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Administrator,

I'll be heading to Seattle next week for the Tenth World Congress on Alternatives and Animal Use in the Life Sciences. I'm co-chairing the Congress, along with Dr. Elaine Faustman from the University of Washington and Dr. Joanne Zurlo of Johns Hopkins University, and I'm looking forward to seeing what I think will be a very strong program. While I'm in Seattle, Chris Robbins will be in DC, in part for the Lean Advisory Board meeting. Bruce Rodan and Richard Yamada will travel to Cincinnati to meet with our staff there and to attend the Small Drinking Water Systems workshop. Later in the week they will meet with Region 3 and their states to discuss their research needs as well as a number of other topics important to the states.

Hot Issues

CyAN collaboration Provides Early Detection Utah Cyanobacteria Bloom: Early detection of toxic algal blooms is now possible based on satellite imagery from the [HYPERLINK "https://www.epa.gov/water-research/cyanobacteria-assessment-network-cyan"] (CyAN), a multiagency project involving EPA, NASA, NOAA, and USGS. Collaborators from EPA, NOAA and the State of Utah sought satellite access early this year after severe cyanobacteria blooms took place in the state during 2016. A week after the state's routine monthly sampling, CyAN detected a bloom developing in Utah Lake's Provo Bay before officials on the ground knew it. Follow-up sampling results prompted the state to quickly issue a cyanobacteria bloom advisory, warning the public and their pets to stay away. Local media noted the public benefit due to the speed and accuracy of detection using satellite imagery. [HYPERLINK "https://apnews.com/5135421651c14925a6d5f62c31bd05a6/Researchers-creating-warning-system-for-toxic-algae-in-lakes"]

CyAN Mobile App Provides Early Detection Data to Army Corps of Engineers and Region 4: CyAN is also providing U.S. Army Corps of Engineers in Lake Okeechobee, Florida, along with other CyAN collaborators in EPA Region 4, daily cyanobacteria data from the Sentinel-3 OLCI satellite

through the CyAN mobile application. Preparations are underway to switch the mobile application testing to current Sentinel-3 OLCI data for the continental U.S. in the coming weeks.

Technical Support on GenX in Cape Fear Basin: On August 15, at the request for Region 4, ORD scientists participated in a call with representatives from local governments in North Carolina to discuss treatment options for GenX and other per- and polyfluoroalkyl substances (PFASs) at drinking water utilities in Cape Fear, NC. Participants on the call included North Carolina Department of Environmental Quality; Pender County (NC) Health Director; and the Cape Fear Public Water Utility. Participants agreed to share information on ongoing projects related to the drinking water utilities in Cape Fear, and to look for opportunities to collaborate further.

ORD prepares next report on Cape Fear Basin PFAS analysis for NC DEQ: ORD is currently preparing its third report on the laboratory PFAS results from North Carolina Department of Environmental Quality (NC DEQ) Cape Fear Basin sampling for NC DEQ. This report will include results for GenX from the sampling for weeks 6 and 7, along with preliminary findings from ORD's non-targeted analysis. ORD brief NC DEQ and EPA Region 4 on the report on Tuesday, August 22nd.

Lead Service Line Identification Project in Illinois: At the request of Region 5, ORD has been working with the City of Galesburg, Illinois EPA, and Region 5 on lead service line (LSL) identification in Galesburg. The project is part of the Flint response to address the national issue of helping systems and individuals locate LSLs. Galesburg has had historical lead action level exceedances, and has implemented phosphate-based corrosion control treatment, public education, and LSL replacement. On August 10, the first round of sampling results indicated elevated lead levels. On August 11, notification of the sampling results and recommendations to use/or installation of point-of-use filtration devices was sent to the City. The LSL identification project, which also includes Flint, MI, is ongoing.

ORD Assists Ohio EPA with bromide and drinking water treatment: ORD scientists and OW are working with Ohio EPA's Division of Drinking and Ground Waters to provide technical assistance to small drinking water utilities facing challenges in meeting the regulated maximum contaminant levels for total trihalomethanes (TTHMs). TTHMs are disinfection byproducts of chlorine. ORD is offering technical expertise on disinfection byproduct formation and distribution system modeling and discussing options, including changes to disinfection practices and distribution system operation. ORD plans to meet with Ohio EPA at the EPA Small Systems Drinking Water Workshop in Cincinnati.

Technical Assistance in Flint, MI: On August 15 ORD scientists met with the water treatment plant operator in Flint, MI to conduct pipe rig maintenance, removing lead pipe sections that were installed at the plant in February 2016. ORD will evaluate scale layer formation on the pipes. ORD has trained the plant operator and staff from the Michigan Department of Environmental Quality to record weekly flow readings from the pipe loop rigs and perform maintenance when needed. On August 17, ORD scientists are meeting with Region 5 representatives to discuss the water quality outlook in Flint, MI.

Atmospheric Water Generation CRADA with WaterGen: In response to a request from the Administrator, ORD initiated a series of discussions with EPA OW and the Administrator's staff to identify research objectives for evaluating the broader use of AWG technologies. Currently the statement of work and CRADA are being finalized. ORD estimates that the research could be completed in 3-6 months. Representatives from WaterGen will be visiting EPA labs in Cincinnati on August 17 and 18 to tour the facilities and discuss the technical aspects of the evaluation of WaterGen's AWG system.

Kansas-EPA Collaboration: In response to a request by the Kansas Department of Health and Environment, ORD and Region 7 discussed a joint-pilot project with Kansas to better understand and

address state needs. EPA, USGS, and the state of Kansas will collaborate on Milton Lake HABs sampling and analysis later this month.

Upcoming Public Events

Alternative to Animal Testing World Congress Meeting: ORD scientists will participate in the Tenth World Congress on Alternatives and Animal Use in the Life Sciences on August 20-24 in Seattle, where they will share EPA's scientific advances in developing alternative, non-animal testing approaches for chemicals. EPA's research will be shared through presentations by ORD scientists, including a plenary presentation entitled "A New Tox21 Strategic Plan and the Integration of EPA Science," Exposure-Based Screening and Priority-Setting", posters, and an exhibit booth where scientists will provide live demonstrations of EPA's online tools and meeting participants can learn more about EPA's research.

Small Drinking Water Systems Workshop Next Week: As of August 15, there are 340 registered participants, of which 140 have registered for the training session, *Optimal Corrosion Control Treatment*, to be held at the end of the workshop. Richard Yamada and Bruce Rodan will be attending the workshop.

EPA Tools and Resources Webinar: On August 23, ORD will host its monthly public webinar for states, tribes and others highlighting the National Stormwater Calculator (SWC), a resource to help support local, state and national stormwater management objectives and regulatory efforts to reduce runoff through infiltration and retention using green infrastructure (infrastructure based on natural processes) practices as low impact development controls.

Chinese delegation to visit EPA Cincinnati: During the week of August 21, representatives from the Chinese Academy of Sciences' Research Center for Eco-Environmental Sciences (CAS/RCEES) and Chinese Academy of Urban Planning and Design under the Ministry of Housing, Urban and Rural Development (MoHURD/CAUPD) will be visiting Cincinnati. Attendees will review the status and plans for ongoing research in the bilateral cooperative project, "Sustainable Development of Water Supplies." This project is an MOU between EPA, China's Ministry of Science and Technology, CAS/RCEES, and MoHURD/CAUPD.

Last week Highlights

Smoke Sense Study and Mobile App Updates: EPA's Smoke Sense Study and mobile app has had an initial strong response from the public, with more than 1200 new users since the app was launched on Google Play Store on August. 1. Coverage of the wildfire smoke study includes an article posted in the next issue of Wildfire magazine, a publication of the International Association of Wildland Fire, and [HYPERLINK "http://www.wenatcheeworld.com/news/2017/aug/05/epa8217s-new-mobile-app-tracks-impacts-from-smoke/"] in the state of Washington, which is experiencing poor air quality from wildfires in British Columbia. The study is the first of its kind to use a mobile app to evaluate the health effects from wildland fires, and to test whether an app is an effective tool to inform the public about the health risks of wildland fire smoke.

ORD Project Provides Public Access to Fathead Minnow Genomes helping Communities Predict Toxicity of Chemicals on Aquatic Environments: ORD toxicologists have released first draft annotations of the fathead minnow genome, dramatically expanding the scope of genome-level information for one of the most widely used organisms in North America for aquatic toxicity testing. Gene predictions were made accessible to the public and scientific community via an interactive genome browser hosted in partnership with the Society of Environmental Toxicology and Chemistry ([HYPERLINK "http://www.setac.org/fhm-genome"]). Understanding the fathead minnow genome ultimately provides decision makers with the information they need to more quickly and cost effectively take action to protect the local aquatic environment.

Material Management Wizard (MWiz)Now Final: The final version of EPA's Materials Management Wizard (MWIZ) is live ([HYPERLINK "https://cfpub.epa.gov/mwiz/"]). MWiz provides easy access to a repository of EPA-sourced materials management tools and resources to support and promote sustainable materials management and community planning decisions. The tools and resources available through MWiz help users analyze problems, understand management options, calculate design parameters, analyze costs and benefits, evaluate tradeoffs, engage stakeholders, and/or develop education and outreach campaigns.

ORD Published [HYPERLINK "https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=337163&fed_org_id=1253&subject=Homeland%20Security%20Research&view=desc&sortBy=pubDateYear&showCriteria=1&count=25&searchall='indoor%20outdoor%20decontamination'"]**:** A survey of commercially-available or fielded equipment was conducted and resulted in three pieces of identified equipment that could be used or rapidly modified for use in supplying liquid chemicals to decontaminate surfaces following a biological contamination incident. This effort aims to improve the capability for transit systems to quickly and efficiently recover from a biological contamination incident by refining existing methods, tools and protocols for characterization, clean-up, and clearance of contamination in physical structures (i.e., tunnels, stations) and rolling stock (i.e., subway trains).

Green Infrastructure-St. Louis, MO: ORD participated in a call with Region 5 and the City of St. Louis to discuss the city's large-scale plans for vacant lot/building demolition and urban watershed management planning. ORD will coordinate with the National Center for Infrastructure Modeling and Management and will provide technical assistance on urban soil replenishment for managing storm water.

Improving Health and Well-being in Denver's Poorest Neighborhood: ORD is working with the University of Colorado-Denver's College of Architecture and Planning (UCD) in a collaborative research project to public health and the environment for residents of the Sun Valley neighborhood—a public housing area where the median annual income is just $9,000. In July 2017, Denver Housing Authority and Sun Valley EcoDistrict received a $30 million HUD grant to redevelop Sun Valley. Agency scientists will be measuring indoor air quality and will be using EPA's Human Wellbeing Index—an integrated measure for evaluating the influence of social, economic and environmental service flows on human wellbeing—to inform redevelopment plans that will revitalize the community.

Support for California Department of Toxic Substances Control: The California Department of Toxic Substances Control (DTSC) requested ORD assistance to learn how to integrate Health Impact Assessment and community structured decision making approaches into their hazardous substance decision process. Future support and collaboration opportunities are currently under discussion. This effort is a follow-up to the contributions ORD staff made during a DTSC-hosted seminar in July, "to improve the Department's permitting process…," and consideration of "…additional criteria to address community concerns when making permit decisions."