

Water for 2060 Advisory Council

Meeting Minutes – 1:00 P.M., May 20, 2014

OWRB Board Room, 3800 N. Classen Blvd., Oklahoma City, Oklahoma

ATTENDEES:

Advisory Council Members and Representation:

Bob Drake, Agriculture (Davis)

Charlette Hearne, Oklahomans for Responsible
Water Policy (ORWP) (Broken Bow)

Mark Helm, Dolese (Oklahoma City)

Trent Smith, Small Business (Choctaw)

Kevin Smith, Ward Petroleum (Enid)

Roger Griffin, Weyerhaeuser (Broken Bow)

Phil Richardson, Agriculture (Minco)

J. D. Strong, Chair, Oklahoma Water Resources
Board (Oklahoma City)

Joe Taron, Pottawatomie County Development
Authority (Shawnee)

Jerry Wiebe, Oklahoma Panhandle Agriculture
& Irrigation (OPAI) (Hooker)

Nathan Kuhnert, Devon Energy (Oklahoma City)

OWRB and USACE Staff and Consultants:

Cole Perryman, OWRB

Jennifer Wasinger, OWRB

Owen Mills, OWRB

Brian Vance, OWRB

Julie Cunningham, OWRB

Joe Freeman, OWRB

Kylee Wilson

Terri Sparks, OWRB

John Rehring, Carollo Engineers

Anna Childers, CH2M Hill

Bryan Mitchell, CH2M Hill

Bryan Taylor, USACE

Other Attendees:

Michael Taylor, ODEQ

Barry Bolton, ODWC

Russ Doughty, ORWP

Introductions and Goals for Today

Mr. J.D. Strong, OWRB Executive Director and Advisory Council Chairman, opened the meeting by welcoming the attendees and asking audience/observers to introduce themselves. Mr. Strong then went over the agenda and noted that the primary goal of the meeting was to start prioritizing recommendations to go in the report to the legislature.

Where We've Been and Where We're Headed

Mr. John Rehring, Carollo Engineers, facilitated the meeting. He gave a brief summary of the March 10 memo from J.D. Strong (attached), which recapped the Council's activities to date and recommended a path forward for accomplishing the Council's legislative directives. He also briefly summarized the four Hot Spot Basin Public meetings and the status of selecting basins for more detailed analyses. He emphasized that the goal of today's meeting is to begin to develop a short-list of recommendations for Public Water Supply (PWS) and Crop Irrigation programs/incentives for water efficiency. He noted that he had not received any feedback from the Council relative to the March memo, but asked if anyone had any comments or suggestions, especially as regards future activities/work sessions. Some of the remarks included:

- Concern that recommendations will not get buy-in without education.
- Comfortable with the path, but not sure that enough knowledge has been gained to make recommendations.
- “Low hanging fruit” is PWS sector; may want to have those speakers [presenting at the November 19, 2013 Council meeting] come back in and listen to the ideas presented.
- Consider sending ideas out to those not able to attend (PWS speakers) and get feedback.
- Can we look at how to quantify potential water savings for the different measures?
- Any performance measures to know if options are successful and cost/benefits?
- We have covered a lot of information, but how do we present it? Need to prioritize.
- Consolidation of ideas would make it easier to facilitate recommendations.

Mr. Rehring then brought the group’s attention to information he had emailed to them on previously-identified PWS and Crop Irrigation programs (attached). The information was tabulated for PWS and Crop Irrigation using four columns:

- “Desired Results” – the types of water use efficiencies we want to result from our recommended incentives or programs
- “Potential Program or Measure” – candidate incentives or programs we could implement to help achieve those “Desired Results”
- “Council Priority” – the Advisory Council’s relative priority for recommending the listed program or measure
- “Considerations” – additional information that could shape whether we recommend the listed programs and measures

The agenda allowed for an hour discussion on PWS topics followed by an hour on Crop Irrigation concepts.

Review of Public Water Supply Concepts

Mr. Rehring suggested that the Council members first look at the “Desired Results” column for PWS to see if there were any that might not be applicable or not a high priority to accomplish at this time, then look at prioritizing potential programs. Discussion included:

- Reduce system losses
 - Make more affordable for small towns
 - Provide matching funds
 - Funding
 - State technical support – ODEQ/BOR currently developing?
 - Not all system losses are leaks; there are many contributors to “non-revenue water”
- Reducing leaks and potable water reuse will provide the greatest volume of water, but we do not know the actual costs/benefits
- Best practices (guidance and recognition) – group by system size; develop best practices document then grade/rank cities according to what is adopted; publicize results as an incentive to adopt best practices
 - Conservation pricing
 - Conservation planning
 - State recognition program
 - High-efficiency plumbing codes
 - Public awareness/action/education

- Potable and non-potable reuse
 - Reuse is important, especially in arid areas
- Statewide education/outreach – applies to all water use sectors (not just PWS)
- Add best practices information-sharing for billing information
- Consider implementing through non-profit partnerships
- Awareness programs – put on best practices list and provide “go-by’s”
- Conservation pricing – put on best practices list
- Technical support person does not have to be state employee – could be ORWA or others

Review of Crop Irrigation Concepts

Mr. Rehring then led a discussion of how we could incentivize or otherwise achieve efficiencies in the Crop Irrigation sector. Using the tabulated 4-column table for guidance, points discussed included:

- Crop insurance – recommend supporting federal initiatives to revamping RMA rules, but this is a national issue that is out of our direct control
- Recognition programs not likely effective for Crop Irrigators
- Best Practices for operations (soil management, etc.) already available from Extensions
- Information sharing on technologies and equipment more beneficial than practices – provide economic benefit information to show return on investment
- Funding/grants may not be practical at approximately \$300K for quarter circle center pivot system; also may be impractical to replace existing high-efficiency sprinkler systems with drip irrigation technologies relative to actual water savings (~5% increase in efficiency)
- Sprinkler system equipment life is generally 10-15 years; incentivize replacing systems at end of useful life with higher-efficiency technology rather than using same technology
- Lower-efficiency sprinkler heads/equipment are not widely sold anymore
- Financing programs may be viable – link to return on investment
- Drought-tolerant crop research already in progress by seed manufacturers; already have market-based incentives
- Consider sharing information on best practices/reporting for recent acre-feet/bushel data to demonstrate potential for high yields with low water use
- Information sharing on water levels in aquifers and OCWP demand/shortage projections
- Use Vo-tech resources for information sharing

Next Steps and Group Resources

Mr. Rehring indicated that there is sufficient input from the Council to develop draft recommendations for the PWS and Crop Irrigation water use sectors. The plan for the next workshop, which will be on August 19, 2014, is to start work on efficiency incentives for other water use sectors such as oil and gas, industrial uses and power generation.

Mr. Strong and Mr. Rehring also extended an invitation from the Oklahoma Panhandle Agriculture and Irrigation group to tour irrigation systems and practices in the Panhandle. Several Council members expressed an interest, so Mr. Rehring will follow-up with additional details.



Water for 2060 Advisory Council

To: Water for 2060 Advisory Council Members
From: J.D. Strong, Advisory Council Chair
Date: March 10, 2014
Subject: Advisory Council Status and Next Steps

The Water for 2060 Advisory Council has taken significant steps toward understanding the many ways Oklahomans are using water efficiently from across our state and across many uses. Importantly, we have also heard from leaders in public water supply, irrigated agriculture, and state and federal agencies about opportunities to build on those successes in concert with the Water for 2060 initiative. I wanted to take this opportunity to thank you for your participation thus far, share a brief recap of where we've been, and look ahead to how we will be drawing on your expertise and perspectives to meet the Advisory Council's legislative directive.

Key steps along this path have included:

- Development of a Background Report (July 2013, available at <http://www.owrb.ok.gov/supply/2060council/BackgroundReport.pdf>) recapping the Oklahoma Comprehensive Water Plan findings regarding potential statewide water conservation savings, highlighting some of the best practices for water efficiency in Oklahoma and across the country, and describing some initial concepts for potential measures to incentivize additional efficiencies.
- Advisory Council Kickoff Meeting (August 2013), where we reviewed and discussed the Advisory Council's legislative charge, discussed highlights of the Background Report, and brainstormed concepts for increasing water efficiency in Oklahoma.
- Advisory Council Public Water Supply Workshop (November 2013), where we focused on the Public Water Supply sector and discussed measures that would be attractive to, and effective for, water providers across our state and discussed ways of further incentivizing municipal and rural water district efficiencies.
- Advisory Council Crop Irrigation Workshop (February 2014), which focused on Crop Irrigation successes to date and opportunities to increase water efficiency. This meeting also provided a forum for identifying additional incentives for increasing water conservation and other efficiency measures.

Agendas, presentations, and summaries for each of the Water for 2060 Advisory Council meetings are posted to OWRB's Water for 2060 website (<http://www.owrb.ok.gov/supply/conservation.php>).

Looking ahead, I want to relay to you our next steps toward fulfilling the Advisory Council's duties. To provide a framework for that, I'm providing an excerpt from House Bill 3055 that set the authority and responsibilities for the Advisory Council:

Section 4.E: The Advisory Council shall have the following duties and responsibilities:

1. Recommend incentives to encourage improved irrigation and farming techniques, more efficient infrastructure, use of water recycling/reuse systems, promotion of "smart" irrigation techniques, control of invasive species, artificial recharge of aquifers, and increased use of marginal quality and brackish waters;

2. Make recommendations regarding the expansion of education programs that modify and improve consumer water-use habits; and

3. Enhance existing, or develop new, financial assistance programs that encourage Oklahoma water systems to implement leak detection and repair programs that result in reduced loss and waste of water, as well as encourage consolidation and regionalization of smaller systems in order to utilize limited resources most efficiently.

4.F: The Advisory Council shall submit a final report of its findings and recommendations to the Governor, Speaker of the House of Representatives, and President Pro Tempore of the Senate no later than three (3) years following the effective date of this act [November 1, 2012].

4.G: Activities of the Advisory Council shall terminate no later than December 31, 2015.

In related work, OWRB has partnered with the U.S. Army Corps of Engineers to conduct an in-depth analysis of the potential roles of water conservation, marginal quality water use, and regionalization of public water supply systems in three OCWP-designated "Hot Spot" basins in western Oklahoma. By demonstrating the potential for efficiency at a local level, the Hot Spot basin studies will be used to further the Water for 2060 goals and may help serve as models for implementation of additional efficiencies for water users statewide. Analyses will be ongoing throughout 2014, and will be initiated following a series of public meetings (March 2014). This work is being conducted separately from the Advisory Council's legislatively-directed duties, but Advisory Council members can be briefed on the Hot Spot basin analyses during the 2014-2015 Advisory Council workshops described below.

OWRB plans on convening four additional Advisory Council meetings, each of which will be used to shape the recommendations we make back to the Governor and the Legislature in 2015. We propose the following framework for taking the input we've received to date, and generating and vetting potential recommendations to the Governor and the Legislature:

- May 2014: Advisory Council Workshop to synthesize input received in the Public Water Supply and Crop Irrigation Workshops and develop a short-list of recommendations we can include in our report back to the Governor and the Legislature regarding incentives for irrigation techniques, infrastructure improvements, water reuse and marginal quality water use, and other measures such as invasive species control. Council members will be asked to review information on the Water for 2060 website and come prepared with some recommendations to discuss. OWRB staff will post additional reference sources (such as case studies/examples relating to conservation in other states) on the website as time and resources allow, so please check back periodically.
- Third Quarter 2014: Advisory Council Workshop to consider other water use sectors, such as oil and gas, industrial uses, and power generation, and methods for encouraging and facilitating increased water efficiency in those sectors. As with the

previous Public Water Supply and Crop Irrigation workshops, representatives from these water use sectors will be asked to participate in the workshop to help develop and validate measures and incentives for further consideration by the Advisory Council.

- Fourth Quarter 2014: Advisory Council Workshop to discuss existing financial assistance programs and potential enhancements toward greater water use efficiency; to discuss necessary statutory or regulatory changes to the current water rights administration framework that would facilitate additional conservation; to review preliminary findings from the Hot Spot Basin analyses regarding regionalization of public water supply systems; and to refine the working list of recommendations to be included in the Council's 2015 report to the Governor and the Legislature.
- First/Second Quarter 2015: Develop Draft Advisory Council Report and hold an Advisory Council Workshop to review and refine the draft report.
- Third Quarter 2015: Submit final Advisory Council Report to the Governor and the Legislature.

We encourage you to provide feedback on this framework, to help ensure that the OWRB team is providing you with the information and framework you need to complete your Advisory Council duties. Again, thank you for your continued participation and input.



Water for 2060 Advisory Council

Compilation of Previously-identified Public Water Supply & Crop Irrigation Programs for Advisory Council Consideration and Prioritization

May 2014

The Water for 2060 Advisory Council is responsible for making recommendations to the Governor and Legislature in 2015 regarding incentives and programs to increase the efficient use of Oklahoma's water resources.

The information presented below was compiled based on presentations and discussions at the first three Water for 2060 Advisory Council workshops. These workshops focused on Public Water Supply systems and suppliers (PWS) and Crop Irrigation. Other sectors will be discussed at future Advisory Council meetings. Previous workshop agendas, presentations, and summaries are posted to the OWRB Water for 2060 website (www.owrb.ok.gov/2060).

This document is intended to support discussions and prioritization of potential programs and incentives the Advisory Council could recommend to the Governor and the Legislature, as will be discussed at the May 20, 2014 Advisory Council workshop.

Information below is tabulated for PWS and Crop Irrigation using the following columns:

- Desired result ("what" we want the incentives or programs to ultimately accomplish with respect to increased water efficiency and related Water for 2060 goals)
- Potential program or measure (different ways for "how" we could incentivize or otherwise help promote/achieve those efficiencies)
- Advisory Council assessment of whether we should recommend the program or measure to the Governor and Legislature (to be rated as High/Medium/Low priority for inclusion in our list of recommendations via discussions at the May 20, 2014 workshop, with documented rationale for each rating)
- Considerations (potential issues that could affect whether or how we implement the indicated programs or measures)

Desired results and potential programs and measures are presented in no particular order. Information listed here does not necessarily represent approval or concurrence by the Advisory Council, pending further discussion and refinement of the items to be recommended to the Governor and Legislature.

PUBLIC WATER SUPPLY			
Desired Result	Potential Program or Measure	Council Priority (Hi/ Med/ Low)	Considerations
Reduce distribution system losses (system leaks, metering, etc.)	<ul style="list-style-type: none"> • Develop state-level guidance documents (“best practices” with case studies of return on investment) for finding and fixing system leaks, metering, etc. • Provide state technical support to PWS • Provide state funding/financing support • Use sales tax funding for system repairs • State financial incentive/reward/recognition for decreasing system losses 		<ul style="list-style-type: none"> • ORWA already has programs for its members • AWWA offers free water loss audit software • There’s already a financial incentive (lost revenue) to reduce losses • 80/20 rule – small leaks can be expensive to find & fix • Not all non-revenue water is leaks
Public awareness and action (conservation, value of water)	<ul style="list-style-type: none"> • Develop statewide public education and outreach materials (brochures, public service announcements, etc.) • Develop best practices manual (penalties for wasting water, awards for identifying leaks) • Develop model website for conservation tips, lake levels, groundwater levels, etc. • Develop school program materials • Proclamation of Water Awareness Month • Develop criteria and state award program for designated Water-Efficient Communities 		<ul style="list-style-type: none"> • Existing toolkits from national organizations • Leverage existing local programs • Existing “SIP” website for landscape irrigation and related tools • Need diverse set of incentives (penalties, scarce supply, cost of outdoor water use)
Conservation pricing	<ul style="list-style-type: none"> • Develop state-level guidance documents (“best practices”) • State outreach/education to PWS 		<ul style="list-style-type: none"> • Design rate structure for no net impact on revenues
Regionalization/interconnecting systems	<ul style="list-style-type: none"> • Use as criterion/bonus for state funding/financing • Develop state funding/financing program specific to regionalizing infrastructure • State outreach/education to PWS 		<ul style="list-style-type: none"> • Practicality depends on distance between systems • Indirect effect on efficiency and conservation • OWRB/DEQ already have some bonus incentives

PUBLIC WATER SUPPLY

Desired Result	Potential Program or Measure	Council Priority (Hi/ Med/ Low)	Considerations
Local water conservation plans	<ul style="list-style-type: none"> • Use as criterion/bonus for state funding/financing • State outreach/education to PWS • Develop state-level guidance documents (“best practices”) • Provide state technical support to PWS • Provide funding/financing support for developing and/or implementing plans (State Conservation Fund?) • State financial incentive/reward/recognition for decreasing per capita water use as result of implementing a plan 		<ul style="list-style-type: none"> • Focus on incentives vs. mandates for funding/financing • Availability of funding to support state roles
High-efficiency fixtures	<ul style="list-style-type: none"> • State legislation requiring WaterSense products statewide • Tax incentives for installation of WaterSense products • Develop state-level guidance documents for local ordinance or rebates (“best practices”) • Provide state funding to match local rebates 		<ul style="list-style-type: none"> • Legislative approach may be considered a “mandate” • Statewide approach eliminates need for local rebates or standards • Consistent requirements in all communities • WaterSense requires performance testing
Increased nonpotable reuse	<ul style="list-style-type: none"> • Develop state-level public education/outreach programs • Use as criterion/ bonus for state funding/financing • State outreach/education to PWS • Develop state-level guidance documents (“best practices”) • Provide state technical support to PWS • Provide state funding/financing support • Create user-friendly regulatory process 		<ul style="list-style-type: none"> • Downstream water rights implications • Cost to comply with ODEQ regulations • Cost relative to other supply options

PUBLIC WATER SUPPLY

Desired Result	Potential Program or Measure	Council Priority (Hi/ Med/ Low)	Considerations
Increased potable reuse	<ul style="list-style-type: none"> • Develop state-level public education/outreach programs • Use as criterion/ bonus for state funding/financing • State outreach/education to PWS • Develop state-level guidance documents (“best practices”) • Provide state technical support to PWS • Provide state funding/financing support • Create user-friendly regulatory process 		<ul style="list-style-type: none"> • Indirect potable reuse regs under development (surface water augmentation) • No regs yet for groundwater recharge or direct potable reuse
Increased gray water use (household level)	<ul style="list-style-type: none"> • Develop state-level public education/outreach programs • Use as criterion/ bonus for state funding/financing • State outreach/education to PWS • Develop state-level guidance documents (“best practices”) • Provide state technical support to PWS • Provide state funding/financing support 		<ul style="list-style-type: none"> • Downstream water rights implications • Regulations and enforcement • Costs relative to other supply options
OTHER: _____	<ul style="list-style-type: none"> • • • • 		<ul style="list-style-type: none"> • • • •

CROP IRRIGATION

Desired Result	Potential Program or Measure	Council Priority (Hi/ Med/ Low)	Considerations
Adoption of efficient irrigation technologies	<ul style="list-style-type: none"> • State funding/financing for conversion to higher-efficiency irrigation equipment (drip systems, sprinkler nozzles, variable rate technology, telemetry, etc.) • State technical assistance for grant applications • Identify and focus state efforts on areas in Oklahoma where efficient irrigation equipment is not widely used • Link deposit program through OWRB's Clean Water SRF Program to match grant funds from other sources and provide lower cost financing options • Information sharing clearinghouse on no-till, tail water recovery, and other water-saving practices • Increase soil monitoring data collection network • Develop portal for sharing information on experience with water use and yields using high-efficiency equipment • Education/outreach regarding links between water use and energy costs • State funding for research on maximizing effectiveness of drip systems for different soil types and crops, no-till, etc. • State funding of pilot projects to demonstrate applicability of new technology to Oklahoma's irrigated agricultural environments 		<ul style="list-style-type: none"> • Significant costs to replace existing irrigation equipment with higher-efficiency equipment • Existing NRCS and other USDA programs, although they typically only pay for upfront costs, not ongoing O&M • Coordination with existing research programs addressing similar issues • Challenges in changing irrigators' practices based on long-term history of existing practices
Reduction in fresh water use	<ul style="list-style-type: none"> • All potential programs or measures 		<ul style="list-style-type: none"> • Conserved water may be used to irrigate additional land, resulting in no net savings
Low water-use and drought-tolerant crops	<ul style="list-style-type: none"> • State funding for drought-tolerant crop research • State education programs for maximizing profit, not yield 		<ul style="list-style-type: none"> • Potential lower yields • Some crops suppress weeds, changing crops could impact • Existing NRCS and other USDA programs • Market-driven crop decisions

CROP IRRIGATION

Desired Result	Potential Program or Measure	Council Priority (Hi/ Med/ Low)	Considerations
Avoid wasting water to prove out crop insurance	<ul style="list-style-type: none"> • Revamp crop insurance rules and protocol 		<ul style="list-style-type: none"> • Federal-level issue; limited state ability to make an impact
Increased unit water efficiency (e.g., gallons used per bushel of crop)	<ul style="list-style-type: none"> • Document best practices for irrigation from irrigators' experience • Document best practices for soil management from irrigators' experience • Develop state-level education materials and programs for crop irrigators • State financial incentive/reward/recognition for decreasing unit water use as result of implementing a plan 		<ul style="list-style-type: none"> • Coordination with existing research programs addressing similar issues
Manage supplies for long-term viability	<ul style="list-style-type: none"> • State-level education and outreach using OCWP data on demands and projected shortages • Encourage/support voluntary management of shared aquifer supplies (max. water table declines) 		<ul style="list-style-type: none"> • Texas Panhandle Groundwater District uses self-implemented water table level management system
OTHER: _____	<ul style="list-style-type: none"> • • • • 		<ul style="list-style-type: none"> • • • •

ADDITIONAL CONCEPTS DISCUSSED (NOT SPECIFIC TO A USE SECTOR)

- Salt cedar eradication programs
- Aquifer recharge opportunities
- Marginal quality water opportunities