Technical Analysis for the Proposed Inland Bays Drainage Basin Bacteria TMDLs

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DELAWARE DIVISION OF WATER RESOURCES
Clean Water - for Today and Tomorrow

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Executive Summary

Section 303(d) of the Clean Water Act requires States to identify water quality impaired waterways and to develop Total Maximum Daily Loads (TMDLs) for the pollutants that impair those waterways. The Delaware Department of Natural Resources and Environmental Control (DNREC) has identified that the water quality of the Inland Bays Drainage Basin was impaired because of elevated bacteria levels. These segments were placed on the State's 303(d) lists and were targeted for development of TMDLs.

The Inland Bays Drainage Basin watershed is situated in the southeastern portion of Sussex County, Delaware and includes the Lewes-Rehoboth Canal, Rehoboth Bay, Indian River, Iron Branch, Indian River Bay, Buntings Branch, Assawoman and Little Assawoman Watersheds

There are several point source facilities within the Inland Bays Drainage Basin Watershed, including the Indian River Generating Station, Lewes STP, Rehoboth STP, Millsboro STP and Vlasic plant. Therefore, pollutants come from both point and nonpoint sources. The concentration limit for these discharges will be a maximum level not to exceed 33 CFU/100mL (geometric mean, minimum 5 samples within 30 days).

The Delaware DNREC adopted amended Total Maximum Daily Loads (TMDLs) for nutrients and oxygen consuming compounds for the entire Inland Bays Drainage Basin Watershed including its tributaries and ponds in 1998/2005. The TMDLs include Waste Load Allocations (WLAs) for point sources, Load Allocations (LAs) for nonpoint sources, and a Margin of Safety (MOS). This TMDL address bacteria only.

Bacteria impairments were evaluated using the cumulative distribution approach to determine the reductions required within the watershed to achieve water quality standards (freshwater: 100CFU/100 mL geometric mean; marine water: 35 CFU/100 mL geometric mean).

In the Inland Bays Drainage Basin Watershed, the overall bacteria loading shall be reduced by 42% in the fresh water regions and 11% in the marine regions from the 2000 - 2005 baseline levels.

The draft proposed TMDL for this watershed was reviewed during a public workshop held on June 6, 2006. All comments received at the workshop and during the June 1st through 30th comment period were considered by DNREC. This report has been updated to address these comments and minor modifications were made in the regulation.

1 Introduction/Background

Under Section 303(d) of the Clean Water Act (CWA), States are required to identify and establish a priority ranking for waters in which existing pollution controls are not sufficient to attain and maintain State water quality standards, establish Total Maximum Daily Loads (TMDLs) for those waters, and periodically submit the list of impaired waters (303(d) list) and TMDLs to the United States Environmental Protection Agency (EPA). If a State fails to adequately meet the requirements of section 303(d), the CWA requires the EPA to establish a 303(d) list and/or determine TMDLs for that State.

In 1996, the EPA was sued under Section 303(d) of the CWA concerning the 303(d) list and TMDLs for the State of Delaware. The suit maintained that Delaware had failed to fulfill all of the requirements of Section 303(d) and the EPA had failed to assume the responsibilities not adequately preformed by the State. A settlement in the suit was reached and the Delaware Department of Natural Resources and Environmental Control (DNREC) and the EPA signed a Memorandum of Understanding (MOU) on July 25, 1997. Under the settlement, DNREC and the EPA agreed to complete TMDLs for all 1996 listed waters on a 10-year schedule.

The Delaware Department of Natural Resources and Environmental Control has identified the waters of Inland Bays Drainage Basin as water quality limited waters with respect to bacteria. These segments were placed on the State's 303(d) lists, and targeted for TMDL development. Drainage Basin Watershed

2 Study Area

2.1 Indian River and Rehoboth Bays

The interlocked Delaware Inland Bay System includes two main water bodies: Indian River Bay and Rehoboth Bay. Both water bodies are shown in Figure 1-1. The Delaware Inland Bays are located in the southeastern part of the state in Sussex County. The Indian River Bay is connected to the Atlantic Ocean on the east via the Indian River Inlet and to Little Assawoman Bay to the south via the Little Assawoman Canal. Rehoboth Bay is connected to Delaware Bay to the north via the Lewes-Rehoboth Canal and to Indian River Bay to the south. The western portion of Indian River Bay, referred to as the Indian River, terminates at Millsboro Dam.

The drainage area of the system is 55,647 hectares, of which 14,339 hectares is upstream of the impoundment at Millsboro. The basin contains one long-term stream gauging station (USGS Station #01484500) on the Stockley Branch. Mean flow for the period of record (43 years) is 0.196 m3/sec or 1.44 x 10-4 m3/sec-hectare. Employing the runoff at Stockley to characterize the remainder of the basin indicates a long-term basin mean flow of 8.03 m3/sec.

Surface area and volume of the bay system are 7.31 x107 m2 and 1.21 x 108 m3, respectively. Mean depth is 1.66 m, which characterizes most of the system. Near the inlet, local mean depth exceeds 10 m. Mean tide range at the inlet is 1.25 m. The tidal prism is 51x106 m3. The system is well mixed from surface to bottom and is saline virtually throughout its tidal cycle. Median salinity is 22.7 ppt and 95% of observations exceed 4.3 ppt. The lowest salinities occur immediately downstream of the Millsboro Dam during periods of high runoff. Residence time of the system, determined as volume divided by freshwater flow rate, is approximately 174 days. An alternate way to characterize residence time (total volume divided by tidal prism divided by the tidal period) yields a much shorter value: 1.2 days (ENTRIX, 2001). Except near headwaters and in constricted areas in which the tide is dampened, tidal flushing is more effective than runoff in the determination of volumetric flows and mass transport throughout the system.

Historically, the inlet to Indian River Bay has periodically closed completely, and remained closed for more than a year at times, creating a freshwater dominated system. By 1940, the construction of twin parallel jetties resulted in a permanent opening of the inlet approximately 152 m wide and 4.5 m deep. The purpose of this effort was to increase salinity, decrease stagnation, control mosquitoes, and provide a stable navigational waterway. Dredging around the inlet has been repeated periodically through 1990. By 1968, the interior shoreline of the inlet was stabilized to protect against erosion. Inlet scouring has occurred at different rates over the years. Between 1942 and 1974, the mean inlet depth at mean low water deepened from 3.0 m to 7.6 m. However, by 1994, the inlet had scoured to depths ranging from 9.1 m to 33.5 m (Gebert et al., 1992). This scouring has resulted in an increase in the cross-sectional area of the inlet from approximately 84 m2 to 2880 m2 between 1939 and 1991 (DIBEP, 1993). From 1939 to 1988, the scouring of the inlet had increased the quantity of water passing through the inlet from approximately 368 cms to 1727 cms (Raney et al., 1990). During this period, freshwater inflow has remained relatively constant, rarely exceeding 8.5 cms (DIBEP, 1993).

In 1951, a channel was dredged extending the entire length of Indian River Bay from the inlet upstream to the base of Millsboro Dam. The channel was dredged to a depth of 2.7 m from

the inlet to Old Landing and to a depth of 1.2 m from Old Landing to the base of Millsboro Dam (DIBEP, 1993). Dredging resulted in the removal of over 4.6 million cubic meters of substrate from Indian River Bay between 1937 and 1992. In addition, dredging has been conducted in Indian River Bay to create marinas, artificial lagoons, and provide greater access into the tributaries. These modifications to the inlet and channel have greatly increased salinity intrusion into the estuary and increased tidal flushing throughout the bays (DIBEP, 1993). This flushing has also reduced nutrient levels (i.e., nitrogen) in the lower and middle portions of the bay. However, this flushing has not been adequate to reduce the eutrophic conditions in the upper bay and Rehoboth Bay. The increased influence of marine water has had a direct influence on the biological communities that utilize the middle and upper portions of the bay.

The geological and hydrographical information was obtained from the United States Army Corps of Engineers report (Cerco et al, 1994).

2.2 Little Assawoman Bay

Little Assawoman Bay has a surface area of approximately 600 hectares and is located within the State of Delaware (Figure 1-1). It is tidally connected at its southern boundary to the much larger Assawoman Bay, in the state of Maryland. To the north, it is tidally connected to the Indian River Bay through a long navigation canal.

There are two major drainage areas entering Little Assawoman Bay as tributaries, a major wetland area bordering it, and a smaller area of nonpoint source runoff. The major drainage areas are Dirickson Creek (with a drainage area of about 550 hectares to the south), and Miller Creek (with a drainage area of about 40 hectares to the north). An additional major nonpoint source area affecting water quality in Little Assawoman Bay is the Assawoman Wildlife wetlands area. This drainage area is proportionally larger to its adjacent water body surface area than found for the wetlands and tidal flats in Indian River Bay and Rehoboth Bay. The smaller area of nonpoint source runoff is in the southeast corner of the bay near the southern inlet and has about 25 hectares of built-up area extending along the interior beach to the west of U.S. 1.

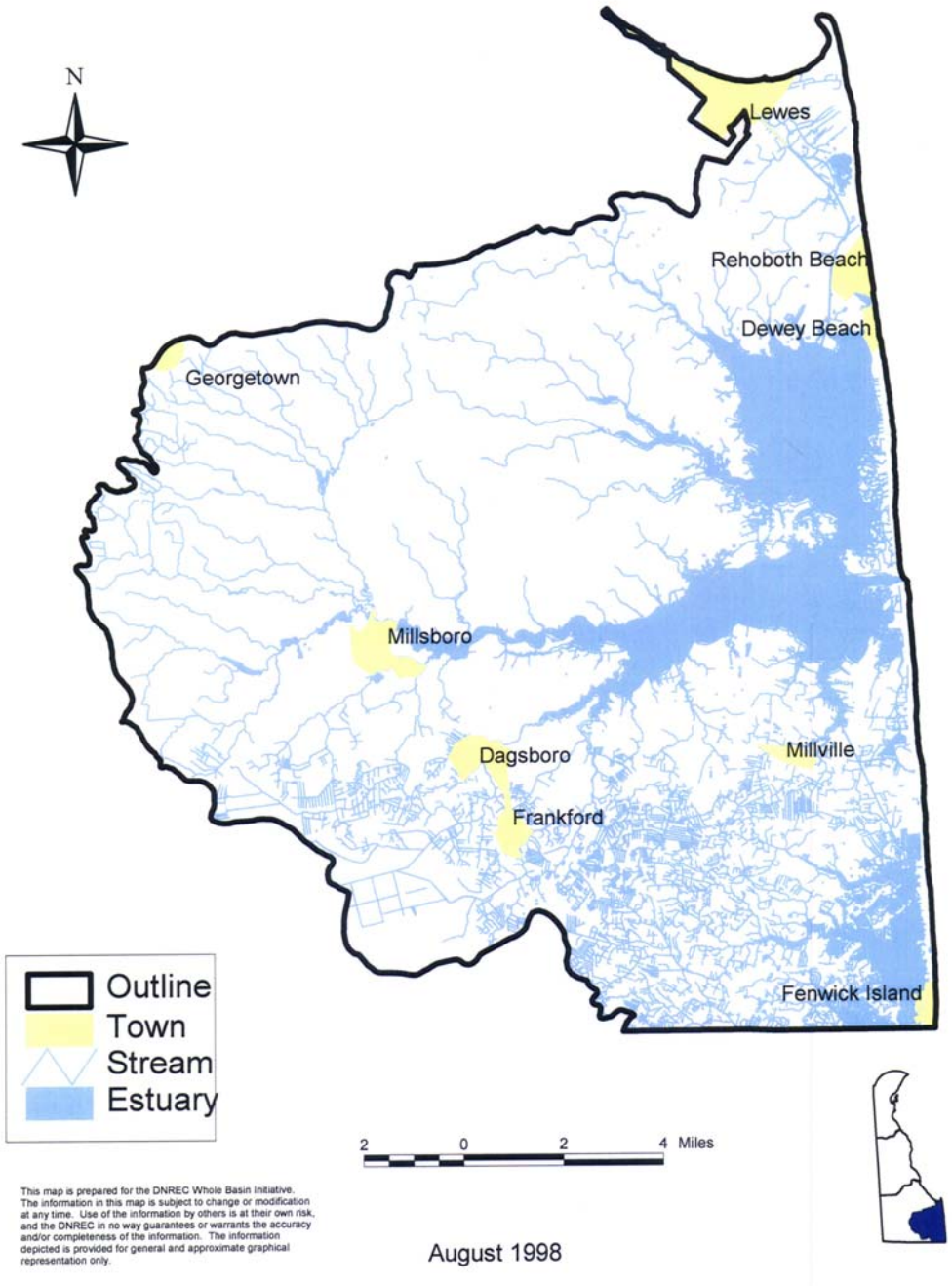

Figure 2-1 Inland Bays Drainage Basin

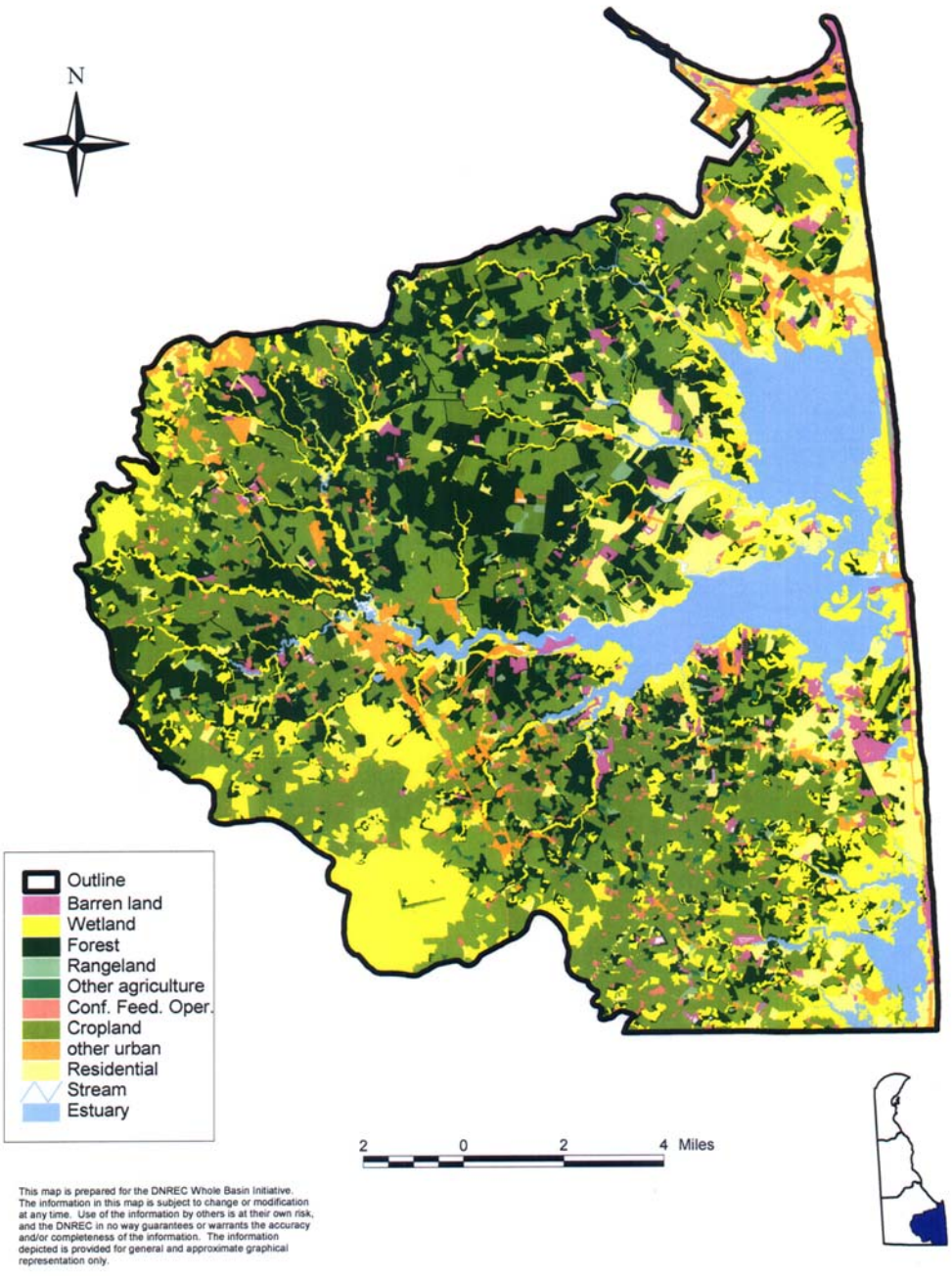

Figure 2-2 Land Use in the Inland Bays Drainage Basin

2.3 Designated Uses

Section 9 of the State of Delaware Surface Water Quality Standards, as amended July 11, 2004, specifies the following designated uses for the waters of the Inland Bays Drainage Basin watershed:

1. Primary Contact Recreation
2. Secondary Contact Recreation
3. Fish, Aquatic Life, and Wildlife
4. Industrial Water Supply
5. Agricultural Water Supply (freshwater segments)

2.4 Applicable Water Quality Standards

The following sections of the State of Delaware Surface Water Quality Standards, as amended July 11, 2004, provide specific numeric criteria for bacteria for the waters of the Inland Bays Drainage Basin Watershed:

A. Enterococcus Bacteria

a. For fresh waters, the geometric average of representative samples should not exceed 100 CFU/100 mL. Fresh waters are defined as those having a salinity of less than five parts per thousand.
b. For marine waters, the geometric mean of representative samples should not exceed 35 CFU/100 mL. Marine waters are defined as those having a salinity of greater than five parts per thousand.

All tidal portions in the watershed east of US Rt. 113 are considered marine and segments west of US Rt. 113 are considered fresh.

2.5 Point Sources

There are five point sources within the watershed: Indian River Power Plant, Lewes STP, Rehoboth STP, Millsboro STP, Valsic. The concentration limit for these discharges will be capped at a level not to exceed 33 CFU/100mL. Because these facilities are discharging at or below the WQS, they will not utilize any assimilation capacity of the receiving waters.

Facility Name	**NPDES ID**
Indian River Power Plant	DE0050580
City of Lewes Sewage Treatment Plant	DE0021512
Rehoboth Beach Sewage Treatment Plant	DE0020028
Millsboro Sewage Treatment Plant	DE0050164
Townsends, Inc.	DE0000086
Vlasic Foods Inc.	DE0000736

Table 2-1 NPDES Permitted Point Sources

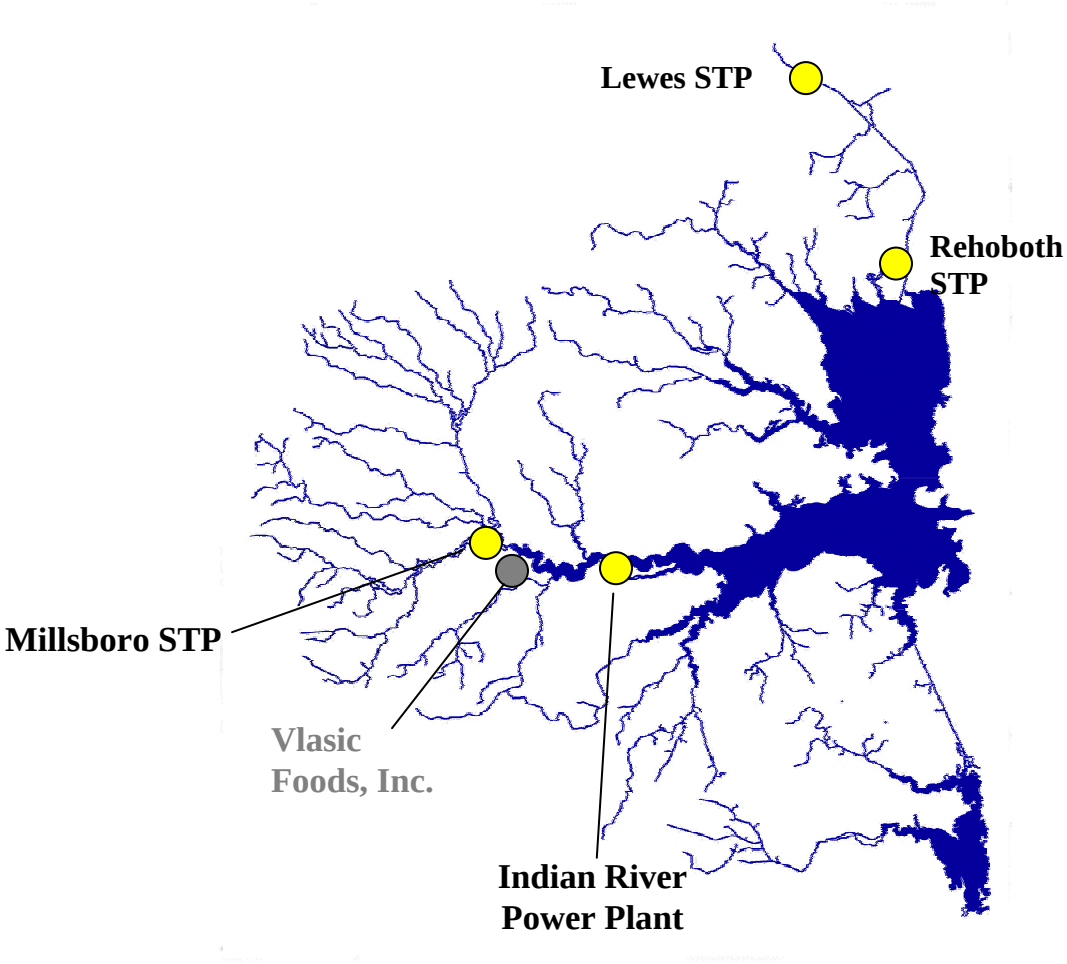

Figure 2-3 NPDES Permit Locations

3 Current Conditions

Recent water quality data (2000-2005) was compiled at a number of stations in the Inland Bays Drainage Basin watershed (Table 3-1). Precipitation data used to determine if the sample was taken on a wet vs. dry day was obtained from the Office of the Delaware State Climatologist, the closest station with an adequate daily record was located at Lewes. A summary of the bacteria data is listed in Table 3-2, the entire data set is listed in the Appendix Section of this document.

Fresh Water Monitoring Stations	305081	308011	308031	308061
	308071	308091	308141	308151
	308171	308181	308191	308201
	308271	308281	308291	308301
	308341	308351	308361	308371
	308381	308391	308401	308411
	308421	308431	308441	308451
	308461	309021	309041	309051
	310121	311011	311031	311041
	319011	319101		
Marine Water Monitoring Stations	305011	305021	305041	305051
	306071	306091	306111	306121
	306131	306161	306181	306191
	306321	306331	306341	308021
	308051	308101	309011	310011
	310031	310071	310101	312011
	312021	312041	402021	

Table 3-1 Monitoring Stations within the Inland Bays Drainage Basin Watershed

	# samples dry weather	# samples wet weather	Average (CFU/100mL)	Geomean (CFU/100mL)	Log Std Dev
Marine segments	321	206	126	20	0.81
Fresh Segments	297	248	495	158	0.79

Table 3-2 Water Quality in the Inland Bays Drainage Basin Watershed (2000-2005)

4 Establishment of the Bacteria TMDL for the Inland Bays Drainage Basin Watersheds

Bacteria impairments were evaluated using the Cumulative Distribution Function Method to determine the reductions required in the Inland Bays Drainage Basin to achieve water quality standards. This approach was developed by Lee Dunbar at the Connecticut Department of Environmental Protection and much of the following text is based upon or copied directly from documentation provided by the Connecticut Department of Environmental Protection

Overall reductions of 11% (marine) and 42% (fresh) in the bacteria loading for the Inland Bays Drainage Basin Watersheds are required for the water quality to meet the geometric mean of 35CFU/100mL and 100CFU/100 mL, respectively.

4.1 Overview of Cumulative Distribution Function Method

This analytical methodology provides a defensible scientific and technical basis for establishing TMDLs to address recreational use impairments in urban watersheds. Representative ambient water quality monitoring data for a minimum of 21 sampling dates is required for the analysis. The reduction in bacteria density from current levels needed to achieve consistency with the criteria is quantified by calculating the difference between the cumulative relative frequency of the sample data set and the criteria adopted by Delaware to support recreational use. Delaware's adopted water quality criteria for the indicator bacteria fecal enterococci are represented by a statistical distribution of geometric mean 100 and log standard deviation 0.4 for purposes of fresh water and a statistical distribution of geometric mean 35 and log standard deviation 0.7 for purposes of marine water TMDL calculations.

The geometric mean criterion was derived by the EPA scientists from epidemiological studies at beaches where the incidence of swimming related health effects (gastrointestinal illness rate) could be correlated with indicator bacteria densities. Delaware's recommended criteria reflect an average illness rate of 12.5 illnesses (fresh) and 19 illness (marine) per 1000 swimmers exposed. This condition was predicted to exist based on studies cited in the federal guidance when the steady-state geometric mean density of fecal enterococci was 100 CFU/100mL and 35CFU/100mL, respectively. The distribution of individual sample results around the geometric mean is such that approximately half of all individual samples are expected to exceed the geometric mean and half will be below the geometric mean.

EPA also derived a formula to calculate single sample maximum criteria from this same database to support decisions by public health officials regarding the closure of beaches when an elevated risk of illness exists. Because approximately half of all individual sample results for a beach where the risk of illness is considered "acceptable" are expected to exceed the geometric mean criteria, an upper boundary to the range of individual sample results was statistically derived that will be exceeded at frequencies less than 50% based on the variability of sample data. The mean log standard deviation for fecal enterococci densities at the freshwater beach sites studied by EPA was 0.4. Using these values, 457 CFU/100mL was calculated to represent the 95^{th} percentile upper confidence limit (5% exceedance frequency) for this statistical

distribution of data and was used as the acceptable, risk based upper boundary. For marine water, 158 CFU/100mL was calculated to represent the 95th percentile upper confidence limit.

TMDLs developed using this approach are expressed as the average percentage reduction from current conditions required to achieve consistency with criteria. The procedure partitions the TMDL into regulated point source wasteload allocation (WLA) and non-point source load allocation (LA) components by quantifying the contribution of ambient monitoring data collected during periods of high storm water influence and minimal storm water influence to the current condition. TMDLs developed using this analytical approach provide an ambient monitoring benchmark ideally suited for quantifying progress in achieving water quality goals as a result of TMDL implementation.

4.2 TMDL End Point Determination

The criteria can be expressed as a cumulative frequency distribution or "criteria curve" as shown in Figure 4-1.

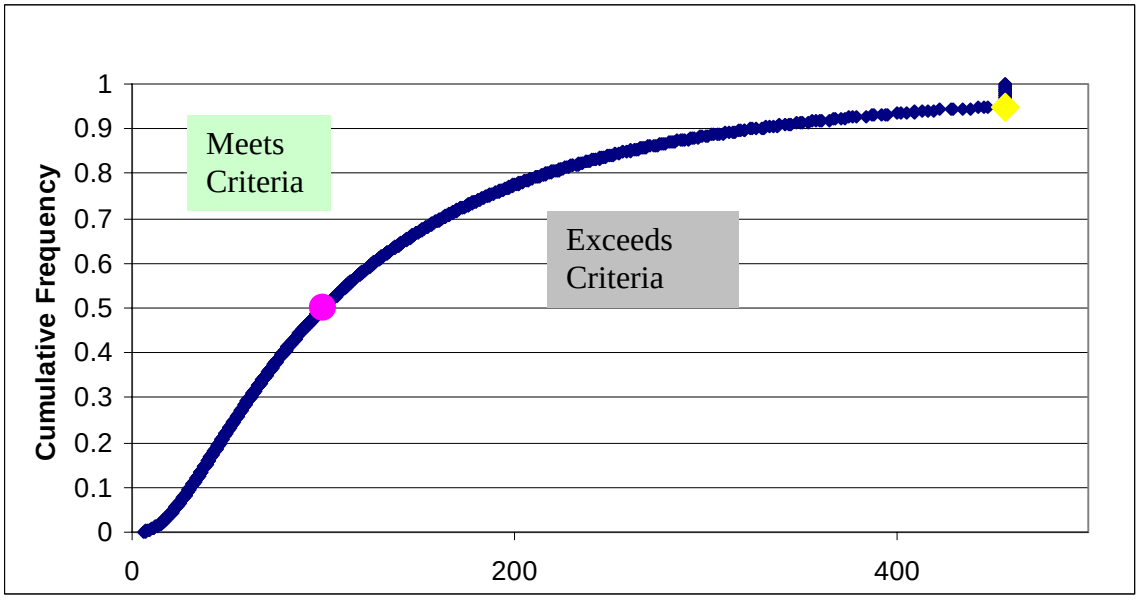

Figure 4-1 Cumulative Relative Frequency Distribution representing Delaware Water Quality Standards

As with the cumulative relative frequency curve representing the criteria shown in Figure 4-1, a cumulative relative frequency curve can be prepared using site-specific sample data to represent current conditions at the TMDL monitoring sites. The TMDL for the monitored segments are derived by quantifying the difference between these two distributions as shown conceptually in Figure 4-2. This is accomplished by calculating the reduction required at representative points on the sample data cumulative frequency distribution curve and then averaging the reduction needed across the entire range of sampling data. This procedure allows the contribution of each individual sampling result to be considered when estimating the percent reduction needed to meet a criterion that is expressed as a geometric mean.

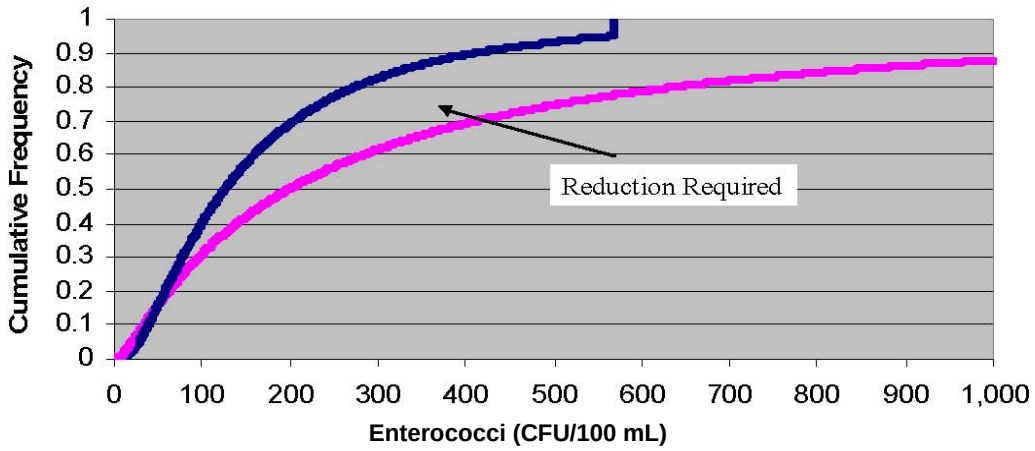

Figure 4-2 Reduction in indicator bacteria density needed from current condition (magenta line) to meet criteria (blue line) based on cumulative relative frequency distribution.

4.3 WLA and LA

Stormwater runoff in an urbanized area is considered a point source subject to regulation under the NPDES permitting program. TMDLs for indicator bacteria in waters draining urbanized areas must therefore be partitioned into a WLA to accommodate point source stormwater loadings of indicator bacteria and a LA to accommodate non-point loadings from unregulated sources. This is accomplished using the same ambient monitoring data used to establish the TMDL.

One common characteristic of urbanized areas is the high percentage of impervious surface. Much of the impervious surface is directly connected to nearby surface waters through stormwater drainage systems. As a result, runoff is rapid following rain events and flow in urban streams is typically dominated by stormwater runoff during these periods. Monitoring results for samples collected under these conditions are strongly influenced by stormwater quality. During dry conditions, urban streams contain little stormwater since urban watersheds drain quickly and base flows are reduced due to lower infiltration rates and reduced recharge of groundwater. At base flow, urban stream water quality is dominated by non-point sources of indicator bacteria since stormwater outfalls are inactive.

The relative contribution of indicator bacteria loadings occurring during periods of high or low stormwater influence to the geometric mean indicator density is estimated by calculating separate averages of the reduction needed to achieve consistency with criteria under “wet” and “dry” conditions. The reduction needed under “wet” conditions is assigned to the WLA and the reduction needed under “dry” conditions is assigned to the LA. Separate reduction goals are established for base flow and stormwater dominated periods that can assist local communities in selection of best management practices to improve water quality. The technique also facilitates the use of ambient stream monitoring data to track future progress in meeting water quality goals.

4.4 Analytical Procedure – TMDL

1. The fecal enterococcus monitoring data is ranked from lowest to highest. In the event of ties, monitoring results are assigned consecutive ranks in chronological order of sampling date. The sample proportion (p) is calculated for each monitoring result by dividing the assigned rank (r) for each sample by the total number of sample results (n): $p = r / n$

2. Next, a single sample criteria reference value is calculated for each monitoring result from the statistical distribution used to represent the criteria following the procedure described in steps 3-6 below:

3. If the sample proportion is equal to or greater than .95, the single sample criteria reference value is equivalent to the maximum value of 457 CFU/mL. (.75 for designated bathing beach areas, 104 CFU/100mL for marine water)

4. If the sample proportion is less than .95 (.75 for designated bathing beach areas), and greater than .50, the single sample criteria reference value is calculated as:

$$\text{criteria reference value} = \text{antilog}_{10}[\log_{10} 100 \text{ CFU/100mL} + \{F \times 0.4\}]$$

Note: 100 CFU/100mL is the geometric mean indicator bacteria criterion adopted into Delaware's Water Quality Standards, F is a factor determined from areas under the Normal probability curve for a probability level equivalent to the sample proportion, 0.4 is the $\log_{10}$ standard deviation used by EPA in deriving the national guidance criteria recommendations (0.7 for marine waters).

5. If the sample proportion is equal to .50, the single sample reference criteria value is equal to the geometric mean criterion adopted into the Water Quality Standards.

6. If the sample proportion is less than .50, the single sample reference criteria value is calculated as:

$$\text{criteria reference value} = \text{antilog}_{10}[\log_{10} 100 \text{ CFU/100mL} - \{F \times 0.4\}]$$

7. The percent reduction necessary to achieve consistency with the criteria is then calculated following the procedure described in steps 8-9 below:

8. If the monitoring result is less than the single sample reference criteria value, the percent reduction is zero.

9. If the monitoring result exceeds the single sample criteria reference value, the percent reduction necessary to meet criteria on that sampling date is calculated as:

$$\text{percent reduction} = ((\text{monitoring result} - \text{criteria reference value})/\text{monitoring result}) \times 100$$

10. The TMDL, expressed as the average percent reduction to meet criteria, is then calculated as the arithmetic average of the percent reduction calculated for each sampling date.

11. Precipitation data is reviewed and each sampling date is designated as a "dry" or "wet" sampling event. Although a site-specific protocol may be specified in an individual TMDL analysis, typically samples collected within 48 hours of a precipitation event of 0.25 inches or greater are designated as "wet".

12. The average percent reduction for all sampling events used to derive the TMDL that are designated as "wet" is computed and established as the WLA.

13. The average percent reduction for all sampling events used to derive the TMDL that are designated as "dry" is computed and established as the LA.

4.4.1 Marine waters in the Inland Bays Drainage Basin

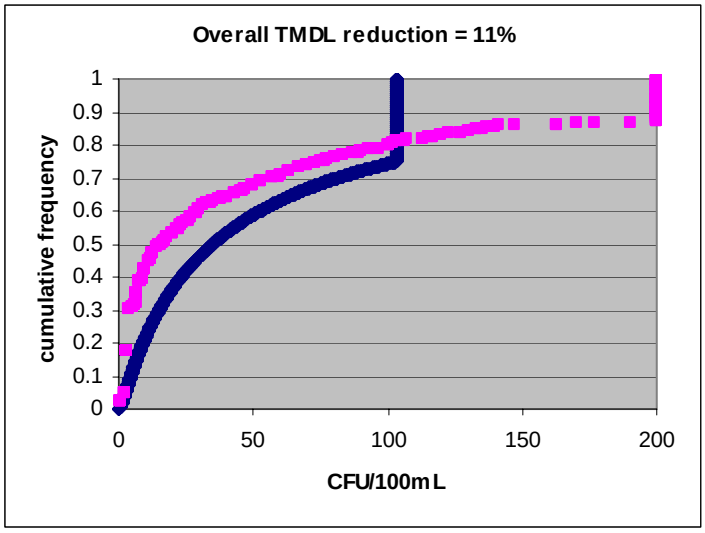

Figure 4-3 Marine waters, Overall TMDL needed from current condition (magenta squares) to meet criteria (blue line). Current condition based on dry and wet weather data.

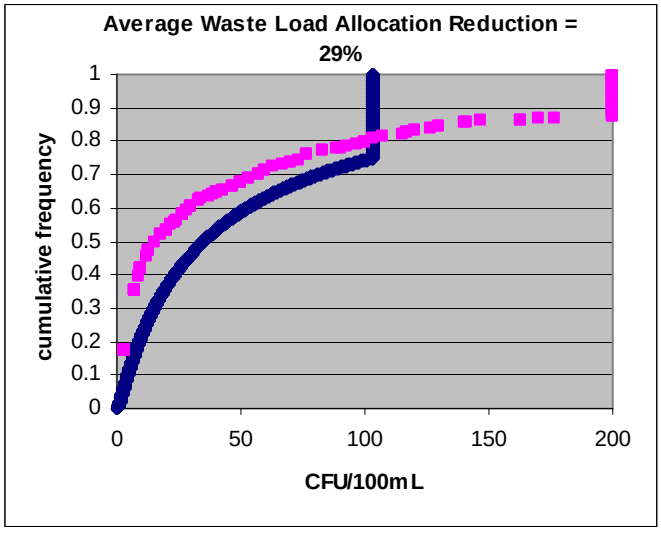

Figure 4-4 Marine waters, Waste Load Allocation (WLA) needed from current condition (magenta squares) to meet criteria (blue line). Current condition based on wet weather data.

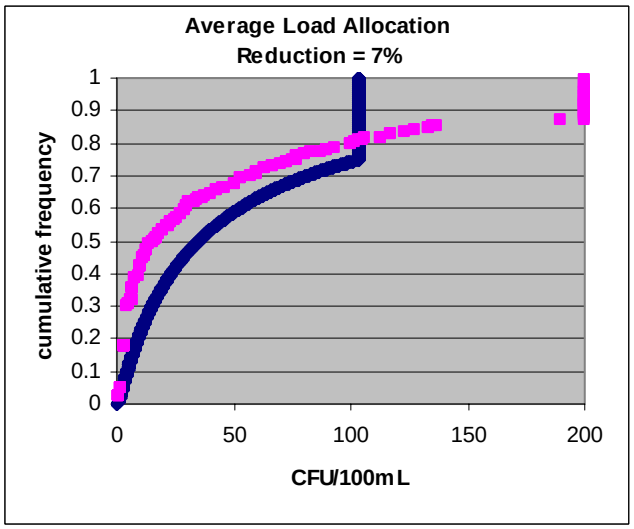

Figure 4-5 Marine waters, Load Allocation (LA) needed from current condition (magenta squares) to meet criteria (blue line). Current condition based on dry weather data.

4.4.2 Fresh waters in the Inland Bays Drainage Basin

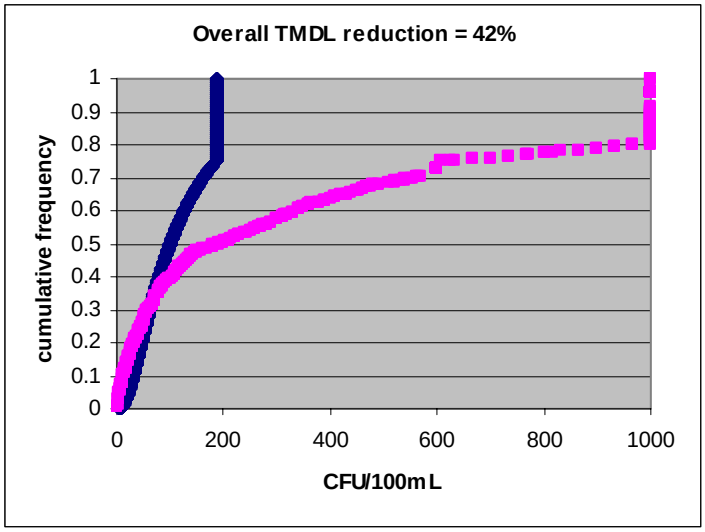

Figure 4-6 Fresh waters, Overall TMDL needed from current condition (magenta squares) to meet criteria (blue line). Current condition based on dry and wet weather data.

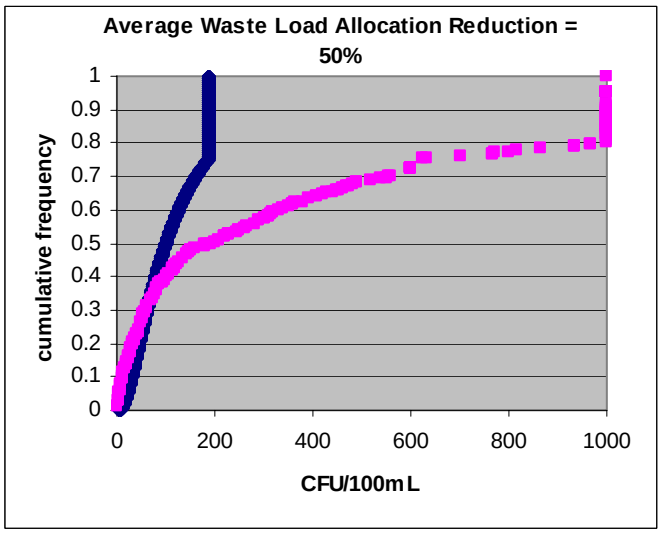

Figure 4-7 Fresh waters, Waste Load Allocation (WLA) needed from current condition (magenta squares) to meet criteria (blue line). Current condition based on wet weather data.

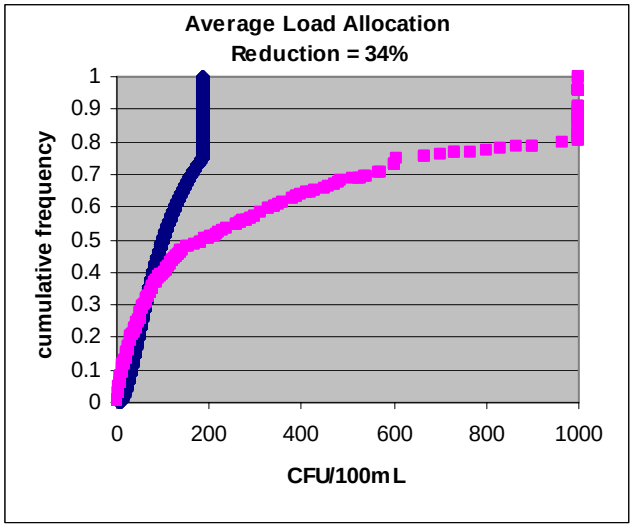

Figure 4-8 Fresh waters, Load Allocation (LA) needed from current condition (magenta squares) to meet criteria (blue line). Current condition based on dry weather data.

4.5 TMDL Reductions

Inland Bays Drainage Basin	Waste Load Allocation reduction	Load Allocation reductions	Overall TMDL reductions
Marine waters	29%	7%	**11%**
Fresh Waters	50%	34%	**42%**
Indian River Generating Station	33 CFU/100mL maximum 30 day-geomean enterococcus concentration (minimum 5 samples)	na	**na**
Lewes STP			
Rehoboth STP			
Millsboro STP			
Vlasic			

Table 4-1 TMDL allocations for the Inland Bays Drainage Basin Watershed.

4.6 Daily Loading

With respect to bacteria, the total maximum daily load can be considered in many different ways because the water quality standard is not expressed in daily terms but as a geometric mean over time, typically a period of 30 days. A theoretical maximum, albeit an unrealistic scenario, can be calculated so that the entire loading over the 30-day period occurs in one day. A more practical approach would be to calculate the maximum load at a level corresponding to the appropriate confidence interval and risk level, e.g. a 95% confidence interval and its related single sample value. However, this approach is problematic, as it does not ensure that the geometric mean will be equal to or below the water quality standard.

An average daily maximum, calculated by multiplying the average daily flow times the water quality standard would arguably be the most appropriate measure of a daily maximum with respect to TMDL requirements. Table illustrates all of the above maximum daily loading calculations.

Flow (m^3/day)	Current loading – wet weather (CFU/day)	Current loading – dry weather (CFU/day)	Theoretical Maximum Daily Load (CFU/day)	95% Confidence Interval Daily Load (CFU/day)	Average Daily Maximum Load (CFU/day)
701,568	7.0E+11	7.0E+11	7.0E+69	3.8E+12	7.0E+11

Table 4-2 Flow and Daily Loading

4.7 Source Tracing Adjustment Factor

The Source Tracking Adjustment Factor (STAF) is a multiplier used to normalize human health risk associated with total fecal enterococci counts to enterococci counts derived exclusively from human sources. Bacteria source tracking (BST) data and the STAF, when

available, will be used throughout the State to determine the sources of fecal contamination and in the development of pollution control strategies (PCSs).

5 Discussion of Regulatory Requirements for TMDLs

Federal regulations at 40 CFR Section 130 require that TMDLs must meet the following eight minimum regulatory requirements:

1. The TMDLs must be designed to achieve applicable water quality standards
2. The TMDLs must include a total allowable load as well as individual waste load allocations for point sources and load allocations for nonpoint sources
3. The TMDLs must consider the impact of background pollutants
4. The TMDL must consider critical environmental conditions
5. The TMDLs must consider seasonal variations
6. The TMDLs must include a margin of safety
7. The TMDLs must have been subject to public participation
8. There should be a reasonable assurance that the TMDLs can be met

1. The Proposed Inland Bays Drainage Basin Watershed TMDL is designed to achieve applicable water quality standards.

Cumulative frequency distribution analysis indicates that after the proposed reductions are met, the maximum bacteria concentrations in any portion of the Inland Bays Drainage Basin will not fall above the water quality standards.

2. The Proposed Inland Bays Drainage Basin Watershed TMDL includes a total allowable load as well as individual waste load allocations for point sources and load allocations for nonpoint sources.

The WLA reductions will be 29% and 50% for marine and fresh waters, respectively. The LA reductions will be 7% and 34% for marine and fresh waters, respectively. The NPDES point sources will have a concentration maximum not to exceed a 30-day geometric mean of 33 CFU/100mL.

3. The proposed Inland Bays Drainage Basin TMDL considers the impact of background pollutants.

The proposed TMDL is based upon extensive water quality monitoring and precipitation databases. The water quality database included headwater streams representing background conditions. Therefore, it can be concluded that the impact of background pollutants are considered in the proposed Inland Bays Drainage Basin Watershed TMDL.

4. The proposed Inland Bays Drainage Basin Watershed TMDL considers critical environmental conditions

The proposed TMDL was established based on the achieving water quality standards at all environmental conditions. Therefore, it can be concluded that consideration of critical environmental conditions was incorporated in the Inland Bays Drainage Basin Watershed TMDL analysis.

5. The proposed Inland Bays Drainage Basin Watershed TMDL considers seasonal variations.

Data used in the cumulative frequency distribution analyses was for a period of 7 years and included every season. Therefore, it can be concluded that consideration of seasonal variations was incorporated in the Inland Bays Drainage Basin Watershed TMDL analysis.

6. The proposed Inland Bays Drainage Basin Watershed TMDL considers a margin of Safety.

EPA's technical guidance allows consideration of a margin of safety as implicit or as explicit. An implicit margin of safety is when conservative assumptions are considered for model development and TMDL establishment. An explicit margin of safety is when a specified percentage of assimilative capacity is kept unassigned to account for uncertainties, lack of sufficient data, or future growth.

The indicator bacteria criteria used in this TMDL analysis were developed exclusively from data derived from studies conducted at high use public bathing areas of which half were affected by point source discharges. Therefore, the criteria provide an additional level of protection when applied to water not designated for high use bathing and without point sources such as those within these watersheds. As a result, achieving the criteria results in an "implicit" MOS. A portion of this "implicit" MOS will be removed via use of the Source Tracking Adjustment Factor (STAF), a tool that will be used in the implementation and best management practice designs during development of the Pollution Control Strategies (PCS) following the adoption of the TMDL. However, the STAF incorporates an explicit margin of safety so that a portion of the "implicit" MOS remains intact. Therefore, an adequate margin of safety is included in the bacteria TMDLs.

7.0 The proposed Inland Bays Drainage Basin Watershed TMDL has been subject to public participation.

An important public participation activity regarding this TMDL was the formation of the Inland Bays Drainage Basin Tributary Action Team in 2001. The Tributary Action Team, made up of concerned citizens and other affected parties within the watershed will assist the DNREC in developing pollution control strategies (PCS) to implement the requirements of the proposed Inland Bays Drainage Basin Watershed TMDL.

In addition to the public participation and stakeholder involvement mentioned above, a public workshop was held on June 6, 2006 to present the proposed Inland Bays Watershed TMDL to the public and receive comments prior to formal adoption of the TMDL regulation. Comments received within the June 1 through June 30 comment period were considered when finalizing this document.

8.0 There should be a reasonable assurance that the proposed Inland Bays Drainage Basin Watershed TMDL can be met.

The proposed Inland Bays Drainage Basin Watershed TMDL considers the reduction of bacteria from point and nonpoint sources. The magnitude of load reductions suggested by the proposed TMDL are feasible. Following the adoption of the TMDL, the Inland Bays Drainage Basin Tributary Action Team will assist the Department in developing a PCS to implement the requirements of the Inland Bays Drainage Basin Watershed TMDL Regulation. The DNREC is planning to finalize and adopt the Inland Bays Drainage Basin PCS within one year after formal adoption of the TMDL Regulation.

6 Appendix

6.1 Marine Water Data

# sample	Date	Source	enterococcus (CFU/100 mL)	Precip.(in)[1] 24h	48h	96h	Condition[2] (WET/DRY)
1	3/6/2000	308101	29	0	0	0	DRY
2	3/6/2000	310031	57	0	0	0	DRY
3	3/6/2000	310101	260	0	0	0	DRY
4	3/6/2000	312011	11	0	0	0	DRY
5	3/6/2000	312021	600	0	0	0	DRY
6	3/6/2000	312041	38	0	0	0	DRY
7	3/7/2000	309011	20	0	0	0	DRY
8	3/8/2000	308021	29	0	0	0	DRY
9	3/8/2000	308051	17	0	0	0	DRY
10	3/8/2000	310011	8	0	0	0	DRY
11	3/8/2000	310071	5	0	0	0	DRY
12	3/8/2000	402021	3	0	0	0	DRY
13	3/9/2000	305011	1	0	0	0	DRY
14	3/9/2000	305041	5	0	0	0	DRY
15	3/9/2000	305051	3	0	0	0	DRY
16	3/9/2000	306071	1	0	0	0	DRY
17	3/9/2000	306091	1	0	0	0	DRY
18	3/9/2000	306111	1	0	0	0	DRY
19	3/9/2000	306121	1	0	0	0	DRY
20	3/9/2000	306131	5	0	0	0	DRY
21	3/9/2000	306161	6	0	0	0	DRY
22	3/9/2000	306181	15	0	0	0	DRY
23	3/9/2000	306191	34	0	0	0	DRY
24	3/9/2000	306331	2	0	0	0	DRY
25	3/9/2000	306341	18	0	0	0	DRY
26	6/12/2000	308101	47	0.3	0.3	0.3	**WET**
27	6/12/2000	310031	57	0.3	0.3	0.3	**WET**
28	6/12/2000	310101	77	0.3	0.3	0.3	**WET**
29	6/12/2000	312011	18	0.3	0.3	0.3	**WET**
30	6/12/2000	312021	142	0.3	0.3	0.3	**WET**
31	6/12/2000	312041	83	0.3	0.3	0.3	**WET**
32	6/13/2000	309011	600	0.3	0.6	0.6	**WET**
33	6/14/2000	308021	170	0	0.3	0.6	**WET**
34	6/14/2000	308051	600	0	0.3	0.6	**WET**
35	6/14/2000	310011	7	0	0.3	0.6	**WET**
36	6/14/2000	310071	9	0	0.3	0.6	**WET**
37	6/14/2000	402021	10	0	0.3	0.6	**WET**
38	6/15/2000	305011	14	0	0	0.6	DRY
39	6/15/2000	305041	31	0	0	0.6	DRY
40	6/15/2000	305051	22	0	0	0.6	DRY

41	6/15/2000	306071	1	0	0	0.6	DRY
42	6/15/2000	306091	1	0	0	0.6	DRY
43	6/15/2000	306111	1	0	0	0.6	DRY
44	6/15/2000	306121	1	0	0	0.6	DRY
45	6/15/2000	306131	1	0	0	0.6	DRY
46	6/15/2000	306161	12	0	0	0.6	DRY
47	6/15/2000	306181	22	0	0	0.6	DRY
48	6/15/2000	306191	220	0	0	0.6	DRY
49	6/15/2000	306331	45	0	0	0.6	DRY
50	6/15/2000	306341	7	0	0	0.6	DRY
51	7/17/2000	308101	117	0	0	4.2	**WET**
52	7/17/2000	310031	50	0	0	4.2	**WET**
53	7/17/2000	310101	30	0	0	4.2	**WET**
54	7/17/2000	312011	30	0	0	4.2	**WET**
55	7/17/2000	312021	13	0	0	4.2	**WET**
56	7/17/2000	312041	3	0	0	4.2	**WET**
57	7/18/2000	309011	3	0	0	4.1	**WET**
58	7/19/2000	308051	30	0.1	0.1	0.1	DRY
59	7/19/2000	310011	3	0.1	0.1	0.1	DRY
60	7/19/2000	310071	3	0.1	0.1	0.1	DRY
61	7/20/2000	305011	1633	1.6	1.7	1.7	**WET**
62	7/20/2000	305041	767	1.6	1.7	1.7	**WET**
63	7/20/2000	305051	360	1.6	1.7	1.7	**WET**
64	7/20/2000	306071	73	1.6	1.7	1.7	**WET**
65	7/20/2000	306091	3	1.6	1.7	1.7	**WET**
66	7/20/2000	306111	13	1.6	1.7	1.7	**WET**
67	7/20/2000	306121	50	1.6	1.7	1.7	**WET**
68	7/20/2000	306131	3	1.6	1.7	1.7	**WET**
69	7/20/2000	306161	120	1.6	1.7	1.7	**WET**
70	7/20/2000	306181	2000	1.6	1.7	1.7	**WET**
71	7/20/2000	306191	520	1.6	1.7	1.7	**WET**
72	7/20/2000	306331	57	1.6	1.7	1.7	**WET**
73	7/20/2000	306341	700	1.6	1.7	1.7	**WET**
74	7/20/2000	402021	3	1.6	1.7	1.7	**WET**
75	9/25/2000	308101	83	1.4	1.4	1.8	**WET**
76	9/25/2000	310031	600	1.4	1.4	1.8	**WET**
77	9/25/2000	310101	600	1.4	1.4	1.8	**WET**
78	9/25/2000	312011	250	1.4	1.4	1.8	**WET**
79	9/25/2000	312021	605	1.4	1.4	1.8	**WET**

80	9/25/2000	312041	600	1.4	1.4	1.8	**WET**
81	9/26/2000	309011	2000	2.7	4	4.4	**WET**
82	9/27/2000	306321	20	0	2.7	4	**WET**
83	9/27/2000	308021	1200	0	2.7	4	**WET**
84	9/27/2000	308051	667	0	2.7	4	**WET**
85	9/27/2000	310011	97	0	2.7	4	**WET**
86	9/27/2000	310071	90	0	2.7	4	**WET**
87	9/28/2000	305011	330	0	0	4	**WET**
88	9/28/2000	305041	27	0	0	4	**WET**
89	9/28/2000	305051	29	0	0	4	**WET**
90	9/28/2000	306071	3	0	0	4	**WET**
91	9/28/2000	306091	3	0	0	4	**WET**
92	9/28/2000	306111	3	0	0	4	**WET**
93	9/28/2000	306121	3	0	0	4	**WET**
94	9/28/2000	306131	3	0	0	4	**WET**
95	9/28/2000	306161	130	0	0	4	**WET**
96	9/28/2000	306181	290	0	0	4	**WET**
97	9/28/2000	306191	480	0	0	4	**WET**
98	9/28/2000	306331	230	0	0	4	**WET**
99	9/28/2000	306341	340	0	0	4	**WET**
100	4/16/2001	308101	27	0.2	0.2	0.3	**WET**
101	4/16/2001	310031	13	0.2	0.2	0.3	**WET**
102	4/16/2001	310101	39	0.2	0.2	0.3	**WET**
103	4/16/2001	312011	140	0.2	0.2	0.3	**WET**
104	4/16/2001	312021	24	0.2	0.2	0.3	**WET**
105	4/16/2001	312041	103	0.2	0.2	0.3	**WET**
106	4/17/2001	309011	260	0.2	0.4	0.4	**WET**
107	4/18/2001	308021	60	0	0.2	0.4	DRY
108	4/18/2001	308051	77	0	0.2	0.4	DRY
109	4/18/2001	310011	16	0	0.2	0.4	DRY
110	4/18/2001	310071	3	0	0.2	0.4	DRY
111	4/18/2001	402021	22	0	0.2	0.4	DRY
112	4/19/2001	305011	2	0	0	0.4	DRY
113	4/19/2001	305041	8	0	0	0.4	DRY
114	4/19/2001	305051	1	0	0	0.4	DRY
115	4/19/2001	306071	11	0	0	0.4	DRY
116	4/19/2001	306091	2	0	0	0.4	DRY

117	4/19/2001	306111	1	0	0	0.4	DRY
118	4/19/2001	306121	1	0	0	0.4	DRY
119	4/19/2001	306131	1	0	0	0.4	DRY
120	4/19/2001	306161	2	0	0	0.4	DRY
121	4/19/2001	306181	4	0	0	0.4	DRY
122	4/19/2001	306191	350	0	0	0.4	DRY
123	4/19/2001	306331	1	0	0	0.4	DRY
124	4/19/2001	306341	5	0	0	0.4	DRY
125	5/14/2001	308101	46	0	0	0	DRY
126	5/14/2001	310031	8	0	0	0	DRY
127	5/14/2001	310101	77	0	0	0	DRY
128	5/14/2001	312011	5	0	0	0	DRY
129	5/14/2001	312021	16	0	0	0	DRY
130	5/14/2001	312041	26	0	0	0	DRY
131	5/15/2001	309011	360	0	0	0	DRY
132	5/16/2001	308021	190	0	0	0	DRY
133	5/16/2001	308051	430	0	0	0	DRY
134	5/16/2001	310011	31	0	0	0	DRY
135	5/16/2001	310071	1	0	0	0	DRY
136	5/16/2001	402021	1	0	0	0	DRY
137	5/17/2001	305011	23	0	0	0	DRY
138	5/17/2001	305041	3	0	0	0	DRY
139	5/17/2001	305051	3	0	0	0	DRY
140	5/17/2001	306071	1	0	0	0	DRY
141	5/17/2001	306091	1	0	0	0	DRY
142	5/17/2001	306111	1	0	0	0	DRY
143	5/17/2001	306121	1	0	0	0	DRY
144	5/17/2001	306131	1	0	0	0	DRY
145	5/17/2001	306161	5	0	0	0	DRY
146	5/17/2001	306181	77	0	0	0	DRY
147	5/17/2001	306191	133	0	0	0	DRY
148	5/17/2001	306331	9	0	0	0	DRY
149	5/17/2001	306341	6	0	0	0	DRY
150	7/23/2001	308101	600	0	0	0	DRY
151	7/23/2001	310031	113	0	0	0	DRY
152	7/23/2001	310101	100	0	0	0	DRY
153	7/23/2001	312011	25	0	0	0	DRY

154	7/23/2001	312021	17	0	0	0	DRY
155	7/23/2001	312041	270	0	0	0	DRY
156	7/24/2001	309011	733	0	0	0	DRY
157	7/25/2001	308021	50	0	0	0	DRY
158	7/25/2001	308051	600	0	0	0	DRY
159	7/25/2001	310011	50	0	0	0	DRY
160	7/25/2001	310071	10	0	0	0	DRY
161	7/25/2001	402021	90	0	0	0	DRY
162	7/26/2001	305011	3	2.1	2.1	2.1	**WET**
163	7/26/2001	305041	7	2.1	2.1	2.1	**WET**
164	7/26/2001	305051	7	2.1	2.1	2.1	**WET**
165	7/26/2001	306071	3	2.1	2.1	2.1	**WET**
166	7/26/2001	306091	3	2.1	2.1	2.1	**WET**
167	7/26/2001	306111	3	2.1	2.1	2.1	**WET**
168	7/26/2001	306121	3	2.1	2.1	2.1	**WET**
169	7/26/2001	306131	3	2.1	2.1	2.1	**WET**
170	7/26/2001	306161	60	2.1	2.1	2.1	**WET**
171	7/26/2001	306181	130	2.1	2.1	2.1	**WET**
172	7/26/2001	306191	177	2.1	2.1	2.1	**WET**
173	9/24/2001	308101	2000	0	0	0.2	DRY
174	9/24/2001	310031	350	0	0	0.2	DRY
175	9/24/2001	310101	100	0	0	0.2	DRY
176	9/24/2001	312011	102	0	0	0.2	DRY
177	9/24/2001	312021	800	0	0	0.2	DRY
178	9/24/2001	312041	2000	0	0	0.2	DRY
179	9/25/2001	309011	20	0.5	0.5	0.5	**WET**
180	9/26/2001	308021	933	0	0.5	0.5	**WET**
181	9/26/2001	308051	2000	0	0.5	0.5	**WET**
182	9/26/2001	310011	23	0	0.5	0.5	**WET**
183	9/26/2001	310071	7	0	0.5	0.5	**WET**
184	9/26/2001	402021	3	0	0.5	0.5	**WET**
185	9/27/2001	305011	60	0	0	0.5	DRY
186	9/27/2001	305041	73	0	0	0.5	DRY
187	9/27/2001	305051	63	0	0	0.5	DRY
188	9/27/2001	306071	3	0	0	0.5	DRY
189	9/27/2001	306091	3	0	0	0.5	DRY
190	9/27/2001	306111	3	0	0	0.5	DRY

191	9/27/2001	306121	7	0	0	0.5	DRY
192	9/27/2001	306131	3	0	0	0.5	DRY
193	9/27/2001	306161	13	0	0	0.5	DRY
194	9/27/2001	306181	123	0	0	0.5	DRY
195	9/27/2001	306191	63	0	0	0.5	DRY
196	9/27/2001	306331	17	0	0	0.5	DRY
197	9/27/2001	306341	7	0	0	0.5	DRY
198	11/13/2001	308101	10	0	0	0	DRY
199	11/13/2001	310011	8	0	0	0	DRY
200	11/13/2001	310031	3	0	0	0	DRY
201	11/13/2001	310071	3	0	0	0	DRY
202	11/13/2001	310101	7	0	0	0	DRY
203	11/13/2001	312011	7	0	0	0	DRY
204	11/13/2001	312021	10	0	0	0	DRY
205	11/13/2001	312041	63	0	0	0	DRY
206	11/13/2001	402021	3	0	0	0	DRY
207	11/14/2001	308021	460	0	0	0	DRY
208	11/14/2001	308051	350	0	0	0	DRY
209	11/14/2001	309011	330	0	0	0	DRY
210	11/15/2001	305011	7	0	0	0	DRY
211	11/15/2001	305021	3	0	0	0	DRY
212	11/15/2001	305041	3	0	0	0	DRY
213	11/15/2001	305051	7	0	0	0	DRY
214	11/15/2001	306071	3	0	0	0	DRY
215	11/15/2001	306091	3	0	0	0	DRY
216	11/15/2001	306111	3	0	0	0	DRY
217	11/15/2001	306121	3	0	0	0	DRY
218	11/15/2001	306131	3	0	0	0	DRY
219	11/15/2001	306161	7	0	0	0	DRY
220	11/15/2001	306181	10	0	0	0	DRY
221	11/15/2001	306191	23	0	0	0	DRY
222	11/15/2001	306331	7	0	0	0	DRY
223	11/15/2001	306341	10	0	0	0	DRY
224	5/13/2002	308101	100	0.6	0.6	0.6	**WET**
225	5/13/2002	310011	3	0.6	0.6	0.6	**WET**
226	5/13/2002	310031	1000	0.6	0.6	0.6	**WET**
227	5/13/2002	310071	3	0.6	0.6	0.6	**WET**

228	5/13/2002	310101	220	0.6	0.6	0.6	**WET**
229	5/13/2002	312011	100	0.6	0.6	0.6	**WET**
230	5/13/2002	312021	127	0.6	0.6	0.6	**WET**
231	5/13/2002	312041	1533	0.6	0.6	0.6	**WET**
232	5/13/2002	402021	3	0.6	0.6	0.6	**WET**
233	5/14/2002	308021	2000	0.4	0.9	0.9	**WET**
234	5/14/2002	308051	1800	0.4	0.9	0.9	**WET**
235	5/14/2002	309011	1167	0.4	0.9	0.9	**WET**
236	5/15/2002	305011	3	0	0.4	0.9	**WET**
237	5/15/2002	305041	50	0	0.4	0.9	**WET**
238	5/15/2002	305051	22	0	0.4	0.9	**WET**
239	5/15/2002	306071	3	0	0.4	0.9	**WET**
240	5/15/2002	306091	3	0	0.4	0.9	**WET**
241	5/15/2002	306111	3	0	0.4	0.9	**WET**
242	5/15/2002	306121	3	0	0.4	0.9	**WET**
243	5/15/2002	306131	3	0	0.4	0.9	**WET**
244	5/15/2002	306161	10	0	0.4	0.9	**WET**
245	5/15/2002	306181	77	0	0.4	0.9	**WET**
246	5/15/2002	306191	100	0	0.4	0.9	**WET**
247	5/15/2002	306331	3	0	0.4	0.9	**WET**
248	5/15/2002	306341	20	0	0.4	0.9	**WET**
249	7/29/2002	308051	63	0	0.1	0.9	DRY
250	7/30/2002	306321	3	0	0	0.8	DRY
251	7/30/2002	310011	67	0	0	0.8	DRY
252	7/30/2002	310031	87	0	0	0.8	DRY
253	7/30/2002	310071	20	0	0	0.8	DRY
254	7/30/2002	310101	133	0	0	0.8	DRY
255	7/30/2002	312011	83	0	0	0.8	DRY
256	7/30/2002	312041	450	0	0	0.8	DRY
257	7/31/2002	305011	3	0	0	0.1	DRY
258	7/31/2002	305041	10	0	0	0.1	DRY
259	7/31/2002	306071	3	0	0	0.1	DRY
260	7/31/2002	306091	3	0	0	0.1	DRY
261	7/31/2002	306111	3	0	0	0.1	DRY
262	7/31/2002	306121	3	0	0	0.1	DRY
263	7/31/2002	306131	3	0	0	0.1	DRY
264	7/31/2002	306161	3	0	0	0.1	DRY

265	7/31/2002	306181	17	0	0	0.1	DRY
266	7/31/2002	306191	30	0	0	0.1	DRY
267	7/31/2002	306331	7	0	0	0.1	DRY
268	7/31/2002	306341	13	0	0	0.1	DRY
269	9/16/2002	308051	2000	1.3	1.8	1.8	**WET**
270	9/17/2002	306321	3	0	1.3	1.8	**WET**
271	9/17/2002	310011	7	0	1.3	1.8	**WET**
272	9/17/2002	310031	93	0	1.3	1.8	**WET**
273	9/17/2002	310071	13	0	1.3	1.8	**WET**
274	9/17/2002	310101	300	0	1.3	1.8	**WET**
275	9/17/2002	312011	350	0	1.3	1.8	**WET**
276	9/17/2002	312041	70	0	1.3	1.8	**WET**
277	9/18/2002	305011	53	0	0	1.8	DRY
278	9/18/2002	305041	27	0	0	1.8	DRY
279	9/18/2002	306071	3	0	0	1.8	DRY
280	9/18/2002	306091	127	0	0	1.8	DRY
281	9/18/2002	306111	3	0	0	1.8	DRY
282	9/18/2002	306121	117	0	0	1.8	DRY
283	9/18/2002	306131	20	0	0	1.8	DRY
284	9/18/2002	306161	13	0	0	1.8	DRY
285	9/18/2002	306181	280	0	0	1.8	DRY
286	9/18/2002	306191	137	0	0	1.8	DRY
287	9/18/2002	306331	93	0	0	1.8	DRY
288	9/18/2002	306341	37	0	0	1.8	DRY
289	3/17/2003	308051	115	0.4	0.4	0.5	**WET**
290	3/18/2003	306321	3	0	0.4	0.4	**WET**
291	3/18/2003	310011	3	0	0.4	0.4	**WET**
292	3/18/2003	310031	30	0	0.4	0.4	**WET**
293	3/18/2003	310071	7	0	0.4	0.4	**WET**
294	3/18/2003	310101	20	0	0.4	0.4	**WET**
295	3/18/2003	312011	3	0	0.4	0.4	**WET**
296	3/18/2003	312041	20	0	0.4	0.4	**WET**
297	3/19/2003	305011	20	0	0	0.4	DRY
298	3/19/2003	305041	10	0	0	0.4	DRY
299	3/19/2003	306071	3	0	0	0.4	DRY
300	3/19/2003	306091	3	0	0	0.4	DRY
301	3/19/2003	306111	3	0	0	0.4	DRY

302	3/19/2003	306121	3	0	0	0.4	DRY
303	3/19/2003	306131	3	0	0	0.4	DRY
304	3/19/2003	306161	10	0	0	0.4	DRY
305	3/19/2003	306181	13	0	0	0.4	DRY
306	3/19/2003	306191	40	0	0	0.4	DRY
307	3/19/2003	306331	17	0	0	0.4	DRY
308	3/19/2003	306341	10	0	0	0.4	DRY
309	5/15/2003	305011	7	0	0	0	DRY
310	5/15/2003	305041	5	0	0	0	DRY
311	5/15/2003	306071	7	0	0	0	DRY
312	5/15/2003	306091	3	0	0	0	DRY
313	5/15/2003	306111	3	0	0	0	DRY
314	5/15/2003	306121	3	0	0	0	DRY
315	5/15/2003	306131	3	0	0	0	DRY
316	5/15/2003	306161	13	0	0	0	DRY
317	5/15/2003	306181	43	0	0	0	DRY
318	5/15/2003	306331	20	0	0	0	DRY
319	5/15/2003	306341	30	0	0	0	DRY
320	5/19/2003	308051	67	0	0.1	1.2	DRY
321	5/20/2003	306321	10	0	0	0.1	DRY
322	5/20/2003	310011	17	0	0	0.1	DRY
323	5/20/2003	310031	70	0	0	0.1	DRY
324	5/20/2003	310071	3	0	0	0.1	DRY
325	5/20/2003	310101	103	0	0	0.1	DRY
326	5/20/2003	312011	10	0	0	0.1	DRY
327	5/20/2003	312041	90	0	0	0.1	DRY
328	5/21/2003	306191	27	0	0	0.1	DRY
329	7/21/2003	308051	135	0	0	0.1	DRY
330	7/22/2003	306321	3	0	0	0.1	DRY
331	7/22/2003	310011	53	0	0	0.1	DRY
332	7/22/2003	310031	73	0	0	0.1	DRY
333	7/22/2003	310071	13	0	0	0.1	DRY
334	7/22/2003	310101	106	0	0	0.1	DRY
335	7/22/2003	312011	80	0	0	0.1	DRY
336	7/22/2003	312041	117	0	0	0.1	DRY
337	7/23/2003	305011	50	0.2	0.2	0.2	**WET**
338	7/23/2003	305041	40	0.2	0.2	0.2	**WET**

339	7/23/2003	306071	3	0.2	0.2	0.2	**WET**
340	7/23/2003	306091	3	0.2	0.2	0.2	**WET**
341	7/23/2003	306111	7	0.2	0.2	0.2	**WET**
342	7/23/2003	306121	3	0.2	0.2	0.2	**WET**
343	7/23/2003	306131	10	0.2	0.2	0.2	**WET**
344	7/23/2003	306161	27	0.2	0.2	0.2	**WET**
345	7/23/2003	306181	163	0.2	0.2	0.2	**WET**
346	7/23/2003	306191	117	0.2	0.2	0.2	**WET**
347	7/23/2003	306331	23	0.2	0.2	0.2	**WET**
348	7/23/2003	306341	33	0.2	0.2	0.2	**WET**
349	10/6/2003	308051	1615	0	0	0.1	DRY
350	10/7/2003	306321	3	0	0	0.1	DRY
351	10/7/2003	310011	3	0	0	0.1	DRY
352	10/7/2003	310031	60	0	0	0.1	DRY
353	10/7/2003	310071	3	0	0	0.1	DRY
354	10/7/2003	310101	60	0	0	0.1	DRY
355	10/7/2003	312011	10	0	0	0.1	DRY
356	10/7/2003	312041	50	0	0	0.1	DRY
357	10/8/2003	305011	67	0	0	0	DRY
358	10/8/2003	305041	12	0	0	0	DRY
359	10/8/2003	306071	3	0	0	0	DRY
360	10/8/2003	306091	3	0	0	0	DRY
361	10/8/2003	306111	3	0	0	0	DRY
362	10/8/2003	306121	7	0	0	0	DRY
363	10/8/2003	306131	13	0	0	0	DRY
364	10/8/2003	306161	50	0	0	0	DRY
365	10/8/2003	306181	100	0	0	0	DRY
366	10/8/2003	306191	113	0	0	0	DRY
367	10/8/2003	306331	73	0	0	0	DRY
368	10/8/2003	306341	53	0	0	0	DRY
369	3/22/2004	308051	18	0	0	0.4	DRY
370	3/23/2004	306321	3	0	0	0	DRY
371	3/23/2004	310011	3	0	0	0	DRY
372	3/23/2004	310031	17	0	0	0	DRY
373	3/23/2004	310071	3	0	0	0	DRY
374	3/23/2004	310101	10	0	0	0	DRY
375	3/23/2004	312011	1	0	0	0	DRY

376	3/23/2004	312041	3	0	0	0	DRY
377	3/24/2004	305011	3	0	0	0	DRY
378	3/24/2004	305041	3	0	0	0	DRY
379	3/24/2004	306071	3	0	0	0	DRY
380	3/24/2004	306091	3	0	0	0	DRY
381	3/24/2004	306111	3	0	0	0	DRY
382	3/24/2004	306121	10	0	0	0	DRY
383	3/24/2004	306131	3	0	0	0	DRY
384	3/24/2004	306161	3	0	0	0	DRY
385	3/24/2004	306181	3	0	0	0	DRY
386	3/24/2004	306191	30	0	0	0	DRY
387	3/24/2004	306331	7	0	0	0	DRY
388	3/24/2004	306341	3	0	0	0	DRY
389	5/17/2004	308051	77	0.1	0.1	0.1	DRY
390	5/18/2004	306321	3	0	0.1	0.1	DRY
391	5/18/2004	310011	10	0	0.1	0.1	DRY
392	5/18/2004	310031	90	0	0.1	0.1	DRY
393	5/18/2004	310071	10	0	0.1	0.1	DRY
394	5/18/2004	310101	1300	0	0.1	0.1	DRY
395	5/18/2004	312011	23	0	0.1	0.1	DRY
396	5/18/2004	312041	260	0	0.1	0.1	DRY
397	5/19/2004	305011	7	0	0	0.1	DRY
398	5/19/2004	305041	12	0	0	0.1	DRY
399	5/19/2004	306071	3	0	0	0.1	DRY
400	5/19/2004	306091	3	0	0	0.1	DRY
401	5/19/2004	306111	3	0	0	0.1	DRY
402	5/19/2004	306121	13	0	0	0.1	DRY
403	5/19/2004	306131	7	0	0	0.1	DRY
404	5/19/2004	306161	7	0	0	0.1	DRY
405	5/19/2004	306181	7	0	0	0.1	DRY
406	5/19/2004	306191	7	0	0	0.1	DRY
407	5/19/2004	306331	13	0	0	0.1	DRY
408	5/19/2004	306341	3	0	0	0.1	DRY
409	7/19/2004	308051	89	0.4	1.4	1.4	**WET**
410	7/20/2004	306321	43	0	0.4	1.4	**WET**
411	7/20/2004	310011	50	0	0.4	1.4	**WET**
412	7/20/2004	310031	2000	0	0.4	1.4	**WET**

413	7/20/2004	310071	140	0	0.4	1.4	**WET**
414	7/20/2004	310101	310	0	0.4	1.4	**WET**
415	7/20/2004	312011	40	0	0.4	1.4	**WET**
416	7/20/2004	312041	2000	0	0.4	1.4	**WET**
417	7/21/2004	305011	10	0	0	1.4	DRY
418	7/21/2004	305041	35	0	0	1.4	DRY
419	7/21/2004	306071	3	0	0	1.4	DRY
420	7/21/2004	306111	7	0	0	1.4	DRY
421	7/21/2004	306121	3	0	0	1.4	DRY
422	7/21/2004	306131	3	0	0	1.4	DRY
423	7/21/2004	306161	7	0	0	1.4	DRY
424	7/21/2004	306181	3	0	0	1.4	DRY
425	7/21/2004	306191	13	0	0	1.4	DRY
426	7/21/2004	306331	3	0	0	1.4	DRY
427	7/21/2004	306341	10	0	0	1.4	DRY
428	9/27/2004	308051	565	0	0	0	DRY
429	9/28/2004	306321	3	0	0	0	DRY
430	9/28/2004	310011	13	0	0	0	DRY
431	9/28/2004	310031	80	0	0	0	DRY
432	9/28/2004	310071	7	0	0	0	DRY
433	9/28/2004	310101	100	0	0	0	DRY
434	9/28/2004	312011	33	0	0	0	DRY
435	9/28/2004	312041	133	0	0	0	DRY
436	9/29/2004	305011	1000	0.7	0.7	0.7	**WET**
437	9/29/2004	305041	34	0.7	0.7	0.7	**WET**
438	9/29/2004	306071	3	0.7	0.7	0.7	**WET**
439	9/29/2004	306091	3	0.7	0.7	0.7	**WET**
440	9/29/2004	306111	47	0.7	0.7	0.7	**WET**
441	9/29/2004	306121	7	0.7	0.7	0.7	**WET**
442	9/29/2004	306131	27	0.7	0.7	0.7	**WET**
443	9/29/2004	306161	27	0.7	0.7	0.7	**WET**
444	9/29/2004	306181	107	0.7	0.7	0.7	**WET**
445	9/29/2004	306191	13	0.7	0.7	0.7	**WET**
446	9/29/2004	306331	40	0.7	0.7	0.7	**WET**
447	9/29/2004	306341	63	0.7	0.7	0.7	**WET**
448	3/7/2005	308051	105	0	0	0	DRY
449	3/8/2005	306321	3	1.3	1.3	1.3	**WET**

450	3/8/2005	310011	7	1.3	1.3	1.3	WET
451	3/8/2005	310031	60	1.3	1.3	1.3	WET
452	3/8/2005	310071	163	1.3	1.3	1.3	WET
453	3/8/2005	310101	67	1.3	1.3	1.3	WET
454	3/8/2005	312011	27	1.3	1.3	1.3	WET
455	3/8/2005	312041	53	1.3	1.3	1.3	WET
456	3/9/2005	305011	120	0	1.3	1.3	WET
457	3/9/2005	305041	12	0	1.3	1.3	WET
458	3/9/2005	306071	27	0	1.3	1.3	WET
459	3/9/2005	306091	3	0	1.3	1.3	WET
460	3/9/2005	306111	3	0	1.3	1.3	WET
461	3/9/2005	306121	3	0	1.3	1.3	WET
462	3/9/2005	306131	30	0	1.3	1.3	WET
463	3/9/2005	306161	53	0	1.3	1.3	WET
464	3/9/2005	306181	340	0	1.3	1.3	WET
465	3/9/2005	306191	240	0	1.3	1.3	WET
466	3/9/2005	306331	77	0	1.3	1.3	WET
467	3/9/2005	306341	70	0	1.3	1.3	WET
468	5/16/2005	306321	3	0.8	0.9	0.9	WET
469	5/16/2005	308051	250	0.8	0.9	0.9	WET
470	5/16/2005	310011	13	0.8	0.9	0.9	WET
471	5/16/2005	310031	57	0.8	0.9	0.9	WET
472	5/16/2005	310071	3	0.8	0.9	0.9	WET
473	5/16/2005	310101	280	0.8	0.9	0.9	WET
474	5/16/2005	312011	40	0.8	0.9	0.9	WET
475	5/16/2005	312041	100	0.8	0.9	0.9	WET
476	5/17/2005	305011	27	0	0.8	0.9	WET
477	5/17/2005	305041	15	0	0.8	0.9	WET
478	5/17/2005	306071	3	0	0.8	0.9	WET
479	5/17/2005	306091	3	0	0.8	0.9	WET
480	5/17/2005	306111	3	0	0.8	0.9	WET
481	5/17/2005	306121	3	0	0.8	0.9	WET
482	5/17/2005	306131	3	0	0.8	0.9	WET
483	5/17/2005	306161	10	0	0.8	0.9	WET
484	5/17/2005	306181	147	0	0.8	0.9	WET
485	5/17/2005	306191	47	0	0.8	0.9	WET
486	5/17/2005	306331	10	0	0.8	0.9	WET

487	5/17/2005	306341	10	0	0.8	0.9	**WET**
488	7/25/2005	308051	833	0	0	0	**DRY**
489	7/26/2005	306321	23	0	0	0	**DRY**
490	7/26/2005	310011	23	0	0	0	**DRY**
491	7/26/2005	310031	270	0	0	0	**DRY**
492	7/26/2005	310071	43	0	0	0	**DRY**
493	7/26/2005	310101	767	0	0	0	**DRY**
	7/26/2005	312011	27	0	0	0	**DRY**
	7/26/2005	312041	360	0	0	0	**DRY**
	7/27/2005	305011	3	0	0	0	**DRY**
	7/27/2005	305041	35	0	0	0	**DRY**
	7/27/2005	306071	3	0	0	0	**DRY**
	7/27/2005	306091	3	0	0	0	**DRY**
	7/27/2005	306111	3	0	0	0	**DRY**
	7/27/2005	306121	3	0	0	0	**DRY**
	7/27/2005	306131	3	0	0	0	**DRY**
	7/27/2005	306161	7	0	0	0	**DRY**
	7/27/2005	306181	3	0	0	0	**DRY**
	7/27/2005	306191	20	0	0	0	**DRY**
	7/27/2005	306331	10	0	0	0	**DRY**
	7/27/2005	306341	7	0	0	0	**DRY**
	9/19/2005	308051	75	0	0.1	0.1	**DRY**
	9/20/2005	306321	3	0	0	0.1	**DRY**
	9/20/2005	310011	13	0	0	0.1	**DRY**
	9/20/2005	310031	230	0	0	0.1	**DRY**
	9/20/2005	310071	43	0	0	0.1	**DRY**
	9/20/2005	310101	57	0	0	0.1	**DRY**
	9/20/2005	312011	30	0	0	0.1	**DRY**
	9/20/2005	312041	63	0	0	0.1	**DRY**
	9/21/2005	305011	10	0.2	0.2	0.4	**WET**
	9/21/2005	305041	18	0.2	0.2	0.4	**WET**
	9/21/2005	306071	3	0.2	0.2	0.4	**WET**
	9/21/2005	306091	3	0.2	0.2	0.4	**WET**
	9/21/2005	306111	3	0.2	0.2	0.4	**WET**
	9/21/2005	306121	3	0.2	0.2	0.4	**WET**
	9/21/2005	306131	10	0.2	0.2	0.4	**WET**
	9/21/2005	306161	7	0.2	0.2	0.4	**WET**

9/21/2005	306181	27	0.2	0.2	0.4	**WET**
9/21/2005	306191	37	0.2	0.2	0.4	**WET**
9/21/2005	306331	33	0.2	0.2	0.4	**WET**
9/21/2005	306341	43	0.2	0.2	0.4	**WET**

6.2 Fresh Water Data

# sample	Date	Source	enterococcus (CFU/100 mL)	Precip.(in)[1] 24h	48h	96h	Condition[2] (WET/DRY)
1	3/6/2000	308091	38	0	0	0	DRY
2	3/6/2000	308151	43	0	0	0	DRY
3	3/6/2000	308171	73	0	0	0	DRY
4	3/6/2000	308351	38	0	0	0	DRY
5	3/6/2000	308381	470	0	0	0	DRY
6	3/6/2000	308441	600	0	0	0	DRY
7	3/6/2000	308451	130	0	0	0	DRY
8	3/6/2000	310121	19	0	0	0	DRY
9	3/6/2000	311011	290	0	0	0	DRY
10	3/6/2000	311031	600	0	0	0	DRY
11	3/6/2000	311041	107	0	0	0	DRY
12	3/7/2000	308011	80	0	0	0	DRY
13	3/7/2000	308061	94	0	0	0	DRY
14	3/7/2000	308071	16	0	0	0	DRY
15	3/7/2000	308141	123	0	0	0	DRY
16	3/7/2000	308181	25	0	0	0	DRY
17	3/7/2000	308191	53	0	0	0	DRY
18	3/7/2000	308201	13	0	0	0	DRY
19	3/7/2000	308271	53	0	0	0	DRY
20	3/7/2000	308281	22	0	0	0	DRY
21	3/7/2000	308301	67	0	0	0	DRY
22	3/7/2000	308341	48	0	0	0	DRY
23	3/7/2000	308391	32	0	0	0	DRY
24	3/7/2000	308401	8	0	0	0	DRY
25	3/7/2000	309021	32	0	0	0	DRY
26	3/7/2000	309041	40	0	0	0	DRY
27	3/7/2000	309051	110	0	0	0	DRY
28	3/7/2000	319011	52	0	0	0	DRY
29	3/7/2000	319101	117	0	0	0	DRY
30	3/8/2000	305081	330	0	0	0	DRY
31	3/8/2000	308031	1	0	0	0	DRY
32	3/8/2000	308291	2	0	0	0	DRY
33	3/8/2000	308361	46	0	0	0	DRY
34	3/8/2000	308411	15	0	0	0	DRY
35	3/8/2000	308421	270	0	0	0	DRY
36	3/8/2000	308431	530	0	0	0	DRY
37	6/12/2000	308091	350	0.3	0.3	0.3	**WET**
38	6/12/2000	308151	310	0.3	0.3	0.3	**WET**
39	6/12/2000	308351	550	0.3	0.3	0.3	**WET**
40	6/12/2000	308381	300	0.3	0.3	0.3	**WET**
41	6/12/2000	308441	127	0.3	0.3	0.3	**WET**

42	6/12/2000	308451	220	0.3	0.3	0.3	WET
43	6/12/2000	308461	470	0.3	0.3	0.3	WET
44	6/12/2000	310121	310	0.3	0.3	0.3	WET
45	6/12/2000	311011	600	0.3	0.3	0.3	WET
46	6/12/2000	311041	600	0.3	0.3	0.3	WET
47	6/13/2000	308011	31	0.3	0.6	0.6	WET
48	6/13/2000	308061	600	0.3	0.6	0.6	WET
49	6/13/2000	308071	14	0.3	0.6	0.6	WET
50	6/13/2000	308141	600	0.3	0.6	0.6	WET
51	6/13/2000	308181	54	0.3	0.6	0.6	WET
52	6/13/2000	308191	600	0.3	0.6	0.6	WET
53	6/13/2000	308201	31	0.3	0.6	0.6	WET
54	6/13/2000	308271	600	0.3	0.6	0.6	WET
55	6/13/2000	308281	560	0.3	0.6	0.6	WET
56	6/13/2000	308301	480	0.3	0.6	0.6	WET
57	6/13/2000	308341	430	0.3	0.6	0.6	WET
58	6/13/2000	308391	600	0.3	0.6	0.6	WET
59	6/13/2000	308401	116	0.3	0.6	0.6	WET
60	6/13/2000	309021	450	0.3	0.6	0.6	WET
61	6/13/2000	309041	460	0.3	0.6	0.6	WET
62	6/13/2000	309051	600	0.3	0.6	0.6	WET
63	6/13/2000	319011	410	0.3	0.6	0.6	WET
64	6/13/2000	319101	600	0.3	0.6	0.6	WET
65	6/14/2000	305081	600	0	0.3	0.6	WET
66	6/14/2000	308031	63	0	0.3	0.6	WET
67	6/14/2000	308291	36	0	0.3	0.6	WET
68	6/14/2000	308361	21	0	0.3	0.6	WET
69	6/14/2000	308411	180	0	0.3	0.6	WET
70	6/14/2000	308421	360	0	0.3	0.6	WET
71	6/14/2000	308431	315	0	0.3	0.6	WET
72	7/17/2000	308091	183	0	0	4.2	WET
73	7/17/2000	308151	63	0	0	4.2	WET
74	7/17/2000	308351	200	0	0	4.2	WET
75	7/17/2000	308381	57	0	0	4.2	WET
76	7/17/2000	308441	310	0	0	4.2	WET
77	7/17/2000	308451	220	0	0	4.2	WET
78	7/17/2000	310121	97	0	0	4.2	WET
79	7/17/2000	311041	410	0	0	4.2	WET
80	7/18/2000	308011	3	0	0	4.1	WET

81	7/18/2000	308061	3	0	0	4.1	**WET**
82	7/18/2000	308071	3	0	0	4.1	**WET**
83	7/18/2000	308181	3	0	0	4.1	**WET**
84	7/18/2000	308191	3	0	0	4.1	**WET**
85	7/18/2000	308201	182	0	0	4.1	**WET**
86	7/18/2000	308301	1567	0	0	4.1	**WET**
87	7/18/2000	308341	220	0	0	4.1	**WET**
88	7/18/2000	308391	1233	0	0	4.1	**WET**
89	7/18/2000	309021	13	0	0	4.1	**WET**
90	7/18/2000	309041	3	0	0	4.1	**WET**
91	7/18/2000	309051	3	0	0	4.1	**WET**
92	7/19/2000	305081	3	0.1	0.1	0.1	DRY
93	7/19/2000	308031	3	0.1	0.1	0.1	DRY
94	7/19/2000	308291	3	0.1	0.1	0.1	DRY
95	7/19/2000	308361	43	0.1	0.1	0.1	DRY
96	7/20/2000	308141	1633	1.6	1.7	1.7	**WET**
97	7/20/2000	308271	2000	1.6	1.7	1.7	**WET**
98	7/20/2000	308281	3	1.6	1.7	1.7	**WET**
99	7/20/2000	308401	30	1.6	1.7	1.7	**WET**
100	7/20/2000	308431	817	1.6	1.7	1.7	**WET**
101	7/20/2000	319011	2400	1.6	1.7	1.7	**WET**
102	7/20/2000	319101	2000	1.6	1.7	1.7	**WET**
103	9/25/2000	308091	600	1.4	1.4	1.8	**WET**
104	9/25/2000	308151	490	1.4	1.4	1.8	**WET**
105	9/25/2000	308351	600	1.4	1.4	1.8	**WET**
106	9/25/2000	308381	600	1.4	1.4	1.8	**WET**
107	9/25/2000	308441	600	1.4	1.4	1.8	**WET**
108	9/25/2000	308451	340	1.4	1.4	1.8	**WET**
109	9/25/2000	308461	600	1.4	1.4	1.8	**WET**
110	9/25/2000	310121	600	1.4	1.4	1.8	**WET**
111	9/25/2000	311011	520	1.4	1.4	1.8	**WET**
112	9/25/2000	311031	600	1.4	1.4	1.8	**WET**
113	9/25/2000	311041	600	1.4	1.4	1.8	**WET**
114	9/26/2000	308011	600	2.7	4	4.4	**WET**
115	9/26/2000	308061	2000	2.7	4	4.4	**WET**
116	9/26/2000	308071	1200	2.7	4	4.4	**WET**
117	9/26/2000	308141	2000	2.7	4	4.4	**WET**

118	9/26/2000	308181	933	2.7	4	4.4	WET
119	9/26/2000	308191	2000	2.7	4	4.4	WET
120	9/26/2000	308201	143	2.7	4	4.4	WET
121	9/26/2000	308271	2000	2.7	4	4.4	WET
122	9/26/2000	308281	555	2.7	4	4.4	WET
123	9/26/2000	308301	1633	2.7	4	4.4	WET
124	9/26/2000	308341	1267	2.7	4	4.4	WET
125	9/26/2000	308391	360	2.7	4	4.4	WET
126	9/26/2000	308401	540	2.7	4	4.4	WET
127	9/26/2000	309021	2000	2.7	4	4.4	WET
128	9/26/2000	309041	1667	2.7	4	4.4	WET
129	9/26/2000	309051	2000	2.7	4	4.4	WET
130	9/26/2000	319011	1967	2.7	4	4.4	WET
131	9/26/2000	319101	2000	2.7	4	4.4	WET
132	9/27/2000	305081	93	0	2.7	4	WET
133	9/27/2000	308031	380	0	2.7	4	WET
134	9/27/2000	308291	160	0	2.7	4	WET
135	9/27/2000	308371	1700	0	2.7	4	WET
136	9/27/2000	308411	1000	0	2.7	4	WET
137	9/27/2000	308421	1167	0	2.7	4	WET
138	9/27/2000	308431	633	0	2.7	4	WET
139	4/16/2001	308091	28	0.2	0.2	0.3	WET
140	4/16/2001	308151	57	0.2	0.2	0.3	WET
141	4/16/2001	308351	25	0.2	0.2	0.3	WET
142	4/16/2001	308381	28	0.2	0.2	0.3	WET
143	4/16/2001	308441	30	0.2	0.2	0.3	WET
144	4/16/2001	308451	35	0.2	0.2	0.3	WET
145	4/16/2001	308461	12	0.2	0.2	0.3	WET
146	4/16/2001	310121	17	0.2	0.2	0.3	WET
147	4/16/2001	311011	73	0.2	0.2	0.3	WET
148	4/16/2001	311031	25	0.2	0.2	0.3	WET
149	4/16/2001	311041	147	0.2	0.2	0.3	WET
150	4/17/2001	308011	4	0.2	0.4	0.4	WET
151	4/17/2001	308061	21	0.2	0.4	0.4	WET
152	4/17/2001	308071	9	0.2	0.4	0.4	WET
153	4/17/2001	308141	120	0.2	0.4	0.4	WET
154	4/17/2001	308181	13	0.2	0.4	0.4	WET
155	4/17/2001	308191	103	0.2	0.4	0.4	WET
156	4/17/2001	308201	107	0.2	0.4	0.4	WET
157	4/17/2001	308271	190	0.2	0.4	0.4	WET

158	4/17/2001	308281	12	0.2	0.4	0.4	**WET**
159	4/17/2001	308301	6	0.2	0.4	0.4	**WET**
160	4/17/2001	308341	10	0.2	0.4	0.4	**WET**
161	4/17/2001	308391	35	0.2	0.4	0.4	**WET**
162	4/17/2001	308401	2	0.2	0.4	0.4	**WET**
163	4/17/2001	309021	80	0.2	0.4	0.4	**WET**
164	4/17/2001	309041	320	0.2	0.4	0.4	**WET**
165	4/17/2001	309051	44	0.2	0.4	0.4	**WET**
166	4/17/2001	319011	245	0.2	0.4	0.4	**WET**
167	4/17/2001	319101	18	0.2	0.4	0.4	**WET**
168	4/18/2001	305081	70	0	0.2	0.4	DRY
169	4/18/2001	308031	12	0	0.2	0.4	DRY
170	4/18/2001	308291	10	0	0.2	0.4	DRY
171	4/18/2001	308361	103	0	0.2	0.4	DRY
172	4/18/2001	308411	67	0	0.2	0.4	DRY
173	4/18/2001	308421	32	0	0.2	0.4	DRY
174	4/18/2001	308431	42	0	0.2	0.4	DRY
175	5/14/2001	308091	270	0	0	0	DRY
176	5/14/2001	308351	170	0	0	0	DRY
177	5/14/2001	308381	360	0	0	0	DRY
178	5/14/2001	308441	90	0	0	0	DRY
179	5/14/2001	308451	270	0	0	0	DRY
180	5/14/2001	310121	180	0	0	0	DRY
181	5/14/2001	311011	600	0	0	0	DRY
182	5/14/2001	311041	600	0	0	0	DRY
183	5/15/2001	308011	3	0	0	0	DRY
184	5/15/2001	308061	24	0	0	0	DRY
185	5/15/2001	308071	1	0	0	0	DRY
186	5/15/2001	308141	540	0	0	0	DRY
187	5/15/2001	308181	14	0	0	0	DRY
188	5/15/2001	308191	220	0	0	0	DRY
189	5/15/2001	308201	1	0	0	0	DRY
190	5/15/2001	308271	200	0	0	0	DRY
191	5/15/2001	308281	30	0	0	0	DRY
192	5/15/2001	308301	133	0	0	0	DRY
193	5/15/2001	308341	87	0	0	0	DRY
194	5/15/2001	308401	7	0	0	0	DRY
195	5/15/2001	309021	210	0	0	0	DRY
196	5/15/2001	309041	130	0	0	0	DRY
197	5/15/2001	309051	73	0	0	0	DRY
198	5/15/2001	319011	600	0	0	0	DRY
199	5/15/2001	319101	77	0	0	0	DRY

200	5/16/2001	305081	400	0	0	0	DRY
201	5/16/2001	308031	5	0	0	0	DRY
202	5/16/2001	308291	100	0	0	0	DRY
203	5/16/2001	308361	180	0	0	0	DRY
204	5/16/2001	308411	180	0	0	0	DRY
205	5/16/2001	308421	260	0	0	0	DRY
206	5/16/2001	308431	390	0	0	0	DRY
207	7/23/2001	308091	450	0	0	0	DRY
208	7/23/2001	308361	1800	0	0	0	DRY
209	7/23/2001	308381	1733	0	0	0	DRY
210	7/23/2001	308441	300	0	0	0	DRY
211	7/23/2001	308451	1467	0	0	0	DRY
212	7/23/2001	308461	2300	0	0	0	DRY
213	7/23/2001	310121	1567	0	0	0	DRY
214	7/23/2001	311011	1767	0	0	0	DRY
215	7/23/2001	311031	733	0	0	0	DRY
216	7/23/2001	311041	2133	0	0	0	DRY
217	7/24/2001	308011	7	0	0	0	DRY
218	7/24/2001	308061	360	0	0	0	DRY
219	7/24/2001	308071	13	0	0	0	DRY
220	7/24/2001	308141	1033	0	0	0	DRY
221	7/24/2001	308181	20	0	0	0	DRY
222	7/24/2001	308191	1233	0	0	0	DRY
223	7/24/2001	308201	667	0	0	0	DRY
224	7/24/2001	308271	510	0	0	0	DRY
225	7/24/2001	308281	240	0	0	0	DRY
226	7/24/2001	308301	867	0	0	0	DRY
227	7/24/2001	308341	539	0	0	0	DRY
228	7/24/2001	308401	37	0	0	0	DRY
229	7/24/2001	309021	1633	0	0	0	DRY
230	7/24/2001	309041	1300	0	0	0	DRY
231	7/24/2001	309051	1100	0	0	0	DRY
232	7/24/2001	319011	1433	0	0	0	DRY
233	7/24/2001	319101	390	0	0	0	DRY
234	7/25/2001	305081	1800	0	0	0	DRY
235	7/25/2001	308031	47	0	0	0	DRY
236	7/25/2001	308291	137	0	0	0	DRY
237	7/25/2001	308371	1067	0	0	0	DRY
238	7/25/2001	308421	1233	0	0	0	DRY
239	7/25/2001	308431	1167	0	0	0	DRY
240	9/24/2001	308091	1333	0	0	0.2	DRY
241	9/24/2001	308361	157	0	0	0.2	DRY

242	9/24/2001	308381	2000	0	0	0.2	DRY
243	9/24/2001	308441	800	0	0	0.2	DRY
244	9/24/2001	308451	180	0	0	0.2	DRY
245	9/24/2001	308461	1133	0	0	0.2	DRY
246	9/24/2001	310121	1367	0	0	0.2	DRY
247	9/24/2001	311011	1133	0	0	0.2	DRY
248	9/24/2001	311041	2000	0	0	0.2	DRY
249	9/25/2001	308011	1100	0.5	0.5	0.5	**WET**
250	9/25/2001	308061	2000	0.5	0.5	0.5	**WET**
251	9/25/2001	308071	420	0.5	0.5	0.5	**WET**
252	9/25/2001	308141	2000	0.5	0.5	0.5	**WET**
253	9/25/2001	308181	117	0.5	0.5	0.5	**WET**
254	9/25/2001	308191	1533	0.5	0.5	0.5	**WET**
255	9/25/2001	308201	2000	0.5	0.5	0.5	**WET**
256	9/25/2001	308271	2000	0.5	0.5	0.5	**WET**
257	9/25/2001	308281	150	0.5	0.5	0.5	**WET**
258	9/25/2001	308301	1850	0.5	0.5	0.5	**WET**
259	9/25/2001	308341	2000	0.5	0.5	0.5	**WET**
260	9/25/2001	308401	2000	0.5	0.5	0.5	**WET**
261	9/25/2001	309021	1033	0.5	0.5	0.5	**WET**
262	9/25/2001	309041	133	0.5	0.5	0.5	**WET**
263	9/25/2001	309051	123	0.5	0.5	0.5	**WET**
264	9/25/2001	319011	1200	0.5	0.5	0.5	**WET**
265	9/25/2001	319101	2000	0.5	0.5	0.5	**WET**
266	9/26/2001	305081	1133	0	0.5	0.5	**WET**
267	9/26/2001	308031	23	0	0.5	0.5	**WET**
268	9/26/2001	308291	10	0	0.5	0.5	**WET**
269	9/26/2001	308361	767	0	0.5	0.5	**WET**
270	9/26/2001	308421	1533	0	0.5	0.5	**WET**
271	9/26/2001	308431	1100	0	0.5	0.5	**WET**
272	11/13/2001	308091	30	0	0	0	DRY
273	11/13/2001	308361	23	0	0	0	DRY
274	11/13/2001	308381	570	0	0	0	DRY
275	11/13/2001	308441	113	0	0	0	DRY
276	11/13/2001	308461	197	0	0	0	DRY
277	11/13/2001	310121	192	0	0	0	DRY
278	11/13/2001	311031	340	0	0	0	DRY
279	11/13/2001	311041	70	0	0	0	DRY
280	11/14/2001	305081	67	0	0	0	DRY
281	11/14/2001	308011	3	0	0	0	DRY
282	11/14/2001	308031	70	0	0	0	DRY
283	11/14/2001	308061	63	0	0	0	DRY

284	11/14/2001	308071	53	0	0	0	DRY
285	11/14/2001	308141	45	0	0	0	DRY
286	11/14/2001	308181	20	0	0	0	DRY
287	11/14/2001	308191	57	0	0	0	DRY
288	11/14/2001	308201	10	0	0	0	DRY
289	11/14/2001	308271	109	0	0	0	DRY
290	11/14/2001	308281	80	0	0	0	DRY
291	11/14/2001	308291	3	0	0	0	DRY
292	11/14/2001	308301	97	0	0	0	DRY
293	11/14/2001	308341	17	0	0	0	DRY
294	11/14/2001	308371	833	0	0	0	DRY
295	11/14/2001	308401	23	0	0	0	DRY
296	11/14/2001	308421	230	0	0	0	DRY
297	11/14/2001	308431	50	0	0	0	DRY
298	11/14/2001	309021	133	0	0	0	DRY
299	11/14/2001	309041	133	0	0	0	DRY
300	11/14/2001	309051	113	0	0	0	DRY
301	11/14/2001	319011	70	0	0	0	DRY
302	11/14/2001	319101	73	0	0	0	DRY
303	5/13/2002	308091	1100	0.6	0.6	0.6	**WET**
304	5/13/2002	308151	310	0.6	0.6	0.6	**WET**
305	5/13/2002	308361	967	0.6	0.6	0.6	**WET**
306	5/13/2002	308381	250	0.6	0.6	0.6	**WET**
307	5/13/2002	308441	365	0.6	0.6	0.6	**WET**
308	5/13/2002	308451	250	0.6	0.6	0.6	**WET**
309	5/13/2002	308461	360	0.6	0.6	0.6	**WET**
310	5/13/2002	310121	475	0.6	0.6	0.6	**WET**
311	5/13/2002	311011	933	0.6	0.6	0.6	**WET**
312	5/13/2002	311031	230	0.6	0.6	0.6	**WET**
313	5/13/2002	311041	800	0.6	0.6	0.6	**WET**
314	5/14/2002	305081	2000	0.4	0.9	0.9	**WET**
315	5/14/2002	308011	210	0.4	0.9	0.9	**WET**
316	5/14/2002	308031	40	0.4	0.9	0.9	**WET**
317	5/14/2002	308061	1733	0.4	0.9	0.9	**WET**
318	5/14/2002	308071	340	0.4	0.9	0.9	**WET**
319	5/14/2002	308141	627	0.4	0.9	0.9	**WET**
320	5/14/2002	308181	87	0.4	0.9	0.9	**WET**
321	5/14/2002	308191	2000	0.4	0.9	0.9	**WET**
322	5/14/2002	308201	490	0.4	0.9	0.9	**WET**
323	5/14/2002	308271	300	0.4	0.9	0.9	**WET**
324	5/14/2002	308281	230	0.4	0.9	0.9	**WET**
325	5/14/2002	308291	82	0.4	0.9	0.9	**WET**

326	5/14/2002	308301	460	0.4	0.9	0.9	**WET**
327	5/14/2002	308341	230	0.4	0.9	0.9	**WET**
328	5/14/2002	308371	1167	0.4	0.9	0.9	**WET**
329	5/14/2002	308401	70	0.4	0.9	0.9	**WET**
330	5/14/2002	308421	1300	0.4	0.9	0.9	**WET**
331	5/14/2002	308431	1734	0.4	0.9	0.9	**WET**
332	5/14/2002	309021	867	0.4	0.9	0.9	**WET**
333	5/14/2002	309041	1133	0.4	0.9	0.9	**WET**
334	5/14/2002	309051	210	0.4	0.9	0.9	**WET**
335	5/14/2002	319011	1200	0.4	0.9	0.9	**WET**
336	5/14/2002	319101	1267	0.4	0.9	0.9	**WET**
337	7/29/2002	308031	53	0	0.1	0.9	DRY
338	7/29/2002	308071	15	0	0.1	0.9	DRY
339	7/29/2002	308091	410	0	0.1	0.9	DRY
340	7/29/2002	308281	143	0	0.1	0.9	DRY
341	7/29/2002	308301	1270	0	0.1	0.9	DRY
342	7/29/2002	308341	480	0	0.1	0.9	DRY
343	7/29/2002	308361	150	0	0.1	0.9	DRY
344	7/29/2002	308461	1530	0	0.1	0.9	DRY
345	7/29/2002	309021	430	0	0.1	0.9	DRY
346	7/29/2002	309041	1630	0	0.1	0.9	DRY
347	7/29/2002	311041	67	0	0.1	0.9	DRY
348	7/30/2002	305081	1030	0	0	0.8	DRY
349	7/30/2002	308291	57	0	0	0.8	DRY
350	7/30/2002	308361	1665	0	0	0.8	DRY
351	7/30/2002	310121	2000	0	0	0.8	DRY
352	9/16/2002	308031	113	1.3	1.8	1.8	**WET**
353	9/16/2002	308071	455	1.3	1.8	1.8	**WET**
354	9/16/2002	308091	2000	1.3	1.8	1.8	**WET**
355	9/16/2002	308281	440	1.3	1.8	1.8	**WET**
356	9/16/2002	308301	2000	1.3	1.8	1.8	**WET**
357	9/16/2002	308341	2000	1.3	1.8	1.8	**WET**
358	9/16/2002	308361	2000	1.3	1.8	1.8	**WET**
359	9/16/2002	308461	2000	1.3	1.8	1.8	**WET**
360	9/16/2002	309021	2000	1.3	1.8	1.8	**WET**
361	9/16/2002	309041	2000	1.3	1.8	1.8	**WET**
362	9/16/2002	311041	2000	1.3	1.8	1.8	**WET**
363	9/17/2002	305081	1070	0	1.3	1.8	**WET**
364	9/17/2002	308291	50	0	1.3	1.8	**WET**
365	9/17/2002	308361	767	0	1.3	1.8	**WET**
366	9/17/2002	310121	113	0	1.3	1.8	**WET**
367	3/17/2003	308031	3	0.4	0.4	0.5	**WET**

368	3/17/2003	308071	20	0.4	0.4	0.5	**WET**
369	3/17/2003	308091	30	0.4	0.4	0.5	**WET**
370	3/17/2003	308281	40	0.4	0.4	0.5	**WET**
371	3/17/2003	308301	7	0.4	0.4	0.5	**WET**
372	3/17/2003	308341	77	0.4	0.4	0.5	**WET**
373	3/17/2003	308361	33	0.4	0.4	0.5	**WET**
374	3/17/2003	308461	27	0.4	0.4	0.5	**WET**
375	3/17/2003	309021	43	0.4	0.4	0.5	**WET**
376	3/17/2003	309041	27	0.4	0.4	0.5	**WET**
377	3/17/2003	311041	153	0.4	0.4	0.5	**WET**
378	3/18/2003	305081	43	0	0.4	0.4	**WET**
379	3/18/2003	308291	20	0	0.4	0.4	**WET**
380	3/18/2003	308371	12	0	0.4	0.4	**WET**
381	3/18/2003	310121	13	0	0.4	0.4	**WET**
382	5/19/2003	308031	15	0	0.1	1.2	DRY
383	5/19/2003	308071	80	0	0.1	1.2	DRY
384	5/19/2003	308091	120	0	0.1	1.2	DRY
385	5/19/2003	308281	40	0	0.1	1.2	DRY
386	5/19/2003	308301	53	0	0.1	1.2	DRY
387	5/19/2003	308341	20	0	0.1	1.2	DRY
388	5/19/2003	308361	53	0	0.1	1.2	DRY
389	5/19/2003	308461	30	0	0.1	1.2	DRY
390	5/19/2003	309021	33	0	0.1	1.2	DRY
391	5/19/2003	309041	53	0	0.1	1.2	DRY
392	5/19/2003	311041	420	0	0.1	1.2	DRY
393	5/20/2003	305081	63	0	0	0.1	DRY
394	5/20/2003	308291	7	0	0	0.1	DRY
395	5/20/2003	308371	22	0	0	0.1	DRY
396	5/20/2003	310121	140	0	0	0.1	DRY
397	7/21/2003	308031	215	0	0	0.1	DRY
398	7/21/2003	308071	50	0	0	0.1	DRY
399	7/21/2003	308091	430	0	0	0.1	DRY
400	7/21/2003	308281	77	0	0	0.1	DRY
401	7/21/2003	308301	470	0	0	0.1	DRY
402	7/21/2003	308341	137	0	0	0.1	DRY
403	7/21/2003	308361	380	0	0	0.1	DRY
404	7/21/2003	308461	900	0	0	0.1	DRY
405	7/21/2003	309021	310	0	0	0.1	DRY
406	7/21/2003	309041	260	0	0	0.1	DRY
407	7/21/2003	311041	300	0	0	0.1	DRY
408	7/22/2003	305081	410	0	0	0.1	DRY
409	7/22/2003	308291	10	0	0	0.1	DRY

410	7/22/2003	308371	260	0	0	0.1	DRY
411	7/22/2003	310121	280	0	0	0.1	DRY
412	10/6/2003	308031	10	0	0	0.1	DRY
413	10/6/2003	308071	17	0	0	0.1	DRY
414	10/6/2003	308091	123	0	0	0.1	DRY
415	10/6/2003	308281	7	0	0	0.1	DRY
416	10/6/2003	308301	77	0	0	0.1	DRY
417	10/6/2003	308341	57	0	0	0.1	DRY
418	10/6/2003	308361	77	0	0	0.1	DRY
419	10/6/2003	308461	390	0	0	0.1	DRY
420	10/6/2003	309021	67	0	0	0.1	DRY
421	10/6/2003	309041	120	0	0	0.1	DRY
422	10/6/2003	311041	330	0	0	0.1	DRY
423	10/7/2003	305081	57	0	0	0.1	DRY
424	10/7/2003	308291	10	0	0	0.1	DRY
425	10/7/2003	308371	202	0	0	0.1	DRY
426	10/7/2003	310121	87	0	0	0.1	DRY
427	3/22/2004	308031	5	0	0	0.4	DRY
428	3/22/2004	308071	7	0	0	0.4	DRY
429	3/22/2004	308091	43	0	0	0.4	DRY
430	3/22/2004	308281	3	0	0	0.4	DRY
431	3/22/2004	308301	50	0	0	0.4	DRY
432	3/22/2004	308341	7	0	0	0.4	DRY
433	3/22/2004	308361	47	0	0	0.4	DRY
434	3/22/2004	308461	27	0	0	0.4	DRY
435	3/22/2004	309021	27	0	0	0.4	DRY
436	3/22/2004	309041	53	0	0	0.4	DRY
437	3/22/2004	311041	127	0	0	0.4	DRY
438	3/23/2004	305081	3	0	0	0	DRY
439	3/23/2004	308291	3	0	0	0	DRY
440	3/23/2004	308371	55	0	0	0	DRY
441	3/23/2004	310121	10	0	0	0	DRY
442	5/17/2004	308031	77	0.1	0.1	0.1	DRY
443	5/17/2004	308071	27	0.1	0.1	0.1	DRY
444	5/17/2004	308091	967	0.1	0.1	0.1	DRY
445	5/17/2004	308281	93	0.1	0.1	0.1	DRY
446	5/17/2004	308301	73	0.1	0.1	0.1	DRY
447	5/17/2004	308341	83	0.1	0.1	0.1	DRY
448	5/17/2004	308361	900	0.1	0.1	0.1	DRY
449	5/17/2004	308461	1000	0.1	0.1	0.1	DRY
450	5/17/2004	309021	140	0.1	0.1	0.1	DRY
451	5/17/2004	309041	340	0.1	0.1	0.1	DRY

452	5/17/2004	311041	2000	0.1	0.1	0.1	DRY
453	5/18/2004	305081	107	0	0.1	0.1	DRY
454	5/18/2004	308291	3	0	0.1	0.1	DRY
455	5/18/2004	308371	115	0	0.1	0.1	DRY
456	5/18/2004	310121	100	0	0.1	0.1	DRY
457	7/19/2004	308031	148	0.4	1.4	1.4	**WET**
458	7/19/2004	308071	90	0.4	1.4	1.4	**WET**
459	7/19/2004	308091	330	0.4	1.4	1.4	**WET**
460	7/19/2004	308281	83	0.4	1.4	1.4	**WET**
461	7/19/2004	308301	280	0.4	1.4	1.4	**WET**
462	7/19/2004	308341	260	0.4	1.4	1.4	**WET**
463	7/19/2004	308361	2000	0.4	1.4	1.4	**WET**
464	7/19/2004	308461	2000	0.4	1.4	1.4	**WET**
465	7/19/2004	309021	290	0.4	1.4	1.4	**WET**
466	7/19/2004	309041	220	0.4	1.4	1.4	**WET**
467	7/19/2004	311041	2000	0.4	1.4	1.4	**WET**
468	7/20/2004	305081	700	0	0.4	1.4	**WET**
469	7/20/2004	308291	20	0	0.4	1.4	**WET**
470	7/20/2004	308371	2000	0	0.4	1.4	**WET**
471	7/20/2004	310121	933	0	0.4	1.4	**WET**
472	9/27/2004	308031	272	0	0	0	DRY
473	9/27/2004	308071	20	0	0	0	DRY
474	9/27/2004	308091	340	0	0	0	DRY
475	9/27/2004	308281	56	0	0	0	DRY
476	9/27/2004	308301	2000	0	0	0	DRY
477	9/27/2004	308341	73	0	0	0	DRY
478	9/27/2004	308361	567	0	0	0	DRY
479	9/27/2004	308461	667	0	0	0	DRY
480	9/27/2004	309021	107	0	0	0	DRY
481	9/27/2004	309041	733	0	0	0	DRY
482	9/27/2004	311041	1070	0	0	0	DRY
483	9/28/2004	305081	1200	0	0	0	DRY
484	9/28/2004	308291	23	0	0	0	DRY
485	9/28/2004	308371	485	0	0	0	DRY
486	9/28/2004	310121	460	0	0	0	DRY
487	3/7/2005	308031	12	0	0	0	DRY
488	3/7/2005	308071	3	0	0	0	DRY
489	3/7/2005	308091	13	0	0	0	DRY
490	3/7/2005	308281	7	0	0	0	DRY
491	3/7/2005	308301	83	0	0	0	DRY
492	3/7/2005	308341	47	0	0	0	DRY
493	3/7/2005	308361	50	0	0	0	DRY

494	3/7/2005	308461	10	0	0	0	DRY
495	3/7/2005	309021	130	0	0	0	DRY
496	3/7/2005	309041	27	0	0	0	DRY
497	3/7/2005	311041	380	0	0	0	DRY
498	3/8/2005	305081	290	1.3	1.3	1.3	**WET**
499	3/8/2005	308291	87	1.3	1.3	1.3	**WET**
500	3/8/2005	308371	772	1.3	1.3	1.3	**WET**
501	3/8/2005	310121	107	1.3	1.3	1.3	**WET**
502	5/16/2005	305081	2000	0.8	0.9	0.9	**WET**
503	5/16/2005	308031	267	0.8	0.9	0.9	**WET**
504	5/16/2005	308071	320	0.8	0.9	0.9	**WET**
505	5/16/2005	308091	1300	0.8	0.9	0.9	**WET**
506	5/16/2005	308281	93	0.8	0.9	0.9	**WET**
507	5/16/2005	308291	20	0.8	0.9	0.9	**WET**
508	5/16/2005	308301	53	0.8	0.9	0.9	**WET**
509	5/16/2005	308341	60	0.8	0.9	0.9	**WET**
510	5/16/2005	308361	390	0.8	0.9	0.9	**WET**
511	5/16/2005	308371	933	0.8	0.9	0.9	**WET**
512	5/16/2005	308461	117	0.8	0.9	0.9	**WET**
513	5/16/2005	309021	1200	0.8	0.9	0.9	**WET**
514	5/16/2005	309041	320	0.8	0.9	0.9	**WET**
515	5/16/2005	310121	967	0.8	0.9	0.9	**WET**
516	5/16/2005	311041	2000	0.8	0.9	0.9	**WET**
517	7/25/2005	308031	1060	0	0	0	DRY
518	7/25/2005	308071	1070	0	0	0	DRY
519	7/25/2005	308091	2000	0	0	0	DRY
520	7/25/2005	308281	2000	0	0	0	DRY
521	7/25/2005	308301	280	0	0	0	DRY
522	7/25/2005	308341	1130	0	0	0	DRY
523	7/25/2005	308361	2000	0	0	0	DRY
524	7/25/2005	308461	2000	0	0	0	DRY
525	7/25/2005	309021	2000	0	0	0	DRY
526	7/25/2005	309041	2000	0	0	0	DRY
527	7/25/2005	311041	1130	0	0	0	DRY
528	7/26/2005	305081	350	0	0	0	DRY
529	7/26/2005	308291	50	0	0	0	DRY
530	7/26/2005	308371	522	0	0	0	DRY
531	7/26/2005	310121	767	0	0	0	DRY
532	9/19/2005	308031	1009	0	0.1	0.1	DRY
533	9/19/2005	308071	33	0	0.1	0.1	DRY
534	9/19/2005	308091	73	0	0.1	0.1	DRY
535	9/19/2005	308281	50	0	0.1	0.1	DRY

536	9/19/2005	308301	127	0	0.1	0.1	DRY
537	9/19/2005	308361	43	0	0.1	0.1	DRY
538	9/19/2005	308461	60	0	0.1	0.1	DRY
539	9/19/2005	309021	87	0	0.1	0.1	DRY
540	9/19/2005	309041	33	0	0.1	0.1	DRY
541	9/19/2005	311041	2000	0	0.1	0.1	DRY
542	9/20/2005	305081	290	0	0	0.1	DRY
543	9/20/2005	308291	30	0	0	0.1	DRY
544	9/20/2005	308371	607	0	0	0.1	DRY
545	9/20/2005	310121	700	0	0	0.1	DRY