LIFT Program Overview

LIFT
Leaders Innovation Forum for Technology

Jeff Moeller, The Water Research Foundation

CIFA Water Infrastructure Investment Summit
April 24, 2019
Washington, DC

Water Environment Federation
the water quality people®

THE Water Research FOUNDATION

THE
Water
Research
FOUNDATION

Leading not-for-profit research cooperative that advances the science of water to protect public health and the environment.

Learn more at www.waterrf.org and www.werf.org

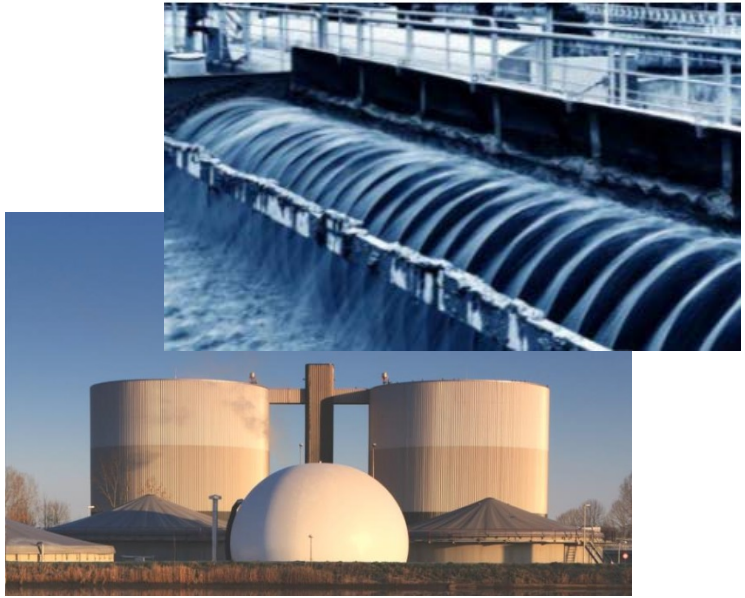
$700 Million in Research

2,300 Projects

1,200 Subscribers

LIFT

WRF/WEF initiative to accelerate innovation and help move new water technologies into practice



LIFT 101

Utility Peer Network

Technology Scans

LIFT Link

FAST Water Test Bed Network

Technology Visualization Tool

Creating the Space to Innovate

Collaborative Demonstrations

SEE IT

Utility Peer Network

- LIFT Working Group and Focus Groups
  - 650+ utility participants
- Web & In-Person Meetings
- Activities:
  - Peer Information Exchange
  - State of the Art Technology Guidance
  - Collaborative Research and Demos

Technology Scans Process

LIFT

Leaders Innovation Forum for Technology

134 Technologies
126 Companies

BIOFORCETECH Corporation
Anaergia
BASWOOD
CLEARWATER CONTROLS
Genifuel
Microvi
WESTECH
EMAGIN
VEOLIA
CAMBI Because it matters
HydroFLOW U.S.A.
PAVER GUIDE
Tellus Utilities Innovation Engineered
pluto
ci agent solutions
DOOSAN
RONGINEER
TROJAN technologies
AMERICAN WATER
inCTRL SOLUTIONS
Lystek
sue2
WATER WARRIORS
arisdyne systems
ORGANICA
PICA Pipeline Inspection and Condition Analysis (USA)Corp.
CLEAR COVE CLEAN ENERGY. CLEAN WATER
Lutra.
Opti
Gardner Denver
PRIME SOLUTION
Saltwork
Optimatics PLAN SMARTER
BIOSOL
NEPTUNE DIAGNOSTICS
Royal HaskoningDHV Enhancing Society Together
BIO MICROBICS
NEW LIMITS WASTEWATER TECHNOLOGY
NOP ENERGY
OVIVO
aquisense technologies
NuReSys
OXYMEM
PASTEURIZATION TECHNOLOGY GROUP™
AYYEKA
cnp
RainGrid
DYNAFLOW, INC.
PARJANA & PARJANA Distribution
Advanced Biological Services
HACH
RENEWABLE NUTRIENTS
OndaVia, Inc.
Scfi
evoQUA WATER TECHNOLOGIES
algae systems
fluence
UCONN UNIVERSITY OF CONNECTICUT
invest-e
World water works Clean Water and Energy from Wastewater
BioCHEM TECHNOLOGY LLC
Nutrient Recovery & Upcycling
ElectroCell Technologies
HAZEN AND SAWYER Environmental Engineers & Scientists
IN-PIPE TECHNOLOGY
novozymes
centrisys CENTRIFUGE SYSTEMS
AQUA-AEROBIC SYSTEMS, INC.
SciCORP SCICORP INTERNATIONAL CORP.
CLEARAS WATER RECOVERY
TerraSolve, LLC
C&B EQUIPMENT
OSTARA
BKT Water & Energy
T2C-ENERGY
PULSED BURST SYSTEMS Low Maintenance, Low Energy, Mixing and Pumping
BLUEWATER SATELLITE, INC
FORWARD WATER TECHNOLOGIES
SCHREIBER Pure Ingenuity
Sustec Part of DMT group
LUMINULTRA microbial monitoring
Vorsana RADIAL COUNTERFLOW SOLUTIONS
KORE INFRASTRUCTURE
BLUEWATER BIO
epic cleantec
emnet
IslandWater TECHNOLOGIES
MANGO MATERIALS
BISHOPWATER
atomes
ARIES CLEAN ENERGY
IF Ctrl
COLIFAST
PERLEMAX
arvia
Nexom
ZAPS TECHNOLOGIES
BIOGILL
EDI
PAQUES
InfoSense, Inc
xylem

2019 LIFT Scan Webinar Series

http://www.werf.org/lift/LIFT_News/LIFT_Events/lift/LIFT_Events.aspx

Topic	Technologies	Date
Carbon Diversion	Hydro MicroScreen (Hydro International); Salsnes Filter (Trojan); EPT (ClearCove); Fuzzy Filer (Schreiber)	April 30
Smart Water-Operations	HARVI (EMAGIN); ProbeX (Hydromantis)	May 21
Stormwater	2NFORM (2NDNATURE) + more	June 25

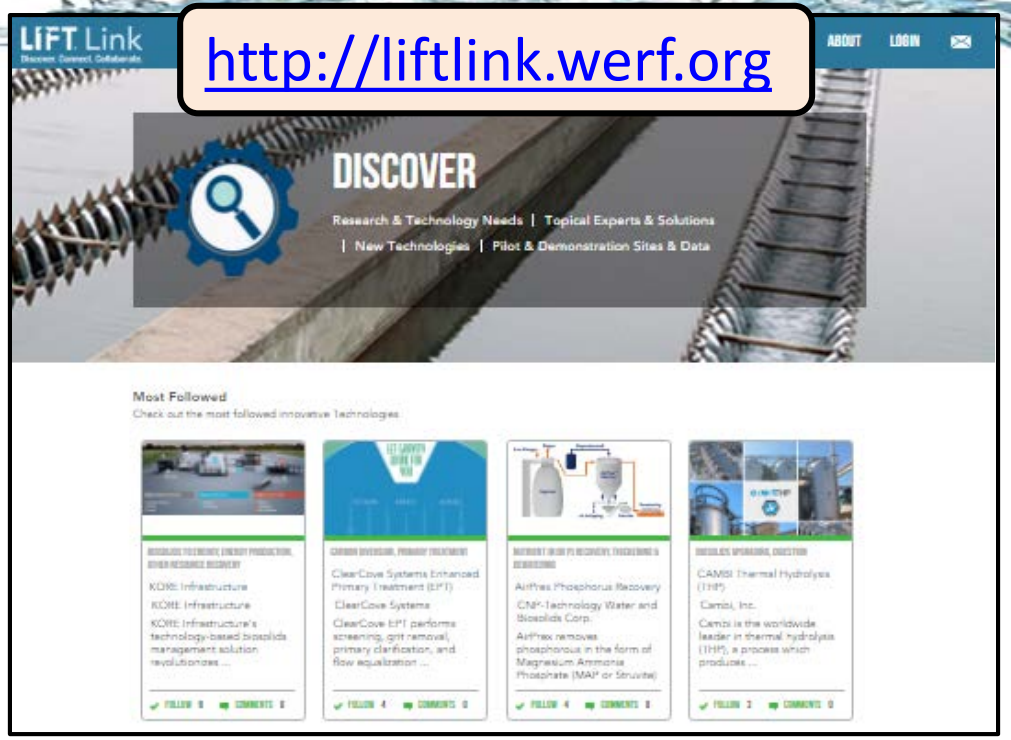
Other topics include: Decentralized Systems, Asset Management, Disinfection, Drinking Water, Sensors, Enhancing Treatment

LIFT Link

Discover

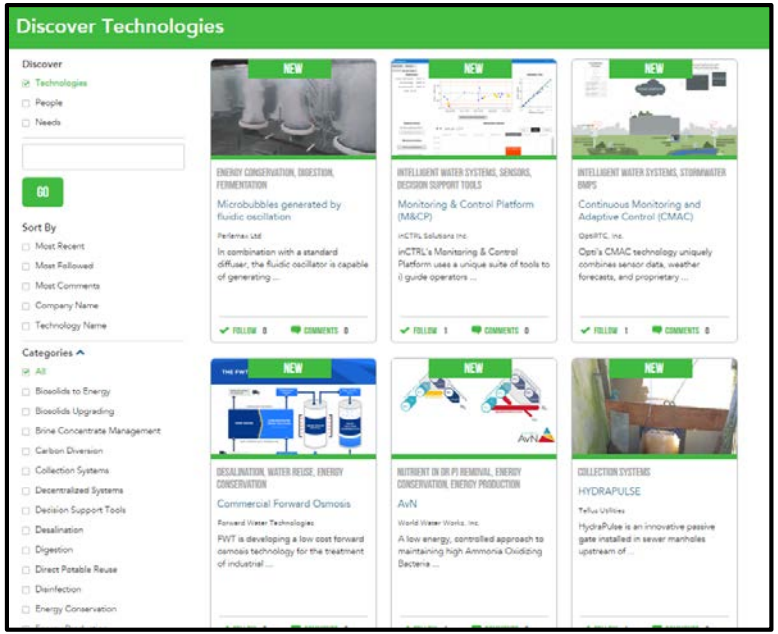
Collaborate

Connect

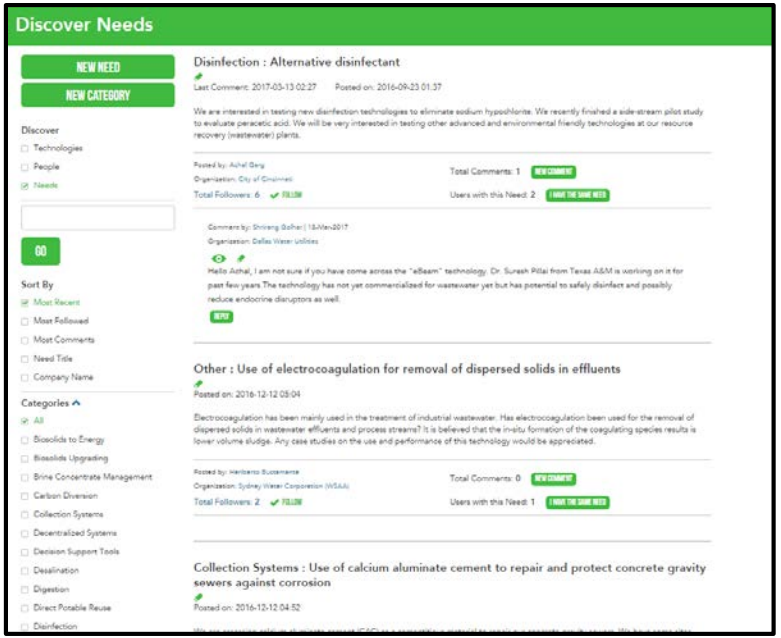


Discover Innovation

Discover Technologies



Discover Needs



National Test Bed Network: FAST Water

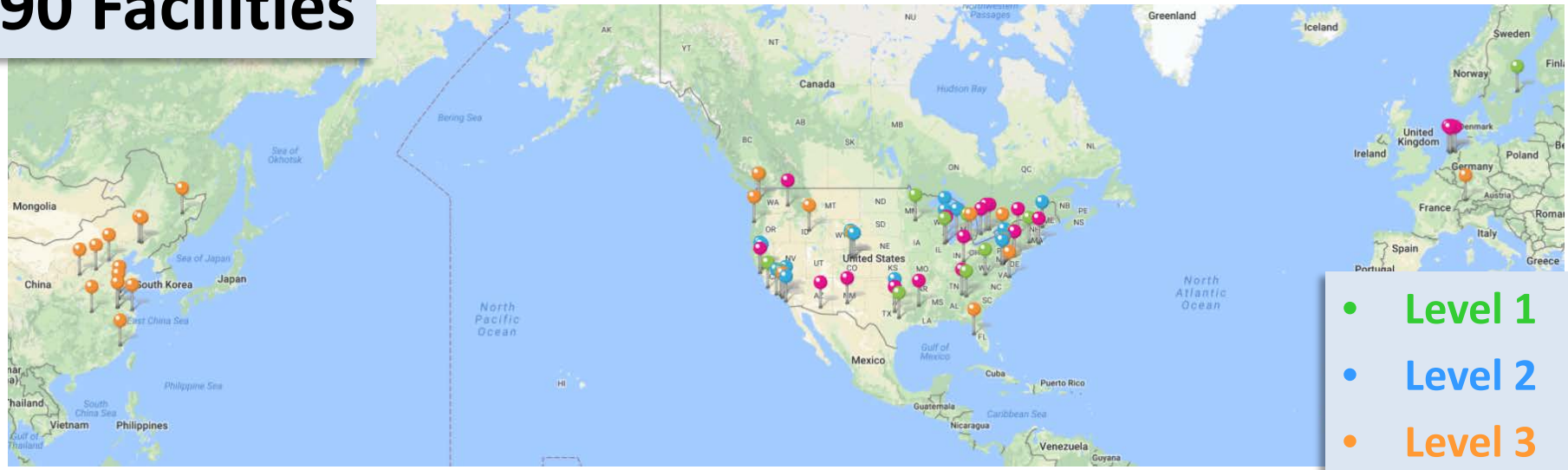
- Steering Committee

www.werf.org/fastwaternetwork

- Planning Partners

FAST Water Directory

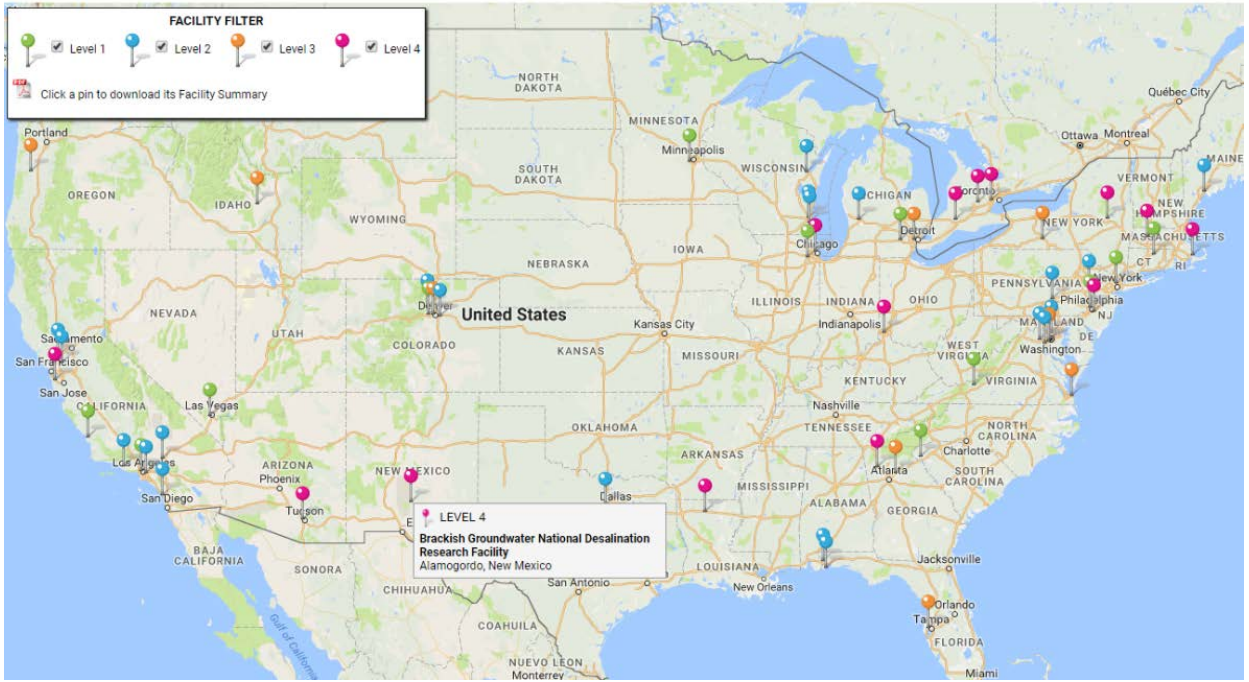
90 Facilities



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

www.werf.org/testbeddirectory

Facility Details



FAST WATER
Facilities Accelerating Science & Technology

LIFT

Brackish Groundwater National Desalination Research Facility

Bureau of Reclamation

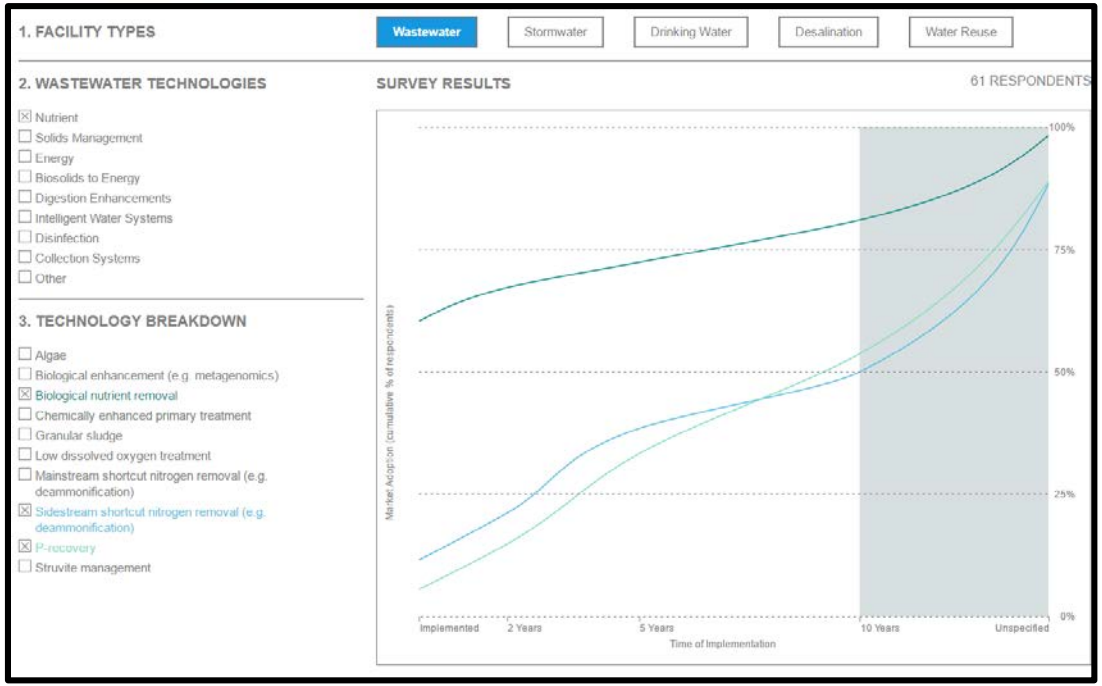
Type of Facility	Level 4: A staffed facility dedicated solely to R&D/piloting of new technologies (can be housed at a functioning WRRF)
Facility Contact	Randy Shaw, PE Facility Manager (575) 443-6553 rshaw@usbr.gov http://www.usbr.gov/research/AWT/BGNDRF/index.html
Facility Address	500 LaVelle Road Alamogordo, NM 88310 United States
Facility Partners	
Description of Test Facility	The Brackish Groundwater National Desalination Research Facility (BGNDRF) is a 43 acre complex comprised of a central research building, outdoor test pads, 5-acre agricultural research area, renewable energy test areas and 4 brackish water wells including a storage and source water delivery system. Research, development and demonstration work are conducted by a variety of organizations including universities, private sector companies, entrepreneurs, and government agencies. Facility use fees are being waived through September 2017.
[illegible]aff	The BGNDRF staff operate and maintain the facility. The Water Treatment Group in the Denver Reclamation office provide desalination technical assistance upon request. The Water Treatment Group has a staff of 12 with 5 PhD's in Chemical and Environmental Engineering and 7 Master's D[illegible] may [illegible] depending o[illegible] the [illegible] of

www.werf.org/testbeddirectory

Water Technology Survey Visualization

http://www.werf.org/lift/visualizationtool

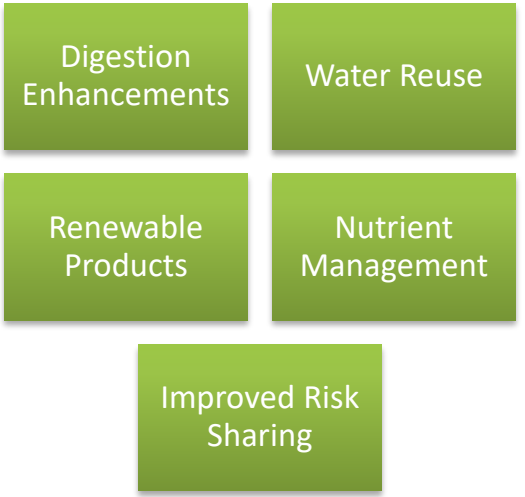
- Deeper understanding of industry direction and peer's activities
- 100+ responses received to date regarding 100+ types of technology



Creating the Space to Innovate

Purpose: To create the regulatory space to help foster new water technology and approaches

- Identifies regulatory and policy barriers to innovation
- Develops action plans to overcome barriers & support innovative technology adoption



Collaborations for Pilots & Demos

Utilities

Universities

Consultants

NGOs

Others

Federal Agencies

Financers

Technology Providers

LIFT SEE IT

- Scholarship Exchange Experience for Innovation and Technology
- WRF, NACWA, WEF Partnership
- $30,000/Year in Travel Scholarships
- 21 Utilities Awarded - 2017 & 2018

Questions / Discussion

www.werf.org/lift

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