Gleick Joins the Blogosphere

City Brights

San Francisco Chronicle

Peter Gleick, president of the Pacific Institute, recently started the "City Brights" blog on the *San Francisco Chronicle* website. His comments address water issues ranging from desalination to agriculture, bottled water, water conflicts, efficiency, and sanitation and hygiene. Each post includes a "water number," a statistic that will likely surprise many readers; in fact this feature could appropriately be called "reality check." For example, Gleick determined that his personal water bill amounts to nearly $4,400 per acre-foot, compared to $10 to $100 per acre-foot that farmers typically pay. In another post, the water number was "not zero" for the number of new dams built in California in the past few decades—in spite of much publicity to the contrary. Gleick has much to teach us about California, western, and world water issues, and this site provides information in easy-to-digest nuggets.

Visit www.sfgate.com/cgi-bin/blogs/gleick/.

Site Promotes Government Transparency

Regulations.gov

U.S. Environmental Protection Agency (EPA)

This website allows users to search, view, and comment on regulations issued by the U.S. government. It is currently undergoing redesign, based on user comments collected over the summer, to facilitate greater discussion about the issues.

Regulations.gov contains all proposed federal regulations and the final rules as published in the *Federal Register*, as well as supporting materials and public comments. Users can comment on proposed rules to the relevant agencies through the site. It holds 2 million documents from more than 160 federal entities.

Visit www.regulations.gov.

Water Recycling Progress Slow in CA

Water Recycling 2030: Recommendations of California's Recycled Water Task Force

National Water Research Institute

This paper outlines progress made in the last six years to address challenges associated with implementing water recycling projects in California. Progress was evaluated according to whether 2003 recommendations by the California Recycled Water Task Force (CRWTF) have been implemented, and if so, what level of success has been achieved. The task force identified 26 regulatory, economic, and societal issues affecting the implementation of water recycling projects and recommended means for addressing each. Issues included such topics as bonds, cross-connections, plumbing code changes, education, community involvement, leadership, and other regulatory matters.

The white paper concluded that of 14 key issues identified by CRWTF, no recommendations had been fully implemented and recommendations for only five issues had been partially implemented. Futhermore, of all 26 issues, recommendations from only two issues had been fully implemented and from nine were partially implemented. Finally, of the 15 issues for which no recommendations had been implemented, some work was underway for most.

According to the white paper, the top priorities have changed since 2003; they now include communication with the public, state leadership and advocacy, regulatory consistency, funding, and public support. Five new issues were also identified: constituents of emerging concern (pharmaceuticals and personal-care products), antidegradation (protecting water quality while supporting beneficial use), salinity management, indirect potable reuse, and improved water-recycling information.

Primary obstacles to addressing the issues were identified as lack of leadership (often at the state level), the need for legislative change, and lack of funding.

Access the 52-page paper at www.nwri-usa.org/epublications.htm.

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A View of California's Coastal Future

The Impacts of Sea-Level Rise on the California Coast

The Pacific Institute

This analysis prepared for three California state agencies estimates that 480,000 people, a wide range of critical infrastructure, vast areas of wetlands and other natural ecosystems, and nearly $100 billion in property along the California coast are at increased risk from flooding from a four-foot sea-level rise if no adaptative measures are taken. Populations in San Mateo, Orange, and Alameda counties were found to be especially vulnerable. The selected sea-level rise is the projected change by 2100 based on medium- to medium-high greenhouse-gas emissions scenarios. In the past century, sea level has risen nearly eight inches along the coast.

Adaptation strategies that could reduce the impacts include coastal armoring and other flood protection, erosion-prevention measures, and reduced development in vulnerable areas.

Detailed maps showing areas of population and critical infrastructure at risk are included in the report and available online.

Visit www.pacinst.org/reports/sea_level_rise/.

Special Issue Addresses Emerging Contaminants

Contaminants of Emerging Concern in Water Resources

American Water Resources Association

Edited by USGS scientists William Battaglin and Dana Kolpin, the February 2009 issue of the *Journal of the American Water Resources Association* contains a collection of papers that address the environmental occurrence of trace organic compounds such as pharmaceuticals, personal care products, pesticides, and hormones, and their potential adverse effects on aquatic and terrestrial life and human health. The papers address how the compounds enter the environment, detection capabilities, and questions concerning contaminant environmental fate and behavior, as well as wastewater and drinking-water treatment efficacies. The edited volume arose from a 2007 AWRA specialty conference and provides an overview of the detection and sources of contaminants of emerging concern, their fate and transport in natural and engineered systems, receptors and effects, and social and engineering solutions to problems.

Journal available in libraries or to AWRA members at www.awra.com. Also visit toxics.usgs.gov.

Worldwide Water Quality Trades Evaluated

Water Quality Trading Programs: An International Overview

World Resources Institute

According to the World Resources Institute, water-quality trading is gaining traction in watersheds around the world. The market-based approach works with water-quality regulations to improve water quality, provide flexibility in how regulations are met, and potentially lower the cost of regulatory compliance and abatement. WRI researchers identified 57 water-quality trading programs worldwide, of which 26 are active, 21 are under consideration or development, and 10 are inactive or are completed pilots with no plans for future trades. Most were in the United States, with only six programs existing elsewhere—four in Australia, one in New Zealand, and one in Canada.

The authors identified five key factors that stakeholders attributed to successful implementation of their trading programs:

- strong regulatory and/or nonregulatory drivers, which helped create a demand for water-quality credits;
- minimal potential liability risks to the regulated community from meeting regulations through trades;
- robust, consistent, and standardized estimation methodologies for nonpoint source actions;
- standardized tools, transparent processes, and online registries to minimize transaction costs; and
- buy-in from local and state stakeholders.

Before going to the expense of developing a water-quality trading program, the report recommends that the relevant bodies—either governmental or nongovernmental—ensure these factors are in place.

Access the 16-page report at www.wri.org/publication/water-trading-quality-programs-international-overview.

Predict Contaminant Degradation from Isotopes

A Guide for Assessing Biodegradation and Source Identification of Organic Groundwater Contaminants Using Compound Specific Isotope Analysis

U.S. EPA

When organic contaminants are degraded in the environment, the ratio of stable isotopes of elements in the compounds often changes, and the extent of degradation can be recognized and predicted from that change. Recent advances in analytical chemistry make possible compound-specific isotope analysis (CSIA) on dissolved organic contaminants such as chlorinated solvents, aromatic petroleum hydrocarbons, and fuel oxygenates, at concentrations in water that are near their regulatory standards.

Stable isotope analyses can provide an in-depth understanding of biodegradation or abiotic transformation processes in contaminated aquifers. Because CSIA is a new approach, there are no widely accepted standards for accuracy, precision, and sensitivity, and no established approaches to document accuracy, precision, sensitivity, or representativeness. This December 2008 publication provides recommendations for sampling, measurement, data evaluation, and interpretation in CSIA.

Access the 82-page report (EPA 600-R-08-148) at www.epa.gov/ada/pubs/reports/600r08148/600r08148.pdf.

Get Climate Info Updates

Climate Change and Water E-Newsletter

U.S. EPA

EPA's National Water Program now offers a weekly electronic newsletter covering news and information related to water programs and climate change. It provides short articles and links to related sites and is part of a larger effort to inform clean-water and drinking-water program managers about climate change topics, issues, and opportunities.

Visit www.epa.gov/ow/climatechange/.

Watershed Resources Clearinghouse

Watershed Central

U.S. EPA

This new website aims to help watershed organizations and others find information on implementing watershed management projects. The site links not only to EPA web resources, but also to those of state, tribal, and federal partners; universities; and nonprofit organizations. Key information includes environmental data, watershed models, nearby local organizations, guidance documents, and other information, as well as links to watershed technical resources, funding sources, mapping applications, and information on specific watersheds. Also included is a wiki to facilitate collaboration and information sharing.

Visit www.epa.gov/watershedcentral.

Calculate Water Footprint

Global Water Tool

World Business Council for Sustainable Development

Businesses can calculate their water footprint, determine areas where they might improve efficiency, and evaluate water-supply-related risks relative to their global operations and supply chains with this update of a web tool first released in 2007. Created by CH2M Hill and the World Business Council for Sustainable Development, the tool appears best suited to companies with a wide international presence that need general guidance for dealing with water issues, particularly in countries with limited water resources or that lack improved water and sanitation facilities. ■

Access the Global Water Tool at www.wbcsd.org.