

Jay M. Brady



Keeping Up

Regulatory awareness
key for ensuring long-term
facility health

Water and wastewater industry members must always prepare for the future. WWD Associate Editor Kristin Muckerheide recently discussed wastewater expansion planning for nutrients and flood mitigation with Jay M. Brady, P.E., principal environmental engineer at Stanley Consultants Inc.

Kristin Muckerheide: How can wastewater treatment facilities stay on top of uncertain and ever-changing nutrient requirements?

Jay M. Brady: Facilities need to stay aware of the nutrient policy and regulatory changes that seem to be frequently occurring. Facilities should consider studying nutrient removal alternatives for differing levels of nutrient removal requirements to give a full picture of what their potential upgrades and associated costs will be for a given effluent requirement. This level of service planning is especially important for those facilities in the process of planning an upgrade. Even if nutrient removal is not added to a current upgrade, a plan should be in place that allows for building and incorporating nutrient removal facilities into the existing plant.

Muckerheide: What goes into planning a plant expansion such as the one you recently spoke about in a presentation at Watercon 2012?

Brady: Planning an expansion such as Iowa City requires the planning team to gain a very good understanding of the owner's needs, desires and constraints. A plan is the most successful when the owner's requirements are integrated into the plan and the owner's staff understands why decisions are made and the rationale behind the plan. A transparent planning process allows the owner to take ownership of the plan.

Muckerheide: What have been your greatest challenges on similar projects?

Brady: Resolving division within an owner's planning team can be a significant challenge on any project. Using a transparent planning process will generally illuminate any major divisions, hopefully allowing resolution in a constructive way. Not everyone will always be pleased or in agreement with a planning outcome, but generally they will accept the plan if they fully understand the rationale behind [it]. Revisiting decisions can be another frustrating and challenging aspect of any project. Utilizing open decision-making processes that utilize mutually

developed criteria with appropriate technical information can help minimize second-guessing decisions.

Muckerheide: How do you model a collection system or plant expansion to meet ammonia- and nutrient-removal objectives while considering emerging concerns?

Brady: Plant process modeling is an important component to determining a cost-effective and flexible plan for meeting near-term effluent requirements and anticipated emerging concerns. Plant process modeling allows various configurations to be efficiently sized and evaluated for process performance. "What if" scenarios can be examined to consider emerging concerns.

Muckerheide: How can facilities identify key concerns regarding flood inundation, and how can they develop a strategy to mitigate them?

Brady: I believe we are just beginning to recognize that our probabilistic-based flood prediction process has likely given us a false security in an age of climate change. Climate models are predicting—and we are likely seeing—more frequent and extreme storm events resulting in extreme flooding. Water and wastewater treatment plants are especially vulnerable to extreme flood events because they are often located on low-lying ground along streams and rivers. These facilities are critical to our cities and citizens and also are very expensive. As such, treatment facilities should be reviewed to verify their design flood levels and their components most vulnerable to flood.

Design flood levels should be revised as necessary based on the best available information. Consideration should be given to providing protection to the 500-year event plus 1 ft or to the 100-year event plus 3 ft to adequately safeguard this critical infrastructure. Multiple strategies are available for mitigating flood concerns, including barriers, raising critical mechanical/electrical equipment, sealing building/structure openings and raising walls. **WWD**

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For more information, write in 1113 on this issue's reader service form on page 45.

California State Senate Protects Ratepayers



California Senate members voted by a margin of 31-4 to approve

Senate bill 1386, a measure that would clarify existing language in the California Water Code, making it explicitly clear that the Water Replenishment District of Southern California would maintain the sole responsibility for storing and managing groundwater in southeast Los Angeles County, thereby avoiding costly duplication of water services among public agencies.

In May, the California Supreme Court rejected appeals by the Central Basin Municipal Water District; the cities of Downey, Signal Hill and Cerritos; and Tesoro Oil Co. challenging the court's jurisdiction to rule on an important groundwater storage plan for the Central and West Coast groundwater basins.

Food & Beverage New Market for Technology



According to a new report by the Global Water Institute, the food and beverage industry is now an important growth market

for water technology companies. The report predicts that these drivers will increase capital expenditure on water technology from \$3.3 billion in 2011 to \$6 billion in 2020, representing a compound annual growth rate of 6.7%.

Currently, the top expenditure categories are aerobic technologies, sludge management and filtration and softening systems, but it is expected that anaerobic systems (including biogas collection) and ultrafiltration- and microfiltration-based solutions will show the most growth between 2011 and 2020.

Mayors Commemorate Clean Water Act



To mark the 40th anniversary of the Clean Water Act, the U.S. Conference of Mayors hosted a panel discussion about the urgent need for regulatory reform.

During the discussion, mayors called on Congress to either amend the act or ask the U.S. Environmental Protection Agency (EPA) to change the way it implements the act to meet a smarter, more current and more cost-efficient and smart approach.

IFAT ENTSORGA Hosts Biggest Show in History

IFAT ENTSORGA 2012 set a new record with approximately 125,000 visitors, up from 109,589 visitors in 2010. A total of 2,939 exhibitors from



54 countries, up from 2,730 exhibitors from 49 nations in

2010, presented in 215,000 sq meters of space, up from 195,000 sq meters in 2010, from May 7 to 11 in Munich.

Of the 125,000 visitors, about 75,000 were domestic and about 50,000 from abroad. In addition to Germany, the top visitor countries were Austria, Italy and Switzerland.

EPA, VA to Connect Veterans With Jobs



The EPA and Department of Veterans Affairs Vocational Rehabilitation and Employment Program

announced a memorandum of understanding to connect veterans with disabilities to career opportunities in the water and wastewater sectors—such as at wastewater plants and drinking water facilities—as part of EPA's Water Sector Workforce Initiative.

Singapore's Water Industry Doubles



Since 2006, the total number of water companies in Singapore

has doubled, up from 50 to about 100, according to Singapore International Water Week. Over the same period, Singapore-based water companies also secured more than 100 international projects worth close to \$9 billion.

WWD Accepting Top Projects Nominations



WWD invites water and wastewater professionals

to nominate the industry projects they deem most remarkable and innovative for recognition in the 2012 Top Water & Wastewater Projects program. Winners will be recognized in the December 2012 Reference Guide issue.

Visit <http://www.wwdmag.com/top-projects-nomination> to submit your nomination form. All entries must highlight a water or wastewater project that was in its design or construction phase over the last 18 months. The final day nominations will be accepted is Aug. 30.

Networking News

- John S. Stanik, chairman of Calgon Corp., has retired. He will stay with the company in his current position until a replacement is found.
- Bruce Bowers joined SCS as a senior project manager.
- Xylem Inc. was awarded the Excellence Award in Corporate Philanthropy by the Committee Encouraging Corporate Philanthropy.

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