



Status of Western States' Water Planning: *A Survey of Western States Water Council Members*

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Purpose of Survey

The Water Resources Division of the Department of Natural Resources and Conservation (DNRC) contracted with Montana Watercourse to conduct a survey of the 17 members of the Western States Water Council, excluding Montana. The purpose of the survey is to identify the water planning efforts of other states. This overview is meant to inform Montana state water planners on helpful processes, procedures and approaches to water planning that have proven helpful to other western states. DNRC will use this information in developing a water planning program for the state of Montana.



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The Process

The Montana Department of Natural Resources and Conservation's Water Management Bureau compiled a list of 19 questions designed to garner information about the status of state water planning programs in 17 member states of the Western States Water Council. The answers to these questions reveal information as to resource planning background and funding, the planning process, public involvement, plan implementation, and plan evaluation and oversight. The questions were answered through a combination of interviews with water planning experts from each state, from information previously compiled in a fall of 2013 document, *Public Outreach, Education and Engagement for State Water Planning: A Survey of Western States Water Council Members*,¹ and from online research.

List of questions:

Water Planning Program Funding

1. What is the annual budget for your water planning program?
2. How is your water planning program funded? Is there a dedicated funding stream?
3. If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

Planning Process

4. Is the concept of climate change incorporated into your planning process, and if so, how?
5. What contract services do you rely on to support plan development?
6. Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?
7. What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?
8. Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?
9. What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Public Involvement

10. What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?
11. Do you use citizen based groups such as basin committees or roundtables in developing the plan?
 - a) What role do they have in the planning process? Are they advisory only or do they have real decision making authority?
 - b) How are members of these committees or roundtables selected?
12. How is public comment received and incorporated in the process?
13. Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?
14. How is information developed during the planning process delivered to the public?

¹ A copy of the report is available at <http://www.dnrc.mt.gov/mwsi>



Plan Implementation

15. What is the purpose of the plan? Is it advisory or is there authority for plan implementation?
16. What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?
17. How do you prioritize projects or recommendations within the plan?
18. How are the projects or recommendations in the water plan funded?

Plan Evaluation/Oversight

19. How do you measure the cost effectiveness of your planning programs and their implementation?

Summary Observations

Findings in this survey reveal a range of water planning needs and strategies as varied as the states involved. Although the ultimate goal for these states is to identify the status of current water supply and demands and to plan management strategies to assure that future needs are met, no two states are alike in their most pressing needs, their ability to fund projects, or the process and approach used for water planning.

It is interesting to note that four of the 17 member states do not have state water plans. Arizona has plans in management areas that contain 83 percent of the state population and in some outlying irrigation areas. Washington's planning and management is done by 32 watershed groups. Nebraska is unique in that 32 Natural Resource Districts plan and manage at the local level. While in Nevada, water planning is the responsibility of water suppliers.

The remaining states take more of a statewide view of planning and management. However, in almost every case, regional, basin or sub-basin planning groups inform the state planning.

Commonalities among the states include the need for dependable, dedicated funding sources that are sufficient to meet the need for improved infrastructure, water storage, data collection and education. North Dakota, with its ample oil revenues seems to be the one exception. Increased public interest and involvement is another similarity among the states. Some states note that several years of drought and resulting competition for water resources is the driving factor for public interest.

When asked about the role of climate change in water planning, nine of the states are not actively planning for climate change. Instead, they address climate variability and examine scenarios for various moisture levels. There exists the recognition that greater weather extremes are possible. Planning for drought and for flooding occurs in some states.

State-by-State Findings

ARIZONA

Arizona has no state water plan. The Arizona Department of Water Resources (ADWR) oversees planning and management done by regional Planning Areas and in designated Active Management Areas (AMAs). The Planning Areas are composed of groundwater basins. The AMAs exist in areas of high population, where most groundwater is used, and where financial resources for management are available. The Rural Watershed Initiative Program deals with water planning for the 87 percent of Arizona that lies outside the five AMA's.



More information at: *State of Arizona Department of Water Resources' Annual Report-2013* (http://www.azwater.gov/AzDWR/documents/ADWRDirector/ADWR_Annual_Report_2013_July.pdf%20-%20Adobe%20Acrobat%20Pro.pdf), and from *Arizona's Next Century: A Strategic Vision for Water Supply Sustainability* (http://www.azwater.gov/AzDWR/Arizonas_Strategic_Vision/documents/ArizonaStrategicVisionforWaterResourcesSustainability.pdf).

Water Planning Program Funding

What is the annual budget for your water planning program?

Total ADWR state appropriation for FY 2013-2014 is \$12,940,500. The water planning program is wrapped into this amount.

How is your water planning program funded? Is there a dedicated funding stream?

Funding comes from legislative appropriation. Current fiscal year funding is restricted to special line items including rural water studies, groundwater monitoring, water adjudication, conservation and drought program and Lower Colorado River Litigation Expenses.



If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

Arizona was one of many states severely impacted by the recent, prolonged recession. All state agencies experienced budget cuts. Since the agency was cut by 60 percent in 2010, some of the lost positions have been recovered. Currently two employees dedicate most of their time to water planning, and other staff help as they can. This amounts to approximately three FTEs with a budget of about \$250,000 per year for the past several years.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

The 2013 Annual Report addresses climate change as one issue of two critical challenges/opportunities of the state. (The other critical issue being the continuation of groundwater management in the state's five active management areas.) The 2013 Annual Report garnered information from recent reports by the Arizona Water Resource Development Commission and the *Colorado River Basin Water Supply and Demand Study* (Basin Study) (<http://www.usbr.gov/lc/region/programs/crbstudy.html>). The 2013 Report states: "both reports quantified the magnitude of the issue to a greater degree than ever before. The state will face several related issues some of which are associated with the current regulatory framework, some financial, and some physical availability issues that will require infrastructure upgrades and, may require augmentation of supplies from outside of the state."

Responding to this issue, Governor Brewer asked ADWR to prepare a statewide strategic vision to provide the state Legislature and Governor with options for water management. Working in partnership with U.S. Bureau of Reclamation, six other Colorado basin states, and many others in the Arizona water community, the Basin Study was developed. The Basin Study identified the long-term imbalance between available supplies and projected water demands over the next 100 years of up to 3 million acre-feet. In January 2014, ADWR presented the *Strategic Vision for Water Supply Sustainability* that identifies regional issues, solution options, barriers to those solutions, and associated costs in a comprehensive plan presented to state policy makers.

What contract services do you rely on to support plan development?

Regional planning efforts include technical studies of specific areas throughout the state conducted through contractual agreements with the United States Bureau of Reclamation (BOR) and the United States Geological Survey (USGS).

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Water planning and management are done regionally, based upon groundwater basins. AMAs are areas where groundwater depletion is most severe: Prescott, Phoenix, Pinal, Tucson, and Santa Cruz. Eighty-three percent of the state's total population resides within the AMAs. Irrigated Non-Expansion Areas (INAs) includes three areas where groundwater depletion is less severe, and where land that was legally irrigated between 1975 and 1980, may continue irrigation at the same level, but may not expand irrigation efforts. The Rural Watershed Initiative Program deals with water planning for the 87 percent of Arizona that lies outside the five AMAs.



What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

Issues include:

- Assured Water Supply (AWS) Program – ensures people inside AMAs have sufficient water.
- Adequate Water Supply Program – ensures people outside AMAs are notified of whether their water supply is adequate or inadequate for at least 100 years.
- Recharge and Recover Program – delivery, storage and use of renewable water supplies.
- Well Rules and Regulations.
- Compliance Program – adhere to conservation requirements.
- Data Management – centralizes data for AMAs and INAs.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

The Water Resources Development Commission (WRDC) reached out to all stakeholders in the state. Major stakeholders included Central Arizona Water Conservation District, the Arizona Water Banking Authority, the Colorado River Interagency Working Group, the Central Arizona Project, Arizona Indian Tribes, and the five Active Management Areas.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

While the state does not have a statewide plan, an extensive set of laws, rules and management plan requirements are in place for the use of groundwater. The landmark 1980 Groundwater Management Act (Code) brought together, for the first time, all responsibilities for water planning and regulation (except water quality) to the newly created Arizona Department of Water Resources.

Creation of the agency followed more than ten years of controversy over groundwater management in the state. Cities, mining districts and the agricultural community were locked in divisive debates. Cecil Andrus, then Secretary of the Interior, issued an ultimatum: unless Arizona enacted tough groundwater laws; he would not approve construction of the Central Arizona Project. That threat was enough to begin the process of more stringent laws and regulations that have served the state well to this time.

As several years of drought and continued growth in the state have increased the demand for water, issues over water supply continue.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

During the 1990s most public interest came from those with concerns that the Code was too restrictive, and that as the price of groundwater got higher, people would eventually quit using that source. Now, after years of drought, the concern is that the Code is not restrictive enough and does not limit pumping outside of AMAs. Irrigators are concerned that the excess Central Arizona Project water they have used since the early 1990s will no longer be available to them due to impending shortages to junior water users.



Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

Each AMA has a five-member advisory council appointed by the Governor as established by the Groundwater Code. Members are appointed for six-year terms to represent groundwater users in their respective AMA. Each Groundwater Users Advisory Council (GUAC) provides advice and recommendations to the AMA Director on groundwater management programs and policies within the AMA.

How is public comment received and incorporated in the process?

No response provided.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

ADWR stays in touch with the public through email blasts to stakeholders, and posting public meetings and agendas online and at ADWR headquarters. The new Strategic Vision, and reports and information for the AMAs are posted on the agency website.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The Code allows ADWR to regulate the use of groundwater, but the users are allowed to decide how to conserve or limit their use. The 2014 Strategic Vision is not regulatory but serves as a guide to the state Legislature for prioritizing management strategies.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Because ADWR does not build or finance projects, water conveyance structures or dams, this does not apply.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

ADWR General Fund appropriations have been inadequate in the past and costs have largely been borne by municipal water providers. The Water Resources Development Revolving Fund has provided funding mostly for water projects in rural areas of the state. This funding has currently been cut. In the past, federal funds have been used for large projects. Smaller projects in high population areas mostly rely on water rates paid by users. The Water Infrastructure Finance Authority of Arizona (WIFA) is an independent agency of the state and is authorized to finance construction, rehabilitation and/or improvement of drinking water, wastewater, wastewater reclamation and other water quality facilities and projects.



Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

No measurement of cost effectiveness occurs.

ARKANSAS

Beginning in 1969, state agencies were responsible for developing a comprehensive water plan. The statute was vague and stated the need to update “from time to time” and “make the public aware of updates.” In 1985, the Arkansas Soil and Water Conservation Commission updated the original water plan, and developed the *1990 Arkansas State Water Plan* that addressed state needs for the next 20 years. Beginning in the fall of 2013, a new round of planning began. The Arkansas Natural Resources Commission (ANRC) has the responsibility of updating and then adopting the plan by rule. The planning process will reach the rulemaking stage for public comment by 2015.

More information at: Arkansas Natural Resources Commission’s Arkansas Water Plan (<http://www.arwaterplan.arkansas.gov>).

Water Planning Program Funding

What is the annual budget for your water planning program?

Currently, the Arkansas Legislature and Arkansas Game and Fish are financing the \$4 million total project cost to update water planning.

How is your water planning program funded? Is there a dedicated funding stream?

No response provided.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

The number of positions has not changed during the current round of planning. The Legislature appropriated \$4 million to complete the update. With that money, CDM Smith Consulting and a local engineering firm were hired to do the bulk of the work, including outreach. Some of the money has funded USGS studies and other expenses.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

Climate models are on too large a scale for state planning efforts. Runoff, precipitation and streamflow trend studies with USGS and the Corps of Engineers have been completed to determine if there are any big patterns.

What contract services do you rely on to support plan development?

Several engineering firms have been contracted to assemble data and review demands and supplies for agriculture, industry, recreation, municipal water, navigation, fish and wildlife, power generation and other uses.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Planning is being done through geographic planning areas. The five regional planning areas are: north, east, west-central, south-central and southwest. A series of Issues and Recommendations Workgroup meetings, taking place around the state, look at regional issues and possible solutions.



What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

Projected water needs are being evaluated up to the year 2050. All the state's major water demand sectors: municipal, residential, commercial, industrial, agricultural and energy are considered. Water supply estimates for wildlife and fish are incorporated into the plan. Shortfalls between supply and needs will be identified and solutions provided for a safe and reliable future water supply.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

Representatives from entities with lobbying duties such as Farm Bureau, environmental groups, power companies and agricultural concerns made up the Demand Work Group. This group was instrumental in projecting water demands for the state. The steering committee for water planning is composed of agencies such as the Natural Resource Conservation Service, the Health Department, the Environmental Quality, the United States Geologic Survey, the Game and Fish, extension offices and law schools. The plan has targeted eleven sectors for inclusion: public water/wastewater providers, industrial water users, agricultural irrigation, livestock/poultry/aquaculture, thermoelectric, fish and wildlife, recreation, navigation, municipal governments, county governments and conservation districts.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

As the planning process approaches the end of the Issues and Recommendations Workgroup meetings, controversial issues are now becoming apparent. Water use regulation is the major issue of controversy.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

Interest and involvement are ever increasing, due in part, to increased water demands.



Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

Volunteer work groups are made up of water experts who manage and use water. Focus is on water use and demand forecasting, water supply availability, and developing potential solutions to shortfalls between supply and demand. Citizens are encouraged to attend planning meetings and provide input. Citizen input is advisory.

How is public comment received and incorporated in the process?

Beginning in the summer of 2013, the public participation process began with meetings throughout the state. These meetings focused on water demands. Beginning in the fall of 2013, a new round of public meetings took place, this time with a focus on water availability. Currently, the public is encouraged to attend regional workshops to identify and prioritize water issues in their areas. Nearly 1,000 citizens and resource planners have attended meetings to discuss regional and state issues. These meetings resulted in the development of the draft *Issues and Recommendations Report* that is posted on the ANRC website. This report will lead to the draft *Arkansas Water Plan Update*. Public comments can be submitted at any time through email, mail and phone calls to ANRC.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

The Arkansas Water Plan website contains updates through links to monthly newsletters. These newsletters are emailed to all who have attended meetings, submitted comments or have joined the mailing list.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The plan is both advisory and there is authority for plan implementation. General recommendations, such as the need for more water education, will be advisory. Others, such as specific numbers for the amount of water that may be used under the state's non-riparian permitting system will be firm numbers adopted by rulemaking.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

It is unknown at this time because it is too early in the process to know.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

Insufficient funding is an issue for maintaining existing and ongoing water projects, development of future projects, research, conservation practices, and education and outreach. Funding for projects and recommendations will be apparent following completion of the current water planning process. Recommendations in the draft *Issues and Recommendations Report* request that ANRC identify potential



funding sources that include such things as increasing public bond funding authority, and sales tax for water quality and quantity projects. Also recommended, are increased tax incentives for projects that reduce groundwater use, switch to surface water, and encourage conservation and installation of water meters to monitor groundwater usage.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

During the update, efforts are made to stay well within the money available.

CALIFORNIA

The California Department of Water Resources (Department) is responsible for updating the state water plan as part of a well-defined and ongoing five year program of state and regional plans. The *California Water Plan Update of 2013* (Update 2013) is the most recent document. Update 2013 is an integrative plan encompassing water quality, water quantity and ecosystem/health/safety/economic issues. The emphasis for the Update 2013 is on local planning. The focus is on solutions for meeting growing water demands. Due to funding concerns, the financial plan identifies critical priorities for integrated water management.

More information at: California Water Plan (<http://www.waterplan.water.ca.gov>).

Water Planning Program Funding

What is the annual budget for your water planning program?

Average annual budget through FY 2012/13 has been just under \$6 million. Starting FY 2013/14, the budget is about \$3 million.

How is your water planning program funded? Is there a dedicated funding stream?

The baseline budget has been funded primarily through State General Funds (\$2 – 2.5 million/yr) plus some funding from the State Water Project revenues (\$700,000/yr). General Obligation bond funds for the last 10 years or so supplied nearly half of the total budget by 2013.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

Over the 10 year period, the number of people working full time on the Update 2013 increased by up to 100 percent to help develop new data and analytical tools, and to launch new and expanded outreach processes. The increase in people working on the Update 2013 occurred through a matrix within the Department (not new “positions” per se). The Department did not want to build the Update 2013 program staff/organization around temporary General Obligation bond funding. Therefore, core Update 2013 staffing, from an organizational standpoint, remained constant at about 8 positions plus a handful of consultants as needed.



Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

The Update 2013 addresses the uncertainty of future climate change and its impact on new resource management strategies. The Climate Change Technical Advisory Group of the Department of Water Resources has included 27 alternative climate scenarios in evaluating future strategies. Included are 12 scenarios from the Governor’s Climate Action Team, five scenarios repeating historical climate, five scenarios repeating historical climate with a severe three year drought, and five scenarios repeating historical climate with a warming temperature trend.

What contract services do you rely on to support plan development?

Outreach relies heavily on experienced facilitation consultants. It has worked well in that they retain neutrality on all issues, help manage what are very often contentions discussions/issues and they help the Department convey highly technical and complex information to stakeholders and the public.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

State and regional planning begins at the local level, where current planning is focused. Regional meetings have been, and continue to be held around the state, with input from local stakeholders.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

The integrated aspect of current planning incorporates public safety, environmental stewardship and economic stability. The issues addressed in the update align as seen in this illustration.



Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

Input from stakeholders was incorporated through three committees: the Public Advisory Committee, the Tribal Advisory Committee, the State Agency Steering Committee; and a Federal Agency Network.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Given California’s sociopolitical diversity, extreme climate variability, very high stakes, and resource limitations, there are dozens of controversial issues. According to Paul Massera, manager of Strategic Water Planning, the top five are (in no particular order):



- Funding – Who should pay for future improvements and how should they be paid for? This centers around the issue of funding reliability given the public’s reduced ability and willingness to pay for improvements.
- Groundwater supply and management – In California, local entities are largely responsible for the state’s groundwater resources which gives locals the flexibility to determine their use and management of groundwater basins. Some basins face overdraft or water quality issues that make it difficult to develop a cohesive state policy. The state government lacks data regarding groundwater use and water quality.
- Flood risk – There are currently about 7 million people and \$600 billion in assets occurring in floodplains in California. These numbers are likely to increase in the future due to urban growth and climate change (increasing peak flood flows and sea level rise).
- Aging infrastructure – Most infrastructures were constructed over 50 years ago and are not able to meet many current and growing demands, and stressors on the systems.
- Degrading environmental conditions and water quality – California has experienced decades of habitat and species declines.

Three over-arching issues are:

1. Common lack of cohesive voter/taxpayer support for particular solutions. Although people can sometimes agree on principles or values, when it comes to implementing specific projects, influential opposition is nearly a certainty.
2. Land use decisions are made at a local level, which can be seen as positive from a local, shorter-term economic development standpoint, but collectively, these decisions have statewide implications (e.g. water supply and flood risk).
3. Climate change is expected to exacerbate nearly every current challenge such as flood risk, ecosystem health and habitat declines, increases in crop irrigation needs, and salinity intrusion in the state’s rivers and coastal groundwater basins.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

The public has become much more involved owing to the Department’s expanded outreach and also to the growing awareness of imminent threats to Californian’s safety, ecosystems and economy.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

The Update 2013 incorporates input from the Public Advisory Committee, the Tribal Advisory Committee, and the State Agency Steering Committee as well as a Federal Agency Network. Regional forums, held around the state, allowed for local input from diverse interests. Citizen design teams in each of the state’s 14 regions were responsible for setting agendas. The citizen role was advisory.

How is public comment received and incorporated in the process?

The public is invited to all meetings which are posted on the DWR website. Comments may be submitted to the Department via email, fax, mail and direct phone lines. Public comments, posted online, appear by date, topic and author of the comments.



Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

The major communication tool is the weekly *Water Plan E-newsletter* that identifies important water management information and dates of upcoming meetings, workshops and other opportunities to become involved in water planning/management. The Department uses email, webinars, and documents posted to the Update 2013 website to disseminate information, as well as distributing information at public meetings.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The Update 2013 provides guidance for water managers and elected officials, but does not create mandates, prioritize actions, or appropriate funding.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Many trade-offs are considered both quantitatively (data and analytical tools) and qualitatively such as stakeholder values and priorities. Stakeholder input provides a basis for the strategic, long-term vision for California's water. Examples of other trade-offs include: costs and benefits of potential strategies, environmental impacts and economic stability, planning horizons (i.e., planning for a 50 - 100 year horizon can result in different priorities than a 10 - 20 year planning horizon), governance and oversight, and finance (i.e. borrowing versus pay as you go). The Update 2013 seeks to find multi-benefit solutions to help address trade-offs (or minimize the win-lose paradigm) and to garner broader stakeholder support.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

The range of actions in the Update 2013 involves a broad range of implementers and funding sources. A menu of funding alternatives is provided in Update 2013. Most funding comes from the General Fund, General Obligation bonds, Revenue bonds, user fees, utility taxes, impact fees, statewide water user fees and assessment districts.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

Least Cost Planning (LCP) models help identify the mixes of alternatives that are most cost-effective over the project life and/or cost-recovery period. This includes capital, environmental mitigation, observations and measurements, and decommissioning costs. In order to achieve an integrated water management approach, the Department is developing methods to better quantify non-economic costs and benefits, including ecosystems services and assets. For the longer term, sustainability indicators are being developed to help better track performance.



COLORADO

The Colorado Water Conservation Board (CWCB) regularly updates the *State Water Supply Initiative* (SWSI). Past planning efforts have not focused on an overall state water plan, but rather, have combined local and state needs. The legislated Inter-Basin Compact Commission (IBCC) at the state level, and the nine Basin Roundtables at the local level, carry out planning duties. Planning efforts in 2004 and 2006 focused on water needs through 2030, conservation, agricultural water transfers and environmental needs. Planning during the 2008-2010 period included greater stakeholder diversity to project water use through 2050. The Governor's 2013 Executive Order requires a statewide water plan. Planning is now underway for the *2015 State Water Plan* (SWP).

More information at: Colorado Water Conservation Board (CWCB) website (<http://cwcb.state.co.us/water-management/water-supply-planning/Pages/main.aspx>). Find basin by basin activities on the CWCB website under Basin Roundtables.

Water Planning Program Funding

What is the annual budget for your water planning program?

Annual funding is about \$750,000 for water planning (state meetings with stakeholders and the nine Basin Roundtables (BRT's)) and for contracted technical work. This amount has remained steady for the past several years.

How is your water planning program funded? Is there a dedicated funding stream?

Funding comes from two main sources. The Colorado Water for the 21st Century Act of 2005 mandated support for water planning by setting up the nine Basin Roundtables (BRTs), and creating an IBCC. This funding supports the planning efforts of stakeholders and for education/outreach for the public. Other money comes through general funds that support the SWSI. The SWSI provides technical information regarding Colorado's current and future water supply and demands, and is the responsibility of the CWCB.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

The budget has not changed much over the years. Funding is tied to severance taxes. When oil and gas exploration dipped several years ago, the funding dropped proportionally. What has changed is the Governor's 2013 Executive Order requiring a state water plan. The *Colorado Water Plan* grew out of information from the SWSI, IBCC, and BRTs that showed the current planning process was not looking at the growing water needs of the entire state. This has added additional responsibilities to the staff, and has created some managerial staff changes, but the Executive Order came with no additional funding. This is the initial year of planning, with a draft version to be prepared for public comment by December 2014. The final plan is due December 2015.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

Climate change is a central focus of water planning for Colorado. As stated on the CWCB website, the state recognizes that "severe drought and projections of greater climate variability raises significant concerns about the water supplies Colorado has available to meet the needs of its citizens and the environment". The interest stems largely because of irrigation needs in the heavily agricultural areas of



the state and due to water demands from other states as established through interstate Colorado River compacts. The *Colorado River Water Availability Study* (CRWAS) was undertaken in 2012 to determine, among other things, a reasonable projection for hydrology as affected by climate change. CRWAS involves several state-sponsored projects, including the CWCB Climate Change Technical Advisory Group (CCTAG) and the *Joint Front Range Climate Change Vulnerability Study* (<http://cwc.state.co.us/environment/climate-change/Pages/JointFrontRangeClimateChangeVulnerabilityStudy.aspx>). The CWCB coordinates its CRWAS efforts with ongoing water policy and management programs, including the Interbasin Compact Committee and basin roundtables processes (<http://cwc.state.co.us/about-us/about-the-ibcc-brts/Pages/main.aspx>).

What contract services do you rely on to support plan development?

Contracted engineering consultants do most of the technical modeling for supply and demand calculations. Each BRT contracts with professional facilitators for stakeholder meetings.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Colorado water planning has been done through nine BRTs for each for the state’s eight major river basins and the Denver metropolitan area. With the new directive for a state water plan, the focus will be statewide, and will incorporate issues and concerns at the basin level.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

BRTs are required to develop basin-wide needs assessments that address consumptive and non-consumptive water needs, available water supplies (surface and groundwater) including an analysis of unappropriated waters, and proposed projects or methods to meet identified water needs to achieve water supply sustainability over time. Planning now is taking a statewide look, with meetings throughout the state, at major issues such as trans-basin transfers of water and agricultural transfers to municipalities.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

The major stakeholders are represented on each of the BRTs. Each roundtable consist of Designated Members

- One member appointed by each county within the roundtable’s boundaries.
- One member appointed jointly by all the municipalities within any county in the roundtable’s boundaries.
- One member appointed by each water conservancy and water conservation district within the roundtable’s boundaries.
- One member appointed jointly by the chairpersons of the Colorado House and Senate Agriculture Committees.

10 At-Large Members (appointed by the designated members in consultation with the Director of Compact Negotiations)

- One representing agricultural interests.
- One representing recreational interests.
- One representing local, domestic water providers.
- One representing industrial interests.
- One representing environmental interests – selected from eligible candidates representing established Colorado environmental organizations.



- At least five of the 10 at-large roundtable members must own water rights or have a contract for federal water.

Colorado Water Conservation Board

- The CWCB Board member from the basin serves as the liaison between the roundtable and the CWCB.

Non-Voting Members (appointed by the full roundtable membership)

- Non-voting members must own water rights or have a contract for federal water to represent out-of-basin water interests within the roundtable's boundaries, or representatives that have interests in and are knowledgeable about water matters.

Agency Liaisons

- Bureau of Land Management
- Bureau of Reclamation
- Colorado Geological Survey
- Colorado Water Quality Control Division
- CSU Extension Service
- Division of Water Resources
- Division of Wildlife
- National Park Service
- U.S. Fish and Wildlife Service
- U.S. Forest Service

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Protecting private property and water rights are the primary concerns of stakeholders. Current water planning efforts are focused on three major points of controversy:

- 1) Conservation of water –This is of major importance in light of continued growth along the Front Range, where demands are stressing the supply. Enhanced levels of conservation for industry, business and private use are each being examined.
- 2) Agricultural transfers of water to municipalities – Alternate transfer methods (Alt Transfers) are being explored that would allow a better sharing of the resource. One consideration is to allow water right permits to recognize multiple use.
- 3) Water diversion across the Rocky Mountain Divide – With 80 percent of the water west of the divide, and 80 percent of the population east of the divide, more water diversions are being considered.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

Public involvement has grown as a CWCB has seen a need, and as demanded by the public. A new position for public outreach and communication at the CWCB manages the increased need to involve the public. The Public Education, Participation and Outreach (PEPO) Workgroup, composed of representatives from each BRT, works to involve the public. Each BRT has an Education Action Plan in place. Over the past few years, a group of over 400 stakeholders has been involved in basin-level education, and the number is growing. The IBSS and staff from the CWCB travel around the state meeting with municipalities, counties, Council of Governments, the Metro Mayors group and other civic and governmental groups.



Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

The nine BRTs develop regional plans that are advisory in nature. Additionally, PEPO Workgroup, consisting of 2 educational liaison members from each roundtable, creates the process to inform, engage and educate the public on the IBCC's activities, and relays public input and feedback to the IBCC. PEPO educates the IBCC and BRT members on water issues.

How is public comment received and incorporated in the process?

The PEPO Workgroup is a legislated committee of the IBCC. This workgroup consists of two educational liaison members from each BRT. The group creates the process to inform, engage and educate the public on the IBCC's activities. They also develop the mechanisms for public input and feedback to relay to the IBCC.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

The very active PEPO maintains an up to date online presence (<http://cwcb.state.co.us/public-information/Pages/PublicInformationHome.aspx>) and relies on a variety of social media to keep the public informed. Roundtable PEPO liaisons provide information through brochures, classes and outreach events. Some BRTs now have weekly information in area newspapers, or provide weekly or monthly e-newsletters. Radio spots and public meetings are increasing at the basin level.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The basin level plans identify specific projects to meet needs of the basins. These plans lay out recommendations for implementing the projects. Thus, they are advisory in nature. The SWP will not contain specific projects, but will be a summary of major components needed to help each basin complete their recommended projects. The SWP will focus mostly on suggested methods to fund the projects and on making the permitting process more efficient. One project in the state was recently completed, but the process took 60 years. Another project took 15 years. The SWP will identify possible MOUs with partner agencies for each project. In this light, the SWP will be more than advisory.

The policy section of the SWP will request legislative action. This section will outline ideas for policies such as a flexible water market (Flex Market) that would allow the Water Court to change permits from single to multiple use. Other policy recommendations will deal with conservation measures and water transfers. The idea is to make these incentive based rather than mandated.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

With the SWP in its initial stages, tradeoffs have not yet been identified. Most of the discussion has focused upon going through the permitting process for recommended projects.



In 2011 an interactive Portfolio and Trade-off Tool (<http://cwcb.state.co.us/technical-resources/portfolio-tool/pages/main.aspx>) was created to allow people to build their own scenarios of projects. The tool is designed to demonstrate the trade-offs that result. The tool has brought people together as they have a better sense of the realities of developing projects.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

The Colorado Water for the 21st Century Act of 2005 allocated funding of \$10 million annually. Projects must pass both the CWCB and the IBCC before funding is granted. Currently the process to grant funding is undergoing review to assure that funds are meeting program goals. An estimated \$20 billion is needed to meet project development and maintenance needs through 2050. Local water providers and ratepayers will pay for much of this. It is unknown what percent should be the responsibility of the state.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

It is too early in the process to know this.

IDAHO

Water planning in Idaho is the responsibility of the governor-appointed, eight member, Idaho Water Resource Board (IWRB). This board, along with the Department of Water Administration, combined in 1974 to form the Idaho Department of Water Resources. IWRB is responsible for planning for the conservation, development, use and management of the state's water resources. Planning is accomplished through three state programs. The *Idaho State Water Plan* (Plan) contains policies to guide water resources. The *Comprehensive Basin Planning Program* inventories, assesses, and protects values of water in a specific basin, waterway, aquifer or geologic area. The *Comprehensive Aquifer Planning Program* plans for future water needs to avoid conflicts over competing water needs in the future.

More information at: Idaho Water Resource Board website

(http://www.idwr.idaho.gov/waterboard/WaterPlanning/Statewaterplanning/State_Planning.htm).

Water Planning Program Funding

What is the annual budget for your water planning program?

The budget in the IWRB is variable. New legislative funding in 2014 of \$15 million from the General Fund is project specific and is currently dedicated to construction of three reservoirs and several other priority activities. The \$5 million from the state cigarette tax is ongoing and funds the statewide aquifer stabilization efforts and staffing. In 2008, the Legislature granted a one-time \$8 million for aquifer planning, modeling and data collection.

The Comprehensive Aquifer Planning Program has been underfunded. The 2014 Legislature awarded \$5 million annually from the tobacco tax to address aquifer stabilization. The first priority is with the Eastern Snake Plain Aquifer and determining how to incorporate additional aquifers to this program.



How is your water planning program funded? Is there a dedicated funding stream?

Planning staff and activities are funded through the General Fund and are a part of the budget of the Idaho Department of Water Resources. The tobacco tax (\$5 million mentioned above) is the only dedicated funding stream. There is some flexibility as to how these funds are allocated each year.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

The 2008 funding allowed an increase of three new staff positions to support planning. Staffing has held steady since that time.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

The 2012 Idaho State Water Plan (Plan)

(<http://www.idwr.idaho.gov/waterboard/WaterPlanning/Statewaterplanning/PDFs/ADOPTED%20State%20Water%20Plan%202012.pdf>) addresses this issue in a very straightforward way by stating that, “Preparedness strategies should be developed to account for the impact of climate variability on the state’s water supplies.” The Plan explains that evidence suggests the earth’s climate is warming, and that this can potentially affect water supplies. Implementation strategies are identified in the Plan, as are milestones necessary to achieve the strategies.

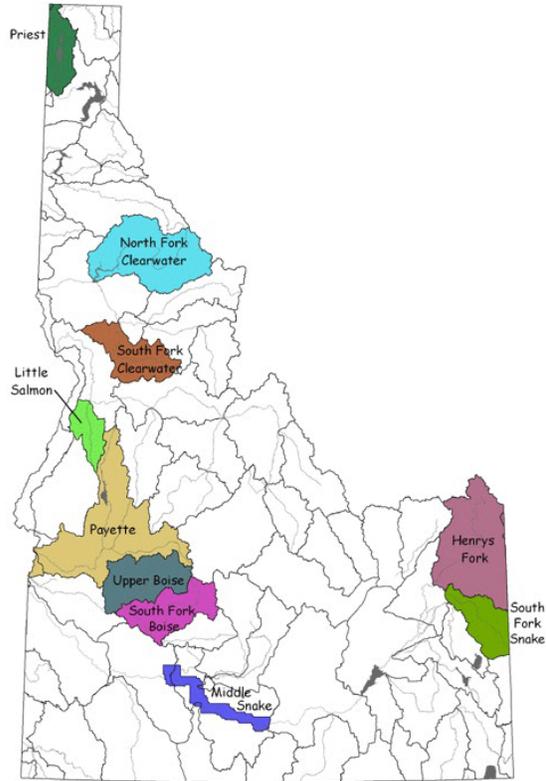
What contract services do you rely on to support plan development?

Resource pooling with other entities such as local governments and irrigation districts, involves some contracted services. Currently, USGS is contracted for some technical services such as groundwater modeling development. Planning and implementation relies on contracted consultants. The University of Idaho has provided some groundwater modeling and other technical work. Work on new reservoirs includes contracts with the Bureau of Reclamation and Corps of Engineers.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

The Plan incorporates statewide water policy as well as a basin-level focus, and aquifer plans that cover specific geographic areas of the state. The Comprehensive Aquifer Management Planning (CAMP) provides information to form management of ground and surface water resources for the next 50 years, with an eye towards sustainability of water supplies and optimum use of water resources. The three CAMPs are the Eastern Snake Plain Aquifer, Treasure Valley and Rathdrum Prairie.

Plans have been completed, or are in development for the basins indicated on the map.



What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

The Plan has been revised five times since 1976. The issues in the current Plan reflect changes over time and are based upon progress made during the last Plan period, public input and stakeholder concerns. The Plan incorporates planning in three general areas: optimum use, conservation and management.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

No response provided.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Not many points of controversy arose during the Plan revision between the 2008 and 2012. However, over time, the issue of over-allocation has become controversial and the IWRB seeks to find a balance between economic development and senior water rights.

During the recent 2013 legislative session, a small faction of legislators focused upon topic-specific issues such as the relationship between private property rights and state/federal role in regards to water management. Ideological beliefs did not prevail. Another overriding concern was with the groundwater-surface water interaction and the impacts on the aquifer and surface water flows in the Eastern Snake River Plain and Aquifer. Increasing groundwater use has resulted in impacts on the Snake River and spring flows and delivery calls have been driving actions to resolve the conflicts. The key comes in finding a balance between economic viability of value-added agricultural processes, commercial development and the issue of prior appropriation.



Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

The IWRB notes an increased involvement in the planning process due to current political climate, the issue of drought, and potential curtailment of water delivery. Opinions vary among policy makers regarding the role of public involvement. Areas that attract increased public interest include groundwater, new project development and creation of new reservoirs.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

No response provided.

How is public comment received and incorporated in the process?

A subgroup of the Water Resource Board (Board) that formed the water planning revision process, initiated organization for the 2012 Plan. Their 40 meetings were open to the public. Additionally, they held seven public hearings around the state during the 90-day public comment period. The Board took comments on advisement and submitted conditional language to the Legislature for acceptance.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

All draft versions of planning documents are posted to the website. Other means of reaching the public include:

- News releases prior to local hearings.
- Board Chair invited response to draft documents posted on IDWR website.
- Email list with several hundred contacts.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

Article XV, Section 7 of the Idaho Constitution provides the authority for the preparation for the SWP by a "Water Resource Agency." In 1965, the Idaho Water Resource Board was created and given legislative authority to "progressively formulate, adopt and implement a comprehensive state water plan...". In 1984, this Article was amended to provide that "the Legislature of the State of Idaho shall have the authority to amend or reject the state water plan in a manner provided by law..."

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Water planning and management discussions during the recent 2014 legislative session focused political pressure upon funding for projects and on water available to meet growing demands. There is urgency to address groundwater verses surface water and to plan for future needs.



How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

The Board is authorized to finance water projects with revenue bonds that do not constitute a general obligation of the state or of the Idaho Water Resource Board. The Board’s Revolving Development Fund and Water Management Account are supported by appropriations from the state’s general fund, federal funds, and other revenue sources. Other revenue sources can come through establishment of water management improvement or conservancy districts, targeted user fees, or by power franchise fees, targeted sales, property, or special product and services and taxes.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

The state struggles with measuring the cost effectiveness of planning programs. Planning has morphed to address political pressures and conflicts. In the past, the state protected rivers using state authority to forestall federal designation of rivers. The intent was to protect the resource. Now, new water use conflicts and new pressures result in planning that is immediate; not future looking. In light of this, cost effectiveness is not being addressed as much as it is being precluded. The state perspective is that local users have been protected. Now the state is moving to protect aquifers and prevent future conflict.

KANSAS

The Kansas Water Office (KWO) is currently working with state, federal, and interstate partners to develop the five year update of the *2009 Kansas Water Plan (KWP)*. The State Water Resources Planning Act of 1963 provides statutory authority and guidance for formulating the KWP. Two entities hold specific roles in water planning. The KWO coordinates efforts to address water development, conservation and management. The Kansas Water Authority (KWA) consists of 13 appointed citizen members representing various water resource interests and 11 state agency representatives. Citizen Basin Advisory Committees (BACs), organized in the 1980s, are integral to the planning process.

In 2013, the Governor called for development of a *50 Year Vision for the Future of Water in Kansas (Vision)*. This Vision call has resulted in renewed public involvement in the planning process.

Links to the 2014 KWP are posted to the Kansas Water Plan 2014 website (http://www.kwo.org/Kansas_Water_Plan/KansasWaterPlan2014.html) as drafts become available.

Water Planning Program Funding

What is the annual budget for your water planning program?

The 1989 statutory funding of the State Water Plan Fund (SWPF) provides revenue to fund the KWP. The fund is administered by the KWA. Revenue is subject to annual appropriations and is generated by:

- Fees on sale or use of municipal, industrial and stock water.
- Fees imposed on fertilizer and pesticides.



- Sand royalty receipts.
- Pollution fines.
- Clean Drinking Water Fee Fund.
- State General Fund Transfer.
- Economic Development Initiates Fund.

Historically, the SWPF has generated between \$17-20 million annually. The FY 2013 projected revenue was \$14 million. This included a scheduled Economic Development Initiatives Fund (EDIF) transfer. However, in FY 2014 this transfer did not occur, reducing the total available to about \$8 million.

How is your water planning program funded? Is there a dedicated funding stream?

See above.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

The driving factors behind decreases to the fund involve a decrease in water use and the deletion of the EDIF transfer to the SWPF. No impact to the number of planning positions has occurred since positions are funded from the State General Fund rather than from the SWPF.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

One of the guiding principles of the *2014 State Water Plan (Plan)* is to “Reduce Our Vulnerability to Extreme Events.” Potential impacts on stream flows, nutrient dynamics, flooding, infrastructure and water supply storage due to climate change are taken into account in the planning process, specifically in strategic plans developed to achieve goals. For example, the need to add additional storage for surface water supply during extended droughts is being addressed through proposed operational changes to federal reservoir releases and other potential operational modifications. Discussions are underway to determine if changes are needed in regards to new NOAA precipitation frequency estimates to evaluate adequacy of current infrastructure design standards to manage higher peak flows.

As stated in the introduction to the 2014 Plan: “There is continuing disagreement about the degree to which human activity has been responsible for change and on how to best respond to change. Proposals to reduce greenhouse gas emissions have received the most attention to mitigate climate change but adaptation is another strategy that is being considered. Widely agreed upon models forecast even more variability in weather and climate resulting in more extreme droughts and floods. Because Kansas is an agricultural state, both of these phenomenon have the potential to upset the historic patterns of benefits attributed to a healthy agricultural economy.”

What contract services do you rely on to support plan development?

Much of the planning work is accomplished in house. As specific needs are identified, partner entities are involved in the planning. These include the US Army Corps of Engineers, the Bureau of Reclamation, USGS, Kansas Geological Survey and Kansas Biological Survey in addition to universities and private consultants. Data and knowledge derived from these studies are incorporated into the planning process on a regular basis.



Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Planning is done on a regional basis. BACs are citizen groups that represent stakeholders in 12 river basins. Each BAC is composed of 11 members representing water stakeholders from municipal, other public water suppliers, domestic, irrigation, industry, recreation and members at-large.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

The Kansas Water Resource Planning Act establishes long-range goals for the management, conservation and development of the waters of the state, including:

- Development of sufficient supplies of water for beneficial purposes to meet the anticipated future needs.
- Reduction of floods and of losses resulting from floods.
- Protection and improvement of states' water quality.
- Public and private management of atmospheric, surface and groundwater supplies.
- Prevention of water supply waste.
- Prevention of water pollution.
- Efficient, economic distribution of the water supplies.
- Coordination of the development of the water resources with the development of the other resources.
- Protection of the public interest through water conservation in a technologically and economically feasible manner.

Ground and surface water management takes place through:

- River-reservoir management.
- Stream reaches with established Minimum Desirable Streamflow.
- Streams outside of Minimum Desirable Streamflow protected areas.
- The Ogallala-High Plains aquifer.
- Groundwater outside of the Ogallala-High Plains aquifer.
- Interstate water management.

The Kansas Water Plan Video 2014

(<https://www.youtube.com/watch?v=9lmbgc8zuTU&feature=youtu.be>) provides an overview of the current update and focus issues.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

All BACs consist of seven core categories that represent major stakeholder groups: agriculture, conservation/environment, fish and wildlife, industry/commerce, municipal public water suppliers, recreation and one slot for an at-large public member. Two to four additional members represent diverse stakeholder interests unique to each BAC. Additional guidance, input and information comes from other state agencies including the Division of Environment in the Department of Health and Environment, and the Division of Water Resources in the Department of Agriculture. The Kansas Geological Survey and state universities also provide data.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

The biggest controversy is the challenge to address the most pressing issues in a timely manner, given increasingly limited resources. Identifying these issues can be challenging because of different agency priorities. Thus, planning is directed towards the broad Vision. The Vision will be incrementally



implemented through regular five year updates of the Plan. These updates will identify goals and plans to achieve the Vision, with consideration for priorities and what can actually be accomplished during the five year period.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

The Governor's call for development of the 50 Year Vision has resulted in almost 200 meetings attended by over 9,000 citizens throughout the state to gather public input into the Vision development process. It is not uncommon for an individual meeting to be attended by more than 100 people. Widespread interest in the planning process can be attributed to focused publicity about the meetings and associated information about the current state of our water resources, the fact that the Governor has called for this Vision to be developed, extended drought conditions, and increased public awareness of the consequences of doing nothing to our reservoirs and groundwater supplies.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

BACs serve as advisory groups that provide insight into each basins most urgent water planning needs. The BACs provide insight, track issues and alert the KWO and KWA about areas of concern in each region. The number of members serving on each BAC, and the stakeholder categories in each BAC, provide maximum advisory citizen input on basin issues.

How is public comment received and incorporated in the process?

Between November 2013 and April 2014, stakeholder meetings were held around the state. These meetings were conducted by the Kansas Water Vision Team with members from KWO and the Kansas Department of Agriculture. They worked with the BACs, the Ogallala Aquifer Advisory Committee, the Reservoir Advisory Committee and the Kansas Aqueduct Stakeholder Committee. These groups generated input from all stakeholders and developed specific goals that served as the basis of the draft Vision.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

Feedback summaries of all meetings and links to draft and final documents are posted to the KWO website (http://www.kwo.org/50_Year_Vision/50_Year_Vision.htm).

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

Statutory authority and basic guidance for formulating the KWP is contained in the State Water Resources Planning Act. This Act states that the KWO, with KWA approval, shall annually submit to the Legislature and to the Governor an updated water plan containing recommendations needed to achieve the long range planning goals.



What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Many issues have been identified but not all can be addressed or accomplished within a five year period. Tradeoffs involve what to leave in and what to leave out.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

Some projects or recommendations are funded through the SWPF as discussed above. Federal dollars for specific programs are also important, as are local funds. Many projects are accomplished through partnerships and leveraging of more than one funding source.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

Programs funded with SWPF provide an annual update of accomplishments. An annual report to the Governor is prepared based on these updates. Beginning with the current five year update, performance measures are being included in each strategic plan in order to better assess effectiveness and efficient use of funding. In addition, studies and analyses are sometimes done to ensure cost effectiveness of practices/programs that are funded. For example, in many cases, it has been found that streambank stabilization along targeted stream reaches is more cost effective than dredging accumulated sediment from water bodies.

NEBRASKA

Nebraska utilizes a decentralized water planning process whereby several agencies coordinate to implement ongoing processes for the planning and utilization of the state's water resources. The state manages water resources through *Integrated Water Management Plans* (IWMPs). Integrated management deals with the relationship between surface and groundwater resources in each basin. The state has created 23 fully appropriated Natural Resource Districts (NRDs). These NRDs are local government units representing a basin or reach, and are governed by locally elected boards of directors. Each NRD develops its own IWMP that ensures a balance between available water supplies and uses, protects the rights of existing users of ground and surface water, and describes future water projections, management for water quality, and conservation programs. Fourteen of the NRDs are fully or over appropriated.

More information at: Nebraska Department of Natural Resources (<http://www.dnr.ne.gov>) and at Nebraska Natural Resources Districts (<http://www.nrdnet.org>).

Water Planning Program Funding

What is the annual budget for your water planning program?

The DNR annual budget is approximately \$3 million annually for staffing and engineering studies to support water planning.



How is your water planning program funded? Is there a dedicated funding stream?

Funds for water planning come through the General Fund appropriation. NRDs have authority to levy taxes to run their operations. Funding is a crisis for water development in the state.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

In 2004, Nebraska created its “Integrated Management Planning” process. This process works to integrate management, planning and controls on water users between the state (DNR) and local agencies (NRDs). In 2008, recognizing the sizable resources needed to fully support this process, the DNR established a dedicated division to support these activities. The Integrated Management Division consists of 14 full-time staff and is composed of geologists, engineers and natural resource planners. The number of positions has not increased in the past few years, but in the initial phases (post 2004) the division expanded from approximately six to the current level of 14 full-time staff.

Drivers for the need to establish a dedicated division included:

- The number of plans being developed.
- The complexity of the local water issues (i.e., this process not only incorporates local water management planning for hydrologically-connected waters, but also includes management of Nebraska’s water resources under Interstate Compacts and Agreements).
- The need to support monitoring activities for effectiveness and plan modifications.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

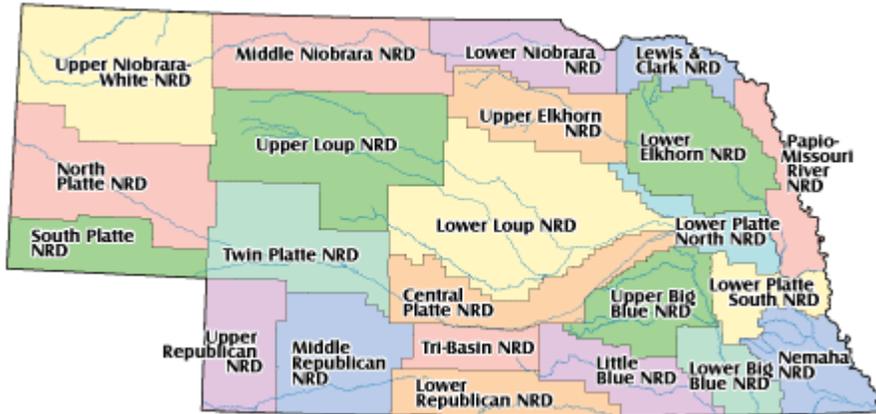
Climate change is not directly incorporated, but climate variability and adaptive plans and processes to react to those changes are incorporated into the water planning process.

What contract services do you rely on to support plan development?

The DNR utilizes services for hydrologic model development, stakeholder assessments and planning process improvements, and some foundational water use and water supply datasets (land use, recharge, runoff, consumptive use estimates). The aim is to leverage contract services to advance the science and integrate those advancements into future processes delivered by agency staff.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

As stated above, the NRD’s plan is at the local level, through systematic, basin-wide approaches that examine both surface and groundwater availability, demands and future projections. Each of the 23 NRDs in the state develop their own IWMP.



What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

Identifying issues of focus comes through statutory criteria for working to balance water supplies and water uses as well as ensuring compliance with interstate compacts and agreements. These issues can be highly variable across the state. Additionally, the recently established, voluntary Integrated Management Planning process relies on local NRD and stakeholders groups to guide the direction of the planning process and how future water needs may be accommodated while providing protection to the existing uses.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

No response provided.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Controversy tends to stem from implementation of controls on various water users groups (i.e. allocations, limitations of new development, etc.) and stakeholder perceptions of inequities in how these controls are implemented. Additionally, local political issues do arise, but generally the process attempts to address those issues by providing for stakeholder forums and public hearings on implementation activities.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

There has been an increased spotlight on water resources in more contentious areas of the state, but overall public interest by the general population (those not holding a water permit) appears to remain low. The DNR has been working to develop baselines and metrics aimed at assessing the current state of public interest and public trust on water issues and is currently working to develop a plan to improve these elements of the planning process.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

The 23 NRDs operate much like conservation districts, except that they are organized around watershed boundaries. Each NRD is governed by a locally-elected Board of Directors, responsive to the citizens in



their watershed. Hence, the role of citizen involvement varies. Some NRDs hire engineering firms or public relations firms to run public involvement programs and to facilitate meetings.

How is public comment received and incorporated in the process?

This varies among the NRDs.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

The most common method is to have information posted to the individual NRD websites. Some NRDs have monthly or quarterly newsletters. Mailings and local paper coverage also provide information to the public.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

Nebraska does not have a stand-alone plan, but rather relies on a decentralized, adaptive, management and planning process. The recognition of the need to have an ongoing process rather than a stand-alone plan was codified in statute in the late 1970s. These management and planning processes are aimed at groundwater and surface water quantity, including municipal water supplies, instream flow levels and aquifer management, groundwater and surface water quality including Clean Water Act implementation, and data.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Tradeoffs tend to be weighed through the stakeholder process that accompanies the development of the plans. The DNR plays a role in providing a variety of options that may be available to remedy specific issues, but relies on the local stakeholder input to establish specific projects and/or controls. The DNR then works closely with the local water management agencies (NRDs) to get project concepts and controls to ensure that they are meeting statutory criteria, goals and objectives of the plans.

How do you prioritize projects or recommendations within the plan?

Project prioritization is determined by the local NRDs' Boards of Directors.

How are the projects or recommendations in the water plan funded?

A diverse set of funding is available for project implementation. These funding streams include:

- General Fund appropriations to DNR (~\$6.5 million annually).
- Water Sustainability Fund (~\$11 million annually).
- Local occupation taxing authority (limited to \$10 per irrigated acre with the rate established by local NRDs).

NRDs have taxing authority; so much of their funding comes from local property taxes. Additional sources are available to support municipal water supplies and water quality projects.



Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

State criteria for funding are utilized to establish broader metrics for cost effectiveness. The implementation is done locally to evaluate more specific cost effectiveness on a per acre-foot basis.

NEVADA

The last state water plan for Nevada was completed in 1999. The Division of Water Resources (DWR) no longer plans on a statewide basis. Major suppliers in key urban areas, where growth has exceeded projections, do local and regional planning independently. The statute only requires that water suppliers have conservation plans in place. The DWR website lists 146 approved conservation plans from separate entities such as subdivisions, RV parks, hotels, prisons, etc. Currently, the DWR is compiling draft water conservation plans from all required entities. All finalized water conservation plans will be posted on the website as they are approved.

Regional water planning, in highly populated areas of the state, is done through the work of two entities:

- The Southern Nevada Water Authority (SNWA), formed in 1991 by a cooperative agreement among seven water and wastewater agencies in southern Nevada, serves nearly two million residents and 40 million annual visitors, and includes the greater Las Vegas area.
- The Western Regional Water Commission (WRWC) was legislatively created in 2007 to represent the entity of Washoe County.

Additionally, the Northern Nevada Water Planning Commission (NNWPC) serves as a technical advisory group that reports to the WRWC.

More information at: Nevada Division of Water Resources (<http://water.nv.gov>), Western Regional Water Commission (<http://www.wrwc.us>), Northern Nevada Water Planning Commission (<http://www.nnwpc.us>), and Southern Nevada Water Authority (<http://www.snwa.com>).

Water Planning Program Funding

What is the annual budget for your water planning program?

Currently, DWR funds one half-time professional engineer. Funding is around \$50,000 and legislative funding is needed for future state water planning.

How is your water planning program funded? Is there a dedicated funding stream?

See above.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

There has been no recent change in the planning budget.



Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

In light of recent drought issues, the State completed the *Nevada Drought Response Plan* in 2012 (Drought Plan). As the title implies, the Drought Plan outlines how the state will monitor drought conditions, identifies the measures for initiating action for drought watch, drought alert and drought emergency stages, and describes how the Governor will then respond by declaring drought emergencies and seeking federal aid. Conservation steps are not identified. Local agencies and organizations are encouraged to develop drought plans which may be designed to identify proactive measures to minimize drought and its consequences. Climate change is not mentioned in this Drought Plan.

The Nevada Revised Statute (NRS) requires that all suppliers of water prepare and adopt a water conservation plan every five years for its service areas.

What contract services do you rely on to support plan development?

No contract services are used.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Nevada is unique in that planning is done at a local level as determined by water suppliers rather than being done by the state water resource agency on a watershed basin or sub-basin level. However, as stated above, limited regional planning occurs through the work of SNWA and WRWC.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

The *1999 State Water Plan* (Plan) presents 14 issues and recommendations for future water policy development and planning. The issues are divided into five categories:

- Water supply and allocation.
- Water quality.
- Resource conservation and recreational uses.
- Flood management.
- Water planning and management.

These issues were selected after an extensive public scoping process and were then prioritized by members of the Advisory Board on Water Resource Planning and Development (Advisory Board), administrators within the Department of Conservation and Natural Resources (DCNR), the Nevada Division of Water Planning (DWP) staff and input from the public.

Currently, issues are dealt with and prioritized by local water suppliers. Many suppliers prioritize issues of delivery infrastructure, conservation and funding.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

Participants in the 1999 planning process included:

- Public – over 600 citizens in 20 public workshops.
- Governor's Office.
- Division of Water Planning – technical reports and public scoping meetings.
- Technical Working Group – 20 members from state and federal agencies.
- DCNR Steering Committee – staff from Divisions of State Lands, Environmental Protection, Wildlife, Water Resources and Water Planning, and Natural Heritage Program.



- Advisory Board on Water Resources Planning and Development - 15 members representing largest and second largest populated counties and water utilities, general public, and farming, mining, ranching and wildlife interests.
- Department of Conservation and Natural Resources Advisory Board – seven members representing general public, state park users, agriculture, mining, recreation, forestry/fire control, conservation.
- Interest Groups – Farm Bureau, Cattlemen’s Association, League of Women Voters, etc.
- Local Governments – county commissioners, etc.
- State Legislature.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Impacts of drought has been the most controversial issue that affects current, local and regional planning processes.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

There is increased interest in water conservation measures in response to ongoing drought. In addition, there is increased interest in the initiation of voluntary groundwater management planning in hydrographic basins designated as critical management areas due to declining water levels.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

Citizen groups are not utilized.

How is public comment received and incorporated in the process?

No response provided.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

Local water suppliers provide public information to those in their service areas. Websites of suppliers provide links to information. Some suppliers reach out to the public through flyers in their water bills.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The plan was designed as a guide to management, use and development of the water resources. The recommendations and implementations contained in the plan are intended to assist local organizations and agencies with their own water planning. The intent is also to help guide water management decisions at the state level. No authority is given to the DWR for plan implementation.



What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

The state has no comprehensive program for promoting and encouraging conservation or for assisting water users in developing water conservation strategies. Suppliers of water are required to submit conservation plans for agency review and to adopt water conservation plans. Prioritization of projects are done at the local level by the water suppliers.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

Implementation and funding comes at the local or regional level through requests by water suppliers. As seen from the chart below, the Plan identified the following state and federal programs available for grants and loans.

Nevada State Water Plan

Agency	Program
State Agencies	
Division of Water Planning	Grants for Capital Improvements to Community Water Systems
Division of Environmental Protection	Clean Water Act Section 319 Nonpoint Source Implementation Grant Program Clean Water Act State Revolving Loan Fund
Division of Water Resources	Channel Clearance Program
Commission on Economic Development	Community Development Block Grant Program
Department of Business and Industry	Water Projects Financing Program
Division of Health, Bureau of Health Protection Services	Safe Drinking Water Act State Revolving Loan Fund
Legislative Counsel Bureau	Disaster Relief Fund
Federal Agencies	
Department of Agriculture, Rural Development	Rural Utilities Service Program
Environmental Protection Agency	Clean Water Act Section 104(b)(3) Wetland Protection Development Grants
Natural Resources Conservation Service, Fish and Wildlife Service	Wetlands Reserve Program
Natural Resources Conservation Service	Environmental Quality Incentive Programs
Federal Emergency Management Agency	Flood Mitigation Assistance Grants



Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

There has been no attempt to measure cost effectiveness for either planning or implementation.

NEW MEXICO

New Mexico's water planning is the responsibility of the Office of the State Engineer (OSE) and the New Mexico Interstate Stream Commission (NMISC). The *State Water Plan* (SWP) was initially developed in 2003. State law requires reviews at least every five years, and allows periodic updates and amendments as needed in response to changing conditions. The 2008 Review summarized the 2003 SWP progress toward meeting legislative objectives, and identified potential plan improvements and conditions that had changed over the five year period. The 2013 Review was written following a year of statewide precipitation extremes. Forty-two percent of the state had experienced exceptional drought. This was followed by September rains that resulted in statewide flooding. As a result, the 2013 Review concludes that a full update of the SWP is required. This update requires that the 16 *Regional Water Plan* updates be designed around a common methodology and technical processes to assure consistency with state water law and policy. The SWP will integrate the information from the updated *Regional Water Plans*. The completion date for updating state and regional water planning is December 2015.

More information at: Office of State Engineer/Interstate Stream Commission (<http://www.ose.state.nm.us/Pub/index.php>) and State Water and Regional Water Planning (<http://www.ose.state.nm.us/Planning/index.php>).

Water Planning Program Funding

What is the annual budget for your water planning program?

Funding has not been consistent. There was no legislated funding between 2008 and 2013. The FY 2014 budget was \$483,000. The FY 2015 budget is \$275,000 from the Legislature plus \$250,000 from the Interstate Stream Commission. Additionally, the agency received a \$440,000 grant from the Legislature. The total for FY 2015 (begins July 1) is around \$965,000. The increase in funding is used to revise the approach to planning. All 16 regions and the state will update in the proposed two year timeframe; subject to sufficient funding and resources.

How is your water planning program funded? Is there a dedicated funding stream?

See above.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

Planning positions have remained steady at 1 FTE. Support staff has decreased due to the economic downturn that affected the 2009 and 2010 budgets. Recent increase in planning funding is a result of increased oil and gas revenues, and state legislative response to extraordinary drought in New Mexico for four consecutive years.



Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

The state is cognizant of the fact that climate variability must be considered in water management planning. Water availability is a challenge for most of the state. The updated regional water plans identify water use by categories, projected population growth, and streamlined drought scenarios for high and low moisture extremes for each region of the state. Some regions want to pursue their own planning for weather extremes.

What contract services do you rely on to support plan development?

Most water planning is contracted. This service is managed by one staff person, the state and regional planner, who coordinates with staff within the NMISC, the OSE, and with other state agencies with water management. The planner also manages a team of consultants for technical, hydrology, facilitation and editing services. An outside consulting firm provides facilitation for outreach to educate citizens about the new planning approach. The planning manager directs the facilitating team in organizing, arranging and facilitating regional meetings in each of the 16 regions.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Planning occurs on a regional level, with local steering committees directing water planning in each of 16 regions. Regions are determined through a combination of hydrological, political and water project boundaries. Tribal involvement is integral in comprehensive planning. Legislation in 2003 required that the state plan shall “integrate regional water plans into the state water plan as appropriate and consistent with state water plan policies and strategies.”

A change from past planning efforts, the *Updated Regional Water Planning Handbook* outlines a common methodology to ensure consistency with state water law and policy and provides details for developing the technical data and updating accepted plans.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

The 2015 Review to the SWP requires that each region be responsible for identifying water projects, programs and policy priorities. Issues of focus will depend upon the most pressing priorities for each region, but most will include the need for water infrastructure improvements, developing water sources, managing for wise use and conservation, and water quality preservation. Each region will address legal issues, water supply, water demand, gaps between supply and demand, and strategies to meet future water demands.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

In 2002, the *Framework for Public Input to a State Water Plan* guided the public input process in all 16 planning regions. Public hearings included input from a diverse array of stakeholders: elected officials, private industry representatives, public agencies and private citizens. An advisory council of representatives from the 16 water-planning regions discussed topics, developed recommendations for resolving differences between the SWP and Regional Water Plans, developed implementation strategies for Regional Water Plans and discussed funding recommendations for project work.

In the current round of planning, each region is guided by a steering committee that includes:

- Agricultural surface water user,
- Agricultural groundwater user,



- Municipal government,
- Rural water provider,
- Extractive industry,
- Environmental interest,
- County government,
- Local (retail) business,
- Tribal entity,
- Watershed interest,
- Federal agency,
- Other groups as identified by the steering committee, and
- Tribal liaisons are encouraged, but tribal sovereignty is respected.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Many people have a concern with the new approach to planning because they feel that this gives more control to the state. They view the change is more of a top-down rather than a grassroots approach to planning as in the past. In reality, the regional plans and the SWP need to be integrated, and the SWP law requires that integration.

Another point of controversy is the challenge of un-adjudicated water rights that remain in the state. The state encompasses 23 Native American Tribes, nations and pueblos. Three major Indian Water Rights settlements have had major impacts.

The fact that the state is in the fourth year of drought has ratcheted up water demand conflicts. This has added to the support for statewide planning.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

Public involvement is greater now due to the challenges of growing demands and weather variability. Agricultural water needs in the southern part of the state are of great concern. In addition, Texas has sued New Mexico over water in the Rio Grande. This case has now gone to the Supreme Court, and is generating public attention and interest. Funding in the 2013 Legislature came from citizens' pushing for more support to continue the state water planning efforts.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

No response provided.

How is public comment received and incorporated in the process?

A list of questions for public meetings on the SWP calls for public response. Based upon compiled responses, the updated water planning focus is on projected population growth, conservation strategies, climate variability planning and recommended water projects and programs. Comments gathered at public meetings around the state are recorded and considered for incorporation into the local planning guide for each region.



Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

The OSE website links to meeting announcements and documents.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The SWP is advisory for the 16 regions, which have no authority spelled out in statute. The Water Trust Board, a diverse 16 member board made up of agency heads, makes legislative funding recommendations. The Water Trust Board, by statute, looks at whether a project is in an “Interstate Stream Commission-accepted regional water plan,” thus, a project’s inclusion is a criterion for funding.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Tradeoffs include regional versus statewide interests in water management and inter-basin transfers. Values and concerns vary from region to region and involve tradeoffs. Although conservation is desired in every region, it is difficult to reach consensus about how best to achieve it. Increased hydraulic fracturing raises water concerns that also include project tradeoffs and recommendations.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

The State Water Trust Fund (Fund) was created in 2001 with the enactment of the Water Project Finance Act. The Water Trust Board, charged with administration of the Fund, has recommended more than \$228 million of funding for 221 projects statewide. On the local level, cities and counties have taxing authority. Other funding comes from agencies such as Natural Resources Conservation Service and US Department of Agriculture.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

The state has not developed a means to evaluate investments in projects. Some of the effectiveness is intangible such as when people work together to create water sharing agreements.

NORTH DAKOTA

The State Water Commission (SWC) has developed and maintained plans for water resource development since the first statewide water plan was published by the State Planning Board in 1937. The *State Water Plans* (Plan) are completed on a 10 year rotational cycle. The *2009 State Water Management Plan* is the most recent. Every two years, project-driven Water Development Reports (WDR) supplement the Plan.



The current 2013-2015 WDR, also called the *Strategic Plan*, provides updated information regarding the state's water development project needs and the ability to fund those needs. It serves as the SWC's formal request for funding from the Resources Trust Fund (RTF); oil extraction tax. The recent WDR is a merging of directives and responsibilities of both the SWC and the Office of the State Engineer. Based upon findings during the current WDR, the state is in the process of developing a *2015 State Water Management Plan*.

More information at: North Dakota State Water Commission (<http://www.swc.state.nd.us/4dlink9/4dcqi/redirect/index.html>).

Water Planning Program Funding

What is the annual budget for your water planning program?

The SWC Planning and Education Division (Division) oversees both water planning and education. The annual budget for just the planning portion of the Division is about \$650,000. Some overlap education functions are included in that number, so the total planning budget is a bit less.

How is your water planning program funded? Is there a dedicated funding stream?

Oil revenues amply fund the planning process. Twenty percent of North Dakota's revenues from the oil extraction tax support the state RFT. A percentage of the RFT is dedicated, by statute, to water related projects. The current 2013-2015 biennium budget for water development efforts is about \$560 million.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

The Division's budget has seen minor increases over the years to account for salary adjustments, but the operational budget has remained largely the same. The staffing level is seven FTEs in the Division; with about two of those FTEs dedicated to water education related efforts.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

The SWC is currently in the process of developing a new *2015 North Dakota State Water Plan* (SWP). Climate change is recognized in the draft document; including recognition of recent trends that have resulted in longer-term wet cycles in the state. The current wet cycle (which began in the early 1990s) has resulted in the need for more robust flood damage reduction strategies in many communities. The state is very involved in the advancement of flood damage reduction strategies and projects, mostly through a cost-share program with local sponsors. Recent climate trends are included into decision making efforts.

What contract services do you rely on to support plan development?

All aspects of water planning are handled in-house.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

The focus is statewide with projections for future water planning done at the local level.



What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

The 2013-2015 Strategic Plan addresses a variety of water appropriation, water development and planning and education issues. As stated earlier, flood damage issues are of current interest due to recent flood years.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

No response provided.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

The water development portion of the SWP attracts the most interest, since it outlines the priorities of the state and agencies, and stipulates where state dollars will be directed in future funding cycles. As mentioned previously, the SWC cost shares with local sponsors to advance various types of water projects (e.g., flood control, water supply, irrigation, studies, rural flood control, etc.). The North Dakota SWP, or biennial updates, always include a specific list of priority project types, as well as some specific projects that account for the cost-share budget. This is of great interest to local project sponsors, agencies, lawmakers, and others who are interested in seeing various projects or project types move forward.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

Stakeholder interest has increased statewide in the planning process because of the water development aspects included in the planning. In addition, the SWCs water management efforts and appropriation responsibilities related to water use for oil fracking have attracted great attention.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

Beginning in fall 2013, a limited number of public meetings were held in eight major watersheds throughout the state. The intent was to educate the public about the need for water planning and to hear citizen concerns. County-level meetings throughout the state targeted major stakeholders for input.

How is public comment received and incorporated in the process?

No response provided.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

The WDRs, the Strategic Plan, and the State Water Management Plan are posted on the SWC website.



Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The Plan is advisory, with the following stated purposes:

- Outline water management and development goals and objectives.
- Provide an overview of ND's water resources – including characteristics and extent, and factors affecting availability for beneficial uses.
- Provide an overview of water appropriation responsibilities and evolving challenges.
- Provide a progress report on ND's water management and development priorities.
- Provide information regarding ND's current and future water development project funding needs.
- Provide information regarding ND's revenue sources for water development.
- Serve as a formal request for funding from the state's Resources Trust Fund.
- Provide information regarding special water topics.
- Identify current and future water management and development challenges.
- Provide recommendations to meet water management and development challenges.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

There are more projects and funding needs than available funding, so the Division is developing a "Project Prioritization Guidance Concept" for the state to help direct state funds to "Essential, High, Moderate, and Low" priority projects. This document is still in draft form.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

The operations of the SWC and the vast majority of water projects are funded through revenues from North Dakota's RTF. The RTF is funded with 20 percent of the revenues from the oil extraction tax. A percentage of the RTF has been designated by the Legislature to be used for water-related projects and energy conservation. Because of increased oil production in North Dakota, the project budget has grown dramatically. For example, in the 2003-2005 biennium, project dollars from the RTF totaled about \$16 million. The 2013-2015 biennium anticipated revenues for projects from the RTF is about \$560 million.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

The Division has not conducted a cost effectiveness analysis of planning program from an operational standpoint. From a project development standpoint, they are required to conduct analysis of project benefits and costs for prioritization and cost-share program purposes. This is not, however, a traditional project cost-benefit analysis with a ratio developed. It is more qualitative for general decision-making purposes.



OKLAHOMA

Oklahoma began long-range water planning in the 1950's. The *Oklahoma Comprehensive Water Plan* (OCWP), created in 1980, led to House Bill 2036 in which the Oklahoma Legislature directed the Oklahoma Water Resources Board (OWRB) to update the 1980 OCWP. The 1995 Update soon followed. The OWRB was also charged with 10 year updates and implementation of a continual planning process. The current *2012 Update of the Oklahoma Comprehensive Water Plan* responds to this mandate. Supplemental reports augment information in the OCWP. The *Physical Water Supply Availability Report* assesses statewide physical water availability and potential shortages. Statewide water demand projects are presented in the *Water Demand Forecast Report*. The *Water Supply Permit Availability Report* documents water available for permitting.

More information at: Oklahoma Water Resource Board (<http://www.owrb.ok.gov>).

Water Planning Program Funding

What is the annual budget for your water planning program?

The budget is currently about \$1.2-\$1.3 million, depending on the amount of gross production tax.

How is your water planning program funded? Is there a dedicated funding stream?

It is funded primarily through a small percentage of the state oil/gas gross production tax. However, the current authorization is only through 2016; continuance of future funding from this source would have to be approved by the Legislature.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

The initial gross production tax appropriation by the Legislature was in June of 2006 to provide around \$6 million in state funding to conduct a comprehensive update of the OCWP over a five year period. The driving factor was the drought of 2006 and previous periods. As noted above, the Legislature extended the funding until 2016 for implementation of the OCWP's eight priority recommendations. The number of water planning positions remains steady. OWRB contracts work out as necessary, due to the uncertain nature of funding.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

The OCWP acknowledges the reality of climate variability and its impact on water resources. The OCWP refers to the Oklahoma Climatological Survey's findings, and concludes that:

- The earth's climate has warmed during the last 100 years.
- The earth's climate will very likely continue to warm for the foreseeable future.
- Much of the global average temperature increases during the last 50 years can be attributed to human activities, particularly increasing greenhouse gases in the atmosphere.
- Oklahoma will be impacted.

The OCWP outlines potential effects on temperature, precipitation, water supply and water demand. Maps of the state show region by region, the potential changes for both hot/dry and warm/wet scenarios

for municipal/industrial demand and for crop irrigation demand. Further, the OCWP identifies implications for water supply shortages.

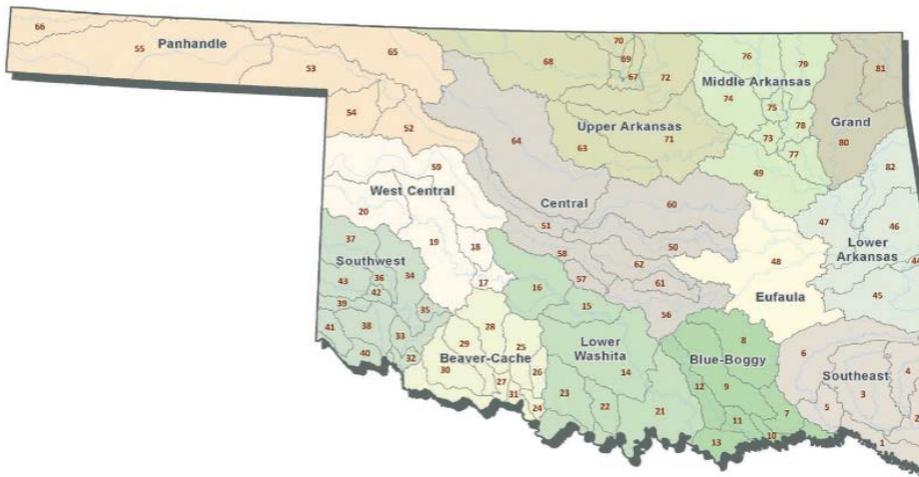
What contract services do you rely on to support plan development?

The Oklahoma Water Resources Research Institute (OWRRI) was contracted for policy and public participation process development. Cooperative agreements with US Army Corps of Engineers and Bureau of Reclamation supported part of the OCWP.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Planning takes place at a regional basis with local advisory committees directing planning in each region. The state is divided into 82 planning basins for water supply availability analysis. Basins were combined into 13 Water Planning Regions to facilitate consideration of regional supply challenges and potential solutions. Thirteen Watershed Planning Region Reports comprise part of the 2012 OCWP Update. The OCWP includes a comprehensive inventory of water rights and legally available supplies to identify net surplus or deficit for each region.

Statewide OCWP Watershed Planning Region and Basin Delineation



What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

Water planning in Oklahoma addresses surface and groundwater assessments, water demands, both physical water supply availability and permit availability, climate change implications, and regional and statewide opportunities and solutions.

The OCWP provides a listing of policy recommendations and implementations that are identified in the categories below. These were brought to light through the entire planning process with input from stakeholders. Priority recommendations are based upon urgency in solving the state’s most pressing near- and long-term water issues, the necessity of the recommendation to ensure a reliable future water supply, the need to prioritize funding requests, findings of technical analyses, and input from OWRB staff.



Priority Recommendations	
Water Project & Infrastructure Funding	State/Tribal Water Consultation & Resolution
Regional Planning Groups	Water Conservation, Efficiency, Recycling & Reuse
Excess & Surplus Water	Water Supply Reliability
Instream/Environmental Flows	Water Quality & Quantity Monitoring
Supporting Recommendations & Initiatives	
Nonpoint Source Pollution	Source Water Protection
Maximizing & Developing Reservoir Storage	Water Emergency/Drought Planning
Water Management & Administration	Water Supply Augmentation
Dam Safety & Floodplain Management	Water Related Research
Water Quality Management	Agricultural Water Research
Navigation	Climate & Weather Impacts on Water Management
Interstate Water Issues	

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

A well-developed process included a series of 42 Local Input Meetings and 11 Regional Input Meetings. During the planning period that began in 2007, over 2,300 citizens attended the Local Input Meetings and 2,500 comments from the public were received by the OWRB. Over 30,000 hours of volunteer time was devoted to the planning process. In 2008, the Regional Input Meetings involved participation by over 350 appointed participants (nominated from the Local Input Meetings) to assure representation of all interests and geographic regions. Thirty planning workshops in 2009, which dealt with water supply and water management themes, followed these events. Over 240 participants outlined alternatives for supply and management issues, concerns and suggestions that were raised during the listening and input meetings. Feedback meetings provided a forum for citizens to review draft findings for both technical information and policy recommendations.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Oklahoma's current water laws do not recognize groundwater/surface water interaction except in one groundwater basin (Arbuckle-Simpson). Proposals to look at groundwater/surface water interaction, conjunctive use and instream flow protections were very controversial. For example, consumptive water users verses non-consumptive. In addition, legislation to set up "regional planning groups" as recommended in the OCWP, has met with unexpected resistance. Perhaps this is due to the perception that they would gain too much authority over water related decision-making.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

The OWRB's efforts to have strong grassroots level public awareness and participation throughout the OCWP process of the past five plus years, has helped educate the public and make them aware of water related issues. There is now greater public attendance at public meetings and board meetings. The current



Water for 2060 Council meetings have fostered interest and attendance from all parts of the state to discuss water conservation and water efficiency options.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

No response provided.

How is public comment received and incorporated in the process?

No response provided.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

During the five year planning process, the Oklahoma Water Resources Research Institute was contracted for public participation process development. A special webpage was devoted to the water planning process. Postings included meeting dates, locations, summaries of meetings, and technical reports. The OWRB website also housed links to all documents, advertised upcoming meetings and other planning-related information. Quarterly newsletters were posted online and press releases advertised local and regional meetings.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The OCWP is a guide that addresses Oklahoma's water challenges. The OWRB has no authority to implement recommendations for solutions. Rather, the OWRB strongly encourages administrative and legislative action on the priority recommendations, supporting policy initiatives and technical strategies.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

De-emphasizing some of the effort envisioned for groundwater/stream water interaction and instream flows has involved some tradeoffs. However, mostly due to public input and support, these issues were ultimately addressed in the priority recommendations; especially for instream flow.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

The OWRB continues to seek federal funds, such as the COE Planning Assistance to States Program, to help leverage state funds for additional planning initiatives. Such initiatives to help facilitate as:

- Water for 2060 Advisory Council work.
- Hot Spot basin strategies.
- Instream Flow Advisory Group meetings.
- Instream Flow Pilot Study.



Gross Production Severance Tax funding helps fund recommended groundwater and surface water basin studies. Recommendations from the OCWP prompted the Legislature to provide an additional \$1.5 million to the base agency funding to set up and maintain a groundwater monitoring network. Studies conducted during the water planning projected \$82+ billion water and wastewater infrastructure needed by 2060. OWRB's five successful grant and loan programs can only satisfy four to nine percent of the projected need. OCWP's water project and infrastructure funding recommendations helped substantiate the need for and garner support for passage of SQ 764, which created the Water Infrastructure Credit Enhancement Reserve Fund (Fund) to help meet funding needs. The Fund established a \$300 million pledge of credit that enables the OWRB to leverage funds in the bond market as water and sewer projects become ready for construction.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

The effectiveness of the 2012 Update of the Oklahoma Comprehensive Water Plan can be measured by:

- Support of citizens in passing SQ 764.
- Governor's support in passing Water for 2060 legislation which sets forth the state goal of using no more fresh water in 2060 than is currently being used today (as recommended in the OCWP).
- Instream Flow Advisory Groups' acquiescence to conducting a pilot IFIM on a scenic Oklahoma river.
- Legislature's support in extending OCWP implementation funding and providing additional funding for groundwater quality monitoring work.

OREGON

The Oregon Water Resources Department (OWRD) addresses the state water supply needs, and restores and protects stream flows and watersheds for long-term sustainability of ecosystems, economy and quality of life. The Department's Water Resource Commission (OWRC) worked jointly with the Department of Environmental Quality (DEQ), the Department of Fish and Wildlife (F&W), and the Department of Agriculture (AG) to develop its first statewide *Integrated Water Resources Strategy* (IWRS). The IWRS was adopted by the OWRC in August 2012, and encompasses water quantity, water quality and ecosystem needs, and provides better understanding to meet instream and out-of-stream needs. It provides a blueprint of critical issues and identifies recommendations to address the issues. Developers of the IWRS realize that funding does not exist to meet all the recommendations, and that much attention to funding is required.

More information at: Oregon Water Resources Department
(<http://www.oregon.gov/OWRD/Pages/index.aspx>).

Water Planning Program Funding

What is the annual budget for your water planning program?

The OWRD does not have a water planning program. The OWRD's Resource Management Division, which was responsible for developing and revising the state's basin plans and associated administrative rules,



was eliminated during budget reductions in early 1990s. These reductions completely eliminated the agency's basin planning activities.

The 2009 Oregon Legislature provided funding for two limited duration positions: a policy coordinator, and a science coordinator; authorizing \$283,000 in lottery-backed bonds for this purpose. These limited duration positions were reauthorized as limited duration during the 2011 Legislative Session.

The other state agencies responsible for assisting with development did not receive additional funding, but assigned existing staff to the project.

How is your water planning program funded? Is there a dedicated funding stream?

OWRD does not have a dedicated water planning program. The 2013 Legislature provided funds to implement a number of recommended actions contained in the 2012 IWRS. Some examples include:

- OWRD was provided funds to hire an IWRS Coordinator.
- Oregon DEQ received funding for three Integrated Water Resources Specialists.
- Oregon AG received funds to hire one FTE to work with other agencies on several IWRS components.
- The Oregon F&W received funds to implement in stream flow water right actions in the IWRS.

In total, the 2013 Legislature provided \$34 million to implement several actions in IWRS. Approximately \$20 million is available as pass-thru funds (grants/loans) for different water resources projects and feasibility studies. The remaining funds are to support state agency led efforts.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

The OWRD has been able to increase staff capacity, as a result of actions identified in the IWRS. With funding provided by the 2013 Legislature, the OWRD added 14 new positions. These positions are permanent, base-budget positions. Overall, more than 50 positions were added to different agencies.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

Climate change is one of the four cross-cutting issues identified in their strategy; along with groundwater, funding and institutional coordination. Authorizing language of ORS 536.330 highlights climate change in several instances and calls for recommendations regarding continuous monitoring of effects on the state's water supply, and for water user actions that are necessary to address climate change. Adaptation of climate change requires a closer look at how it may affect water rights and crop production.

What contract services do you rely on to support plan development?

The IWRS was developed by state agency staff and resources, with input from various advisory groups, stakeholders and the public. Advisory group members served voluntarily, or as part of their existing functions within their respective agency. The state hired an outside facilitator to help guide discussions and recommendations of a state-appointed Policy Advisory Group. The contracted facilitator assisted with eight meetings over the course of two years (2010 – 2012).

The public outreach process, which largely consisted of 10 open house events and several workshops with various stakeholder organizations, relied heavily on donated hours from local groups such as: watershed councils, soil and water conservation districts, and field staff from various state agencies.



Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

The planning process included input and recommendations that address basin concerns; however, the final document focuses on a statewide approach to planning for future water demands.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

Thirteen critical issues are addressed. Based upon information gathered through the extensive public input sessions, each issue lists recommended actions. The critical issues are:

1. Further Understand Limited Water Supplies & Systems; Water Quality/Quantity Information; Water Management Institutions.
2. Understanding Oregon's Out-of-Stream Needs/Demands.
3. Understanding Oregon's Instream Needs/Demands.
4. The Water - Energy Nexus.
5. Climate Change.
6. The Water and Land Use Nexus.
7. Water - Related Infrastructure.
8. Education and Outreach.
9. Place - Based Efforts.
10. Water Management and Development.
11. Healthy Ecosystems.
12. Public Health.
13. Funding.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

The IWRS was led by four state agencies: the Water Resource Department, the Oregon Department of Environmental Quality (DEQ), the Department of Fish and Wildlife (F&W), and the Department of Agriculture (AG). Following community meetings in 11 sites across the state, formal advisory groups met to discuss critical issues and most promising solutions. More than 15 natural resource and economic development state agencies, and 10 federal agencies provided assistance. Additionally, an 18-member advisory group of citizens and stakeholders provided a range of diverse perspective and interests.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Although, not the intent of the planning process, some interests were concerned that the IWRS would overturn Oregon water law, and the system of prior appropriation. Because Oregon wasn't facing some type of water crisis, such as a severe, prolonged drought, it was challenging at times to convince the general public and some stakeholders of the need to develop a statewide water strategy.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

Public interest and participation in water resources management has increased over the last five to ten years. The 2009 and 2011 Legislature made significant investments to support water related agency functions, including increasing scientific capacity through monitoring and cooperative studies, and providing funds to local communities to conduct feasibility studies for water conservation, storage, and



reuse projects. The 2013 Legislature provided \$10 million to invest in various water resources projects, both instream and out-of-stream, a first for the state.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

Public input was gathered through meetings and to responses to an online survey. Additionally, citizen representatives participated in advisory groups that met to identify critical issues and likely solutions. The role of citizens was part of the decision-making process.

How is public comment received and incorporated in the process?

A “Public Involvement Plan” outlined how to communicate key messages and hear public concerns. Transparency of the process was at the heart of this plan. Forty stakeholder workshops in three months sought input and spread the message: “This planning process is important to state. It does not represent new regulation.” The push was for general public involvement, not just stakeholder involvement. An online survey, designed to assess concerns and issues, was available to anyone. All draft issue papers were posted online for public comment. Comments were also posted.

Comments, feedback and input received throughout the development of the IWRS were shared regularly with the Water Resources Commission, the Oregon State Legislature and the Governor’s office. The process took more than three years of engaging Oregon’s citizens.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

The OWRC and partner agencies posted draft and final versions of all bulletins, issue documents and other information on their websites. A variety of outreach methods included:

- 1) Partners (DEQ, AG, and F&W) helped advertise through their communication channels.
- 2) Emails.
- 3) Local papers.
- 4) IWRS listserv was developed and used during the planning process.
- 5) Workshops and Open Houses.
- 6) Stakeholders passed information to their constituents.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The IWRS is advisory. The fundamental purpose of the IWRS is to understand Oregon’s water needs and to identify a strategy to meet these current and future needs. The document presents long-term and short-term blueprints, or overviews of “next steps” for the state to follow in order to understand and meet future water needs. It is up to the future Oregon Legislature to support the policy and funding recommendations.



What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

The IWRS does not lay out projects in specific locations. Rather, it is a framework of options and tools to help develop projects in the future. Senate Bill 839 (2013), which authorized the Water Supply Development Program and associated funds, states that projects shall be evaluated based upon the public benefits of the project. The evaluation must consider both positive and negative effects of a project. The three categories of public benefit to be considered in the project evaluation are economic, environmental, and social or cultural benefits. Each category of benefits must be given equal importance in the evaluation of a project.

How do you prioritize projects or recommendations within the plan?

See above.

How are the projects or recommendations in the water plan funded?

Funding for implementation of the IWRS is a mix of General Fund, Lottery Backed Bonds, and other funds (i.e. transaction fees). A large majority of the funds come from the state's General Fund

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

As state above, the Water Resources Department does not have a water planning program; however, several state agencies received investments to implement a number of recommended actions. Because the state is in the very early stages of implementation, there is no measurement of cost effectiveness.

SOUTH DAKOTA

The 1972 State Legislature established the *State Water Plan* (SWP) to ensure benefits of the water resources through conservation, development, management and use of the resources. The responsibility for water planning falls to the Board of Water and Natural Resources (Board), a part of South Dakota's Department of Environment and Natural Resources. The *2012 Annual Report* and *2013 State Water Plan* are the current operating documents.

The SWP consists of two parts:

- The *State Water Facilities Plan* lists potential water projects. The Board approves placing projects on to the State Water Facilities Plan. The 2013 SWP identifies 114 projects, which are listed alphabetically, rather than in a ranking of need. Projects placed on the list are not guaranteed funding. Funding comes from the Board and may include additional state or federal funds.
- The *State Water Resources Management System* identifies large, costly water projects requiring state or federal authorization and financing. Projects are placed on the list when recommended by the Board and approved by the Governor and the Legislature. Legislative action is required to remove projects from the list. The SWP includes a status report for each of the 12 projects on that list.

More information at: Department of Environment and Natural Resources' Board of Water and Natural Resources (<https://denr.sd.gov/error.aspx?aspxerrorpath=/dfta/wwwf/bwnr.aspx>).



Water Planning Program Funding

What is the annual budget for your water planning program?

There is no budgeted line item for water planning. Water planning, project development and Board staffing are all bundled in the Water and Environment Fund (WEF) that is the source of funding. Legislation does allow the Board to use an annual maximum amount, up to \$500,000, from interest earnings on loan payments, and interest earned on remaining WEF funds, for administration. This supports about 12 staff positions. Less than one FTE is dedicated to water planning.

How is your water planning program funded? Is there a dedicated funding stream?

As stated above, the dedicated funding comes from WEF. This fund does fluctuate somewhat as it is based upon lottery ticket proceeds, contractor excise tax, and a few other items. The total amount in the fund for 2014 is approximately \$15.7 million.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

The planning budget has been mostly static for the past few years. Staffing for planning has been, and continues to be less than one FTE.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

Climate change has not been part of the planning process, and there is no indication that it will be included in the future. This is due, in part, to the nature of the plan as project-based.

What contract services do you rely on to support plan development?

No contract services are utilized in the plan development.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

The SWP is project specific rather than a statewide view of assessing water resource availability and demands.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

No issues are addressed in the SWP, only specific projects.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

Project sponsors for the larger projects on the State Water Resources Management System portion of the plan are generally the only stakeholders who are interested in the planning.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Controversy has not been an issue in creating the most recent SWP. In the past, controversy came when large projects, contained in the State Water Resources Management System, required major funding. Often these projects became politicized. Currently, only a few active projects require major funding, and controversy around these projects has passed.



Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

There has not been much public interest or involvement. The only time the public gets involved is when large projects need funding, and the funding might compete with other projects.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of the committees or roundtables selected?

No citizen committees or roundtables were convened, although the public was invited to participate in one large planning meeting.

How is public comment received and incorporated in the process?

No response provided.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

No response provided.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The plan is mostly advisory in nature. Annual advisory reports are sent to the Legislature to report on project status with recommended funding for each project.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

The only consideration for funding projects is the degree to which project sponsors are proactive in advocating for the project. If the Board is assured that loans will be paid off, the project is funded. Historically, every project has been funded when sponsors actively work with the Board to secure funding.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

The State Revolving Fund and the State Loan Program fund the projects. The Board does not oversee the Community Development Grants, but does work to incorporate some of that funding into project support.



Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

No metrics are in place to evaluate cost effectiveness. There is no funding or staff to develop a way to measure this.

TEXAS

The Texas Water Development Board (Board) develops the *State Water Plan* (Plan). Comprehensive planning began in 1997. This is a bottom-up process, requiring public involvement for state and regional planning. The *2012 State Water Plan* was adopted by the Board in December of 2011 and was approved by the Governor in early 2012. The *2012 Plan* is the ninth state water plan and the third plan based upon the regional water planning process. Sixteen regions, based on watersheds, aquifers and metro areas, produce updated plans every five years. The last round of updates resulted in approved plans for all 16 regions in 2011.

In addition to incorporating the regional water plans, the Plan guides state water policy, and includes legislative recommendations that the Board believes are necessary to facilitate desired, voluntary water transfers. In addition, the Plan identifies river and stream segments and sites of value for the construction of reservoirs that the Board recommends for protection.

More information at: Texas Water Development Board
(<http://www.twdb.state.tx.us/waterplanning/swp/2012/index.asp>).

Water Planning Program Funding

What is the annual budget for your water planning program?

Funding for the water planning process in Texas is divided between grants and staffing. Grants are directed to regional water planning groups that are responsible for developing regional water plans on a five year cycle. The Board staff is responsible for oversight of the regional planning process, data collection and dissemination, research, and for writing the Plan in the year following the completion of regional water plans. For FY 2014, there were \$2.1 million in grants to regional planning groups. The initial budget for the staff devoted to planning in FY 2014 was \$1.13 million. An additional \$600,000 was budgeted for groundwater availability modeling, which is closely related to the regional planning process.

How is your water planning program funded? Is there a dedicated funding stream?

Funding for the planning process is dependent on appropriations determined in each legislative session. There is no dedicated funding stream.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

Funding for planning has been decreased in each of the past two biennial legislative sessions, driven by budget decisions.



Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

Chapter Four of the 2012 Plan is devoted to climate variability of Texas. The Board cohosted a conference in 2008 to address possible impacts of climate change on surface water supplies from the Rio Grande. The agency also hosted 2 Water Planning and Climate Change Workshops in 2008 and 2009 to examine climate change issues on a state level.

The concluding recommendations resulted in initiation of two research studies. The *2010 Uncertainty and Risk in the Management of Water Resources* study developed a methodology to allow various sources of uncertainty to be incorporated into the regional water-planning framework. This methodology allows planners to analyze a range of scenarios and future potential outcomes. A second, ongoing research study assesses global climate models for water resource planning applications that best apply to Texas.

The agency also formed a staff workgroup to monitor the status of climate science, assess predicted changes by climate models, analyze and report data regarding natural climate variability, and to evaluate the resiliency of water management strategies in adapting to climate variability and how regional water planning groups might address the impacts.

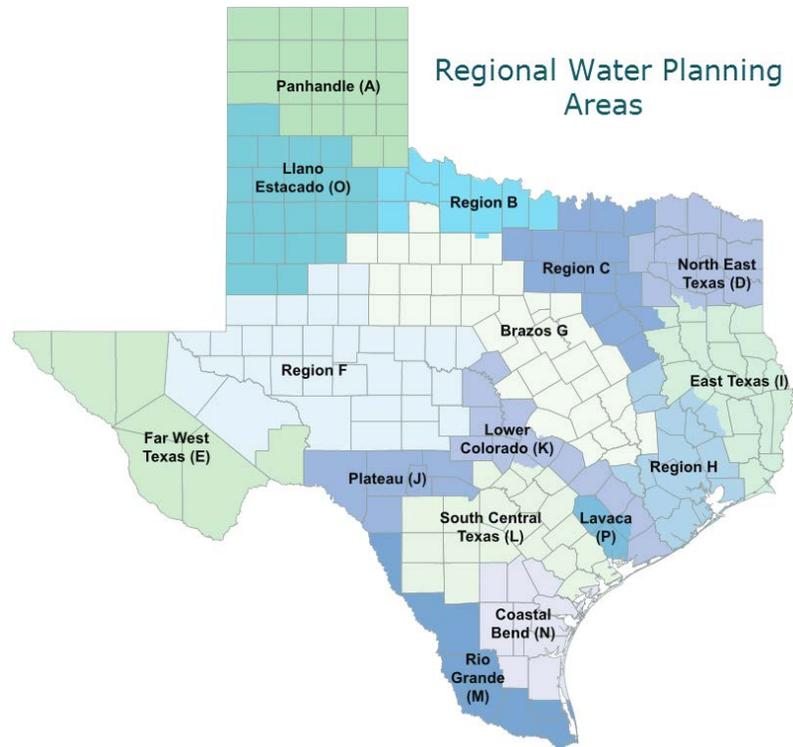
The chapter concludes with this statements: “Until better information is available to determine the impacts of climate variability on water supplies and water management strategies evaluated during the planning process, regional water planning groups can continue to use safe yield (the annual amount of water that can be withdrawn from a reservoir for a period of time longer than the drought of record) and to plan for more water than required to meet needs, as methods to address uncertainty and reduce risk.”

What contract services do you rely on to support plan development?

Each of the 16 regional water planning groups uses the grant money provided to contract with consultants who provide technical services in the development of the regional water plans. The Board relies on some contract services for groundwater availability modeling, and, on an ad hoc basis, for specific research projects to support planning.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Planning is done on a regional level. Sixteen regions were established following two public comment periods and modifications. Following the establishment of region boundaries, the public was involved in the regional planning process. The planning process for updates begins with meetings of Regional Planning Groups, each made up of representatives from 12 stakeholder groups. Each region does its own planning following basic rules. Data management and modeling are linked to the planning process. Detailed supply and demand assessments in each region use consistent methodologies. A mandated public comment period follows each regional update. Then the Water Protection Bureau has one year to meld regional comments into a statewide document. The most recent round of updates involved over 400 individuals.



What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

The 2012 Plan centers on the issue of drought. As stated in the introductory letter from the Board’s Chair to the People of Texas: “In serious drought conditions, Texas does not and will not have enough water to meet the needs of its people, its businesses, and its agricultural enterprises. This plan presents the information regarding the recommended conservation and other types of water management strategies that would be necessary to meet the state’s needs in drought conditions, the cost of such strategies, and estimates of the state’s financial assistance that would be required to implement these strategies. The plan also presents the sobering news of the economic losses likely to occur if these water supply needs cannot be met. As the state continues to experience rapid growth and declining water supplies, implementation of the plan is crucial to ensure public health, safety, and welfare and economic development in the state.”

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

Between January 2006 and December 2011, over 450 voting and nonvoting members of the regional Water Planning Groups worked to develop the Plan. Stakeholders included consultants, administrative agencies, the Texas Water Development Board staff, the Texas Parks and Wildlife Department, the Texas Department of Agriculture, the Texas Commission of Environmental Quality, other state and federal agencies, regional water planning group members, and individuals and organizations who provided public input during the planning process.

Each regional Water Planning Group is required to have at least 11 interests represented, including the public, counties, municipalities, industries, agriculture, environment, groundwater conservation districts,



small business, electric-generating utilities, river authorities, water districts and water utilities. Non-voting federal, state and local agency members also serve on the planning groups.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

Primary areas of controversy in some regional water plans have involved water demand projections, proposed reservoir development, groundwater development and transfer, and questions of whether there is sufficient reliance on conservation and innovative water technologies such as desalination.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

The 2012 Plan was released to the public in late 2011, a year that has now been designated as the single driest year in the state's history. The ongoing drought created significant interest in water issues. In 2013, the Texas Legislature and Texas voters approved the investment of \$2 billion from the state's Economic Stabilization Fund to create the State Water Infrastructure Fund for Texas (SWIFT), intended to provide financing assistance to local entities to implement Plan projects. The combination of the drought and the availability of financing have resulted in a significant increase in public interest and involvement in the planning process.

Do you use citizen based groups such as basin committees or roundtables in developing the Plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

As stated above, the regional planning areas are led by planning groups that coordinate the water planning process for each area. The role of the planning groups includes, among other things, quantifying projected water demand for the next 50 years, addressing issues of supply and demand, evaluating water management strategies, and recommending regulatory, administrative, and legislative changes. Once the planning groups adopt their regional water plans, the Board reviews, approves and compiles information into the state plan. Initial members are named by the Board to represent a variety of stakeholders. Each planning group then adopts methods to be used to name additional members and terms and conditions of membership.

How is public comment received and incorporated in the process?

Public input comes at the regional level. Summary information from each region is included in the state Plan.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

Regional Planning Groups carry out communications and planning at the regional level. These groups maintain websites with links to meeting notices, and draft and final documents.



Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The purpose of the Plan is to ensure that all communities have adequate supplies of water during times of drought. The Plan addresses the needs of all water user groups in the state: municipal, irrigation, manufacturing, livestock, mining, and steam-electric power. The Plan is advisory in nature. Regulatory, administrative and legislative recommendations are included in the Plan.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Recommendations for water management strategies are made at the regional planning group level. These decisions are made taking into account factors including, in addition to cost; the reliability of the water supply from the strategy during a drought of record; impacts to the waters of the state; impacts to agricultural and natural resources; impacts to the environment; feasibility of getting the project implemented; and any other factors deemed relevant to the planning groups.

How do you prioritize projects or recommendations within the plan?

Regional planning groups prioritize projects and recommendations for their areas, then the Board determines most urgent projects from a state perspective.

How are the projects or recommendations in the water plan funded?

The Board offers a number of funding programs for water projects, but only the SWIFT and previously the Water Infrastructure Fund are expressly devoted to funding Plan projects through loans. The Water Infrastructure Fund was dependent on biennial appropriations, and was able to provide funding for over \$1 billion worth of recommended strategies in the Plan. The SWIFT is expected to begin providing funding in mid-2015. Projects may also be funded directly by the project sponsors themselves, for example, through issuance of their own bonds.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

On an internal basis, Board staff are evaluated on a number of different performance measures, which have historically been met and/or exceeded on a regular basis.

UTAH

Utah is currently in the process of updating the *State Water Plan* (Plan). The Utah Division of Water Resources (DWR) is responsible for this planning and for state water management. Following a series of eight public meetings during the summer of 2013 that attracted over 800 comments, Governor Herbert convened a water summit in October 2013 to address the need for the state to map out a 50-year water strategy. The Governor has appointed a 38-member team comprised of representatives from diverse groups such as elected officials, water district managers, community activists, special interest groups, and federal and state policymakers. They are tasked with evaluating water management strategies and determining best options for future water planning. This State Water Strategy Advisory Team should



conclude work on this in 2015, and will incorporate the more recent *Basin Water Plans* and many reports on water supply topics and future demand scenarios.

More information at: Utah Division of Water Resources (<http://www.water.utah.gov>).

Water Planning Program Funding

What is the annual budget for your water planning program?

The state has a well-funded program of periodic updates of state and regional plans and staffing commitments. The \$6 million per year support for water planning comes from the General Fund and the State Revolving Fund, split approximately in half.

How is your water planning program funded? Is there a dedicated funding stream?

The funding stream is dedicated and described above. Occasionally the DWR receives additional funds from federal contracts which help fund further planning studies or construction-related investigations. These are typically small amounts less than \$100,000 per year.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

Planning budgets and the number of planning positions has decreased slightly over the past several years. The driving factor behind these changes was budget cuts that resulted from the Great Recession. However, these cuts were small relative to other western states and were weathered largely through attrition.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

The State of Utah has no special mechanism or methodology to incorporate climate change data into the planning process. However, DWR acknowledges some of the potential impacts that climate change could have on the state's water resources and are looking for solid research on the topic that is applicable to the state. The DWR has started to incorporate climate change into models and will do more with climate change in the next Plan.

What contract services do you rely on to support plan development?

The State of Utah typically does not contract out water planning services and is able to conduct most data collection, modeling and related analysis in house. However, for large water projects that must go through NEPA analysis, the state has contracted with reputable engineering firms to provide critical engineering planning and design services. No such services are used to prepare the Plan or associated River Basin Plans.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Planning is done for 11 major river basins in the state.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

No response provided.



Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?
No response provided.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

While water resources are often the subject of controversy and political pressure, water planning is rarely mired down by these factors in the state of Utah. Water planning in the state is basic in nature and does not prescribe any give strategy or project to solve water supply challenges. Rather, the Plan and *River Basin Plans* provide a toolbox of available solutions and acknowledges/defers to the responsibility of local and regional water entities to design their own solutions.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

Only a very small portion of Utah's citizens has been actively involved in state water planning. Those who are involved are typically water resource professionals or others in fields directly affected by water resource decisions. Environmental groups are fairly active in the state in trying to influence important water resource decisions. DWR has found that the best way to garner active public participation in the planning process is to spend time, money, and effort to publicize important events. Getting the Governor to invite the public directly to participate in the planning process has been very helpful.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

Input during the planning process included public comment. Local advisory committees included citizen representatives of various water interests.

How is public comment received and incorporated in the process?

The state water planning process that began in 2013 included eight listening sessions to compile concerns and possible solutions from all stakeholders. These comments were compiled in a white paper for the Governor's review. The *Utah's Water Future* (<http://www.utahswater.org/wp-content/uploads/2013/10/Water-Plan-White-Paper.pdf>) is the summary document of the public listening sessions.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

All draft and final documents and meeting minutes are posted to DWR and partner agency websites.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The Plan and associated River Basin Plans are largely advisory. No water resources agency is granted authority or given funds to implement specific plan elements. The purpose of the plans are to provide



valuable water resources data and information that will help local water providers meet their water management challenges. If necessary, the state works closely with willing partners to resolve problems and meet the needs of their customers outside the state water planning process.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

It is hard to say that the state of Utah has made any specific tradeoffs in considering various projects or in making recommendations. However, whenever a water project is built there is an implicit decision made that the water being removed from the environment will provide a significant enough benefit to the state and its citizens to justify to environmental impact.

How do you prioritize projects or recommendations within the plan?

Local advisory committees direct water planning efforts in each region. Prioritization of projects and recommendations begins at the local level.

How are the projects or recommendations in the water plan funded?

- The Revolving Construction Fund helps in construction of rural drinking water systems, well development and construction of irrigation systems.
- The Cities Water Loan Fund provides financial assistance to cities, town and districts for construction of municipal water projects.
- The Conservation and Development Fund helps in the construction of large projects such as dams and large municipal irrigation and drinking water systems.

Plan Evaluation/Oversight

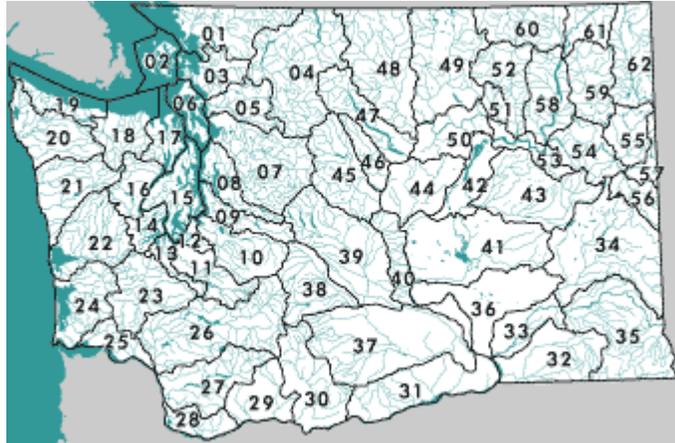
How do you measure the cost effectiveness of your planning programs and their implementation?

The State of Utah has a metrics based system to help all agencies assess the effectiveness of their operations. However, these metrics are not well suited to measure the effectiveness of water resources planning processes. Thus far, monitoring efforts are accomplished through watching to see if the methods and strategies put forth in the plans are implemented by local partners. For the most part, this appears to be the case.

WASHINGTON

Washington has no statewide water plan. The Washington Department of Ecology (Ecology) administers the watershed basin level planning. Convinced that planning could best be done at local level, by those with the greatest stake in the proper long-term management of resources, the 1998 Legislature passed ESHB 2514, The Watershed Planning Act, as a framework for developing local solutions to issues on a watershed basis.

Sixty-two watershed level Water Resource Integrated Areas (WRIA) were identified. Thirty-two watershed planning groups, some encompassing several WRIsAs, were formed to come up with plans for Ecology to approve.



The state funded a three phase planning effort. Watershed groups could opt to participate. Most groups did participate due to funding.

Phase 1 - Organization and Outreach – Each watershed group developed an operational inventory of water assets, and organized committees.

Phase 2 – Assessment and Analysis – Water resource data was collected, current water rights, instream and out-of-stream flows were analyzed, and strategies to meet future needs were mapped out.

Phase 3 - Write and Recommend - Water plans were written. Plans included recommendations for water quality and quantity, instream flow and salmon restoration.

Twelve state agencies signed a memorandum of understanding that identified roles and responsibilities for coordination under the Watershed Planning Act. The agencies work cooperatively to speak as one governmental voice when sitting at local planning unit tables.

In addition to the watershed plans, Seattle and the surrounding areas undergo a voluntary process for regional water supply planning.

More information at: State of Washington Department of Ecology (<http://www.ecy.wa.gov/water.html>).

Water Planning Program Funding

What is the annual budget for your water planning program?

Watershed planning and associated state funding is conducted in 4 phases:

- Phase 1 - Organizational Phase – Up to \$50,000 per Water Resource Integrated Areas (WRIA) or up to \$75,000 for multi-WRIA planning units.
- Phase 2 - Assessment Phase - Up to \$200,000 for each WRIA in the management area to fund watershed assessments after the organizational phase is completed.
- Phase 3 - Planning Phase - Up to \$250,000 for each WRIA in the management area for watershed plan development, planning unit approval and county board adoption.
- Phase 4 – Implementation Phase – Up to \$100,000 per WRIA for the first three years of implementation activity, and then up to \$50,000 per WRIA for the fourth and fifth years of implementation. A ten percent local match is required for all five years. For management areas including more than one WRIA, up to \$25,000 may be granted for years the first three years then up to \$12,500 may be granted for years four and five for each additional WRIA.



Supplemental funding is also available for up to \$100,000 for each of three optional assessment elements: instream flow, water quality, and multipurpose water storage. Watershed plans are due four years from when a planning unit draws upon Phase 2 funding.

Because all but one group is still in the planning stage, the current annual budget for the planning program is about \$50,000. Funding is now focused on implementation phase, and because the time limit of four years has passed for most watershed groups, funding for implementation is low.

How is your water planning program funded? Is there a dedicated funding stream?

See above.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

Staffing for planning has decreased dramatically as the planning process is near completion. Currently, only two employees are assigned, part time, to the planning process. This is down from 17 FTEs in 2007. Contributing factors leading to the decrease in budget and positions include the economic downturn beginning in 2008, the completion of planning in watersheds, and the fact that planning is not mandatory.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

In 2011, Governor Chris Gregoire directed state agencies to develop an integrated approach to the state's vulnerability to climate impacts. The 2012 Washington State Integrated Climate Change Response Strategy (http://www.ecy.wa.gov/climatechange/ipa_responsestrategy.htm#REPORT) is a framework to help decision makers protect Washington's communities, natural resources and economy from the impacts of climate change.

Response strategies identified in the "Integrated Climate Change Response Strategy" include:

- Protecting human health due to higher temperatures, heat waves and declining urban air quality.
- Reducing the risks of damage to infrastructure and disruption to transportation systems due to extreme storms, extensive flooding, landslides, and sea level rise.
- Improving water management to compensate for reduced stream flows resulting from declining snowpack.
- Preventing further losses to the \$50 billion-a-year agriculture and forestry industries from wildfires, disease, reduced summer water supply and pests that will proliferate under changing climate conditions.
- Protecting sensitive and vulnerable species and the habitat they depend on due to climate change.
- Supporting the efforts of local communities in engaging the public in determining appropriate responses to climate change.

What contract services do you rely on to support plan development?

Contract services apply to both planning and implementation of watershed plans. The Department of Ecology is the fiduciary agency for pass through grants and loans to the local watershed sponsors. Typically, the agency contracts with county natural resource departments, soil and water conservation districts, public utility districts, counties, cities and tribes. These entities, in turn, contract with consulting firms.



Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Planning is done at the watershed level. Sixty-two watersheds are identified as WRIA. These areas correspond roughly with USGS's Hydrologic Unit Codes. Each WRIA has developed a set of reports that deal with various aspects of the watershed. Included in these reports are Integrated Water Resource Management Plans for each WRIA.

What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

Watershed planning groups were required, by statute, to address the issue of water quantity. Optional issues the plans could address were instream flow, water quality and habitat.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

Stakeholders included state agencies tied to water quality and quantity, as well as commerce, economy, development, and fish and wildlife. Also included were county and city governments, tribes, representatives from agriculture, industry, environmental groups, recreational organizations, and local residents.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

- Exempt wells.
- Instream flow vs rural development.
- Water quality issues.
- Relinquishing water rights if not used in last five years.

Major political drivers were, and continue to be, the amount of money available for projects and the Endangered Species Act. Salmon recovery is a huge issue in Washington.

Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

There was greater involvement during the planning stage than now during the implementation stage. Much of public involvement depends upon the actions of the local watershed groups. If local entities can generate funding to include the public, then there is more interest and involvement.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

Local watershed groups are comprised of stakeholders. Their role is advisory.

How is public comment received and incorporated in the process?

Listening sessions in each of the 62 watersheds were/are held during the planning process. Webpages contain links to Water Availability Focus Sheets with information specific to each WRIA.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.



How is information developed during the planning process delivered to the public?

During the three phase planning process, local watershed committees conducted meetings and posted documents on Ecology’s Public Involvement webpage, and on the webpages devoted to each of the WRIAs.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The plan is advisory. Authority for implementation is widespread among agencies (i.e., instream flows) and counties (i.e. tracking new developments and the tie to groundwater and surface water connectivity).

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Tradeoffs are apparent at the development level when various alternatives may achieve the same or similar results.

How do you prioritize projects or recommendations within the plan?

No response provided.

How are the projects or recommendations in the water plan funded?

The state is now winding down after two decades of state projects. Pass through grants, with revenue through state bonds, are awarded to local entities to address local supply issues, storage and conservation, and prepare for long and short-term demands and future allocations. Fourteen grants totaling \$7.9 million have been awarded for work through June 2015. Buying back senior water rights generates between \$500,000 and \$1 million annually when they are sold or leased. The Washington Water Trust and Trout Unlimited handle these transactions.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

Often the effectiveness is intangible. The Department of Ecology is aware that the instream flow rule is now less controversial and consumes less of their time. This demonstrates cost effectiveness. The program is deemed successful if answers are positive to questions such as: “Did we improve water quality? Did the project address TMDLs? Did the plan make the system more efficient?”.

WYOMING

The Wyoming Water Development Office (WWDO) coordinates statewide water and land resources planning. It accomplishes the water planning work through the Wyoming Water Development Commission (WWDC), comprised of 10 governor-appointed representatives of the four state water divisions and the Wind River Reservation. The 1996 Legislature directed WWDO and the State Engineer’s Office (SEO) to update the 1973 *Framework Water Plan*. The update process, which began in 1997 and resulted in the approved 2007 *State Framework Water Plan*, included phased tasks:

Phase 1 - Wyoming Statewide Public Opinion Survey – to gauge public opinion on water issues, build consensus and support for a planning process.

Phase 2 - Pilot Basin Citizen Advisory Group (BAG) – public involvement in a grassroots process where, a group of 15 members was selected to form the BAG, with representatives for agriculture,



local government, industry, environmental and recreational interests. The BAG's goals were to: 1) identify specific water and water-related management issues of the basin, 2) create a template for the organization and operation of BAGs in other areas.

Phase 3 - Statewide Data Inventory (SDI) – The Water Resources Center at the University of Wyoming developed the inventory from various agencies and compiled them in electronic format.

Phase 4 - Consultant Feasibility Study – development of an implementation strategy for the water planning process.

The result of this planning process has been the successful completion of legislatively funded efforts for the remaining six river basin water plans as well as the statewide *Framework Water Plan*. An amount of \$3.7 million was devoted to the one-time, seven basin planning.

More information at: Wyoming Water Development Office (<http://waterplan.state.wy.us>).

Water Planning Program Funding

What is the annual budget for your water planning program?

The annual budget has varied from \$250,000 to \$1,550,000. The largest appropriation funded two Basin Plans in the same year. Currently, the Water Development Office is anticipating a signed contract to update the North Platte River Basin Plan for roughly \$350,000. Office personnel have completed two basin plans updates, in which case there was no appropriated budget.

How is your water planning program funded? Is there a dedicated funding stream?

River Basin Planning is one program within the Wyoming Water Development Commission (WWDC). The WWCD provides funding for River Basin Planning, Project Planning, Dam and Reservoir Planning, and Project Construction. Funding for all water development projects and programs comes from one of three earmarked water development accounts. The Water Development Account I is allocated 12.45 percent of the revenues that accrue to the States Severance Tax Distribution Account and the interest earned on this account. The Water Development Account II earns interest plus 2.10 percent of the revenues that accrue to the State's Severance Tax Distribution Account. Water Development Account III earns interest plus .5 percent of the revenues that accrue to the States Severance Tax Distribution Account, plus Water Development Account I and Budget Reserve Account appropriations on occasion.

If the planning budget and/or number of positions has increased or decreased over the past few years, what were the driving factors behind this change?

Positions have varied as reflected by budgeting. One position was originally designated for RBWP. This was reassigned to the conventional Project Planning section due to workload. Budgets have fluctuated based on the number and scope of plans for each year. Funding and positions will vary depending on the need for updating plans, and the scope and type of project being funded, and whether or not the work is being done in-house.

Planning Process

Is the concept of climate change incorporated into your planning process, and if so, how?

Climate change is not currently considered in planning. The River Basin Plans incorporate the development of representative dry, average, and wet year scenarios. These scenarios are calculated based on historical stream gauge data. Hence, climate data is intrinsic in the hydrology.

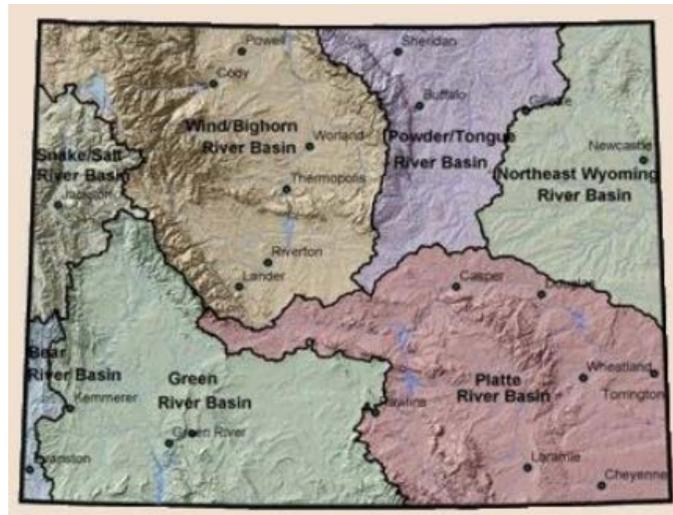
What contract services do you rely on to support plan development?

Consulting engineers are hired for River Basin Plans and the *State Framework Water Plan* with the exception of the updated in-house plans. The Wyoming State Geological Survey was, and is, contracted to complete the groundwater studies.

Does your planning process focus on statewide, regional, major basin or sub-basin issues and concerns?

Planning is done on a basin level. This information comes together in the Framework Water Plan to provide a statewide perspective of the status of the state’s water resources.

- River Basin Planning Regions:**
- Bear River Basin
 - Green River Basin
 - Northeast Wyoming River Basin
 - Platte River Basin
 - Powder/Tongue River Basin
 - Snake/Salt River Basin
 - Wind/Bighorn River Basin



What issues are addressed by your water resource planning program? How do you identify and select the issues to focus on?

The planning program addresses, in a general way, issues of storage projects, new development of unappropriated flow, rehabilitation issues, trans-basin diversion projects, drought, surface and groundwater issues, and interstate streams. Basin Advisory Groups (BAGs) identify those issues of greatest importance to their watershed.

Who were the major stakeholders in forming the plan, in public hearings, or in water issues generally?

The general makeup of BAGs includes representatives from agriculture, local government, industry, environmental and recreational interests.

What were/are the main points of controversy in creating the plan? Are there any major political issues that affected the planning process?

The initial round of plans generated more controversy than the current round of updates. Controversy arises around the issue of mapping irrigated lands and tying those lands to respective water rights. In parts of the state, the Water Development Office and Wyoming State Engineer’s Office are modeling water use with a detailed water use model, StateMod, as part of watershed studies. The RBWP has not done this more detailed work. However, this may change in the future, and will be driven by the BAGs and policy makers. It will take some public outreach to explain the benefits of this type of work.



Public Involvement

What changes, if any, have you noticed in the level of public interest or involvement in state water planning in recent years?

Attendance of BAG meetings has been consistent in some basins over the life of Basin Planning, while it has decreased in other basins. Attendance is impacted by the location of meetings and whether or not there is an active plan in the basin. Fewer people attend local meetings if their basin is not actively being studied. Hot-button topics attract public involvement and include trans-basin transfers of water, increased competition for water due to drought or population growth, and interstate compacts, especially in the Colorado River Basin.

Do you use citizen based groups such as basin committees or roundtables in developing the plan? What role do they have in the planning process? Are they advisory only or do they have real decision making authority? How are members of these committees or roundtables selected?

BAGs in the seven major river basins include citizens representing various water interests. The BAGs are advisory. They do prioritize projects and recommendations, but have no decision-making authority.

How is public comment received and incorporated in the process?

Meetings are open to the public for input. Each BAG develops their own plans that reflect public concerns and suggestions for addressing the issues.

Have you noticed significant changes in the level of public interest or involvement in state water planning in recent years? If so, in what areas or ways?

No response provided.

How is information developed during the planning process delivered to the public?

Documents are posted on the basin webpages that are part of the WWDO's website.

Plan Implementation

What is the purpose of the plan? Is it advisory or is there authority for plan implementation?

The purpose of the plan is to provide a water resource inventory at a basin level that can then be summarized to account for water resources on a statewide level. The plans are descriptive and not prescriptive. The plans have no authority and are not designed to implement other planning projects. However, as part of a RBWP, issues, developed strategies, and general recommendations are identified. More specific recommendations for such things as municipal master plans, dams and reservoir studies, and watershed studies, may be developed for future planning. The public entities, municipalities, irrigation districts, and others could then use Basin Plans as a vehicle for seeking Water Development Commission funding to do a study.

What were/are some of the tradeoffs considered in the projects and recommendations laid out in the plan?

Neither the State Framework Plan, nor the Basin Plans are specific with project recommendations. Rather, local public entities determine local issues that need attention. Local sponsors submit applications. The WWDC staff determines which projects and recommendations to approve based upon the criteria defined as eligible for WWDC funding.



How do you prioritize projects or recommendations within the plan?

As stated above, determination for project prioritization comes at the local basin level.

How are the projects or recommendations in the water plan funded?

The Water Development Commission was formed in the late 1970's with the intent of utilizing tax revenues, generated from nonrenewable resources, to fund water studies and projects. The Commission funds municipal master plans, tank siting studies, water well supply studies, irrigation system planning, pipeline studies, watershed studies, and construction of alternatives developed in the studies. Local public entities can apply for funding every year. Projects are split into three levels. Level I (reconnaissance) and Level II (feasibility) studies are funded with a 100 percent grant, with the Water Development Office retaining the funding and contracting for engineering services. This ensures that projects are completed according to state requirements. Level III (Construction) projects are generally completed at a 67 percent grant and 33 percent loan/sponsor match funding package. This process ensures that all projects receive local support because they begin at the local level.

Plan Evaluation/Oversight

How do you measure the cost effectiveness of your planning programs and their implementation?

The cost effectiveness of the Basin Plans is not easily measured. The collected data is used to determine the development of specific project areas to help address interstate water questions, and to plan for shortages in dry years. The value of having this information current and available when it is needed is difficult to quantify. However, it is an investment that the state of Wyoming has chosen to support that has been utilized throughout the years. Currently, River Basin Planning is evolving and new ideas are being considered for improving the data now available, collecting new data, and for working more closely with the Water Development's conventional planning program. Additionally, this will help to ensure that River Basin Planning is relevant and crucial to the success of conventional planning projects, interstate issues, dams and reservoir studies, municipal and domestic water use studies, and for the use of state government officials when they have questions.



State Contact Information

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