United States
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Agency

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Industrial Wastewater Treatment Technology Database (IWTT) Web Application

Summary

EPA released the Industrial Wastewater Treatment Technology Database (IWTT) in 2017 as a publicly accessible web application. IWTT presents industrial wastewater treatment technology performance data from conference proceedings, industry publications, peer-reviewed research articles, and other government data as a web-based database application to provide public access to this useful resource. IWTT can be used for many purposes including investigating established and emerging treatment technologies, identifying technologies that can treat a particular pollutant, and understanding the motivation behind installation of new treatment at an industrial facility.

To use the IWTT Web Application, go to EPA's website at: https://watersgeo.epa.gov/iwtt/guided-search

What questions can IWTT help me answer?

IWTT can help answer questions like:

- What pollutants can be removed using an existing treatment technology, and what has been the percent removal and/or influent and effluent concentrations?
- What treatment technology or technologies are being used to remove particular pollutants or categories of pollutants (e.g., metals, priority pollutants) from industrial wastewater?
- What new or existing treatment technologies are being developed or improved by a particular industry?
- What new treatment techniques or strategies are being used to improve treatment performance?
- What is motivating innovation, development, and implementation of new or upgraded treatment systems?

Background

EPA developed IWTT to compile performance data for industrial wastewater treatment technologies into a comprehensive, readily searchable database. IWTT contains information from over 200 peer-reviewed articles that document the performance of new and improved industrial wastewater treatment technologies. EPA continues expanding the information in the database and improving the web application to make IWTT even more useful.

What types of information can I find in IWTT?

IWTT is a collection of information from peer-reviewed and technical literature containing data from pilot- and full-scale industrial wastewater treatment systems. IWTT data sources include research journals, industry trade group publications, and conferences proceedings. IWTT contains comprehensive bibliographic information from each publication and catalogs all technical data available in the publication. You can find more details about the information in IWTT by reading Table 1.

Table 1. Overview of Information Captured in IWTT

Information about the Paper	Treatment Technology Information	Pollutant Removal Performance
• Article reference information • Abstract • Key findings • Motivation (e.g., meet effluent limits, cost savings, water reuse, capacity increase, remedy environmental impairment, resource recovery) • Type of wastestream (e.g., process wastewater, commingled stormwater, process wastewater)	• Relevant point source category, SIC and NAICS codes • Scale (pilot or full) • Treatment system units comprising the system (in order of the treatment train) • Operating parameters (e.g., pH, treatment chemicals) • Narrative description of the system • Wastewater discharge type (direct or indirect) • System manufacturer • Cost information	• Pollutant parameter name and CAS Number • Analytical method • Influent and effluent detection limits • Influent and effluent concentrations and qualifier flags • Reported percent removal • Effluent limits required for discharge

IWTT organizes this information in the following categories:

■ Treatment systems: treatment units in the system, unit order, and treatment chemicals used.

■ Industries: industry or industries for which the technology has been tested.

■ Pollutant parameters: pollutants removed by the technology, including influent and effluent concentrations and wastewater quality, percent removals, and analytical detection methods when identified.

■ Motivation: stated reason for industry to evaluate or employ the new technology.

How do I find information in IWTT?

IWTT has two search modes to help you find the most useful information. *Guided Technology Search* allows you to search by industry, treatment technology, or pollutant to drill down to the most relevant data. *Article Search* allows you to identify industrial wastewater treatment data sources by searching bibliographic information or treatment performance criteria.

How is EPA using IWTT?

EPA issues national, technology-based industrial wastewater regulations called effluent guidelines and is required to review them annually. EPA uses IWTT when conducting these reviews as a source of treatment technology performance information. IWTT helps assess new technologies and technology improvements that industry is using to treat wastewater. Interested/affected parties can also use IWTT to find technologies that treat pollutants that are not currently regulated by effluent guidelines or pretreatment standards or that provide better treatment than currently required.

Where can I find more information?

The IWTT Web Application is available at https://watersgeo.epa.gov/iwtt/guided-search.

EPA is interested in feedback on the web application and uses of the database. If you would like further information, have ideas to share, or have specific questions about IWTT, please email Doruntinë Rexhepi of EPA's Office of Water, Engineering and Analysis Division, at rexhepi.doruntine@epa.gov.