



## FEMP Water Efficiency Tools and Training

March 24, 2016

Saralyn Bunch - FEMP

Kate McMordie Stoughton - PNNL

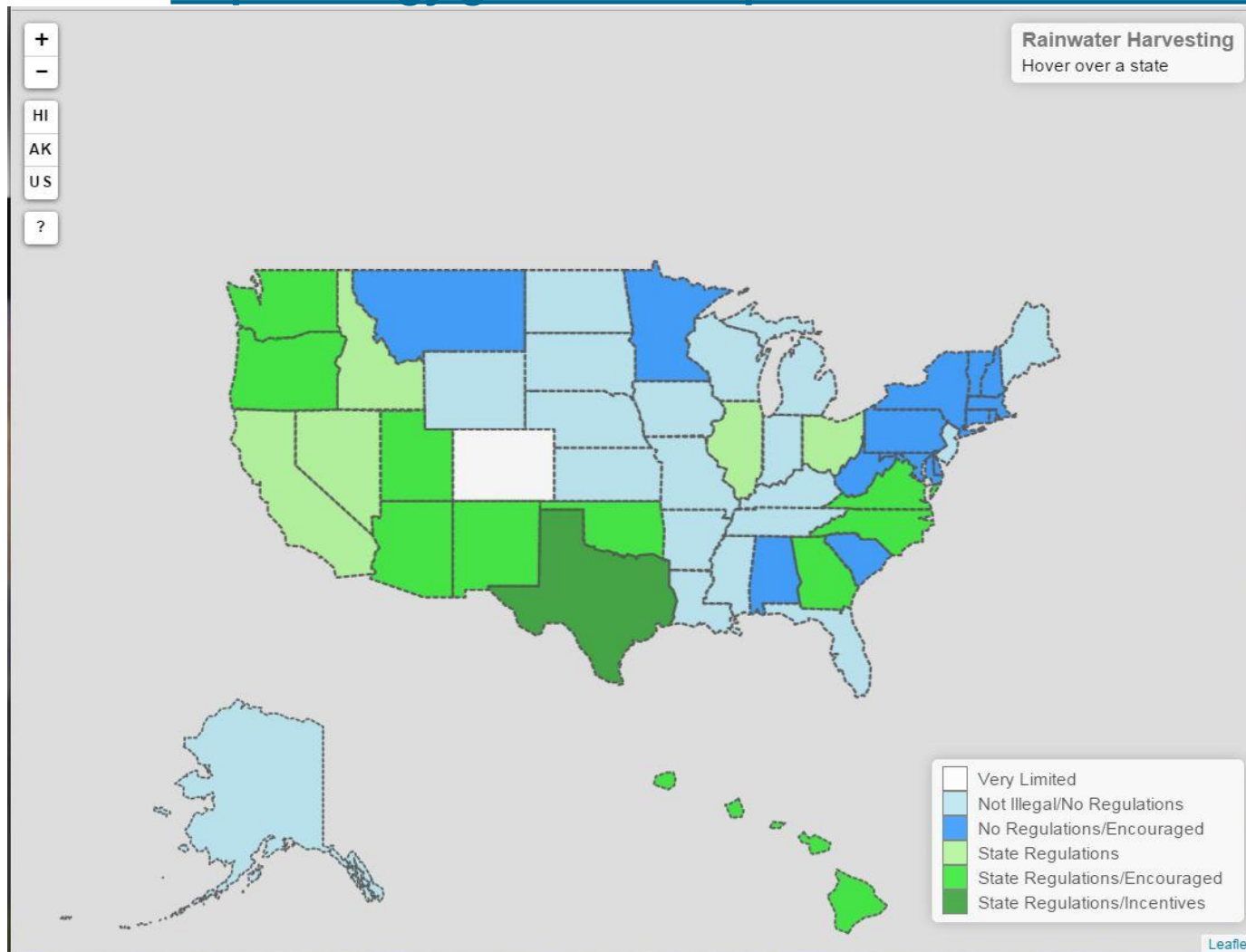
[Saralyn.Bunch@ee.doe.gov](mailto:Saralyn.Bunch@ee.doe.gov)



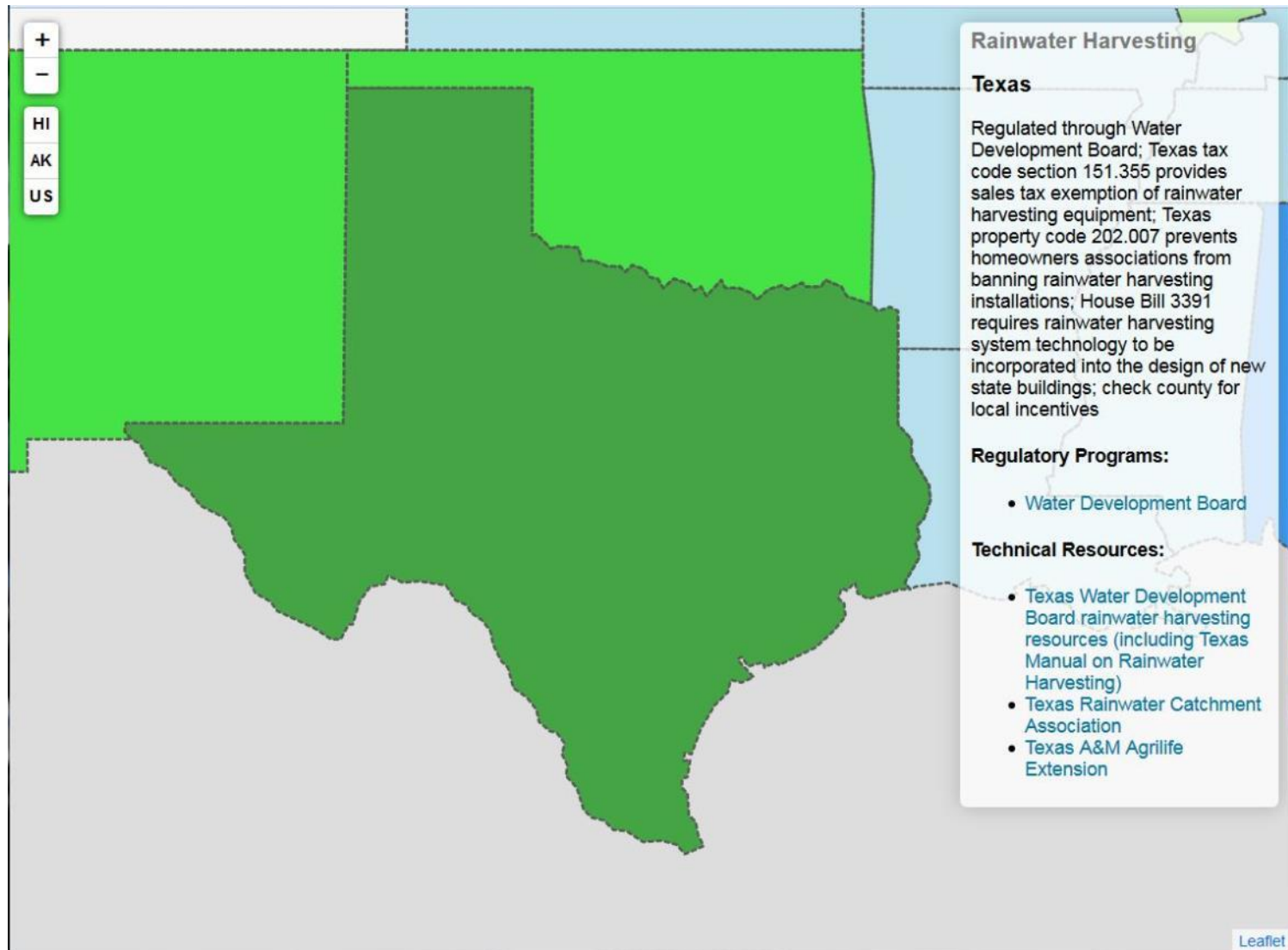
# Alternative Water Mapping Tool

## Rainwater Harvesting Regulations

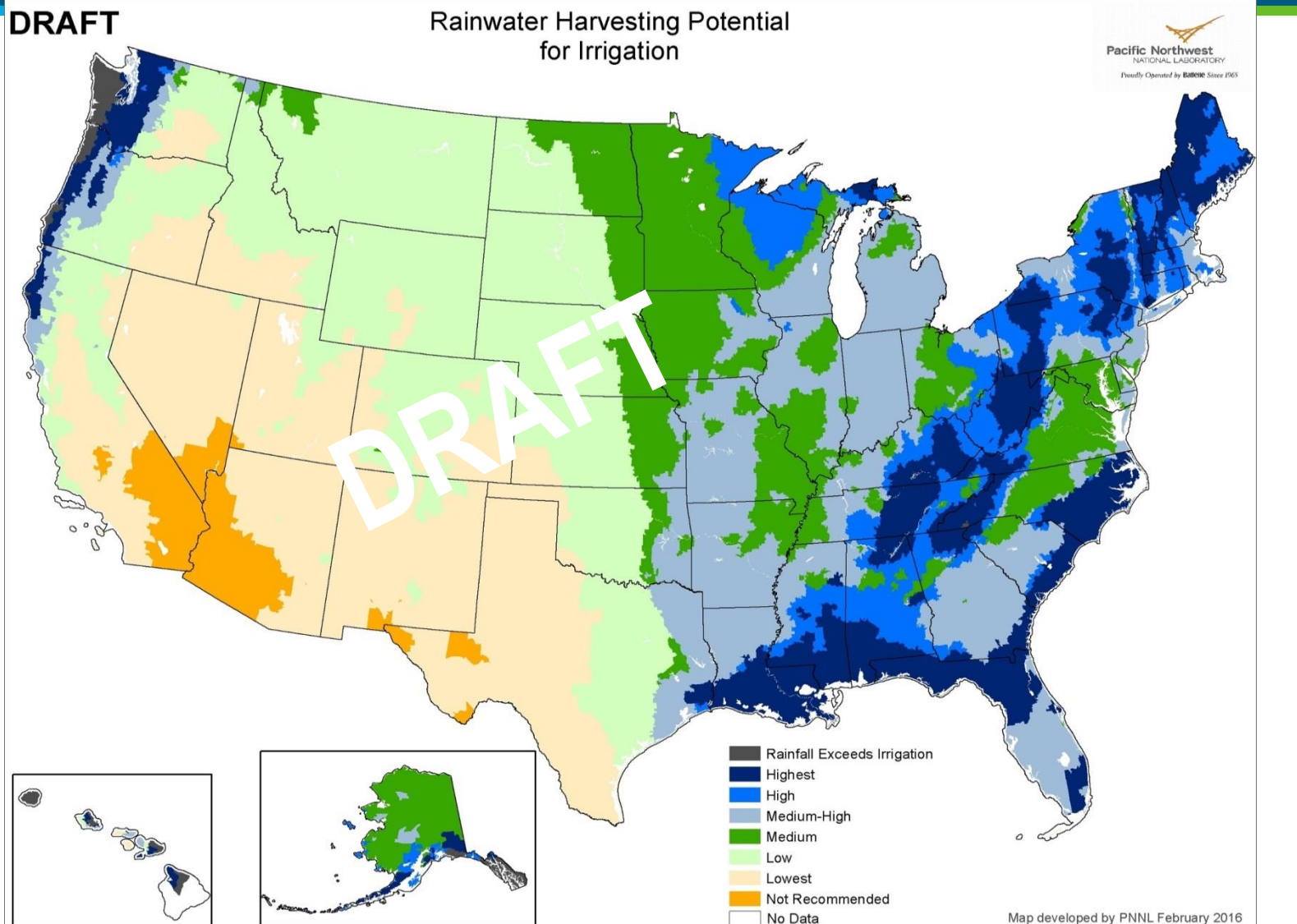
Website Link: <http://energy.gov/eere/femp/alternative-water-sources-map>



# Rainwater Harvesting Regulations – State Level



# Future Map – Rainwater Harvesting Potential for Irrigation



# Future Map – Air Handling Unit Condensate Capture Potential



# Future Map – Reclaimed Wastewater



# FEMP Water Project Screening Tool – Input Example

Website Link

<http://energy.gov/eere/femp/downloads/water-project-screening-tool>



## Water Project Screening Tool

### Site Level Data

1. What is the total facility square footage?

2. Are the majority of your buildings older than 1994? (Y/N)

3. What is the estimated percent of each building type by floor area?

*100% remaining*

Office

Hospital/healthcare

Barracks

Prison

Laboratory

Dining/commercial kitchen






Gym/pool

Other

4. Does the site operate and maintain the water distribution system? (Y/N)

Next

# FEMP Water Project Screening Tool – Output Example

EQUIPMENT	PROJECT POTENTIAL SCORE	WHAT YOUR SCORE MEANS	TECHNOLOGY OPTIONS
<p>PLUMBING</p> 	<p>              Resources:  <a href="#">FEMP BMP #6 - Toilets and Urinals</a>  <a href="#">FEMP BMP #7 - Faucets and Showers</a>  <a href="#">EPA WaterSense</a> </p>	<p>Many of the buildings likely have old plumbing fixtures; upgrading to high efficiency fixtures will save water.</p>	<p>Install high efficiency toilets, urinals, faucets, and showerheads. Ensure the contractor has specific expertise in water-efficient plumbing systems.</p>
<p>COOLING TOWERS</p> 	<p>              ALTERNATIVE WATER PROJECT POTENTIAL               Resources:  <a href="#">FEMP BMP #10 - Cooling Tower Management</a>  <a href="#">EPA WaterSense</a> </p>	<p>Cooling towers are a significant water user that offers large potential water savings.</p> <p>The site does not currently use alternative water for cooling tower makeup. Alternative water can significantly offset the use of freshwater.</p>	<p>Maximize cycles of concentration. Consider installing real-time controllers to control blowdown and chemical feed. Contract with a company that has specific expertise in this area.</p> <p>Consider switching to alternative water sources for cooling tower makeup, such as harvested rainwater, captured condensate, or reclaimed wastewater.</p>



# FEMP Water Management Training

## Planning and Practice

1. Water Management Basics
2. Managing Water Assessments
3. Best Practices for Comprehensive Water Management

<https://www4.eere.energy.gov/femp/training/series/water-management-planning-and-practice>

- \*\* Free
- \*\* Self-paced
- \*\* CEU credits

## Water Management: Planning and Practice

This training series provides a comprehensive approach to water management, including strategic planning, water balance development, water assessments, and best management practices, to assist agency energy and facility managers with reducing facility water use and meeting federal mandates and compliance requirements.

Showing results 1 - 3 of 3

ON DEMAND

4.5 hours

0.50 CEU



### Best Practices for Comprehensive Water Management for Federal Facilities

*Advanced level (301)*

This eTraining core course provides Federal facility and energy managers with knowledge and skills to assist in meeting water-related legislative and executive order requirements. Learners will develop skills in increasing water efficiency and reducing water use through sound operations and maintenance practices and water-efficient technologies.

ON DEMAND

3.5 hours

0.40 CEU



### Managing Water Assessment in Federal Facilities

*Intermediate level (201)*

This eTraining core course focuses on managing the water-assessment process in Federal facilities and assists Federal energy and facility managers in complying with executive orders and legislative mandates and meet the requirements of Section 432 of the Energy Independence and Security Act of 2007.

ON DEMAND

2 hours

0.3 CEU



### Water Management Basics

*Introductory level (101)*

This eTraining core course provides learners with a concise introduction to comprehensive water management, including the key topic areas of basic water management terminology, the history of federal water mandates, current Executive Order 13693 provisions, best practices associated with comprehensive water management, and proven water conservation financing mechanisms and strategies.

# FEMP Contact Information

## Saralyn Bunch

- FEMP Program Manager
- Email: [saralyn.bunch@ee.doe.gov](mailto:saralyn.bunch@ee.doe.gov)
- Phone: 202-586-3267

## Kate McMordie Stoughton

- Pacific Northwest National Laboratory
- Email: [kate.stoughton@pnnl.gov](mailto:kate.stoughton@pnnl.gov)
- Phone: 720-379-3511