



GLEN ROCK ENVIRONMENTAL COMMISSION

2016 Annual Report



Borough of Glen Rock Water Conservation Ordinance

Every year in the summer our underground aquifer - the source of our water - suffers a drastic decrease in volume. The main reason for such depletion is due to higher peak water consumption, which can amount to a 300% increase compared to the rest of the year.

As a result, Ridgewood Water has requested municipalities to amend their current ordinances with stricter Water Conservation measures. This flyer explains why changes are being made and what they are.

Why

As indicated by Ridgewood Water, the 300% water usage increase in summer months is due mostly to an increased use of automatic lawn irrigation systems, which lead to water shortages. Most summers, water restrictions need to be stepped up to emergency stage 3 and 4, and we need to purchase water from other water utilities. This is expensive, and the cost is passed down to consumers. In addition, depletion of water from the aquifer hampers the natural filtration and purification of the water as it percolates through the ground, resulting in higher levels of contaminants such as salt in our drinking water.

By reducing the amount of water wasted by lawn over-irrigation we will be replenishing the aquifer and preserving water quality. This is a smart thing to do for the environment, our health, and our pockets.

What

The new ordinance asks you to conserve water, and it is focused exclusively on lawn irrigation by sprinklers. These are the regulations depending on the type of irrigation system you have:

- Hose-end sprinklers:**
 - Water your lawn no more than 2 days per week
 - Odd numbered addresses on Tuesday and Sunday
 - Even numbered addresses on Wednesday and Sunday
 - Water between 5:00 p.m. and 10:00 a.m.
 - Watering of any lawn area limited to 30 minutes
- Automatic sprinklers without a SMART system:**
 - Water your lawn no more than 2 days per week
 - Odd numbered addresses on Tuesday and Sunday
 - Even numbered addresses on Wednesday and Sunday
 - Water between 5:00 p.m. and 10:00 a.m.
 - Must be equipped with a rain sensor to disable at 1/8 inch of rainfall
 - Don't water your lawn when it's raining
 - Backflow/anti-siphon warning of any lawn area limited to 30 minutes
 - Rotating heads: watering of any lawn area limited to 30 minutes
- Automatic sprinklers with a SMART system:**
 - Water between 5:00 p.m. and 10:00 a.m., any day, no further restrictions

Glen Rock's Water Conservation Ordinances	Irrigation Type	Day You Can Water	Hours You Can Water	How Long You Can Water
	Hose-End	Odd numbered homes on Tue & Sun Even numbered homes on Wed & Sun	5pm - 10am	Watering of any lawn area limited to 30 minutes per day
	Spray or Mist Head	Odd numbered homes on Tue & Sun Even numbered homes on Wed & Sun	5pm - 10am	Watering of any lawn area limited to 30 minutes per day
	Rotating Head	Odd numbered homes on Tue & Sun Even numbered homes on Wed & Sun	5pm - 10am	Watering of any lawn area limited to 30 minutes
	SMART System	Any day	5pm - 10am	The SMART system is based on soil moisture, weather reports, etc. determines the correct amount of water needed.

EXEMPTIONS:

- Watering of vegetable gardens
- Commercial nurseries can be watered as necessary
- Water use for recreational purposes for children
- Watering flowers, shrubs, lawns, etc. with a hose that has an automatic shut-off nozzle
- Lawns treated with chemicals that prevent watering can be watered for 1 water day
- New lawns or landscaping can be watered as needed within the first 21 days
- When using reclaimed water (from rainwater harvesting, graywater systems, etc.)

Additionally:

- SMART controllers must be registered with the Glen Rock Building Department for a \$35 fee, and will be given a yard placard to be displayed on the lawn.
- All automated must use a rain sensor that disables at 1/8 inch of rainfall
- Don't water your lawn when it's raining

FACT:

- Watering on fewer days & for longer periods (approx. 30 min.), results in deeper roots & more drought-tolerant & less pest-resistant grass.

PENALTIES:

Warnings for violations will be issued for the first year, followed by fines starting at \$100 after April 1st, 2017, increasing to \$250 for repeat offenders



GREC Responsibilities:

NJ State Legislation 40:56A which established Environmental Commissions empowered commissions to “study and make recommendations concerning open space preservation, water resource management, air pollution control, solid waste management, noise control, soil and landscape protection, environmental appearance, marine resources and protection of flora and fauna.”

Today the GREC and other environmental commissions are involved in a broad range of activities, such as:

- Advising their governing bodies and boards of health on a variety of environmental issues,
- Informing and advising municipal planning and zoning boards about environmental impacts of proposals for development,
- Informing residents on environmental matters and ways to help protect the environment,
- Interacting with neighboring commissions and other organizations to tackle regional and state problems, and
- Helping to explain to other local officials and residents the programs and regulations of the NJ DEP and communicate local concerns to the NJ DEPC.

2016 Priorities:

- 1) Advise the Borough Council, Planning Board and Municipal officials on environmental issues and the environmental impacts of borough policies and actions
- 2) Work toward Sustainable Jersey recertification with goal to apply for recertification at June 7, 2018 recertification cycle deadline.
- 3) Expand green team to involve more people from the community passionate in protecting the environment
- 4) Continue to work with the Glen Rock Schools to involve students and administration in programs relevant to the environment including the Sustainable Jersey for Schools program.

2016 Objectives:

- Expand the Green Up Glen Rock Team
- Renew the Home Energy Audit program
- Provide formal comment letters and reports on site plans and major issues
- Encourage and mentor GR students in GREC activities through SJ grant funding
- Enhance GREC presence in the community through Social Media
- Raise awareness about the need for water conservation, and use of responsible outdoor watering
- Advance community understanding of environmental issues
- Implement Hazardous waste day
- LGEA Start Energy Audit / All major Municipal Buildings
- Launch additional Actions selected for SJ recertification (pilot program for Farmer’s market, identify funding for electric vehicles charging stations)
- Continue to increase environmental expertise of Commissioners

2016 Accomplishments:

Recruit/replace GREC members

The establishment and active involvement of a municipal Green Team is required for a community to be certified by Sustainable Jersey. The GREEN UP GLEN ROCK TEAM was created in 2009 by the Glen Rock Council Resolution No. 103-09 Resolution for Sustainable Glen Rock to lead the effort to help Glen Rock achieve certification as a Sustainable Community by Sustainable Jersey. In July 2012, the Glen Rock Borough Council reaffirmed its commitment to pursuing Sustainable Jersey certification and the continued role of the GREEN UP GLEN ROCK TEAM. Glen Rock received its first certification by Sustainable Jersey in NOVEMBER 2012, and its second in NOVEMBER 2015.

In January 2016 Andy Curshen, Paul Sharar and Charles Nebbia left the commission and Chris Leishear has agreed to serve as co-chair with Sylvia Rabacchi. Each commissioner has agreed to select several of the Action programs that will add up to over 150 points needed for the next recertification in 2018, and to seek other residents who will help with the Action programs and be part of our GREEN UP GLEN ROCK TEAM.

Recruit Green Team and Educate Community

In 2016 we have reached out to residents through social media by launching a free standing website that is being used to recruit Green Team members via their interests. This resulted in the addition of 4-5 more residents contributing and initiating new SJ actions.

In addition the website is used to educate the community regarding the current topics that GREC is taking on. <http://www.greenupglenrock.com/>

Updated GREC page on borough website

In October- November 2016 the GREC has made a complete reorganization of the GREC page on the borough website. Updates were made and tabs were added for each of the current and recent activities: http://www.glenrocknj.net/index.asp?SEC=8641F482-5D2E-4A5C-A0EB-9AAD62258A0B&DE=75FF5D89-C039-4DC6-8BAC-E84FBD353355&Type=B_BASIC

Home Energy Audit Program, "The Energy Smart Rock Homes"

The Home Energy Audit Program was continued for 2016 by a resolution of the Glen Rock Borough Council. During the year 2016 a total of 20 homes had energy audits performed, with four homes contracting for energy-efficient upgrades performed by the designated contractor, Ceil Power. Another four homes are also currently considering moving forward. Prior to 2016, 138 Glen Rock Homes had the assessment completed, with 25 of those choosing to pursue the recommended work.

An average energy savings of 26% has been realized by the homes that have had energy-efficient updates installed!

Under the Home Energy Audit Program residents of Glen Rock can receive a home energy assessment from Ciel Power at a discounted price of \$49. Homeowners who participate can qualify for rebates and zero interest financing, through the New Jersey Home Performance with Energy Star Program. The rebates and incentives will help offset the cost of installing insulation and upgrading heating, cooling, and hot water systems. A portion of these incentives may also be applied towards the remediation of health and safety concerns such as asbestos, knob and tube wiring, and mold.

The assessment takes around three hours and the Ciel Power technician collects approximately 250 “data points” on each residence. The result is a detailed report highlighting the potential for energy savings. The assessment report typically recommends such measures as additional insulation, sealing of cracks and gaps, encapsulating crawl spaces and upgrading appliances and HVAC. Reports are provided showing the “before” and “after” test results so that the homeowner can see the effects of the work completed. . After review homeowners are free to decide if they want to move ahead with any of the energy upgrade recommendations and whether they wish to use the auditing firm or another qualified contractor whose work can qualify the homeowner for up to \$5000.00 in state grants and up to \$10,000 in no-interest loans.

While the Mayor and Borough Council have approved the program and the borough’s partnership with Ciel Power, neither the assessment nor the recommended work from the report are in any way mandatory and the consumer is under no obligation to hire Ciel Power for the suggested work. Ciel Power, LLC is both a Building Performance Institute (BPI) accredited contractor and also a licensed New Jersey Home Improvement contractor.

Community Garden

The Glen Rock Community Garden was founded in 2010. The garden includes 28 plots that are approximately 10 by 20 feet, where gardeners grow a great variety of vegetables and herbs. The garden includes a communal asparagus patch, grape and kiwi vines. Plots are made available to residents of Glen Rock on a first come, first served basis. Insurance, as well as water, are provided by the town. Gardeners are each responsible for taking care of their own plots, but a great effort is made at helping one another out with watering gardens, mowing and maintenance. Located next to a town baseball field, the garden is frequently visited by children.

Fleet Inventory

Every municipality, including Glen Rock, manages equipment and vehicles that facilitate provision of services and allow employees to conduct municipal business. The equipment and vehicles make up a fleet that contributes greenhouse gases as well as other pollutants to the environment. These pollutants degrade air, water quality, and public health. A "Green Fleet" minimizes these negative

impacts, as well as operating costs, by improving energy efficiency and reducing emissions through the use of alternative vehicles and fuels. Green fleets are developed by purchasing more fuel-efficient vehicles (cars, buses, and service vehicles), converting to cleaner fuels, training drivers to operate vehicles for maximum efficiency, downsizing to smaller vehicles, and reducing municipal use of motor vehicles.

Glen Rock fleet fuel usage data has been gathered for all vehicles owned and operated by the Borough. The data has been entered into a standardized reporting format with results showing the total pollutants produced for several classes of vehicles. Totals are reported for N₂O and CH₄ pollutant levels for the year. The results will be utilized to confirm that our efforts in mitigating the production of pollutants are meeting with success.

Energy Audit All Municipal Building (LGEA)

This is a major 50 point action which will become part of the GREC effort to recertify the Borough's Bronze Certification with SJ. The requirements are a detailed inventory of all the Borough's major buildings together with their energy usage be produced, ultimately leading to Energy Audits being performed on each with the intention of determining how and where energy efficiency can be improved. After adopting a Resolution agreeing to the audits and after appropriate RFP's procedure, the CHA company implemented the energy audits of 8 municipal buildings for the 2014 year, and then completed in March 2016. The cost of these audits was covered by the NJ Clean Energy Program. The GREC reviewed the documents and made recommendations to the Council to devote part of the budget to the implementation of a subset of energy conservation measure with the shortest pay-back of ~ 1-5years, which correspond to mainly lighting upgrades in many buildings, including replacing with LED light bulbs, and adding sensor controls. Capital budgeting was approved for implementation of selected items identified in the CHA reports, with a level of funding up to an amount of \$60,000. Items were selected for further consideration based on the degree of utility they will provide, acceptance by the using department, cost reasonableness, and a payback period.

Sustainable Jersey re-certification

The GREC attained Bronze level certification in the Sustainable Jersey Program early in 2016.

Hazardous Waste Pick-Ups

In October 2016 GREC coordinated a pick-up using volunteers who brought the HW to the collection point in Paramus

Provide formal comment letters and reports on site plans and major issues

The GREC has researched the pros and cons of the proposed Educational building construction at the GR Arboretum, and expressed positive feedback in a position paper sent to the Mayor and Council in Spring 2016. The letter was also published on the local paper as well as on the GREC website.

In view of the hiring of a new Director of Recreation, GREC recommended the borough Search Committee to include experience/interest in sustainable practices as desirable qualifications.

In relation to the Pilgrim Pipeline proposed to connect Albany, NY with Linden, NJ the GREC has invited a representative from CAPP (Coalition Against the Pilgrim Pipelines) for a presentation and then followed up with independent research on the topic. The proposed pipeline is expected to bring oil derived from Canada to be refined in Linden, NJ and then back up to Albany, and is supposed to cross pristine areas, since as Ramapo Mountain forest. Oil pipelines are object of frequent leaks and a potential oil spilled in Ramapo could results in the contamination of drinking water of up to half of the population of NJ. Based on this information, GREC ultimately composed a letter for the borough Council with the recommendation to adopt a Resolution in opposition to the construction of the pipeline.

Advance community understanding of environmental issues

In October 2016 GREC participated to the annual Community Showcase at the MS/HS where all organizations in Glen Rock were invited: GREC had a table where posters displaying some of the activities performed in collaboration with MS/HS students were presented,- i.e. anti-idling, plastic bag reduction. Also, anti-idling car decals, oil collection cans, bird feeders and Shop-the-Rock/Buy Local, Bring-your-own bag reusable bags were handed out along with literature on composting, and leave the leave program.

Similarly, GREC participated to the Farmer's market pilot in late Summer 2016, where reusable bags (Shop the rock, bring your own bag) were distributed in exchange of a pledge not to use single-use plastic bags.

The GREC/Green Up Glen Rock Facebook page has been updated, and used for raising awareness and posting updates on environmental issues.

Collaboration with GR school district and students

GREC continues to assist the School District by providing updates on grant opportunities from SJ and SJ for Schools programs to pursue environmental related projects as they become available. In 2016 GREC recruited and mentored HS students in writing and submitting grant proposals. Two students were each awarded a grant from the Sustainable Jersey for Schools program: one grant (\$2,000) "Revamping recycling at Glen Rock High School" allowed the upgrade and re-design of

labelling for all recycling bins in the high school. The bin upgrade was accompanied by a comprehensive education program on the specific single stream recycling system adopted by the school.

The second grant, in collaboration with the office of the Superintendent (\$4,000) was utilized for the "Promoting healthy eating at the Glen Rock schools" project. This project included organizing and funding presentations at each of the GR schools by various organizations, including a local business, a nutritionist and a local organization specialized in healthy eating education. In addition, a tasting demo of healthy foods took place at the MS/HS. Finally, a survey developed and administered to students and parents demonstrated a strong interest in the addition of healthy food options at the school cafeteria. The survey results proved useful when a group of parents requested and successfully obtained the addition of organic options the lunch menu. The project earned a Board of Education award to the grant awardee student. The 2 students were then awarded a prize by the GR Mayor during a council meeting (photo included).

The GREC has also coordinated 2 presentations by the two high school students at the Central elementary school environmental club, where they presented their projects and engaged the younger students.

In addition to mentoring HS students, the GREC hosted several presentations by middle school students at GREC meetings, where students reported on their activities: a group of students associated with FFL (First Lego League) Research Project (team HIPE) has been researching solutions to reduce e-waste, and also ways to reduce water nitrogen runoff by nitrifying bacteria.

In 2016, all Fourth graders participated in the annual Water Day co-sponsored by the Arboretum.

Continue to increase environmental expertise of Commissioners

In Spring 2016 GREC members and members of the Green team participated to the annual Bergen County Environment Conference at Hackensack, NJ Bergen County office.

Launch additional Actions selected for SJ recertification

Farmers Market

The Glen Rock Farmers Market was piloted the first three Sundays in October, from 10am-2pm at Borough Hall's employee parking lot and adjoining lawn, which is central meeting point in town and is adjacent to the Glen Rock Borough Hall train stop. The pilot markets had a limited \$1,000 budget, that community organizers were able to use to produce marketing materials, including informational flyers to distribute at the town fair, to use to create a farmer's market website and to conduct all administrative and organizational responsibilities that are associated with hosting 16 fresh produce vendors, artisans, a certified dietician and environmental experts at the market. Attendance at The Glen Rock Farmer's pilot weeks ranged from 1,000-3,000 visitors per market,

which was a great success for many vendors that affirm that Glen Rock residents were among the most enthusiastic that they have seen. Many vendors even sold out of their stock and the Bergen Record, the largest paper in the county, gave the GRFM a good review.

Water conservation:

GREC, along with Ridgewood Water, the source of local water, has been working on establishing a new water ordinance for the town that is aimed at encouraging residents to use water in a thoughtful way to actively conserve water, particularly in the summer months when water usage soars. The goal is to establish water regulations that conserve water actively throughout the season, so as to prevent dire restrictions when water levels drop during the warmer months especially. This has involved a careful re-examination of the current regulations and water restriction criteria at each of the water restriction stages. These new ordinance guidelines, focused on restricting the use of outdoor sprinklers to 2 days/week for all summer months, ultimately endorsed by Ridgewood Water, are intended to be implemented along with the other three municipalities that are served by Ridgewood Water, which include Midland Park, Wyckoff, and Ridgewood. GREC, working with Ridgewood Water, has been instrumental in identifying critical issues, listening to the concerns of residents at public meetings, and in crafting an ordinance that will work practically to serve residents, businesses, and the public sector of the four towns. The new water conservation ordinance is expected to be presented to the council in Spring 2017.

Electric vehicle charging stations – “It Pays to Plug In program”:

This year the Glen Rock Environmental Commission applied for and was awarded a grant from the New Jersey Department of Environmental Protection (NJDEP) for the installation of 6 electric vehicle charging stations around Glen Rock. The program called “It Pays To Plug In” was designed to encourage New Jersey residents and commuters to make the switch to electric vehicles (EV's). In January 2017, sales of EV's in the United States increased 41% year compared to 2016, and Plug-in Hybrid sales increased 86% in the same period. This NJDEP program will make it easier for Glen Rockers to use electric vehicles around town, and should encourage EV drivers from neighboring communities to visit Glen Rock for their shopping and dining.

2017 Objectives:

- Renew the Home Energy Audit Program
- Repeat the “No Idling” campaign
- Complete SJ “Buy Local” action
- Develop a pollinator garden demo and raise awareness about the current pollinator crisis
- Provide formal comment letters and reports on major issues

- Continue to recruit and mentor students in GREC activities
- Assist the School District by updating them on grants as they become available to pursue environmental related projects.
- Initiate new project on carbon footprint with HS students as part of a greenhouse gas reduction larger plan
- Complete Farmer's market action
- Present water conservation ordinance proposal to council
- Implement and complete installation of electric vehicle charging stations in town funded by SJ grant
- Update GREC Website
- Collaborate with local and regional environmental organizations
- Complete SJ "Energy Star Portfolio Manager" action with Borough Administrator
- Continue to perform energy audits of Borough vehicles under the Fleet Inventory

We appreciate the support of the Mayor, Borough Administrator, Council, and other municipal officials and employees as we work for a cleaner, healthier, and more sustainable community.

Respectfully submitted,

Sylvia Rabacchi and Ben Meyer
Glen Rock Environmental Commission, Co-Chairs

Submitted: March 31, 2017