

Water Technology Innovation



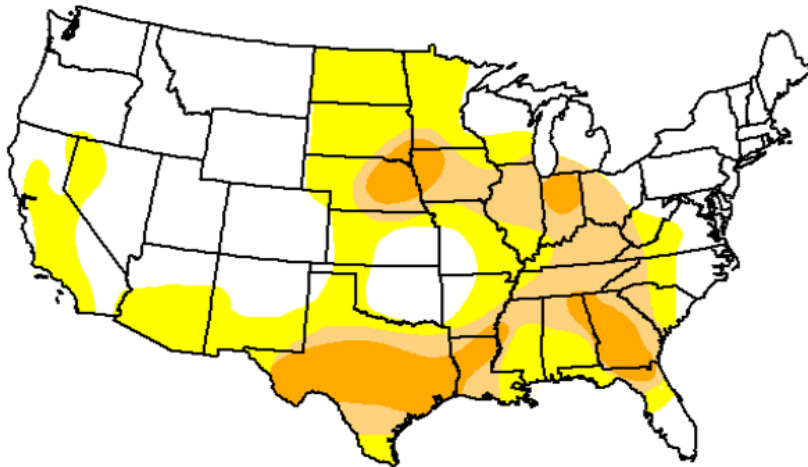
MSSC
Las Vegas, NV
January 28, 2016

Sally C. Gutierrez, Director
Environmental Technology Innovation Clusters Program
U.S. Environmental Protection Agency
Cincinnati, Ohio



U.S. Drought Monitor CONUS

January 4, 2000
(Released Thursday, Jan. 6, 2000)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	49.00	51.00	23.35	9.45	0.00	0.00
Last Week	-	-	-	-	-	-
3 Months Ago	-	-	-	-	-	-
Start of Calendar Year 1/4/2000	49.00	51.00	23.35	9.45	0.00	0.00
Start of Water Year	-	-	-	-	-	-
One Year Ago	-	-	-	-	-	-

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author(s):

Staff
National Drought Mitigation Center



<http://droughtmonitor.unl.edu/>

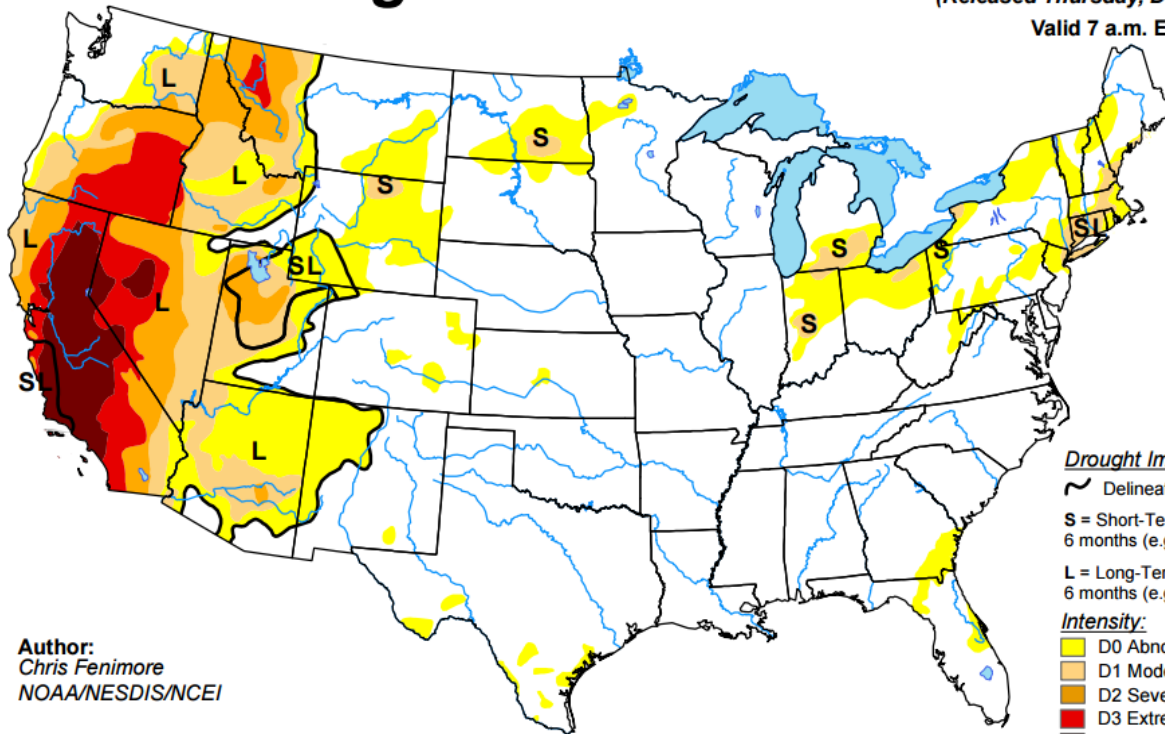


U.S. Drought Monitor

December 29, 2015

(Released Thursday, Dec. 31, 2015)

Valid 7 a.m. EST



Author:
Chris Fenimore
NOAA/NESDIS/NCEI

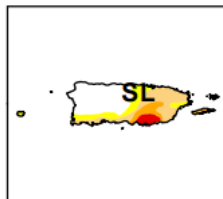
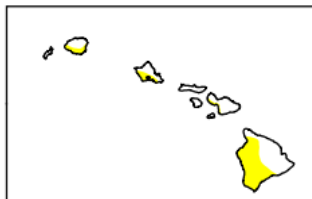
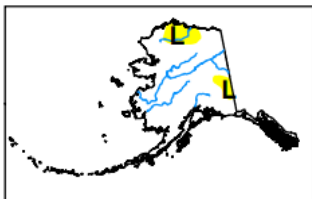
Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

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<http://droughtmonitor.unl.edu/>

The Business Case for Water Innovation



66% of businesses identified exposure to water risks

...with financial impacts as high as **\$2.5 bn US....**



...Water stewardship offers clear benefits to at-risk companies

Water Technology Innovation

FATHOM™




AQUAPORIN

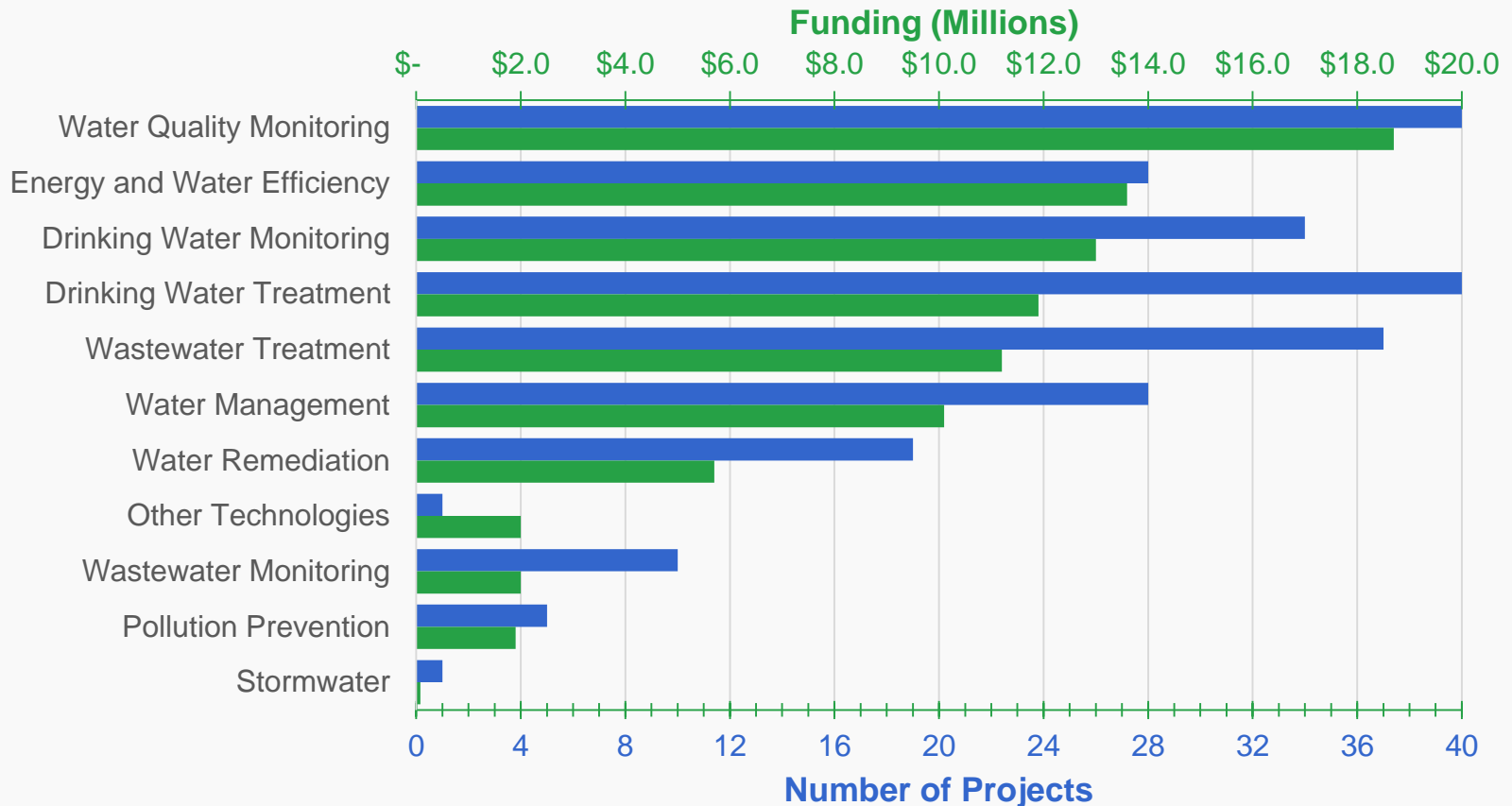


aquisense
technologies

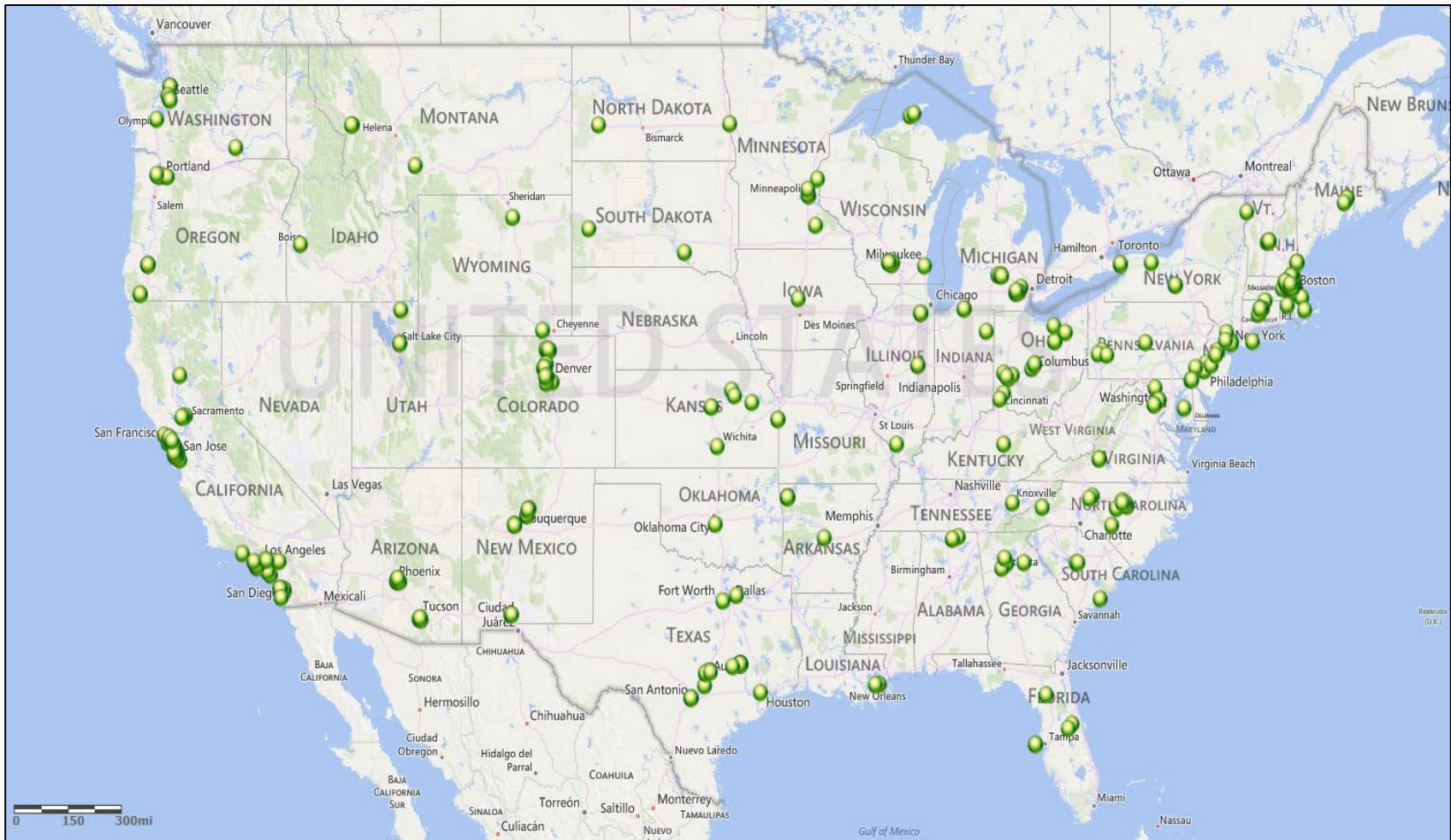
Which agencies fund SBIR awards for water technology? (2012-14)

Agency	Total Funding (Millions)	Number of Projects
DOE	\$26.9	45
NSF	\$20.2	54
USDA	\$10.3	34
NIH	\$9.0	23
DOD	\$8.9	23
EPA	\$7.8	38
NASA	\$4.9	16
NOAA	\$1.8	11
Total	\$90.0	244

What kinds of technologies get funded? (2012-14)



Where are SBIR awardees? (2006-2012)



Procurement Innovation

The screenshot shows the H2bid website homepage. At the top left is the H2bid logo. The navigation menu includes Home, Open Bids, More, Search, Login, and Register. A large blue banner features a water faucet icon and the text: "The Leading Source For Water And Wastewater Utility Contract Opportunities". Below this banner, it says "Connecting Water Utilities and Vendors Around the World". On the right side of the banner, there are two call-to-action buttons: "Search For Bids" and "Post Bids". Below the banner is a search section titled "Search for Bids & Tenders:" with input fields for Keyword, Document Number, Category, and Country, and buttons for Search and Advanced Search. To the right of the search section are links for "Subscribe in a reader" and "US | Canada". Further right is a section for "e-bidding" with a description: "A user-friendly e-bidding service for securely posting bids and receiving responses over the Internet. Designed specifically to meet the stringent needs of water utilities." Below that is a section for "Open Bids" with a "View Open Bids" link and a description: "H2bid is the leading source of open bids from water and wastewater utilities. Our goal is to provide you with the best information about current contracting opportunities."

The screenshot shows the SPLASH LINK.COM website homepage. At the top left is the SPLASH LINK.COM logo. The navigation menu includes Plans, Markets Served, Create, Find, and a Subscribe button. A large blue banner features a water ripple background and the text: "Millions in Funding. Thousands of Projects. One site." Below this banner, it says "All water. All the time. Plans starting at \$249/year, all-inclusive." and a "Get Started" button. Below the banner are three images: a roll of blue paper, a collection of blue and white tools, and a network diagram.

Examples of Water Utility Innovation





Policy Innovation



Finance Innovation

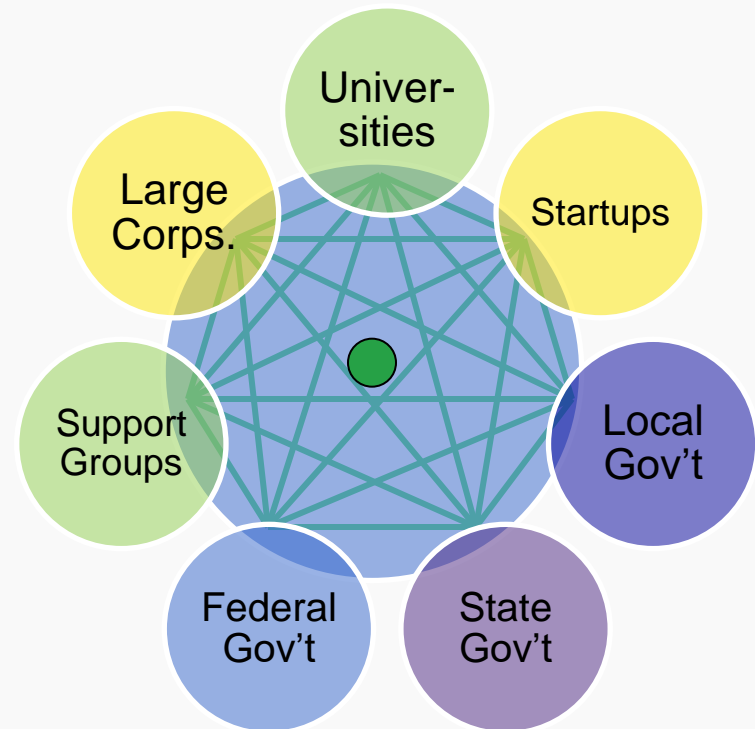


Community Based Water Innovation

The Cluster Concept

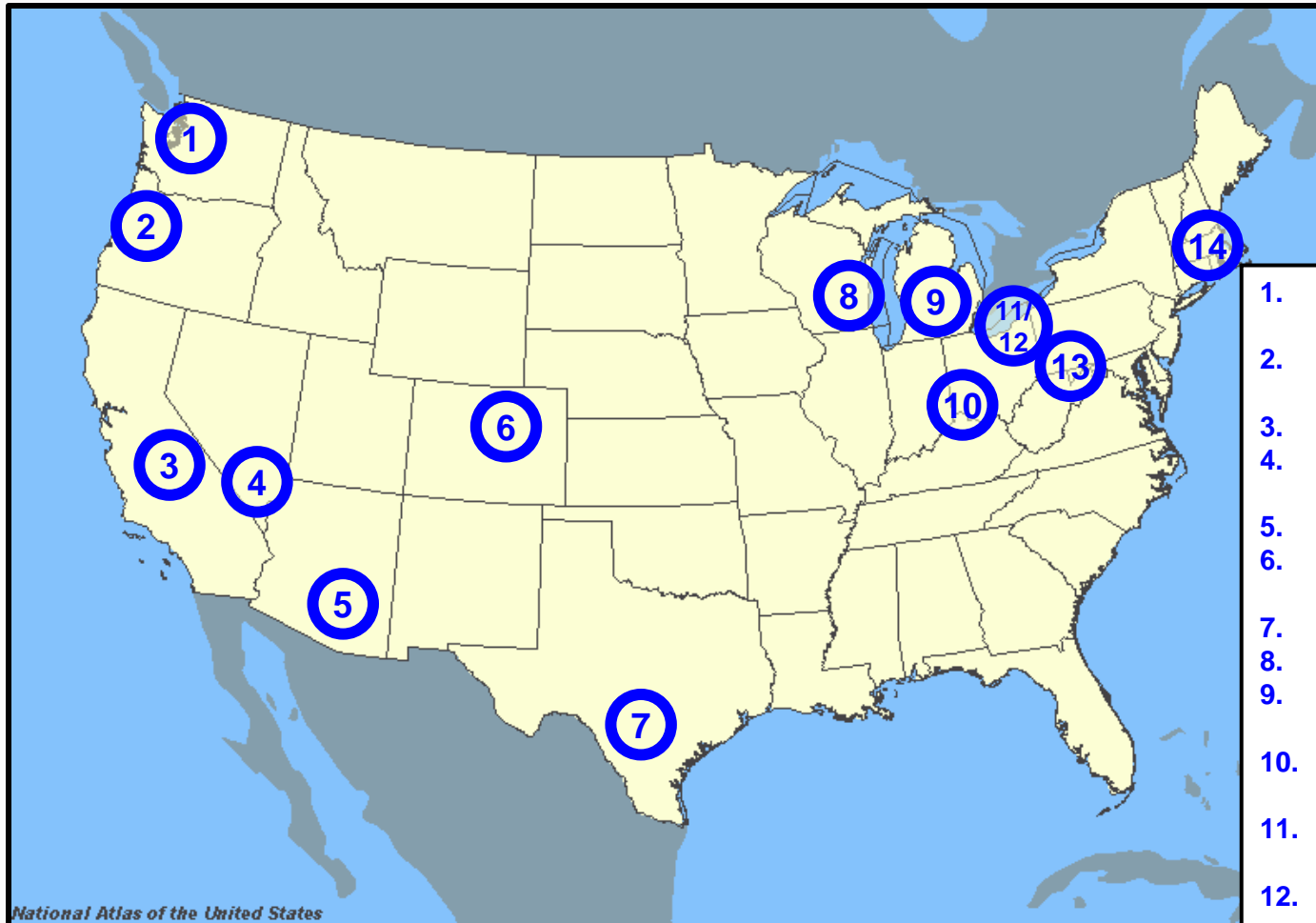
Clusters are **dense, regional networks** of companies and other groups in the same industry.

- **Clusters contribute to the growth of *existing* industries**
 - Industries participating in a strong cluster register higher growth of wages and innovation (as well as higher employment growth)
- **Clusters contribute to the creation of *new* industries**
 - New industries are more likely to emerge if they can integrate into an existing cluster, or if related or neighboring clusters are strong
- **Strong clusters contribute to the *overall* growth of the region**
 - Strong traded clusters in a region contribute to the employment growth of other traded and local activities in that region



Source: Delgado/Porter/Stern, 2012, 2014, "Clusters, Convergence, and Economic Performance," NBER and Research Policy

Locations of U.S. Water Clusters

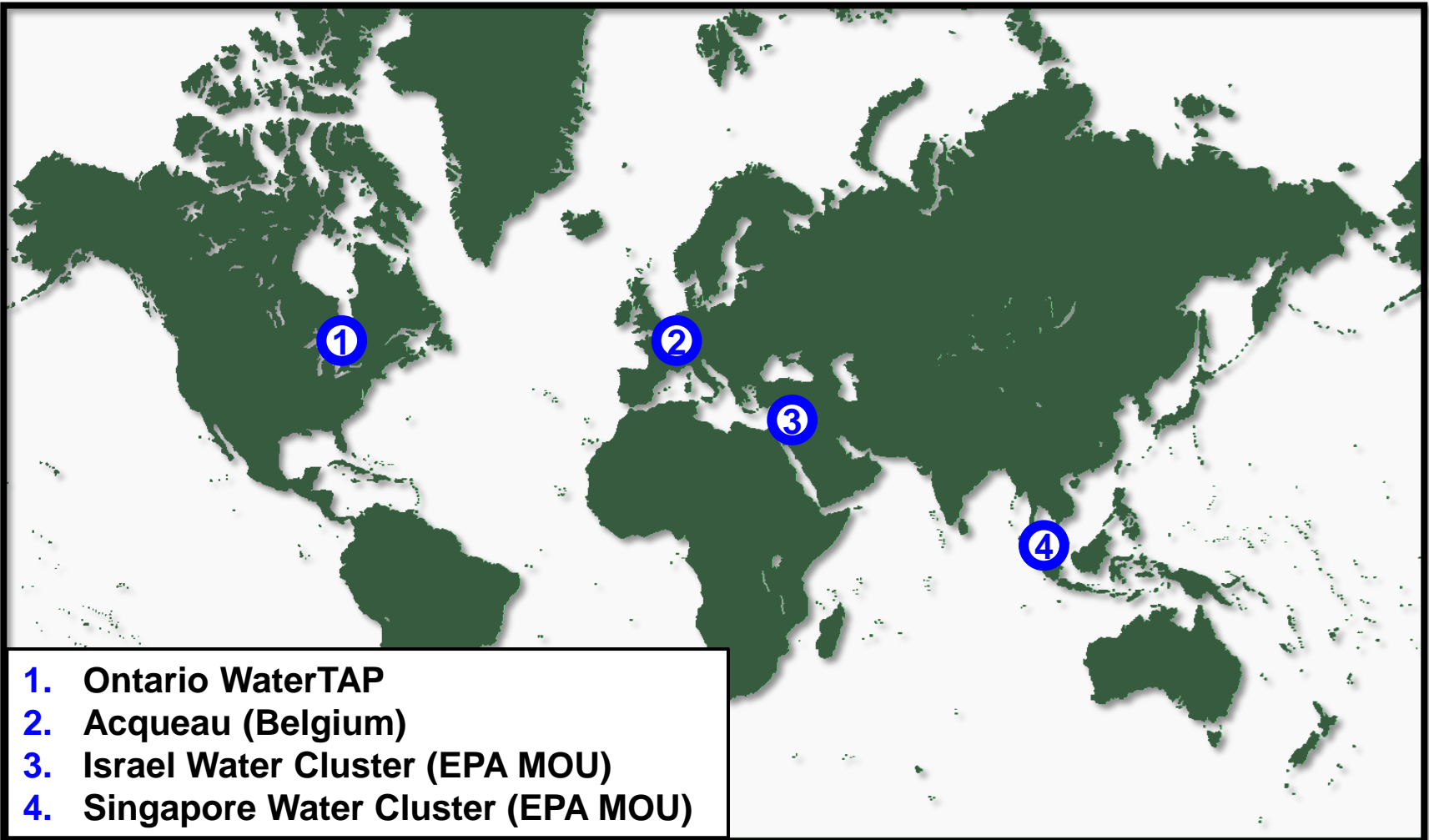


1. **Clean Urban Water Technology Zone** (Tacoma, WA)
2. **Oregon Water Tech Innovators** (Portland, OR)
3. **The BlueTechValley** (Fresno, CA)
4. **Nevada Center of Excellence** (Las Vegas, Nevada)
5. **H2OStream** (Tucson, Arizona)
6. **Colorado Water Innovation Cluster** (Fort Collins, CO)
7. **Accelerate H2O** (San Antonio, TX)
8. **The Water Council** (Milwaukee, MI)
9. **Michigan Water Technology Initiative**
10. **Confluence WTIC** (SW Ohio/N Kentucky/SE Indiana)
11. **Cleveland Water Alliance** (Cleveland, Ohio)
12. **Akron Global Water Alliance** (Akron, OH)
13. **Water Economy Network** (Pittsburgh, PA)
14. **New England Water Innovation Network** (Massachusetts)

Full map available at www2.epa.gov/clusters-program/clusters-map.

This map is not intended to be comprehensive, and may not include some emerging water clusters.

International Water Clusters





White House Water Innovation Strategy

- on March 22, 2016, the United Nation’s World Water Day, the Administration will bring representatives from Federal, State, regional, local, and tribal governments together with private sector and other stakeholder groups to the White House to discuss ways in which the public-private water innovation strategy is making progress in this important area.
- Releasing a new report that lays out the water innovation strategy.
 - **Boosting water sustainability and long-term water security by increasing use of water-efficient and -reuse technologies.**
 - **Promoting and investing in breakthrough research and development (R&D) that will reduce the price, energy costs, and emissions requirements of new water supply technology to achieve “pipe parity” in the next decade.**



Water Resource Challenges and Opportunities
for Water Technology Innovation

December 2015



Contact Information

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<http://www.epa.gov/clusters-program>