

Radioactive Waste Disposal from Water Treatment Facilities

Radioactive residuals are created from use of water treatment technologies. These residuals come in two forms, liquid and solid. Liquid residuals consist of spent filter backwash water, brine, rinse water, acid neutralization water, concentrated waste streams, and more. Solid residuals consist of sludge, spent membranes, spent resins, spent filter media, and more. There are many options for disposal and determining the best choice can be complicated. Waste companies in the area can be consulted for recommended disposal options. Additionally, the Minnesota Pollution Control Agency (MPCA) can be consulted on waste disposal.

Best Practices

Disposal options will vary depending on regulations and location of the treatment plant, along with type, volume, and concentration of the radioactive materials.

Options for Solids

Municipal & Industrial Solid Waste Landfill, Hazardous Waste Landfill, or Low-Level Radioactive Waste Landfill.

Options for Liquids

Direct Discharge to Waters of the U.S., Discharge to Publicly Owned Treatment Works, or Underground Injection.

For more guidance on disposal, see the decision trees on pages 17 and 21 of the EPA's [A Regulator's Guide to Management of Radioactive Residuals from Drinking Water Treatment Technologies \(PDF\)](https://www.epa.gov/sites/default/files/2015-05/documents/816-r-05-004.pdf) (<https://www.epa.gov/sites/default/files/2015-05/documents/816-r-05-004.pdf>) (EPA 816-R-05-004, July 2005).

Consult the MPCA

The MPCA implements the federal rules in Minnesota, and questions regarding waste are best directed to them. The following link has basic guidelines for hazardous waste, and the bottom of the page has office contact information by county: [Hazardous waste \(https://www.pca.state.mn.us/business-with-us/hazardous-waste\)](https://www.pca.state.mn.us/business-with-us/hazardous-waste).

Links

- EPA's Waste Management Guide: [Water Treatment and Waste Management \(https://www.epa.gov/emergency-response-research/water-treatment-and-waste-management\)](https://www.epa.gov/emergency-response-research/water-treatment-and-waste-management).
- EPA's Technical Report on Waste Disposal: [Drinking Water Treatment Plant Residuals Management - Technical Report \(PDF\)\(https://www.epa.gov/sites/default/files/2015-11/documents/dw-treatment-residuals-mgmt-tech-report-sept-2011.pdf\)](https://www.epa.gov/sites/default/files/2015-11/documents/dw-treatment-residuals-mgmt-tech-report-sept-2011.pdf).
- MPCA's Hazardous Waste Guide: [Hazardous waste \(https://www.pca.state.mn.us/business-with-us/hazardous-waste\)](https://www.pca.state.mn.us/business-with-us/hazardous-waste).

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