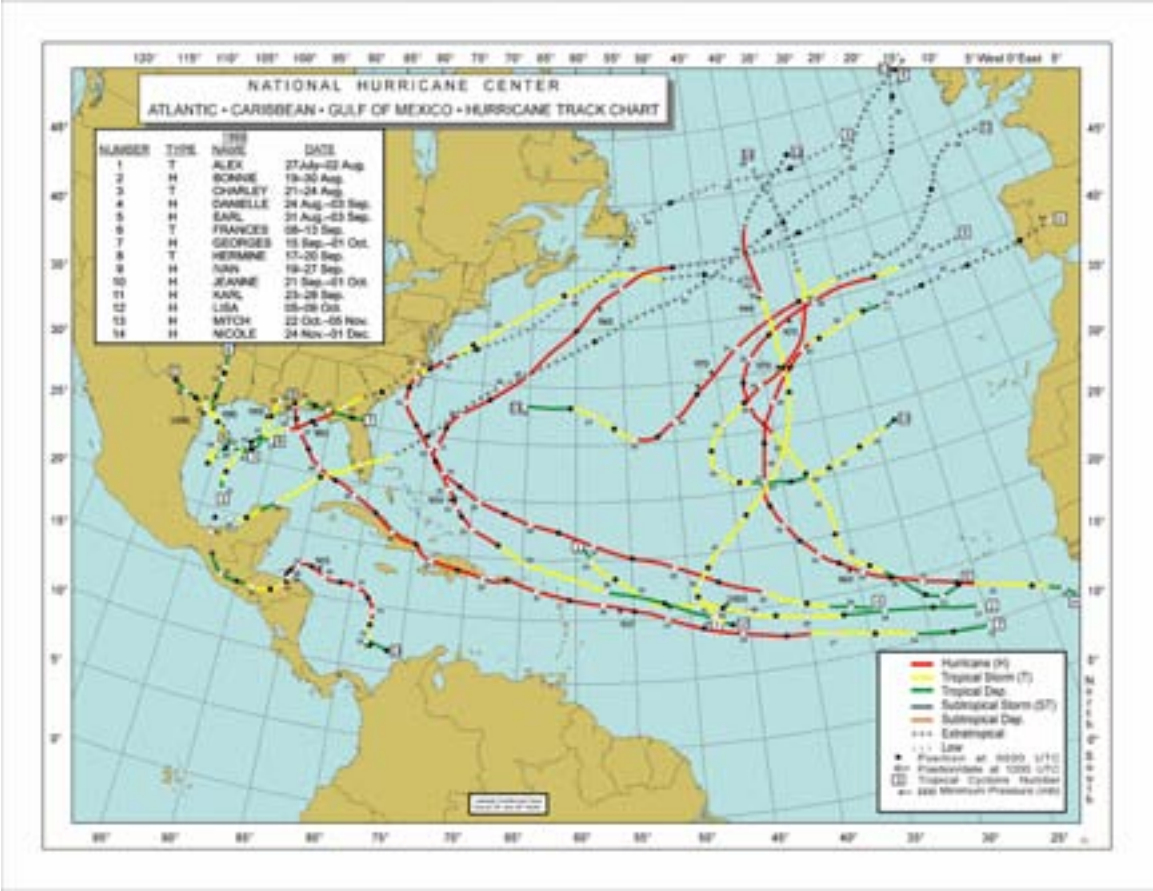
experienced a 15 foot storm surge, the highest recorded since 1917. Homes and businesses located on the immediate coast received major damage. The majority of the seafood processors were badly damaged or destroyed; however, most have been repaired or rebuilt and are permitted to operate. Shellfish harvesting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

2004 Hurricane Season

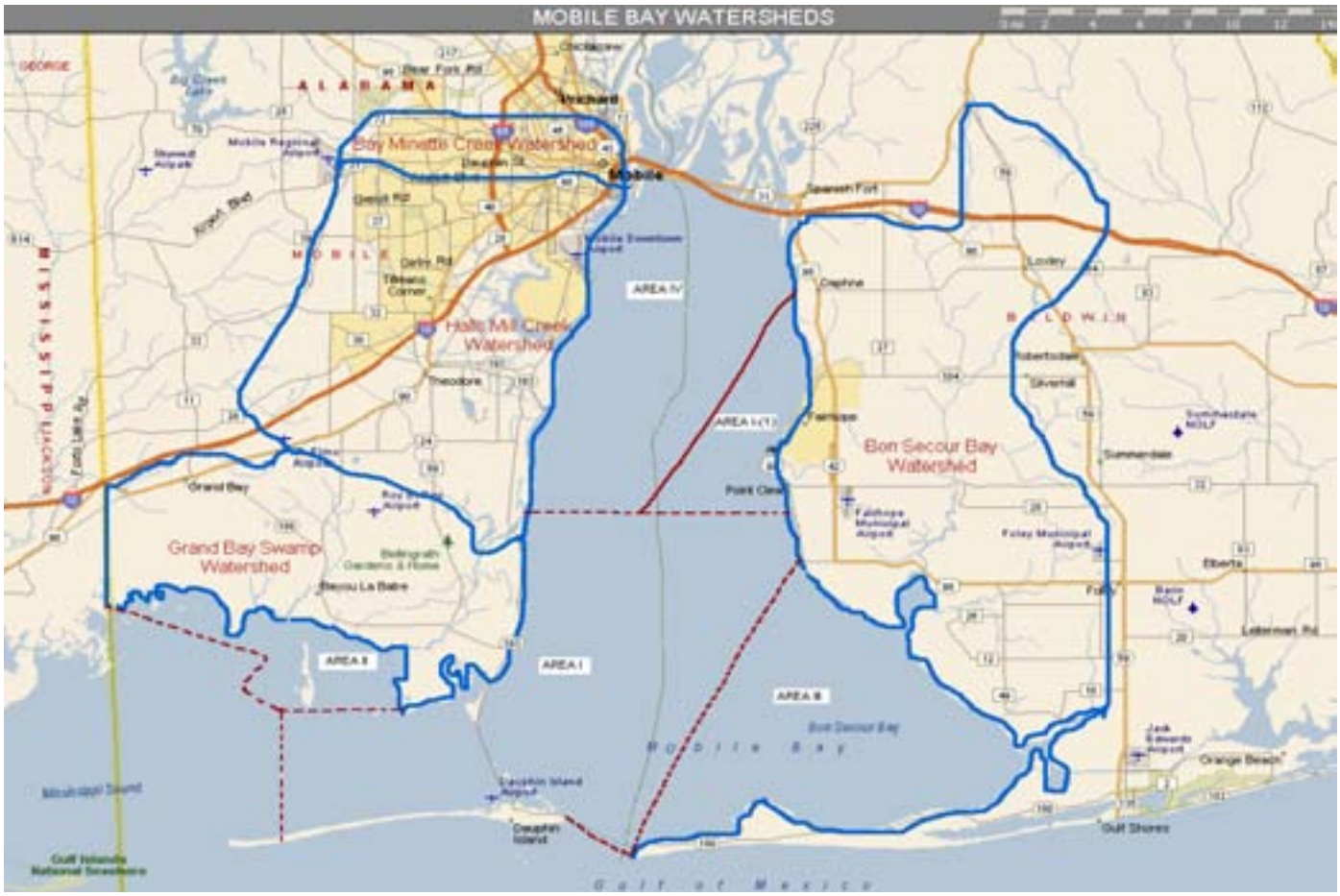


September 16, 2004 – Hurricane Ivan was the strongest hurricane of the 2004 Atlantic hurricane season. Just before landfall near Gulf Shores, Alabama, Ivan's eye wall weakened considerably to a Category 3 hurricane (winds120 mph.) Ivan's storm surge of 14 feet high with high surf and wind brought extensive 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.



III.A.4. Storm water – Area III

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 Weeks Bay, the Bon Secour River, and drainage from the Mobile River delta. There are tidal creeks and man-made canals that discharge into the area.

The main drainage basin for this area is the Bon Secour Bay 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 – Area III

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 – Area III

The impact of wildlife on the shellfish harvesting area was evaluated. Wildlife populations throughout the study area have not significantly changed since the 2003 pollution source survey. No additional wildlife areas or preserves have been designated within the study area.

Abundant wildlife along the shoreline of the study area has 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 – Area III

There are no industrial waste discharges in the study area.

AREA III

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 biotoxin. 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. (appendix: Table III-1)

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 was performed by Florida Fish and Wildlife Research Institute. . (appendix: Table III-2)

ADPH ROUTINE DINOFLAGELLATE TESTING
MOBILE BAY - AREA III

DINOFLAGELLATE RESULTS 2007

DINOFLAGELLATE RESULTS 2006

DINOFLAGELLATE RESULTS 2005

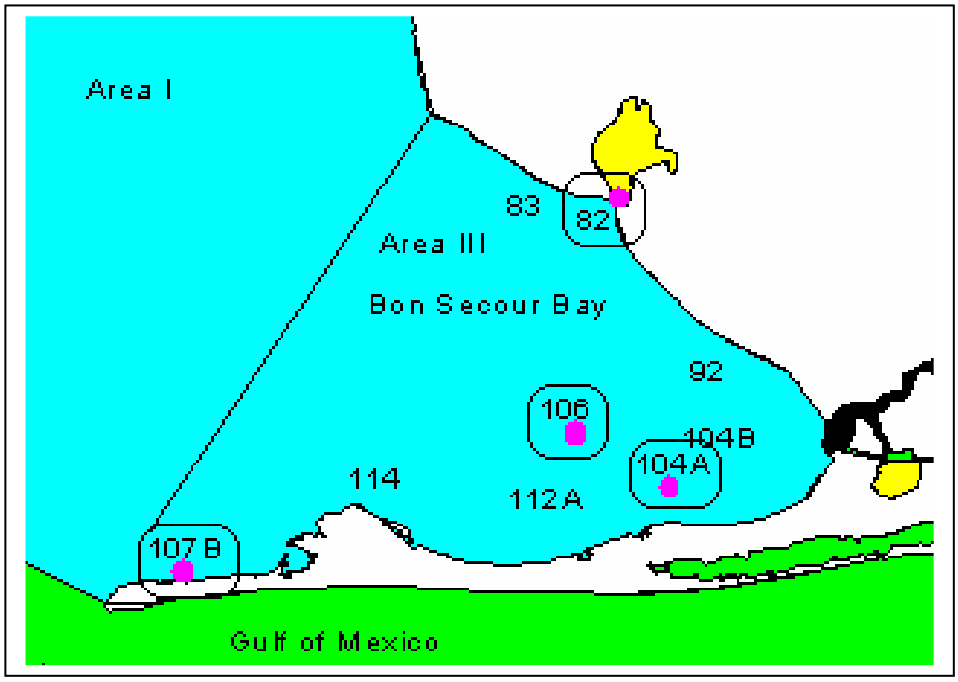
DINOFLAGELLATE RESULTS 2004

DINOFLAGELLATE RESULTS 2003

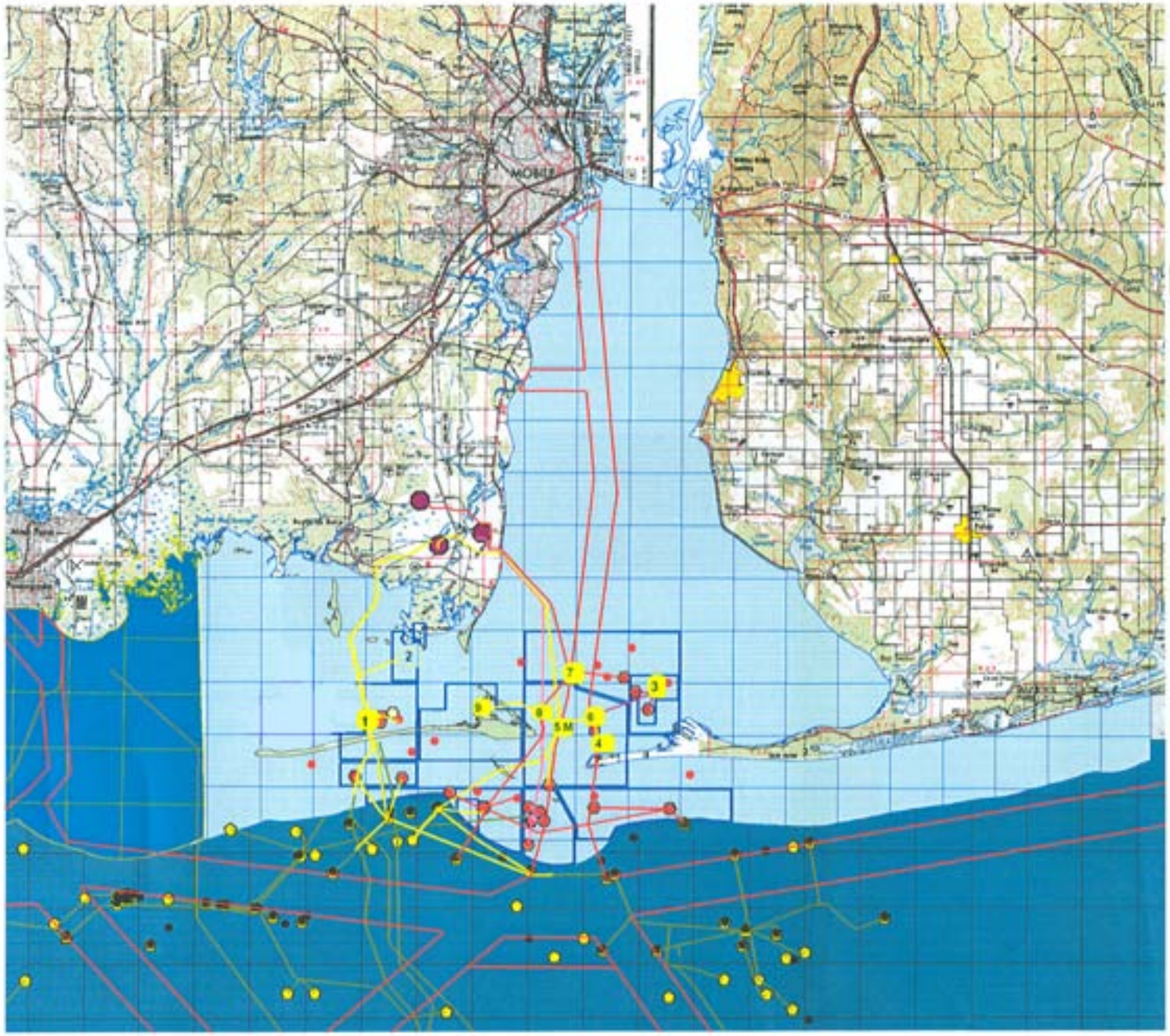
DINOFLAGELLATE RESULTS 2002

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
M Manned

N
W
E
S

By
Henry E. Moore, Jr.

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).

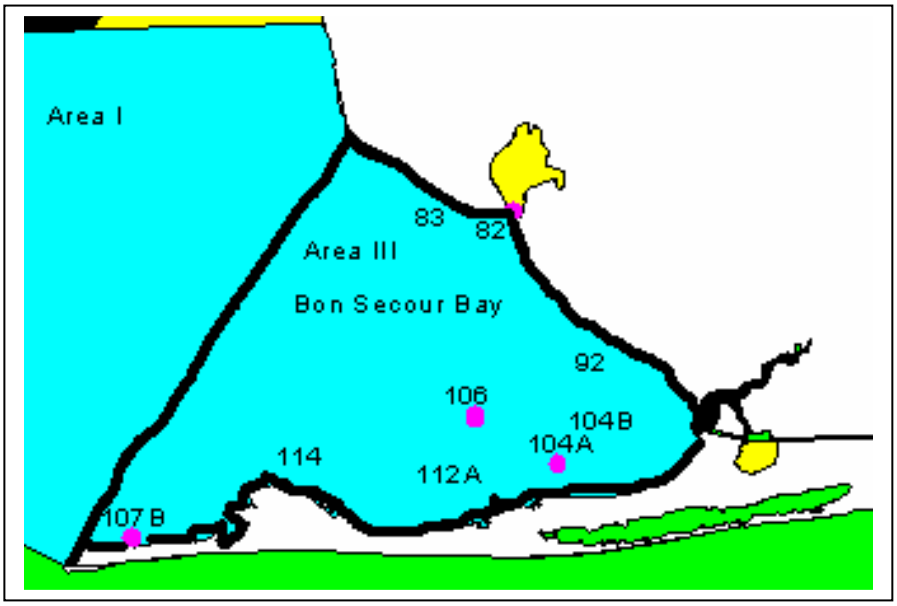
Both platforms are unmanned with zero waste discharge.
The platforms are permitted to discharge rainwater runoff.
Neither platform is located near any commercial quantities of shellfish.

IV.A. BACTERIOLOGICAL WATER QUALITY – AREA III

There are nine (9) bacteriological water quality sampling stations in Area III. 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 the sampling stations is illustrated in the map of Area III below and in the following table.

The locations of the 9 sampling stations used to develop the current classification are:

Station	Latitude	Longitude	Common Name/Location	Current Classification
83	30°21.87'	87°51.40'	Mary Ann Beach Park	Conditionally Approved
92	30°18.26'	87°47.31'	Northwest of Bon Secour River	Conditionally Approved
104A	30°15.71'	87°47.77'	Bon Secour Bay	Conditionally Approved
104B	30°17.27'	87°46.48'	West of Bon Secour River	Conditionally Approved
106	30°17.19'	87°51.68'	Intercoastal Waterway	Conditionally Approved
107B	30°14.25'	88°00.57'	Fort Morgan Ferry Landing	Conditionally Approved
112A	30°14.90'	87°51.48'	The Pines	Conditionally Approved
114	30°16.52'	87°56.22'	Little Point Clear	Conditionally Approved
82	30°22.26'	87°50.28'	Weeks Bay	Restricted (Managed as Prohibited)



IV. A. BACTERIOLOGICAL DATA ANALYSIS – AREA III

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. The results of the fecal coliform analyses for each station are found in the "Mobile Bay Bacteriological Sample Results Area III" section of this survey report.

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

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

ANALYSIS CONFIRMING THE CONDITIONAL MANAGEMENT PLAN ESTABLISHED FOR GROWING AREA III

FDA Regional Shellfish Specialist, John Veasey, performed a correlation and regression analysis using Alabama's Area III 2002-2005 sample data. Basically, the data suggested that only Area III had correlations between elevated river stage above 8 feet (at Barry Steam Plant in Bucks, Alabama as measured and reported by the U. S. Army Corps of Engineers) and elevated fecal counts. Since the ADPH-Seafood Branch predominantly samples its shellfish waters while they are in "open" status with the river below 8 feet, it makes sense that river stage is the most important factor in the analysis, when you consider where Area III is located (Bon Secour Bay, Baldwin County, Alabama).

Rainfall (accumulation at NOAA's Mobile Regional Airport weather station) on the sampling date and each of four previous days, seemed to contribute to the detectable elevated levels of fecal coliform at Weeks Bay (sample station #82). Results of samples collected by ADPH during 2002-2005 from Area III when the Mobile River stage at Barry Steam Plant was less than eight feet and the stations in that area were closed, are generally associated with higher river stages and rainfall amounts than the results of samples collected during open status. They are also generally characterized by higher station fecal coliform geometric means and maximum values.

(appendix: Table IV-1)

MOBILE BAY

BACTERIOLOGICAL SAMPLE RESULTS

AREA III

2001 - 2007

Sta 83	Sta 92	Sta 104A	Sta 104B	Sta 106	Sta 107B	Sta 112A	Sta 114
7.8	7.8	7.8	4.5	2.0	1.8	2.0	1.8
4.5	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	1.8
1.8	1.8	1.8	2.0	1.8	2.0	1.8	2.0
4.0	1.8	1.8	1.8	1.8	1.8	1.8	2.0
2.0	1.8	2.0	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	1.8	1.8
1.8	1.8	1.8	1.8	2.0	1.8	1.8	1.8
4.5	1.8	1.8	1.8	2.0	1.8	1.8	1.8
7.8	2.0	1.8	4.0	2.0	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	2.0	2.0	1.8	1.8	1.8	1.8
23.0	1.8	2.0	1.8	1.8	1.8	1.8	1.8
33.0	13.0	1.8	1.8	7.8	1.9	1.8	1.8
7.8	2.0	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	1.8
1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8
2.0	1.8	4.5	7.8	6.8	1.8	1.8	1.8
1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
1.8	1.8	1.8	4.5	1.8	1.8	1.8	1.8
2.0	1.8	7.8	7.8	1.8	1.8	1.8	1.8
17.0	4.5	49.0	4.5	2.0	1.8	1.8	1.8
4.0	1.8	1.8	1.8	1.8	1.8	1.8	4.0
2.0	1.8	2.0	1.8	1.8	2.0	1.8	1.8
1.8	1.8	2.0	4.0	1.8	1.8	1.8	1.8
4.0	1.8	1.8	1.8	2.0	1.8	1.8	1.8
2.0	1.8	1.8	2.0	1.8	1.8	1.8	1.8
2.0	1.8	4.5	2.0	1.8	1.8	1.8	1.8
2.0	1.8	1.8	4.5	1.8	4.5	1.8	1.8

TOTAL SAMPLES ANALYZED: 240

MEDIAN FECAL COLIFORM: 1.8

GEO MEAN FECAL COLIFORM: 2.2

% > 43 FECAL COLIFORM: < 1%

STATION:82 (Closed)
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
11/14/2007	71.1	19.0	2.8	23.0	C
9/26/2007	84.0	17.0	2.9	33.0	C
7/17/2007	84.0	19.2	2.4	4.0	C
6/12/2007	88.2	19.0	1.8	1.8	C
2/7/2007	57.0	17.2	4.0	1.8	C
11/14/2006	63.1	13.0	2.7	7.8	C
9/20/2006	83.1	15.0	3.1	49.0	C
7/26/2006	84.0	19.0	3.4	1.8	C
6/20/2006	85.1	11.0	2.6	4.5	C
5/17/2006	76.1	6.0	7.5	1.8	C
4/25/2006	81.1	6.0	3.9	13.0	C
11/14/2005	73.0	19.0	3.2	7.8	C
9/15/2005	85.1	17.0	3.2	33.0	C
6/27/2005	84.0	4.0	4.0	6.8	C
3/23/2005	70.2	5.0	5.1	13.0	C
1/26/2005	59.0	10.0	3.8	26.0	C
10/20/2004	80.1	10.0	2.9	33.0	C
8/17/2004	85.1	12.0	2.6	1.8	C
7/13/2004	92.1	7.0	3.2	1.8	C
5/5/2004	72.1	8.0	3.7	2.0	C
10/7/2003	73.0	12.0	3.0	4.5	C
8/19/2003	85.1	4.0	4.4	70.0	C
7/24/2003	82.0	0.0	5.2	6.8	C
2/19/2003	65.1	10.0	6.0	6.8	C
11/19/2002	64.0	8.0	6.3	7.8	C
9/11/2002	88.2	14.0	3.5	13.0	C
7/23/2002	87.1	12.0	1.6	13.0	C
5/14/2002	79.2	10.0	5.8	22.0	C
4/17/2002	78.1	8.0	3.7	13.0	C
12/4/2001	65.1	20.0	5.0	7.8	C

No. of Samples: 30 **Number > 43: 2**

Geo. Mean FEC: 8.3 **% > 43: 7%**

STATION:83
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
9/26/2007	83.1	22.7	2.9	7.8	O
7/17/2007	85.1	20.0	2.4	4.5	O
6/12/2007	87.1	20.0	1.8	1.8	O
2/7/2007	57.0	16.4	4.0	1.8	O
11/14/2006	64.0	20.0	2.7	4.0	O
9/20/2006	82.0	23.0	3.1	2.0	O
7/26/2006	84.0	20.0	3.4	1.8	O
6/20/2006	86.0	16.0	2.6	1.8	O
5/17/2006	76.1	5.0	7.5	1.8	O
4/25/2006	81.1	7.0	3.9	4.5	O
11/14/2005	71.1	22.0	3.2	7.8	O
6/27/2005	85.1	11.0	4.0	1.8	O
3/23/2005	70.2	5.0	5.1	2.0	O
1/26/2005	59.0	8.0	3.8	23.0	O
10/20/2004	80.1	13.0	2.9	33.0	O
8/17/2004	85.1	10.0	2.6	7.8	O
7/13/2004	93.0	5.0	3.2	1.8	O
5/5/2004	73.0	10.0	3.7	1.8	O
10/7/2003	73.0	20.0	3.0	2.0	O
8/19/2003	83.1	5.0	4.4	1.8	O
7/24/2003	85.1	0.0	5.2	1.8	O
2/19/2003	60.1	8.0	6.0	2.0	O
11/19/2002	63.1	8.0	6.3	17.0	O
9/11/2002	86.0	15.0	3.5	4.0	O
7/23/2002	88.2	15.0	1.6	2.0	O
5/14/2002	79.2	10.0	5.8	1.8	O
4/17/2002	77.0	5.0	3.7	4.0	O
12/4/2001	62.1	25.0	5.0	2.0	O
10/23/2001	80.1	15.0	4.1	2.0	O
8/28/2001	88.2	14.0	2.3	2.0	O

No. of Samples: 30 **Number > 43: 0**

Geo. Mean FEC: 3.2 **% > 43: 0%**

STATION:92
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
9/26/2007	82.0	25.2	2.9	7.8	O
7/17/2007	84.0	20.8	2.4	1.8	O
6/12/2007	87.1	22.0	1.8	2.0	O
2/7/2007	55.0	18.4	4.0	1.8	O
11/14/2006	64.0	22.0	2.7	1.8	O
9/20/2006	82.0	24.0	3.1	1.8	O
7/26/2006	84.0	20.0	3.4	2.0	O
6/20/2006	86.0	16.0	2.6	1.8	O
5/17/2006	76.1	9.0	7.5	1.8	O
4/25/2006	80.1	9.0	3.9	1.8	O
11/14/2005	72.1	21.0	3.2	2.0	O
6/27/2005	84.0	9.0	4.0	1.8	O
3/23/2005	70.2	10.0	5.1	1.8	O
1/26/2005	55.0	12.0	3.8	1.8	O
10/20/2004	78.1	16.0	2.9	13.0	O
8/17/2004	83.1	18.0	2.6	2.0	O
7/13/2004	92.1	10.0	3.2	1.8	O
5/5/2004	66.0	15.0	3.7	1.8	O
3/31/2004	68.0	14.0	4.0	1.8	O
12/22/2003	48.0	20.0	3.2	1.8	O
10/7/2003	73.0	17.0	3.0	1.8	O
8/19/2003	83.1	9.0	4.4	1.8	O
7/24/2003	80.1	0.0	5.2	4.5	O
2/19/2003	63.1	15.0	6.0	1.8	O
11/19/2002	61.2	15.0	6.3	1.8	O
9/11/2002	87.1	18.0	3.5	1.8	O
7/23/2002	87.1	15.0	1.6	1.8	O
5/14/2002	78.1	15.0	5.8	1.8	O
4/17/2002	76.1	15.0	3.7	1.8	O
12/4/2001	60.1	25.0	5.0	1.8	O

No. of Samples: 30 **Number > 43: 0**

Geo. Mean FEC: 2.1 **% > 43: 0%**

STATION:104A
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
9/26/2007	81.1	24.1	2.9	7.8	O
7/17/2007	84.0	21.5	2.4	1.8	O
6/12/2007	87.1	24.0	1.8	1.8	O
2/7/2007	53.1	18.0	4.0	1.8	O
11/14/2006	63.1	22.0	2.7	1.8	O
9/20/2006	81.1	24.0	3.1	2.0	O
7/26/2006	85.1	22.0	3.4	1.8	O
6/20/2006	85.1	16.0	2.6	1.8	O
5/17/2006	74.1	11.0	7.5	1.8	O
4/25/2006	80.1	10.0	3.9	1.8	O
11/14/2005	71.1	22.0	3.2	1.8	O
6/27/2005	83.1	9.0	4.0	1.8	O
3/23/2005	70.2	15.0	5.1	2.0	O
1/26/2005	57.0	12.0	3.8	2.0	O
10/20/2004	77.0	16.0	2.9	1.8	O
8/17/2004	83.1	18.0	2.6	2.0	O
7/13/2004	91.0	12.0	3.2	1.8	O
5/5/2004	66.0	15.0	3.7	2.0	O
3/31/2004	68.0	14.0	4.0	4.5	O
12/22/2003	48.0	20.0	3.2	1.8	O
10/7/2003	72.1	15.0	3.0	1.8	O
8/19/2003	83.1	8.0	4.4	7.8	O
7/24/2003	78.1	5.0	5.2	49.0	O
2/19/2003	60.1	15.0	6.0	1.8	O
11/19/2002	62.1	15.0	6.3	2.0	O
9/11/2002	84.0	20.0	3.5	2.0	O
7/23/2002	87.1	18.0	1.6	1.8	O
5/14/2002	77.0	16.0	5.8	1.8	O
4/17/2002	77.0	20.0	3.7	4.5	O
12/4/2001	61.2	26.0	5.0	1.8	O

No. of Samples: 30 **Number > 43: 1**

Geo. Mean FEC: 2.4 **% > 43: 3%**

STATION:104B
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
9/26/2007	81.1	24.8	2.9	4.5	O
7/17/2007	85.1	20.7	2.4	1.8	O
6/12/2007	87.1	22.0	1.8	1.8	O
2/7/2007	54.1	18.1	4.0	2.0	O
11/14/2006	64.0	22.0	2.7	1.8	O
9/20/2006	82.0	24.0	3.1	1.8	O
7/26/2006	83.1	21.0	3.4	1.8	O
6/20/2006	86.0	16.0	2.6	1.8	O
5/17/2006	75.0	10.0	7.5	1.8	O
4/25/2006	80.1	9.0	3.9	1.8	O
11/14/2005	72.1	21.0	3.2	4.0	O
6/27/2005	84.0	9.0	4.0	1.8	O
3/23/2005	70.2	12.0	5.1	2.0	O
1/26/2005	56.1	12.0	3.8	1.8	O
10/20/2004	78.1	18.0	2.9	1.8	O
8/17/2004	83.1	18.0	2.6	1.8	O
7/13/2004	91.0	12.0	3.2	1.8	O
5/5/2004	66.0	15.0	3.7	1.8	O
3/31/2004	68.0	14.0	4.0	7.8	O
12/22/2003	48.0	20.0	3.2	1.8	O
10/7/2003	73.0	15.0	3.0	4.5	O
8/19/2003	83.1	10.0	4.4	7.8	O
7/24/2003	80.1	0.0	5.2	4.5	O
2/19/2003	60.1	15.0	6.0	1.8	O
11/19/2002	60.1	15.0	6.3	1.8	O
9/11/2002	84.0	20.0	3.5	4.0	O
7/23/2002	88.2	15.0	1.6	1.8	O
5/14/2002	79.2	16.0	5.8	2.0	O
4/17/2002	77.0	18.0	3.7	2.0	O
12/4/2001	60.1	25.0	5.0	4.5	O

No. of Samples: 30 **Number > 43: 0**

Geo. Mean FEC: 2.4 **% > 43: 0%**

STATION:106
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
9/26/2007	81.1	25.2	2.9	2.0	O
7/17/2007	84.0	23.7	2.4	1.8	O
6/12/2007	86.0	24.0	1.8	2.0	O
2/7/2007	56.1	11.6	4.0	1.8	O
11/14/2006	64.0	21.0	2.7	1.8	O
9/20/2006	82.0	25.0	3.1	1.8	O
7/26/2006	85.1	28.0	3.4	1.8	O
6/20/2006	87.1	17.0	2.6	1.8	O
5/17/2006	75.0	9.0	7.5	2.0	O
4/25/2006	79.2	9.0	3.9	2.0	O
11/14/2005	71.1	22.0	3.2	2.0	O
6/27/2005	85.1	9.0	4.0	1.8	O
3/23/2005	70.2	12.0	5.1	1.8	O
1/26/2005	56.1	12.0	3.8	1.8	O
10/20/2004	78.1	16.0	2.9	7.8	O
8/17/2004	83.1	18.0	2.6	1.8	O
7/13/2004	91.0	12.0	3.2	1.8	O
5/5/2004	66.0	15.0	3.7	1.8	O
3/31/2004	65.1	14.0	4.0	6.8	O
12/22/2003	48.0	20.0	3.2	1.8	O
10/7/2003	73.0	18.0	3.0	1.8	O
8/19/2003	83.1	9.0	4.4	1.8	O
7/24/2003	78.1	3.0	5.2	2.0	O
2/19/2003	60.1	15.0	6.0	1.8	O
11/19/2002	60.1	15.0	6.3	1.8	O
9/11/2002	84.0	20.0	3.5	1.8	O
7/23/2002	87.1	18.0	1.6	2.0	O
5/14/2002	78.1	15.0	5.8	1.8	O
4/17/2002	76.1	18.0	3.7	1.8	O
12/4/2001	61.2	25.0	5.0	1.8	O

No. of Samples: 30 **Number > 43: 0**

Geo. Mean FEC: 2.0 **% > 43: 0%**

STATION:107B
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
9/26/2007	81.1	30.3	2.9	1.8	O
7/17/2007	82.0	31.5	2.4	1.8	O
6/12/2007	84.0	29.0	1.8	1.8	O
2/7/2007	52.2	13.4	4.0	2.0	O
11/14/2006	64.0	24.0	2.7	1.8	O
9/20/2006	81.1	27.0	3.1	1.8	O
7/26/2006	85.1	30.0	3.4	1.8	O
6/20/2006	83.1	22.0	2.6	1.8	O
5/17/2006	75.0	11.0	7.5	1.8	O
4/25/2006	79.2	13.0	3.9	1.8	O
11/14/2005	71.1	25.0	3.2	1.8	O
6/27/2005	85.1	13.0	4.0	1.8	O
3/23/2005	64.0	10.0	5.1	1.8	O
1/26/2005	57.0	12.0	3.8	1.8	O
10/20/2004	77.0	28.0	2.9	1.8	O
8/17/2004	83.1	23.0	2.6	1.8	O
7/13/2004	91.0	10.0	3.2	1.8	O
5/5/2004	67.1	15.0	3.7	1.8	O
3/31/2004	64.0	23.0	4.0	1.8	O
10/7/2003	74.1	22.0	3.0	1.8	O
8/19/2003	83.1	8.0	4.4	1.8	O
7/24/2003	78.1	7.0	5.2	1.8	O
2/19/2003	58.1	12.0	6.0	1.8	O
11/19/2002	63.1	8.0	6.3	1.8	O
9/11/2002	85.1	22.0	3.5	2.0	O
7/23/2002	85.1	23.0	1.6	1.8	O
5/14/2002	77.0	20.0	5.8	1.8	O
4/17/2002	73.0	8.0	3.7	1.8	O
12/4/2001	63.1	28.0	5.0	1.8	O
10/23/2001	74.1	22.0	4.1	4.5	O

No. of Samples: 30 **Number > 43: 0**

Geo. Mean FEC: 1.9 **% > 43: 0%**

STATION:112A
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
9/26/2007	80.1	25.1	2.9	2.0	O
7/17/2007	84.0	45.0	2.4	1.8	O
6/12/2007	86.0	25.0	1.8	1.8	O
2/7/2007	56.1	11.1	4.0	1.8	O
11/14/2006	63.1	22.0	2.7	1.8	O
9/20/2006	82.0	25.0	3.1	1.8	O
7/26/2006	84.0	23.0	3.4	1.8	O
6/20/2006	84.0	18.0	2.6	1.8	O
5/17/2006	74.1	8.0	7.5	1.8	O
4/25/2006	80.1	11.0	3.9	1.8	O
11/14/2005	70.2	24.0	3.2	1.8	O
6/27/2005	85.1	10.0	4.0	1.8	O
3/23/2005	64.0	10.0	5.1	1.8	O
1/26/2005	54.1	12.0	3.8	1.8	O
10/20/2004	77.0	17.0	2.9	1.8	O
8/17/2004	83.1	18.0	2.6	1.8	O
7/13/2004	92.1	8.0	3.2	1.8	O
5/5/2004	66.0	15.0	3.7	1.8	O
3/31/2004	65.1	14.0	4.0	1.8	O
12/22/2003	48.0	20.0	3.2	1.8	O
10/7/2003	74.1	18.0	3.0	1.8	O
8/19/2003	83.1	5.0	4.4	1.8	O
7/24/2003	78.1	5.0	5.2	1.8	O
2/19/2003	57.0	15.0	6.0	1.8	O
11/19/2002	65.1	12.0	6.3	1.8	O
9/11/2002	86.0	20.0	3.5	1.8	O
7/23/2002	85.1	20.0	1.6	1.8	O
5/14/2002	78.1	10.0	5.8	1.8	O
4/17/2002	74.1	20.0	3.7	1.8	O
12/4/2001	61.2	28.0	5.0	1.8	O

No. of Samples: 30 **Number > 43: 0**

Geo. Mean FEC: 1.8 **% > 43: 0%**

STATION:114
AREA III

30 MOST RECENT SAMPLES

DATE	TEMP	SAL	RIV	FEC	STATUS
9/26/2007	81.1	27.7	2.9	1.8	O
7/17/2007	84.0	27.1	2.4	1.8	O
6/12/2007	85.1	27.0	1.8	1.8	O
2/7/2007	55.0	11.0	4.0	2.0	O
11/14/2006	63.1	22.0	2.7	2.0	O
9/20/2006	81.1	26.0	3.1	1.8	O
7/26/2006	85.1	28.0	3.4	1.8	O
6/20/2006	85.1	20.0	2.6	1.8	O
5/17/2006	75.0	10.0	7.5	1.8	O
4/25/2006	80.1	12.0	3.9	1.8	O
11/14/2005	70.2	25.0	3.2	1.8	O
6/27/2005	84.0	11.0	4.0	1.8	O
3/23/2005	64.0	10.0	5.1	1.8	O
1/26/2005	57.0	12.0	3.8	1.8	O
10/20/2004	78.1	23.0	2.9	1.8	O
8/17/2004	83.1	23.0	2.6	1.8	O
7/13/2004	91.0	8.0	3.2	1.8	O
5/5/2004	67.1	15.0	3.7	1.8	O
3/31/2004	66.0	23.0	4.0	1.8	O
10/7/2003	74.1	18.0	3.0	1.8	O
8/19/2003	83.1	8.0	4.4	1.8	O
7/24/2003	78.1	5.0	5.2	1.8	O
2/19/2003	58.1	15.0	6.0	1.8	O
11/19/2002	61.2	14.0	6.3	4.0	O
9/11/2002	86.0	20.0	3.5	1.8	O
7/23/2002	85.1	22.0	1.6	1.8	O
5/14/2002	78.1	18.0	5.8	1.8	O
4/17/2002	78.1	5.0	3.7	1.8	O
12/4/2001	62.1	28.0	5.0	1.8	O
10/23/2001	74.1	22.0	4.1	1.8	O

No. of Samples: 30 **Number > 43: 0**

Geo. Mean FEC: 1.9 **% > 43: 0%**

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
82							
	11/14/2007	71	19	2.8	23.0	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	84	17	2.9	33.0	C	managed as prohibited
	7/17/2007	84	19	2.4	4.0	C	managed as prohibited
	6/12/2007	88	19	1.8	1.8	C	managed as prohibited
	2/7/2007	57	17	4.0	1.8	C	managed as prohibited
	11/14/2006	63	13	2.7	7.8	C	managed as prohibited
	9/20/2006	83	15	3.1	49.0	C	managed as prohibited
	7/26/2006	84	19	3.4	1.8	C	managed as prohibited
	6/20/2006	85	11	2.6	4.5	C	managed as prohibited
	5/17/2006	76	6	7.5	1.8	C	managed as prohibited
	4/25/2006	81	6	3.9	13.0	C	managed as prohibited
	11/14/2005	73	19	3.2	7.8	C	managed as prohibited
	9/15/2005	85	17	3.2	33.0	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	84	4	4.0	6.8	C	managed as prohibited
	3/23/2005	70	5	5.1	13.0	C	managed as prohibited
	1/26/2005	59	10	3.8	26.0	C	managed as prohibited
	10/20/2004	80	10	2.9	33.0	C	managed as prohibited
	8/17/2004	85	12	2.6	1.8	C	managed as prohibited
	7/13/2004	92	7	3.2	1.8	C	managed as prohibited
	5/5/2004	72	8	3.7	2.0	C	managed as prohibited
	10/7/2003	73	12	3.0	4.5	C	managed as prohibited
	8/19/2003	85	4	4.4	70.0	C	managed as prohibited
	7/24/2003	82	0	5.2	6.8	C	managed as prohibited
	2/19/2003	65	10	6.0	6.8	C	managed as prohibited
	11/19/2002	64	8	6.3	7.8	C	managed as prohibited
	9/11/2002	88	14	3.5	13.0	C	managed as prohibited
	7/23/2002	87	12	1.6	13.0	C	managed as prohibited
	5/14/2002	79	10	5.8	22.0	C	managed as prohibited
	4/17/2002	78	8	3.7	13.0	C	managed as prohibited
	12/4/2001	65	20	5.0	7.8	C	managed as prohibited
	10/23/2001	80	15	4.1	23.0	C	managed as prohibited
	8/28/2001	88	10	2.3	1.8	C	managed as prohibited

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	6/21/2001	85	5	2.4	2.0	C	managed as prohibited
	4/5/2001	73	0	6.7	23.0	C	managed as prohibited
	1/24/2001	53	18	6.3	2.0	C	managed as prohibited
83							
	11/14/2007	69	22	2.8	4.5	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	83	23	2.9	7.8	O	
	7/17/2007	85	20	2.4	4.5	O	
	6/12/2007	87	20	1.8	1.8	O	
	2/7/2007	57	16	4.0	1.8	O	
	11/14/2006	64	20	2.7	4.0	O	
	9/20/2006	82	23	3.1	2.0	O	
	7/26/2006	84	20	3.4	1.8	O	
	6/20/2006	86	16	2.6	1.8	O	
	5/17/2006	76	5	7.5	1.8	O	
	4/25/2006	81	7	3.9	4.5	O	
	11/14/2005	71	22	3.2	7.8	O	
	9/15/2005	84	17	3.2	4.5	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	85	11	4.0	1.8	O	
	3/23/2005	70	5	5.1	2.0	O	
	1/26/2005	59	8	3.8	23.0	O	
	10/20/2004	80	13	2.9	33.0	O	
	8/17/2004	85	10	2.6	7.8	O	
	7/13/2004	93	5	3.2	1.8	O	
	5/5/2004	73	10	3.7	1.8	O	
	10/7/2003	73	20	3.0	2.0	O	
	8/19/2003	83	5	4.4	1.8	O	
	7/24/2003	85	0	5.2	1.8	O	
	2/19/2003	60	8	6.0	2.0	O	
	11/19/2002	63	8	6.3	17.0	O	
	9/11/2002	86	15	3.5	4.0	O	
	7/23/2002	88	15	1.6	2.0	O	
	5/14/2002	79	10	5.8	1.8	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	4/17/2002	77	5	3.7	4.0	O	
	12/4/2001	62	25	5.0	2.0	O	
	10/23/2001	80	15	4.1	2.0	O	
	8/28/2001	88	14	2.3	2.0	O	
	6/21/2001	85	5	2.4	1.8	O	
	4/5/2001	71	0	6.7	70.0	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/24/2001	53	18	6.3	1.8	O	
92							
	11/14/2007	70	23	2.8	2.0	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	82	25	2.9	7.8	O	
	7/17/2007	84	21	2.4	1.8	O	
	6/12/2007	87	22	1.8	2.0	O	
	2/7/2007	55	18	4.0	1.8	O	
	11/14/2006	64	22	2.7	1.8	O	
	9/20/2006	82	24	3.1	1.8	O	
	7/26/2006	84	20	3.4	2.0	O	
	6/20/2006	86	16	2.6	1.8	O	
	5/17/2006	76	9	7.5	1.8	O	
	4/25/2006	80	9	3.9	1.8	O	
	11/14/2005	72	21	3.2	2.0	O	
	9/15/2005	83	17	3.2	11.0	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	84	9	4.0	1.8	O	
	3/23/2005	70	10	5.1	1.8	O	
	1/26/2005	55	12	3.8	1.8	O	
	10/20/2004	78	16	2.9	13.0	O	
	8/17/2004	83	18	2.6	2.0	O	
	7/13/2004	92	10	3.2	1.8	O	
	5/5/2004	66	15	3.7	1.8	O	
	3/31/2004	68	14	4.0	1.8	O	
	12/22/2003	48	20	3.2	1.8	O	
	10/7/2003	73	17	3.0	1.8	O	
	8/19/2003	83	9	4.4	1.8	O	
	7/24/2003	80	0	5.2	4.5	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	2/19/2003	63	15	6.0	1.8	O	
	11/19/2002	61	15	6.3	1.8	O	
	9/11/2002	87	18	3.5	1.8	O	
	7/23/2002	87	15	1.6	1.8	O	
	5/14/2002	78	15	5.8	1.8	O	
	4/17/2002	76	15	3.7	1.8	O	
	12/4/2001	60	25	5.0	1.8	O	
	10/23/2001	78	18	4.1	1.8	O	
	8/28/2001	87	18	2.3	1.8	O	
	6/21/2001	86	5	2.4	1.8	O	
	4/5/2001	71	3	6.7	4.5	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/24/2001	52	22	6.3	2.0	O	
104A							
	11/14/2007	69	23	2.8	2.0	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	81	24	2.9	7.8	O	
	7/17/2007	84	22	2.4	1.8	O	
	6/12/2007	87	24	1.8	1.8	O	
	2/7/2007	53	18	4.0	1.8	O	
	11/14/2006	63	22	2.7	1.8	O	
	9/20/2006	81	24	3.1	2.0	O	
	7/26/2006	85	22	3.4	1.8	O	
	6/20/2006	85	16	2.6	1.8	O	
	5/17/2006	74	11	7.5	1.8	O	
	4/25/2006	80	10	3.9	1.8	O	
	11/14/2005	71	22	3.2	1.8	O	
	9/15/2005	82	16	3.2	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	83	9	4.0	1.8	O	
	3/23/2005	70	15	5.1	2.0	O	
	1/26/2005	57	12	3.8	2.0	O	
	10/20/2004	77	16	2.9	1.8	O	
	8/17/2004	83	18	2.6	2.0	O	
	7/13/2004	91	12	3.2	1.8	O	
	5/5/2004	66	15	3.7	2.0	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	3/31/2004	68	14	4.0	4.5	O	
	12/22/2003	48	20	3.2	1.8	O	
	10/7/2003	72	15	3.0	1.8	O	
	8/19/2003	83	8	4.4	7.8	O	
	7/24/2003	78	5	5.2	49.0	O	
	2/19/2003	60	15	6.0	1.8	O	
	11/19/2002	62	15	6.3	2.0	O	
	9/11/2002	84	20	3.5	2.0	O	
	7/23/2002	87	18	1.6	1.8	O	
	5/14/2002	77	16	5.8	1.8	O	
	4/17/2002	77	20	3.7	4.5	O	
	12/4/2001	61	26	5.0	1.8	O	
	10/23/2001	75	20	4.1	1.8	O	
	8/28/2001	87	12	2.3	2.0	O	
	6/21/2001	86	8	2.4	1.8	O	
	4/5/2001	70	4	6.7	13.0	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/24/2001	52	20	6.3	1.8	O	
104B							
	11/14/2007	69	22	2.8	4.5	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	81	25	2.9	4.5	O	
	7/17/2007	85	21	2.4	1.8	O	
	6/12/2007	87	22	1.8	1.8	O	
	2/7/2007	54	18	4.0	2.0	O	
	11/14/2006	64	22	2.7	1.8	O	
	9/20/2006	82	24	3.1	1.8	O	
	7/26/2006	83	21	3.4	1.8	O	
	6/20/2006	86	16	2.6	1.8	O	
	5/17/2006	75	10	7.5	1.8	O	
	4/25/2006	80	9	3.9	1.8	O	
	11/14/2005	72	21	3.2	4.0	O	
	9/15/2005	83	18	3.2	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	84	9	4.0	1.8	O	
	3/23/2005	70	12	5.1	2.0	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	1/26/2005	56	12	3.8	1.8	O	
	10/20/2004	78	18	2.9	1.8	O	
	8/17/2004	83	18	2.6	1.8	O	
	7/13/2004	91	12	3.2	1.8	O	
	5/5/2004	66	15	3.7	1.8	O	
	3/31/2004	68	14	4.0	7.8	O	
	12/22/2003	48	20	3.2	1.8	O	
	10/7/2003	73	15	3.0	4.5	O	
	8/19/2003	83	10	4.4	7.8	O	
	7/24/2003	80	0	5.2	4.5	O	
	2/19/2003	60	15	6.0	1.8	O	
	11/19/2002	60	15	6.3	1.8	O	
	9/11/2002	84	20	3.5	4.0	O	
	7/23/2002	88	15	1.6	1.8	O	
	5/14/2002	79	16	5.8	2.0	O	
	4/17/2002	77	18	3.7	2.0	O	
	12/4/2001	60	25	5.0	4.5	O	
	10/23/2001	78	18	4.1	33.0	O	
	8/28/2001	87	18	2.3	1.8	O	
	6/21/2001	86	5	2.4	1.8	O	
	4/5/2001	71	4	6.7	2.0	O	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/24/2001	52	22	6.3	1.8	O	
106							
	11/14/2007	69	24	2.8	1.8	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	81	25	2.9	2.0	O	
	7/17/2007	84	24	2.4	1.8	O	
	6/12/2007	86	24	1.8	2.0	O	
	2/7/2007	56	12	4.0	1.8	O	
	11/14/2006	64	21	2.7	1.8	O	
	9/20/2006	82	25	3.1	1.8	O	
	7/26/2006	85	28	3.4	1.8	O	
	6/20/2006	87	17	2.6	1.8	O	
	5/17/2006	75	9	7.5	2.0	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	4/25/2006	79	9	3.9	2.0	O	
	11/14/2005	71	22	3.2	2.0	O	
	9/15/2005	83	17	3.2	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	85	9	4.0	1.8	O	
	3/23/2005	70	12	5.1	1.8	O	
	1/26/2005	56	12	3.8	1.8	O	
	10/20/2004	78	16	2.9	7.8	O	
	8/17/2004	83	18	2.6	1.8	O	
	7/13/2004	91	12	3.2	1.8	O	
	5/5/2004	66	15	3.7	1.8	O	
	3/31/2004	65	14	4.0	6.8	O	
	12/22/2003	48	20	3.2	1.8	O	
	10/7/2003	73	18	3.0	1.8	O	
	8/19/2003	83	9	4.4	1.8	O	
	7/24/2003	78	3	5.2	2.0	O	
	2/19/2003	60	15	6.0	1.8	O	
	11/19/2002	60	15	6.3	1.8	O	
	9/11/2002	84	20	3.5	1.8	O	
	7/23/2002	87	18	1.6	2.0	O	
	5/14/2002	78	15	5.8	1.8	O	
	4/17/2002	76	18	3.7	1.8	O	
	12/4/2001	61	25	5.0	1.8	O	
	10/23/2001	78	20	4.1	1.8	O	
	8/28/2001	87	16	2.3	1.8	O	
	6/21/2001	86	7	2.4	1.8	O	
	4/5/2001	69	3	6.7	1.8	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/24/2001	52	20	6.3	1.8	O	
107B							
	11/14/2007	70	31	2.8	7.8	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	81	30	2.9	1.8	O	
	7/17/2007	82	32	2.4	1.8	O	
	6/12/2007	84	29	1.8	1.8	O	
	2/7/2007	52	13	4.0	2.0	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	11/14/2006	64	24	2.7	1.8	O	
	9/20/2006	81	27	3.1	1.8	O	
	7/26/2006	85	30	3.4	1.8	O	
	6/20/2006	83	22	2.6	1.8	O	
	5/17/2006	75	11	7.5	1.8	O	
	4/25/2006	79	13	3.9	1.8	O	
	11/14/2005	71	25	3.2	1.8	O	
	9/15/2005	83	23	3.2	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	85	13	4.0	1.8	O	
	3/23/2005	64	10	5.1	1.8	O	
	1/26/2005	57	12	3.8	1.8	O	
	10/20/2004	77	28	2.9	1.8	O	
	8/17/2004	83	23	2.6	1.8	O	
	7/13/2004	91	10	3.2	1.8	O	
	5/5/2004	67	15	3.7	1.8	O	
	3/31/2004	64	23	4.0	1.8	O	
	10/7/2003	74	22	3.0	1.8	O	
	8/19/2003	83	8	4.4	1.8	O	
	7/24/2003	78	7	5.2	1.8	O	
	2/19/2003	58	12	6.0	1.8	O	
	11/19/2002	63	8	6.3	1.8	O	
	9/11/2002	85	22	3.5	2.0	O	
	7/23/2002	85	23	1.6	1.8	O	
	5/14/2002	77	20	5.8	1.8	O	
	4/17/2002	73	8	3.7	1.8	O	
	12/4/2001	63	28	5.0	1.8	O	
	10/23/2001	74	22	4.1	4.5	O	
	8/28/2001	87	25	2.3	1.8	O	
	6/21/2001	86	14	2.4	1.8	O	
	4/5/2001	67	2	6.7	7.8	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/24/2001	52	18	6.3	2.0	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available
SAL= Salinity (ppT)
RIV= River Stage (Feet)
O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
112A							
	11/14/2007	69	24	2.8	1.8	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	80	25	2.9	2.0	O	
	7/17/2007	84	45	2.4	1.8	O	
	6/12/2007	86	25	1.8	1.8	O	
	2/7/2007	56	11	4.0	1.8	O	
	11/14/2006	63	22	2.7	1.8	O	
	9/20/2006	82	25	3.1	1.8	O	
	7/26/2006	84	23	3.4	1.8	O	
	6/20/2006	84	18	2.6	1.8	O	
	5/17/2006	74	8	7.5	1.8	O	
	4/25/2006	80	11	3.9	1.8	O	
	11/14/2005	70	24	3.2	1.8	O	
	9/15/2005	83	18	3.2	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	85	10	4.0	1.8	O	
	3/23/2005	64	10	5.1	1.8	O	
	1/26/2005	54	12	3.8	1.8	O	
	10/20/2004	77	17	2.9	1.8	O	
	8/17/2004	83	18	2.6	1.8	O	
	7/13/2004	92	8	3.2	1.8	O	
	5/5/2004	66	15	3.7	1.8	O	
	3/31/2004	65	14	4.0	1.8	O	
	12/22/2003	48	20	3.2	1.8	O	
	10/7/2003	74	18	3.0	1.8	O	
	8/19/2003	83	5	4.4	1.8	O	
	7/24/2003	78	5	5.2	1.8	O	
	2/19/2003	57	15	6.0	1.8	O	
	11/19/2002	65	12	6.3	1.8	O	
	9/11/2002	86	20	3.5	1.8	O	
	7/23/2002	85	20	1.6	1.8	O	
	5/14/2002	78	10	5.8	1.8	O	
	4/17/2002	74	20	3.7	1.8	O	
	12/4/2001	61	28	5.0	1.8	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	10/23/2001	75	20	4.1	1.8	O	
	8/28/2001	87	18	2.3	2.0	O	
	6/21/2001	86	6	2.4	1.8	O	
	4/5/2001	70	5	6.7	1.8	O	
	1/24/2001	52	18	6.3	1.8	O	
114							
	11/14/2007	68	24	2.8	1.8	C	closed on 10/23/07 due to Red Tide opened on 2/20/08
	9/26/2007	81	28	2.9	1.8	O	
	7/17/2007	84	27	2.4	1.8	O	
	6/12/2007	85	27	1.8	1.8	O	
	2/7/2007	55	11	4.0	2.0	O	
	11/14/2006	63	22	2.7	2.0	O	
	9/20/2006	81	26	3.1	1.8	O	
	7/26/2006	85	28	3.4	1.8	O	
	6/20/2006	85	20	2.6	1.8	O	
	5/17/2006	75	10	7.5	1.8	O	
	4/25/2006	80	12	3.9	1.8	O	
	11/14/2005	70	25	3.2	1.8	O	
	9/15/2005	82	18	3.2	1.8	C	closed on 8/29/05 emergency closure (Katrina) opened 9/22/05
	6/27/2005	84	11	4.0	1.8	O	
	3/23/2005	64	10	5.1	1.8	O	
	1/26/2005	57	12	3.8	1.8	O	
	10/20/2004	78	23	2.9	1.8	O	
	8/17/2004	83	23	2.6	1.8	O	
	7/13/2004	91	8	3.2	1.8	O	
	5/5/2004	67	15	3.7	1.8	O	
	3/31/2004	66	23	4.0	1.8	O	
	10/7/2003	74	18	3.0	1.8	O	
	8/19/2003	83	8	4.4	1.8	O	
	7/24/2003	78	5	5.2	1.8	O	
	2/19/2003	58	15	6.0	1.8	O	
	11/19/2002	61	14	6.3	4.0	O	
	9/11/2002	86	20	3.5	1.8	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available

SAL= Salinity (ppT)
RIV= River Stage (Feet)

O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

AREA III BACTERIOLOGICAL SAMPLE RESULTS

From: **01/01/01** ***to:*** **12/31/07**

STATION	DATE	TEMP	SAL	RIV	FEC	STATUS	COMMENTS
	7/23/2002	85	22	1.6	1.8	O	
	5/14/2002	78	18	5.8	1.8	O	
	4/17/2002	78	5	3.7	1.8	O	
	12/4/2001	62	28	5.0	1.8	O	
	10/23/2001	74	22	4.1	1.8	O	
	8/28/2001	87	20	2.3	1.8	O	
	6/21/2001	86	10	2.4	1.8	O	
	4/5/2001	67	6	6.7	1.8	C	closed on 3/4/01 Riv 8.48' - 8.86' opened on 4/6/01
	1/24/2001	52	16	6.3	1.8	O	

LEGEND

DATE= Sampling Date
STA= Station
TEMP= Temperature (° Fahrenheit)
BLANK SPACE= No Data Available
SAL= Salinity (ppT)
RIV= River Stage (Feet)
O = Open Status
C = Closed Status
FEC= Fecal Coliform (MPN/100mL)

SUMMARY – AREA III

This comprehensive sanitary survey shows that:

- shellfish harvested from Area III 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 III at levels that present an actual or potential public health hazard.
- Area III 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 III 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
August 2007						
8/29/2007	2.2 feet	118 / O	1.8	18.0	18.0	
July 2007						
7/10/2007	1.7 feet	118 / O	2.0	45.0	45.0	
June 2007						
6/11/2007	2.0 feet	118 / O	1.8	18.0	18.0	
January 2007						
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	
November 2006						
11/1/2006	3.1 feet	118 / O	1.8	18.0	18.0	
August 2006						
8/15/2006	1.9 feet	118 / O	1.8	18.0	18.0	
July 2006						
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
June 2006						
6/27/2006	3.7 feet	118 / O	13.0	20.0	18.0	
May 2006						
5/23/2006	3.4 feet	118 / O	1.8	18.0	18.0	
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
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
9/13/2005	2.6 feet	123A / C	2.0	18.0	18.0	3,000.0
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
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
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
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
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
September 2003						
9/24/2003	3.7 feet	118 / O	2.0	18.0	18.0	580.0
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
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

DATE by Month	RIVER STAGE	STATION/STATUS O=Open C=Closed	BAY WATER FEC	SHELLSTOCK FEC	SHELLSTOCK E COLI	SHELLSTOCK SPC
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
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
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
December 2002						
12/17/2002	6.9 feet	118 / O	4.5	20.0	20.0	780.0
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
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
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
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
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
June 2001						
6/27/2001	1.8 feet	118 / O	1.8	18.0	18.0	1,000.0
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

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) (possible bacteriological contamination of oyster beds due to recent rainfall)	=	4 Working Days
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) (possible bacteriological contamination of oyster beds due to recent rainfall)	=	4 Working Days
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 (the presence of red tide cells, Karenia brevis, exceeding standards)	=	49 Working Days

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, Karenia brevis, 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, Karenia brevis, 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) (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 17 Working Days
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) (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 23 Working Days
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 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 17 Working Days
Notice date:	June 6	
Opened:	June 7 (6 AM) - June 23	
Notice date:	June 24	
Closed:	June 24 (4 PM) - June 27 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 3 Working Days
Notice date:	June 27	
Opened:	June 28 (6 AM) - July 5	
Notice date:	July 6	
Closed:	July 6 (4 PM) - July 16 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 8 Working Days
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 (possible bacteriological contamination of the oyster beds due to recent rainfall)	= 10 Working Days
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 ℉	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

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 ℉	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

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 ℉	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

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 ℉	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

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
12/17/2007	9:28 AM	112A	The Pines Ft. Morgan	43	27	L-F	N 18-20	1.1	C	0	0	0	0	0	0	18,000	620
12/17/2007	10:28 AM	107B	Ft. Morgan Ferry Landing	49	33	L-F	N 15-20	1.1	C	0	0	100	0	0	720	0	1,200
11/29/2007	9:32 AM	112A	The Pines Ft. Morgan	61	25	F	3.2 NNE	1.6	C	0	0	210	0	0	0	84,000	2,100
11/29/2007	10:25 AM	107B	Ft. Morgan Ferry Landing	64	32	F	9.2 NNE	1.6	C	0	0	0	0	0	310	1,900	210
11/14/2007	12:00 PM	82	Weeks Bay	71	19	F	SW 3	2.8	C	0	0	720	0	0	0	100	4,200
11/14/2007	10:25 AM	107B	Ft. Morgan Ferry Landing	70	31	F	SW 3	2.8	C	0	100	0	0	0	34,000	1,800	0
11/14/2007	11:15 AM	106	Intercoastal Waterway	69	24	F	SW 3	2.8	C	0	0	0	0	100	0	100	0
11/14/2007	11:27 AM	104A	Bon Secour Bay	69	23	F	SW 3	2.8	C	0	0	210	0	0	0	4,600	2,900
11/5/2007	9:32 AM	112A	The Pines Ft. Morgan	68	10	neap	2-4 NNW	2.4	C	0	0	210	0	820	310	1,800	620
10/31/2007	10:40 AM	112A	The Pines Ft. Morgan	68	17	F	6.1 NE	2.1	C	0	0	310	0	2,000	0	11,000	19,000
10/31/2007	9:37 AM	107B	Ft. Morgan Ferry Landing	66	29	F	11.6 NE	2.1	C	0	100	0	0	100	1,500	6,800	0
10/25/2007	12:20 PM	107B	Ft. Morgan Ferry Landing	75	31		NW	2.6	C	0	100	0	0	0	210	2,800	0
10/25/2007	11:30 AM	112A	The Pines Ft. Morgan	60	30		NW	2.6	C	0	0	100	0	100	210	10,000	410
10/19/2007	8:15 AM	107B	Ft. Morgan Ferry Landing				NW	3.0	O	0	0	0	0	410	2,400	720	520
10/17/2007	9:30 AM	107B	Ft. Morgan Ferry Landing	78	0		SSE	3.5	O	0	0	0	0	820	100	210	2,200
9/26/2007	10:42 AM	106	Intercoastal Waterway	81	25	H	ENE 3	2.9	O	0	0	0	0	0	0	13,000	210
9/26/2007	11:00 AM	104A	Bon Secour Bay	81	24	H	ENE 3-5	2.9	O	930	720	0	0	1,100	0	11,000	5,700
9/26/2007	10:05 AM	107B	Ft. Morgan Ferry Landing	81	30	H	ENE 5	2.9	O	0	0	100	0	100	0	210	210

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
9/26/2007	11:35 AM	82	Weeks Bay	84	17	H	ENE 3	2.9	C	0	0	0	0	1,100	0	1,300	620
7/17/2007	11:29 AM	107B	Ft. Morgan Ferry Landing	81	31	R	SW 3-5	2.4	O	0	0	100	0	100	0		410
7/17/2007	12:47 PM	82	Weeks Bay	84	19	R	SW 3-5	2.4	C	0	0	100	0	1,100	0		920
7/17/2007	12:13 PM	104A	Bon Secour Bay	84	22	R	SW 3	2.4	O	0	0	0	0	0	0		100
7/17/2007	12:00 PM	106	Intercoastal Waterway	84	24	R	SW 3-5	2.4	O	930	0	0	0	1,900	0	410	210
6/12/2007	10:40 AM	107B	Ft. Morgan Ferry Landing	84	29	H	W 5-10	1.8	O	0	100	0	0	210	0	1,100	100
6/12/2007	11:27 AM	104A	Bon Secour Bay	87	24	H-F	W 5-10	1.8	O	0	0	0	0	100	0	1,400	620
6/12/2007	12:04 PM	82	Weeks Bay	88	19	H-F	W 5	1.8	C	0	0	310	0	0	0	13,000	2,300
6/12/2007	11:10 AM	106	Intercoastal Waterway	86	24	H-F	W 10	1.8	O	0	0	100	0	2,700	0	2	620
2/7/2007	1:03 PM	82	Weeks Bay	57	17	L-R	SW 3	4.0	R	0	0	10,000	0	0	0	130,000,000	28,000
2/7/2007	12:30 PM	104A	Bon Secour Bay	53	18	L-R	SW 3	4.0	O	0	0	12,000	0	0	0	110,000,000	34,000
2/7/2007	11:47 AM	107B	Ft. Morgan Ferry Landing	52	13	L-R	SW 3	4.0	O	0	0	2,000	0	0	0	120,000,000	1,000
2/7/2007	12:12 PM	106	Intercoastal Waterway	56	12	L-R	SW 3	4.0	O	0	0	2,000	0	0	0	53,000,000	2,000
11/14/2006	11:27 AM	82	Weeks Bay	63	13	neap	E 5	2.7	C	0	0	1,800	0	310	0	1,100	3,800
11/14/2006	10:16 AM	107B	Ft. Morgan Ferry Landing	64	24	neap	E5	2.7	O	0	0	0	0	0	0	0	0
11/14/2006	10:55 AM	104A	Bon Secour Bay	63	22	neap	E 5	2.7	O	0	0	1,900	0	820	0	1,400	930
11/14/2006	10:35 AM	106	Intercoastal Waterway	64	21	neap	E 5	2.7	O	0	0	310	0	100	0	930	310
9/20/2006	2:00 PM	82	Weeks Bay	83	15	F	NNE 5	3.1	C	0	0	0	0	820	0	13,000	16,000

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
9/20/2006	12:56 PM	106	Intercoastal Waterway	82	25	F	NNE 10-15	3.1	O	210	100	210	0	210	0	21,000	2,500
9/20/2006	12:13 PM	107B	Ft. Morgan Ferry Landing	81	27	F	NNE 10-15	3.1	O	1,400	100	0	0	410	0	4,400	210
9/20/2006	1:15 PM	104A	Bon Secour Bay	81	224	F	nne 15	3.1	O	0	0	0	0	0	0	3,600	100
7/26/2006	9:55 AM	106	Intercoastal Waterway	85	28	R	SE 7-9	3.4	O	0	0	0	0	0	0	830	900
7/26/2006	9:30 AM	107B	Ft. Morgan Ferry Landing	85	30	R	SE 7	3.4	O	0	100	0	0	0	0	100	210
7/26/2006	11:24 AM	104A	Bon Secour Bay	85	22	R	SSE 5-8	3.4	O	0	0	0	0	820	0	210	0
7/26/2006	9:05 AM	82	Weeks Bay	84	19	R	calm	3.4	C	100	0	0	0	0	0	0	100
6/20/2006	10:55 AM	106	Intercoastal Waterway	87	17	H	SW 3	2.6	O	0	0	0	0	7,100	0	310	720
6/20/2006	10:37 AM	104A	Bon Secour Bay	85	16	H	SSW 3	2.6	O	0	0	0	0	11,000	0	410	100
6/20/2006	9:47 AM	107B	Ft. Morgan Ferry Landing	83	22	H	SSW 3	2.6	O	0	0	0	0	210	0	310	100
6/20/2006	11:52 AM	82	Weeks Bay	85	11	H	SSW 5	2.6	C	0	0	0	0	15,000	0	210	6,800
5/17/2006	2:30 PM	107B	Ft. Morgan Ferry Landing	75	11	R	NW 15	7.5	O	0	0	0	0	0	0	310	0
5/17/2006	3:15 PM	104A	Bon Secour Bay	74	11	R	NW8	7.5	O	0	0	0	0	0	0	0	930
5/17/2006	3:23 PM	106	Intercoastal Waterway	75	9	R	NW 10	7.5	O	0	0	100	0	0	0	210	210
5/17/2006	4:15 PM	82	Weeks Bay	76	6	R	NW 10	7.5	C	0	0	0	0	0	0	620	820
4/25/2006	11:00 AM	107B	Ft. Morgan Ferry Landing	79	13	H	SW 10	3.9	O	0	0	0	0	0	0	130,000	1,100
4/25/2006	11:57 AM	106	Intercoastal Waterway	79	9	H	SW 10	3.9	O	0	0	0	0	0	0	400	520
4/25/2006	11:45 AM	104A	Bon Secour Bay	80	10	H	SW 10	3.9	O	0	0	210	0	0	0	620	520

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
4/25/2006	12:42 PM	82	Weeks Bay	81	6	H	SW 5-10	3.9	C	0	0	310	0	310	0	1,100	410
11/14/2005	11:52 AM	82	Weeks Bay	73	19	R	SE 5	3.2	C	0	0	0	0	210	0	620	0
11/14/2005	11:00 AM	104A	Bon Secour Bay	71	22	R	SE 3	3.2	O	0	0	520	0	520	0	1,900	0
11/14/2005	10:15 AM	107B	Ft. Morgan Ferry Landing	71	25	R	SE 2	3.2	O	0	0	410	0	0	0	100	720
11/14/2005	11:15 AM	106	Intercoastal Waterway	71	22	R	SE 3	3.2	O	0	0	0	0	100	0	1,600	410
6/27/2005	11:00 AM	107B	Ft. Morgan Ferry Landing	85	13	R	NE 4.5	4.0	O	0	0	0	0	3,200	0	0	760
6/27/2005	12:08 PM	82	Weeks Bay	84	4	H	ESE 2.0	4.0	C	0	0	0	0	0	0	0	150,000
6/27/2005	11:39 AM	106	Intercoastal Waterway	85	9	H	ESE 5.5	4.0	O	0	0	0	340	0	0	170	5,200
6/27/2005	11:34 AM	104A	Bon Secour Bay	83	9	H	ESE 2.1	4.0	O	0	0	0	0	3,000	0	0	8,400
3/23/2005	12:17 PM	106	Intercoastal Waterway	70	12	R	SW 6.3	5.1	O	0	0	0	460	910	0	0	5,700
3/23/2005	12:07 PM	104A	Bon Secour Bay	70	15	R	SW 8.5	5.1	O	0	0	1,200	0	0	0	230	3,200
3/23/2005	11:32 AM	107B	Ft. Morgan Ferry Landing	64	10	R	SW 8.4	5.1	O	0	0	1,100	0	0	0	6,200	1,300
3/23/2005	12:47 PM	82	Weeks Bay	70	5	R	SW 7.5	5.1	C	0	0	0	0	0	0	230	14,000
1/26/2005	10:42 AM	107B	Ft. Morgan Ferry Landing	57	12	L-R	SSW 7.6	3.8	O	0	0	0	0	0	0	320	320
1/26/2005	11:17 AM	104A	Bon Secour Bay	57	12	L-R	SSW 6.5	3.8	O	0	0	0	0	0	0	0	1,200
1/26/2005	11:54 AM	82	Weeks Bay	59	10	L-R	SSW 7.1	3.8	C	0	0	0	0	0	0	32,000	4,100
1/26/2005	11:25 AM	106	Intercoastal Waterway	56	12	L-R	SSW 4.1	3.8	O	0	0	0	0	0	0	1,900	560
10/20/2004	9:35 AM	107B	Ft. Morgan Ferry Landing	77	28	F	W 8	2.9	O	0	0	0	0	170	0	1,000	170

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
10/20/2004	10:25 AM	104A	Bon Secour Bay	77	16	F	W 6	2.9	O	0	0	0	0	0	0	1,800	200
10/20/2004	10:40 AM	106	Intercoastal Waterway	77	116	F	W 6	2.9	O	0	0	0	580	0	0	1,800	240
10/20/2004	11:20 AM	82	Weeks Bay	80	10	F	W 4	2.9	C	0	0	0	220	0	0	650	440
8/17/2004	10:18 AM	107B	Ft. Morgan Ferry Landing	83	23	R	NE 8	2.6	O	0	0	160	160	2,000	0	1,300	0
8/17/2004	11:30 AM	82	Weeks Bay	85	12	R	NE 5	2.6	C	0	0	190	370	3,000	0	9,100	1,700
8/17/2004	10:54 AM	104A	Bon Secour Bay	83	18	R	5 NE	2.6	O	0	0	160	320	2,100	0	2,900	6,700
8/17/2004	11:03 AM	106	Intercoastal Waterway	83	18	R	NE 5	2.6	O	0	0	800	200	2,800	0	4,800	3,800
7/13/2004	10:59 AM	104A	Bon Secour Bay	91	12	H	6.6 NW	3.2	O	0	0	150	310	0	0	770	8,700
7/13/2004	10:03 AM	107B	Ft. Morgan Ferry Landing	91	10	H	7.1 NW	3.2	O	0	0	0	0	0	0	470	1,700
7/13/2004	11:42 AM	82	Weeks Bay	92	7	H-F	4.3 NW	3.2	C	0	0	0	360	0	0	546	11,000
7/13/2004	11:08 AM	106	Intercoastal Waterway	91	12	H	6.6 NW	3.2	O	0	0	190	190	0	0	380	2,300
5/5/2004	10:27 AM	106	Intercoastal Waterway	66	15	R	NW 9.2	3.7	O	0	0	160	0	160	0	7,800	480
5/5/2004	9:44 AM	107B	Ft. Morgan Ferry Landing	67	15	R	NW 5.4	3.7	O	0	0	0	0	0	0	2,800	160
5/5/2004	10:21 AM	104A	Bon Secour Bay	66	15	R	NW 7.9	3.7	O	180	0	530	0	0	0	890	1,100
5/5/2004	11:04 AM	82	Weeks Bay	72	8	R	3.2 NW	3.7	C	0	0	1,700	3,300	0	0	5,800	4,400
3/31/2004	10:54 AM	107B	Ft. Morgan Ferry Landing	64	23	L-R	NW 11.5	4.0	O	0	0	0	0	0	0	550	730
3/31/2004	11:41 AM	106	Intercoastal Waterway	65	14	R	W 8.2	4.0	O	0	0	0	360	360	0	540	39,000
3/31/2004	11:46 AM	104A	Bon Secour Bay	68	14	R	16.9 W	4.0	O	0	0	0	0	0	0	360	44,000

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
12/22/2003	12:00 PM	104A	Bon Secour Bay	48	20	L	E 5-10	3.2	O	0	0	2,700	390	200	0	420,000	3,700
12/22/2003	12:30 PM	106	Intercoastal Waterway	48	20	L	E 5-10	3.2	O	0	0	2,300	0	0	710	1,200,000	5,500
10/7/2003	11:17 AM	82	Weeks Bay	73	12	H	calm	3.0	C	0	0	0	78	1,400	0	4,100	200
10/7/2003	10:42 AM	106	Intercoastal Waterway	73	18	H	1.7 E	3.0	O	0	230	480	480	1,600		2,900	1,100
10/7/2003	10:40 AM	104A	Bon Secour Bay	72	15	H	2.1 E	3.0	O	0	0	200	0	400	0	1,800	2,200
10/7/2003	10:03 AM	107B	Ft. Morgan Ferry Landing	74	22	H	2-4 E	3.0	O	0	0	550	0	550	0	550	0
8/19/2003	10:27 AM	104A	Bon Secour Bay	83	8	H-F	2.6 NW	4.4	O	0	0	0	0	0	0	1,000	300
8/19/2003	10:37 AM	106	Intercoastal Waterway	83	9	H-F	2.2 NW	4.4	O	0	0	0	0	0	0	1,700	280
8/19/2003	9:46 AM	107B	Ft. Morgan Ferry Landing	83	8	H-F	1.3 NW	4.4	O	0	0	0	300	0	0	2,700	600
8/19/2003	11:06 AM	82	Weeks Bay	85	4	H-F	1.3 NW	4.4	C	0	0	0	540	0	0	180	1,100
7/24/2003	10:25 AM	82	Weeks Bay	76	0	F	calm	5.2	C	0	0	0	0	0	0	0	31,000
7/24/2003	9:55 AM	106	Intercoastal Waterway	78	3	F	2.6 NE	5.2	O	0	0	0	380	0	0	190	580
7/24/2003	9:45 AM	104A	Bon Secour Bay	78	3	F	3.6 NE	5.2	O	0	0	0	180	0	0	370	180
7/24/2003	9:00 AM	107B	Ft. Morgan Ferry Landing	78	7	F	2.4 NE	5.2	O	0	0	0	560	0	0	140	1,300
2/19/2003	12:33 PM	82	Weeks Bay	65	10	R	SE 7.3	6.0	C	0	0	0	15,000	0	0	44,000,000	0
2/19/2003	12:06 PM	106	Intercoastal Waterway	60	15	R	SE 4.2	6.0	O	0	0	6,800	11,000	0	0	18,000,000	720
2/19/2003	11:59 AM	104A	Bon Secour Bay	60	15	R	7.7 SE	6.0	O	0	160	3,300	300,000	0	0	8,900,000	0
2/19/2003	11:21 AM	107B	Ft. Morgan Ferry Landing	58	12	R	6 SE	6.0	O	0	0	3,200	0	3,100	0	1,900,000	540

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
11/19/2002	12:37 PM	82	Weeks Bay	64	8	R	calm	6.3	C	0	0	0	10,000	0	0	160,000	1,200
11/19/2002	11:30 AM	107B	Ft. Morgan Ferry Landing	63	8	R	6.9 NW	6.3	O	0	0	0	8,800	0	0	15,000	2,300
11/19/2002	12:14 PM	106	Intercoastal Waterway	60	15	R	8.2 SW	6.3	O	0	0	0	7,700	0	0	2,100	0
11/19/2002	12:04 PM	104A	Bon Secour Bay	62	15	R	4.2 SW	6.3	O	0	0	0	3,900	350	0	4,200	1,600
9/11/2002	11:56 AM	82	Weeks Bay	88	14	F	2.7 NW	3.5	C	0	0	0	510	510	0	170	170
9/11/2002	11:23 AM	106	Intercoastal Waterway	84	20	F	5.9 NW	3.5	O	740	0	0	1,300	560	0	2,800	0
9/11/2002	11:15 AM	104A	Bon Secour Bay	84	20	F	1.4 NW	3.5	O	690	0	0	1,900	170	0	4,900	0
9/11/2002	10:32 AM	107B	Ft. Morgan Ferry Landing	85	22	F	2.9 NW	3.5	O	0	0	0	0	530	0	1,800	0
7/23/2002	10:32 AM	107B	Ft. Morgan Ferry Landing	85	23	R	2.1 NW	1.6	O	0	0	180	0	180	0	180	0
7/23/2002	12:12 PM	82	Weeks Bay	87	12	F	2.9 NW	1.6	C	0	0	0	7,300	2,400	0	3,200	8,600
7/23/2002	11:38 AM	106	Intercoastal Waterway	87	18	R	2.3 NW	1.6	O	0	0	0	3,200	2,000	0	340	1,700
7/23/2002	11:24 AM	104A	Bon Secour Bay	87	18	R	2.3 NW	1.6	O	0	0	340	0	1,000	0	690	350
5/14/2002	1:25 PM	82	Weeks Bay	79	10	R	10.3 NNE	5.8	C	0	0	180	24,000	0	0	370	920
5/14/2002	12:35 PM	106	Intercoastal Waterway	78	15	R	15.4 NNE	5.8	O	0	0	180	2,800	0	0	1,600	530
5/14/2002	12:20 PM	104A	Bon Secour Bay	78	16	R	16.3 NNE	5.8	O	0	0	1,500	6,300	0	0	4,400	1,900
5/14/2002	11:00 AM	107B	Ft. Morgan Ferry Landing	77	20	R	NNE 15	5.8	O	0	0	0	2,600	0	0	3,800	1,500
4/17/2002	12:02 PM	82	Weeks Bay	78	8	R	8 SSE	3.7	C	0	0	0	390,000	0	0	0	0
4/17/2002	11:30 AM	106	Intercoastal Waterway	76	18	R	3 E	3.7	O	0	0	670	85,000	0	0	330	330

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
4/17/2002	11:15 AM	104A	Bon Secour Bay	75	20	R	5 E	3.7	O	740	0	190	190,000	0	0	560	0
4/17/2002	10:25 AM	107B	Ft. Morgan Ferry Landing	73	8	R	2.8 E	3.7	O	0	0	0	1,700	0	0	210	1,100
12/4/2001	1:25 PM	104A	Bon Secour Bay	61	26	F	E 10-15	5.0	O	0	0	300	1,200	0	0	450	0
12/4/2001	1:25 PM	106	Intercoastal Waterway	61	25	F	E 10-15	5.0	O	0	0	0	880	0	0	1,800	0
12/4/2001	2:05 PM	82	Weeks Bay	65	20	F	E 5	5.0	C	0	0	0	10,000	0	0	1,200	590
12/4/2001	12:25 PM	107B	Ft. Morgan Ferry Landing	63	28	F	E 10	5.0	O	0	0	0	310	0	0	3,100	310
10/23/2001	12:24 PM	82	Weeks Bay	80	15	F	SE 0-5	4.1	C	0	0	0	1,100	140	0	430	1,000
10/23/2001	11:56 AM	106	Intercoastal Waterway	78	20	F	calm	4.1	O	0	0	0	0	300	0	170	500
10/23/2001	11:43 AM	104A	Bon Secour Bay	75	20	F	SW 0-5	4.1	O	0	0	0	730	290	0	290	290
10/23/2001	11:05 AM	107B	Ft. Morgan Ferry Landing	74	22	F	NE 0-5	4.1	O	0	0	0	470	0	0	4,200	160
8/28/2001	11:52 AM	106	Intercoastal Waterway	87	16	H-F	SW 0-5	2.3	O	0	0	640	1,900	3,600	0	85,000	210
8/28/2001	12:28 PM	82	Weeks Bay	88	10	H-F	SW 0-5	2.3	C	1,700	0	0	6,300	140	0	5,200	2,400
8/28/2001	11:02 AM	107B	Ft. Morgan Ferry Landing	87	25	H-F	SW 0-5	2.3	O	0	0	0	0	170	0	340	0
8/28/2001	11:47 AM	104A	Bon Secour Bay	87	12	H-F	SW 0-5	2.3	O	0	0	0	2,800	1,500	0	150	150
6/21/2001	10:02 AM	82	Weeks Bay	85	5	R	calm	2.4	C	0	0	0	920	0	0	180	19,000
6/21/2001	11:27 AM	107B	Ft. Morgan Ferry Landing	86	14	R	calm	2.4	O	0	0	320	320	160	0	800	960
6/21/2001	10:37 AM	106	Intercoastal Waterway	86	7	R	W 5	2.4	O	0	0	4,200	16,000	760	0	1,100	84,000
6/21/2001	10:44 AM	104A	Bon Secour Bay	86	8	R	W 5	2.4	O	0	0	6,200	35,000	0	0	3,700	32,000

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

RESULTS OF ADPH DINOFLAGELLATE SAMPLING AREA III

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
4/5/2001	11:10 AM	106	Intercoastal Waterway	69	3	R	SE 5-10	6.7	C	0	0	0	75,000	110	0	0	110
4/5/2001	10:45 AM	82	Weeks Bay	73	0	R	SE 0-5	6.7	C	0	0	0	0	0	0	0	120
4/5/2001	10:15 AM	104A	Bon Secour Bay	70	4	R	S 0-5	6.7	C	0	0	0	780	0	0	0	9,200
4/5/2001	9:30 AM	107B	Ft. Morgan Ferry Landing	67	2	R	calm	6.7	C	0	0	0	0	0	0	0	0
1/24/2001	12:52 PM	82	Weeks Bay	53	18	L-R	NW 2	6.3	C	0	0	0	0	0	0	86,000	1,400
1/24/2001	12:12 PM	106	Intercoastal Waterway	52	20	L-R	calm	6.3	O	0	0	1,200	88	0	0	8,900	620
1/24/2001	12:03 PM	104A	Bon Secour Bay	52	20	L-R	calm	6.3	O	0	0	560	190	0	0	8,000	370
1/24/2001	11:15 AM	107B	Ft. Morgan Ferry Landing	52	18	L-R		6.3	O	0	0	0	0	0	0	110	1,200

2006 DATA ANALYSIS

TABLE IV-1

AREA III
(2006 Data Analysis)

Table IV-1

Station	LogFc	Date	WTemp	River	Accum0	Accum1	Accum2	Accum3	Accum4	Accum5
107B	0.25527251	04/17/02	73	3.7	0	0	0	0.33	0.331	0.571
114	0.25527251	04/17/02	78	3.7	0	0	0	0.33	0.331	0.571
112A	0.25527251	04/17/02	74	3.7	0	0	0	0.33	0.331	0.571
104A	0.65321251	04/17/02	77	3.7	0	0	0	0.33	0.331	0.571
106	0.25527251	04/17/02	76	3.7	0	0	0	0.33	0.331	0.571
104B	0.30103	04/17/02	77	3.7	0	0	0	0.33	0.331	0.571
92	0.25527251	04/17/02	76	3.7	0	0	0	0.33	0.331	0.571
82	1.11394335	04/17/02	78	3.7	0	0	0	0.33	0.331	0.571
83	0.60205999	04/17/02	77	3.7	0	0	0	0.33	0.331	0.571
107B	0.25527251	05/14/02	77	5.8	0	0.22	0.221	0.221	0.222	0.222
114	0.25527251	05/14/02	78	5.8	0	0.22	0.221	0.221	0.222	0.222
112A	0.25527251	05/14/02	78	5.8	0	0.22	0.221	0.221	0.222	0.222
104A	0.25527251	05/14/02	77	5.8	0	0.22	0.221	0.221	0.222	0.222
106	0.25527251	05/14/02	78	5.8	0	0.22	0.221	0.221	0.222	0.222
104B	0.30103	05/14/02	79	5.8	0	0.22	0.221	0.221	0.222	0.222
92	0.25527251	05/14/02	78	5.8	0	0.22	0.221	0.221	0.222	0.222
82	1.34242268	05/14/02	79	5.8	0	0.22	0.221	0.221	0.222	0.222
83	0.25527251	05/14/02	79	5.8	0	0.22	0.221	0.221	0.222	0.222
107B	0.25527251	07/23/02	85	1.6	0	0.07	0.11	0.11	0.11	0.11
114	0.25527251	07/23/02	85	1.6	0	0.07	0.11	0.11	0.11	0.11
112A	0.25527251	07/23/02	85	1.6	0	0.07	0.11	0.11	0.11	0.11
104A	0.25527251	07/23/02	87	1.6	0	0.07	0.11	0.11	0.11	0.11
106	0.30103	07/23/02	87	1.6	0	0.07	0.11	0.11	0.11	0.11
104B	0.25527251	07/23/02	88	1.6	0	0.07	0.11	0.11	0.11	0.11
92	0.25527251	07/23/02	87	1.6	0	0.07	0.11	0.11	0.11	0.11
82	1.11394335	07/23/02	87	1.6	0	0.07	0.11	0.11	0.11	0.11
83	0.30103	07/23/02	88	1.6	0	0.07	0.11	0.11	0.11	0.11
107B	0.30103	09/11/02	85	3.5	0	0	0	0	1.3	1.301
114	0.25527251	09/11/02	86	3.5	0	0	0	0	1.3	1.301
112A	0.25527251	09/11/02	86	3.5	0	0	0	0	1.3	1.301
104A	0.30103	09/11/02	84	3.5	0	0	0	0	1.3	1.301
106	0.25527251	09/11/02	84	3.5	0	0	0	0	1.3	1.301
104B	0.60205999	09/11/02	84	3.5	0	0	0	0	1.3	1.301
92	0.25527251	09/11/02	87	3.5	0	0	0	0	1.3	1.301
82	1.11394335	09/11/02	88	3.5	0	0	0	0	1.3	1.301
83	0.60205999	09/11/02	86	3.5	0	0	0	0	1.3	1.301
107B	0.25527251	11/19/02	63	6.3	0.001	0.001	0.001	0.201	0.271	0.271
114	0.60205999	11/19/02	61	6.3	0.001	0.001	0.001	0.201	0.271	0.271
112A	0.25527251	11/19/02	65	6.3	0.001	0.001	0.001	0.201	0.271	0.271
104A	0.30103	11/19/02	62	6.3	0.001	0.001	0.001	0.201	0.271	0.271
106	0.25527251	11/19/02	60	6.3	0.001	0.001	0.001	0.201	0.271	0.271
104B	0.25527251	11/19/02	60	6.3	0.001	0.001	0.001	0.201	0.271	0.271
92	0.25527251	11/19/02	61	6.3	0.001	0.001	0.001	0.201	0.271	0.271
82	0.8920946	11/19/02	64	6.3	0.001	0.001	0.001	0.201	0.271	0.271
83	1.23044892	11/19/02	63	6.3	0.001	0.001	0.001	0.201	0.271	0.271

107B	0.25527251	02/19/03	58	6	0	0	0.001	0.251	0.781	0.781
112A	0.25527251	02/19/03	57	6	0	0	0.001	0.251	0.781	0.781
104A	0.25527251	02/19/03	60	6	0	0	0.001	0.251	0.781	0.781
106	0.25527251	02/19/03	60	6	0	0	0.001	0.251	0.781	0.781
104B	0.25527251	02/19/03	60	6	0	0	0.001	0.251	0.781	0.781
92	0.25527251	02/19/03	63	6	0	0	0.001	0.251	0.781	0.781
82	0.83250891	02/19/03	65	6	0	0	0.001	0.251	0.781	0.781
83	0.30103	02/19/03	60	6	0	0	0.001	0.251	0.781	0.781
114	0.25527251	02/19/03	58	6	0	0	0.001	0.251	0.781	0.781
107B	0.25527251	07/24/03	78	5.2	0	1.55	2.02	2.84	2.841	3.411
114	0.25527251	07/24/03	78	5.2	0	1.55	2.02	2.84	2.841	3.411
112A	0.25527251	07/24/03	78	5.2	0	1.55	2.02	2.84	2.841	3.411
104A	1.69019608	07/24/03	78	5.2	0	1.55	2.02	2.84	2.841	3.411
106	0.30103	07/24/03	78	5.2	0	1.55	2.02	2.84	2.841	3.411
104B	0.65321251	07/24/03	80	5.2	0	1.55	2.02	2.84	2.841	3.411
92	0.65321251	07/24/03	80	5.2	0	1.55	2.02	2.84	2.841	3.411
82	0.83250891	07/24/03	82	5.2	0	1.55	2.02	2.84	2.841	3.411
83	0.25527251	07/24/03	85	5.2	0	1.55	2.02	2.84	2.841	3.411
107B	0.25527251	08/19/03	83	4.4	0.29	0.29	0.29	0.38	0.38	0.38
114	0.25527251	08/19/03	83	4.4	0.29	0.29	0.29	0.38	0.38	0.38
112A	0.25527251	08/19/03	83	4.4	0.29	0.29	0.29	0.38	0.38	0.38
104A	0.8920946	08/19/03	83	4.4	0.29	0.29	0.29	0.38	0.38	0.38
106	0.25527251	08/19/03	83	4.4	0.29	0.29	0.29	0.38	0.38	0.38
104B	0.8920946	08/19/03	83	4.4	0.29	0.29	0.29	0.38	0.38	0.38
92	0.25527251	08/19/03	83	4.4	0.29	0.29	0.29	0.38	0.38	0.38
82	1.84509804	08/19/03	85	4.4	0.29	0.29	0.29	0.38	0.38	0.38
83	0.25527251	08/19/03	83	4.4	0.29	0.29	0.29	0.38	0.38	0.38
107B	0.25527251	10/17/03	74	3	0.03	0.03	0.03	0.03	0.03	0.03
114	0.25527251	10/17/03	74	3	0.03	0.03	0.03	0.03	0.03	0.03
112A	0.25527251	10/17/03	74	3	0.03	0.03	0.03	0.03	0.03	0.03
104A	0.25527251	10/17/03	72	3	0.03	0.03	0.03	0.03	0.03	0.03
106	0.25527251	10/17/03	73	3	0.03	0.03	0.03	0.03	0.03	0.03
104B	0.65321251	10/17/03	73	3	0.03	0.03	0.03	0.03	0.03	0.03
92	0.25527251	10/17/03	73	3	0.03	0.03	0.03	0.03	0.03	0.03
82	0.65321251	10/17/03	73	3	0.03	0.03	0.03	0.03	0.03	0.03
83	0.30103	10/17/03	73	3	0.03	0.03	0.03	0.03	0.03	0.03
112A	0.25527251	12/22/03	48	3.2	0.001	0.001	0.001	0.001	0.001	0.001
104A	0.25527251	12/22/03	48	3.2	0.001	0.001	0.001	0.001	0.001	0.001
106	0.25527251	12/22/03	48	3.2	0.001	0.001	0.001	0.001	0.001	0.001
104B	0.25527251	12/22/03	48	3.2	0.001	0.001	0.001	0.001	0.001	0.001
92	0.25527251	12/22/03	48	3.2	0.001	0.001	0.001	0.001	0.001	0.001
107B	0.25527251	03/31/04	64	4	0	0.001	0.002	0.002	0.002	0.002
114	0.25527251	03/31/04	66	4	0	0.001	0.002	0.002	0.002	0.002
112A	0.25527251	03/31/04	65	4	0	0.001	0.002	0.002	0.002	0.002
104A	0.65321251	03/31/04	68	4	0	0.001	0.002	0.002	0.002	0.002
106	0.83250891	03/31/04	65	4	0	0.001	0.002	0.002	0.002	0.002
104B	0.8920946	03/31/04	68	4	0	0.001	0.002	0.002	0.002	0.002
92	0.25527251	03/31/04	68	4	0	0.001	0.002	0.002	0.002	0.002
107B	0.25527251	05/05/04	67	3.7	0	0	0	0.01	0.37	0.95
114	0.25527251	05/05/04	67	3.7	0	0	0	0.01	0.37	0.95

112A	0.25527251	05/05/04	66	3.7	0	0	0	0.01	0.37	0.95
104A	0.30103	05/05/04	66	3.7	0	0	0	0.01	0.37	0.95
106	0.25527251	05/05/04	66	3.7	0	0	0	0.01	0.37	0.95
104B	0.25527251	05/05/04	66	3.7	0	0	0	0.01	0.37	0.95
92	0.25527251	05/05/04	66	3.7	0	0	0	0.01	0.37	0.95
82	0.30103	05/05/04	72	3.7	0	0	0	0.01	0.37	0.95
83	0.25527251	05/05/04	73	3.7	0	0	0	0.01	0.37	0.95
107B	0.25527251	07/13/04	91	3.2	0.31	0.7	0.7	1.15	1.151	1.941
114	0.25527251	07/13/04	91	3.2	0.31	0.7	0.7	1.15	1.151	1.941
112A	0.25527251	07/13/04	92	3.2	0.31	0.7	0.7	1.15	1.151	1.941
104A	0.25527251	07/13/04	91	3.2	0.31	0.7	0.7	1.15	1.151	1.941
106	0.25527251	07/13/04	91	3.2	0.31	0.7	0.7	1.15	1.151	1.941
104B	0.25527251	07/13/04	91	3.2	0.31	0.7	0.7	1.15	1.151	1.941
92	0.25527251	07/13/04	92	3.2	0.31	0.7	0.7	1.15	1.151	1.941
82	0.25527251	07/13/04	92	3.2	0.31	0.7	0.7	1.15	1.151	1.941
83	0.25527251	07/13/04	93	3.2	0.31	0.7	0.7	1.15	1.151	1.941
107B	0.25527251	08/17/04	83	2.6	0	0	0	0	0	1.65
114	0.25527251	08/17/04	83	2.6	0	0	0	0	0	1.65
112A	0.25527251	08/17/04	83	2.6	0	0	0	0	0	1.65
104A	0.30103	08/17/04	83	2.6	0	0	0	0	0	1.65
106	0.25527251	08/17/04	83	2.6	0	0	0	0	0	1.65
104B	0.25527251	08/17/04	83	2.6	0	0	0	0	0	1.65
92	0.30103	08/17/04	83	2.6	0	0	0	0	0	1.65
82	0.25527251	08/17/04	85	2.6	0	0	0	0	0	1.65
83	0.8920946	08/17/04	85	2.6	0	0	0	0	0	1.65
107B	0.25527251	10/20/04	77	2.9	0	0.02	0.08	0.08	0.08	0.08
114	0.25527251	10/20/04	78	2.9	0	0.02	0.08	0.08	0.08	0.08
112A	0.25527251	10/20/04	77	2.9	0	0.02	0.08	0.08	0.08	0.08
104A	0.25527251	10/20/04	77	2.9	0	0.02	0.08	0.08	0.08	0.08
106	0.8920946	10/20/04	78	2.9	0	0.02	0.08	0.08	0.08	0.08
104B	0.25527251	10/20/04	78	2.9	0	0.02	0.08	0.08	0.08	0.08
92	1.11394335	10/20/04	78	2.9	0	0.02	0.08	0.08	0.08	0.08
82	1.51851394	10/20/04	80	2.9	0	0.02	0.08	0.08	0.08	0.08
83	1.51851394	10/20/04	80	2.9	0	0.02	0.08	0.08	0.08	0.08
107B	0.25527251	01/26/05	57	3.8	0	0	0	0	0.001	0.001
114	0.25527251	01/26/05	57	3.8	0	0	0	0	0.001	0.001
112A	0.25527251	01/26/05	54	3.8	0	0	0	0	0.001	0.001
104A	0.30103	01/26/05	57	3.8	0	0	0	0	0.001	0.001
106	0.25527251	01/26/05	56	3.8	0	0	0	0	0.001	0.001
104B	0.25527251	01/26/05	56	3.8	0	0	0	0	0.001	0.001
92	0.25527251	01/26/05	55	3.8	0	0	0	0	0.001	0.001
82	1.41497335	01/26/05	59	3.8	0	0	0	0	0.001	0.001
83	1.36172784	01/26/05	59	3.8	0	0	0	0	0.001	0.001
107B	0.25527251	03/23/05	64	5.1	0	0.4	0.4	0.46	0.46	0.46
114	0.25527251	03/23/05	64	5.1	0	0.4	0.4	0.46	0.46	0.46
112A	0.25527251	03/23/05	64	5.1	0	0.4	0.4	0.46	0.46	0.46
104A	0.30103	03/23/05	70	5.1	0	0.4	0.4	0.46	0.46	0.46
106	0.25527251	03/23/05	70	5.1	0	0.4	0.4	0.46	0.46	0.46
104B	0.30103	03/23/05	70	5.1	0	0.4	0.4	0.46	0.46	0.46
92	0.25527251	03/23/05	70	5.1	0	0.4	0.4	0.46	0.46	0.46

82	1.11394335	03/23/05	70	5.1	0	0.4	0.4	0.46	0.46	0.46
83	0.30103	03/23/05	70	5.1	0	0.4	0.4	0.46	0.46	0.46
107B	0.25527251	06/27/05	85	4	0	0	0	0.1	0.1	0.1
114	0.25527251	06/27/05	84	4	0	0	0	0.1	0.1	0.1
112A	0.25527251	06/27/05	85	4	0	0	0	0.1	0.1	0.1
104A	0.25527251	06/27/05	83	4	0	0	0	0.1	0.1	0.1
106	0.25527251	06/27/05	85	4	0	0	0	0.1	0.1	0.1
104B	0.25527251	06/27/05	84	4	0	0	0	0.1	0.1	0.1
92	0.25527251	06/27/05	84	4	0	0	0	0.1	0.1	0.1
82	0.83250891	06/27/05	84	4	0	0	0	0.1	0.1	0.1
83	0.25527251	06/27/05	85	4	0	0	0	0.1	0.1	0.1
107B	0.25527251	09/15/05	83	3.2	0	0	0	0	0	0
114	0.25527251	09/15/05	82	3.2	0	0	0	0	0	0
112A	0.25527251	09/15/05	83	3.2	0	0	0	0	0	0
104A	0.25527251	09/15/05	82	3.2	0	0	0	0	0	0
106	0.25527251	09/15/05	83	3.2	0	0	0	0	0	0
104B	0.25527251	09/15/05	83	3.2	0	0	0	0	0	0
92	1.04139269	09/15/05	83	3.2	0	0	0	0	0	0
82	1.51851394	09/15/05	85	3.2	0	0	0	0	0	0
83	0.65321251	09/15/05	84	3.2	0	0	0	0	0	0
107B	0.25527251	11/14/05	71	3.2	0.001	0.001	0.001	0.001	0.001	0.001
114	0.25527251	11/14/05	70	3.2	0.001	0.001	0.001	0.001	0.001	0.001
112A	0.25527251	11/14/05	70	3.2	0.001	0.001	0.001	0.001	0.001	0.001
104A	0.25527251	11/14/05	71	3.2	0.001	0.001	0.001	0.001	0.001	0.001
106	0.30103	11/14/05	71	3.2	0.001	0.001	0.001	0.001	0.001	0.001
104B	0.60205999	11/14/05	72	3.2	0.001	0.001	0.001	0.001	0.001	0.001
92	0.30103	11/14/05	72	3.2	0.001	0.001	0.001	0.001	0.001	0.001
82	0.8920946	11/14/05	73	3.2	0.001	0.001	0.001	0.001	0.001	0.001
83	0.8920946	11/14/05	71	3.2	0.001	0.001	0.001	0.001	0.001	0.001

	LogFc	*Date*	*WTemp*	*River*	*Rain0*	*Accum1*	*Accum2*	*Accum3*	*Accum4*	*Accum5*
LogFc	1									
Date	0.02216555	1								
WTemp	0.06499513	-0.0417558	1							
River	**0.**02451255	0.2692318	-0.397	1						
Accum0	-0.0170799	0.0139569	0.4001	-0.057	1					
Accum1	0.05271713	-0.062936	0.2671	0.2617	0.29937	1				
Accum2	**0.**07032287	-0.0743895	0.2443	0.2507	0.21646	0.9932	1			
Accum3	0.05929585	-0.1258963	0.2262	0.2944	0.23387	0.9791	0.98504	1		
Accum4	0.03776067	-0.2709282	0.2358	0.3213	0.16212	0.8594	0.86999	0.8915	1	
Accum5	-0.0194138	-0.1666538	0.3318	0.1383	0.20531	0.7988	0.80162	0.8253	0.8836	1

n	174
CV	0.1488203