

**WATER AUTHORITY OF GREAT NECK NORTH
WATER CONSERVATION PLAN**

SECTION 2

2.0 Existing Conservation Regulations

As stated in Section 1, the Water Authority of Great Neck North in 1994 implemented one of the most aggressive water conservation programs on Long Island. The following list describes in detail the measures the Water Authority has implemented since 1994:

- A. **Irrigation:** A major component of the Water Authority’s comprehensive water conservation program is its outdoor landscape and lawn sprinkling rules and regulations. The regulations limit outdoor watering to specific days of the week and restrict the months of the year outdoor watering is permitted. With the “day of the week” based guidelines, automatic sprinkler clocks can be set at the start of the season with no manual resetting required to adjust for 31-day months and the maximum three day-per-week sprinkling regulations. Violators are subject to fines and/or enforced water use compliance.

OUTDOOR LANDSCAPE WATERING REGULATIONS:

- Premises with odd numbered addresses are permitted to water on Monday, Wednesday, and Friday;
- Premises with even numbered addresses are permitted to water on Sunday, Tuesday, and Thursday;
- Premises with no number, or multiple numbers, including odd and even numbers (for example: 1, 2, 3, & 4 Smith Street) are permitted to water on Sunday, Tuesday, and Thursday;
- Sprinkling is limited to three days per week;
- Landscape watering is prohibited between 10:00 a.m. and 4:00 p.m.;
- No outdoor watering is permitted prior to April 15 and after November 1;
- Washing sidewalks and driveways is prohibited at all times; and
- Hoses must have automatic shut-off nozzles.

SPECIAL EXEMPTION NOTICE:

The Water Authority appreciates that some property owners may have automatic sprinkling clocks that cannot be set to comply with the new “day of the week” regulations. If a clock cannot be set based on the days of the week, a property owner can apply for an exemption from the Water Authority’s guidelines. Property owners applying for an exemption must give permission to the Water Authority to inspect and verify that their sprinkling system clocks cannot be set to the “day of the week” system. If, based on the water Authority’s inspection an exemption is granted, the property owner will be bound by Nassau County lawn sprinkling regulation, which are as follows:

EXEMPTION ONLY:

- Premises with even numbered addresses, or no street number, are permitted to water on even numbered calendar days.
- Premises with odd numbered addresses are permitted to water on odd number calendar days.
- Sprinkling is limited to 3 days per week and prohibited between 10:00 a.m. – 4:00 p.m.
- Washing sidewalks and driveways is prohibited.
- Hose must have automatic shut-off nozzles.

- B. **Meter Replacement Program:** As water meters age, they tend to run slow and provide lower than actual readings. Accurate meter readings, coupled with graduated rates, are important tools of an effective water conservation program.

In past practice, the Water Authority has replaced all meters that were 15 years of age or older. However, since the implementation of the new Badger Radio Read System, the Water Authority aggressively pursued the change over from a remote reader system to Badger’s new state-of-the-art radio read system. Starting from 2002, the Water Authority began a program to complete the change over to the new system which was completed within a 10 year period, equating to every account having a meter age of 10 years or less. All large meters are currently tested on an annual basis, with a good portion of the meters less than ten years old. Any large meters that are older than ten years will be replaced with a new Badger radio read system meter.

- C. **Piping Replacement Schedule:** The Water Authority currently monitors and replaces all water mains and appurtenances based on water main breaks, the age of the pipe and valve conditions. The Water Authority is currently working to remove and replace all transite water mains within its system.

D. **Leak Detection Program:** The Water Authority in 1994 implemented a very aggressive leak detection program. The Authority continues to perform leak detection surveys on an annual basis in various parts of its system. In 2016, the Authority hired New York Leak Detection Inc., who surveyed the entire Authority Distribution system discovering over 20 possible leaks. In addition, the Authority continues to respond to all leaks as emergencies with repair work generally occurring within 24 hours of notification.

E. **Water Use Audit Program:** This program is continually advertised through local papers, the Authority's public awareness program, and remains available as a standard policy for high bill complaints. The Authority's computer system flags increases in consumption and generates post cards, which offer free water audits and leak inspections.

The Authority continues to track the top residential and commercial water consumers in its system on an annual basis (see Appendix I).

F. **Plumbing Retrofit Program:** The Water Authority instituted an on-going plumbing retrofit program in July of 1994. Retrofit kits remain available to all customers upon request and are recommended during service calls and high bill complaints. The Authority continuously advertises the availability of the retrofit kits in our newsletters and various articles relating to water conservation.

G. **Public Awareness Program:** The Water Authority continues to promote water conservation through a year round public awareness program. To be most effective, the Authority increases its focus on educating consumers during the high use months through numerous print articles.

In addition, to heighten water conservation during the summer months, water conservation displays are placed at various parks, Village Halls, and public pools to further create awareness regarding water conservation.

H. **Rate Structure:** A very aggressive rate structure continues to be promoted and enacted by the Water Authority. Rates were adjusted in April 2008 to help to further promote the conservation of water. Past studies have shown that in order to achieve continual effective water conservation, water rates have to be effectively structured.

I. **General Water Conservation:** The Water Authority continues to promote the Xeriscape Garden and has built a display open to the public seven days a week. The Authority advertises the display and provides information regarding the Xeriscape garden as part of its public awareness program. The Water Authority also continues to sponsor educational programs relates to water conservation.

- J. **Offer New Meters to Public to Track Usage:** In 2014, the Authority completed a program to replace the meters in its service area with more modern equipment, which has a lifespan of 10 to 15 years. New Smartphone Meter Technology, which has since become available, will be installed when the next meter program is initiated. As a courtesy to residents who wish to purchase the newer meter technology now the Authority is making the equipment available for a price of \$256.00, which includes installation.
- K. **Water Conservation Coordinator:** Superintendent Gregory Graziano remains the water conservation coordinator for the Water Authority.

2.1 How Effective Has Conservation Been to Date?

In order to determine how effective water conservation has been at the Water Authority of Great Neck, pumpage must be looked at in three parts; Service and Production History, Average Usage per Account, and Average and Maximum Demand Pumpage.

Despite continued efforts by the Water Authority to develop new conservation methods and awareness, the issue of continued growth has magnified. As a result of the real estate boom experienced in this area over the past several years, the population continues to grow on the peninsula. There has been a 4.5% increase in the number of services at the Authority over the last 10 years, while the average daily usage of water has remained fairly stable. In 2007, the five-year daily average demand (2003-2007) was 4.36 MGD and in 2016, this same 5-year running average (2012-2016) was 4.34 MGD. The stable average daily demand is a testament to the success of the Water Authority's conservation program.

The number of services increased by 213 services over the last 5 years (2012 – 2016). Due to the real estate boom, many of the new services represent multi-family, apartment, and senior complexes, which greatly increase water use for a particular location from the former use. Even single family homes, were replaced with multiple houses as developers took advantage of the escalating real estate market.

To further support the effectiveness of the Water Authority's conservation program, the average water usage per account within the Water Authority, was evaluated. The average usage per account has been declining in response to the Water Authority's conservation program.

The data shows that there is a steady increase in water services, that large portions of these services reflect increased density service accounts such as apartment buildings and senior complexes, while the average daily use has remained stable. The daily use has remained stable in response to the Water Authority's aggressive water conservation program, which is clearly demonstrated by the overall decline in the average water use per account despite these new developments. This data supports that the Water Authority's water conservation program has resulted in a 16.7% decrease.

Going forward, the Water Authority plans to continue to conduct Leak Detection Surveys of the Distribution System annually.

In summary, the Water Authority has demonstrated its ability to manage its pumpage to protect the groundwater resource, and has exceeded the water reduction it anticipated by instituting an aggressive water conservation plan.