APPENDIX A

WATERS ASSESSED FOR COMPLIANCE WITH DESIGNATED USES

The attached tables present Georgia's 2014 Integrated 305(b)/303(d) List of Waters. EPD issued a public notice on February 1, 2013 soliciting data from any outside sources to be included in the assessment of water quality data for the 2014 305(b)/303(d) List. All available data, including that which was collected by the Department of Natural Resources, were considered and determinations were made for compliance with designated uses. Information as to the specific data sources and an explanation for the various codes used with the 2014 listing assessment are included in the "Data Source Code/Key for Abbreviations" Table that follows this narrative.

Collected data and information were compared against applicable water quality standards to make listing assessment decisions. Assessed waters were placed into one or more of the five categories as described below:

Category 1 – Data indicate that waters are meeting their designated use(s).

Category 2 – A water body has more than one designated use and data indicate that at least one designated use is being met, but there is insufficient evidence to determine that all uses are being met.

Category 3 – There were insufficient data or other information to make a determination as to whether or not the designated use(s) is being met.

Category 4a – Data indicate that at least one designated use is not being met, but TMDL(s) have been completed for the parameter(s) that are causing a water not to meet its use(s).

Category 4b - Data indicate that at least one designated use is not being met, but there are actions in place (other than a TMDL) that are predicted to lead to compliance with water quality standards.

Category 4c - Data indicate that at least one designated use is not being met, but a pollutant does not cause the impairment.

Category 5 - Data indicate that at least one designated use is not being met and TMDL(s) need to be completed for one or more pollutants.

In the 5-part categorization method, waters that are assessed as "not supporting" their uses were either placed in Category 4a, 4b, 4c or 5. The federally mandated 303(d) list is made up of those waters in Category 5. Waters that are assessed as "supporting" their uses were placed in Category 1. Waters for which there were insufficient data to make a use assessment were placed in Category 2 or 3.

Georgia's Integrated List of Waters is organized by water type (streams, lakes, coastal streams, sounds/harbors, and coastal beaches). Each water type is organized by its use assessment (supporting, not supporting, or assessment pending) and is then further organized by river basin. Water bodies within a river basin are alphabetized. Information provided in the List of Waters

includes a description of the water's location, data source, designated water use classification, criterion violated, potential cause, estimates of extent affected and the assessment category (1-5). For waters within category 5, an entry in the priority column indicates the year by which a TMDL will be drafted for the pollutant of concern. A "Notes" column has been included to provide additional information for some water bodies such listing any TMDLs have been completed. Finally, each listed water has a unique Reach ID assigned to it. The Reach ID is a thirteen digit code made up of the letter "R" followed by the Hydrologic Unit Code (HUC 10) in which the waterbody falls followed by two sequential digits (i.e. 01, 02, 03).

In providing the information for the evaluated causes as listed in the tables on the following pages, many potential sources which may have caused the violation of the indicated criterion were considered. These sources are identified as the most likely candidates for affecting a particular stream segment. One potential source may be largely responsible for the criterion violated or the impact may be the result of a combination of sources.

Georgia contains a vast number of waterbodies. While EPD has assessed a large number of these waters, there are many waters (especially smaller creeks and lakes) that have not been assessed due to a lack of data. Waters that do not appear in the 305(b)/303(d) list of waters are to be considered to be in Category 3 (no data).

EPD developed a listing assessment methodology to use in the assessment of State waters. This methodology describes the different types of data that EPD evaluates and explains how the evaluation of the data results in water being placed in one or more of the 5 categories described above.

Georgia's 2014 305(b)/303(d) Listing Assessment Methodology

The outline below provides the listing assessment methodology used for the solicitation, review, consideration and assessment of data for Georgia's 2014 305(b)/303(d) List of Waters. Each listing cycle brings new challenges in the review and assessment of data. The information that follows is intended as a guide. The methodology does not cover all possible scenarios, so best professional judgment was used along with the listing assessment methodology as needed. A best professional judgment approach was also used where insufficient information or data were available to making listing decisions. Each biennial listing cycle, the listing assessment methodology will be updated to include needed changes and to reflect the most current Listing Guidance provided by the USEPA.

I. Data Solicitation

On February 1, 2013, a letter was sent by postal mail or electronic mail to the USEPA, and individuals and/or organizations on the mailing list that is maintained by the Georgia Environmental Protection Division (GA EPD) for notifying interested parties regarding proposed Rules pertaining to water issues. This letter stated that the GA EPD was gathering water quality data and information to be used in the development of Georgia's draft 2014 305(b)/303(d) List of Waters. Any comments, data, or other information were requested to be submitted by July 1, 2013. The letter included a link to a document on GA EPD's website that provides information as to the requirements for the submission and acceptance of water quality data for GA EPD's use in 305(b)/303(d) listing assessments. A copy of the notification letter was also included on GA EPD's 305b/303d webpage and EPD's "What's New" webpage.

II. Data Acceptability Requirements

Data used in listing determinations are subject to the Quality Control/Quality Assurance requirements in the Georgia Environmental Protection Division's Quality Assurance Manual

and Quality Assurance Project Plan. Chapter 391-3-6-.03(13) of *Georgia Rules and Regulations for Water Quality Control* describes requirements that need to be met in order for GA EPD to use water quality data collected by outside sources for use in 305(b)/303(d) listing decisions. Data that did not meet data acceptability requirements were typically used for screening purposes.

III. Data Assessment Period

All readily available data and information for the calendar years 2011-2013 were considered in development of Georgia's 2014 305(b)/303(d) List of Waters. For data collected in 2013, typically only data from January thru June were available for assessment. Currently, Georgia has over 2,000 waterbodies on its 305(b)/303(d) list of waters. It is not possible to obtain new data on all of these waters every two years. In cases where no new data had been collected between 2011 and 2013, EPD continued to use the older data it had available for the waterbodies to make its assessments. In addition, data from 2008 through 2010 were considered along with the 2011-2013 data when assessing a waterbody if the data set were continuous. For instance, if data were collected every year from 2008-2013, then the data from all these years were used in the assessment. On the other hand, if data had been collected in 2008, but not again until 2012, then only the 2012 data was used in the assessment since conditions may have changed in the intervening years. There are instances where GA EPD may choose not to use all years of consecutive data in the assessment of a waterbody. For example, where a local government or group has conducted specific water quality improvement efforts in the watershed of a waterbody and the data collected before and after the improvement projects provide a clear indication that the project has succeeded in improving water quality, GA EPD may choose only to use data collected after implementation of the water quality improvements. It is the responsibility of the local government or group to submit specific documentation to GA EPD including a description of the improvement project, its location and the date of implementation along with the water quality data supporting the assertion that the project has succeeded.

IV. Data Collection – Areas of Focus

GA EPD used data collected from across the State to develop its 2014 305(b)/303(d) list of waters. GA EPD currently has monitoring staff located in four offices across the State (Atlanta, Cartersville, Brunswick and Tifton). By spreading its monitoring staff in different regions of the State, GA EPD is better able to monitor waters throughout the State each year. In addition, EPD receives data from other GA DNR Divisions such as Georgia's Wildlife Resources Division and Georgia's Coastal Resources Division. GA EPD also accepts data from outside groups as discussed in Part I and II of this document. This data may have been taken from anywhere in the State. Finally, GA EPD may conduct special projects. Data from these special projects can also be used for assessment purposes.

V. Data Rounding

When assessing State waters, GA EPD compares water quality data with their respective water quality criteria. Water quality data for a given parameter will be rounded to the same number of significant digits as the criterion for that parameter before the two are compared for the purpose of making listing determinations. Should it be necessary to perform mathematical operations with the data before comparison with the appropriate criterion (such as the calculation of an average of a number of data points), GA EPD will keep extra decimal places throughout the calculations and then round to the appropriate number of decimal places at the end. This practice prevents the propagation of rounding errors throughout the calculation.

VI. Assessment of Waters Using the 5-Part Categorization System

The U.S. EPA has strongly encouraged States to move to a five-part categorization of their waters. GA EPD first adopted the five-part categorization method with the 2008 305(b)/303(d) report. Assessed waters are placed into one or more of five categories as described below:

Category 1 – Data indicate that waters are meeting their designated use(s).
Category 2 – A water has more than one designated use and data indicate that at least one designated use is being met, but there is insufficient evidence to determine whether all uses are being met.
Category 3 – There is insufficient data/information to make a determination as to whether or not the designated use(s) is being met.
Category 4a – Data indicate that at least one designated use is not being met, but a TMDL(s) has been completed for the parameter(s) that is causing a water not to meet its use(s).
Category 4b - Data indicate that at least one designated use is not being met, but there are actions in place (other than a TMDL) which are predicted to lead to compliance with water quality standards.
Category 4c - Data indicate that at least one designated use is not being met, but the impairment is not caused by a pollutant.
Category 5 - Data indicate that at least one designated use is not being met and TMDL(s) need to be completed for one or more pollutants.

A waterbody will be assessed as supporting its designated use (Category 1); not supporting its use (Category 4 or 5); or use assessment pending (Category 2 or 3). It is possible for a water to be in category 4 and 5 at the same time if it is impaired by more than one pollutant. For instance, if a water were impaired for fecal coliform bacteria and dissolved oxygen and a TMDL had been completed only for dissolved oxygen, then the water will be placed in category 4a for dissolved oxygen and category 5 for fecal coliform bacteria.

VII. Assessment Methodology for Making Use Support Decisions (Listing/Delisting Strategies)

The following provides an outline of the assessment methodology employed during the 2014 Listing Cycle. The conditions under the header “listing” describe what data are needed to place a water on the “not supporting” list for a specific parameter. The conditions under the header “delisting” describe what data are needed to remove a specific parameter from the “not supporting” list. Generally, the data required to “delist” a parameter are the same as would be required to assess a water as “supporting” its use for the parameter in question. The methodology below also describes a number of situations which would result in a water being placed in Category 3 “assessment pending”.

A “preferred minimum data set” is provided for a number of the parameters below. If the quantity of data available is less than the “preferred minimum set”, GA EPD will use best professional judgment to determine if there are sufficient data available to make an assessment of use support or if the water body should be placed in Category 3 until more data are collected. Best Professional Judgment will also be used in cases where data were determined to be suspect.

A. Fecal Coliform Bacteria: Preferred minimum data set – 4 geometric means (2 collected in winter months and 2 in summer months). Each geometric mean consisted of at least 3 samples collected in a 30-day period.
    1. Listing –
        a. One year of available data (Geometric Mean):

1. Water bodies were determined not to be supporting their use designation if more than 10% of the geometric means exceeded water quality criteria.

b. Multiple consecutive years of available data (Geometric Mean):
   1. Water bodies were determined not to be supporting use designation if (a) more than 10% of the geometric means exceeded water quality criteria or (b) if 10% of the geometric means exceeded water quality criteria and one or more winter maximum violations occurred in the 30 day data set(s) where the geometric mean met water quality criteria.

c. Single Sample Data: In the absence of sufficient data in a data set to calculate a geometric mean, the USEPA's Listing Guidance may have been used to assess bacterial data as described below. GA EPD used its best professional judgment when determining whether to use the single sample data to make a use assessment or to place the water in Category 3 until sufficient data could be collected for use determination. Some factors in making this determination were the size of the data set, the time of year samples were collected, the consistency of the data (i.e. were most of the samples well over the single sample criteria), etc. If it was determined that the single sample data were sufficient for making a use determination:
   1. Water bodies were determined not to be supporting use designation if more than 10% of the single samples exceeded the USEPA's recommended review criteria for bacteria of 400/100 mL during the months of May-October, and 4,000/100 mL during the months of November-April with the exception of waters classified as "Recreation" where the review criteria are 400/100 mL January-December.

d. Waters within "shellfish growing areas": Georgia's Coastal Resources Division (CRD) designates certain waters of the State as being shellfish growing areas. CRD designates shellfish harvesting areas within the growing areas. CRD monitors these waters for fecal coliform contamination in accordance with FDA requirements. A geometric mean using the most recent 30 data points was calculated and this mean was compared against FDA's criterion of 14 MPN. In addition, the 90th percentile of the 30 samples was calculated and compared with FDA's criteria of (43 MPN/100 ml for a five tube decimal dilution test; 49 MPN/100 ml for a three tube decimal dilution test or 31 CFU/100 ml for a MF (mTEC) test).
   1. Water bodies were determined not to be supporting their designated use if the geometric mean of the most recent 30 samples was greater than 14 MPN or if the 90th percentile exceeded the values provided above based upon the testing method used.

2. Delisting –
   a. One year of available data:
      1. Waters were eligible for delisting for fecal coliform if 10% or less of the geometric means exceeded the water quality criteria. If fewer than 4 geometric means were available for assessment, GA EPD may have considered a water eligible for delisting if there were at least two summer geometric means available for assessment and they complied with the water quality criteria.
   b. Multiple consecutive years of available data:

1. Waters were eligible for delisting for fecal coliform bacteria if 10% or fewer of the geometric means exceeded water quality criteria.

c. Single Sample Data: Single sample data are typically not be used for delisting purposes as the preferred data set would include the ability to calculate geometric means. However, GA EPD may consider using single sample data for delisting using best professional judgment. Some factors to be taken into consideration would be the size of the data set, the time of year samples the water had been taken and/or whether the original "not supporting" designation was based on single sample data or geometric means. If it was determined that the single sample data were sufficient for making a use determination:
   1. Water bodies were eligible for delisting for fecal coliform if 10% or fewer of the single samples exceeded the USEPA's recommended review criteria for bacteria of 400/100 mL during the months of May-October, and 4,000/100 mL during the months of November-April with the exception of waters classified as "Recreation" where the review criteria are 400/100 mL January-December.

d. Waters within "shellfish growing areas"
   1. Waters were eligible for delisting for fecal coliform bacteria if the geometric mean of the last 30 data points was less than or equal to 14 MPN and the 90^{th} percentile of the last 30 data points did not exceed the values provided above based upon the testing method used.

B. Dissolved Oxygen (DO), pH, Water Temperature: preferred minimum data set - 12 samples in a 12 month period with 1 or 2 samples collected per month
   1. Listing* –
      a. Dissolved Oxygen - One year of available data or multiple consecutive years of available data:
         1. Water bodies were determined not to be supporting use designation if more than 10% of the data did not meet the water quality criteria
         2. In the case where the DO criteria was not met more than 10% of the time, but where a "natural" dissolved oxygen concentration has been established, then the dissolved oxygen data were compared against the established "natural" dissolved oxygen concentration. If any of the data points were less than the "natural" dissolved oxygen concentration, then the water was determined not to be supporting its designated use. If none of the DO data was less than the "natural" DO, then the water was determined to be "supporting" its use (as far as DO was concerned).
      b. Water Temperature, pH - One year or multiple consecutive years of available data:
         1. Water bodies were determined not to be supporting use designation if more than 10% of the data did not meet water quality criteria.

   * Chapter 391-3-6-.03(7) of the Rules and Regulations for Water Quality Control recognizes that some waters of the State "naturally" will not meet the instream criteria in the Rules and that this situation does not constitute a violation of water quality standards. Many waters in Georgia, specifically areas in South Georgia and near the Coast, have "natural" dissolved oxygen concentrations below the State's standard dissolved oxygen criteria (daily average of 5.0 mg/l and an instantaneous minimum of 4.0 mg/l). If a water body does not meet the DO criteria more than 10% of the time and the water body is located in an area of the State where it is anticipated that the low

dissolved oxygen condition is natural, then EPD will place the water in Category 3 until work is completed which establishes the "natural" dissolved oxygen concentration for the water body. The measured dissolved oxygen data will then be compared with the "natural" dissolved oxygen concentration and an assessment will be made as to whether the water body is meeting its use.

Georgia also has many blackwater streams. The pH of blackwater streams is naturally low. If a water has been identified as a blackwater stream, then it will not be listed as impaired if greater than 10% of the pH measurements are less than minimum pH criterion of 6.0 as long as there are not point source or land use issues that may be contributing to the low pH status of the stream.

2. Delisting –
   a. Dissolved Oxygen - One year or multiple consecutive years of available data:
      1. Waters were eligible for delisting for DO if 10% or less of the data was lower than the water quality criteria.
      2. In the case where the DO criteria is not met more than 10% of the time, but where a "natural" dissolved oxygen concentration has been established, the instream DO data will be compared against the "natural" DO. If no violations of the natural dissolved oxygen concentration occurred, the segment would be eligible for delisting.
   b. Water Temperature, pH - One year or multiple consecutive years of available data:
      1. Waters were eligible for delisting for temperature or pH if 10% or less of the data did not meet the water quality criteria.

C. Metals: preferred minimum data set – 2 samples in a 12 month period (1 winter, 1 summer)
   1. Listing –
      a. Waterbodies were determined not to be supporting use designation if one sample exceeded the acute criteria in a three-year period or if more than one sample exceeded the chronic criteria in three years.
   2. Delisting –
      a. Waters were eligible for delisting for metals if no exceedences of the acute criteria occurred and no more than one exceedence of the chronic criteria occurred in three years.

D. Priority Pollutant/Organic Chemicals: preferred minimum data set – 2 samples in a 12 month period (1 winter, 1 summer)
   1. Listing –
      a. Waterbodies were determined not to be supporting use designation if more than one sample exceeded the criteria in a three-year period.
   2. Delisting –
      a. Waters were eligible for delisting for priority pollutants/organic chemicals if no more than one exceedence of the criteria occurred in a three-year period.

E. Toxicity:
   1. Listing –

a. Acute or Chronic toxicity tests conducted on municipal or industrial effluent samples and receiving waters – Waterbodies were determined not to be supporting use designation if:
    1. Effluent toxicity test(s) consistently predicted in-stream toxicity at critical 7Q10 low stream flow and/or if toxicity tests performed on receiving waters consistently indicated that the water is toxic.
2. Delisting –
    a. New data with a facility consistently passing WET test(s) (if listing originated based on effluent toxicity test results) will be eligible for delisting.
    b. New data with receiving waters consistently passing toxicity test(s) (if listing originated based on stream toxicity test results) will be eligible for delisting.

F. Fish/Shellfish Consumption Guidelines:
1. Listing –
    a. All Fish/Shellfish Tissue Contaminants Except Mercury:
        1. Waterbodies are determined not to be supporting use designation if the State's fish consumption guidelines document recommends that consumption needs to be limited or if no consumption is recommended.
    b. Fish/Shellfish Tissue - Mercury:
        1. Waterbodies were determined not to be supporting their use designation if the Trophic-Weighted Residue Value (as described in the October 19, 2001 GA EPD "Protocol"), was in excess of Georgia's water quality criterion of 0.3 mg/kg wet weight mercury. Waters where the calculated Trophic-Weighted Residue Value for mercury is equal to 0.3 mg/kg wet weight total were put in Category 3.
2. Delisting –
    a. All Fish/Shellfish Tissue Contaminants Except Mercury:
        1. Waters were eligible for delisting if there are no consumption restrictions and fish/shellfish can be consumed in unlimited amounts.
    b. Fish/Shellfish Tissue - Mercury:
        1. Waters were eligible for delisting if the calculated Trophic-Weighted Residue Values for mercury in fish tissue was less than or equal to 0.3 mg/kg wet weight total. Waters where the calculated Trophic-Weighted Residue Value for mercury was equal to 0.3 mg/kg wet weight total were put in Category 3.

G. Biotic Data (Fish Bioassessments):
1. Listing –Fish Bioassessments were based on Fish Index of Biotic Integrity (IBI) data. Water bodies were determined not to be supporting use designation if:
    a. The IBI ranking was "Poor" or "Very Poor";
2. Delisting –
    a. Waters were eligible for delisting if the water had a Fish IBI rank of "Excellent", "Good", or "Fair"

H. Biotic Data (Macroinvertebrate Bioassessments):
1. Listing –Benthic Macroinvertebrate Bioassessments based on a multi-metric index.

a. Water bodies were determined not to be supporting use designation if the narrative rankings were “Poor” or “Very Poor”.
b. If the narrative ranking was “Fair”, then the water was placed in Category 3.

2. Delisting –
   a. Water bodies were eligible for delisting if the water scored a narrative ranking of “Very Good” or “Good”. If a water scored “Fair”, it was placed in Category 3.

I. Data from Lakes with Site-Specific Criteria:
Site-specific numeric criteria have been established for 6 major lakes in Georgia including 1) West Point Lake, 2) Lake Walter F. George, 3) Lake Jackson, 4) Lake Allatoona, 5) Lake Sidney Lanier and 6) Carters Lake. These lakes are monitored annually and assessed for these parameters as described below:

1. Listing –
   a. Chlorophyll *a* (lake stations): The last five calendar years of chlorophyll *a* data collected at each site-specific lake criteria station were assessed.
      1. If during the five-year assessment period, the growing season average exceeded the site-specific growing season criteria 2 (or more) out of the 5 years, the lake area representative for that station was assessed as not supporting designated uses. If the average exceeded the site-specific growing season criteria for 1 out of 5 years, the water was placed in Category 3.
   b. Total Nitrogen (lake stations): The last five calendar years of total nitrogen concentrations collected at each site-specific lake criteria station were assessed.
      1. For Lakes other than Lake Allatoona: If greater than 10% of the total nitrogen values exceeded the site-specific criteria, the lake area representative for that station was assessed as not supporting designated uses.
      2. For Lake Allatoona: A growing season average for each of the last five years was calculated for each site-specific lake criteria station. If any of the five growing season averages exceeded the criterion, then the lake area that is represented by that station was assessed as not supporting designated uses.
   c. Fecal Coliform: Typically only single sample data were available for evaluation. The data from the last 5 years were evaluated. If there were sufficient data to calculate a geometric mean, the procedures in Part VII.A.1. of this document was followed.
      1. Water bodies were determined not to be supporting their use designation if more than 10% of the single samples exceeded the USEPA’s recommended review criteria for bacteria of 400/100 mL.
   d. Dissolved Oxygen, pH, Water Temperature: The last five calendar years of available data were assessed.
      1. Water bodies were determined not to be supporting use designation if more than 10% of the data did not meet water quality criteria
   e. Major Lake Tributary Annual Total Phosphorous Loading Criteria: Annual total phosphorous loadings for each major lake tributary standard station were calculated for each of the last five calendar years.
      1. If the average of the annual total phosphorous loadings exceeded the site-specific criteria, the site was assessed as not supporting designated uses.

f. Major Lake Annual Total Phosphorous Loading Criteria: The annual total phosphorus loading for each lake was calculated for each of the last five calendar years.
   1. If the average of the annual total phosphorous loadings exceeded the site-specific criteria, the site was assessed as not supporting designated uses.

2. Delisting –
   a. Chlorophyll *a* (lake stations): The last five calendar years of chlorophyll *a* data collected at each site-specific lake standard station were assessed.
      1. If during the five-year assessment period, there were no chlorophyll *a* growing season averages exceeding the site-specific growing season criteria, the lake area representative for that station was eligible for delisting. If the average exceeded the site-specific growing season criteria for 1 out of 5 years, the water was placed in Category 3.
   b. Total Nitrogen (lake stations): The last five calendar years of total nitrogen concentrations collected at each site-specific lake standard station were assessed.
      1. For Lakes other than Lake Allatoona: If 10% or less of the total nitrogen values exceeded the site-specific criteria, the lake area representative for that station was eligible for delisting.
      2. For Lake Allatoona: A growing season average for each of the last five years was calculated for each site-specific lake criteria station. If none of the five growing season averages exceeded the criterion, then the lake area that is represented by that station was eligible for delisting.
   c. Fecal Coliform: Typically only single sample data were available for evaluation. The data from the last 5 years were assessed. (If there were sufficient data to calculate a geometric mean, the procedures in Part VII.A.2. of this document were followed).
      1. If 10% or less of the single samples exceeded the USEPA's recommended review criteria for bacteria of 400/100 mL then the water was eligible for delisting.
   d. Dissolved Oxygen, pH, Water Temperature: The last five calendar years of available data were assessed.
      1. If 10% or less of the data did not meet water quality criteria, the water was eligible for delisting.
   e. Major Lake Tributary Annual Total Phosphorous Loading Criteria: Annual total phosphorous loadings for each major lake tributary standard station were calculated for each of the last five calendar years.
      1. If the average of the annual total phosphorous loadings did not exceed the site-specific criteria then the site was eligible for delisting.
   f. Major Lake Annual Total Phosphorous Loading Criteria: The annual total phosphorus loading for each lake was calculated for each of the last five calendar years.
      1. If the average of the annual total phosphorous loadings did not exceed the site-specific criteria then the site was eligible for delisting.

J. Enterococci Data Collected under the BEACH Act: Preferred minimum data set – 10 geometric means. Each geometric mean is to consist of at least 3 samples collected in a 30 day period. If there is insufficient data (such as when data is collected monthly), then a longer averaging period (recreational season instead of 30 days) was used to calculate a single geometric mean per year. Beaches

are sampled at different frequencies depending upon how many people use them for recreation and their proximity to potential pollution sources. Beaches are sampled either weekly year round or monthly from April to October

1. Listing –
    a. Monthly Samples: An annual geometric mean was calculated for each year using Enterococci data from the Recreational Season (May – October).
        1. If there were five consecutive years of annual geometric means available for assessment, a beach was assessed as not supporting its use designation if more than one annual geometric mean exceeded the criterion (35/100 mL). If there were fewer than five consecutive years of data available for assessment, a beach was assessed as not supporting its use designation if at least one annual geometric mean exceeded the criterion.
    b. Weekly Samples: Rolling geometric means were calculated using data from all months (not just the Recreational Season) from the last 5 years. Each geometric mean consists of at least 3 samples taken in a 30-day period.
        1. Beaches were determined not to be supporting their designated use if more than 10% of the geometric means exceeded the criterion.
    c. Mixture of Monthly and Weekly Samples
        1. If during the last five years, data were collected monthly some years and weekly other years, then GA EPD assessed each data type separately as described above. If both the monthly and weekly data types indicate that a beach is not in compliance with the Enterococci criterion as described above, then the beach was assessed as not supporting its use. If the monthly and weekly data types support different listing decisions, then GA EPD used its best professional judgment in making the listing determination. Generally, more weight was placed on the weekly data and on the most recent data set.
2. Delisting –
    a. Monthly Samples: An annual geometric mean was calculated for each year using Enterococci data from the Recreational Season (May – October).
        1. If there were five consecutive years of annual geometric means available for assessment and one or fewer annual geometric means exceeded the criterion, the beach was eligible for delisting. If there were fewer than five consecutive years of data available for assessment, a beach was be eligible for delisting if none of the annual geometric means exceeded the criterion.
    b. Weekly Samples: Rolling geometric means were calculated using data from all months (not just the Recreational Season) from the last five years. Each geometric mean consists of at least 3 samples taken in a 30-day period.
        1. If 10% or less of the geometric means exceeded the criterion, the beach was eligible for delisting.
    c. Mixture of Monthly and Weekly Samples
        1. If during the last five years, data were collected monthly some years and weekly other years, then GA EPD assessed each data type separately as described above. If both the monthly and weekly data types indicated that a beach is in compliance with the Enterococci

criterion as described above, then the beach was eligible for delisting.

K. Objectionable Algae (Nutrients)
   1. Listing –
      a. A water was listed for objectionable algae based upon visual observation of excessive algae, duckweed, or other aquatic plant life by field staff along with other factors including high concentrations of nutrients in the water compared with other waters in the same river basin and diurnal DO and pH swings indicative of high algae or plant activity (higher DO and pH later in the day and lower DO in the early morning).
   2. Delisting –
      a. A water would be considered for delisting for objectionable algae if visual observation by field staff revealed that algae, duckweed, or other aquatic plant life was no longer excessive compared to other streams in the area and the DO, pH, and nutrient data were at levels that no longer indicated a problem with excessive algae/plant life.

VIII. Priorities for Action

Section 303(d)(1) of the Clean Water Act requires each state to "establish a priority ranking" for the segments it identifies on the 303(d) list (i.e. those waters in Category 5). This ranking is to take into account the severity of the pollution and the uses to be made of such segments. The State is to establish TMDLs in accordance with the priority ranking. States are given considerable flexibility in establishing their ranking system. Georgia typically uses a basin rotation approach when it comes to drafting TMDLs. There are some cases where GA EPD may choose to draft a TMDL outside of the basin rotation schedule. Factors influencing this decision could include the severity of the pollution and whether development of the TMDL may require additional data collection and complex analysis. TMDLs are typically finalized sometime during the year after they are proposed. GA EPD has chosen to implement the priority ranking by indicating the year by which the TMDL for each segment on the 303(d) list will be drafted. TMDLs may be drafted before the year indicated in the report.

All dates provided are within the 13-year timeframe that is allowed for TMDL development as provided in the US EPA 1997 Interpretative Guidance for the TMDL Program. This guidance states that States should develop schedules for establishing TMDLs expeditiously, generally within 8-13 years of being listed.

Data Source Code/ Key for Abbreviations

Data Source

1 = DNR-EPD, Watershed Planning & Monitoring Program
2 = DNR-EPD, Permitting Comp. & Enf. Program (Municipal)
3 = DNR-EPD, Permitting Comp. & Enf. Program (Industrial)
4 = DNR, Wildlife Resources Division
5 = DNR, Coastal Resources Division
6 = State University of West Georgia
7 = Gainesville College
8 = Georgia Institute of Technology
9 = U.S. Environmental Protection Agency
10 = U.S. Geological Survey
11 = U.S. Army Corps of Engineers
12 = U.S. Forest Service
13 = Tennessee Valley Authority
14 = Cobb County
15 = Dekalb County
16 = Douglas County Water & Sewer Authority
17 = Fulton County
18 = Gwinnett County
19 = City of Clayton
20 = City of Gainesville
21 = City of LaGrange
22 = Georgia Mountains R.D.C.
23 = City of Conyers
24 = Lake Allatoona (Kennesaw State University)
25 = Lake Blackshear (Lake Blackshear Watershed Association)
26 = Lake Lanier (University of Georgia)
27 = West Point (LaGrange College/ Auburn University)
28 = Georgia Power Company
29 = Oglethorpe Power Company
30 = South Carolina Electric & Gas Company
31 = South Carolina DHEC
32 = Jones Ecological Research Center
33 = Alabama DEM
34 = City of College Park
35 = Kennesaw State University
36 = University of Georgia
37 = Columbus Water Works
38 = Columbus Unified Government
39 = St. Johns River Water Mgmt. District
40 = Town of Trion
41 = Cherokee County
42 = Clayton County Water Authority
43 = City of Atlanta
44 = City of Cartersville
45 = Georgia Ports Authority
46 = Chattahoochee/Flint RDC
47 = Upper Etowah Adopt-A-Stream
48 = Middle Flint RDC
49 = Central Savannah RDC
50 = Chatham County
51 = City of Savannah
52 = Heart of Georgia RDC
53 = City of Augusta
54 = Southwire Company
55 = DNR-EPD, Brunswick Coastal District
56 = DNR-EPD, Hazardous Waste Mgmt. Branch
57 = Ellijay High School
58 = DNR, Georgia Parks Recreation & Historic Sites Division
59 = DNR-EPD, Ambient Monitoring Unit (Macroinvertebrate Team)
60 = Forsyth County
61 = Tyson Foods, Inc.
62 = South Georgia RDC
63 = Northeast GA RDC
64 = Ogeechee Canoochee Riverkeeper
65 = Screven County
66 = Coastal GA RDC
67 = City of Roswell
68 = City of Alpharetta
69 = Columbia County
70 = Southwest GA RDC
71 = Southeast GA RDC
72 = Coweta County
73 = Middle GA RDC
74 = Bartow County
75 = Atlanta Regional Commission
76 = Soquee River Watershed Partnership
77 = Upper Chattahoochee Riverkeeper
78 = Henry County

Note: The above is a list of all historical data sources. All sources were not necessarily used in compilation of the 2014 list.

Criterion Violated Codes		Potential Cause Codes	
As	= Arsenic	CSO	= Combined Sewer Overflow
Algae	= Objectionable Algae	I1	= Industrial Facility
Bio F	= Biota Impacted (Fish Community)	I2	= Residual from Industrial Source
Bio M	= Biota Impacted (Macroinvertebrate Community)	M	= Municipal Facility
Cd	= Cadmium	NP	= Nonpoint Sources/Unknown Sources
Cu	= Copper	UR	= Urban Runoff/Urban Effects
1,1-DCE	= 1,1- Dichloroethylene		
DO	= Dissolved Oxygen		
CFB	= Commercial Fishing Ban		
FC	= Fecal Coliform Bacteria		
FCG	= Fish Consumption Guidance		
Hg	= Mercury		
P	= Phosphorus		
Pb	= Lead		
PCE	= Tetrachloroethylene		
SB	= Shellfishing Ban*		
Se	= Selenium		
Temp	= Temperature		
TCA	= 1,1,2 - Trichloroethane		
TCE	= Trichloroethylene		
Tox	= Toxicity Indicated		
TWR	= Trophic-Weighted Residue Value of mercury in fish tissue exceeding the EPD human health standard of 0.3 mg/kg		
Zn	= Zinc		

* Shellfishing Ban (SB) is listed as an impairment for waters where shellfish should not be harvested/eaten due to concerns about pollutant contamination. It is important to note that public and commercial shellfishing in coastal waters is only permissible in designated “Approved Harvest Areas” throughout the coastal region. Shellfish growing area waters are monitored regularly to ensure that these areas remain in compliance with the FDA fecal coliform thresholds. All other waters of the state are classified as "Prohibited", and are closed to the taking of shellfish. Georgia’s Coastal Resources Division maintains a list of approved public shellfishing areas which can be found at the following website:http://crd.dnr.state.ga.us/content/displaycontent.asp?txtDocument=299