Ambient Surface Water Quality Monitoring Network (ASWMN)

The Ambient Surface Water Quality Monitoring Network is a cooperative DEP/USGS program, established in the mid-1970's. A major redesign of the network occurred in 1997. The revised network was specifically designed to address surface water quality issues in each of the state's 20 watershed management areas addressing the following objectives: (1) track status and trends in ambient water quality; (2) establish background water quality; (3) obtain water quality data that can be correlated with specific land uses (urban/suburban, agricultural and undeveloped); and (4) coordinate water chemistry and biological monitoring networks. A second major revision occurred in 2005 with the addition of 100 additional monitoring stations to improve statewide spatial coverage for the network. These 100 additional stations are sampled for water quality by DEP and for flow by USGS.

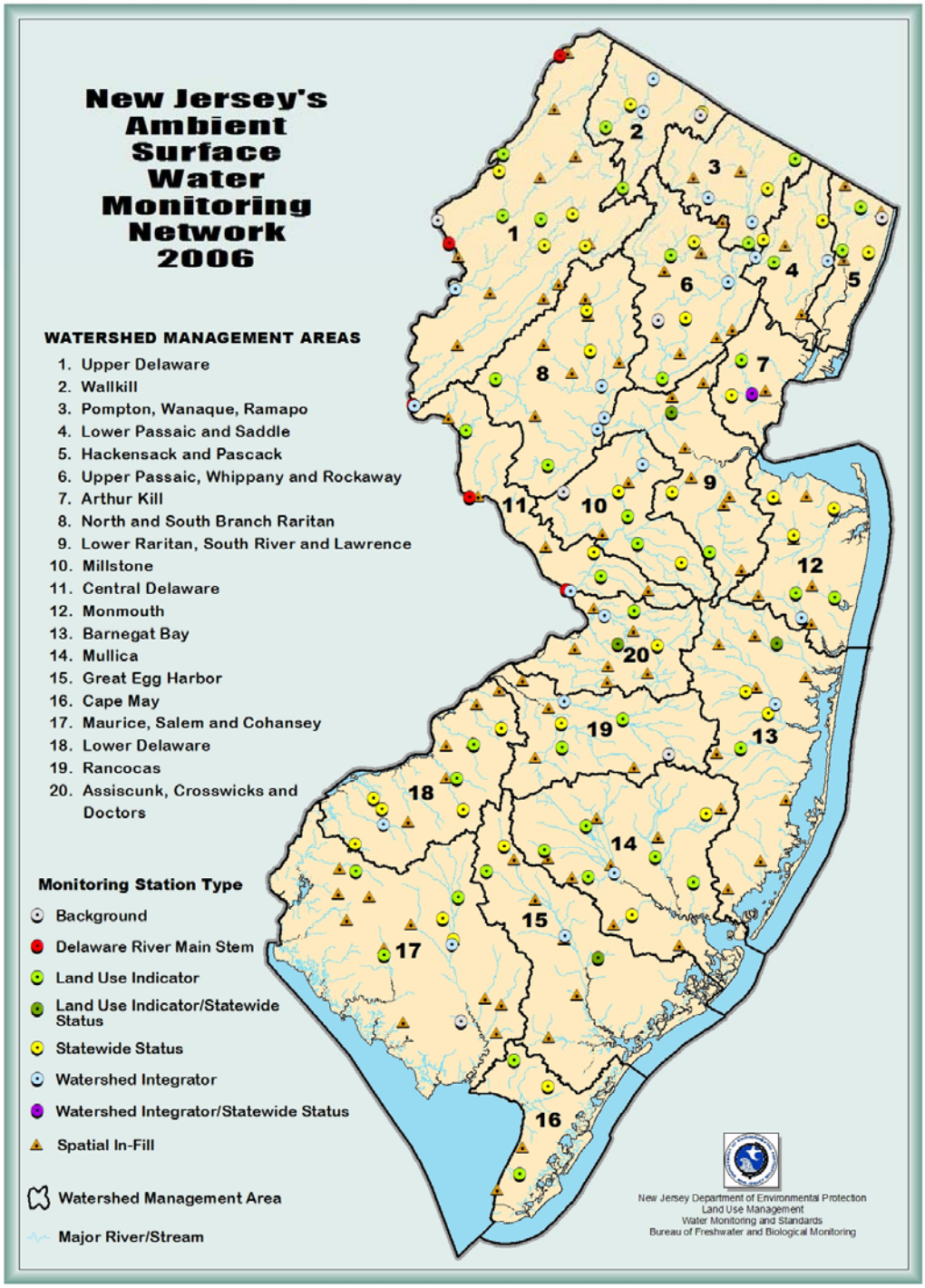
The network is comprised of 5 station types: (1) *background / reference sites* – waterways located in undeveloped watersheds (generally county, state or federal parks and forests), (2) *land use indicator sites* – waterways which reflect a dominate land use (urban / suburban, agricultural or undeveloped) within a watershed management area, (3) *watershed integrator sites* – waterways which reflect large drainage areas and multiple pollution sources, (4) *statewide status sites* – sites randomly reselected every two years from DEP's 829 station biological (macroinvertebrate – AMNET) network and (5) *spatial infill sites* - sites added in 2005 to provide a minimum of one site in each HUC (Hydrologic Unit Code) 11. These sites were selected from a group of stations formerly referred to as the "Supplemental Network". The overall ASWMN consists of 215 stations that are sampled quarterly.

Parameters monitored:
Monitored quarterly – discharge (except at statewide status sites), field parameters, filtered common ions, total and filtered nutrients, suspended solids and BOD

Monitored biannually – metals (spring – high flow and summer – low flow)

Monitored annually at selected sites – bacterial parameters (5 times in 30 days), diurnal DO, pesticides, sediment metals, sediment nutrients and sediment polyaromatic hydrocarbons.

The data collected via this Network are used in assessments for the New Jersey Integrated Water Quality Monitoring and Assessment Report (formerly referred to as the 305(b) Water Quality Inventory Report and the 305 (d) Impaired Waterbodies List). Network data are available from the following: (1) the USGS computerized data system, NWIS (http://nj.usgs.gov), (2) EPA's computerized data system, STORET (http://www.epa.gov/storet/dbtop.html) and (3) USGS annual reports " Water Resources data – New Jersey". Additional information on this monitoring network is available from the Bureau of Freshwater & Biological Monitoring's webpage (www.state.nj.us/dep/wmm/bfbm).


New Jersey's Ambient Surface Water Monitoring Network 2006
WATERSHED MANAGEMENT AREAS
1. Upper Delaware
2. Wallkill
3. Pompton, Wanaque, Ramapo
4. Lower Passaic and Saddle
5. Hackensack and Pascack
6. Upper Passaic, Whippany and Rockaway
7. Arthur Kill
8. North and South Branch Raritan
9. Lower Raritan, South River and Lawrence
10. Millstone
11. Central Delaware
12. Monmouth
13. Barnegat Bay
14. Mullica
15. Great Egg Harbor
16. Cape May
17. Maurice, Salem and Cohansey
18. Lower Delaware
19. Rancocas
20. Assiscunk, Crosswicks and Doctors
Monitoring Station Type
Background
Delaware River Main Stem
Land Use Indicator
Land Use Indicator/Statewide Status
Statewide Status
Watershed Integrator
Watershed Integrator/Statewide Status
Spatial In-Fill
Watershed Management Area
Major River/Stream
New Jersey Department of Environmental Protection
Land Use Management
Water Monitoring and Standards
Bureau of Freshwater and Biological Monitoring