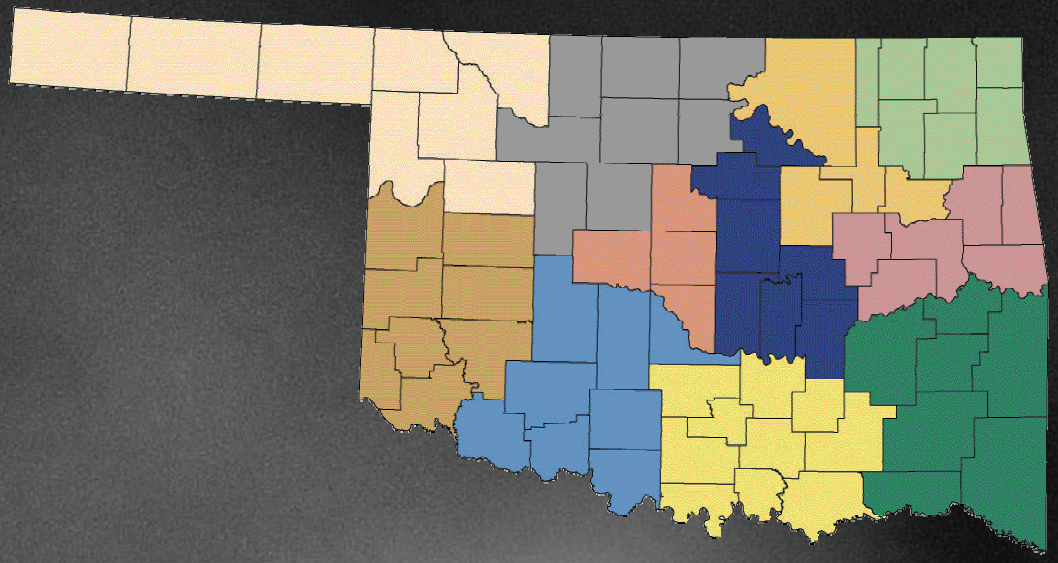
# A New Water Plan For Oklahoma



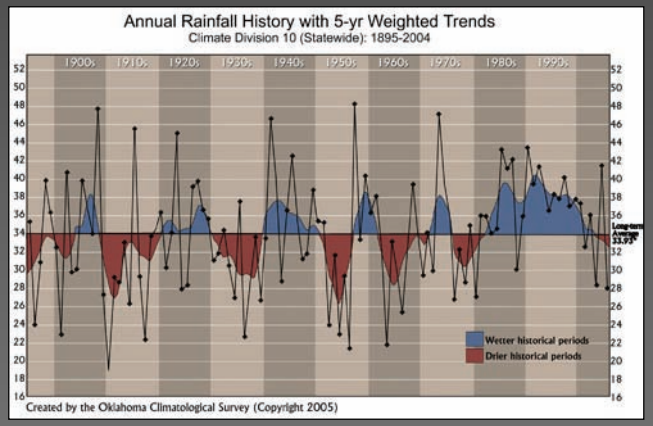
State of Oklahoma
OWRB
WATER RESOURCES BOARD
the water agency

# Background

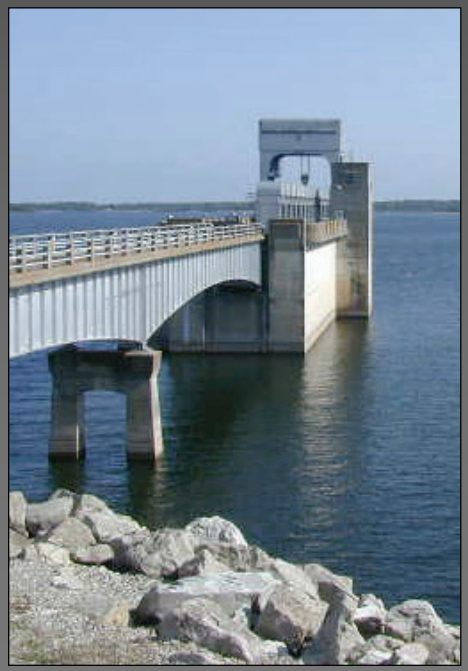
# Why Plan?

***To meet Oklahoma's future water supply challenges...***

- **Address population growth**
- **Address future water and wastewater infrastructure costs**

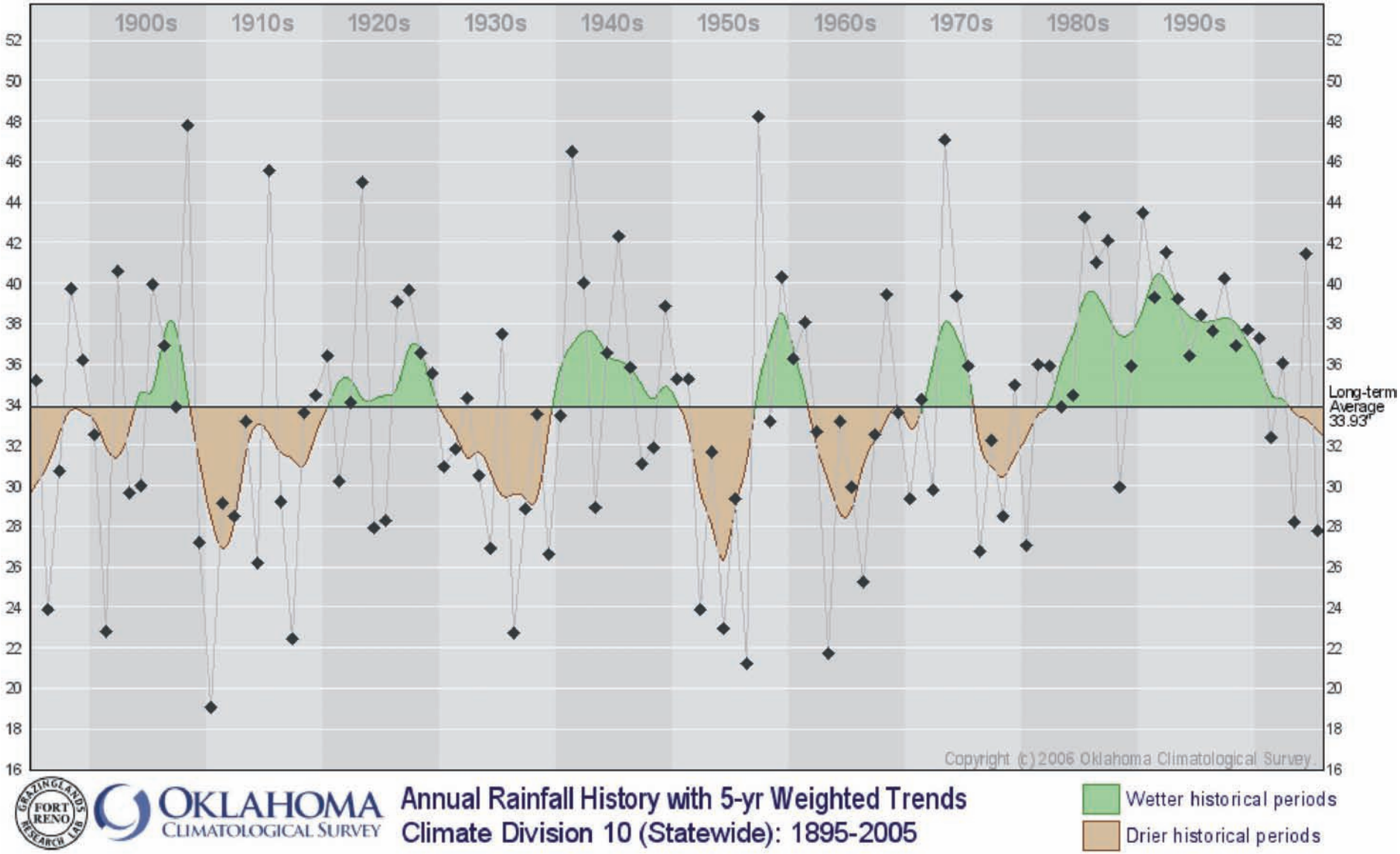



- **Balance economic development and the environment**
- **Satisfy competing water interests**



- **Reduce vulnerability to drought / flooding**

# Annual Trends in Statewide Averaged Rainfall (1895 Through 2005)

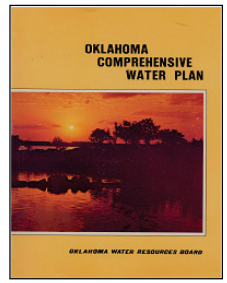


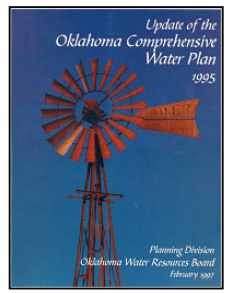

OKLAHOMA CLIMATOLOGICAL SURVEY

GRAZINGLANDS RESEARCH LAB FORT RENO

# Oklahoma Water Planning

- The *Oklahoma Comprehensive Water Plan*:
  - Oklahoma's long-range water use and management strategy
  - Plan for and encourage the use of water in a manner that will best serve the many needs of the people of Oklahoma
  - First OCWP completed in 1980; updated in 1997
- OWRB Planning Authority:
  - … authorized, empowered and directed… to prepare a comprehensive state water plan and decennial updates thereof… and… to conduct surveys and cooperate with other state and federal agencies (Title 82, Section 1086.2, Oklahoma Statutes)



# A New Water Plan for Oklahoma

- Oklahoma Water Plan Update:
  - Oklahoma requires a more aggressive strategy to address future water supply challenges:
    - Develop and implement regional and system-level plans to provide economical, long-term water service
  - In 2006 the Legislature provided State Gross Production Tax funds for the OWRB to "… accomplish all phases and funding needs for the Oklahoma Comprehensive Water Plan."
    - ~$6.5 million over next five years for Water Plan
    - ~$6.5 million over next five years to help recapitalize the Financial Assistance Program

## A New Water Plan for Oklahoma

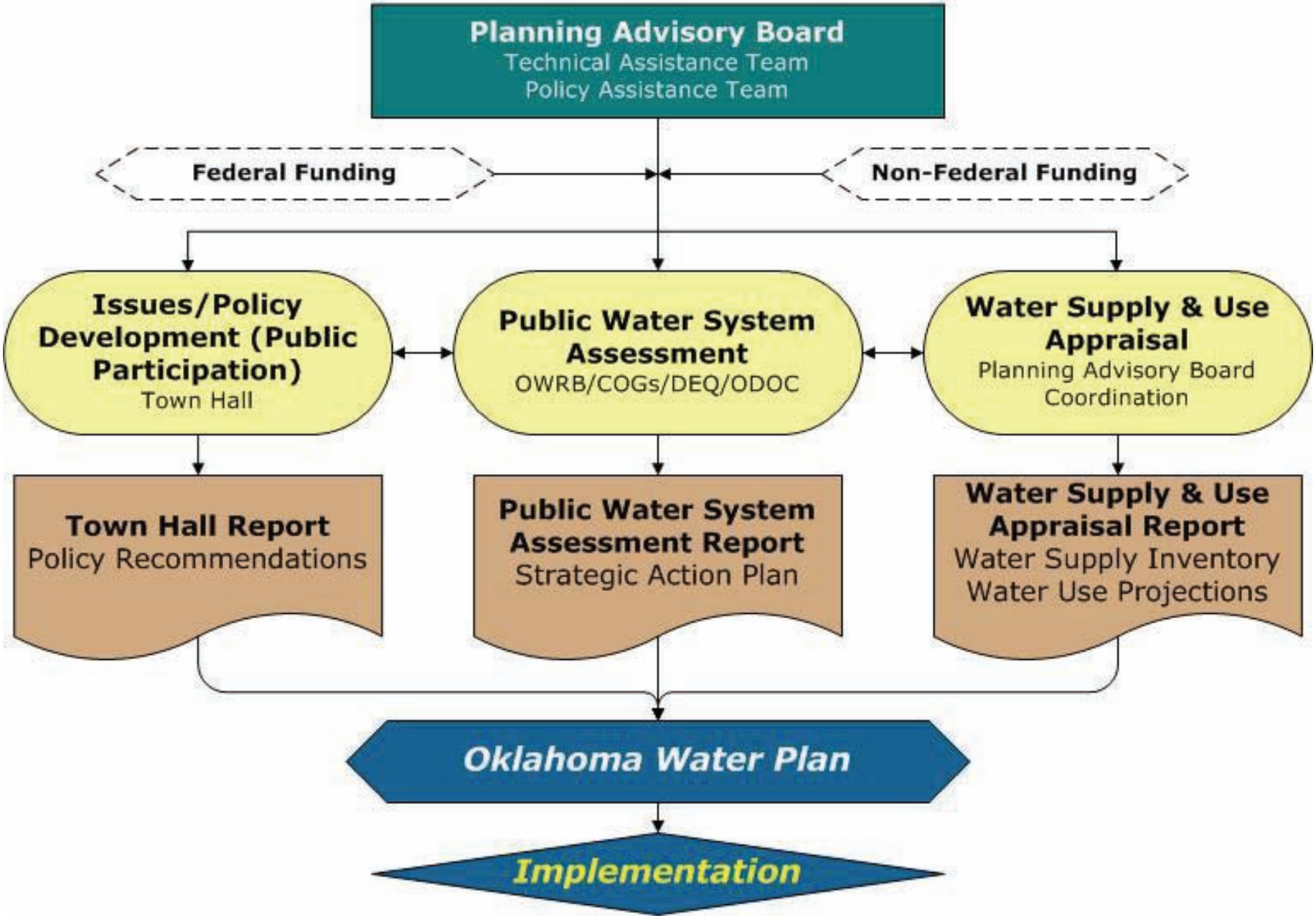
# Goals

**Provide safe and dependable water supply for all Oklahomans while maintaining the state's economy and protecting the environment.**

**Provide information so that water providers, policy-makers, and water users can make informed decisions concerning the use and management of Oklahoma's water resources.**

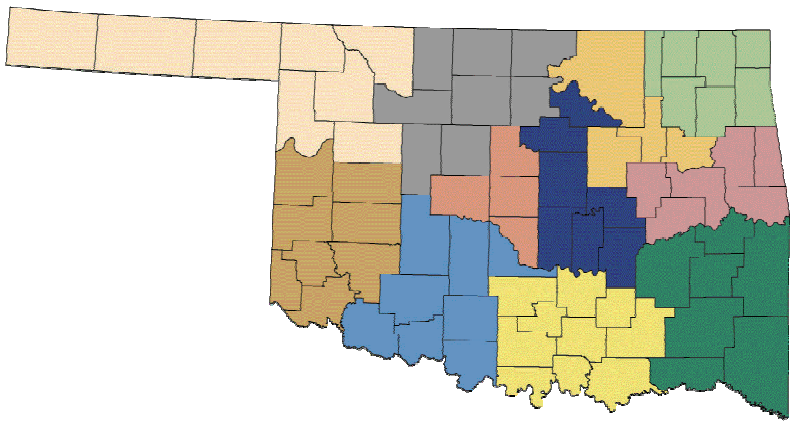
# The Water Planning Process

# Oklahoma Water Plan Process



# The Water Planning Process

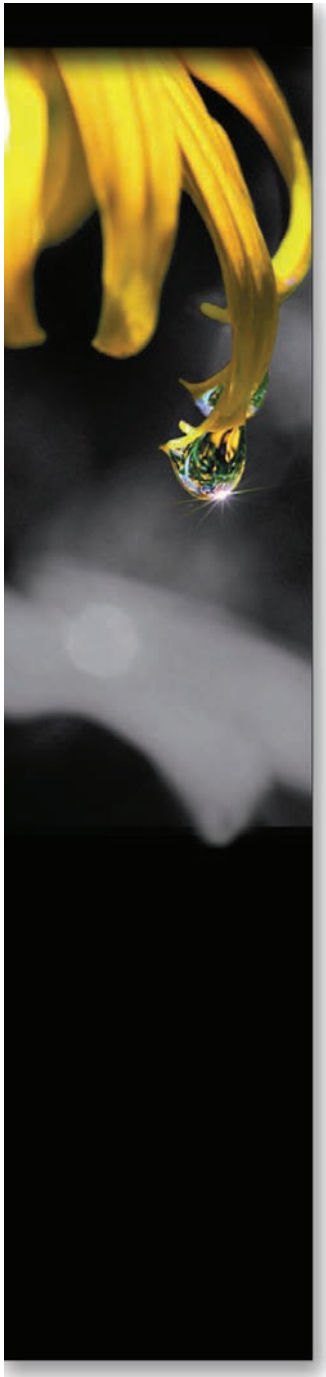
- Water Use Projections:
  - Develop water demand projections
  - Water supply inventory and analysis through forecast year 2060



*Water Uses:
- Public Water Supply
- Domestic Use
- Agriculture Use
- Industrial Use
- Recreational Use
- Environmental Use

*Regions keyed to substate planning districts:

*water demand projections supplied on county basis



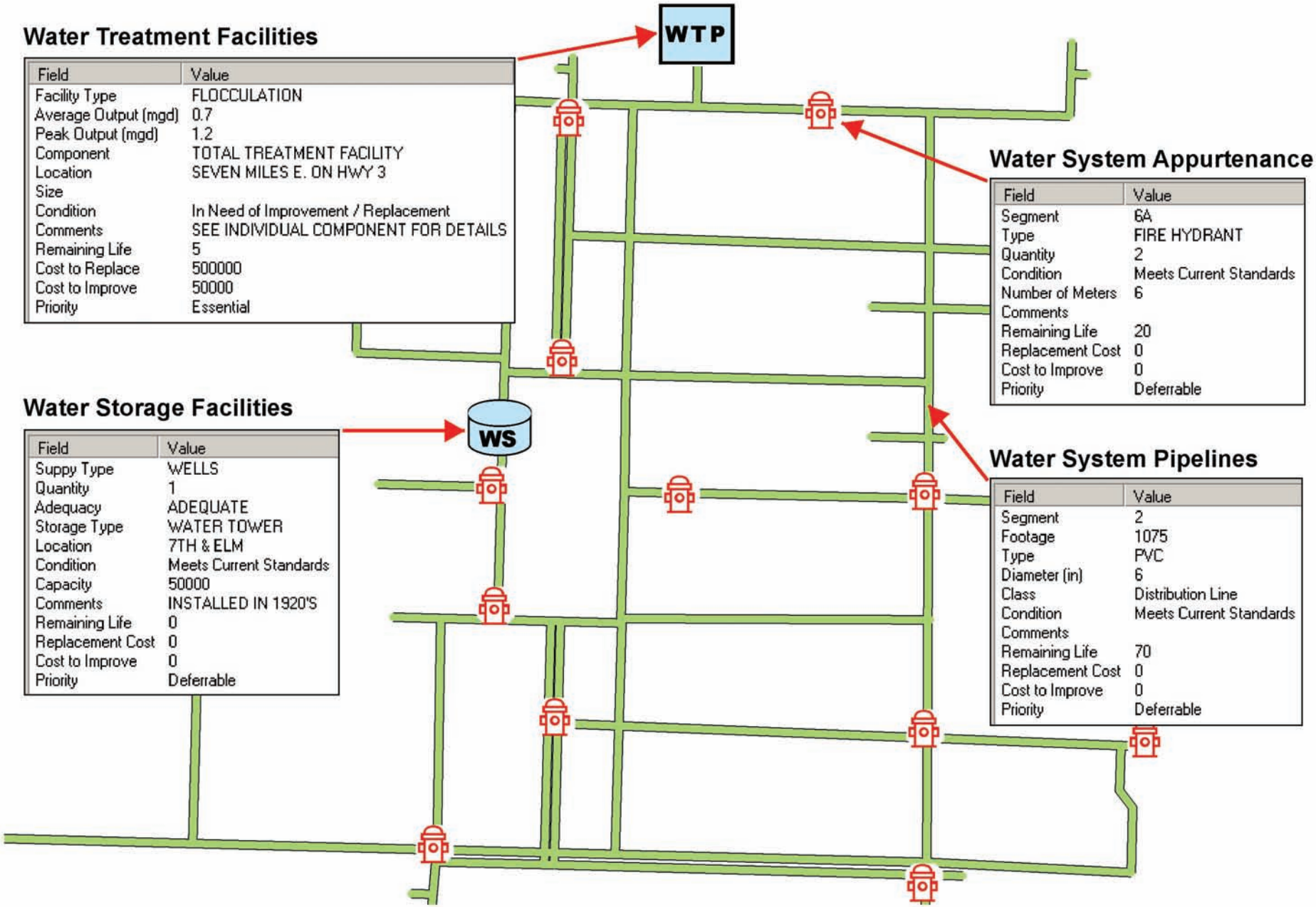
# The Water Planning Process

- Public Water System Assessment:
  - Goals:
    - Identify local/regional problems and water use opportunities:
      - Collect data, survey, and map systems, sources of supply, basic infrastructure, and rate structures
      - Review water supply/demand projections in relation to each system's water needs
      - Identify adequacy of existing system infrastructure to meet projected needs
    - Develop conceptual options and/or master plans to meet future needs

# The Water Planning Process

- <u>Public Water System Assessment Workplan</u>:
  - Inventory of water system infrastructure
    - 1,717 active public water supply systems:
      - 1,240 community water systems (municipalities/rural water districts)
      - 124 non-transient, non-community systems (schools, factories, etc.)
      - 353 non-community systems (rest stops, parks, etc.)
      - assorted smaller systems
  - Leverage appropriated funds to obtain federal assistance

# Public Water System Assessment
## -GIS Water System Features & Data




### Water Treatment Facilities

| Field | Value |
|---|---|
| Facility Type | FLOCCULATION |
| Average Output (mgd) | 0.7 |
| Peak Output (mgd) | 1.2 |
| Component | TOTAL TREATMENT FACILITY |
| Location | SEVEN MILES E. ON HWY 3 |
| Size | |
| Condition | In Need of Improvement / Replacement |
| Comments | SEE INDIVIDUAL COMPONENT FOR DETAILS |
| Remaining Life | 5 |
| Cost to Replace | 500000 |
| Cost to Improve | 50000 |
| Priority | Essential |

### Water System Appurtenance

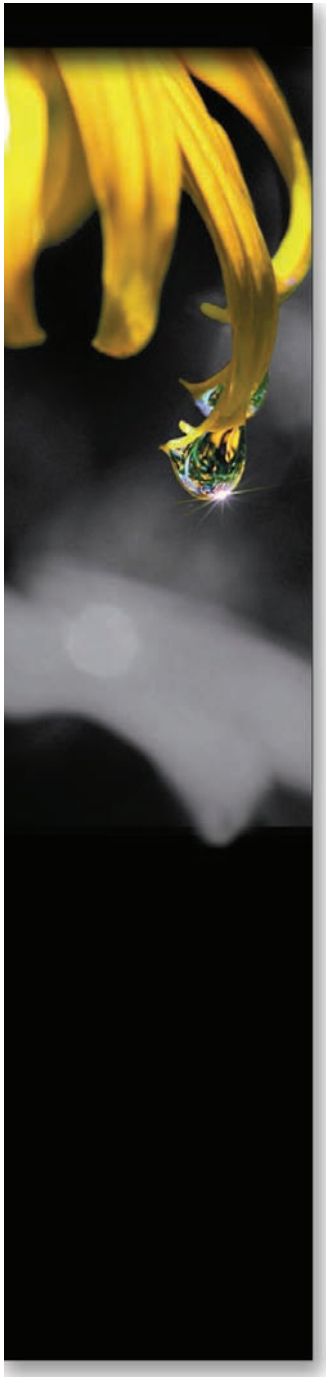
| Field | Value |
|---|---|
| Segment | 6A |
| Type | FIRE HYDRANT |
| Quantity | 2 |
| Condition | Meets Current Standards |
| Number of Meters | 6 |
| Comments | |
| Remaining Life | 20 |
| Replacement Cost | 0 |
| Cost to Improve | 0 |
| Priority | Deferrable |

### Water Storage Facilities

| Field | Value |
|---|---|
| Suppy Type | WELLS |
| Quantity | 1 |
| Adequacy | ADEQUATE |
| Storage Type | WATER TOWER |
| Location | 7TH & ELM |
| Condition | Meets Current Standards |
| Capacity | 50000 |
| Comments | INSTALLED IN 1920'S |
| Remaining Life | 0 |
| Replacement Cost | 0 |
| Cost to Improve | 0 |
| Priority | Deferrable |

### Water System Pipelines

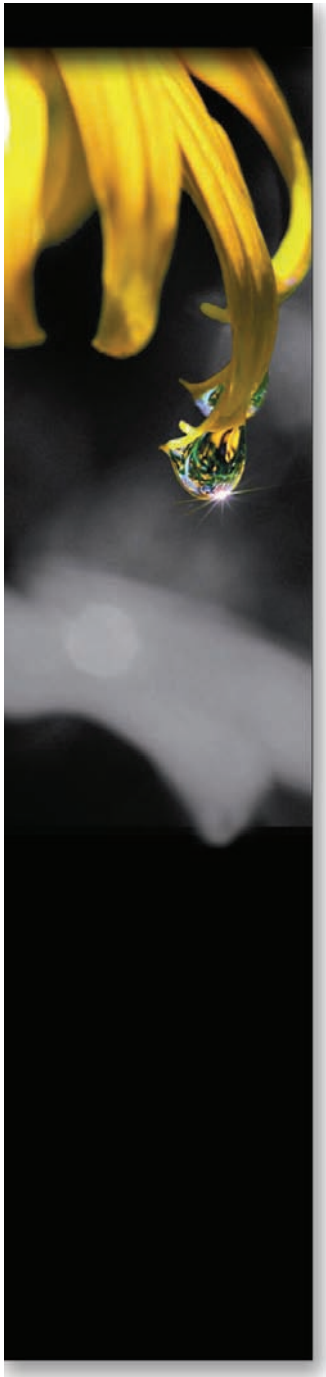
| Field | Value |
|---|---|
| Segment | 2 |
| Footage | 1075 |
| Type | PVC |
| Diameter (in) | 6 |
| Class | Distribution Line |
| Condition | Meets Current Standards |
| Comments | |
| Remaining Life | 70 |
| Replacement Cost | 0 |
| Cost to Improve | 0 |
| Priority | Deferrable |



# The Water Planning Process

- Issue Identification & Policy Development:
  - Utilize an extensive and inclusive public and stakeholder participation process throughout the planning period
  - Utilize "Town Hall" concept
  - Planning Advisory Board:
    - Knowledgeable stakeholders representing broad water use interests to provide advice on the planning process
    - Technical assistance provided to PAB by experts from water agencies, organizations, and universities

**Final Water Plan Update:**
**•July 2011**

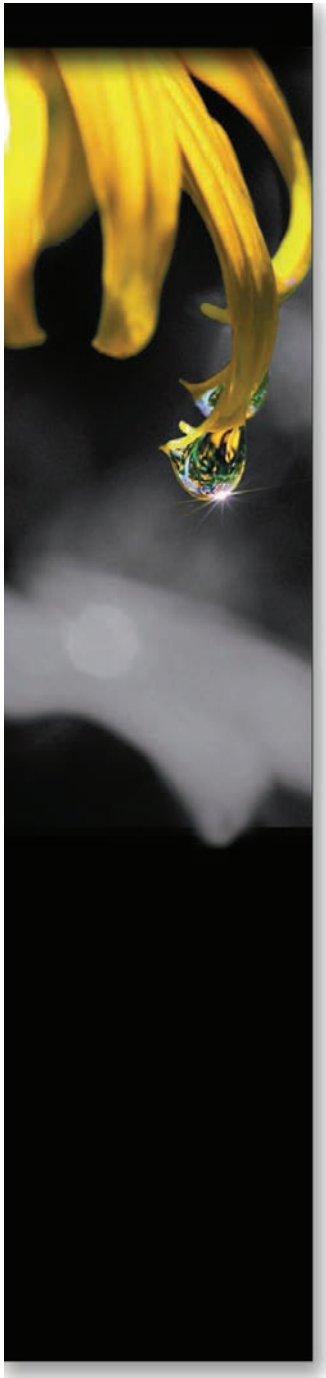


# The Water Planning Process

- Water Plan Phase II—<u>Implementation</u>:
  - Assess cost/benefit impacts
  - Evaluate & incorporate needs of other water use sectors (recreational, environmental, etc.)
  - Prioritize needs and options
  - Identify funding alternatives
  - Review financial capacity in relation to infrastructure needs

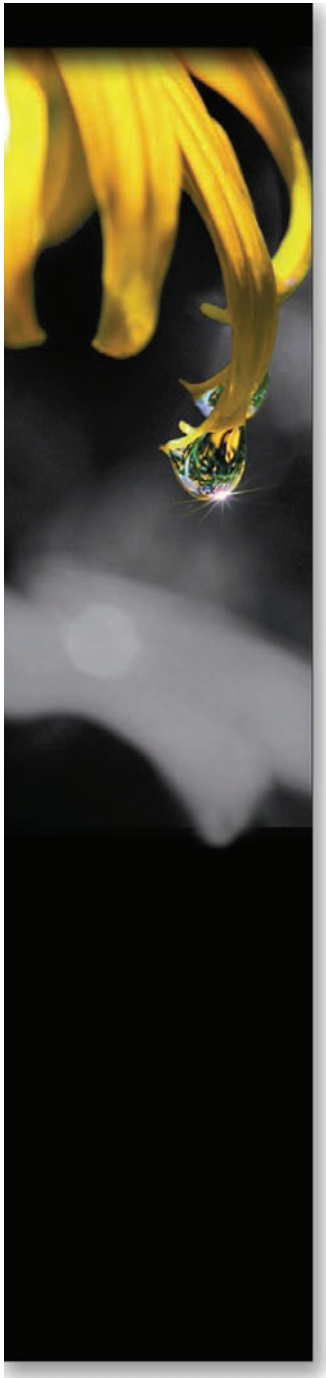
  *<u>Utilize OWRB's Financial Assistance Program to implement projects</u>:

    *Responsible for $1.6 billion in loans/grants to Oklahoma's water and wastewater systems



# The Water Planning Process

- Partners—Water Plan Update:
  - Oklahoma Water Resources Research Institute
  - Oklahoma Association of Regional Councils (COGs)
  - Oklahoma Department of Environmental Quality
  - Federal Partners



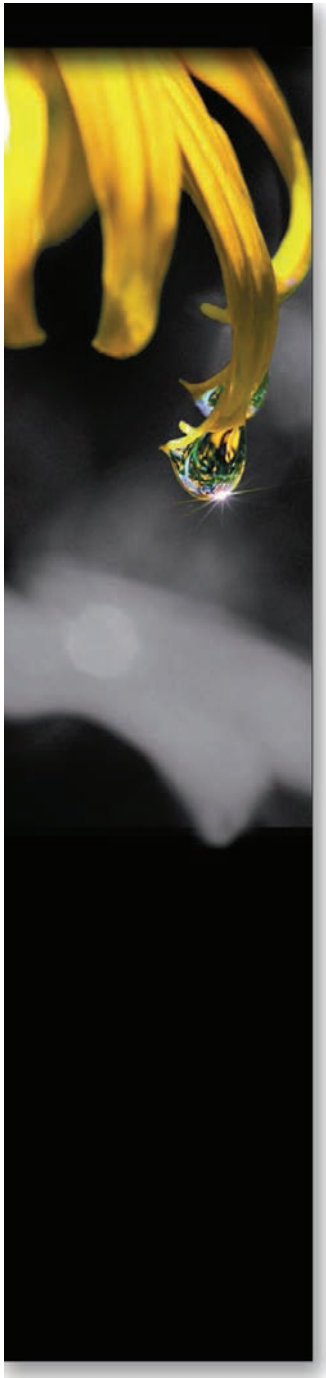
# The Water Planning Process

- Planning Partners—Oklahoma Water Resources Research Institute:
  - One of 54 state and territorial water resources research institutes in the U.S.
  - Awards annual grants of about $75,000 from the USGS to water researchers at state universities
    - OWRRI grants over next 5 years will focus on research needed to support development of Oklahoma's Water Plan

❖ ***Water Plan Task:***

❖ ***Facilitate public participation and water policy development***

OSU OKLAHOMA STATE UNIVERSITY WATER RESOURCES RESEARCH INSTITUTE

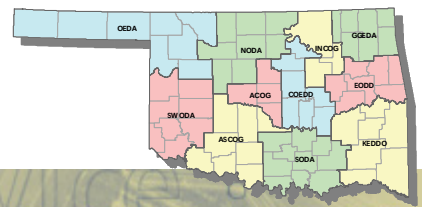


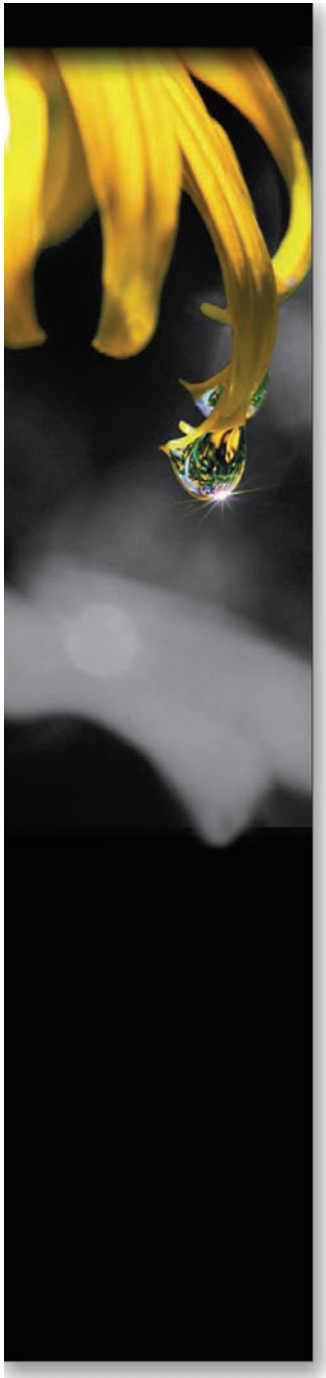
# The Water Planning Process

- Planning Partners—Oklahoma Association of Regional Councils (COGs):
  - COGs partner with local governments in various planning projects to improve quality of life and economic development

❖ ***<u>Water Plan Task</u>:***

❖ ***Help assess the capacity and condition of water supply systems to implement system-level improvement plans and projects***





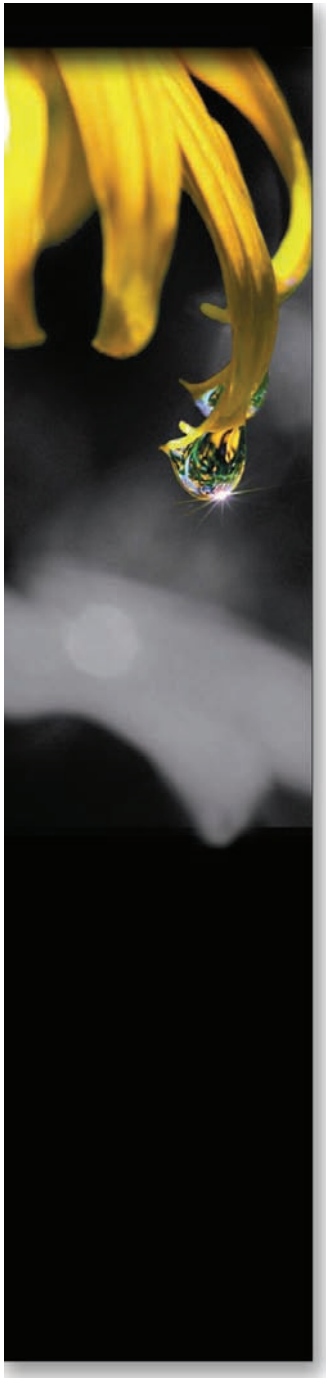
# The Water Planning Process

- Planning Partners—Oklahoma Department of Environmental Quality:
  - Regulates public water supply facilities in Oklahoma
  - Maintains the Safe Drinking Water Information System, a database of more than 1,700 public water supply systems that serve approximately 3.45 million customers

❖ ***Water Plan Task:***

❖ ***Assist in the collection and management of water system data as well as project implementation***

OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY



# The Water Planning Process

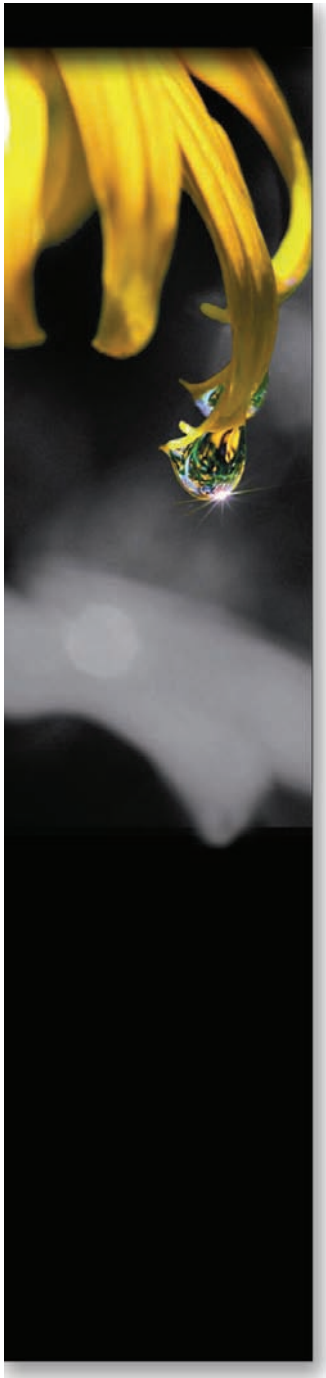
- Federal Planning Partners:
  - Tap into the expertise and resources of various federal water agencies:
    - Corps of Engineers (PAS, Southeast Study)
    - Bureau of Reclamation (TAS, General Investigations
    - U.S. Geological Survey (Cost-Share Program)
    - Environmental Protection Agency (Capacity Development)

US Army Corps of Engineers ®

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

USGS
science for a changing world

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



# The Water Planning Process

| Year | Date | Event or Milestone |
|---|---|---|
| 2006 | Nov | Kickoff Meeting |
| 2007 | Apr | Begin Listening Sessions |
| 2008 | Feb | Complete Listening Sessions |
| | Jul-Sep | Regional Vetting Sessions |
| 2009 | Jan-Mar | Planning Workshops Round 1 |
| | Apr-Jun | Planning Workshops Round 2 |
| | Jul-Sep | Planning Workshops Round 3 |
| 2010 | May | Town Hall Meeting |
| 2011 | Jan | Draft Water Plan |
| | Feb-Apr | Feedback Sessions |
| | Jul | Final Water Plan |

State of Oklahoma

# OWRB

WATER RESOURCES BOARD

the water agency

www.owrb.state.ok.us