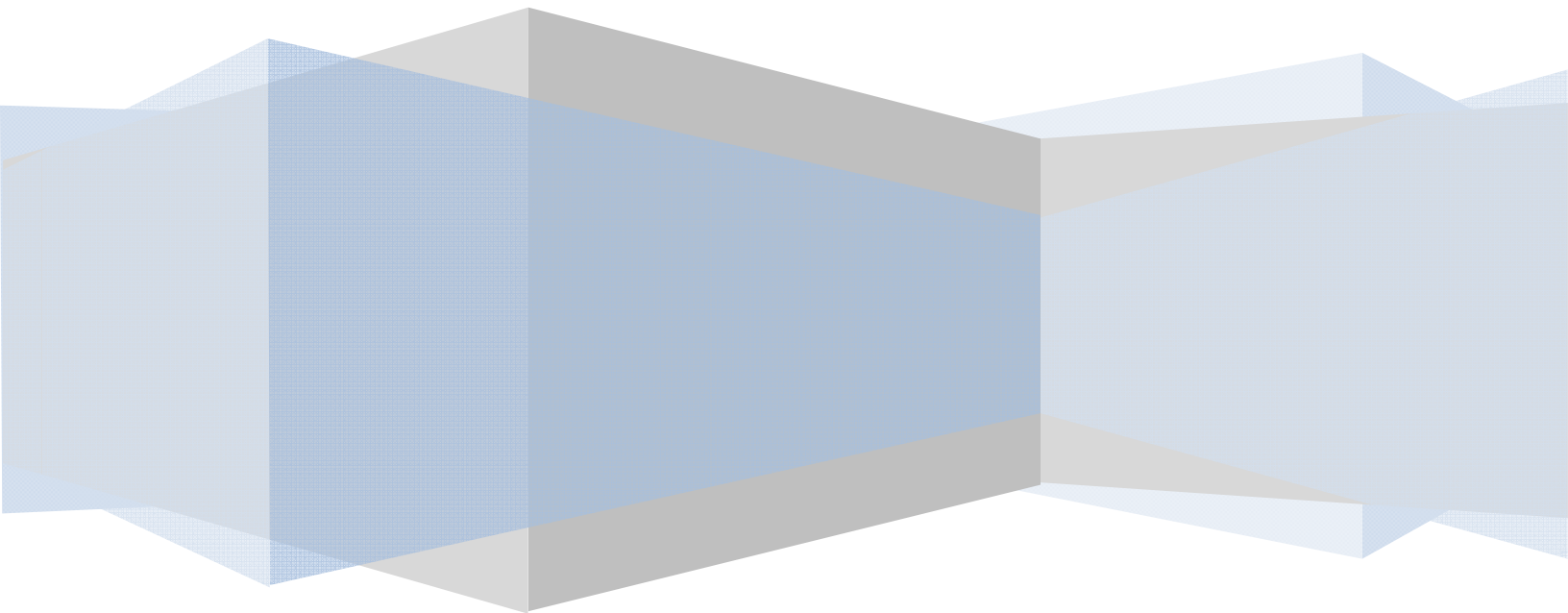


Water Research Institute

# ***Regional Input Meeting***

## ***Information Packet***



# REGIONAL INPUT MEETING (RIM) BRIEFING REPORT

Prepared by the OSU Water Research Institute

July 2008

This report presents information that all RIM discussants and alternates should read and become familiar with before attending the RIM meeting. The report presents a summary of the following topics:

- Purpose of public participation in support of the Oklahoma Comprehensive Water Planning process.
- Structure of the public participation process.
- Purpose of the RIM stage of the public participation process.
- Definition of issue groups.
- Expectations of RIM discussants.
- Conclusion

## Purpose of Public Participation in Water Planning

The Oklahoma Water Resources Board is charged with revising the Comprehensive Water Plan for the State of Oklahoma. This, the second revision of the plan that was first published in 1980, is due in mid-2011. For this revision, the OWRB asked the OSU Water Research Institute to lead a statewide effort to engage and involve the public in the planning process. The purpose of the public participation effort is to:

*Generate recommendations for the strategic management of water resources in Oklahoma to ensure an adequate supply of water of sufficient quality to meet the needs of all Oklahomans over the next 50 years.*

Strategic management involves identifying needs, setting priorities, defining objectives, laying out procedures, and specifying evaluation protocols to ensure that water is available so that Oklahoma can prosper over the long term. Prosperity requires not only sufficient quantities of water but also water that is clean enough to meet the needs of a particular water use. We believe the public participation process described below will lead to a plan that will gain widespread public support.

## Structure of the Public Participation Process

This process is designed to involve citizens from all across Oklahoma in defining issues, identifying concerns, stimulating questions, and developing suggestions to improve this water plan revision. We have strived to make the process as fair, inclusive, and transparent as possible. No voice will be ignored or excluded. All information obtained during the process will be made available on our website at <http://okwaterplan.info>.

The process is divided into five stages.

The first two stages are devoted to defining an agenda for the water planning process. In other words, we want to make sure that the water plan addresses the issues and concerns of all Oklahomans.

### *Stage 1: Local Input Meetings*

Forty-two meetings were held across the State in 2007. At each meeting, a brief presentation by OWRB staff summarized important information relating to water use and management in Oklahoma and in the particular region in which the meeting was held. The rest of the meeting was dedicated to hearing from the public. Altogether, we received about 2,500 comments from the public at the meetings and through our website. Reports of each meeting and a searchable database are available on the website.

### *Stage 2: Regional Input Meetings*

Eleven regional input meetings are scheduled for the second half of 2008. In these meetings, discussions will be held among citizens about the issues that deserve priority attention in the planning process. This report, of course, presents background material that all RIM discussants must review.

### *Stage 3: Planning Workshops*

In 2009, the WRI will sponsor a series of workshops that will engage participants in formulating recommendations for strategic water resource management in Oklahoma. Experts will be available to answer questions that arise during these workshops. The resulting recommendations will be passed on to Stage 4.

### *Stage 4: Town Hall*

In the first half of 2010, the WRI and the Oklahoma Academy for State Goals will sponsor a three-day Town Hall meeting that will consider the various recommendations coming from the workshops and attempt to reach agreement on those that should be incorporated into the State's water plan. The format of this meeting will be similar to that used in Town Hall meetings sponsored by the Academy each fall.

### *Stage 5: Regional Feedback Meetings*

In early 2011, the WRI will again hold eleven regional meetings to solicit reactions from citizens about the draft water plan. The draft plan, written by the OWRB, will be based on the recommendations issued from the Town Hall. Participants will also be asked to offer suggestions on how the plan should be implemented.

## **Purpose of the Regional Input Meetings**

The purpose of the RIMs is to finalize the agenda for the Planning Workshops to ensure that the issues most important to Oklahomans are adequately considered and addressed.

## **Definition of Issue Groups (“Buckets”)**

WRI staff was able to sort the 2500 comments obtained during the LIM stage into 54 issues (the issues assigned to each bucket are listed in the RIM Ratings Sheet and brief summaries of LIM comments relating to each issue are presented in the Appendix). The staff then placed the 54 issues into eight groups, or buckets. The issue buckets include the following:

1. *Water Quantity*: Issues associated with the collection, storage, and distribution of water to reliably meet water needs.
2. *Water Quality*: Issues associated with water and wastewater collection and treatment, as well as source protection.
3. *Water Conservation and Reuse*: Issues associated with water conservation such as increased water use efficiency, reduced wasting of water, use of marginal waters, and reuse of gray water.
4. *Water Appropriations and Uses*: Issues associated with uses of water, including considerations of conjunctive management (of surface and ground water) and minimum stream flows (to protect aquatic life).
5. *Water Sales and Transfers*: Issues associated with the inter-basin transfer of water in Oklahoma as well as sales of water outside of Oklahoma.
6. *Land Management and Hazard Mitigation*: Issues associated with land management practices to protect water resources (e.g., riparian area restoration, soil conservation, and wetlands enhancement) and with measures to reduce the damage from natural and man-made hazards, including terrorism.
7. *Water Resource Management Planning*: Issues associated with how planning should be conducted, including scope, public participation procedures, funding, evaluation, and conflict management.
8. *Water Management Agencies*: Issues associated with the jurisdictions, authorities, and procedures of water management agencies.

## Expectations of RIM Participants

Two RIM sessions are planned for each regional meeting. Each session will be moderated by trained facilitators.

In the afternoon meeting, about 30 invited “discussants” will be asked to participate in one of four simultaneous “breakout” discussions to try to reach agreement on the relative priorities of the issues contained within their assigned buckets. The breakout groups will then come back together to listen to the results of each group’s recommendations and then attempt to reach agreement as a whole group on which issues deserve priority attention in the planning workshops that will take place next year.

Each discussant is expected to:

- read this report and review the issues defined in the appendices
- complete the attached issue prioritization score sheet and submit it to the WRI by the stated deadline
- arrive on time at the afternoon session and stay until the session’s conclusion
- actively participate in the discussions
- provide judgments on issue priorities based on their personal views
- think about the water needs of all Oklahomans over the long-term
- respectfully listen to others’ opinions and reflect upon their merits

The afternoon session will be open to the public; however, the public will be asked to hold their comments until the evening session. Participants in the evening session will be given the opportunity to comment on the results of the afternoon session. Comments obtained during the evening session will also be considered in defining planning workshop sessions. Afternoon discussants are encouraged, but are not required, to attend the evening session.

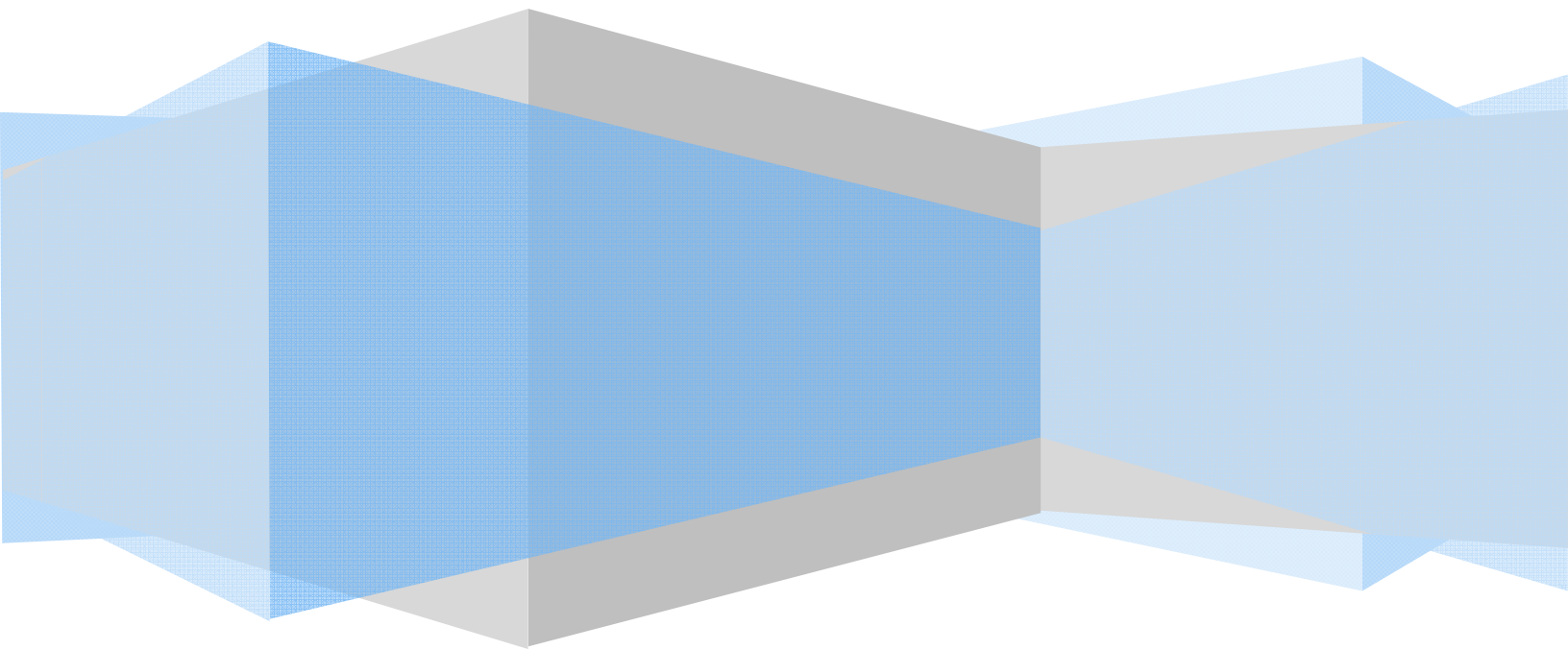
## Conclusion

The WRI and OWRB thank you for your willingness to participate in the water planning process. As a discussant or alternate, you were invited because you are knowledgeable about water issues in your region, are serious about water planning, possess a unique and important perspective on water resource management, and are willing to debate and reach agreement on water management recommendations that meet the needs of all Oklahomans over the next 50 years. Water is essential to the future prosperity of Oklahoma. As such, we must rationally and cautiously plan for its availability and wise allocation so the values of all Oklahomans are respected and honored.

Please be sure to read the instructions included on the attached issue prioritization score sheet and carefully consider how each issue should be prioritized for consideration in the planning discussions that will follow. Then please submit your score sheet to the WRI by the deadline.

If you have any questions on the RIM process or the score sheet, please don’t hesitate to contact us. Thanks again for your participation.

# *Appendix*



## Comment Summary by Issue Group

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*This list of issues contains summaries of the comments received during the Local Input meetings in 2007. The issues are organized into categories labeled by a letter and number code. These issue categories are organized into eight issue groups.*

*In some cases, the issues are the actual comments made; in other cases, they were summarized or reworded for clarity. Because some issues touch on multiple topics, they may appear in more than one issue category. If a similar comment was already included under an issue category, then it was not added multiple times. Rather, it was either eliminated or the comment in that category was modified to incorporate it.*

*The issues are included here to provide you with a more full understanding of the issues involved in each issue category. The RIMs will involve rating only the issue categories (with the letter-number codes). The individual issues will not be rated.*

*Some issue categories have several comments included and others just a few, that does not represent the importance of an issue, that is for you to decide.*

**Disclaimer:**

*The comments listed below each issue were obtained during the 42 Local Input Meetings held across Oklahoma in 2007. They represent examples of what Oklahomans have said about the issue. However, the meaning of the issue is not necessarily limited to these comments. Moreover, the reader should not infer that the Water Research Institute endorses or certifies the factual accuracy of any comment.*

## Comment Summary by Issue Group

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**QUANTITY** – ISSUES ASSOCIATED WITH THE COLLECTION, STORAGE, AND DISTRIBUTION OF WATER TO RELIABLY MEET WATER NEEDS.

### *Qn-1 – The improvement and expansion of drinking water infrastructure, such as impoundments, distribution systems and aquifer recharge measures*

- Additional reservoirs will reduce the land available on county tax rolls
- Economic development needs to be taken into consideration when infrastructure plans are developed
- Generally the most fertile and valuable land is what is taken for new reservoirs
- A study should be done that includes the economic growth of large cities and the effect on rural water systems as growth trickles out
- New projects should be approved based on feasibility and in the public interest, and it should be done only through coordinated well-established and well-regulated channels
- We should move from subterranean water sequestration to surface water use
- Concern that the state will not help identify where new lakes could be built
- New reservoirs will flood some of our best land and this can have negative effects
- We should build a series of dams on the Canadian River from Norman west to the state line and then build wind turbines along the river. Off-peak power could be used to pump water upstream from dam to dam to provide permanent storage for towns and farmers in western Oklahoma
- There should be a way for every citizen to have affordable access to rural water
- When planning a new reservoir the use of that reservoir needs to be foremost in the planning process
- When laying new lines, the road right-of-ways could be used instead of buying additional easements
- If Texas is successful, they have planned six dam sites in southeast Oklahoma and this needs to be studied for its environmental impact
- If new reservoirs are planned they need to be deeper
- We need more reservoirs or farm ponds to both capture water and prevent flooding
- A coffer dam should be built below Lake Eufaula Dam to store water and then pump it back into the lake when needed
- The biggest problem Oklahoma has is distribution. Cooperation and distribution are key to supply the state with water where needed
- Water should not be run through a dry creek to transport it, a more efficient way should be developed
- We need to retain the rainwater we receive in lakes, ponds, impoundments and recharge systems
- A study should be done on building reservoirs in western Oklahoma
- We need to increase the number of dams in the state as well as maintain the ones we have
- The storage capacity of a lake could be increased if low water dams were built [upstream] to catch silt – would be particularly helpful to Lake Thunderbird
- More research should be done on artificial recharge of the state's aquifers
- Oklahoma should encourage the finalization of Phase III of the impoundment of Lee Creek. Ft. Smith has a huge impact on the economy of the LeFlore County area and they would pay for the impoundment and Oklahoma would get the benefits
- We should consider using Lake Optima as a place to store water
- Maybe we should look at raising the levels of some lakes by raising their dams
- We should use guides and levies to help recharge the Arbuckle-Simpson Aquifer
- There is adequate water in the state but we need to find a cost effective distribution mechanism to get water where it is needed
- The importance of playas to recharge of the Ogallala Aquifer must be recognized and efforts to protect and restore playas need to be considered

## *Comment Summary by Issue Group*

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- The plan needs to recognize the impact small communities have on the state's economy and encourage more funding for the development and improvement of rural water districts and small towns
- The state should pay off the debt for Sardis Lake and then complete a wise-use study to determine how to generate revenue to pay off the debt
- There should be a study done on using overflowing or flooding rivers and lakes to recharge the state's aquifers
- We should consider enhanced recharge of aquifers
- Playas should be protected as they are the primary source of recharge for the Ogallala
- Adequate funding for the OWRB's revolving fund
- Water quality requirements and regulations should be developed regarding infrastructure that delivers drinking water

### ***Qn-2 – Maintenance of water supply systems, such as dams and pipelines***

- The debt for Lake Sardis needs to be paid off
- Oklahoma State University needs to be held accountable for not fixing the flooding problems caused by Lake Carl Blackwell
- We should look at dredging the state's flood control structures and using the sediment as compost – it could be sold to help offset the cost of dredging
- Oklahoma City needs to come out and clean Lake Atoka as they said they would
- When water lines are back-flushed after a repair it should be done correctly and there should be standards for this procedure
- Upstream watershed management will help reduce siltation of the state's lakes

### ***Qn-3 – State and federal funding of water storage infrastructure***

- The cost of water supply improvements will be high and a mechanism for fair distribution of those costs (not resulting in windfall profits or economically debilitating prices) is needed for Oklahoma's future
- Funding should be made available to help maintain the state's flood control structures
- There should be some tax incentives to clean out farm ponds because if they fill in or overflow it will increase the amount of sediment in lakes
- There should be money made available now to begin purchasing land for new lakes, before the cost of the land goes up
- Seed money should be provided to help pay for the construction of new reservoirs
- We should capture the water below a dam, bottle it and sell it to provide funding for infrastructure needs
- We need to balance the investment in water infrastructure, some money coming from private entities and some from the government. The state needs to realize our infrastructure is an investment
- Money should be provided to cities to clean out their lakes to extend their lifespan and expand their capacity
- Towns should be required to repair current lines before more money is given to expand as several towns have leaky pipes that are wasting water and increasing treatment costs
- Water storage cost should be based on original construction costs and not today's rates
- There is concern about pollution from ground and surface water by oil and gas wells both current wells and abandoned wells

### ***Qn-4 – The effects of climate change on water supplies***

- We need to prepare for long-term droughts when considering the impacts of climate change
- We should look at the effects of climate change on our water supplies
- There should be a special section in plan to discuss climate change

## *Comment Summary by Issue Group*

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**QUALITY – ISSUES ASSOCIATED WITH WATER AND WASTEWATER COLLECTION AND TREATMENT, AS WELL AS SOURCE PROTECTION.**

### *Q1-1 – State and federal funding of water treatment and protection*

- Concern that small towns won't be able to afford to maintain their infrastructure with the rising cost of water treatment
- There should be some funding available to small communities to help with the cost of treating their water for nitrates
- There should be some sort of funding made available to help cover the increased costs of the unfunded mandates from the federal government
- Small systems should have the same access to funds as larger communities
- There should be some funding available for private citizens who are required by DEQ to put in a community water system
- Money needs to be made available to help small water systems expand when needed
- Water rates may need to be raised to help cover the cost of expansion and maintenance
- When lake levels get too low and the lake turns over The U.S. Army Corps of Engineers should provide money to residents around the lakes and to the suppliers who pull water from the lakes because of the cost of cleaning up water and the degradation of taste
- There should be continued funding of the Elm Fork chloride diversion study
- More grant money should be made available to help rural water systems so rates don't have to be raised thereby causing a hardship on lower income citizens
- Research should be done to determine the actual toxicity of new contamination levels the EPA sets as each time the standard is changed it could take otherwise good water and make it unusable for drinking water
- Water should be returned to a recharge area and not just continually removed from it
- Funding to monitor impacts of gas mining on all waters

### *Q1-2 – More and better measures to protect drinking water*

- The relationship between stream water quality and quantity needs to be addressed
- How can we be sure our well water is safe to drink when there are agriculture operations surrounding us? We need quality water for health reasons
- We should look at funding a slurry pipeline from eastern Oklahoma to western Oklahoma to transport chicken litter
- Wells can become unusable because of arsenic levels in our groundwater and this will increase the demand for surface water
- Concern that city waste lagoons will overflow into city drinking water supplies
- There should be a requirement to use community water systems, both drinking and wastewater, within city limits especially if there are a lot of wells and septic systems
- Industrial and agriculture pollution should be monitored in drinking water
- The state should develop standards for drinking water treatment plant designs
- There needs to be a place for water plant operators to call with a problem and not get drug over the coals. It should be available for both drinking water and wastewater
- We should revisit diverting water around the salt deposits in the Great Salt Plains to reduce salinity in the Cimarron River
- We should look at desalination plants as a way to get more water, especially in the Tillman County area
- We need to find a better way to treat water that will keep costs down
- There should be a way to make desalinization plants smaller and more cost effective
- The Red River Chloride project is of concern because of the effect it could have on Lake Texoma

## *Comment Summary by Issue Group*

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- Oklahoma City should look at more advanced treatment technologies and treat the water they have available and not try to get water out of other areas of the state
- Reverse osmosis should be considered as a way to treat water
- Desalination of water with high salt content will not pose a threat to local environments if it were used for agriculture and domestic use
- Wetlands provide valuable benefits to the state such as flood and erosion control, water quality benefits and aquifer recharge. These benefits also include economic benefits
- Planned wetlands should be used to help solve storm water and impaired lake problems
- We need to recognize the value of wetlands and streams on water quality and supporting wildlife
- Blending water should be considered as a way to have more water to use
- Concern about aquifer pollution from agriculture use
- We need to focus on water quality – keeping it clean and safe
- Water in the Cimarron River needs to be protected from hog farms to maintain the quality of the water as a drinking water supply
- We need to address the waters listed on the 303(d) list
- Reference streams should be designated in each ecosystem so we can monitor water quality
- Concern that we are letting a few large industries negatively affect our water quality, even those beyond our borders and we need to put some rules in place now to protect our water for the future
- The plan should consider the effects on water quality as the quantity in the aquifers decreases
- Drilling mud that is being spread on the ground could contaminate groundwater
- Illegal salt water dumping is occurring on Tribal grounds
- OERB needs to clean up marginally plugged oil and gas wells
- Water well drillers should be regulated so we know how much surface pipe is used. If the amount of pipe is not adequate it could cause contamination of the well
- Homeowners and golf courses should be required to test their lawns before fertilizer is applied
- CAFOs should be required to have closed systems and not be allowed to use open sewage systems
- Oil and gas operators should be required to plug wells they are no longer using
- Storm water should be added to the definition of wastewater and other pollution sources to protect water quality
- Environmental protections of both watersheds and re-charge zones should be established and enforced by the state

### ***Q1-3 – Better technology for treating wastewater***

- The federal government should invest money in improving wastewater treatment lagoons or oil refining plants, especially along the Arkansas River
- Water should be treated to the point it can be added back into lakes
- The state should look at requiring cities to upgrade their wastewater treatment systems so the water out of them could be pumped back into the water supply
- Septic systems and oxidation ponds are outdated and a primary source of pollution to both surface and groundwater and should be removed and replaced with tertiary treatment
- There needs to be a place for water plant operators to call with a problem and not get drug over the coals. It should be available for both drinking water and wastewater
- Funding should be provided for de-nitrification plants

### ***Q1-4 – Requirements for providing the public with accurate and timely water quality information***

- When wastewater effluent lines rupture, notices should be sent out
- There should be an educational effort to let well-owners know about potential groundwater contamination as well as provide an annual-cycled schedule for well testing sites

## *Comment Summary by Issue Group*

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- Notices of water quality violations should be made immediately available and not six months later
- The public should be informed about health issues associated with pollution in our lakes such as lead and when contaminated fish are found
- All sources of pollution should be identified and not just blame agriculture
- There should be an early warning system to warn of a chemical spill set up along the Verdigris River because of the large amount of barge traffic
- Cities that continually have nitrate problems with their water should be more proactive in letting citizens know about the problems and what can be done. Some agency should be involved with those areas where this long-term problem persists
- A website should be developed to show property description and location in a map format of all legal notices that would affect the water or environment so people can easily identify affected land

## Comment Summary by Issue Group

**WATER CONSERVATION AND REUSE – ISSUES ASSOCIATED WITH WATER CONSERVATION SUCH AS INCREASED WATER USE EFFICIENCY, REDUCED WASTING OF WATER, USE OF MARGINAL WATERS, AND REUSE OF GRAY WATER.**

### *C-1 – Measures to encourage conservation through improving water use efficiency and wasting less water*

- Everyone should use water efficiently
- Home swimming pools should be limited. It is a waste of water and the use of public pools should be encouraged
- Water companies do not encourage conservation because sales are a money making opportunity for them and this should be looked at
- We must encourage conservation now
- The state should require communities to develop conservation plans, especially if they receive state funds
- Rural water districts and non-profit rural providers should implement water use restrictions and notify consumers during high-water uses and drought periods
- Xeriscaping should be encouraged as a way to conserve water
- Water resource management should include a program of control, conservation and beneficial use
- We need to ensure our aquifers have adequate supplies for the future and industrial use should not deplete aquifers others depend on
- Farm ponds and other conservation measures should be allowed to be used to keep water on private property to enhance the land
- Surface water needs to be conserved for future use in case our aquifers are depleted
- We need to consider future growth both from population and for economic development and be good stewards of our water now
- We need to protect our water
- Serious conservation measures should be established in order that all can share a scarce resource
- We should look at the demand side to find the best way to reduce the amount of water used
- Best management practices should be used to conserve and reuse water in order to optimize the value
- A record should be kept of all uses of water in the state per capita and this should be used as a way to encourage conservation [by measuring per capita use], we can begin to monitor waste and conservation efforts' impacts
- New project construction should be delayed when there is inadequate supply to meet demands in an area due to drought conditions
- Homes should also be required to install low-water-use fixtures
- A voluntary approach to conservation will work better than coercion and individuals and regions can change their own practices with regulations
- Water permit applications should require entities to have conservation measures in place and show optimal use of existing water supplies
- The current groundwater law needs to be changed from a mining law to a sustainable use law
- Using good clean water to wash rocks and settle dust is wasting it
- City-treated water used for watering lawns and other similar uses should be regulated or better controlled
- Mining companies using potable water to wash rocks should have to pay for that water and should look at recycling and reusing the same water over and over
- Pollution of water should be considered a waste of water and we should take better care of it
- Large outdoor fountains should be prohibited as it gives the perception that water is an unlimited resource
- We should stop the use of fresh water to move/manage animal waste to open air lagoons
- The hospitality and restaurant industries waste a lot of water and education and self regulation should be encouraged by these industries
- Turn off sprinklers when it is raining

## *Comment Summary by Issue Group*

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- Water permit applications should require entities to have conservation measures in place and show optimal use of existing water supplies
- The definition of waste and conjunctive use must be defined by our legislature

### ***C-2 – Measures that encourage the reuse of treated wastewater, gray water, produced water (oil and gas) and storm water run-off***

- We should figure out a way to treat salt water from oil and gas wells so that it can be used in an economically feasible way
- We should look at solar powered evaporation-recovery systems to de-mineralize and purify poor quality or contaminated water
- We should have gray water and black water systems to help preserve drinking water
- Oklahoma needs to follow other states' examples of using gray water and be more forward-looking
- Communities should either receive support for or be required to re-use a portion of their wastewater for irrigation, industrial use and/or augmentation of the community's pretreated water supply
- Reclaimed water should be recycled where possible to help with economic growth
- Building codes should require new industry construction standards to include/encourage water reuse and low-water use fixtures
- Golf courses and homes should be watered with recycled water
- Reuse of storm water should be encouraged
- There should be more research on water reuse methods and those results should be made public
- Rainwater capture systems should be, at the least encouraged but maybe even required
- Cities should be encouraged to develop dual-system potable/non-potable water supplies but they should treat the non-potable water to drinking water standards of 10 – 20 years ago to prevent health problems
- Wastewater treatment plant effluent could be supplied to ethanol plants to conserve water
- The plan should consider indirect potable reuse
- During times of moderate drought, there should be a return line to a water supply lake of treated effluent so the water can be recycled
- We should find ways to use all our water including storm and wastewater to economically benefit Oklahoma
- Permits for reusing treated wastewater should be easier to get
- We should legalize the use of gray water systems in Oklahoma

### ***C-3 – Improved educational programs about water conservation for all Oklahomans***

- The education process needs to begin with kids in kindergarten
- The state's education system should require students to read Bob Kerr's book "Land, Wood, and Water"
- Education is key in making people understand the value of water
- Conservation education should be in the plan and should involve several levels including schools, towns, industries, and individuals
- There needs to be an effective way to let the public know about all of the different water education programs currently available
- More information needs to be provided to residential water users regarding conservation
- Television should be used as a way to show water conservation practices that can be easily done at home
- Education about best management practices should be available
- Water should be talked about in gallons and not acre-feet so people better understand the quantity of water they are using
- There should be curriculum developed around the efficient use of water

## *Comment Summary by Issue Group*

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- The state should provide education tools to public schools to help students better understand impacts on water quality and conservation
- There should be some education done discouraging flushing pharmaceutical waste down the toilet
- Conservation education should be required in all schools and communities to increase awareness
- A website should be developed to allow for easy access by the media to information such as aquifer levels
- Some type of program and funding mechanism should be developed to help communities education their citizens about water conservation
- More information regarding water quality of aquifers needs to be made available especially the effect of agricultural activities
- County commissioners need to be educated about water quality and the effect mismanaged road maintenance can have on it
- Education about best management practices for erosion control needs to be continued
- Education may not be enough we may need to develop regulations to force people to conserve as many feel suggestions are meant for others not themselves
- State assistance in science, education, and finance to assist transition to sustainable practices would be helpful
- Oklahoma City needs to be educated about where their water comes from and recognize the needs of western Oklahoma

### ***C-4 - Incentives to promote water conservation***

- We should develop conservation incentives. They should be in the plan and done by state statute
- Fair water pricing will result in getting people to think about conservation and water as wastewater because water use equals a similar volume of wastewater
- There should be financial incentives to help farmers switch to low-water-use equipment
- Subsidies could be provided to encourage gray water reuse and rainwater capture techniques, as well as technical support and education assistance for small-scale commercial and residential users
- There should be some kind of incentive to encourage low-water-use landscaping, especially as houses and yards become large
- Incentives should be provided for agricultural conservation practices and for urban and metropolitan areas
- Water credits could be given to cities, or other users, for their conservation efforts
- Cost-share incentives should be given to land owners for development of water conservation and this could run through the Soil Conservation Service (NRCS)
- Increasing block rates (progressive rate structure, where increased use results in higher rates) should be implemented to encourage conservation
- Preference should be given to communities that are actively and successfully promoting water conservation
- Water conservation districts should use incentives to better manage the use of water
- Cities and municipalities should be setting examples for their citizens by better regulation of their water use
- Underground irrigation should be encouraged through tax incentives for cities and golf courses and maybe even private residences
- We should reward sustainable development and building. The price of water for non-food uses and unsustainable homes and buildings should be increased
- Tax credits could be given to households who use water saving devices
- CREP (Conservation Reserve Enhancement Program) type programs should be encouraged by the water plan as this will help with water quality issues
- Continue and improve federal and state funding for conservation practice assistance

## Comment Summary by Issue Group

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- State assistance in science, education, and finance to assist transition to sustainable practices would be helpful

### ***C-5 – Research programs that assess improved methods for water conservation***

- The state should work with the states around us, whom we share an aquifer with, to do studies on those aquifers
- Recharge rates on the state's aquifers should be monitored
- Funds should be made available to research reclamation of water from industrial uses, such as produced waters
- Studies, similar to the Arbuckle-Simpson study, should be done on all the state's aquifers
- There should be development of a stream and lake biodiversity database for Oklahoma that is easily accessible by people doing aquatic studies
- A study should be done on how much water is lost to evaporation and run-off through irrigation and whether drip irrigation is more effective
- Research and funding should be made available for wastewater reuse development
- A study should be done on construction of catchment basins with large sieve wells to recharge the state's aquifers
- The state could do regional studies to develop the best plans for accomplishing good conservation practices
- Underground drip irrigation systems should be studied
- A study on sustainable yield of the state's aquifers needs to be completed, without this study we don't know how much water we have available
- The state should develop a real-time groundwater network so we understand recharge, vulnerability and long-term changes of all our aquifers
- The state should look at replenishing the aquifers with treated wastewater, similar to what California is doing
- The state should manage water resources on a data-supported, watershed-by-watershed basis recognizing the important spatial variations in both stream flow and biota of different water bodies
- There should be development of improved geographic-based management to benefit local decision-making
- The OWRB should consider how soil and water conservation efforts affect the quantity of water
- We should increase the number of acid rain monitoring stations in southeast Oklahoma. Also, we could help the coal fired plants at Hugo and Shady Point improve the quality of their air discharges to improve water quality in the area
- Funding for more stream gauges and studies on water quality
- Research on using CRP-type grasses rather than crops to help remove nitrates should be continued
- State law should be changed to allow for the use of new technologies and methods of conservation
- State assistance in science, education, and finance to assist transition to sustainable practices would be helpful

## *Comment Summary by Issue Group*

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**APPROPRIATED WATER USES** – ISSUES ASSOCIATED WITH USES OF WATER, INCLUDING CONSIDERATIONS OF CONJUNCTIVE MANAGEMENT (OF SURFACE AND GROUND WATER) AND MINIMUM STREAM FLOWS (TO PROTECT AQUATIC LIFE).

### *UA-1 – Discussions about water law regarding groundwater and surface water use*

- Private property owners' rights to groundwater need to be addressed when considering conjunctive management
- Groundwater rights should not be intermingled with surface water rights, thus preventing land owners from drilling wells and irrigating
- Concern that if the interaction between ground and surface water were recognized then property values would diminish
- Municipalities who have well fields to supply water do not want current ground and surface water law changed
- If water rights are taken away from agriculturist then they may have to move out of rural areas and thereby diminish rural communities
- Private water ownership should be maintained with no priority of use
- There should be laws to protect private citizens' water rights
- Water rights should not be able to be severed from the land
- We should end private ownership of groundwater, all water should be held as a public trust

### *UA-2 – The interaction between ground and surface water in allocation decisions*

- Groundwater withdrawal needs to be monitored because of the affect it can have on surface water and other groundwater users
- In karst topography regions special consideration should be given to withdraw rates because of the effect withdrawals have in this type of topography
- Surface and groundwater connection must be recognized for quality and quantity concerns when water is allocated
- The Ogallala aquifer should not be used for the establishment of artificial wetlands
- Ground and surface water are one big unit and the state should be allowed to view it as such
- Stream and groundwater laws need to be combined
- The definition of waste and conjunctive use must be defined by our legislature

### *UA-3 – Prioritizing water uses during shortages*

- The Red river basin fishery should not get priority over human drinking water and irrigation, as the fish are not native species and if the salt is controlled then the River would supply a lot of water
- The 5 F's (food, fuel, fiber, fun and feed) priority list should be addressed in the plan
- A priority list of water uses should be developed for now and the next 50 years
- There should be a program to set priorities for water use during drought periods. Find some way to balance the uses
- Domestic use of water should have priority over other uses
- Public municipalities should have priority on stream and groundwater
- Irrigation should be prioritized behind residential use
- Recreation use of water should be given a higher priority as it is non-polluting and less consumptive. Recreation has a huge impact on Oklahoma's economy
- Wildlife needs to be given greater priority
- A best practices approach to balancing competing demands for water should be used. It should rely on the best available science and include a study of existing state water plans to find what works and what

## *Comment Summary by Issue Group*

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does not. It should recognize the particular realities of Oklahoma and adapt “best practices” to our realities

- The plan should prioritize people and wildlife over industry, especially those industries that bring in little revenue for the state, such as mining
- Concern that environmental issues will take precedent over human consumption of water
- The water plan should have alternative plans for stream and groundwater usage during times of crisis
- Agriculture use should have a higher priority than recreation or less necessary uses
- Humans should have priority over wildlife in regards to water usage. Living near a wildlife refuge we are abused by wildlife with little or no ability to protect our property
- There should be some priority placed on fire protection so fire departments have water available to fight fires
- When allocating drinking water supply, some rural water districts should be given priority because they may have more infrastructure than some small towns
- Municipalities should not get priority over agricultural use of water
- Private water ownership should be maintained with no priority of use
- Recreation use should be limited on surface waters that are also used as drinking water supplies
- Residential usage of well water should have priority over permitted uses
- There should be a mechanism to prioritize permitting
- All permits should be reduced during times of drought or seasonal variations

### ***UA-4 – The water quality and quantity needs of ecosystems in allocation decisions***

- The environment and economy are interrelated and should be looked at together. We need to move away from couching water in terms of the opposition of the economy and the environment
- Wastewater can have negative effects on aquatic ecosystems which can affect both the quantity and quality of water supplies
- Low lake levels have a negative effect on fish and wildlife and they should be protected
- We need to recognize that different areas of the state require different amounts of water to sustain the natural habitat. If too much water is taken out of an area, it could have a detrimental effect on the local atmosphere
- Environmental flows needs to be incorporated into the plan
- The needs of federally-listed and at-risk species need to be addressed in the water plan and Oklahoma law
- The levels of streams below dams must be considered as there is usually not enough water coming out of the dam to protect the downstream ecosystem
- There are several different fish species that are beginning to suffer from water withdrawals and more could be affected if water is diverted out of the Red River
- Cave crayfish and cave fish need to be studied to understand the affects of groundwater withdrawal in karst topography regions
- The water quality of deep water releases from dams needs to be considered as it can contribute to large fish kills
- Our ecosystem is whispering for us to live in harmony and if we listen, we'll be the ones who benefit. Please, let's listen while it's still a whisper
- There should be water dedicated for fish and wildlife to ensure their health and the health of the economies in, around, and below the lakes. The federal government controls the allocation, and we need to get our federal senators behind this
- Drought, silting in of reservoirs, and transferring water out of an area have had negative impacts on recreation and the regions' ecology
- Environmental flows should be set before permits are issued
- Stream water permitting may need to be changed in order to ensure minimum in-stream flows

## *Comment Summary by Issue Group*

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- The OWRB or an independent contractor should conduct an instream flow methodology study to enable the plan to reflect the maximum protection of fish and wildlife and make the best use of stream water in Oklahoma

### *UA-5 – The need of adequate amounts of water to further economic development in allocation decisions*

- Water supplies must be allocated in a way that recognizes where economic growth is occurring and it should fuel that growth. When the state's economy is stimulated, it benefits the entire state
- Future growth requires that Oklahoma be able to provide the water needed to support long-term aggressive growth
- Future development should be tied [limited] to the available water supply
- The legislature and chamber of commerce should identify businesses that support Oklahoma's water goals and pursue those businesses/industries
- The value of water's impact on economic development needs to be recognized
- Economic development needs to be taken into consideration when infrastructure plans are developed
- The plan should project future local economic benefits of regional water applications and uses, especially Sardis Lake and irrigation projects on the Red and Little rivers
- New projects should be approved based on feasibility and in the public interest, and it should be done only through coordinated well-established and well-regulated channels

### *UA-6 – The effect of population change on water needs in allocation decisions*

- The impacts of housing development with wells and septic systems should be addressed by law and/or water policy
- A growing population will continue to impact working lands and replace natural vegetation with impervious surfaces and structures. Society needs to consider the negative impacts of growth more deliberately and adopt green infrastructure, as well as promote retention of green space and open space
- We need to consider population changes in the planning process

### *UA-7 – The water needs of recreation and tourism in allocation decisions*

- Proper lake levels should be maintained if water is transferred either in or out of state
- Drought, silting in of reservoirs, and transferring water out of an area have had negative impacts on recreation and north central Oklahoma ecology
- Anglers, boaters and fish need water. Hopefully a comprehensive, progressive state water plan will include those needs and that the focus will be less on development and use and more on conservation. Fisheries should be considered valuable and significant components of our state's water resources and not a byproduct of impoundments or a disposable factor
- Water quality is important to continued tourism especially around the state's lakes. Communities should be educated about what they can do to help improve the quality of lake water
- Concern about the cumulative effect of chloride removal and water removal for supply on the economy of the Lake Texoma area
- The Lake Eufaula area depends on the lake for its economic development and the most beneficial use of Lake Eufaula water is all of the aspects of use
- An in-depth economic evaluation needs to be done to determine if the best beneficial use of our water is for recreation, which brings and keeps money in Oklahoma, or washing hogs, chickens or rocks, which can result in the profits leaving the state
- Recreational use of water must be included in the plan
- A study should be done that includes the economic growth of large cities and the effect on rural water systems as growth trickles out
- Anglers and boaters need to be included in the planning process
- A study needs to be done to determine the economic impact tourism and recreation have on the state

## *Comment Summary by Issue Group*

### ***UA-8 – The water needs of agriculture and agriculture industry in allocation decisions***

- The infrastructure of the irrigation district needs to be updated and federal and state assistance should be sought
- Agriculture irrigation is a huge use of water; however, it is very important to the state's economy. Farmers and ranchers are concerned about conservation and look for different ways to conserve water in their industry
- Agriculture use of water should be recognized as important
- The largest irrigated crop in the US is turf. As this displaces agriculture crops we need to understand where our food comes from as food quality could decrease
- The poultry industry depends on the waters of eastern Oklahoma and that water needs to be protected
- Increased ethanol production will result in more corn crops being grown, more water used and the result will be higher food and transportation costs
- If agricultural water rights are taken away, then entire counties are affected by decreasing tax revenues
- There should be incentives to encourage the transfer of litter from eastern Oklahoma to western Oklahoma where it is needed to increase phosphorus levels
- Other, less water-demanding, crops besides corn should be looked at for bio-fuel production
- Urban areas and golf courses overuse fertilizer and then farmers get blamed for contaminating the water and it is not all from them
- The state should look at federal law to know what it is especially in regards to agriculture industry rights
- There should be a cap on the amount of irrigation water that is used for agriculture, especially as more corn is produced for ethanol production. This could drain the Ogallala aquifer
- Agriculture use varies year-to-year and season-to-season; an increased use of water should not be considered overuse

### ***UA-9 – The water needs of oil and gas production, including refining and exploration, in allocation decisions***

- There is concern about pollution from ground and surface water by oil and gas wells both current wells and abandoned wells
- Oil and gas, and mining companies should have to pay for the water they are using
- It can take as much as 85,000 barrels of water to drill one oil well and we need to remember that
- There is a 42" pipeline being built in Bryan County and people are concerned about the effect this will have on the area
- Oil and gas water needs are increasing and that should be remembered
- Illegal salt water dumping is occurring on Tribal grounds
- Disposal of brine water needs to be regulated
- Funding to monitor impacts of gas mining on all waters
- The use of surface and groundwater during oil and gas production needs to be better regulated and considered in water resource planning
- Closed mud systems should be encouraged in all drilling operations
- The state needs to address decommissioning unused wells and test wells that are left open
- Before an oil and gas drilling company is issued a permit they should have to produce a floodplain-drilling permit or exemption
- Any changes in current law or policy should not be detrimental to the oil and gas industry to the point they choose to leave the state

### ***UA -10– The water needs of mining in allocation decisions***

- On site storage is a must for mining operations but the storage should not leak
- The mining industry contributes immeasurably to the economic health of many small communities and the industry's water use is essential to continue that

## *Comment Summary by Issue Group*

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- Mining operations that come in and do not procure water rights prior to beginning their mining operations should not be able to get permits. There is concern that mining use will deplete groundwater supplies and rural water is not available; therefore, people may not have the water they need
- Parts of mining quarries should be used as holding ponds and that water used for their operations, not drinking water supplies
- Water permits should be obtained before mining permits are issued
- Oklahoma should have a law that says when mining operations hit an aquifer then mining must stop
- There should be some legislation regarding the control of water in a quarry and sale of the same

### ***UA-11- The water needs of navigation in allocation decisions***

- The Kerr-McClellan Navigation system is very important to our state
- Concern about dredging of the McClellan-Kerr Navigation System in order to increase the depth. What impact will it have on water quality and shoreline wildlife, how will fisheries be impacted and what will they do with the dredged material?
- There should be criteria developed so water is not diverted out of the McClellan-Kerr Arkansas River Nav. System below what is required for navigation

### ***UA-12 - The water needs of hydropower in allocation decisions***

- Water flow should be used to generate electricity whenever feasible
- Hydroelectric activity is not cost effective or a beneficial use
- Are we getting the most out of our water by generating during peak power periods or during off-peak periods? Peak power is more valuable
- We should look at the efficiency of the generators on the state's dams as many are 40 – 50 years old

### ***UA-13 - The water needs of industry in allocation decisions***

- Poor water quality may cause the loss of industry in small towns
- While recreation, fishing and wildlife are important to the state, industry and its economic impact should get appropriate consideration
- We should include all the water used by cooling towers in the planning process
- We need to ensure our aquifers have adequate supplies for the future and industrial use should not deplete aquifers others depend on
- We should reduce the number of industrial discharge permits that use Oklahoma water to dilute polluted discharges. Some of the best water in the state is used to dilute pollution. Is this really a beneficial use of water?
- We need to include water for future industrial growth

### ***UA-14 - The water needs of municipalities in allocation decisions***

- Recreation use should be limited on surface waters that are also used as drinking water supplies
- The plan needs to recognize the impact small communities have on the state's economy and encourage more funding for the development and improvement of rural water districts and small towns
- Money should be provided to cities to clean out their lakes to extend their lifespan and expand their capacity
- The plan should address lake levels. There should be set lake levels for tourism, recreation, fish and wildlife, and local municipal use
- We should change the way water is allocated rather than force cities to use eminent domain
- Oklahoma City believes an abundant and affordable supply of good-quality water is critical to a good quality of life and a healthy and growing economy. We desire a positive and affordable water supply for all Oklahomans

## *Comment Summary by Issue Group*

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- The plan should protect those cities that have planned for and paid for their water resources. The investment (infrastructure & assets) has to be protected and not given up to the have-nots without cost share
- We should limit the use of groundwater where rural or city water is available

## Comment Summary by Issue Group

### WATER TRANSFERS AND SALES – ISSUES ASSOCIATED WITH THE INTER-BASIN TRANSFER OF WATER IN OKLAHOMA AS WELL AS SALES OF WATER OUTSIDE OKLAHOMA.

#### T-1 – Water sales or transfers within the State

- Water needs to remain within its area of origin and not sent outside it.
- If water is sold out of a basin enough should be required to remain for the population and for economic development
- We should consider getting a re-allocation of water from Lake Meredith and let it flow back to us through the Beaver/Canadian River
- When water is transferred out-of-basin, the receiving area must show responsible water usage before any permits are issued
- Before water is transferred out of an area, a cost analysis should be done to determine if the movement is economically feasible
- We should revisit transferring water from eastern to western Oklahoma
- There should be seasonal and drought clauses in allocations of water out-of-basin to protect the local agricultural interests and fish and wildlife inhabitants
- Water should be returned to a recharge area and not just continually removed from it
- Water should not be allowed to be moved off-site
- Oklahoma City needs to recognize where their water comes from and stop using rural water to fill their lakes for recreation
- If people in central Oklahoma are not willing to send water to western Oklahoma they should not be taking water from southeastern Oklahoma
- Dependency on water transfers should be avoided, as that means the area receiving the water has exceeded their carrying capacity
- We should limit interbasin water transfers to avoid transport of aquatic nuisance species
- Rain should be held in the area it falls on and not sold out of its basin of origin to ensure beneficial use for area residents
- Water transfers can have a negative ecological impact of the receiving area as well as the supply area
- Small communities should be treated equally with larger ones in working to bring water to central Oklahoma
- The state plan should facilitate movement of water from where it is found to where it is needed through pipeline easements and financing
- For water to recycle, it needs to stay in its original area so the state may need to develop regions that design solutions for themselves
- Responsible water usage in a recipient basin should be required before permits are issued that would transfer water from one basin to another
- It should be illegal to pool groundwater for the purpose of transferring it outside the area of origin
- Before any water is transferred to another region or state, two acre-feet of water per acre of land per year should be reserved for agricultural use and the “use it or lose it” rule should not apply
- Concern that other areas of the state will take water from the Panhandle to supplement or fix their problems
- When water is transferred out-of-basin, the area that controls the withdrawal should have to meet certain stewardship standards
- Drought, silting in of reservoirs, and transferring water out of an area have had negative impacts on recreation and the regions’ ecology
- Permitting withdrawals from lakes should be strict if the water is going to be transferred out-of-basin. The needs of the area supplying the water should be considered first

## *Comment Summary by Issue Group*

### ***T-2 – Water sales or transfers outside of the State***

- Don't sell water out-of-state
- The people from Texas are the ones competing for our water
- Limit water sales out-of-state to 10-year contracts
- Water leaving our state is never wasted; it is being used downstream
- Don't sell any water out-of-state until our in-state needs are met
- We should take some of the water that flows out of Hugo Lake and sell it, as it just ends up in the Gulf of Mexico anyway
- We should just give the water to Texas
- Oklahoma should not sell any water until the water plan is complete
- Conservation requirements should be established if water is sold across state lines. Water purchasers should have to demonstrate need
- If water is sold to Texas it should be treated water this will discourage overuse downstream
- The plan should help people who have to haul drinking water to their homes before it considers sending water out-of-state
- If we have to give water to Texas, it should be lower quality water
- Water flowing downstream is not wasted; it is used to clean the basins downstream
- Limit large industries and corporations within and outside of Oklahoma to buy up groundwater rights for transport of water for out-of-state usage
- Native American tribes should not be allowed to sell water out-of-state
- A 100-year needs study should be done before any water is declared excess

### ***T-3 – The economic impact of sales or transfers on the entire State, as well as the basin of origin***

- Any water taken from a basin should require compensation by the taker and equitable value should be returned. Those areas that have already taken water out of the basin should not be grandfathered in
- When water rights are taken by eminent domain, a portion of the revenue should remain with the water rights holder and the overlying landowner
- The proceeds of any sale of storm water runoff should benefit the citizens of the drainage area
- Payment should not be expected for water as it is a life supporting element and we should be kind to our neighbors
- Areas around lakes that were supposed to benefit economically from recreation but are not benefiting due to the management of the lake should get some type of compensation
- If water is sold out-of-state, then the people in the county the water is coming out of should be fairly compensated similar to how oil and gas is done
- When water tables under land are affected by a neighbors use, there should be some type of compensation
- If water is sold, either ground or surface, the proceeds should go to the state, not private owners
- Watersheds should benefit from any water transfer either in-or out-of-state
- Oklahoma should require certain water quality standards be met thereby increasing the cost of water we sell
- If water is taken for commercial use, it should be force pooled, similar to oil and gas production
- No private entity should make money from the sale of public water
- Water should remain in Oklahoma to build our economy
- Southeast Oklahoma is beginning to see economic growth from tourism and this is what needs to be sold not the water
- We should be able to sell water to bring in money that would benefit the area, creating jobs and educating children

## *Comment Summary by Issue Group*

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- If we sell water to Texas and the salinity in the Red River changes, then Arkansas and Louisiana could sue us because of that change
- The area where water would be taken from if a sale or transfer were to happen is a poor area and selling water would not necessarily help the area to develop economically
- We need to determine our long-term plans for development and the water for Oklahoma development as selling water out-of-state could set a precedent
- If we well some or our water, then we could have money to improve our infrastructure
- If other states need our water, their citizens should move here and let us reap the economic gains
- Selling water to Texas could finance needed infrastructure improvements and other water resource needs
- The lakes and streams of southeast Oklahoma are the basis of their economy. If water is removed from the area it will have a negative impact on the economy and the industry they do have
- Lake level protection will also help protect the economies around the state's lakes
- When inter-basin transfers are considered both the environmental and economic cost must be considered. For example, there will be additional CO<sub>2</sub> and other greenhouse gasses produced when water is moved due to the energy demand from coal fired plants
- The chloride diversion project around Jackson County is important to the economic base and future expansion of the area
- Water supply is one of the drivers of economic development for southeast Oklahoma
- If water is diverted out of the Red River, the amount of salt will increase and will have a detrimental effect on those downstream

### ***T-4 – How water and land is managed within the basin of origin if water is sold or transferred***

- There should be regulations about water sales, so they do not impact a region, community or area, and those regulations should be enforced
- We should ensure safeguarding the quantity of surface water in springs, lakes and streams as well as the perpetual supply of groundwater for all property owners in a groundwater basin when granting permits to persons who plan to sell or transfer their rights to sell water for use outside the groundwater basin
- We need to take care of the needs of Oklahoma first
- Concern that once water is sent to Texas the state will be locked into sending that same amount to them without the ability to “turn off the tap”
- Each area of the state should be allowed to control their own water resources
- Water in the state belongs to all of the people in the state and no one area should have total control of the water resources in their area
- The court and interstate commerce law will dictate whether or not we can sell our water
- Greed and profit should not control Oklahoma water
- If there is a vote about water sales, the area where the water will come from should be the only one to vote
- Concern that Texas or Oklahoma City could pay off the debt on Sardis Lake and take control of that water
- The people who live in an area where water is located should be the ones making the decisions about what to do with the water
- I am concerned about the tribes selling water out-of-state and losing our groundwater rights
- If water is sold out-of-state, then everyone who wants a copy of the contract should get one so they will know what is going on
- There should not be outside (out-of-basin) ownership of water resources
- The people who lost land to reservoirs should have some say in the re-allocation of its use
- Texas should not be able to determine land use in Oklahoma if they get water from us
- Texas should not have the right to use eminent domain in Oklahoma to build a reservoir for their use
- When water is transferred out-of-basin the source area should have priority

## *Comment Summary by Issue Group*

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- We should be able to market our water within our state

## Comment Summary by Issue Group

**LAND MANAGEMENT AND HAZARD MITIGATION – ISSUES ASSOCIATED WITH LAND MANAGEMENT PRACTICES TO PROTECT WATER RESOURCES (E.G., RIPARIAN AREA RESTORATION, SOIL CONSERVATION, AND WETLANDS ENHANCEMENT) AND WITH MEASURES TO REDUCE THE DAMAGE FROM NATURAL AND MAN-MADE HAZARDS, INCLUDING TERRORISM.**

### ***LH-1 – How to reduce the impact of natural or man-made disasters that could affect water supply or infrastructure***

- We need a statewide drought management plan
- The state emergency management agency needs to recognize the impact of floods on rural areas
- The plan's first priority should be to provide management contingencies for periods of extended droughts. The plan should look at the effects of a five or six year drought and ensure there will be adequate water supplies for all areas
- There should be a plan to interconnect rural water districts and municipalities so that if there is a natural disaster or terror attack water can be delivered where it is needed
- There should be legislation that provides support for rural water systems in times of disaster
- We need to plan for drought now
- There should be an early warning system to warn of a chemical spill set up along the Verdigris River because of the large amount of barge traffic
- Federal funds should be provided to develop homeland security for water supply safety and water supply insurance for all Oklahomans, rural and urban
- There should be safeguards against terror attacks for our surface and groundwater supplies

### ***LH-2 – Land management practices that affect water quality and quantity***

- The Forestry Service currently has programs to education a wide range of people regarding conservation and encouraging natural resource management, including use of best management practices and will continue to help raise public awareness
- Education regarding the specific use of lakes should be done, especially since so many lakes are used both for recreation and water supply. As well, no recreation should be allowed on lakes that were built solely as a water supply source
- We need to protect the small amount of bottom land hardwood forest we have left in the state
- Beneficial use should serve the best interest of the people who live in an area and best understand it
- The state should develop more county or regional "Home and Agriculture Hazardous Material" programs
- Expanding landscape level watershed management will help with water quantity and may help with water quality
- Oil companies should not be building berms around their wells to catch the water and haul it off, they should let it flow naturally [into local creeks]
- Encourage land stewardship that conserves water resources on a basin-wide scale
- Control of invasive woody species in riparian zones should be encouraged
- There should be restrictions on removal of vegetation along creeks and rivers
- Eastern red cedars are causing a lot of problems with water supplies
- Anything done to a river affects the bordering landowners
- We need good drainage programs and to engineer against flood devastation
- We should not allow septic tanks to be installed on land that surrounds lakes
- Riparian areas must be provided along edges of all waterways
- Well-head protection planning should be improved
- Trees add moisture to the atmosphere and do not use that much water. We need to stop cutting so many down
- Watershed protection studies should be mandatory for those watersheds that supply drinking water

## *Comment Summary by Issue Group*

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- There should be better watershed management to improve water quality
- Land use planning should be considered to help plan for urban sprawl
- Priority should be given to soil conservation districts for watershed management as they can have legal authority over conflicts
- Feral hog populations should be monitored and controlled as they are reducing water quality and causing other problems in southeast Oklahoma
- County commissioners need to be educated about water quality and the effect mismanaged road maintenance can have on it
- Developers should not be allowed to raise areas of floodplains to the point they affect others
- The plan should address non-point source pollution and future management controls
- Education about best management practices for erosion control needs to be continued
- Research on using CRP-type grasses rather than crops to help remove nitrates should be continued
- Playas should be protected as they are the primary source of recharge for the Ogallala
- Models established by the Conservation Districts to address water quality issues should be used state-wide
- Fertilization of land should be done only after soil testing is done
- Land should be kept in its natural grassland state to help slow run-off and clean and filter water
- Bank stabilization on major streams needs to be addressed
- We need to reduce urban runoff and encourage the installation of vegetation in parking lots, the use of permeable surface materials for driveways, sidewalks and parking lots
- Upstream watershed management will help reduce siltation of the state's lakes
- Gypsum rock used for roads to drilling operations could dissolve and contaminate both ground and surface water
- We need funding for cedar removal
- When productive forestland is lost in the state, then water quality can suffer. There should be a way for landowners to economically justify retaining working forestlands instead of destroying them for development
- There should be rewards for using and punishments for not using "best management practices"

### ***LH-3 - The infrastructure needs for fire fighting***

- There should be consistency in state and county water pipe size regulations to ensure fire protection needs are met
- There are currently no records of where water lines are or what size they are and this can hamper fire fighters
- There should be some priority placed on fire protection so fire departments have water available to fight fires
- We need to keep enough water in areas to ensure adequate supply for firefighting needs

## *Comment Summary by Issue Group*

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**WATER RESOURCE MANAGEMENT PLANNING – ISSUES ASSOCIATED WITH HOW PLANNING SHOULD BE CONDUCTED, INCLUDING SCOPE, PUBLIC PARTICIPATION PROCEDURES, FUNDING, EVALUATION, AND CONFLICT MANAGEMENT.**

### *P-1 – Ways to balance demand and supply over the long-term*

- The state should go from a utilization approach to a sustainable approach
- The Plan must take a sustainable-use policy and make it work
- Sustainability of our growth and water supply are inter-related and should be considered together
- All water use should be sustainable and not treated as a “mineable” mineral resource
- Transferring water from one ecosystem of the state to support another region’s overuse and abuse is not sustainable. Areas without enough water resources to sustain themselves should implement and enforce local water use regulations that sustain their local water resources
- We need to live within our means. Industries that use a lot of water should locate where there is a plentiful supply and those areas where there is not enough should stop coming up with plans for taking water from eastern Oklahoma
- Each region of the state needs to become self-reliant
- State assistance in science, education, and finance to assist transition to sustainable practices would be helpful
- The Plan should enable sustainable economic growth for the citizens of the state, not enrich water speculators
- Rural water districts need to stop getting their water from small streams and get on a dependable and sustainable water supply
- A permitted use, either surface or groundwater should not be allowed to continue if it dries up streams or springs
- The OWRB needs to update its information regarding water supplies in the aquifers to ensure water allocations are reasonable and ensure elected officials have up-to-date information
- Water use should be regulated fairly for all

### *P-2 – Ways to improve the planning process*

- Don’t speed up the planning process
- A 100-year plan is short-sighted and we should plan for seven generations into the future
- The plan should determine the water needs for Oklahoma for the next 100 years
- We need to see what other states have done and we need to include experts from outside the state
- We need to consider population changes in the planning process
- Protection of water resources must also be included
- Plan for drought now
- We need to actually implement the ideas in this plan to help Oklahoma
- If we don’t do the plan, then the federal government will come in and do it for us
- The plan needs to capture unanticipated requirements for water such as increased oil and natural gas drilling needs
- There must be a balance between industrial use, rural water uses, and large municipalities use. It must include all interests in the state
- The plan needs to be complete before 2010
- If we put out a shoddy water plan, it affects our children and not us
- Education about the plan is essential
- I hope the results of the plan are not urban versus rural
- Oklahoma can be a model to other arid states if the plan is done right

## *Comment Summary by Issue Group*

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- Scientific studies and policy making should be kept separate so they don't influence each other
- Planning should go all the way to the watershed level
- Do not be guided by the big boys – small communities need water too
- This plan should integrate with the wildlife department's comprehensive wildlife conservation strategy
- Economic considerations should be evaluated last so good ideas don't get eliminated before receiving full consideration
- We need to use the plan, not just develop it
- The plan should be interconnected with the Dept. of Commerce's capital improvement plan
- We need to include water for future industrial growth
- The plan should include both rural and urban citizens in its funding mechanism
- A 100-year needs study should be done before any water is declared excess
- An oversight commission comprised of farm and ranch stakeholders should be appointed to work with the OWRB on the water plan
- The Grand River Dam Authority and the U.S. Army Corps of Engineers should be required to participate in the OCWP
- We should do a complete study
- If the stated goal of the plan is to have the environment and economy as a priority, I am concerned about the purity of the environmental aspect of the plan
- We have a water development problem and we should follow these four steps 1. Quantify how much water we have and where it is 2. Determine where water is needed, how much, and when 3. Find a way to get water where it is needed 4. Create a plan to finance what is needed
- Communities that have already planned for their future should get special consideration
- The needs of both rural and municipal communities should be balanced
- The plan should emphasize science, conservation, and water quality
- In order to be transparent, the technical studies should make interim reports available
- The plan should protect the cities that have planned for their water resource future. If cities have not planned, then they should have to cost-share or something to ensure their needs are met, not just get it for free
- All of the studies from this planning process must show some results. Funding should not determine feasibility
- The technical committees should include members from the private sector. The public should be allowed to monitor the technical meetings which should be open to the public
- Everything in the plan should be scientifically vetted and sustainability should be a guiding principle of the plan
- The plan should be a non-biased plan in regards to cities and rural water districts
- The plan needs to adequately address water quality and not just water quantity
- It seems illogical to have a two phase structure to the formulation of a water plan. Having both the engineering and policy phase means there is the potential for conflict. For example, the plan may call for no water to be transferred from east to west, yet the engineering studies may call for improvement to infrastructure for that purpose
- The plan has left out riparian owners in the planning process. The soil and conservation districts need to be included in the planning process because they help facilitate discussions between riparian owners and others
- Regular status reports should be done and made available to the public through the media and the water plan website
- The plan must be flexible enough to allow for changes as uses change over the years so water is available for those changing needs
- The plan should be flexible enough to change as population changes
- There should be a special section in plan to discuss climate change

## *Comment Summary by Issue Group*

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- Funding for mapping, hydrological modeling, and technical identification of use, consumption, and trends

### ***P-3 – Whether and how Oklahoma should work with other states on ground and surface water quality and quantity***

- The plan needs to recognize the Red River Compact as it defines prior water commitments
- The plan should realize the needs of Arkansas and Louisiana and both the quantity and quality of Red River water
- There should be coordination between all the states that overlay the Ogallala aquifer
- Oklahoma needs to work with other states regarding surface water quality, for example Arkansas and Oklahoma should work together regarding the Illinois River watershed
- We should partner with other states to plan for basin-wide water resource utilization
- The plan should include something to allow Oklahoma to safeguard water flowing into the state
- The OWRB should work together with the Arkansas Natural Resource Commission regarding the Lower Little River Watershed
- We need to work with and learn from other states, but Oklahoma water should stay here
- We should work with other states to develop an interstate regional water plan

### ***P-4 – How to better involve the public in the planning process***

- The Indian Nations should be included in the planning process and should also be included in the technical studies
- The plan should have a statewide legal summit, as well as, geological and technical summits
- There should be some mechanism in the information gathering phase of the planning process to have a series of public debates between those who challenge OWRB management and OWRB officials
- Rural Oklahoma needs to stay informed during the planning process
- The Tribes should participate in the public input meetings
- Citizens in the state need to maintain an interest in water resources. If we don't have proper planning we could be without groundwater
- The younger generation should be involved in the planning process
- We should put members of organizations like Sierra Club on decision-making boards to ensure Oklahomans continue to have clean air and water. It is time to stop selling out to CAFOs, Oklahoma Farm Bureau and similar organizations that backstab small farmers while expecting citizens to subsidize the environmental messes created by those who make a profit by torturing animals
- The planning process must protect opportunities and rights of rural areas, small towns, and tribal communities
- Anglers and boaters need to be included in the planning process
- Representative from all resource agencies and recreational stakeholder groups should be included in any water discussions
- Citizen input is vital but rarely requested
- The Lake Texoma Association supports the development of long-range state water plans using effective public participation in the planning process
- Make sure all citizens are included in the water usage study, as many people across the state don't have the opportunity for rural or city water usage and must be included for a true water plan study
- You need to listen to the citizens in the area for your information. You need scientific data but also you need to listen to the people that live the water
- More money should be spent on advertising to involve more citizens across the state
- It will be the people's responsibility to make sure the legislature considers the comments
- All elected or appointed officials in each region should be invited to the regional meetings

## *Comment Summary by Issue Group*

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- It is important to include public input in the plan, but you must also use people with genuine expertise in developing the plan

### ***P-5 – How to incorporate regional differences in water supply and use***

- The water plan should take into account regional differences, especially concerning aquifers and watersheds to consider the different needs of each area
- The three Panhandle counties' water resources should be more regionalized because they receive less rainfall than the rest of the state and they are in a drought situation more often
- Oklahoma City needs to be educated about where their water comes from and recognize the needs of western Oklahoma
- The plan must balance eastern and western Oklahoma interests
- The fact GRDA does the permitting within their jurisdiction keeps things more regional and we need to recognize the uniqueness of the various regions of the state and manage them in the best way possible
- Remember Cimarron County is part of Oklahoma and not just at tax time
- The Conservancy Act language requires Conservancy Districts to be the water planners for their area
- Rural western Oklahoma's needs are different than the eastern part of the state and this needs to be remembered in the political law making process
- Concern that because the plan is being done on a statewide basis, local issues will get lost, especially those that may have a financial impact on communities
- The originating county of a resource needs representation when decisions are made, particularly because many times the originating area does not have a large population
- Tulsa and Oklahoma City should not be the only areas heard – rural Oklahoma must be heard as well

### ***P-6 – What research needs to be done during and after the current planning process***

- Look at how many people may convert from well water to either rural water or municipal water to plan where the additional water will come from
- The plan should be based on sound science
- Fund studies to see how much water is actually being used by everyone
- The plan should consider realistic changes in technologies, land use, crops, industry and how that will affect water
- The state and the Corps need more data on the amount of water available for both surface and groundwater, including the federal reservoirs
- Review the water laws and regulations of the states adjoining Oklahoma. The review should be done by a responsible group of people in order to see if Oklahoma should adopt some of their laws and regulations to update the water laws and regulations of Oklahoma
- Flow measurements under rapid-flow and slow-movement conditions should be done in all streams for 10 years before permits to remove water are issued
- Scientific studies should be done on all aquifers, lakes, and streams so we can know how much water Oklahoma has
- Research on aquifers should be done to ensure they can sustain the two-acre feet allocation currently in place
- There should be an in depth study done on the Rush Springs aquifer before any laws or policy changes are considered
- A study done on the migration of groundwater out-of-state should be done
- Groundwater exploration should be conducted to find additional groundwater supplies
- A study should be done to determine how much siltation is affecting the amount of water in our impoundments so we can know how many acre-feet we truly have
- A study needs to be done to determine the economic impact tourism and recreation have on the state
- There should be system and life-cycle modeling done either per river basin or per aquifer across the state

## *Comment Summary by Issue Group*

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- The cumulative effect of reducing inflows into Lake Texoma from the Red River, and excessive removal of water from Lake Texoma and downstream on the Red River must be carefully evaluated before final decisions are made by Oklahoma, Texas, and federal planners, authorities and legislators
- Establish a national pilot project and field test bed for large inland lake computer modeling and simulation
- The state needs to research the best possible way to issue permits
- Science and not dollars should determine how our plan is written
- More test wells should be used on all the aquifers across the state to ensure the data gathered is accurate across the aquifer
- The OWRB or an independent contractor should conduct an instream flow methodology study to enable the plan to reflect the maximum protection of fish and wildlife and make the best use of stream water in Oklahoma
- We should look at examples in other states where areas have grown rapidly and we should not use past data to project future use
- The Corps should do its first statewide computer modeling of all its dams and navigation channels and include fish and wildlife
- More research into the hydraulic flow of groundwater should be done
- Scientific studies should be done on all aquifers, lakes, and streams so we can know how much water Oklahoma has

### ***P-7 – Treating the water plan as a living document that is reviewed on an ongoing basis***

- A dedicated, dependable source of funding for water resource planning, management, and education is vital to efficient management and wise use of water
- How and why the plan was developed needs to be included in the plan for the next generation
- Develop a five year plan to review any legislation approved for the comprehensive water plan if passed into law
- Regular plan updates should be mandated
- Tax-deductible contributions to the Oklahoma Comprehensive Water Plan development process should be allowed to help fund continuous updates and oversight
- We need to keep the water planning process going until we deal with some of the issues in it
- Money should be appropriated in order to keep the water plan updates on schedule
- The plan itself must include provisions for continuous review and more frequent revisions. It should also be considered a living, breathing document not just something that collects dust and no one uses

### ***P-8 – Procedures to deal with conflict during and after the planning process***

- Priority should be given to soil conservation districts for watershed management as they can have legal authority over conflicts
- There should be some way to solve the conflicts between municipalities and rural water districts
- Strengthen the soil conservation districts to help with conflicts over rights
- There should be a conflict resolution management plan within the plan so conflicts can be quickly resolved
- The plan should include some provisions for alternative dispute resolution to solve water management conflicts. This will help avoid expensive litigation and appeals to politicians
- There should be some way to solve the conflicts between municipalities and rural water districts

## *Comment Summary by Issue Group*

### **WATER MANAGEMENT AGENCIES – ISSUES ASSOCIATED WITH THE JURISDICTIONS, AUTHORITIES, AND PROCEDURES OF WATER MANAGEMENT AGENCIES.**

#### ***AP-1 – Changes to State agency jurisdictions, authorities and relationships***

- Increase OWRB authority over water
- Include water quality as part of OWRB authority
- Consolidation of DEQ and OWRB
- Limit OWRB authority to water protection and exclude water sales
- Expand authority of OWRB to include all mining operations when a quarry hits groundwater
- Determine jurisdiction of the oxbows along the Verdigris River so they can be cleaned up
- Include GRDA controlled water in the plan
- Separate the loan division and permitting division of OWRB to allow intervention from legislators when there is a dispute on a loan
- Develop the Oklahoma Natural Resources Protection Agency to replace Sec. of Environment, DEQ and the OWRB
- Dept. of Agriculture should not be in charge of water quality
- The state should retain control and authority of all regulatory programs regarding water quality, the Tribes across the state should follow the state standards and not complicate things by setting their own water quality standards which could hinder economic development
- The OWRB and ODEQ should not be combined
- The Corporation Commission and the OWRB needs to communicate effectively regarding water issues including information on water bearing formations and well logs
- There should be separation of OWRB's loans and grant program from other OWRB issues
- A study should be conducted to determine the most efficient way for state agencies to give the best service to Oklahoma citizens regarding water issues
- Cooperation between OWRB, engineers and wildlife biologists when planning and designing low-water dams
- The administrator of the Oklahoma Scenic Rivers Commission should have more freedom to properly manage the Illinois River
- The state should not be involved in nor support long-term water development speculation
- OERB needs to clean up marginally plugged oil and gas wells
- The Oklahoma Dept. of Agriculture, Food and Forestry, Forestry Services Division should remain actively involved in the state's non-point source pollution management program and best management practices
- The state's well testing program should be balanced across the state relative to the size of the basin
- A dollar value should be published for Oklahoma's public waters by state officials
- The OWRB needs to set flat rules everyone must follow and not different rules for different entities
- We should mandate excessive fines for polluters of our rivers
- There should be a ban on the use of fresh water in petroleum water floods and the OWRB and Corp. Comm. should work hand-in-hand to stop/monitor pollution from saltwater injection wells and for the wells to be monitored more frequently

#### ***AP-2 – Changes to local agency authorities and relationships and changes to or development of new local organizations***

- Regional water boards should be established and given the authority to issue conjunctive use permits
- Municipalities should not be allowed to take water rights by eminent domain
- Include citizens outside their city's voting district to be members of water authority that supplies them
- Involve conservation districts more on a local level in water management
- Increased cooperation between cities and rural water districts

## *Comment Summary by Issue Group*

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- Give preference to upstream soil conservation projects in water rights and disputes
- Establish regional water boards to address the concerns of their region including water sales for consumptive use
- Establish federal advisory committees for all U.S. Corps of Engineers lakes
- Strengthen the soil conservation districts to help with conflicts over rights
- Provide more “knowledge-sharing” with public works departments across the state
- Rural water districts may be expanding their authority by providing water to other systems
- Rural water districts should receive more support and more districts should be developed
- Municipalities and rural water districts should work together more effectively
- The OWRB should consider establishing and supporting watershed advisory groups comprised of local stakeholders. Their purpose should include monitoring implementation of the plan locally and offering suggestions for improving implementation success. Public participation should not be limited to just revising the plan
- Rural water districts that receive public money should be regulated
- There should be some allowance for municipalities to take over rural water districts if they cannot meet increased demands and the municipality has encroached on the districts territory
- Small systems that purchase treated water from other systems should not have to pay increased costs just because their supplier is inefficient in their distribution system
- Regional water authorities should be developed to wholesale water similar to G&T’s wholesale electricity

### ***AP-3 – Changes in the services agencies offer to the public***

- A central hotline should be developed to direct citizens to the proper agency regarding a water issue
- There should be easier access to floodplain information
- We expect our state agencies and elected officials to be our strongest defenders of our most valuable natural resource
- The OWRB needs to update its information regarding water supplies in the aquifers to ensure water allocations are reasonable and ensure elected officials have up-to-date information
- The price of public water should be posted
- The OWRB should provide technical expertise to small communities with water quality issues
- The ODEQ and OWRB should work more closely with communities regarding industrial permits and legal notification to the public should be more aggressive
- Cities that continually have nitrate problems with their water should be more proactive in letting citizens know about the problems and what can be done. Some agency should be involved with those areas where this long-term problem persists
- A website should be developed to show property description and location in a map format of all legal notices that would affect the water or environment so people can easily identify affected land
- The attorney general should rule whether the OWRB’s administrative protest process is legal and maybe they should look at how the Corp. Comm. has set up their protest hearings

### ***AP-4 – More consistent enforcement of current laws and regulations***

- We need legislation guaranteeing oversight by constituents to ensure accountability of all bureaucrats involved in deciding the most beneficial use of our water resources
- There should be a penalty for overuse of a well
- Meters should be placed on all wells and proper use of the water documented and if overuse occurs the permit should be revoked
- There should be a policy in place to punish bad actors
- Someone besides the EPA should be enforcing rules against illegal saltwater injection wells
- Self-regulation models should be abandoned for a closely monitored system

## *Comment Summary by Issue Group*

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- There should be more regulation of permitted use
- There are currently federal laws to improve our water law enforcement
- There should be better enforcement of existing regulations regarding well spacing
- There should be more regulatory pressure put on large industrial users
- Fines should be severe for water polluters and for those who violate water regulations
- State agencies should have to comply with recommendations given them by the Corps to solve dissolved oxygen levels
- Laws regarding silt and construction site runoff should be enforced
- There should be regulation on seismic exploration and some way to register complaints. No one seems to be enforcing the BMP requirements
- There should be more teeth in the laws or penalties for well drillers who do not report the wells they drill
- Oil companies need to be monitored more closely to see what harm they may be doing to our water
- The OWRB should enforce their “use it or lose it” rule on everyone, not just a few
- There should be more enforcement, possibly new legislation, to enforce TMDLs particularly on sensitive water supplies
- Chicken waste in our waters must be policed and fines should be administered to violators of the laws
- There should be a mechanism for the OWRB to collect fines on unplugged geo-tech borings
- The deep wells are the ones pulling out more than shallow domestic wells and this could be difficult to control

### ***AP-5 – The effects of federal regulations on state regulations and programs***

- The U.S. Army Corps of Engineers needs to also understand the priorities of the state of Oklahoma
- We need to work with the federal government to lower the cost of water in the state’s lakes
- The Conservancy Act requires that anything costing over \$7,500 must be put out for bid but other agencies have limits of \$25,000 - \$30,000. This bidding process costs us in time and money and could mean that a city could be without water for an extended period of time
- There is too much regulatory burden on municipalities from state and federal agencies, especially the DEQ and the EPA
- We should include counties on the MS-4 list (Municipal Small Separate Storm Sewer Operator’s) for storm water evaluation as many areas that should be monitored are being left out
- Interest should not be charged on storage fees in US Army Corps of Engineers lakes
- The laws governing rural water districts should remain more constant as the frequent changes in the laws make it difficult for them to apply for and receive funding
- Drinking water maximum contamination levels should be set at levels that are scientifically known risk levels and not some arbitrary level
- Set lake levels to ensure enough supply for tourism, recreation, fish and wildlife, and municipal uses
- There should be changes in federal laws regarding wildlife that end up stopping progress of human living
- The state should work with Congress to get recreation authorized as a designated use on federal reservoirs
- Minimum lake levels should be set on all lakes
- Some people support the new federal guidelines for drinking water standards
- The federal government could forgive the debt on Sardis Lake
- Use of our federal reservoirs should be reviewed and possibly re-prioritized
- The state should look at federal law to know what it is especially in regards to agriculture industry rights
- Some water in reservoirs should be allocated as an emergency reserve
- Before any changes to Oklahoma’s wetlands requirements are made the state should let the ongoing federal changes get resolved

## Comment Summary by Issue Group

### AP-6 – New state regulations and laws as necessary

- Oklahoma needs to move from a model of utilization to one of conservation
- Water permit applications should require entities to have conservation measures in place and show optimal use of existing water supplies
- Education may not be enough we may need to develop regulations to force people to conserve as many feel suggestions are meant for others not themselves
- We should meter all wells and place a seal on them so all use and overuse is recorded
- There should be a requirement for accurate well logs and identifiable information regarding the wells
- Pollution laws must be more strict and should include the older swine farms
- Permits for reusing treated wastewater should be easier to get
- There is a discrepancy between the regulation of irrigation wells and municipal wells and this should be addressed
- We should require manual disconnects between wells and wastewater effluent lines that are cross connected
- Licensed well-drillers are hard to find and maybe the 5-year apprenticeship is too long and should be reduced
- Upstream people should not be able to put up dams that stop the flow of water resulting in impacts on those downstream
- Any state statutes that come out of the plan should include flexibility for addressing inequities caused by future unforeseen events
- There should be some zoning ordinances for land management practices to keep cattle and chicken litter out of streams
- All sources of water should have check and flow meters
- There should be consistency in state and county water pipe size regulations to ensure fire protection needs are met
- The state should adequately enforce existing regulations, review and change regulations when appropriate and/or accept responsibility for the water quality in the state's watersheds
- The state should implement licensing for irrigation contractors
- Metering requirements should be considered on a region by region basis depending on the predominate water use
- We should reduce the number of industrial discharge permits that use Oklahoma water to dilute polluted discharges. Some of the best water in the state is used to dilute pollution. Is this really a beneficial use of water?
- Water well drillers should be regulated so we know how much surface pipe is used. If the amount of pipe is not adequate it could cause contamination of the well
- There should be regulation regarding water runoff as land is developed. Erosion along drainage ditches is costing the state millions of dollars
- Public access to public water for all recreational purposes must be maintained or enhanced
- Bond money should be put up by both a homeowner and well driller so bad domestic water wells can be properly capped
- The OWRB should work with the oil and gas industry to develop reasonable and appropriate requirements for activities that can be consistently applied by Floodplain Boards. The state should also implement an equitable permit fee program for all entities constructing in a floodplain
- Cities should have the same requirements as farmers when it comes to putting waste on their property
- There should be a change in the regulations regarding pond building and the volume allowed before a permit is required should be increased to encourage more building of impoundments
- Water quality requirements and regulations should be developed regarding infrastructure that delivers drinking water
- Engineers should have to be certified so water districts can know they are using a qualified engineer

## *Comment Summary by Issue Group*

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- There should be development of surface water marketing rules that balance the interests of individual property interests with community sustainability interests
- Fire departments should be required to report water usage
- Homeowners and golf courses should be required to test their lawns before fertilizer is applied
- We should have a pricing mechanism in place to protect Oklahoma's interest in its water
- The state should standardize a shoreline management plan for the entire state accounting for regional differences
- CAFOs should be required to have closed systems and not be allowed to use open sewage systems
- The quality of bottled water should be regulated by the state
- Oil and gas operators should be required to plug wells they are no longer using
- Disposal of brine water needs to be regulated
- The state needs to address decommissioning unused wells and test wells that are left open
- Meters should be placed on all wells and proper use of the water documented and if overuse occurs the permit should be revoked
- We should adopt a "pollution pays" policy applied to industries that contaminate surface water to the point it can no longer be used
- Stream and groundwater laws need to be combined
- The definition of waste and conjunctive use should be defined by the legislature for the best benefit to Oklahoma
- Reservoirs should be owned by the state unless they are within the municipal limits of the owning municipality. Land surrounding the body of water should be reserved for recreational use and wildlife habitat
- Municipalities should have more representation on the Water Resources Board
- There should be representation on the Water Board for recreation
- There should be a change in the surface water policy to allow for private uses in the Panhandle, such as allowing ponds, catchment systems, and reservoirs
- Storm water should be added to the definition of wastewater and other pollution sources to protect water quality
- Environmental protections of both watersheds and re-charge zones should be established and enforced by the state
- The Rush Springs aquifer should be protected by limiting and monitoring of injection wells, creating legislation to protect municipalities rights to the aquifer, and limiting private leasing for the purpose of profiteering at the consumers expense
- The definitions of beneficial use and "interface with downstream users" should be adequately defined
- The plan should define "surplus" and "excess" water clearly so people know whether the terms include allocated but currently unused water
- The impacts of housing development with wells and septic systems should be addressed by law and/or water policy
- State elected officials should be required to disclose campaign donations from water interests out of their district
- Current water laws should be reviewed to ensure they consider the needs of current and future human consumption
- The current stream water law works well
- Oklahoma should have a law that says when mining operations hit an aquifer then mining must stop
- There should be some legislation regarding the control of water in a quarry and sale of same
- There are legislative improvements that need to be made regarding Oklahoma's water law. 1. There should be a rule of Law that 25 to 33 1/3% of the stream water is all there should be taken from a flowing stream when irrigation is in progress. 2. The law now is mandatory granting of a water use permit if you own the surface. Oil law disallows depletion, but water rights do not have depletion. A new law should be

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that if adjoining property owners suffer a 25 to 33 1/3% decline in water availability in the wells - the permit should not be granted. The next issue is wells drilled without permits. There should be a statute that lets either the Water Board deny usage of all wells in that section for a period of time, that are owned by the person who failed to get legal permits. The issue of drilling a well or wells on your land, and piping said water to adjoining land should be a separate permit (and this type of permit can be stopped by adjoining land owners if their water usage is decreased by 10% or more). There should be a statute if a legal well pumps water to adjoining areas or farms without the proper permit, this well is closed for 1 to 5 years (the legislators decide on this)

- Laws should be based on good science and not what someone thinks works best in their neighborhood
- Our current water laws should be clarified to avoid an increased burden on our courts
- The Kiamichi River should be designated a Scenic River
- The amount of representation on the OWRB board should be representative of the amount of water in each area
- The Arbuckle-Simpson aquifer should be considered a state treasure
- The definition of waste and conjunctive use must be defined by our legislature
- We should have a "water bill of rights" which sets certain rights for all citizens of the state so highly populated areas do not get a political or monetary advantage over smaller areas
- We should legalize the use of gray water systems in Oklahoma
- OWRB board members should be elected by voters from the different regions of the state and the head of the OWRB should be confirmed by a majority of Oklahoma voters every four years
- A permanent position on the OWRB's board should be someone who represents independent crude oil and natural gas operators
- Pending water legislation should be open to all
- State law should be changed to allow for the use of new technologies and methods of conservation
- All Oklahoma elected officials should be required to disclose all campaign monies received from Texas
- Water rights should be specifically spelled out so the federal courts cannot come in and change things
- Rural water districts should be allowed to have longer contracts with the cities that supply them water; usually the contracts are year-to-year

### ***AP-7 – Incentive programs to promote compliance with regulations***

- We should consider initiating a no growth policy with a pollution cap and trade system, similar to carbon credit trading.
- We should look at providing incentives for industries to clean up their produced waters to a quality that could then be re-injected into reservoirs
- The state should continue with cost-share programs to help remove invasive species that have a detrimental effect on water quantity
- We should provide incentives to landowners to vegetate watersheds and reduce inflow of silt
- Incentives should be provided to land owners to manage watersheds appropriately
- Incentives should be provided for producers of alternate fuels such as using switchgrass to make ethanol
- Entities that receive state or federal money should be required to select the best, most cost-effective option rather than an option that costs more

### ***AP-8 – Revisions to the current permitting process to make it more efficient***

- The grant application process for money to repair infrastructure needs to be speeded up
- Permits for reusing treated wastewater should be easier to get
- The state should also implement an equitable permit fee program for all entities constructing in a floodplain
- There is too much red tape to try to get a groundwater permit and the process should be streamlined
- Senior water rights should not be displaced by eminent domain

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- We should claim and hold no more of our water than our portion alongside of our neighbor
- Consistency in stream water permitting across the state (GRDA/OWRB)
- Environmental flows should be set before permits are issued
- Commercial water companies should be required to undergo periodic in-depth evaluations of their practices and the effect they are having on the water resource they utilize
- The seven-year “use it or lose it” needs to be reevaluated as it encourages waste
- Permit applications should be more specific as to what future need is
- Protestors of water permits should have to pay for the protest
- There should be no new fees by the OWRB for water wells or permitting
- Well spacing rules need to be defined by the results of studies done on aquifers
- All aquifers need to be studied prior to permitting and the current law that says you can take 2 acre-feet per acre of land should be revised to reflect this
- Oklahoma’s water laws are very screwed up and anyone (any state) can apply for a permit
- There should be a more flexible allocation/re-allocation rule put in place
- Irrigation wells should be metered to help protect the domestic user, especially when they have to shoulder the cost of drilling a new well because the old well became unusable due to overuse or contamination from heavy crop fertilization. We will have to draw a line between the almighty dollar and people’s lives
- Current water needs of all persons living in a water basin must be met before any permits are issued to remove water from a basin
- If new irrigation wells are drilled then old ones should be closed – no net increase in number of wells
- Water to corporate farms should be limited
- Stream water should not be permitted based on the average annual flow as this does not take into account seasonal variations
- The state should address the conflict between long-range municipal planning with short-term permits
- Permits must show clear benefits
- Permits should be based on best practice science
- When someone protests a water permit, the burden of proof should be shifted to the applicant from the protestor
- Current permit use should be metered. What gets measured gets managed
- The definition of domestic use is outdated and the no-permit allowance to surface owners should be ½ acre-foot times acres used
- Water permits should be obtained before mining permits are issued
- Residential usage of well water should have priority over permitted uses
- Permits should be given in inches and not acre-feet
- Studies on all springs and streams should be done before any permits are issued
- Groundwater permitting should take into account the amount of water available in an aquifer
- Reservoir permitting should be based on the firm yield of the reservoir
- The process of publicizing water use applications needs to be modified so it is easier to understand who is applying for what, where, and how much
- Permits should have to be supervised for 50 years as that is the planning horizon
- Graduated Water Permit: There are four types of groundwater permits issued by the OWRB, including regular, temporary, special, and provisional temporary. The maximum annual yield of a groundwater basin is determined based on the overlying surface area being fully permitted. Since this is rarely the case, there should be a rule change that would allow the OWRB to issue two permits: (1) a regular permit based on the maximum annual yield, and (2) a temporary permit for an amount of withdrawal governed by the percentage of the basin for which regular permits have been issued. The temporary permit will be reviewed annually and the rate of withdrawal reduced accordingly as the percent of the basin obtaining regular groundwater permits increases. The purpose of the proposed rule change is to

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allow water users with temporary permits a grace period, after the maximum annual yield has been determined, to make alternate water supply arrangements such as purchasing or leasing additional land, forming a water district, connecting to another water source, or constructing a surface reservoir.

- There should be no permit requirement for livestock, wildlife or pet use
- New permits should be evaluated for impacts on downstream users
- Entities applying for permits should be required to implement conservation and optimization practices before a permit is issued
- All wells should be permitted, including domestic wells. Then the OWRB will have a record of all wells
- There should be a mechanism to prioritize permitting
- Stream water permitting may need to be changed in order to ensure minimum in-stream flows
- Before an oil and gas drilling company is issued a permit they should have to produce a floodplain-drilling permit or exemption
- No more permits for groundwater should be issued, especially in western Oklahoma because groundwater is the only water source there, and if that is gone, then so is the population
- Permits for water use should be specified as to their use
- When the water table in an aquifer drops the state should not continue to issue permits as they affect all the landowners overlying the aquifer
- The OWRB should be able to reduce groundwater appropriation when the user of the water is not the landowner and the use of the water is not on the land where the water is produced
- Water permit applications should require entities to have conservation measures in place and show optimal use of existing water supplies

### ***AP-9 – Discussions about the law regarding the ownership of surface water and groundwater***

- Limit large industries and corporations within and outside of Oklahoma to buy up groundwater rights for transport of water for out-of-state usage
- Water flowing under a streambed should be considered part of the stream water law
- Sheet water or diffused surface water should belong to the surface owner of the land it falls on and they should be able to collect and hold it
- There should be laws to protect private citizens' water rights
- Water rights should not be able to be severed from the land
- We should end private ownership of groundwater, all water should be held as a public trust
- We should prevent the acquisition of water rights by special interest groups
- I am concerned about lake levels being raised and taking more of my property
- Municipalities should have priority access to water they have developed
- Water rights should not be further privatized
- Concern about private ownership of municipal water
- Concern that current regulatory systems are being abused such as private entities using eminent domain to take land
- Concern that additional groundwater restrictions will be imposed making it difficult for communities to continue using groundwater as a supply source
- The current groundwater law needs to be changed from a mining law to a sustainable use law
- If Lake Optima is not going to be used it should be given back to the original landowners
- Water rights should be specifically spelled out so the federal courts cannot come in and change things

### ***AP-10 – Taxes on water sales, transfers and uses***

- We should have some law to limit water sales to other states when water becomes scarce in Oklahoma
- Cities that own reservoirs in other counties should have to pay a fee in lieu of taxes
- The US Corps of Engineers should be required to pay property taxes on land they own

## *Comment Summary by Issue Group*

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- Oklahoma should establish impact fees similar to what Florida has done
- Consumptive use of water should be subject to a state depletion tax
- There should be a statewide fee for each finished water tap off a water main
- If water is sold, there should be a tax levied on that sale
- We should establish a recreational tax
- The legislature should consider a state water tax similar to the gasoline tax we currently have

### ***AP-11 – Regionalization of water and wastewater systems***

- Incentive for cooperation between rural water districts and state and local agencies
- We should regionalize small water systems
- The regionalization of water use (irrespective of state or county boundaries) should be focused on
- There should be development of regional water systems to serve everyone
- Regional coalitions of water utilities will be required to supply affordable water throughout Oklahoma in the future
- We should interconnect all water systems as electric power companies do
- We should also regionalize wastewater treatment plants to help spread out the cost of treatment
- We need funding for regionalizing water distribution systems
- There should be federal incentives for regionalization of water systems
- There should be some incentives given to encourage regionalization of water systems

### ***AP-12 – Tribal claims to both ground and surface water***

- Native American tribes should not be allowed to sell water out-of-state
- Determine who owns the water in Oklahoma
- The plan should address who owns the water in the state
- The issue of water ownership should be resolved by a statewide vote of the people of Oklahoma
- No sovereign entity should own the water in the state of Oklahoma, this includes other countries and Indian nations
- The state has to recognize that the Cherokee Nation and many other tribes have claims on the same water that is the subject of this plan. In order to address the issue government-to-government consultation will need to take place
- Avoid desecration of Native American cultural and religious sites and do not attempt to exert authority over lands and water rights recognized to be theirs
- The plan should address Native American claims to groundwater
- The legislature should recognize the Tribal-State Water Compact so that groundwater rights in Logan, Noble, Payne, Garfield and Kingfisher counties remain with the landowner
- Concern about how tribal sovereignty will affect individual water rights
- Concern about the Osage Nation claiming ownership of the groundwater in Osage County, the impact it will have non-tribal landowners, and their rights to use their groundwater
- Concern about the Osage Nation's claim to all surface water in Osage county and who would have jurisdiction to regulate it
- Native American tribes must be included in discussions about moving water out of a watershed
- The Indian Nations should be included in the planning process and should also be included in the technical studies
- The Tribes should participate in the public input meetings

# ISSUE RATING SHEETS

Name \_\_\_\_\_

## QUANTITY

*ISSUES ASSOCIATED WITH THE COLLECTION, STORAGE, AND DISTRIBUTION OF WATER TO RELIABLY MEET WATER NEEDS*

THE PLAN SHOULD CONSIDER...	REGIONAL PRIORITY	STATE-WIDE PRIORITY	EXPLANATION/RATIONALE
<b>Qn-1.</b> the improvement and expansion of drinking water infrastructure, such as impoundments, distribution systems and aquifer recharge measures	H L	H L	
<b>Qn-2.</b> maintenance of water supply systems, such as dams and pipelines	H L	H L	
<b>Qn-3.</b> State and federal funding of water storage infrastructure	H L	H L	
<b>Qn-4.</b> the effects of climate change on water supplies	H L	H L	

## **QUALITY**

### ISSUES ASSOCIATED WITH WATER AND WASTEWATER COLLECTION AND TREATMENT, AS WELL AS SOURCE PROTECTION

THE PLAN SHOULD CONSIDER...	REGIONAL PRIORITY	STATE- WIDE PRIORITY	EXPLANATION/RATIONALE
<b>QI-1.</b> State and federal funding of water treatment and protection	<b>H L</b>	<b>H L</b>	
<b>QI-2.</b> more and better measures to protect drinking water	<b>H L</b>	<b>H L</b>	
<b>QI-3.</b> better technology for treating wastewater	<b>H L</b>	<b>H L</b>	
<b>QI-4.</b> requirements for providing the public with accurate and timely water quality information	<b>H L</b>	<b>H L</b>	

## **WATER CONSERVATION AND REUSE**

*ISSUES ASSOCIATED WITH WATER CONSERVATION SUCH AS INCREASED WATER USE EFFICIENCY, REDUCED WASTING OF WATER, USE OF MARGINAL WATERS, AND REUSE OF GRAY WATER*

<b>THE PLAN SHOULD CONSIDER...</b>	<b>REGIONAL PRIORITY</b>	<b>STATE-WIDE PRIORITY</b>	<b>EXPLANATION/RATIONALE</b>
<b>C-1.</b> measures to encourage conservation through improving water use efficiency and wasting less water	<b>H L</b>	<b>H L</b>	
<b>C-2.</b> measures that encourage the reuse of treated wastewater, gray water, produced water (oil and gas) and storm water run-off	<b>H L</b>	<b>H L</b>	
<b>C-3.</b> improved educational programs about water conservation for all Oklahomans	<b>H L</b>	<b>H L</b>	
<b>C-4.</b> incentives to promote water conservation	<b>H L</b>	<b>H L</b>	
<b>C-5.</b> research programs that assess improved methods for water conservation	<b>H L</b>	<b>H L</b>	

## **APPROPRIATED WATER USES**

*ISSUES ASSOCIATED WITH USES OF WATER, INCLUDING CONJUNCTIVE MANAGEMENT (OF SURFACE AND GROUND WATER) AND MINIMUM STREAM FLOWS (TO PROTECT AQUATIC LIFE)*

THE PLAN SHOULD CONSIDER...	REGIONAL PRIORITY	STATE- WIDE PRIORITY	EXPLANATION/RATIONALE
<b>UA-1.</b> Discussions about water law regarding groundwater and surface water use	H L	H L	
<b>UA-2.</b> the interaction between ground and surface water in allocation decisions	H L	H L	
<b>UA-3.</b> prioritizing water uses during shortages	H L	H L	
<b>UA-4.</b> the water quality and quantity needs of ecosystems in allocation decisions	H L	H L	
<b>UA-5.</b> the need of adequate amounts of water to further economic development in allocation decisions	H L	H L	
<b>UA-6.</b> the effect of population change on water needs in allocation decisions	H L	H L	
<b>UA-7.</b> the water needs of recreation and tourism in allocation decisions	H L	H L	
<b>UA-8.</b> the water needs of agriculture and agriculture industry in allocation decisions	H L	H L	

<b>UA-9.</b> the water needs of oil and gas production, including refining and exploration, in allocation decisions	H L	H L	
<b>UA-10.</b> the water needs of mining in allocation decisions	H L	H L	
<b>UA-11.</b> the water needs of navigation in allocation decisions	H L	H L	
<b>UA-12.</b> the water needs of hydropower in allocation decisions	H L	H L	
<b>UA-13.</b> the water needs of industry in allocation decisions	H L	H L	
<b>UA-14.</b> the water needs of municipalities in allocation decisions	H L	H L	

## ***WATER TRANSFERS AND SALES***

ISSUES ASSOCIATED WITH THE INTER-BASIN TRANSFER OF WATER IN OKLAHOMA AS WELL AS SALES OF WATER OUTSIDE OKLAHOMA

THE PLAN SHOULD CONSIDER...	REGIONAL PRIORITY	STATE- WIDE PRIORITY	EXPLANATION/RATIONALE
T-1. water sales or transfers within the State	H L	H L	
T-2. water sales or transfers outside of the State	H L	H L	
T-3. the economic impact of sales or transfers on the entire State, as well as the basin of origin	H L	H L	
T-4. how water and land is managed within the basin of origin if water is sold or transferred	H L	H L	

## **LAND MANAGEMENT AND HAZARD MITIGATION**

*ISSUES ASSOCIATED WITH LAND MANAGEMENT PRACTICES TO PROTECT WATER RESOURCES (E.G., RIPARIAN AREA RESTORATION, SOIL CONSERVATION, AND WETLANDS ENHANCEMENT) AND WITH MEASURES TO REDUCE THE DAMAGE FROM NATURAL AND MAN-MADE HAZARDS, INCLUDING TERRORISM*

<b>THE PLAN SHOULD CONSIDER...</b>	<b>REGIONAL PRIORITY</b>	<b>STATE- WIDE PRIORITY</b>	<b>EXPLANATION/RATIONALE</b>
<b>LH-1.</b> how to reduce the impact of natural or man-made disasters that could affect water supply or infrastructure	<b>H L</b>	<b>H L</b>	
<b>LH-2.</b> land management practices that affect water quality and quantity	<b>H L</b>	<b>H L</b>	
<b>LH-3.</b> the infrastructure needs for fire fighting	<b>H L</b>	<b>H L</b>	

## **WATER RESOURCE MANAGEMENT PLANNING**

*ISSUES ASSOCIATED WITH HOW PLANNING SHOULD BE CONDUCTED, INCLUDING SCOPE, PUBLIC PARTICIPATION PROCEDURES, FUNDING, EVALUATION, AND CONFLICT MANAGEMENT*

THE PLAN SHOULD CONSIDER...	REGIONAL PRIORITY	STATE- WIDE PRIORITY	EXPLANATION/RATIONALE
<b>P-1.</b> ways to balance demand and supply over the long-term	H L	H L	
<b>P-2.</b> ways to improve the current planning process	H L	H L	
<b>P-3.</b> whether and how Oklahoma should work with other states on ground and surface water quality and quantity	H L	H L	
<b>P-4.</b> how to better involve the public in the planning process	H L	H L	
<b>P-5.</b> how to incorporate regional differences in water supply and use	H L	H L	
<b>P-6.</b> what research needs to be done during and after the current planning process	H L	H L	
<b>P-7.</b> treating the water plan as a living document that is reviewed on an ongoing basis	H L	H L	
<b>P-8.</b> procedures to deal with conflict during and after the planning process	H L	H L	

## **WATER MANAGEMENT AGENCIES**

### *ISSUES ASSOCIATED WITH THE JURISDICTIONS, AUTHORITIES, AND PROCEDURES OF WATER MANAGEMENT AGENCIES*

THE PLAN SHOULD CONSIDER...	REGIONAL PRIORITY	STATE- WIDE PRIORITY	EXPLANATION/RATIONALE
<b>AP-1.</b> changes to State agency jurisdictions, authorities and relationships	H L	H L	
<b>AP-2.</b> changes to local agency authorities and relationships and changes to or development of new local organizations	H L	H L	
<b>AP-3.</b> changes in the services agencies offer to the public	H L	H L	
<b>AP-4.</b> more consistent enforcement of current laws and regulations	H L	H L	
<b>AP-5.</b> the effects of federal regulations on state regulations and programs	H L	H L	
<b>AP-6.</b> new state regulations and laws as necessary	H L	H L	
<b>AP-7.</b> incentive programs to promote compliance with regulations	H L	H L	

<b>AP-8.</b> revisions to the current permitting process to make it more efficient	H L	H L	
<b>AP-9.</b> discussions about the law regarding the ownership of surface water and groundwater	H L	H L	
<b>AP-10.</b> taxes on water sales, transfers and uses	H L	H L	
<b>AP-11.</b> regionalization of water and wastewater systems	H L	H L	
<b>AP-12.</b> tribal claims to both ground and surface water	H L	H L	