

2008 FINAL New Jersey Integrated Water Quality Monitoring and Assessment Report

July 2009

The New Jersey Department of Environmental Protection (Department) has assessed the quality of the State's water resources. The data used in this report was primarily collected between 2002 and 2006. The results have been compiled in the 2008 **Integrated Report**. The full report is available on the Department's Web site at http://www.state.nj.us/dep/wms/bwqsa/2008_integrated_report.htm.

Designated Uses of New Jersey Surface Waters:

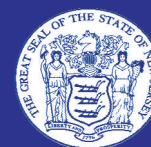
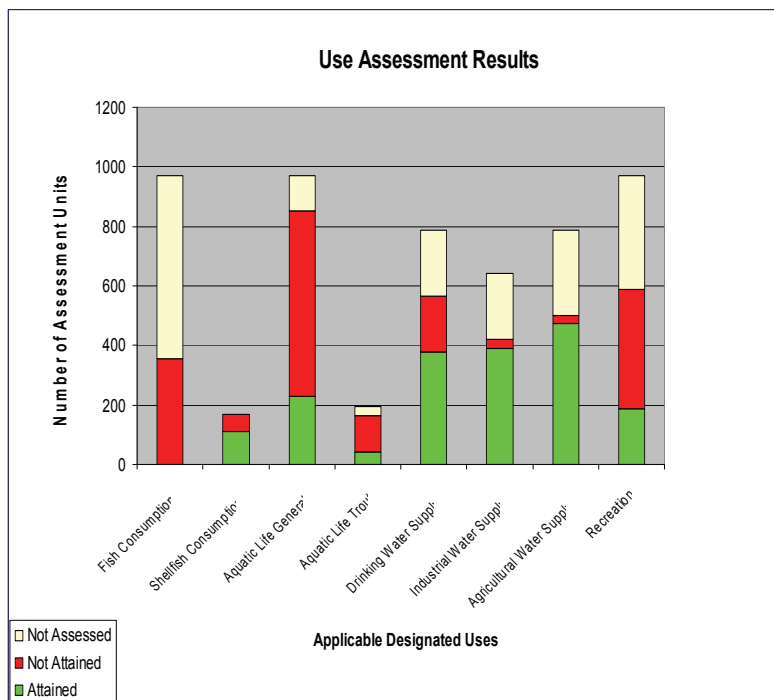
- Fish Consumption
- Shellfish Harvest for Consumption
- Aquatic Life-General
- Aquatic Life-Trout
- Drinking Water Supply
- Industrial Water Supply
- Agricultural Water Supply
- Recreation

New Jersey waters are designated for one or more of the above uses in the **Surface Water Quality Standards (SWQS)** at N.J.A.C. 7:9B. **Water quality criteria** have been adopted as part of the SWQS to protect the designates uses. The Department assesses water quality based on compliance with SWQS to determine attainment of the designates uses. Not all waters are designated for all uses and not all uses are assessed to the same extent. The Integrated Water Quality Monitoring and Assessment Methods Document accompanies the Integrated Report and includes a description of the quality assurance requirements for all data assessed, as well as the rationale for the assessment process.

Assessment Units: The assessment units used for the 2008 Integrated Report are the U.S. Geological Survey Hydrologic Unit Code (HUC) 14 subwatersheds and the Delaware River Basin Commission's zones for the Delaware River. There are 950 HUC 14 subwatersheds and 20 Delaware River Zones in New Jersey, for a total of 970 assessment units, which average 8.5 square miles in size. For easier reading, this fact sheet refers to all assessment units as subwatersheds.

The **2008 Integrated List of Waters** identifies use assessment results for all subwatersheds based on five categories called "sublists". Subwatersheds are assigned to Sublist 1 if all applicable uses are attained, to Sublist 2 for each individual use attained, to Sublist 3 for each use that is not assessed, to Sublist 4 for each use that is not attained but is already addressed by an adopted **Total Maximum Daily Load (TMDL)**, and to Sublist 5 for each use that is not attained and requires a TMDL. Sublist 5 is used to generate the List of Water Quality Limited Waters (303(d) List).

The **2008 303(d) List** identifies subwatersheds that are not attaining their designated uses, the pollutants causing non-attainment, and priority ranking for TMDL development. The 2008 303(d) List identified 41 pollutants and 2,304 subwatershed/pollutant combinations.



2008 Integrated Report Assessment Results:

- ◆ Most (94%) of the State's waters were assessed for at least one designated use - a 50% increase from the 2006 Integrated Report. Almost 50% of the State's waters were assessed for all designated uses except fish consumption. Eighteen percent (18%) were fully assessed for all designated uses including fish consumption.
- ◆ The number of subwatersheds attaining all designated uses (except fish consumption) increased from 24 to 37 between 2006 and 2008.
- ◆ Only 37% of the State's waters were assessed for the **fish consumption use (FC)**. None of the assessed waters attained the use due to fish consumption advisories, which are based on the presence of mercury, PCBs, cyanide, or pesticides (DDx, dieldrin, chlordane, and dioxin) in fish tissue and comprise almost 50% of the 2008 303(d) List. However, data indicate that PCB levels in fish tissue are declining since the 1979 ban on PCB manufacturing.
- ◆ All (100%) shellfish classified waters were assessed and 65% attained the unrestricted **shellfish harvest for consumption use**. The remaining 35% of shellfish waters include waters classified as prohibited, seasonal, or special restricted. TMDLs have been established for 75% of shellfish waters listed as not attaining the shellfish harvest for consumption use.
- ◆ Over 85% of the State's waters were assessed for **general aquatic life use (AL)** and almost 30% of assessed waters attained the use. In most waters where the use was not attained, biota were impaired but a specific pollutant was not identified as the cause. These waters are listed as "Cause Unknown" on the 2008 303(d) List. Where pollutants were identified as the cause of non-attainment, the most common were phosphorus, dissolved oxygen, and pH.
- ◆ Almost 85% of the State's waters were assessed for **trout aquatic life use** and over 25% of assessed waters attained the use. Non-attainment was most frequently caused by temperature too warm for trout.
- ◆ Over 70% of applicable waters were assessed for the **drinking water supply use (DW)** and almost 70% of assessed waters attained the use. Most of the waters listed as not attaining the use do not have water intakes and are not used for drinking water purposes. Arsenic is the leading pollutant causing non-attainment of the drinking water supply use; however, all finished water obtained from surface waters and used for drinking water supplies meets the Safe Drinking Water Standard for arsenic. Over 60% of applicable waters were assessed for **industrial and agricultural water supply uses** and the use was attained in over 90% of waters assessed for each of these uses.
- ◆ Sixty percent (60%) of the applicable waters were assessed for **recreational uses (REC)** and over 30% of assessed waters attained the use. TMDLs have been established for 80% of the waters not attaining recreational uses. All ocean beaches were assessed and are fully swimmable, with the exception of four beaches in Spring Lake and Sea Girt, which are automatically closed for 24 hours after rainfalls greater than 0.1 inch, for 48 hours after rainfalls greater than 2.8 inches within a 24-hour period, or for any visible discharge from Wreck Pond's ocean outfall.

NJ Water Facts

Rivers and Streams	18,126 miles
Lakes, Ponds, & Reservoirs	52,804 acres
Coastline	127 linear miles
Bays and Estuaries	260 sq. miles

Top 10 Pollutants on the 2008 303(d) List

Parameter	# of Listings	Use
PCB	255	FC
mercury	254	FC
Cause Unknown	189	AL
Arsenic	154	DW
Phosphorus	143	AL
DO	141	AL
DDx (DDD, DDE, DDT)	137 each	FC
pH	121	AL
Chlordane	77	FC
Temperature	69	AL

Additional monitoring is needed in 85% of assessment units to assess all uses. This information is vital to determine the causes and sources of non-attainment so that appropriate restoration measures can be taken to ultimately meet the Clean Water Act goal of 100% fishable and swimmable waters throughout the State of New Jersey.