

FOR IMMEDIATE RELEASE: February 2, 2012 No. 8

## Statement from DEP Deputy Commissioner for Water Supply Paul Rush on the U.S. Geological Survey Report on Delaware Aqueduct

"In 2009, DEP commissioned the United States Geological Survey (USGS) to study the impact of the leaking Delaware Aqueduct on homeowners in Wawarsing. The preliminary report, a product of roughly two years of data collection and analysis, provides a much greater degree of insight into this issue that helps DEP better understand the aqueduct's contribution to water problems in Wawarsing.

"The report clearly states that precipitation and other seasonal effects have the largest influence on groundwater levels. The exceptionally high precipitation over the past decade, well documented by USGS in the report, is a significant factor in increased household flooding, especially during the study period. However, the report also confirms that the water elevation in some monitored wells in the vicinity of the tunnel rises and falls depending upon whether the Delaware Aqueduct is in service or shutdown—something that DEP has already said publicly. In terms of what is new, the report adds a useful layer of detail about the tunnel's direct impact on specific wells that was less known to date. This breakdown of the impact is divided into two categories: the impact on water levels in deep bedrock, and the impact on the soil above the bedrock but below the surface, also known as the unconsolidated aquifer.

"The impact on the bedrock aquifer shows that the leak changes groundwater levels from 1.5 to 12 feet throughout a study area that extends up to 7,000 feet north of the tunnel. This is somewhat expected since the bedrock in this area is composed predominantly of highly fractured limestone that readily transmits water—one of the reasons why the tunnel is leaking in the first place.

"How the leak affects the shallow aquifer in the soil above the bedrock is where the report adds the most new information, which helps us better understand the tunnel's role in local flooding and its possible impact on basements. Though seasonal effects, like precipitation, cause water level fluctuation between 3.5 to 6.5 feet each year, the report finds that the tunnel contributes anywhere from zero to 2.5 feet depending on the specific location. In terms of the impact on specific properties, the report indicates that residential areas in Wawarsing are less affected than non-populated areas, which show a greater impact.

"For example, the area where wells showed the greatest rise the maximum in elevation, 2.5 feet, is along Port Ben Road, a non-residential agricultural area. On the other hand, monitored wells near homes on Route 209 and Smith Road show relatively smaller impacts, anywhere from 1.2 inches to six inches of additional groundwater.

www.nyc.gov/dep

"The report also provides information regarding Lippman Park Lake, which did not show a change in water elevation based on the operation of the tunnel. Additionally, the report also documents an anomaly below ground at the lower portion of Smith Road extending to the Kelsey Lane area where underground water levels "do not respond to changes in (tunnel) pressure." How much this condition affects flood-prone homes in the vicinity is not immediately clear from the report.



USGS Report Figure 16

"We should note that not every well has yet provided data, so it is entirely possible that new information will become available that paints a somewhat different picture and we remain open to refining our thinking based on this.

"Beyond our immediate analysis, this report deserves a thoughtful review by DEP as well as feedback from the public. Following this, we will assess whether any additional funding is appropriate beyond the \$3.7 million that we have committed to help residents who choose to take advantage of the buyout program as well as \$642,000 in sump pumps, UV units and flood control assistance that DEP has previously provided the community. It is our hope that the new information in this preliminary report will better inform the Environmental Impact Statement for the project to repair the tunnel and facilitate faster and less contentious resolutions for the mostaffected property owners. DEP has said previously that where our infrastructure is affecting homeowners, we will seek to compensate them accordingly. For the long term, we continue to move forward as expeditiously as possible with our \$2.1 billion project to repair the Delaware Aqueduct, our top capital priority over the next decade." DEP manages the city's water supply, providing more than one billion gallons of water each day to more than nine million residents, including eight million in New York City, and residents of Ulster, Orange, Putnam and Westchester counties. This water comes from from the Catskill, Delaware, and Croton watersheds that extend more than 125 miles from the City, and the system comprises 19 reservoirs, three controlled lakes, and numerous tunnels and aqueducts. DEP employs nearly 6,000 employees, including more than 750 scientists, engineers, surveyors, watershed maintainers and others professionals in the upstate watershed. In addition to its \$49 million payroll and \$132 million in annual taxes paid in upstate counties, DEP has invested more than \$1.5 billion in watershed protection programs—including partnership organizations such as the Catskill Watershed Corporation and the Watershed Agricultural Council—that support sustainable farming practices, environmentally sensitive economic development, and local economic opportunity. In addition, DEP has a robust capital program with a planned \$13.2 billion in investments over the next 10 years that creates up to 3,000 construction-related jobs per year. For more information, visit www.nyc.gov/dep, like us on Facebook at www.facebook.com/nycwater, or follow us on Twitter at www.twitter.com/nycwater.

Contact: Farrell Sklerov (718) 595-6600