

WE&RF Test Bed Network Directory

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Water Environment & Reuse Foundation

Workshop for Developing the Structure of a
National Energy Positive Water Resource Recovery Facility Test Bed Network
Denver MWRD, CO
June 20-21, 2016

Background on LIFT

LIFT is a
WEF/WE&RF
Initiative
Accelerating
Innovation
Into Practice



Utility Technology Focus Groups

- 1 Shortcut Nitrogen Removal
- 2 P-Recovery
- 3 Digestion Enhancements
- 4 Biosolids to Energy
- 5 Energy from Wastewater
- 6 Collection Systems
- 7 Green Infrastructure
- 8 Small Facilities
- 9 Odor Control
- 10 Disinfection
- 11 Water Reuse
- 12 Intelligent Water Systems



Technology Scans

LIFT[®] Technology Scans 3-Step Process



Technology Scans



69 Technologies
65 Companies



Discover Technologies

- Discover new technologies
- Connect with others with similar needs, technology interests, and desired expertise
- Collaborate on research and technology ideas, proposals, projects, demonstrations, and implementation

The screenshot displays three technology cards on a grid. Each card features a header image, a title, a description, and interaction buttons.

- NUTRIENT REMOVAL:**
 - Image:** 3D rendering of an aeration lagoon with numbered callouts.
 - Title:** Intermittently Decanted Extended Aeration Lagoon (IDEAL)
 - Description:** Environmental Dynamics International (EDI) Recent ammonia criteria released by the U.S. EPA will cause wastewater treatment ...
 - Buttons:** FOLLOW 5, COMMENTS 0
- RESOURCE RECOVERY:**
 - Image:** Industrial facility with a process flow diagram overlay.
 - Title:** KORE Infrastructure
 - Description:** KORE Infrastructure KORE has scaled down and re-engineered a historically large-scale industrial process ...
 - Buttons:** FOLLOW 6, COMMENTS 0
- COLLECTION SYSTEMS:**
 - Image:** Diagram of a sewer line with an SL-RAT tool inserted.
 - Title:** Sewer Line Rapid Assessment Tool (SL-RAT®)
 - Description:** InfoSense, Inc. The Sewer Line Rapid Assessment Tool, or SL-RAT®, is an acoustic inspection ...
 - Buttons:** FOLLOW 1, COMMENTS 0

* Currently in beta, release expected fall 2016

Collaborations for RDD&D

Utilities

Universities

Consultants

NGOs

Others

Federal
Agencies

Financers

Technology
Providers



Identifying Test Bed Facilities

- **Level 1:** A university or research lab that can assist with bench-scale work but is not dedicated to piloting new technologies
- **Level 2:** A water resource recovery facility that is interested in innovation and willing to host a project, but does not have a dedicated test facility
- **Level 3:** A water resource recovery facility or research lab with a dedicated physical space available for piloting innovative water technology
- **Level 4:** A staffed facility dedicated solely to R&D/piloting of new technologies

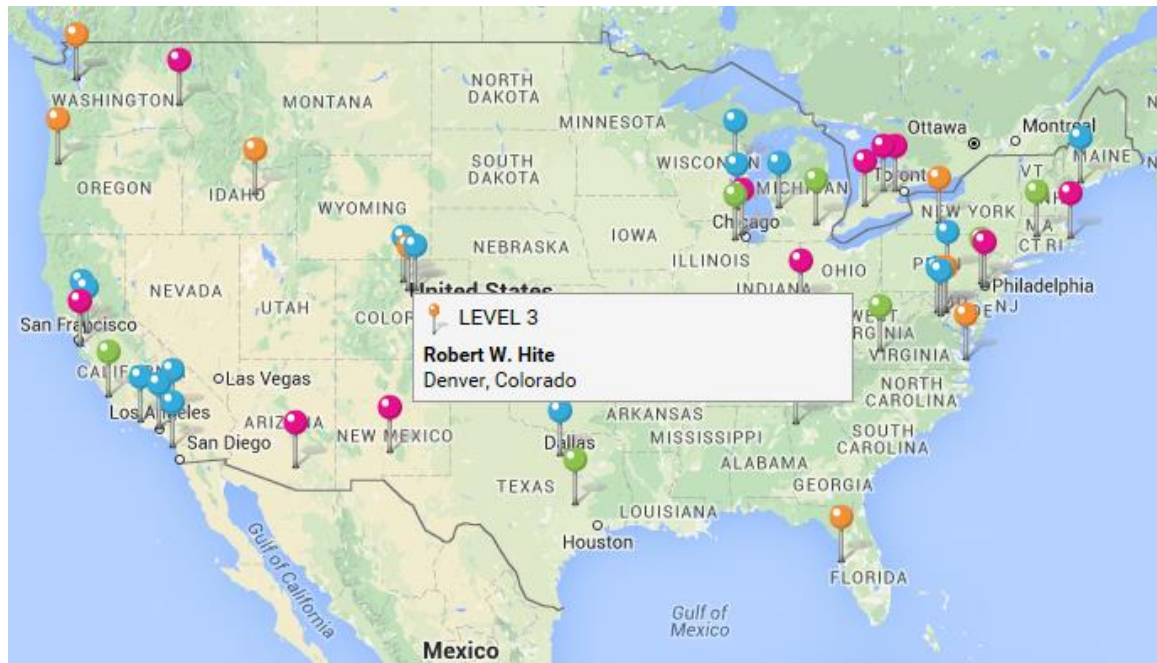
Test Bed Facility Directory



- Level 1
- Level 2
- Level 3
- Level 4

www.werf.org/testbeddirectory

Facility Details



Robert W. Hite Treatment Facility Metro Wastewater Reclamation District

Type of Facility	Level 3: A water resource recovery facility or research lab with a dedicated physical space available for piloting innovative water technology
Facility Contact	James McQuarrie Chief Innovation Officer (303) 2863374 Jmcquarrie@mwrd.dst.co.us http://www.metrowastewater.com/Pages/default.aspx
Facility Address	6450 York Street Denver, CO 80229 United States
Facility Partners	The Denver metro region is experiencing a significant increase in inter-agency dialogue (e.g., city, water utility, wastewater utility, electrical utility) on opportunities to work collaboratively on "One water" opportunities, and renewable energy opportu
Description of Test Facility	The RWHTF is a 220MGD rated facility, that serves roughly 1.8M people in the Denver metro area. This large facility serves as arid region where water is scarce. The receiving stream for the RWHTF is very small so the river is predominantly effluent from the RWHTF. The facility achieves biological phosphorus and nitrogen removal, and is expected to get down to very low effluent nutrient limits. It has CHP on the biogas. The District is in the process of isolating one 10 mgd secondary treatment train to facilitate demonstration scale evaluations of technologies and treatment approaches.
	The District is staffed with an extremely capable group of employees, ranging from in-house process experts to

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Looking Forward

Home Page

Municipal/Industrial Facility

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WERF
Sign In

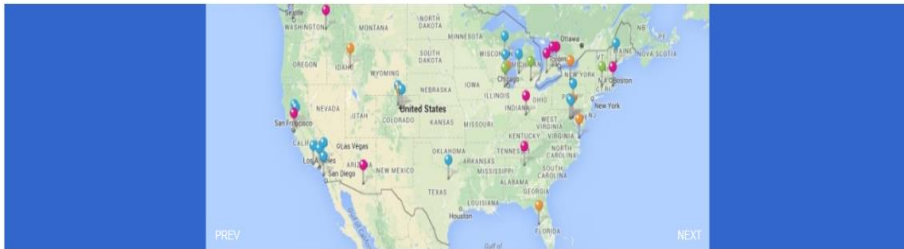
HOME ABOUT WE&RF NEWS RESEARCH AREAS FUNDING AWARDS GET INVOLVED EVENTS

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National Water Resource Recovery Test Bed Facility Network and Directory

The National Water Resource Recovery Test Bed Facility Network and Directory connects researchers, new technology providers, and other innovators in the water resources recovery industry with test facilities appropriate for their needs. It is hoped that this network will assist in the developing and piloting of technology at various scales to help manage risk and accelerate the adoption of innovation.



Municipal/Industrial Facility

Looking to use innovation to improve operations at your facility, or deploy a new technology.

Innovative Water Technologies

- Discover innovative water technologies
- Learn about ongoing pilots and demonstrations
- See performance data from completed pilots and demonstrations
- Connect with the inventors



Connect with Regulators

- Contact regulators from your region
- Find regulators who have permitted a specific innovative technology

I'm a:

Technology Developer

Test Bed Facility

Municipal/Industrial Facility

Regulator

Public

Events

Facility Discussion Roundtable - February 3, 2017

[Register now](#) for the upcoming roundtable on the importance of using your facility as a test bed!

Collaborative Workshop and Conference - March 10-14, 2017

News

[LIFT Test Bed Facility Network Launches](#)
(1/20/2017)

[How New York City is using the National Test Bed Directory to improve their Facility](#) (1/22/2017)

Success Stories

[Pima County RWD](#)
Tucson, AZ

[Guelph Wastewater](#)
Ontario, CA

..... of some sort**



Thank You!

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