

Compiled by Elizabeth Lisican



TODD GARTNER

# Integrated Investment Portfolio

Leveraging nature to solve increasing water industry challenges

**Securing a clean water supply is an ever-increasing concern in the U.S. With aging infrastructure, growing demand and extreme weather events, there is no shortage of challenges. WWD Managing Editor Elizabeth Lisican recently spoke with Todd Gartner, a senior associate for the World Resources Institute's Food, Forests & Water Program, about tackling these issues by investing in nature.**

**Elizabeth Lisican:** When it comes to securing clean water, what does it mean to invest in nature?

**Todd Gartner:** "Natural infrastructure" like forests and wetlands provide proven benefits when it comes to water security. Forests, for example, have sturdy, long-lived roots that help to anchor soil against erosion, and multiple layers of vegetation and a thick litter layer that reduce falling rain's erosive force. Forests also promote infiltration of water into the soil, minimizing flooding and allowing for nutrient uptake by vegetation and soil microbes. Forests, in short, purify the water downstream on which communities rely.

By strategically securing networks of forests and other ecosystems, water utilities and businesses can ensure these essential services. These efforts often involve conserving remaining forests with easements or land acquisitions. In many watersheds, forests and wetlands have been degraded and must be restored. Some innovative communities are compensating upstream rural landowners to manage their land in part to provide clean water and flood control.

**Lisican:** How can natural infrastructure be integrated into traditional water management strategies?

**Gartner:** The water management industry is very good at engineering solutions to growing water challenges—be it advanced filtration plants to clean degraded source water or reservoirs to protect communities from drought and flood. Yet, as managing water becomes increasingly complex and costly, communities must rely on all the tools in their arsenals. Maintaining networks of upstream ecosystems can enhance services and reduce the costs of providing clean water. Even as utilities and businesses maintain key engineered facilities to manage water—such as treatment plants—a growing number of innovators

are finding that natural infrastructure is a solid and overdue investment. An integrated portfolio of both natural and built infrastructure can enhance water security and stabilize rising costs.

**Lisican:** Please offer some examples of utilities that have put this concept into practice.

**Gartner:** The primary drinking water reservoir for Raleigh, N.C., was added to the Clean Water Act 303(d) list of impaired waters in 2008. In the same year, the region suffered from a drought resulting in water use restrictions and fears of emergency measures. Two years later, the area suffered flooding that closed roads and schools, and forced evacuations. These challenges are in part due to increasing development pressures in the watershed and loss of forest, floodplains, and wetlands. The municipal water utilities in Raleigh and nearby Durham maintain sophisticated water storage and treatment capabilities. These cities also are making smart investments to protect priority upstream lands. Raleigh has established a permanent watershed protection fee (one penny per 100 gal). This small increase to water bills provides almost \$2 million per year for strategic land conservation.

The water utilities on the Northern Front Range of Colorado have intricate systems of reservoirs and treatment facilities to provide high-quality drinking water. But in the face of catastrophic wildfires upstream, natural infrastructure options are becoming critical. Wildfires in these utilities' forested headwaters can cause massive sedimentation, which can clog water intakes, reduce reservoir storage capacity and increase treatment costs. While robust built infrastructure is essential for managing these risks, Front Range utilities stand to save hundreds of millions by investing in measures like prescribed burning and mechanical thinning that reduce the occurrence and severity of wildfires. **WWD**

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For more information, write in 1113 on this issue's reader service form on page 47.

News Briefs compiled by Amy McIntosh

**U.S. Agencies Support Water Quality Trading**

 The U.S. Department of Agriculture and the U.S. EPA have partnered to support water quality trading and other market-based approaches that provide benefits to the environment and economy. Trading would allow regulated entities to purchase and use pollutant reduction credits generated by other sources in a watershed.

**Grundfos USA Celebrates 40th Anniversary**

 Grundfos celebrated 40 years of operations in the U.S. with a ceremony at its facility in Fresno, Calif. Denmark-based Grundfos expanded to the U.S. in 1973 and has grown from one office in Fresno to more than 1,300 employees in five facilities nationwide.

**Treatment Equipment Demand to Grow in Developing Regions**

 World demand for water treatment equipment is expected to rise 6.9% per year to \$53.4 billion in 2017, according to a Freedonia Group study. Developing parts of the world—the Asia/Pacific and Africa/Mideast regions, Eastern Europe, and Central and South America—are expected to show strong growth.

**Partnership Offers Landfill-Free Verification**

 NSF Sustainability partnered with Sustainable Waste Solutions to provide landfill-free verification for companies. Companies must demonstrate that less than 1% of their process waste goes to landfill for disposal and that documented waste management procedures and trainings are in place.

**Study Helps Water Utilities Prepare for Wildfires**

 The Water Research Foundation completed a new study, "Effects of Wildfire on Drinking Water Utilities and Best Practices for Wildfire Risk Reduction and Mitigation." Survey participants reported that collaboration with other drinking water systems; landowners; non-profit organizations; and local, state and federal government agencies was a critical aspect of effective wildfire mitigation.

**Construction of Abu Dhabi Tunnel Complete**

 Abu Dhabi Sewerage Services Co. completed construction of its new main sewer tunnel. The 41-km tunnel is the major component of one of the largest gravity-driven sewerage networks in the world. Appointed program manager in 2008, CH2M Hill helped oversee the delivery of the tunnel.

**Black & Veatch to Lead St. Louis Emissions Program**

 The Metropolitan St. Louis Sewer District selected Black & Veatch to lead its \$35-million incinerator air emissions upgrade program. The program is necessary in order to meet new federal air emission limits for existing and new sewage sludge incinerators.

**Virginia Beach Works to Meet Consent Order**

 The city of Virginia Beach currently is in a Special Order by Consent with the Virginia Department of Environmental Quality. RJN Group Inc. will help the city meet its regulatory commitments by providing data to determine if the city has met its peak flow commitment for particular sanitary sewer basins.

**Project Aims to Restore New York Harbor Oyster Population**

 Xylem's YSI Integrated Systems and Services has teamed up with the Urban Assembly New York Harbor School and Verizon to collaborate on the Billion Oyster Project. The project was developed as a long-term oyster restoration project, to restore native oyster species to New York Harbor and surrounding estuaries and waterways.

**eSight Energy Wins Innovation Award**

 eSight Energy won the award for Most Innovative Company at the 10th annual British American Business Council and the British Consulate-Chicago awards. The award recognizes corporations and individuals who have made significant contributions to further trade, commerce, civic, philanthropic and/or cultural relations between the U.K. and the U.S.

**Networking News**

- Vanessa Leiby was named executive director of the Water and Wastewater Equipment Manufacturers Assn.
- John Rinard was appointed CEO of Willdan Group's infrastructure division.
- AEA Investors has acquired Siemens Water Technologies. **WWD**

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