

NEORSD Board Approves Significant Sewer System Improvement Plan to Reduce Raw Sewage Discharges

Plan negotiated between NEORSD, Ohio and Federal Governments contains innovative environmental benefits with considerable cost

Today, the Northeast Ohio Regional Sewer District (NEORSD) Board of Trustees agreed to enter into a consent decree with the federal government, which details the long-term plan for reducing raw sewage overflows into the environment, by a 5-2 vote. The dissenting votes were from Mayor Dean DePiero and Mayor Gary Starr. The \$3 billion, 25-year program will reduce the total volume of raw sewage discharges from 4.5 billion gallons to 494 million gallons annually – over 98% of wet weather the flows in combined sewer system will be treated in a typical year – and will assist NEORSD in meeting Clean Water Act (CWA) requirements. The agreement is between NEORSD, the Department of Justice, the United States Environmental Protection Agency, Region 5, the Ohio Environmental Protection Agency and the Ohio Attorney General's Office.

The CWA employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways and manage polluted runoff. Additionally, the CWA requires anyone who discharges pollutants to first obtain a permit from the EPA, or the discharges will be considered illegal. Although the NEORSD has reduced raw sewage discharges significantly over the years and holds permits for discharge points, the EPA considers NEORSD in violation of the Clean Water Act because not all overflows have been controlled to required levels.

“Since 1972, the Sewer District has reduced the amount of raw sewage discharging into the environment by half – from 9 billion gallons in early 1970s to 4.5 billion gallons today,” stated Julius Ciaccia, Executive Director of the Northeast Ohio Regional Sewer District. “This plan will compliment the District's past work while helping us to comply with the Clean Water Act.”

Similar to other mid-west cities, sewers in Greater Cleveland were designed and built to transport both sanitary sewage and rain water in one pipe. During a heavy rain event, the pipe can become too full, discharging raw sewage into the environment. Like NEORSD, other mid-west cities, including Cincinnati, Columbus and Kansas City, just to name a few, negotiated or continue to negotiate a long-term plan to address the discharges. In total, there are 772 communities across the country facing similar sewer problems, including 86 in the State of Ohio. Most of those cities are under or are negotiating similar consent decrees and are raising rates accordingly.

Since 2004, NEORSD has negotiated with state and federal environmental regulators to obtain approval of its long-term plans to reduce raw sewage

discharges, the last of which was submitted to the state in 2002. To date, the NEORSD has spent approximately \$45.1 million in engineering, attorney's and expert fees in developing the plan to reduce raw sewage discharges and negotiations toward a Consent Decree. Specific issues included the length of time allotted to complete construction projects, the cost of the program and affordability. In July 2010, all parties agreed on a mutually acceptable proposal.

"It was of utmost importance to my staff that we advocate on behalf of our customers who will bear the entire burden of this costly yet necessary program," stated Ciaccia. "In the end, we were able to encourage the EPA to incorporate elements that reduced the cost while maintaining the overall benefit of the program."

The heart of the agreement includes the construction of large-scale storage tunnels and treatment plant enhancements. NEORSD will construct seven tunnels, which are about two to five miles in length, up to 300 feet underground and up to 24 feet in diameter - large enough to park a semi-truck inside. The tunnels are similar to the nearly complete Mill Creek Tunnel, a structure that will have the capacity to store 75 million gallons of raw sewage until it can be treated at NEORSD's Southerly Wastewater Treatment Plant. In 2011, NEORSD will begin construction on its second large-scale tunnel – the Euclid Creek Tunnel.

At the Easterly and Southerly plants, the maximum amount of wastewater that can receive secondary treatment will increase. Additionally, at the Westerly plant, the maximum amount of treatment that can take place at the District's Combined Sewer Overflow Treatment Facility, which is located adjacent to plant, will increase. The District has been given an opportunity to demonstrate the effectiveness of lower energy treatment options through pilot demonstration projects. If successful, the District can avoid implementation of costly, energy-intensive treatment technologies.

"With total environmental benefit as a priority, the Sewer District thoroughly assessed the overall impact of construction on the environment," stated Kellie Rotunno, Director of Construction and Engineering. "If a project improved water quality but emitted significant Greenhouse Gases, we looked for alternatives."

The most notable aspect of the proposal, however, includes a number of progressive and unique components:

Timeframe and High Burden Community - In the early stages of the negotiations, EPA suggested that NEORSD should be able to complete its entire program in 8 to 12 years. Consideration was not given to the fact that this timeframe and the \$5.25 billion investment into sewer upgrades (\$3 billion to reduce raw sewage discharges and an additional \$2.25 billion to address other aging sewer infrastructure issues) would have a significant and detrimental impact on NEORSD's customers' wallets. Instead, NEORSD countered with a

30-year timeframe to reduce the amount of raw sewage discharges. After significant negotiation and consideration given to Greater Cleveland as a 'high burden' community, the complexity of the NEORSR plan, and the demonstration that the majority of the environmental benefit will occur within the first 20 years, the parties agreed to a 25-year timeframe. NEORSR is only the second community to be given a 25-year timeframe in which to address this issue.

Green Infrastructure— In an unprecedented move, the federal government incorporated a wide array of sustainable green infrastructure components into the consent decree. Some of the initiatives could include the construction of wetlands, bioswales, retention ponds and other 'green' components to manage rainfall before it even makes its way to the sewer. Additionally, with the increase in foreclosed homes in this area, NEORSR will work with the City of Cleveland to assess the use of vacant lots for green infrastructure and leverage economic development opportunities in redevelopment corridors for green infrastructure projects.

The addition of green infrastructure is notable because it a) gives NEORSR the option to replace the plan's traditional "gray" infrastructure with additional "green" infrastructure ("Green-for-Gray"), which could reduce Greenhouse Gas emissions; and b) could reduce the long-term cost of the program while embracing the use of sustainable and environmentally friendly practices.

An analysis will be completed to assure these progressive methods are working and, if successful, they may be used in other instances.

Benefits to Low-Income Populations - This program will significantly mitigate pollution in some of the poorest neighborhoods in the region, and will focus on reducing basement flooding, sewer backups, and beach closings during the early phases of the program. The first 20 years of the 25-year program will focus first on reducing those discharges impacting Lake Erie bathing beaches, like Edgewater, Euclid and Villa Angela.

Investing Penalty Funds in Northeast Ohio - In lieu of a portion of a civil penalty for past discharges, the Sewer District will use traditional penalty funds to invest in other environmentally-beneficial programs. The investment of penalty funds will directly benefit projects in Northeast Ohio.

'Both the Sewer District and the EPA approached the recent negotiations with thoughtfulness and common sense,' stated Ciaccia. 'We appreciate the EPA's willingness to take a different look at how to best manage this program, and to consider and agree to sustainable and progressive alternatives.'

The plan will become final once all parties' signatures are included on the consent decree and it is lodged in federal court. A 30-day public comment period will then be initiated. At the end of that period, the plan will be legally binding.