How Oklahoma’s Comprehensive Water Plan has driven Reuse, Recycling, WQ Standards, Water Rights and Other Regulatory Programs

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Why a Comprehensive 50 year Plan and Why Now?

- Required by state law to update every 10 years
- Drought acutely affecting consumptive water users
  - Water for 2060
  - Water Reuse
  - Aquifer Storage and Recovery
  - 2016 Legislative Update
- Desire to “manage the unavoidable and avoid the unmanageable”
2012 Oklahoma Comprehensive Water Plan (OCWP)

- Partnered with the US Army Corps of Engineers and other local, state and federal groups
- Ended up with approximately $15,000,000 to develop and refine the plan
- Began work in earnest in 2006 and completed it in 2012.
- Involved exhaustive public listening sessions, advisory groups, and technical analysis
- Although primarily a water supply model to respond to drought, other issues like water quality, in-stream flows, monitoring and infrastructure were addressed
Approximately 56% of water use in 2007 came from surface water sources and 44% from groundwater sources.
Water Demands by Sector

Pie Charts
2060 - Total Demands by Sector (% of Total Region Demands)
- Thermoelectric Power
- Self Supplied Rural Residential
- Self Supplied Large Industrial
- Oil and Gas
- Municipal and Industrial
- Livestock
- Crop Irrigation

Map Base
2060 - Total Demands by Region (AFY)
- 55,637 - 100,000
- 100,001 - 250,000
- 250,001 - 350,000
- 350,001 - 473,836

Total State Water Demand (2060) = 2,492,456 AFY
Potential limitations of each supply source to meet 2060 demands

Surface Water

- Permit Availability: 30%
- Physical Availability: 50%
- Water Quality: 20%

Alluvial/Bedrock Ground Water

- GW Depletion as % of Aquifer Storage: 50%
- Rate of GW Depletion: 50%

All 82 basins ranked
Other interesting general findings:

55 of the 82 surface water planning basins will have water shortages by 2060 and 10 of the 82 will be severe.
Other interesting general findings:

Groundwater depletion (although contemplated by state law) will be significant enough to affect domestic and agricultural use in 34 of the 82 basins. Considering BOTH surface and groundwater sources, demand will far outstrip available supply in 12 of the 82 basins by 2060.
The final OCWP outlined 8 priority recommendations:

1) Water Project and Infrastructure Financing
   • $37,790,000 shortfall in Drinking Water Infrastructure Need
   • $43,890,000 shortfall in Wastewater Infrastructure Need
   • $81,680,000 total shortfall

2) Regional Planning Groups (regional differences in supply, demand, priority, policy, etc. are real and may be addressed through local planning efforts)

3) Excess and Surplus Water (some basins may actually have less demand than supply by 2060 creating markets, transfers or other statewide solution options)

4) Instream/Environmental Flow (Oklahoma’s current appropriative system does not consider instream/environmental flows. Highly polarizing. In early development)
The final OCWP outlined 8 priority recommendations cont.: 

5) State/Tribal Water Consultation and Resolution (Working to clarify authorities and responsibilities associated with Oklahoma’s 39 Federally recognized tribes)

6) Water Conservation, Efficiency, Recycling and Reuse (Affirmed that it is Oklahoma’s statewide goal to utilize no more water in 2060 than it used in 2010)

7) Water Supply Reliability (Prioritize and fund the fair, reliable, and sustainable allocation of surface and groundwater. Determine more precisely availability, modeling, hydrologic and groundwater studies)

8) Water Quality and Quantity Monitoring (provide dedicated funding to do holistic monitoring of surface and groundwater quality and quantity)
Lessons Learned through the 2012 OCWP Process

Interact Early and Often with the public - This can be through listening sessions, local governments, or unique water planning meetings. Remember – if you don’t tell people what’s going on they make stuff up and don’t trust you – and usually what they make up is much worse than the truth. Think “FIT” (Fair-Inclusive-Transparent).

Think upstream both hydrologically and politically - In all probability the implementation of any plan will require legislative support AND funding. Find a couple champions among elected officials and make them a part of the entire process.

Regional Planning Groups - Almost no state is homogenous, and these differences must be recognized.
Lessons Learned through the 2012 OCWP Process cont.

Instream/Environmental Flow - Non-consumptive use of water has a real economic value and consumptive users often overlook it.

Water Conservation, Efficiency, Recycling and Reuse - Mother Nature isn’t making any more water. We have to manage our water resources to use them most efficiently and effectively.

Water Supply Reliability - Allocating water use in most states is built upon statutes over 50 years old. Almost all of Oklahoma’s groundwater basins are showing depletions, just as the statute envisioned. But is that still good policy?

Water Quality and Quantity Monitoring - We don’t need data to make decisions, but we do need data to make good decisions.
Water Planning

Planning activities are critical to ensure sound surface and groundwater quality and quantity management decisions. They can also be powerful tools to highlight programmatic weaknesses or antiquated values.

Projected 2060 Water Demands under OCWP Baseline and Conservation Scenarios (AFY)

Projected 2060 Water Shortages under OCWP Baseline and Conservation Scenarios (AFY)
An Act

An Act relating to waters and water rights; creating the Water for 2060 Act; providing short title; stating Legislative findings; stating goal for water consumption by certain year; amending 82 O.S. 2011, Section 1088.1, which relates to the Oklahoma Water Conservation Grant Program; modifying name of act; adding rural water districts to act; authorizing certain water reuse projects; creating the Water for 2060 Advisory Council; stating membership and providing for appointments; requiring Executive Director of the Oklahoma Water Resources Board to serve as chair; providing for quorum, membership vacancies and administrative support for Advisory
**Bold, Yet Attainable Goal**

**Demand Projections**

**Conservation Scenarios I & II**

Total fresh water use will need to be reduced by more than 30% by 2060 to maintain 2012 levels of use.
State of Oklahoma, Chickasaw Nation, Choctaw Nation of Oklahoma, City of Oklahoma City Water Settlement ("Tribal Water Settlement")
Tribal Water Settlement

- Historic – first in our state, first of its kind
- Product of 5 years of intense deliberation
- Already approved by OWRB, Choctaw & Chickasaw Nations, and Oklahoma City
- Now heads to Congress for approval by them and the Federal government (hopefully!)
Tribal Water Settlement

- Recognizes and protects existing water rights, including use by the Nations
- Maintains consistency of OWRB administration of water rights statewide, including SE Oklahoma
- OKC and surrounding metro get water needed for future growth and prosperity
- SE Oklahoma has long-term water needs protected, including water for tourism and recreation
- State’s debt and other obligations to the Federal government will be resolved
Questions?

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