

## GROUNDWATER QUANTITY: WATER WITHDRAWAL CAPS FOR NASSAU COUNTY

### Background:

In 1986 Commission-introduced law was enacted which, among other groundwater protection measures, required the DEC to evaluate pumping limitations as part of a water supply management program. These measures were taken out of concern documented in a number of groundwater studies, that Long Island's aquifers are experiencing serious water quantity stress due to widespread overpumping and contamination of groundwater.

As the agency responsible by law for issuing groundwater withdrawal permits the DEC also has the authority to modify these permits. As the condition of the groundwater quantity changes, the DEC may modify these permits to adapt to such changes. Permits issued, reissued, or renewed after November 30, 1986 are valid for a period of ten years. Permits older than this date have an infinite life span unless the DEC determines to modify them.

Based on its policy and supported by the law, the DEC modified existing permits and imposed annual pumpage limits on 41 water suppliers in Nassau County. These limits were based on evidence from studies and data from United States Geological Survey (USGS), Environmental Protection Agency (EPA), Long Island Regional Planning Board and DEC.

Modifications made on the 41 water district's water supply permits include limitations on the maximum annual and five-year average pumpage from all wells, plus requirements to develop and implement a water conservation program. In addition, these suppliers are required to report pumpage on a monthly basis.

### Status of DEC Water Cap Program:

In January 1990 the DEC won a New York Supreme Court case filed by the Long Island Water Corporation. The judge ruled that the DEC's Water Cap Program is neither arbitrary nor capricious as claimed by the Long Island Water Corporation's Article 78 charge. The DEC hopes this ruling will aid them in similar legal challenges to the Cap Program.

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The Village of Bayville is currently awaiting a judicial hearing officer's report and decision based on the administrative hearing held in May 1989 on the modifications to their permits. The Village of Garden City's similar request was initiated on November 30, 1989 with the conducting of an issues conference. The

Commission has requested party status in this matter and has gone on the record in support of permit conditions that impose pumping limitations. The outcome of these actions may determine whether or not the DEC has legal standing to modify and impose caps when a village is already pumping below the cap.

Table 1 presents the comparison of 1989 pumpage with the annual and five year cap for each of the water districts.

The average daily pumpage during 1989 fell below the limits placed on the suppliers by the DEC. An average of 167.4 million gallons per day (mgd) was withdrawn from the Nassau County aquifer system by the 41 water suppliers. This may in part be a result of increased conservation measures by consumers. More likely however, it is probably a reflection of a year of higher than average rainfall. The Mineola rain station of the USGS recorded 36.4 inches of rain during the May-through-September irrigation season. When compared to recorded rainfall for the same seasons in 1988 and 1987, 19.3 inches and 17.2 inches respectively, the 1989 figures highlight the possible effect on the groundwater supply. (See Table 2)

#### Groundwater Quantity Recommendations:

1. A specific schedule is needed to ensure the timely development of specific criteria related to quantity issues of the region's water resources. Some parameters that need to be considered are: stream flow rates and start-of-flow points in specific streams; acceptable levels of surface ponds, lakes and otherwise unregulated freshwater wetlands; minimum and maximum acceptable rates of change, including warning levels when conditions approach but do not exceed acceptable limits. Similar parameters should be developed for determining the acceptable thickness of freshwater lenses in insular areas where the freshwater lens is completely underlaid by saltwater. The New York State Department of Health, Nassau County Departments of Health and Public Works, Suffolk County Department of Health Services and the New York City Department of Health and Environmental Protection would assist DEC in developing these parameters. Input should also be sought from other interested and affected agencies such as the United States Geological Survey and the Commission.
2. A system for integrating all of Long Island's data collection and management is needed. A comprehensive ground and surface water monitoring system should continue to be developed to determine where and whether regional or subregional groundwater depletion is occurring and if so, whether such an occurrence is accelerating, decelerating or stabilizing. As new monitoring information is produced, it should be incorporated

into existing groundwater research and modeling activities of the USGS, DEC, NYSDOH, and Nassau County Departments of Health and Public Works.

3. Since water conservation is apparently the primary technique being utilized to provide sufficient water supply, DEC should strictly enforce the pumpage limitations and conservation measures for Nassau County water supplies.
  4. The water suppliers, with the assistance of a DEC Water Conservation Manual, should pursue other conservation techniques in addition to sprinkling restrictions.
  5. All water suppliers should institute seasonal or increasing rate structures for residential and commercial/industrial customers.
  6. The numerous existing water conservation plans of the Nassau municipalities and water districts need to be summarized and the best of the measures should be integrated into all permits.
  7. Although the 41 water suppliers account for approximately 80% of the water withdrawn from Nassau County's aquifers, DEC should modify the permits of the wells accounting for the remaining 20% (industrial, commercial, public service) as soon as possible so that almost all water withdrawn has a pumpage cap thereby instituting conservation plans within all categories.
  8. A clear framework for water resource management activities is needed for Nassau County. Accordingly, the county should complete its work on updating a Master Water Plan and implement measures not already in place as soon as possible. In addition, the Nassau County Water Resources Board should be expanded in membership and scope to provide direction and a fresh perspective for water resource planning for Nassau County.
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