Compiled by Elizabeth Lisican

up close & personal


Nosa Irenumaagho

AWWA ACE12 offers a chance to experience Dallas treatment facilities

Each year, attendees of the American Water Works Assn. Annual Conference and Exposition (AWWA ACE) look forward to touring water and wastewater facilities in the show's host city. *WWD* Managing Editor Elizabeth Lisican recently spoke with Nosa Irenumaagho, assistant manager of Dallas' Southside Wastewater Treatment Plant, about one of this year's featured tours.

Elizabeth Lisican: What is the Southside Wastewater Treatment Plant's history? What population does it serve?

Nosa Irenumaagho: Southside Wastewater Treatment Plant is one of two wastewater plants owned and operated by the city of Dallas. The plant is responsible for treating wastewater generated by an estimated 1.25 million citizens of Dallas and 11 customer cities. In addition, solids treatment for both plants is consolidated at Southside.

Southside was initially constructed in 1964 to provide oxidation pond treatment for 3 million gal per day (mgd) of raw wastewater. Since then, the plant has undergone three expansions (and modernization) to reach its current capacity of 110 mgd, and peak flow of 190 mgd.

The completion of Phase III in 1988 increased the plant's capacity to 90 mgd. This phase added four grit units, six modular trains of primary clarification, aeration and secondary clarification. This phase also added 12 effluent filters and two serpentine chlorine contact chambers. A new chlorine building was constructed to house bulk chlorine storage tanks and feed equipment while the original chlorine building was modified to house bulk sulfur dioxide storage tanks and associated feed equipment. In 1998, the plant capacity was rerated to 110 mgd, based on hydraulic modeling and without construction of additional treatment facilities.

Lisican: How does the plant handle specific treatment challenges?

Irenumaagho: Our strategy starts with identifying the challenge and its root cause through various discussions and meetings. These meetings could include outside engineers and consultants. Further discussion identifies possible solutions, ranks some select solutions and identifies implementation schedule, followed by construction and/or modification. In addition, Southside personnel continue training, [which] prepare[s] them to meet future challenges.

Lisican: What new technologies are being considered for the future?

Irenumaagho: On the immediate horizon—and already planned—is a biological nutrient removal process using enhanced biological phosphorus removal to meet an anticipated, more stringent permit limit. For safety and security reasons, ozone is recommended to be implemented as primary disinfection and micro constituent removal technology. The plant is continuing to enclose most facilities for odor control using environmentally friendly, in-ground biofiltration technology.

Lisican: What can visitors expect when they tour this plant during ACE12?

Irenumaagho: Upon arrival, visitors will discover the natural beauty of the Southside plant. Southside is unique compared to other large treatment plants in Texas and perhaps the nation. It is located on approximately 2,800 acres in the floodplain of the Trinity River. An extensive levee system protects the plant site and several thousand acres of adjoining private property from a 100-year flood.

The plant is surrounded by a 500-ft-wide buffer zone, which has been transformed into a multi-functional linear lake system. In addition to its park-like beauty, the linear lake provides storm water conveyance and storage for the adjacent neighborhoods and is a habitat for numerous wildlife, inhabited by a diverse population of local and migratory species. It is a popular spot for bird watching, picnicking and fishing. The plant is completely isolated from its neighboring environment. WWD

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For more information, write in 1112 on this issue's reader service form on page 77.

News Briefs compiled by *WWD* Associate Editor Nicole Bowling

NGWA Forum to Examine Hydraulic Fracturing

The National Ground Water Assn. is holding a one-day forum, titled "Hydraulic Fracturing: Scientific and Technical Approaches to Protect Groundwater," on June 27, 2012, in Columbus, Ohio. Topics will include water testing, well construction integrity and technologies for wastewater management.

U.S. Departments Partner on Natural Gas & Oil

The U.S. Department of Energy, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of the Interior announced a formal partnership to coordinate and align all research associated with development of the nation's abundant unconventional natural gas and oil resources. This partnership was created to ensure that the continued expansion of natural gas and oil production happens safely and responsibly.

U.S. Membrane Market on the Rise

According to an April Freedonia report, demand for membranes in the U.S. is expected to increase 7.1% per year to $5.4 billion in 2016. Advances will be supported primarily by the continued adoption of environmental regulations that require purity levels that are best achieved with membrane separation technologies.

Additionally, ongoing interest in minimizing waste and recycling or reusing input fluids will stimulate gains in membrane demand, especially in the industrial market.

New Pollution Reduction Plans Set for LA

The EPA and the Los Angeles Regional Water Quality Control Board announced the latest in a series of pollution reduction plans designed to restore 175 water bodies in Los Angeles and Ventura Counties.

The pollution targets set by these plans will improve water quality, restore ecosystems and protect the public by eliminating beach closures due to bacteria and improving the health of fish used for consumption.

U.S. Coast Guard Issues Ballast Water Rule

After almost two decades of waiting, the U.S. Coast Guard finally released new requirements for treating ballast water discharges from vessels in order to reduce the risk of aquatic nuisance species from entering U.S. waters, damaging the environment and causing billions in economic losses.

Under existing rules, shippers must exchange ballast at sea or flush the tanks with salt water if empty. Now, for the first time, ships will be required to install onboard ballast water management systems instead.

Report Underscores Water Infrastructure Needs

A new AWWA report shows that if the government delays the $1 trillion-worth of underground water infrastructure work required over the next 25 years or fails to do it properly, the problem will only grow worse and become more expensive to fix.

The 2010 investment estimate of $13 billion a year will increase to $30 billion annually by the 2040s. Aging water pipes may leak, break or fail and thereby compromise businesses, communities and public health.

Study: PVC Pipe Has Lowest Break Rate

A comprehensive study on water main breaks by Utah State University found that PVC pipe has the lowest overall failure rate when compared with cast iron, ductile iron, concrete, steel and asbestos cement pipes. Another major finding was that corrosion is a major cause of water main breaks: 75% of all utilities have corrosive soil conditions and, combined with a high portion of old cast iron and ductile iron pipes, corrosion is ranked the second highest reason for water main pipe failure in the U.S.

New Envision Rating System Announced

The Institute for Sustainable Infrastructure in collaboration with the Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design unveiled a new infrastructure rating system, called Envision. The system was designed to help policy makers evaluate the sustainability of infrastructure, set realistic national priorities and conduct a national discourse on infrastructure investment.

Networking News

- Amanda J. Waters was appointed government affairs counsel with the the Water Environment Federation.
- Dow Chemical Co. will purchase the remaining equity in Clean Water Technologies Inc.
- Lakos Separators and Filtration Solutions hired Tiffany Dawkins as territory sales manager and Prashat Joshi as strategic initiatives coordinator. WWD

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