GNHWPCA
Protecting the Environment

SewerWorks

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THANK YOU FOR YOUR SUPPORT OF THE CT DEEP CLEAN WATER FUND AND OUR CAPITAL IMPROVEMENT PLANS

The Authority is pleased with the efforts of its Board of Directors, local elected officials and its rate payers as it continues to support and advocate funding of the Connecticut Department of Energy and Environmental Protection's (DEEP) Clean Water Fund (CWF) Program. The Authority gains significant benefits from both state and federal grant and loan money that are made available annually through this program.

Once again the Authority is listed on the Fiscal Year 2012 and Fiscal Year 2013 CWF priority list with projects that will help fund both plant upgrades and sewer separation projects. We are currently working on projects in the Trumbull Street area of New Haven that separate sewers reducing the frequency of CSO events. Projects like these provide an immediate benefit and are supported with a 50% grant from the DEEP's CWF Program.

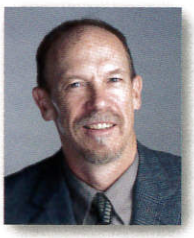
In addition, the Authority has secured eligibility on projects through the DEEP CWF Infiltration and Inflow Reduction program. This program provides for lining of sanitary sewer pipes which receive larger amounts of groundwater infiltration in addition to the added benefit of renewing aging pipes to "like new" condition. Work will begin on lining approximately 5 miles of pipelines in the Cities of Hamden and East Haven in early 2013. Planning for additional lining will begin in Woodbridge this spring.

Finally, we are excited to have launched the design of the first phase of a $250M Denitrification and Wet Weather Treatment Plant Upgrade Project. The design of the first $45M Phase will be completed by the end of 2012 and work will begin in the summer of 2013. This phase will provide improvements to the secondary treatment process which will lower the amount of Nitrogen discharged to the Long Island Sound. In addition, it will provide a much needed renewal of our aging electrical system and sludge handling facilities.

The above referenced State and Federally funded projects are complemented by the Authority's Annual Capital Improvement Program. This year the Authority will complete a rehabilitation of a circa 1946 pump station on State Street in Hamden. In addition, design has started on a rehabilitation of the Mill Rock Pump Station in Hamden which is of the same generation. These important projects involve complete mechanical overhauls which include new back-up generators that allow us to provide reliable service to our customers during emergency conditions.

Continued support of both the Authority's capital program and the DEEP's CWF program will lead to improved water quality within the West River, Quinnipiac River, Mill River and Long Island Sound.

MEET ONE OF OUR BOARD MEMBERS



I earned a degree in civil engineering from the University of New Haven and am a licensed professional engineer in the states of Connecticut, New York and New Jersey. The majority of my career has been with consulting engineering firms where I acquired a great deal of experience with the design and rehabilitation of sanitary sewerage collection systems and pump station design. After moving to Hamden in 1996, I volunteered to serve on a Town board and was appointed to a position on the Town of Hamden WPCA. When the Greater New Haven Water Pollution Control Authority (GNHWPCA) was established in 2005, I was asked to stay on to serve as one of the two Town of Hamden representatives on the Board of Directors. The time was rapidly approaching when major, very costly upgrades would need to be done by all of the member towns to their sewerage collection system and pump stations. The creation of the regional authority was essential to the continued maintenance and operation of the aging sewerage systems in the constituent municipalities. The GNHWPCA staff has done a remarkable job of prioritizing, planning and implementing these capital improvements while managing to keep the sewer user fees to some of the lowest in the state. I am proud to serve the Town of Hamden as part of this organization.

—Russell Cyr

WHAT IS GREEN INFRASTRUCTURE?

"Green infrastructure" is a term that has grown in use and practice over the past ten years. Its' definition is broad and widely interpreted as infrastructure whose design features create a sustainable natural environment within a developed setting. Regulators, land-use planners, architects, and engineers are rethinking project planning. The incorporation of Green Infrastructure concepts in stormwater management results in reduced flooding, improvements to water quality and increased groundwater recharge.

Example of curb cut and vegetative swale used to reduce flow to stormwater catchbasin and pipe systems.

The GNHWPCA, along with the Cities of New Haven and Bridgeport, have participated in a study to determine how Green Infrastructure planning can be incorporated to effectively manage stormwater and also reduce the frequency of Combined Sewer Overflow (CSO) events. The study's findings indicate that Green Infrastructure concepts can be successful. However, the process is not without obstacles and does require a coordinated and cooperative effort from all stakeholders including the Authority's member municipalities, community groups, ratepayers and regulatory agencies. The eligibility of Green Infrastructure projects funded through the Clean Water Fund is critical. We believe that Green Infrastructure could be used as a tool to improve the management of wet weather flows and reduce CSO events while improving public spaces with "Greener" landscapes and infrastructure.

In other communities with combined sewer/stormwater systems, such as Syracuse, NY, and Philadelphia, PA, it has been demonstrated that implementation of green design elements into the City's existing streets, parks, and other public spaces provide a significant benefit. These elements include rain gardens, vegetated swales, green roofs and porous pavements. The benefits not only include best management practices for stormwater, but also provide for recharging groundwater, creating wildlife habitat, beautifying neighborhoods, cooling urbanized areas, improving air quality and providing additional capacity in our combined sewer systems.

— GNHWPCA Chairman Stephen Mongillo

Exploring Energy Alternatives

The GNHWPCA is continually exploring innovative power sources as options for alternative and future energy generation. GNHWPCA has been successfully capitalizing on the facility's Fuel Cell Electric Power and Heat and from this we are able to produce energy from a natural, readily available source: Fats, Oils & Greases (FOG). On the horizon GNHWPCA hopes to incorporate additional energy alternatives in an effort to produce clean energy from natural, renewable and fuel free sources such as:

WIND: GNHWPCA is looking into wind energy, by harnessing the power of the wind to propel the blades of wind turbines the blade rotation is converted into electrical current by means of an electrical generator. Wind power produces no pollution that can contaminate the environment and since no chemical processes take place and since wind generation is a renewable source of energy, we will never run out of it.

SOLAR: GNHWPCA is looking into solar energy. Solar power works by trapping the sun's rays into solar cells where this sunlight is then converted into electricity. Solar power is a renewable resource that releases no water or air pollution.

GNHWPCA Featured in *Energy & Infrastructure Magazine* Article

GNHWPCA was recently featured in the Fall/Winter 2011 edition of *Energy & Infrastructure Magazine* recognizing the Authority's current and ongoing efforts to stay innovative in its work by exploring new technologies available in wastewater treatment.

As highlighted in previous GNHWPCA *SewerWorks* editions the article focused on the Authority's Heat Recovery System, which captures heat generated from our incineration operations and converts this to electricity, and the Long-term Control Plan to reduce combined sewer overflows, reducing stormwater treated at our facility that otherwise would not require treatment.

The article also gave insight to future projects the Authority is exploring, such as windmills and the potential of using wind power to make electricity. Looking ahead GNHWPCA plans to add more water treatment technologies to its treatment processes as it continually strives to enhance and improve its operations. For more information and to read the article in its entirety you can go to EnergyandInfrastructure.com and type "GNHWPCA."