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WSWRD

NATIONAL RISK MANAGEMENT RESEARCH LABORATORY FACT SHEET

The Water Supply and Water Resources Division based in Cincinnati, Ohio, and Edison, N.J., conducts research to support both the Safe Drinking Water Act and the Clean Water Act by designing, developing and evaluating technologies to treat, detect, monitor and control waterborne contaminants.

Mission

WSWRD's mission is to conduct innovative and relevant research to manage contaminants that pose a threat to human health in various water supplies and to develop innovative approaches and tools to monitor, treat, characterize, protect, and restore source water, waterways and infrastructure.

Organization

WSWRD's mission is accomplished through its four branches: the Urban Watershed Management Branch (Edison), the Treatment Technology Evaluation Branch, the Microbial Contaminants Control Branch, and the Water Quality Management Branch. Experts assigned to the branches work on research projects within the branch's scope, as well as on integrated multidisciplinary research teams across EPA.

Research

Given the wide range of water supply and water resources, great care must be taken to ensure the safest possible drinking water reaches the consumer. Researchers study ways to monitor, protect and restore water resources, as well as treat and transport clean drinking water. In addition, WSWRD concentrates on waterborne diseases and pathogens that may impact the nation's source water and drinking water supply. The research also helps develop technologies and tools for water resource managers and decision makers to adapt water resources to future climate change, demographics, and economic developments.

Aging Water Infrastructure - In support of EPA's Sustainable Water Infrastructure Initiative, NRMRL initiated the Aging Water Infrastructure Research Program to evaluate and demonstrate innovative technologies and improve the cost effectiveness of operation, maintenance, and replacement of aging and failing drinking water and wastewater treatment and conveyance systems. This research program assists EPA's program and regional offices, states, territories and tribes in meeting their programmatic requirements. The program also assists utilities in more effectively implementing comprehensive asset management, providing reliable service to customers, and meeting Safe Drinking Water Act and Clean Water Act requirements.

Arsenic - EPA's Arsenic Research Program fills in research gaps for a number of technologies and compliance approaches, and provides information to utilities, engineering firms, regulatory officials, and others. The research focuses on the development and evaluation of innovative methods and cost-effective technologies for improving the assessment and control of arsenic contamination.

Contaminants - The Safe Drinking Water Act and Clean Water Act require EPA to establish a Contaminant Candidate List of drinking water contaminants to be considered for future regulation. WSWRD research investigates how biological, chemical, and radiological contaminants on the CCL impact water sources and supplies

Distribution Systems - Focuses on the transport of treated water to consumers. WSWRD research areas include on-site distribution system simulators used to evaluate and understand the dynamics that influence water quality and pipe material dynamics as water is transported within distribution pipelines; on-site experimental pipe loops for leak detection analysis on water infrastructure conveyance systems; and corrosion, scaling, and metal mobility studies to control corrosion and reduce the release of metals into our drinking water distribution systems.

Source Water Protection – Source water is untreated water from streams, rivers, lakes, or underground aquifers and it supplies both public drinking and recreational waters. WSWRD reviews ways to monitor, protect, and treat source waters.

Storm Water Management - In undeveloped and undisturbed environments, rainfall is naturally filtered and absorbed by its environment. In an urban setting, with typical development of many impervious surfaces, stormwater transports stressors to receiving waters. Research is focused on the development and demonstration of technologies, systems and methods to manage the risks to public health, property, and the environment from Wet-Weather Flow.

Treatment Technologies – Research in treatment technology evaluation is focused on several key problems that face the potable water industry. These include the study of the formation and removal of Disinfection Byproducts; the removal of pathogenic protozoa and corrosion control. Research also includes the design and evaluation of conventional and innovative treatment technologies such as advanced oxidation and nanotechnologies to remove biological and chemical contaminants in support of small drinking water treatment systems.

Point of Contact
NRMRL Technical Communications and Outreach Staff, 26 W. Martin Luther King Blvd. Cincinnati, Ohio 45286, 513-569-7377.

Website
http://www.epa.gov/nrmrl/wswrd/