



EPA's Office of Research and Development (ORD) and Office of Water (OW) invite you to a **free webinar**



Uranium Standards in Drinking Water and Removal Technologies Research at Small Community Water Systems

A certificate for one continuing education contact hour will be offered for this webinar

Tuesday, February 2, 2016
2:00 to 3:00 pm EST*

*Optional Q&A session
from 3:00 to 3:30 pm EST

Uranium and health effects and uranium in drinking water standards

Community water systems must comply with the maximum contaminant levels (MCLs) established by the Radionuclides Rule for radium-226, radium-228, gross alpha particle activity, beta particle and photon radioactivity, and uranium. The Rule intends to reduce the consumer's long term exposure to radiation in drinking water, thereby reducing the risk of cancer and improving public health protection. Uranium is a naturally occurring radioactive element and is present in virtually all soil, rock, and ground water sources. Long-term exposure to uranium in drinking water in excess of EPA's standard may result in kidney toxicity. This presentation will include an overview of uranium and health effects, followed by an overview of uranium in drinking water standards, including specifics about: monitoring requirements, determining compliance, and violations.

Presented by Samuel Hernandez, P.E. – EPA's OW. Sam is an environmental engineer with EPA's Office of Ground Water and Drinking Water (OGWDW). He currently serves as the Drinking Water Radionuclides Rule manager, which includes responding to inquiries about the principles and applicability of the rule and providing support to states and to other EPA offices regarding the technical basis of the rule. Prior to joining EPA, Sam worked at the U.S. Nuclear Regulatory Commission as an environmental project manager where he coordinated the development and publication of environmental impact statements and safety evaluation reports related to the renewal of operating licenses of nuclear power plants. Sam has a B.S. in Chemical Engineering from the University of Puerto Rico and a M.S. in Environmental Engineering from the University of Maryland.

Removal of uranium from drinking water by small system treatment technologies

Radionuclides, such as uranium, occur naturally as trace elements in rocks and soils; thus, they can be found in dissolved forms in ground waters, some of which are used as sources of drinking water. This presentation will include a short discussion of basic uranium chemistry followed by a discussion on small system treatment technologies that are effective for uranium removal. These treatment technologies include coagulation/filtration, lime softening, anion exchange, activated alumina, and reverse osmosis. Both pilot- and full-scale treatment system information will be covered. The presentation will conclude with a discussion on residual disposal.

Presented by Thomas Sorg, PE, BCEE – EPA's ORD. Tom has over 51 years of experience with federal environmental programs. His experience includes 42 years with the drinking water research and development program of EPA, and 25 years as Chief of the Inorganics and Particulate Control Branch of the Drinking Water Research Division. Tom's research emphasis has been on drinking water treatment technology for the removal of inorganic and radionuclide contaminants from water supplies, including the removal of arsenic. Over the past 12 years, his research has focused mainly on treatment technologies to remove arsenic from drinking water in support of the revised arsenic MCL of 10 µg/L. This effort has included oversight of the EPA Arsenic Removal Full-Scale Demonstration Program.

Registration: <https://attendee.gotowebinar.com/register/5438878674995945218>

Who should attend?

State primacy agencies, tribes, community planners, technical assistance providers, academia, and water systems interested in issues facing community water systems and solutions to help solve them.

Looking for more webinars?

This webinar is part of EPA's monthly series: *Challenges and Treatment Solutions for Small Drinking Water and Wastewater Systems*. A webinar will be held each month in 2016.



[www.epa.gov/water-research/
small-systems-monthly-
webinar-series](http://www.epa.gov/water-research/small-systems-monthly-webinar-series)