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Managing Water in the West

Reclamation's SECURE Reservoir Operations Pilot Initiative

Lake Mendocino FIRO Workshop

June 28, 2016

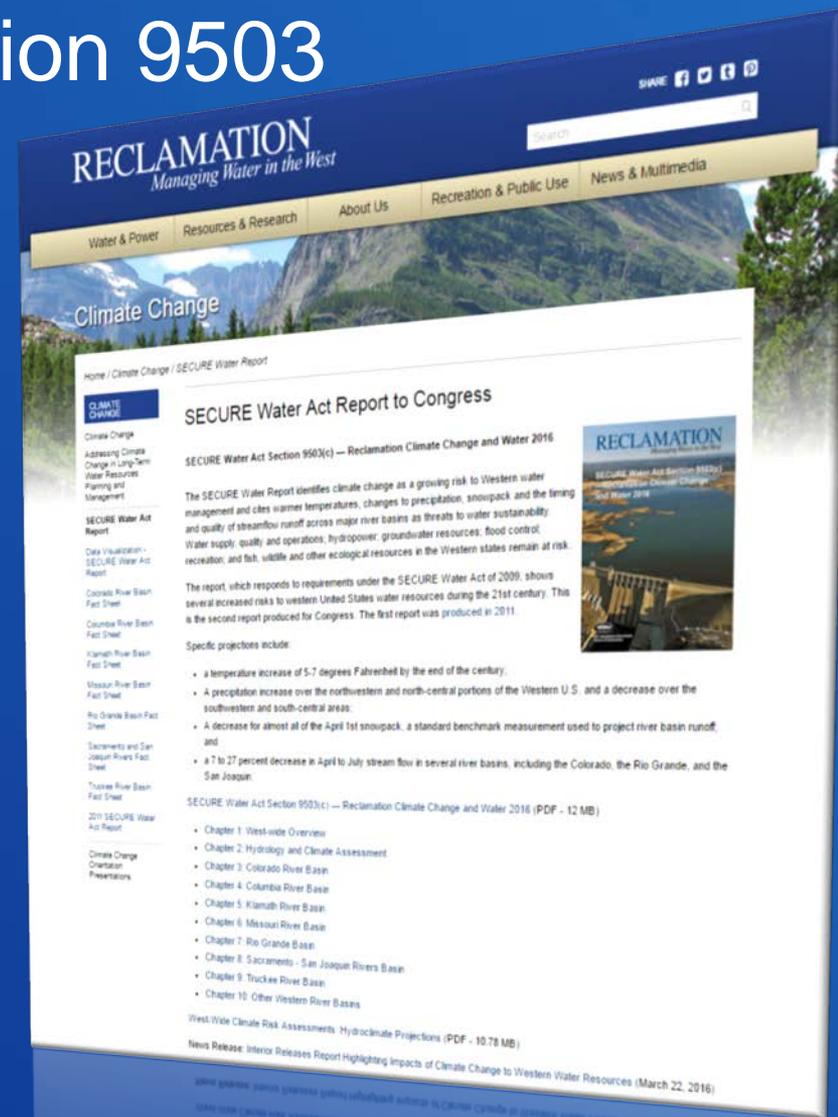


U.S. Department of the Interior
Bureau of Reclamation

Public Law 111-11 Subtitle F SECURE Water Act – Section 9503

- (1) *Effects and risks resulting from*, global climate change with respect to the quantity of water resources
- (2) *Impacts* of global climate change *with respect to operations*
- (3) *Mitigation and adaptation strategies* considered and implemented
- (4) *Coordination activities* conducted by the Secretary
- (5) the implementation of a west-wide risk assessment *monitoring plan*

First Report to Congress published 2011,
Second Report Published March 2016



Reclamation's Climate Change Adaptation Strategy High Priority— Reservoir Operations Pilot Initiative

Strategy Goal

Guidance,
Science and
Capacity

Pilot Study /
Demonstration

Formalize
Process and
Implement

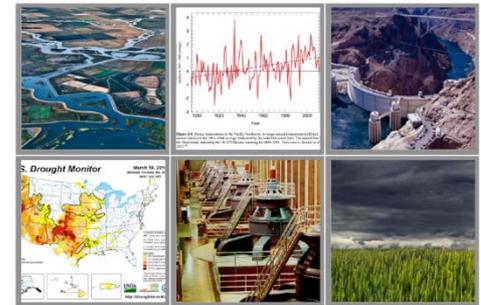
Guidance: Develop guidance for considering climate change in reservoir operations

Pilot Study: Initiate pilot studies to evaluate how climate change information could better inform reservoir operations at Reclamation reservoirs

Implement: Guidance will inform reservoir operations planning and operating guidelines

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Climate Change Adaptation Strategy




U.S. Department of the Interior
Bureau of Reclamation

November 2014

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Brief Background

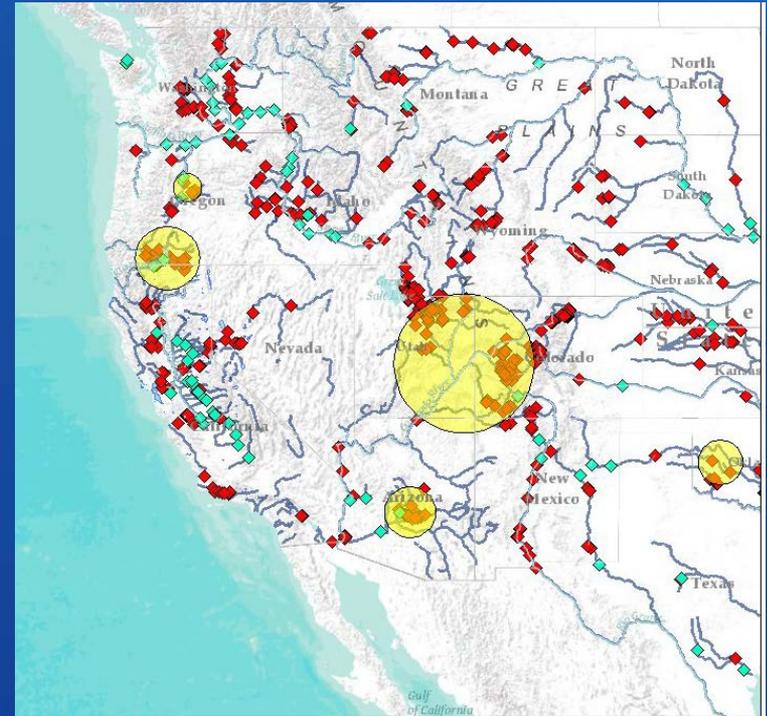
2014 – Established the SECURE Reservoir Operations Team, Conducted Reclamation-wide Survey

2015 - Reclamation began the Reservoir Operations Pilot Initiative as part of the WaterSMART program and selected 5 pilot studies

2016 – 2017 – Conduct pilot studies and develop/revise framework for pilot initiatives and guidance

2018 – Finalize Reclamation-wide guidance on improving reservoir operations

Reservoir Operations Pilot Locations



Five reservoir operations pilots in the Pacific Northwest, Mid-Pacific, Great Plains, Upper Colorado, and Lower Colorado regions

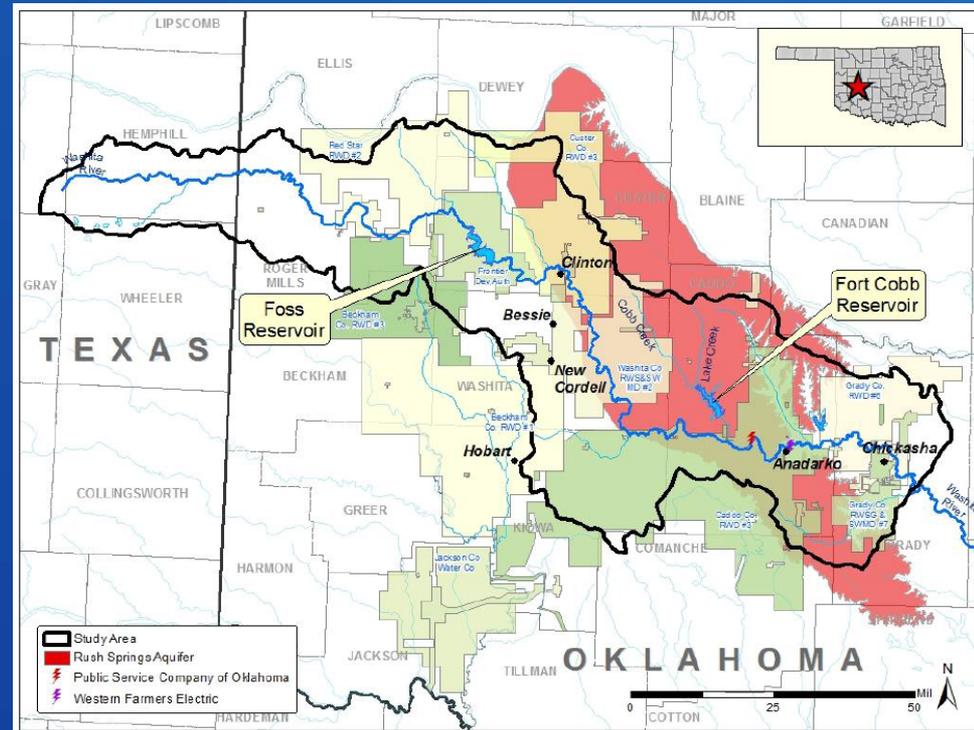
Great Plains

Pilot Reservoir(s): Upper Washita,
Fort Cobb and Foss Reservoirs
Location: Southwestern Oklahoma

Main objectives include:

- Update Operations Model
- Improved Forecasting
- Increase Flexibility

On-going studies in the area: Upper Washita Basin Study and Foss Reservoir Master Conservancy District, Drought Contingency Plan



Mid-Pacific

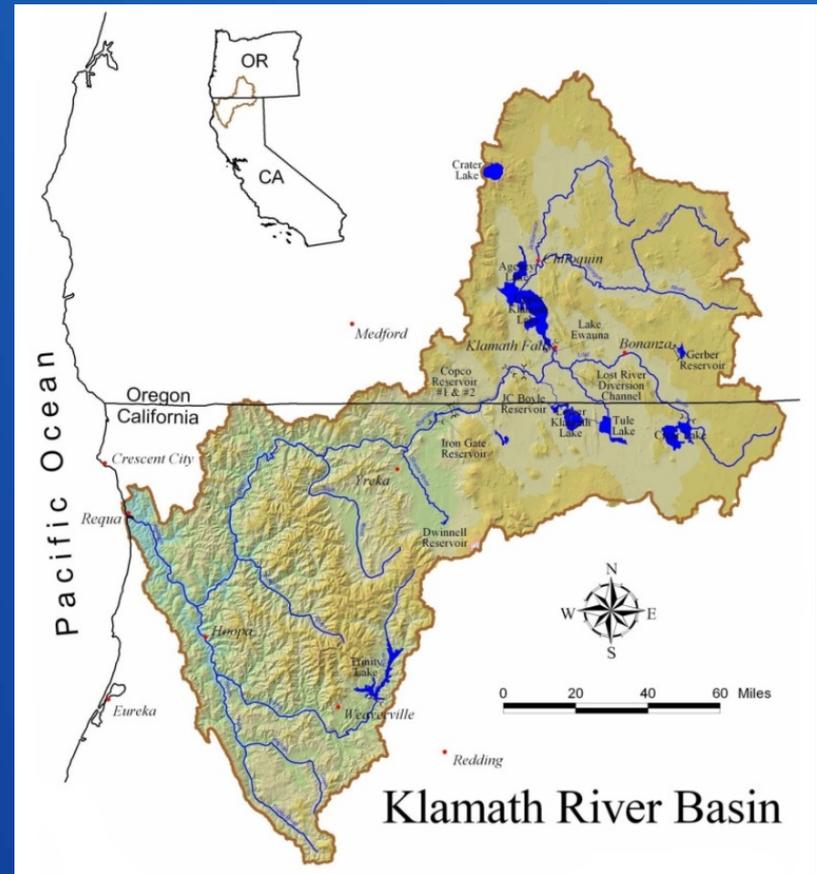
Pilot Reservoir(s): Klamath Project,
Klamath River Basin

Location: Southern Oregon to
northern California

Main objectives include:

- Forecast Development
- Demand Forecasting
- Mid-Term Operations Model

On-going studies in the area: Klamath River Basin Study



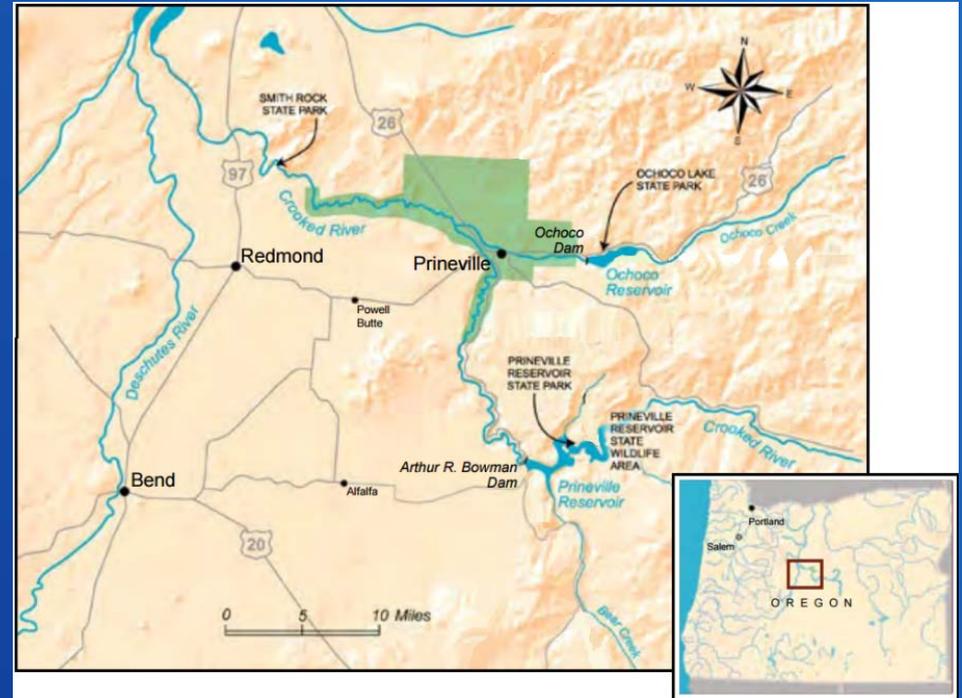
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Pacific Northwest

Pilot Reservoir(s): Ochoco Creek
and Crooked River
Location: Central Oregon

Main objectives include:

- Update Operations Model
- Forecast Optimization
- Flood Control Rule Curves



On-going studies in the area: Upper Deschutes Basin Study

Upper Colorado

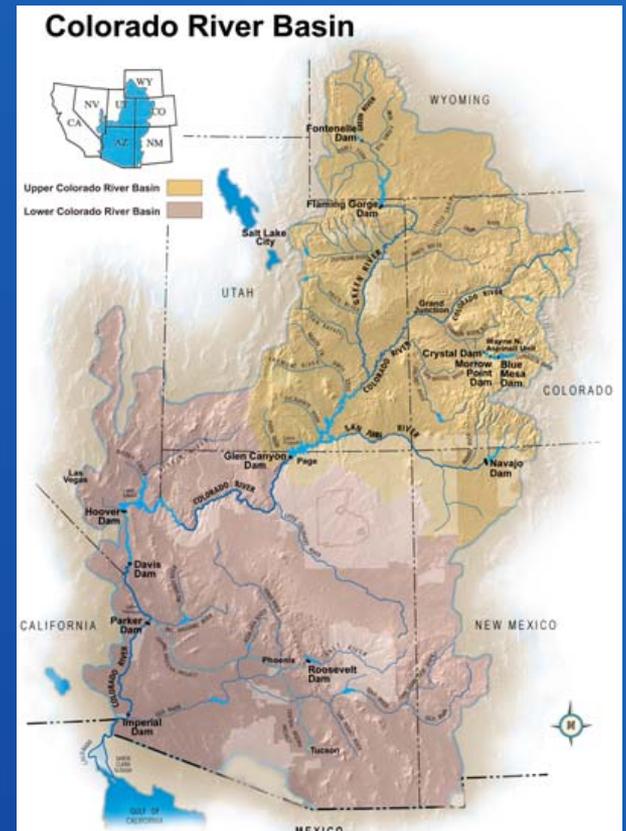
Pilot Reservoir(s): Upper Colorado Reservoirs, Flaming Gorge, Aspinall, Navajo, and Lake Powell
Location: Southwestern Oklahoma

Main objectives include:

- Long-Term Operations Model
- Extended Operations

On-going studies in the area: Upper Colorado Drought Contingency Plan

Note: Working on identifying an additional study in the Upper Colorado region in the Rio Chama (northern NM)



Lower Colorado

Pilot Reservoir(s): Salt River Project, Salt and Verde River

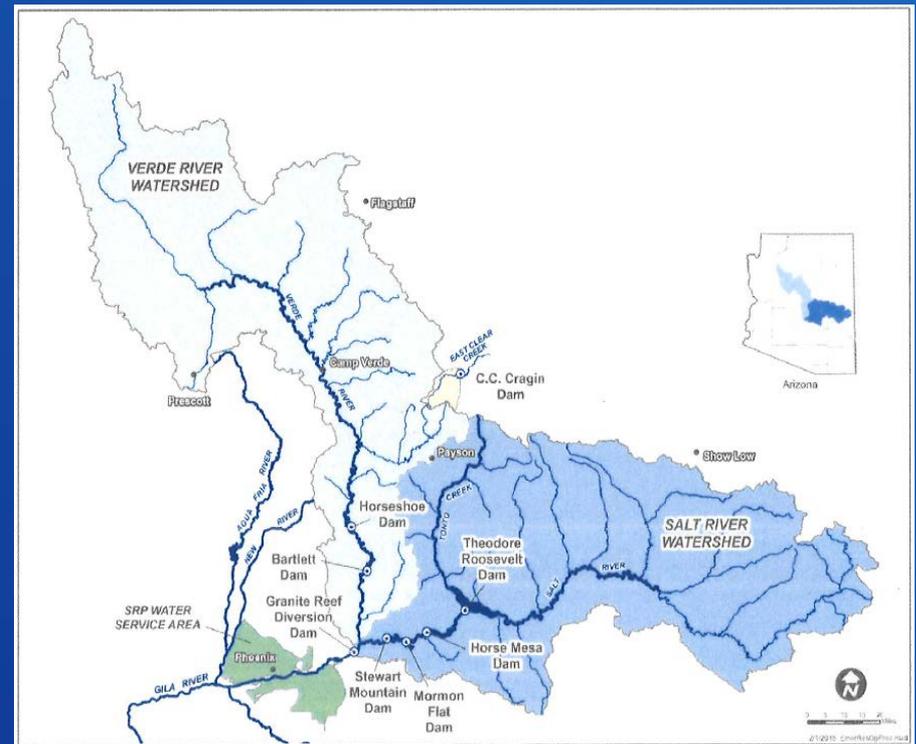
Reservoir Systems

Location: Arizona

Main objectives include:

- Climate Variability vs. Change
- Extreme Events
- Reservoir Sedimentation

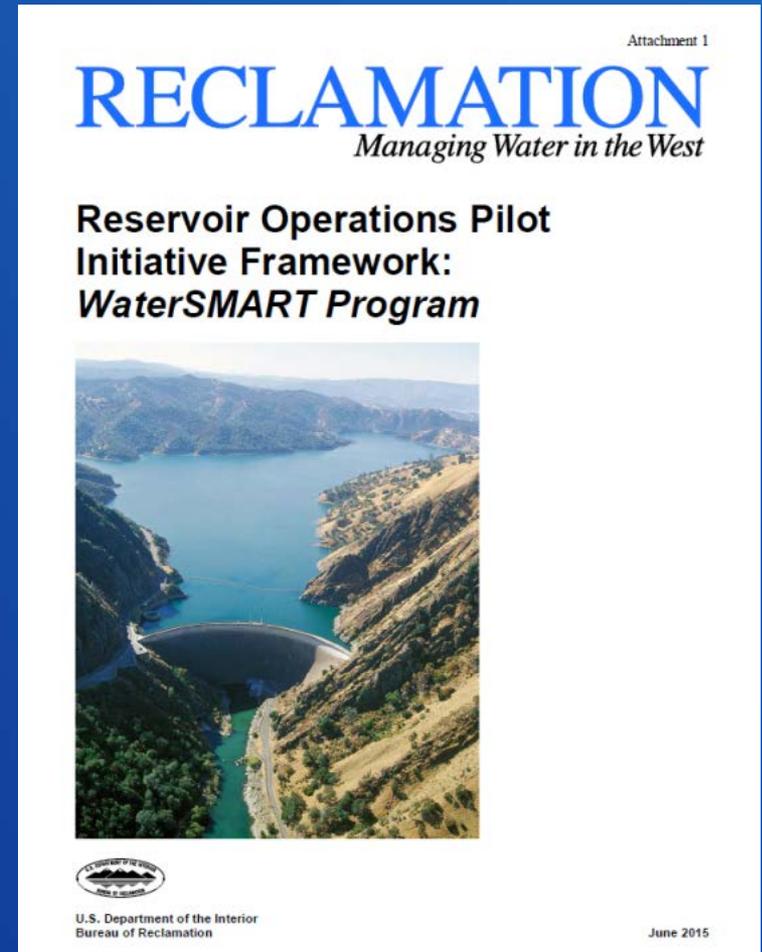
Study is in conjunction with the Salt River Project



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Reservoir Operations Pilot Initiative and Reclamation-wide Guidance

- Focus of pilot initiative and guidance
 - Incorporating **better scientific information** into operations (e.g. forecasting, sedimentation, planning models for operations, Federal coordination)
 - Optimizing operations within **existing water management frameworks**
 - Identifying locations to **update operating criteria** to improve water management
- Forward Looking: Support regional operations studies



Questions?

Useful Links:

- SECURE Water Act Report and [Tool](http://www.usbr.gov/climate/SECURE)
www.usbr.gov/climate/SECURE

- Reclamation Reservoir Operations
Pilot Initiative Website

<http://www.usbr.gov/watersmart/wcra/reservoirpilot.html>

- Reclamation Climate Change Adaptation Strategy

<http://www.usbr.gov/climate/>

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