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Participatory Water Planning *Options for Nebraska*

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Participatory Water Planning *Options for Nebraska*

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Nebraska Department of Natural Resources

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Executive Summary

Water quantity is becoming an increasingly important and contentious issue. Many states are using public participation processes to ensure that the wide-ranging interests of the public are considered. A number of contextual factors should be considered in developing a Nebraska participatory process for public input on water issues. Factors worth considering include jurisdictional arrangements, the landscape of potential partners and stakeholders, the current state of scientific knowledge about water supply and demand, and funding and resource issues. A variety of input practices do exist which states can, and have, employed to obtain input on water issues – from the public and expert stakeholders. Examples of such components include the use of surveys, public meetings, deliberative forums, expert interviews, and participatory modeling. Some states have developed comprehensive participatory processes for water planning. These include permanently established structures such as the models used in Colorado and Kansas; temporary structures – as exemplified by New Mexico’s approach; and wide-scale participatory initiatives, such as those convened in Oklahoma and North Dakota. There are pros and cons to each approach, particularly when it comes to political considerations, resource requirements, or other interests. Key lessons learned from the experiences of other states provide guidance to the development of a Nebraska participatory approach. Finally, three blueprints that Nebraska could follow to pursue or enhance greater participation in water planning are proposed: 1) initiating traditional forms of public input, such as surveys and focus groups; 2) convening a comprehensive, highly structured deliberative approach to water planning across the state; and/or 3) institutionalizing regional, basin-specific models for public input.

Introduction

This report summarizes key considerations, trends, and experiences of states in participatory water planning. The scope of this report primarily focuses on western states, which share some of the same experiences, legal doctrines, and challenges that Nebraska faces. Research for this report was conducted through an extensive review of state statutes, agency reports, academic articles, websites, and books and other publications on this topic. Additionally, 25 interviews were conducted with state and local officials, citizens, facilitators, and interest group representatives from 13 western states, to shed light on the experiences and challenges of involving the public in water planning and policy.

This report proceeds as follows: **Part 1 – Participatory Processes for Water Planning** - first outlines general considerations that should be examined about the wider environments in which water planning take place. It reviews individual participatory input activities that could be used by Nebraska, summarizes pros and cons, and identifies states which have employed such practices in water planning. It then reviews more extensive statewide structures for public input, categorized into a) permanent input structures; b) temporary input structures; and c) “one-time” input initiatives. Part 1 also outlines structures of state planning entities that typically review public input and have authority to make policy and decisions. **Part 2 – Lessons Learned from Other States** - outlines important experiences from other states in their implementation of participatory input processes. To illustrate these lessons learned, it quotes extensively – and anonymously – from the individuals we interviewed for this report. **Part 3 – Ways Forward** - draws from Parts 1 and 2 to offer examples of general blueprints for participatory processes that Nebraska can consider for future action.

Finally, in the process of conducting research for this report, we developed several profiles of states to provide a more detailed review of their planning processes, and overall governmental structures and background relevant to water planning and policy. The **Appendix** contains six particularly relevant state profiles.

Part 1: Participatory Processes for Water Planning

Contextual Considerations

A number of institutional, historical, and political forces shape the overall environments in which participatory processes are implemented. State sponsors of participatory processes may have little leverage to influence or control this wider context. Nonetheless, these issues should be considered by agencies prior to developing participatory input processes so any major implications can be adequately addressed:

- **Local versus State Jurisdiction: How is state and local jurisdiction and authority over water planning and management currently balanced?** Texas represents one example where local jurisdictions have primary authority for water planning decisions, and statewide regulations are relatively lax. At the other end of the spectrum, Arizona places great emphasis on state government retaining control and authority over water planning matters. In most other western states, state government bodies and local entities either share jurisdiction over water planning (NE), or local entities enjoy a significant *de jure* or *de facto* ability to advise the state on water planning (CO, KS).
- **Stakeholders and Partners: What is the overall environment and culture of stakeholders and partners?** Some states have made great progress in convening participatory planning processes with the help of local watershed groups and related organizations (MT, NM). Others have had harder times gaining the support of stakeholders and interest groups into participatory planning. Examining and addressing these dynamics will play a significant role in shaping participatory processes and the resulting outcomes.
- **Partisanship Culture: To what extent does partisanship need to be addressed in terms of developing a participatory process?** Some states specifically require that official water planning decision making bodies have bipartisan representation (WY). Most states do not specifically require bipartisan representation.
- **Ownership: Where should a participatory input process be housed?** Some state entities have taken the lead in creating and facilitating participatory processes to involve members of the public in water planning (CO, KS). Other states have contracted with local, non-government entities to facilitate participatory processes, such as universities/colleges, non-profit water-related civic groups, or private consulting/facilitation firms, or those entities otherwise play significant roles in participatory processes (MT, NM, OK). This determination might be influenced by funding concerns, scientific concerns, or more likely, political concerns. In states where there are histories of water planning-related tensions between communities and interest groups, working with a neutral entity to plan and/or facilitate participate processes might be a beneficial way to gain trust among stakeholders and community members.
- **State of Scientific Knowledge: Is there adequate scientific data about water supply and demand?** Some states have significant gaps in scientific knowledge about water supply and demand, due to lagging adjudication of water rights, or significant exemptions in water use and other regulatory loopholes (NM, TX). Other states have completed fairly comprehensive, statewide studies of current and future water supply and demand (AZ). Some jurisdictions have facilitated participatory modeling projects to engage and involve community stakeholders in

water modeling projects (ID, NM), usually through the help of significant grant dollars. Establishing either long-term goals or near-term objectives for participatory water planning processes may be contingent on the state of scientific knowledge about current and future water supply and demand.

- **Funding: What are the funding needs for a participatory process? What vulnerabilities does funding create?** States have used combinations of legislature-appropriated general funds, state oil/gas severance/mining taxes, matching funds from federal agencies, or private grants to fund participatory processes. With reduced or strained state and federal budgets, securing funds to convene public input processes is becoming increasingly difficult. What's more, the development of funding streams for participatory input programs also creates financial dependencies that implicate long-term sustainability issues. Many states have purposefully tried to keep costs at a minimum for participatory planning processes to avoid creating financial expectations that may be difficult to meet in future years. Others have partnered with local government agencies, or citizen watershed groups to share costs.

Components of Participatory Processes

There are numerous methods available to obtain input from the public about policy matters, irrespective of the topic of interest. Common methods include random sample surveys (Korzi, 2000), public hearings before a law or rule making body (Baker, Addams & Davis, 2005), or listening sessions and town hall meetings (Lukensmeyer & Brigham, 2002). This section outlines examples of participatory methods employed in states we surveyed that are specific to water planning activities. It also includes examples of more novel methods used for other topical areas, such as deliberative polls (Fishkin, 1995), citizen panels or juries (Crosby, 1995), and various forms of online methods (Graham & Witschge, 2003; Price & Cappella, 2002).

Three categories of approaches are presented in this section: public input mechanisms, expert input mechanisms, and formalized statewide planning structures. It should be noted that soliciting input from the public about water planning, or policy matters in general, may not be the only beneficial objective or goal of administering a participatory process. Other benefits of engaging the public in participatory activities include educating the public about a topic, generating public discussion and media attention to an issue, building trust in government agencies or initiatives, and generating support for a potential policy or law. Some theorists argue that public input reinforces fundamental principles of democracy, and thus lead to better governance (e.g., Fishkin, 1995). Despite the anticipated value in engaging the public, there is a dearth of empirical evidence that documents which participation techniques yield what positive (or negative) outcomes (e.g., PytlikZillig & Tomkins, 2011; Tomkins, PytlikZillig, Herian, Abdel-Monem, & Hamm, 2010).

PUBLIC INPUT MECHANISMS

Public Surveys

There are two general types of public surveys that can be employed to solicit input from the public, random sample surveys and non-random surveys. Both types of surveys may be conducted through a variety of channels, such as phone, mail, or internet.

Random Sample Surveys

Random sample phone or mail surveys rely on statistical methods to identify respondents. Because of the methodology used to recruit respondents, it is possible to generalize survey results from the

sampled respondents to a larger community or population. Generalizing results to a larger population requires a large number of respondents to decrease the margin of error of the survey data.

Pros/Cons

Random sample surveys are generally regarded as a valuable method to obtain accurate data from the public because of the reliance on statistical sampling. However, they can be expensive. For example, random sample telephone surveys require a professional phone bank with trained staff and polling software. Random surveys are also subject to selection bias because some potential respondents will be more inclined to participate in a survey than others. Additionally, there is little or no opportunity for extended dialogue or interaction between survey respondents and sponsors, policymakers, or other community members.

Non-Random Surveys

Non-random surveys are another option. They are often convenience-based in distribution and may rely on existing mailing or phone lists, internet surveys open to whomever wishes to complete them, or paper surveys distributed through newsletters or community events. The results of non-random surveys may not be generalized. Rather, they are conducted to gauge the opinions only of those who responded to the survey. Mail surveys obviate the problem of missing cell-phone users, but they otherwise have the same disadvantages as do surveys conducted by phone.

Pros/Cons

Non-random surveys can be inexpensive to develop and disseminate, and reach a relatively large number of people in a short amount of time. However, these surveys rely on non-random samples that are not representative of the general public, but only of those who elect to complete the surveys. Without adequate protections, these surveys can be manipulated by motivated interest groups through “ballot stuffing.” There is little or no opportunity for live interaction between respondents and policy makers or other community members. These types of surveys can also yield low numbers of responses, depending on how they are promoted and the level of interest from the general public.

Summary State Examples

North Dakota used a random sample survey in 1992 to gauge public feelings about water issues as part of a comprehensive participatory initiative. Survey respondents were identified through lists of names and addresses compiled from the state’s motor vehicles department. The random sample survey yielded approximately 2,500 responses. **Oregon** convened a comprehensive public participation initiative in 2009/2010 to develop a statewide water strategy. An online survey was used to gauge public feelings about water resource-related long term goals, perceived challenges and threats to water quantity and quality, and policy preferences. The online survey yielded approximately 80 responses from the public.

Listening Sessions, Town Halls and Public Hearings

Listening sessions, town halls and public hearings are forums that allow the public to voice opinions and concerns about a particular topic or issue. They are typically sponsored by a government entity that publicizes the forum, and can often be required by a legal regulation, law, or policy. These forums are typically not facilitated, or lightly facilitated, might involve an educational presentation by a government or sponsoring entity, and may or may not follow rules of procedure such as mandating allotments of time for speaking, or requiring written statements. More formal public hearings are transcribed and may occur in the presence of policy makers. A listening session or public hearing might typically last a few hours a day at a pre-determined site and time, or several days.

Pros/Cons

A benefit of a listening session or public hearing is that they can be easy and inexpensive to convene, and can expose officials or government representatives to a variety of perspectives and voices in a short amount of time. Depending on how well they are promoted, forums can draw large numbers of community members. Disadvantages of these forums are that they can be dominated by special interest group representatives, and might only attract individuals who have strong feelings about an issue. Without suitable planning and facilitation, such meetings can be contentious, lack direction, and be “problem-based” rather than serve as a forum for constructive dialogue or engagement of the public.

Summary State Examples

Numerous states have convened public forums with varying formats as part of participatory processes. Pertinent examples include **Oklahoma**, which convened 42 local listening sessions across the state in 2007 that garnered over two thousand participants, as well as a series of deliberative forums and a water town hall session. **Oregon** convened 11 open houses across the state in 2010 to provide background information about its integrated water strategy planning, collect public input, and feature successful local projects. The Oregon open house discussions were facilitated by local volunteers interested in water issues and not state staff. **New Mexico** convened 29 public meetings across the state and a town hall session in 2003, which yielded approximately 1,500 participants. **Colorado, Kansas** and **Texas** regularly hold public meetings on a quarterly or biannual basis, though they are more formal in nature as they involve convening appointed local/regional planning entities.

Deliberative Forums

Deliberative forums are public meeting formats that are usually structured and facilitated towards generating substantive discussion and dialogue among participants. Deliberative forums typically involve an educational presentation by a government or sponsoring entity, facilitated small or large group discussions based around specific questions, tasks, or scenarios, and other structured exercises or activities. Deliberative forums tend to place a premium on engaging members of the public in facilitated discussions, information exchange and education, and sharing viewpoints and opinions in constructive and environments. The number of participants, overall scope, duration, and specific nature of activities, can depend on the outcomes sought by forum sponsors. Some deliberative forum approaches, such as the Deliberative Polling model developed by Stanford professor James Fishkin (1995), typically involve anywhere from 50-200 participants meeting through the course of an entire day or even several days. Other forums, such as the Citizen Jury or Citizen Panel model, involve a much smaller number of participants, but require more intensive deliberations for longer periods of time.

Pros/Cons

The advantage of deliberative forums is that they can result in “solutions-based” discussions and input from the public that may offer valuable insight for policymakers; provide opportunities for significant interaction and exchange of ideas between sponsors and participants, or among participants with different perspectives; and also result in meaningful learning and education among participants. Input from deliberative forums can be richer, more nuanced, and more structured towards specific questions of interest than through listening sessions or public hearings. Disadvantages of convening deliberative forums is that they often require significant planning, and the use of (potentially many) trained facilitators. Costs of potentially paying stipends to trained facilitators can be significant. Additionally, recruitment of participants might be challenging, depending on the objective of the forum and what range of perspectives forum sponsors are seeking. Deliberative forums are also vulnerable to participation bias and are not representative of the general public, since they typically attract individuals with a significant interest in the discussion. Paying stipends as incentives for participation might help to

attract a more representative cross-section of a community to participate in a deliberative forum (funds assist those who need financial support for transportation and/or child care, for example), but this can significantly add to costs.

Summary State Examples

Oklahoma employed a series of deliberative forums in 2008 and 2009 following a series of public listening sessions. The deliberative sessions were aimed at discussing and prioritizing potential water management solutions to address regional and statewide water concerns. The sessions were facilitated by a contractor (Oklahoma State University). **New Mexico** convened a series of deliberative forums using a charrette-model in 2003. At the session, potential water management practices were presented to participants, who had an opportunity to discuss the impacts, and pros/cons of each potential solution. The forums were facilitated by state water planning staff.

Participatory Modeling

Participatory modeling refers to the active involvement of public stakeholders and community members in natural resources-related, computer-based modeling projects. In the context of water planning, participatory modeling would refer to watershed-scale hydrologic modeling of projected water demand and supply in which members of the public had an active role in shaping and analyzing models and modeling results. Participatory water modeling often involves collaborations between agencies, community groups, and academic/scientific experts. Participatory modeling brings together hydrologists or other environmental scientists with members of the public, and incorporates public knowledge into model design. The duration and overall scope of participatory watershed modeling projects will depend on the complexity of both the watershed being studied, and the degree of human-environment interaction, the availability of data, and policy objectives.

Pros/Cons

Participatory watershed modeling is an intensive approach that can result in education and learning among citizens and policymakers about hydrological systems. If facilitated in a transparent and well-managed process, participatory watershed modeling can lead to a greater understanding of water concerns based on scientifically valid methods, and therefore result in arguably better policy responses. Another advantage of watershed modeling is that it creates working groups which blend community stakeholders and agency representatives with technical experts, and creates opportunities for greater cross-sector learning.

Disadvantages of participatory watershed modeling are that it can be expensive due to the time involved, and the need for prolonged technical expertise and consultation. Because model development, and data gathering and analysis can take months, interest among community members and policy makers may decrease over time. The technical nature of participatory modeling projects may serve as a barrier to participation generally. Additionally, active participation in participatory watershed modeling is usually most conducive with smaller groups of people. Wide-scale involvement in participatory modeling can be difficult to obtain and/or manage.

Summary State Examples

Participatory modeling is typically convened on a regional basis as opposed to a statewide one. Recent successful examples of participatory modeling initiatives include the Palouse Basin Participatory Model Pilot Project in the North **Idaho** and Eastern **Washington** region. The project was convened as a joint effort between University of Idaho and Washington State University faculty and local municipal and community leaders in 2008. The goal of the project was to explore options for developing a sustainable

water supply development plan for the Palouse Basin. Convened by faculty from the partnering universities, a basin committee of stakeholders was formed and met five times over the year.

In 2002, water planners in the three-county Middle Rio Grande planning region in **New Mexico** (Albuquerque) employed participatory modeling to examine water demand, supply, and conservation scenarios facing the region to the year 2050. Over the course of a year, 24 conservation strategies chosen by the public were tested and analyzed using a computerized model developed by a contractor (Sandia National Laboratory). Conservation strategies were vetted by the public, and the ultimate model chosen by the public formed the basis of a regional water management plan which was formally accepted by the state in 2004.

Combinations of Participatory Processes

Comprehensive participatory processes might involve combinations of methods and approaches to gather input from a community or communities of interest. Formal public hearings might be mandated as part of law, regulation, or general agency practice. Convening additional participatory processes can augment insight into community views, and reach wider and more diverse populations. The Deliberative Polling model incorporates the use of random sample telephone surveying with deliberative discussions to gather data from a cross-section of the public, providing them with opportunities to learn more about topics, and discuss policy issues in deliberative environments.

Pros/Cons

Advantages of using multiple participatory methods include that they can result in greater amounts and types of input from the public. Agencies and policymakers who successfully implement multiple participatory processes will have access to greater varieties of data from the public, and arguably, a more valid foundation with which to implement policy decisions based on public input. Large scale participatory processes employing multiple methods increase the confidence in results. They can also lead to positive media coverage, and generate public goodwill and trust in agencies and subsequent policy initiatives.

Disadvantages of using multiple participatory methods are primarily resource-related. High costs and intensive planning and preparation are required to successfully convene comprehensive participatory processes, with no guarantee that results from such efforts would ideally meet sponsor expectations. Without sufficient funding, sustaining such processes over time may be challenging. It may only be realistic to convene such initiatives on a periodic, or one time basis. If continual public input is sought by agencies or sponsors, less expensive activities to seek public input might be preferable.

Summary State Examples

In 2007, **Oklahoma** combined the use of listening sessions, deliberative forums, and the convening of a capstone town hall session in a participatory input project for water management that spanned the entire state. **North Dakota** has employed the use of surveys and public forums for its comprehensive water planning projects in 1983 and 1992.

EXPERT INPUT MECHANISMS

Agencies may not have the financial resources or staff available to conduct or manage wide scale participatory processes directed at the general public. Or, agencies might have already conducted public participation efforts and not received valuable information, or would like to augment what information they have collected from the general public with insight from targeted groups, particularly those with expertise or technical insight into an issue beyond what a member of the general public may have. Such

targeted forms of input can be both low cost and yield valuable results if implemented appropriately (Dahlberg, 2007).

Expert Surveys

An expert or stakeholder survey simply refers to a targeted survey directed towards a specific, non-random population that has been selected because of their expertise or involvement in an issue. In the water planning context in Nebraska, populations of interest might be Natural Resource District officials, county or municipal leaders or elected or appointed officials of other local government entities, water purveyors, or members of various interest groups and other stakeholders. Expert or stakeholder surveys can be administered via phone, paper and pencil surveys, or disseminated by the internet. It is recommended that such surveys be adequately promoted prior to their dissemination through the use of a “warm-up” letter, e-mail, or even a phone call, in order to increase response rates. Generally, the more personalized the pre-survey approach is to potential respondents, the greater the likelihood that individuals will complete the survey. Because potential respondent pools might be small, and there is a likelihood that sponsors will know identifying information of respondents, maintaining anonymity and/or confidentiality in survey responses is important. If employed, such measures should be adequately and clearly outlined in communications with potential survey respondents. An offer of compensation can increase survey response.

Pros/Cons

Like non-random sample surveys generally, expert or stakeholder surveys can be easily implemented with minimal costs, and results can represent what an informed population think about the topic. Written or internet based expert surveys can yield a rich amount of data from a large number of respondents in a short amount of time. Because respondents will likely have a natural interest in the survey topic, it is likely that they may be willing to answer longer, more complex surveys than members of the general public would. If paired with other data collection measures or participatory activities targeted towards the general public, results might be perceived with greater validity. The primary disadvantage of expert/stakeholder surveys is that they, by nature, restrict their respondent pool to a pre-determined population. Responses will not reflect public preferences, and respondents will likely have interests that influence their survey responses. Expert or stakeholder surveys have little or no value in terms of engaging or educating the wider public, and may even engender suspicion or concerns about transparency towards sponsoring agencies or entities.

Summary State Examples

Several states have employed surveys targeting water purveyors, municipal representatives, technical experts, or other stakeholders. **North Dakota** employed a planning needs survey targeting water resource district members and yielded close to 70 responses in 1992. North Dakota continues to regularly survey water purveyors and stakeholders about needs and management practices on a regular basis. **Arizona’s** Department of Water Resources surveyed approximately 1,000 water provider staff across the state in 2003 and 2004 to assess perceptions of needs and priorities. **Wyoming** sent a survey to over 1,000 water purveyors and users in 2006 to assess needs and priorities for statewide planning; however, only fifteen completed surveys were returned.

Key Informant Interviews, Focus Groups and Formal Testimony

Key informant interviews and focus groups are structured or semi-structured interviews or group discussion sessions conducted with knowledgeable experts about an issue of interest. Conducting interviews or discussions with qualified experts or stakeholders can potentially yield rich and valuable insight and content, particularly if the interviewer(s) are trained and prepared. Both in-person and

telephone interviewing can be employed with similar results. Adequate anonymity and/or confidentiality measures can enhance participant comfort with an interview and potentially result in more valuable interview outcomes. Expert testimony is another method for soliciting expert input, and typically occurs in formal, proscribed legislative or agency settings.

Pros/Cons

Soliciting qualitative input from technical specialists or knowledgeable stakeholders through interviews or testimony is a low-cost and efficient means to gather potentially rich data and insight. With adequate planning and selection of interview/testimony participants, expert insight will ideally filter out uninformed perspectives. Formal testimony provided on an official record addresses transparency concerns. Expert qualitative insight can augment and complement quantitative data obtained through surveys, and mixed methods approaches increase the validity of results. On the other hand, relying solely on expert-stakeholder interviews or testimony excludes views of the general public, and might raise concerns or criticism that lay person views are being neglected for elite interests. There is little or no wider public engagement value, nor opportunities for wider community members to become educated about the issues of concern.

Summary State Examples

Prior to convening its public engagement project to develop a statewide integrated water management strategy, **Oregon** conducted formal interviews in 2008 with water planning officials from neighboring California and Washington to learn about their water planning structures. During the public engagement stage of its process, it specifically targeted various water stakeholders (state, local, tribal government representatives, professional associations, etc.) for invitation-only focus groups about planning needs. In **Idaho**, the Department of Water Resources convened a public engagement process to solicit input about long term management strategies for the Eastern Snake Plain Aquifer. Prior to initiating its public engagement activities, the Department hired a third-party facilitator to interview 50 agency representatives, municipal officials, and water purveyors and user group representatives to identify issues that they recommended the public should provide input.

FORMALIZED STATEWIDE WATER PLANNING STRUCTURES

States employ a variety of different statewide structures that incorporate participatory processes into water planning activities. These structures can be categorized into three different types of participatory models: a) Permanent input structures – These are input structures based around basin/watershed-specific regions that provide input or advice to a state-convened entity; b) Temporary input structures – This approach employs the use of planning input from more ad hoc entities convened on a local or regional level; and, c) One-time input initiatives – These may be very comprehensive initiatives to collect statewide input on water planning that are convened on a one-time or very periodic basis.

Permanent Input Structures

Several states have highly structured, permanent processes in place to solicit water planning input from local/regional entities. These processes are typically created at the state level, and coordinated by a planning entity within a state department of natural resources or a close equivalent. Colorado and Kansas are two examples of states that have developed permanent participatory structures that have become well-established.

Colorado

Colorado solicits public input for water planning through permanent basin roundtables. The roundtable structure and process was created by state law in 2005 through the Colorado Water for the 21st Century Act. There are nine roundtables, each one representing a major river basin and one for the Denver metropolitan area. Each roundtable is composed of representative positions that are mandated by the state statute, and include local government representatives and interest group representatives. The mission of each roundtable is to develop a basin-wide needs assessment that identifies consumptive and non-consumptive water needs, determine available water supplies to meet those needs, and identify any projects or initiatives necessary to increase supply or reduce usage so an appropriate water balance is achieved.

The basin roundtables report directly to the Colorado Water Conservation Board – the state agency that is charged with overall water planning for Colorado. Designated representatives from each individual basin also form the Inter-Basin Compact Committee, which serves as a forum to coordinate and discuss inter-basin issues. The Colorado Water Conservation Board has final authority to make decisions on water planning, and the individual basins are advisory in nature. In practice, the water planning generated at the roundtable level is typically accepted by the state board, particularly if basin-level consensus is reached on water planning. Basin level planning is typically rolled into Colorado’s water planning process the Statewide Water Supply Initiative (SWSI). In Colorado, water planning is effectively decentralized through the basin roundtable system and project and program implementation by local water providers.

Each roundtable meets at its own discretion, typically once a month or once a quarter or on an as-needed basis. All basin roundtables are subject to state open meeting laws. The Colorado Water Conservation Board provides grant funding to support roundtable planning activities, though funding availability fluctuates with state budgetary conditions. The state also provides staffing support for each roundtable.

The roundtables structure has achieved a degree of independence and stability through the support and involvement of members and volunteers. The roundtables are supported by the state, but are not politically dependent on the state:

“They didn’t bureaucratize at all. I don’t think any of them have offices, have permanent staff or directors.... We kept [funding] separate... We did not want to create another bureaucracy because that is the strength of it all, because you don’t have political interests wanting to take control of it.”

When the roundtables were first established, state officials estimated that approximately two full time equivalent positions spread across multiple personnel were dedicated to developing the roundtable structure. Over time, this staffing support has increased. Today, 6 full time state employees support the basin roundtable process and the associated grant programs. Basin roundtables are also supported on an administrative level by volunteers or through various personnel affiliated with the entities that comprise each individual basin roundtable.

Kansas

Kansas solicits public input through the use of region-specific basin advisory committees. There are a total of 12 basin advisory committees operating in Kansas, corresponding to major river basins/usage areas in the state. The advisory committees provide consultation to the Kansas Water Authority, an entity within the Kansas Water Office that advises the governor and state legislature on water policy

issues and is responsible for developing the state's water plan. The basin advisory committee system was developed out of the Kansas State Water Resources Planning Act, and first established in 1985. Not unlike basin roundtables in Colorado, the Kansas basin advisory committees are mandated by statute to have representatives from a set of core water-related interests, which are filled by volunteers that serve four-year terms. Individual members are selected and approved locally by each committee, but are also subject to approval by the Kansas Water Authority to become official members. Each basin committee also has the ability to create and designate additional representative slots beyond the core positions in order to reflect the diverse character of water use and interests in each basin.

The Kansas Water Authority is responsible for regularly updating the statewide water plan and making water policy decisions for the state. It has sole authority to develop and approve the state plan. The Water Authority actively and regularly consults with the advisory committees, who assist the state by recommending priority issues for their basin, and also collect input from local residents at regular advisory committee meetings. Although the Water Authority will defer to a great extent to local basin concerns and recommendations in developing or updating the overall state plan, the basin advisory committees only retain advisory powers to recommend planning and policy matters to the Kansas Water Authority:

"The 'A' in the BAC is advisory. They are not an authority, they are advisory. There are times that causes some issues, because there are times that a local group would like to see things done differently or would like to see things or projects move faster or at a higher priority. So there are times when them not having as much authority creates a little state/local friction."

Basin advisory committees in Kansas meet on an as needed basis, typically three to five times a year. Each basin advisory committee also has chairs and vice-chairs that are elected locally and approved by the Kansas Water Authority. The chairs meet on a regular basis with themselves to discuss inter-basin issues, and also during quarterly meetings with the Kansas Water Authority. Every January, the chairs of the advisory committees also meet with state legislators to brief them about local water concerns. The Kansas Water Authority staff provide very light support to the individual advisory committees, usually just to take meeting minutes and communicate necessary information back to the Water Authority. Dedicated state staffing and expenses to the advisory committee process are thus minimal.

The basin advisory committee process is highly structured and has become a well-established process in Kansas for the generation and solicitation of public input. Since its inception in 1985, local stakeholders have become invested and supportive of the process, particularly because of the degree to which local concerns can be addressed through the advisory committees:

"The pros are that it's a pretty deliberative process. Everyone has a chance to say what they want to say, and we move at a slow enough pace that there is comfort in the fact that there won't be significant changes in policy without giving people a chance to talk about it and adjust. There are a lot of opportunities for people to get engaged in the discussion.... Having that openness and deliberativeness and transparency give people a lot of comfort.... Now the cons are, can government ever move fast enough? That long, deliberative process means you can't always respond quickly enough to a problem or opportunity. So that deliberativeness can be both a pro and a con."

Temporary Input Structures

As opposed to the establishment of permanent, basin or region-based processes for gathering local input, some states have opted for more hoc processes. In this approach, a state department of natural

resources or equivalent entity with responsibility for water planning offers grant funding to entities with an interest in local/regional water planning. Interested stakeholders and entities develop coalitions which identify their planning goals, participatory components, and then apply for the grant funding. The state will typically not have a significant role in determining the geographic scope of planning, or exact membership in local planning coalitions.

New Mexico

Statewide water planning in New Mexico is conducted by the Interstate Stream Commission. The Commission manages compliance with New Mexico's eight interstate water compacts, and administers state funds for water planning and conservation in general. To gather local input, the Commission issues grants for water planning based on a template developed in partnership with the New Mexico Water Dialogue – a civic engagement group that promotes citizen discussion and dialogue about the state's water issues.

To obtain a planning grant, interested entities within New Mexico's 16 regional planning areas form coalitions and apply for planning funds. As part of the planning template developed by the Commission, water planning must address approaches to meeting regional water demand up to six decades in the future, must include public participation activities, and must also include involvement by tribal entities. Other than these basic requirements, the Interstate Stream Commission does not mandate the composition of planning coalitions, or types or methods of participatory processes that local coalitions convene. There are thus significant differences among regions in regards to the composition of local/regional planning groups, overall planning approaches, participatory methods employed, and actual water plans. This loose guidance provides a great deal of flexibility and deference to local planning coalitions, and results in highly individualized regional planning:

"Each planning area used consultants and they maybe used different assumptions, and different units of measurement and data sources and so forth.... So it is sort of like mixing apples and oranges....If you look at the [planning template] it lays out pretty good guidance and pretty good principles, but when you get down to detail level, there was still a lot of freedom to do things in different ways.... It tells you what you need to address, but it doesn't tell you specifically how to address them."

Regional councils of governments (county and municipal government coalitions) typically serve as the lead entities involved in regional planning, in partnership with other water stakeholder groups and tribes. However many of the tribes prefer to participate in the regional planning process as observers and not official participants due to their status as sovereign nations. Grant funding supported hiring of consultants by regional planning coalitions and convening of participatory forums. Typical participatory forums convened by the local coalitions included deliberative meetings that were promoted through newspapers, radio promotions, and word of mouth. A particularly successful approach used by some planning coalitions in deliberative forums was to develop scenarios outlining water supply and demand deficits, and presenting policy alternatives for how best to reduce or eliminate such deficits:

"We had a lot of public meetings and charrette sessions where people looked at ten different alternatives for bridging the gap.... By fully engaging everybody and getting a lot of cooks in the kitchen, planning went faster and you didn't end up with a document that was just cook-booked by a handful of people. Everybody had a stake in it and a piece of the action."

Because water planning in New Mexico is primarily done by the local planning coalitions – who in turn use state funds to hire environmental planning firms to assist them, very few state staff resources have been implicated by this planning process:

“If I recall correctly the state only had one state water planner. That person was responsible to help guide and direct all 16 regional areas. They had a few other staff members within the Interstate Stream Commission who could attend a meeting from time to time. But in actuality the state had very little personnel resources to put into this, and very little financial resources, so things were pretty much done by the local-regional planning areas, and I would say that each of the planning areas had a core group of 15 or 20 people who chipped away at the planning process.”

One-Time Input Initiatives

Several state water planning entities have employed the use of comprehensive, statewide participatory initiatives. These initiatives might typically involve the use of several different types of participatory methods, culminating in a new or revised statewide plan or strategy based on public input. Because of the costs and labor involved, these types of initiatives can usually only be convened on a one time or very periodic basis.

Oklahoma

Oklahoma statute requires that the statewide water plan be updated every ten years. The plan was last updated in 1995, and Oklahoma is currently completing planning (expected by the end of 2011). To update the plan, the Oklahoma Water Resources Board – the entity charged with conducting water planning – contracted with the Oklahoma Water Research Institute at Oklahoma State University to conduct a comprehensive public participation initiative.

The Oklahoma initiative was multi-staged. In 2007, 42 listening sessions open to the public were held across the state, facilitated by Oklahoma State University staff. Over 2,000 individuals participated in the listening sessions. The purpose of the listening sessions was to identify water concerns across the state that should be addressed in the statewide plan update. Participants from those meetings were then invited to nominate themselves to participate in regional input meetings. In 2008, 11 regional input meetings were conducted with over 350 participants. At the regional meetings, water concerns were prioritized in order of importance by participants. A total of 11 priority areas were identified through the regional meetings.

“We did 42 local input meetings in year one. We had anywhere from 20 or 30 people to 100 people at each meeting. They just talked. Sometimes it went on for two, three, four hours. The good, the bad, the ugly. Everyone just spat out their feelings and opinions on water in Oklahoma. The regional input meeting step which was the next one was designed to filter through some of that information. It did a pretty good job at that.”

In 2009, three planning workshops were convened, in which representatives from the same pool of interested citizens had an opportunity to deliberate about potential management solutions for each of the priority areas of concern. The capstone forum for the effort was a three-day town hall session in 2010 in which approximately 200 members of the public and water stakeholders were asked to reach consensus on strategic recommendations to the Oklahoma Water Resources Board for the updated plan.

Following the town hall session, 70 plan update recommendations were identified. To further filter the public's recommendations, an additional 13 public meetings were convened statewide to review a draft plan update featuring fifteen of the recommendations that were selected by the Water Resources Board.

"We held meetings to receive feedback on the recommendations. They were a synthesis of their recommendations, our interpretations of their recommendations which included some discussion about their completeness, and the ability to implement them. We took the ones we thought were the ones that were most important, and ones recommended from other water agencies, and synthesized those together into a list. The feedback what we got was very positive."

A final plan update draft is now being developed. The plan update amounts to recommendations and has no formal authority. The final plan will be provided to the legislature and governor for their review and action.

"The advantages are that you get people talking about it. You get articles in the paper, you get people talking to their legislators. You really sort of mobilize an army. You get people fired up. You've created a lot of chatter. Another really important thing is that there were people who were really strongly opinionated about water planning. Although it may be a stretch to say that we got them to change their minds, clearly for a number of people, they began to understand other people's perspectives. I think a lot of people gained a much greater appreciation of other people. Finally, we got people to support our water plan."

North Dakota

North Dakota has convened several large participatory processes, though these activities have taken place over the past several decades. As part of North Dakota's 1983 statewide planning process, the North Dakota State Water Commission – the entity charged with water planning for the state – divided the state into 17 public involvement regions. Each public involvement region developed a citizen advisory board consisting of a representative from each of the region's water resource districts and an equal number of citizen representatives identified through local municipal organizations. The purpose of each advisory board was to identify water-related problems facing the region and potential solutions, and prioritize those solutions into potential practices. In their review of potential management solutions, boards were asked to consider the impacts of management options using three criteria: 1) quantifiable beneficial and adverse economic impacts, 2) quantifiable and non-quantifiable beneficial and adverse environmental impacts, and 3) social impacts. Recommendations were then presented to the State Water Commission for inclusion into the state plan. Each citizen advisory board met five times over a one and half year period, for a total of 85 times. Board meetings were open to the public.

The state again initiated a large participatory process for development of its 1992 water plan. The State Water Commission identified eight public involvement regions across the state, each with a citizen advisory board again composed of individuals nominated by local water resource districts, and municipal and tribal entities. Each board meeting was open to the public, and boards met a total of four times over a year's duration. The boards reviewed 1983 regional planning recommendations, and updated them with newer recommendations for management practices. Regional recommendations were provided and reviewed by two state-based entities, a policy steering committee and a technical review committee. The State Water Commission paired its 1992 input process with a random survey about water issues. The survey population was identified through lists of residents obtained through the state's motor vehicles department, and yielded approximately 2,500 responses.

Staff from the North Dakota State Water Commission indicated that both large input processes were facilitated by state water commission employees. Detailed records of the input processes were not available.

Oregon

Water policy for Oregon is constructed by the Water Resources Commission, a Governor-appointed body that develops water policy for the state. The Commission is currently overseeing the development of the state's first integrated water resources strategy, driven by the recognition that there is no official statewide water strategy and there is a need to prepare for the potential effects of climate change, population growth, and changes to land-use.

To begin its process, the Water Resources Commission invited water planning officials from California and Washington to Oregon to discuss their planning initiatives. In an effort to convey the urgency of planning for the future of Oregon's water resources, the Project Team, with help from other commissions and stakeholders, developed a set of draft Issue Papers covering water quantity, water quality, ecology and ecosystems, economic development, culture and community, and climate change, to outline all relevant issues as background documents for the integrated water strategy development process. Public commenting was available for a 3-year work plan and all the issue papers on two separate occasions.

From January 2010 to August 2010, the focus was placed on public input activities to identify water resource needs and possible solutions. Eleven community open houses and one virtual open house were held across the state in which project staff conducted presentations about ongoing water projects and solicited feedback from the public about key water issues and potential solutions. These sessions were facilitated by community volunteers and not department employees. Additionally, 31 smaller stakeholder workshops were held across the state targeting key stakeholder groups such as government agency representatives, professional associations, tribal governments, and civic and environmental organizations. The stakeholder workshops were facilitated by department staff. An online survey was conducted that yielded 80 responses. Public comment was also gathered through emails and traditional means. Approximately 1,000 individuals provided input through these outreach efforts.

The public engagement forums were not decision-making meetings, but were intended to be open forums for discussion and brainstorming. In all the public forums convened, four questions were selected to serve as the basis for discussion. The questions were also asked on the online survey. Those questions were:

Question 1 (Vision): As we embark on a long-term, integrated water resources strategy, what are some broad objectives you have, with regard to water in Oregon? Describe your hopes and goals for the state, in terms of water quantity, water quality, and other water related issues.

Question 2 (Challenges/Threats/Weaknesses): What do you see as some factors that may hinder our ability to meet Oregon's water needs in the future? (This question was aimed at identifying institutional weaknesses or external threats.)

Question 3 (Solutions/Opportunities/Strengths): Do you have water resource solutions (policies, programs, projects) that you would like to see as part of this Integrated Strategy? What are some

successful models from your organization, community, or elsewhere that we should encourage or develop further?

Question 4 (Education/Outreach): Do you feel that you have access to adequate information about water resource issues? Please suggest ideas for better education and outreach about these issues.

The Project team is currently identifying recommended future steps and possible obstacles. Draft recommended actions have been compiled based on the public input gathered through the open houses, advisory group meetings, stakeholder workshops, and the online survey. The draft recommended actions were released for public comment, through a series of bulletins in June 2011. The Project Team used the public comments, meetings with the advisory groups, and stakeholders, to revise the recommended actions and develop a discussion draft of the strategy. The discussion draft, released in December 2011, is currently available for public comment. Staff are currently meeting with other boards and commissions to present the discussion draft and seek endorsement.

It is anticipated that the final strategy will have recommended actions, an implementation and funding plan, and measurement indicators. The final strategy is scheduled for adoption by the Water Resources Commission in August of 2012.

STATE PLANNING ENTITIES

States typically have a lead entity composed of appointed or elected officials or citizens that are responsible for developing and overseeing participatory planning. These bodies review public input and planning recommendations generated at a local or regional level.

Idaho

The Water Resource Board of the Idaho Department of Water Resources convened a process in which an Eastern Snake Plain Aquifer Advisory Committee was created and charged with developing a Comprehensive Aquifer Management Plan (CAMP). The Advisory Committee was composed of sixteen users representing municipalities, business, land developers, surface water users, ground water users, spring water users, hydropower, domestic well owners, conservation interests, mixed-use interests, and the county assessor. Members were appointed by the Governor and Water Resources Board, and an outside facilitator from a consulting group (CDR Associates) was employed to facilitate the Advisory Committee process.

Oregon

The Oregon Water Resources Commission is a Governor-appointed body that oversees the activities of the Oregon Water Resources Department. The Department is developing Oregon's first integrated water resources strategy, and consulting with three other state agencies that are regularly involved in water quantity or quality management (Department of Environmental Quality, Department of Fish and Wildlife, and Department of Agriculture) to create a four-part leadership structure for its input process. The structure was composed of a project leadership team composed of senior staff members, an 18 member citizen Policy Advisory Group chosen by nominees and recommendations by the state agency directors, a 15 member Agency Advisory Group of government agency representatives, and an ad hoc Federal Liaison Group to work with federal agencies on technical matters. Each of the four agencies which composed this leadership structure played a role in the development and review of the state's participatory-driven integrated water resources strategy.

Colorado

The Colorado Water Conservation Board has 15 members. Ten voting members represent each of the state's eight major river basins, a representative for the Denver metropolitan area, and a representative for the Director of the Department of Natural Resources. Five non-voting members include the director of the board, the State Engineer, Attorney General, Director of the Division of Parks & Wildlife, and Commissioner of Agriculture. Board members serve three years and are appointed by the Governor.

Georgia

The Georgia Water Council is the committee created by state law that coordinates statewide water planning and has authority to review and approve the plan before submission to the state legislature. The Water Council is formed from representatives of eight state agencies (Environmental Protection Division, Department of Community Affairs, Soil and Water Conservation Commission, Environmental Facilities Authority, Department of Natural Resources, Department of Agriculture, Forestry Commission, Department of Human Resources), two senators from the Georgia Senate Natural Resources and Environment Committee (the committee chair and another senator), two representatives from the Georgia Natural Resources and Environment Committee (the committee chair and another representative), and two members of the general public who are chosen by the President Pro Tempore of the Senate and Speaker of the House of Representatives.

Kansas

The Kansas Water Authority advises the Governor, legislature, and director of the Kansas Water Authority on water policy issues. It is comprised of 24 members: 13 individuals appointed by the Governor and legislative leadership to represent different water interests and user groups across the state, and 11 non-voting members representing state agencies that serve ex officio.

Part 2: Lessons Learned From Other States

States take a variety of approaches to incorporating public input into water planning. There is no single correct approach or model for conducting public participation in water planning. Additionally, the different approaches employed by states each have their advantages and disadvantages. The participatory approach used should be mindful of the pros and cons of different approaches, reflect the state's objectives in reaching out to the public, and be both politically expedient as well as practical from a resource and administration perspective.

In the interviews we conducted of various state and local officials and citizens, a number of interviewees indicated that participatory planning processes that lent themselves to maximum benefits in terms of addressing long-term water sustainability issues were the least acceptable politically. Likewise, what was most politically convenient or easy to accomplish probably would have resulted in the least optimal water planning outcomes. Thus, the challenge facing states is to convene participatory processes that are both politically acceptable, and provide the most value in terms of planning and engagement outcomes.

Working within a defined context is also a crucial limitation. State agencies charged with water planning rarely enjoy the ability to affect or influence state institutions or other dynamics that form the overall context for water management. However, agency sponsors can successfully and independently develop and implement valuable participatory initiatives on their own or with the support of essential partners. A number of critical lessons based on the experiences of other states should be considered in developing a participatory approach to water planning:

Lesson One: Develop a long-term strategy for sustaining public participation

Ensure that there is a vision and structure for sustainability of the planning process for the long term. It is helpful if such a vision and structure is embedded in legislation, agency rules, or other formal authority that will continue to guide public input on a long-term basis. Additionally, consideration should be put into how a process might be sustained after budgetary support is withdrawn or decreases. Sponsors may want to avoid constructing participatory processes that are dependent on significant budgets, and instead look for low-cost models with cost sharing and natural partnerships.

“The better your enabling legislation is written to not only establish regional planning areas and their mission and objectives, the better your planning will be. And you have to actually provide an adequate budget for that, and provide some kind of statutory mission for the long term. We found that in the regional planning areas, after the planning process was completed and plans were adopted, many of our regional planning councils just sort of evaporated. They had done their job and just went away. There was no one available to be a caretaker and help with implementation, or remind people that it existed, or to update it. I think it was a fault of our enabling legislation. There wasn't enough thought given to the long-term mission. We still continue to meet monthly, but we don't have a budget, and by statute, I don't think we have much authority.”

“Funding is the double-edged sword hanging over your head. You can do lots of great things with big budgets, hold all sorts of meetings, hire consultants and do fancy technical studies. Especially with the funding and matching funds from the Bureau of Reclamation or USGS. But once the funding goes away you are faced with a difficult situation.... We decided to keep things on a shoestring so there was no

dependence, and no political criticism that came with funding. That is a big reason for the success of the process until now. Everyone could support a process that cost next to nothing but got you good results.”

Lesson Two: Design a participatory process towards meeting specific goals

Prior to initiating a participatory process, it is important to establish what output from the public is sought. Pre-identified goals should drive the process, and not vice-versa. Additionally, consideration should be given to how results from the participatory process will be used, and what implications it will have for policy:

“We wanted to take what came out of the planning process and have some well-baked recommendations. Unfortunately, what happened is that the [final] process, as it turned out, wasn’t designed to take what had been developed and do what it was I and others wanted it to do. It didn’t take what had been done and weed through the good and the bad and bake it yet fully again. The process was simply not designed to do what it was we wanted.... Public input is great, but how you design it is super-duper important. I would have designed a process that would have gotten to that specificity that we wanted.... The other side of that argument is that if you get too specific, your hands are kind of tied and you don’t have that wiggle room.”

Lesson Three: Prepare for push-back

Depending on the scope of a participatory process, sponsors should prepare to encounter resistance and criticism from some quarters. A common criticism is that members of the general public are not technically informed of the issues:

“A lot of the large user and industry groups, they loathe this whole thing. They hate even talking about it because it’s different from what they are used to, and they like things just the way they are, thank you very much. So, there is strong opposition to ideas related to in-stream and environmental flow issues - things that the public put forward that they didn’t like. So they accused the public of being a bunch of doofuses that didn’t know the difference between their ass and a hole in the ground: ‘They don’t know anything about that, we’re the ones who work in water and we’re the experts.’”

Lesson Four: Balance public and expert input

It is important to identify what type of input is best provided by the general public, and what might be better provided by technical experts or other stakeholders. A useful and valid participatory process should balance expert and general public input in a transparent fashion, and well-structured process with identified purposes and endpoints:

“At some point, you can have all the public input you want, and everyone feels good and we’re all being heard. But at some point, you’ve got to get to an end point. If you continue to have too many people and it gets too big, and you have people who aren’t as knowledgeable as you’d like them to be at that stage of the process, if you don’t filter them a little bit, it can go on ad infinitum and you never get to an endpoint. In my opinion, what I would have done is absolutely tried to get all perspectives represented, but I’d also have people who I knew who knew their stuff.”

Lesson Five: Involve local government

Ensure that local government entities are involved and supportive of participatory planning at all times. It should be kept in mind local government entities have significant needs and authority, and are crucial constituents to participatory planning. Additionally, identify those individuals within local government that are key resources to involve:

“We have had meetings where we are sitting around, and there are only six of us at the meeting, and someone asks, ‘Why are we meeting?’ and that sort of thing....You can’t just put a plan on the shelf after it’s done. You have to keep it alive and you have to sell it. The local governments are the ones that are the implementers. They are the ones that have the ability to implement those alternatives. If you don’t keep on presenting it to them and showing them the benefits, they just keep on muddling along.”

“We no longer invite a city mayor or county commissioner to every meeting because there is just not enough substance to validate them spending that amount of time. But what we can do is have people come to our meetings who are in the planning departments of the city or county, and we have people who are the designated water person for environmental organizations. So we have tagged those who are truly the working members of local governments and planning partners who are still engaged in real ‘rubber meets the road’ work. We keep them engaged and know what they are doing with planning and zoning and infrastructure development. When we do have something really substantial, we can invite some of the real decision makers, but in the meantime we are using some of these staff people to keep everything moving forward. If you look at it over time, it has been real successful that way.”

Lesson Six: Value the use of neutral facilitators

Having a third party or local facilitator or host to public forums is critical to establishing a positive rapport with stakeholders and influencing perception of the process. This might be particularly helpful in contexts where there is a history of tensions. Universities or colleges may serve as good entities due to both their expertise and positive image with communities:

“I think it’s important that neutrals are involved. Neutrals from a university tend to be a pretty good choice because universities tend to have a reputation for being neutral.... Given the mentalities and personalities of [those with the state], I think it would have been a disaster if they had gone out and done this. We didn’t have a dog in the fight. If someone wanted to swear up and down about the director, it wouldn’t have bothered me. In the long run, it helped their reputation. Even though people knew we were working for the state, it was still seen as the state wanting to reach out to the public in a way that mattered.”

Lesson Seven: Determining who composes ‘The Public’ will drive discussion dynamics

Determining the target audience is a critical part of designing the participatory process, and closely interrelated with defining process activities, objectives, and promotion. Consideration should be given to the implications of either separating or merging interest group representatives with members of the general public into process activities, as it will affect process dynamics and outcomes:

“When we started this we asked, ‘What do we do about the lobbyists?’ The whole genesis of this process was that it was to be a grassroots process. This should be a grassroots process to get around all the lobbyists and special interests and just get the grassroots folks. The problem is, how do you define lobbyists? There are people who are registered as lobbyists, but there are plenty of people who aren’t, but they essentially do the same thing. They go out to the statehouse, shake hands, and tell lawmakers what they should do. So we decided to let everyone who wanted to participate in the process participate except for state legislators. These powers that be, a lot of them hated our process because they are used to getting what they want. They are used to being a single voice. Suddenly, they find themselves in a room with 300 other voices.”

Lesson Eight: Determine what type of participant education is needed and the optimal means to provide it

A valuable participatory planning process should be based on input from a public that is adequately informed of the issues. However, issues implicated by water planning can be highly technical and inaccessible to members of the general public. Too much technical information can be overwhelming and difficult to process, causing frustration and leading to uninformed input. Participatory processes should be designed so that the general public is engaged and adequately informed of the relevant issues. Input that requires processing overly technical information is probably not a suitable task for the public.

“We probably should have spent more time informing the participants. We tried, but people just won’t read the stuff. People are busy. They’re not going to sit down and read 100 pages of boring water policy stuff. But most of them will come to a meeting and listen to you.”

Lesson Nine: Use community resources to promote and validate public participation

Adequately involving a wide cross section of community members in input activities requires effective promotion by a neutral and well-respected community entity. States have had successes with working with university extension offices to promote community participation:

“We used our extension services to host the meetings, which are usually at local fairgrounds. Many of the extension services, that is where their offices are. That worked really well because those extension agents work with a lot of people in the counties. We’d start out meetings with the extension agents introducing us. We would send out a flyer about two weeks before the meetings. They could put them in their newsletters and post them up around town. The extension agents know where to put those up. The local eateries or the feed store and places like that.”

Part 3: Ways Forward

There are a variety of ways participatory input strategies might be organized by the Nebraska Department of Natural Resources to engage the public about water planning and policy issues. These proposed blueprints, and affiliated pros and cons, are discussed below. Elements of each blueprint are not exclusive, and could be modified or adapted to best reflect the needs of the Department and its stakeholders.

Blueprint 1: Traditional Public Input

A relatively easy to administer initiative would be to gather input from the general public and stakeholders through the use of surveys and stakeholder focus groups. In this model, we recommend the use of a random sample survey of the public because of its scientific validity, paired with a survey directed towards Natural Resource District representatives, municipal officials, water purveyors, and other local officials and stakeholders. Additionally, we recommend convening stakeholder-specific focus groups as well as focus groups targeting the general public, in order to obtain qualitative information that could be examined alongside survey data.

Although not required, we recommend the use of third party facilitators for focus groups because it adds a degree of transparency and credibility to both the process and outcomes in the eyes of the public, stakeholders, and policy makers. However, internal staff facilitators could be used if resources are an issue. Educational documents could be sent to survey and focus group respondents, or be made available in the form of issue papers on the websites of the Nebraska Department of Natural Resources or a third party facilitator. Such activities should be administered and promoted on a regular basis in order to institutionalize a participatory process within the Department. Questions of interest to be featured by surveys and focus groups could center on general themes of meeting water supply and demand projections and assessing policy preferences, focus on more specific areas of interest, or a combination of both.

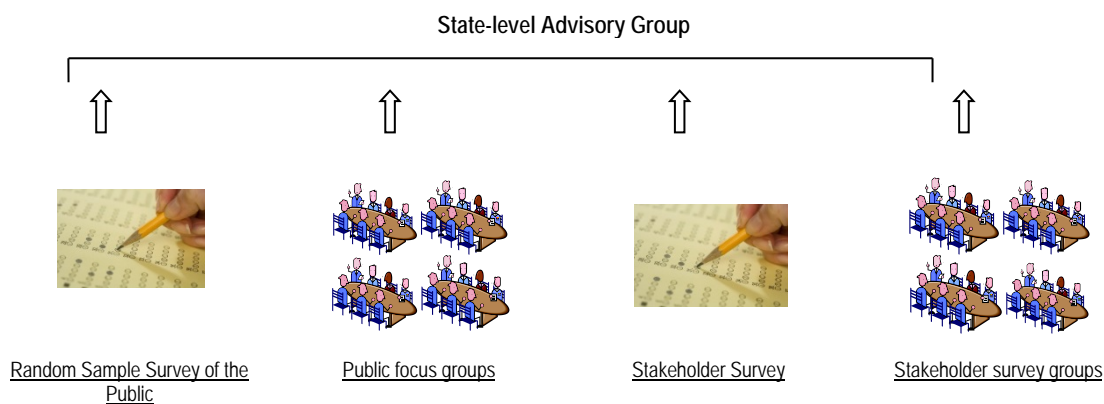


Figure 1. Regularly conducted surveys and focus groups of both the general public and stakeholders/experts inform state-level planning.

Pros/Cons

These activities would be relatively easy to implement on an administrative level, and could be scaled up or down depending on the availability of funds and resources. It would provide the Department with both quantitative and qualitative data from both the general public and stakeholders on which to base policy decisions. These activities do not implicate significant institutional or political changes, and could be initiated independently by the Department. These are relatively “safe” public input activities that are regularly used by governmental agencies in a variety of fields, and would likely not generate much political or public criticism.

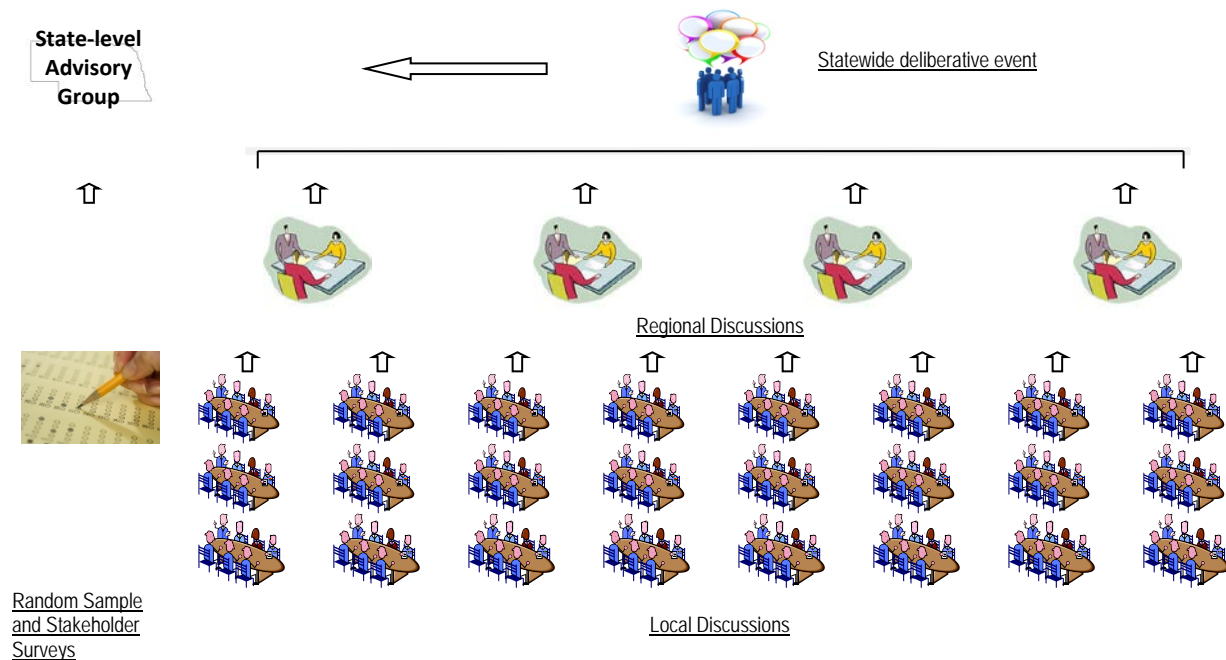
Potential disadvantages of such an approach are that it does not significantly change planning or decision making processes in Nebraska, or directly engage the public in a particularly significant, long-term way. Although there would be opportunities to educate the public about water issues, such education would be limited.

Blueprint 2: Deliberative Public Participation

The foundation of this approach is a highly visible strategy to engage the general public and stakeholders about water issues statewide, similar to the approach used in Oklahoma. Addressing wide-scale, fundamental statewide policy issues would best fit a comprehensive approach, such as the development of a statewide water plan or long-term water strategy. We would recommend that a random sample survey of the general public to acquire quantitative data. Listening sessions and deliberative-style forums should be convened to assess and identify public concerns about water, and discuss policy preferences or management solutions.

Forums should be structured and convened to complement each other in terms of forming a cohesive process that results in adequately addressing specific questions of interest, and cover all areas of the state. A recommended approach might be to convene listening sessions in each of Nebraska’s Natural Resource Districts to assess and identify needs and general impressions. Deliberative basin-specific forums could then be convened in each major basin or portions of each basin to provide an educational overview of potential management practices or other strategies and then solicit discussion and input from participants. This iterative input process could culminate in a single deliberative forum or series of forums to process and finalize policy preferences that could form the basis of a statewide water plan, and/or legislation that would be recommended to the Legislature and Governor. This deliberative public input should also be paired with expert and stakeholder level input either integrated into or conducted alongside the process targeting the general public. We recommend that activities be facilitated by a third party to preserve neutrality of the process.

Figure 2. Local and regional deliberations culminate in a statewide deliberative forum. Surveys are also conducted to inform planning.



Pros/Cons

A highly structured, multi-level, multi-method engagement process will result in generating a rich and nuanced public and stakeholder input on comprehensive and specific questions of interest. Deliberative forums provide participants with opportunities to not only become educated about water policy and planning issues, but to also hear and consider the views of other stakeholders and members of the public, which might potentially influence and change their own views. The scope of the process brings new voices into the discussion. The visibility and scale of the process, if conducted successfully, provides a strong basis for comprehensive, statewide policy changes or restructuring. Finally, the initiative could be administered independently by the Department, and not require major policy or institutional restructuring, though partnership and support from local entities and other stakeholders would be beneficial.

The disadvantages of this approach are primarily resource-driven and political. Although activities could be scaled down, it is likely that significant financial resources would be needed. Convening all activities and collecting and examining public input would take a significant amount of time. Politically, engaging the general public on a wide scale could lead to criticism from established stakeholders. Decisions about how to balance the interests and input of special interests with the general public might be difficult. Sustaining the process might be challenging.

Blueprint 3: Institutionalizing Regional Decision-making

This blueprint follows the approach taken by neighbors Colorado and Kansas and involves the formation of basin-specific regional planning entities that report to the state. We recommend basin-specific entities incorporate NRD representatives into a regional entity, but also include representatives from the general public, municipalities, and other stakeholder groups. Specific representation and nominations or selection processes could be identified by statute. The institutionalization of basin-wide planning could be structured towards development of regional plans, a statewide plan, or both, but a wide degree of independence should be provided to individual basins to convene planning activities so

long as it conforms to a basic template which meets state requirements. Determining whether basin-specific entities would be advisory in nature, or have more formal authority and powers, would be a critical policy decision. However, we would recommend that an advisory-only capacity for regional planning entities might be most political expedient given that Natural Resource Districts already retain significant authority, and restructuring jurisdiction and authority would be politically challenging.

Pros/Cons

The advantages of institutionalizing a basin-specific regional planning process is that it maintains a wide degree of independence and autonomy locally, but aggregates concerns, discussions, and engagement on a regional level that would be better suited to address basin-scale issues. This approach maintains current Natural Resource Districts, while also integrating newer voices into water planning. It would be a suitable approach towards the development of statewide planning based on regional input, as indicated by the experience of Kansas. Additionally, this structure could be sustainable on a long-term basis as costs to the state are minimal.

A disadvantage of this approach is that it is stakeholder-centric as opposed to having the broad involvement of the general public. It maintains a minimal role for the state in terms of directly developing or facilitating input activities with the general public. The approach would likely not be conducive to wide-scale, public education about water issues. Perhaps most challenging, formation of a new, regional advisory or planning structure would require significant political support and change that could not be driven the Department acting alone.

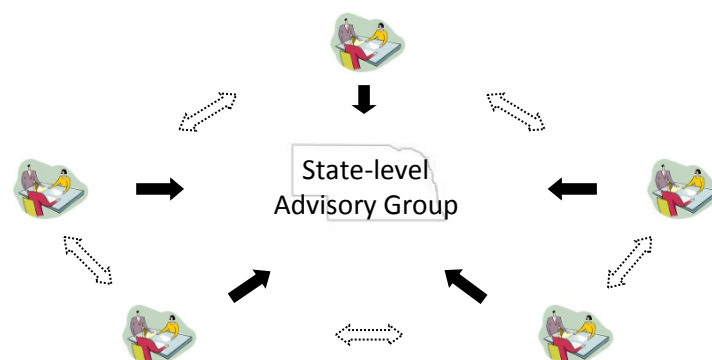


Figure 3. Regularly convened basin-specific bodies advise or determine regional plans that compose a statewide plan.

Conclusion

Western states have pursued a variety of different paths to integrate public participation into water planning efforts. These experiences indicate that there are both strengths and weaknesses to different methods and overall approaches used, and important lessons learned that should be heeded. Nebraska has several options it could pursue to integrate participatory processes into water planning. No single approach represents a “correct” model of public participation for Nebraska. Rather, the optimal participatory approach for water planning should be based on considerations about what process(es) would result in the best possible outcomes, and have the least amount of acceptable risks or challenges.

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Interviews

Arizona

J. Scott Miller, Statewide Active Management Area Director, Arizona Department of Water Resources, September 21, 2011.

Colorado

Russell George, Colorado Water Conservation Board, October 21, 2011.

Eric Hecox, Water Supply Planning, Colorado Water Conservation Board, September 29, 2011.

Idaho

Fritz Fiedler, Associate Professor of Civil Engineering, University of Idaho, August 25, 2011.

Kansas

Earl Lewis, Assistant Director, Kansas Water Office, September 26, 2011.

Byron Warta, Chair of Basin Advisory Committee Chairs, September 28, 2011.

Montana

Paul Azevedo, Water Management Bureau Chief, Montana Department of Natural Resources and Conservation, September 16, 2011.

Alicia Vanderheiden, Montana Watershed Coordination Council, September 26, 2011.

New Mexico

Consuelo Bokum, New Mexico Water Dialogue, September 28, 2011.

Angela Bordegaray, Interstate Stream Commission, New Mexico Office of the State Engineer, September 15, 2011.

Charlie Nylander, Jemez y Sangre Regional Water Council/Water Matters, October 17, 2011.

Mary Murnane, New Mexico Water Dialogue, September 13, 2011.

North Dakota

Lee Klapprodt, North Dakota State Water Commission, August 2, 2011.

Oklahoma

Kyle Arthur, Director of Planning, Oklahoma Water Resources Board, September 16, 2011.

Mike Langston, Oklahoma State University Water Resources Research Institute, September 20, 2011.

South Dakota

Garland Erberle, Chief Engineer, August 31, 2011.

James Feeney, Natural Resources Administrator, South Dakota Department of Environment and Natural Resources, August 25, 2011.

Eric Gronlund, Water Rights Program, South Dakota Department of Environment and Natural Resources, August 31, 2011.

Brad Johnson, South Dakota Board of Water and Natural Resources, September 7, 2011.

Texas

Dan Hardin, Texas Water Development Board, September 21, 2011.

C. E. Williams, Panhandle Regional Water Planning Group, September 23, 2011.

Utah

Todd Stonely, River Basin Planning, Utah Division of Water Resources

Washington

Allyson Beall, School of Earth and Environmental Sciences, Washington State University, August 12, 2011.

Bill Zachmann, Watershed Plan Implementation & Policy Coordinator, Department of Ecology, August 16, 2011.

Wyoming

Phil Ogle, Deputy Director, River Basin Planning, Wyoming Water Development Office, October 17, 2011.

Appendix: Select State Profiles

Arizona

Statewide Plan:

No

Primary Government Entities Involved in Water Supply Management:

The Arizona Department of Water Resources (ADWR) administers the state's groundwater code and surface water rights, and has responsibility for all surface and groundwater under its jurisdiction. The Department was created in 1980.

The primary mission of the ADWR is to secure long-term water supplies for the state, which are continually stressed due to a growing population, and lack of rainfall. The Department also oversees conservation, manages floodplains and flood control plans, and inspects dams. It essentially has responsibility for all non-federal water related issues with the exception of water quality.

Ground and Surface Water:

The ADWR does not manage ground and surface water conjunctively. The doctrine of prior appropriation applies to surface water. Due to limited water resources and a growing population, Arizona has strict laws governing water management. Groundwater is managed by the ADWR according to the state's groundwater code—passed in 1980. The code's basic objectives are geared towards preserving the state's limited amounts of groundwater and controlling or mitigating overuse.

The state has identified two categories of designations for parts of the state facing groundwater shortages. These are areas which historically relied on mined groundwater, and are now subject to regulations under the Groundwater Code. There are currently five Active Management Areas (ARAs) in Arizona, where overuse of groundwater is or was at high levels. In these areas, management goals have been set to obtain safe-yields in the near future (where removal of groundwater does not outpace replacement) by curtailing use or employing other strict conservation measures. There are also three Irrigation Non-expansion Areas (INAs), where the expansion of agricultural irrigation is limited.

Planning:

Groundwater

Arizona depends heavily on groundwater. Groundwater provides 40% of the state's water supply, which has been traditionally used for agriculture, and is critical for serving its growing population centers and industry. The Arizona Groundwater Code was created specifically to control groundwater depletion and identify the best way to allocate groundwater to meet the state's needs. Groundwater is subject to the doctrine of beneficial use. The state is divided into seven water planning areas, which are composed of hydrologically distinct groundwater basins.

New pumping for irrigation is prohibited in the three Irrigation Non-expansion Areas (INAs) due to already depleted groundwater. INAs are created by a determination of the ADWR, which requires a

showing of factual information and a public hearing. Excluding the INAs, pumping outside the AMAs does not require a permit but does require a notice of pumping for monitoring purposes.

The state's five Active Management Areas represent regions where groundwater depletion is the most serious. The AMAs include Arizona's two major population centers—Phoenix and Tucson—and three agricultural areas. Groundwater pumping in AMAs requires a permit from the Department. Designation of an AMA requires a showing of fact by the ADWR and a public hearing. Management goals for groundwater were established in the Groundwater Code, which mandates wide-scale conservation requirements for municipal water providers, and industrial and agricultural sectors that fall within the AMAs. These include no expansions of agricultural production areas, the assignment of maximum annual groundwater allotments to farms, a gallons per capita day program for municipal water providers, mandatory metering of water on wells, mandatory use of renewable water sources (non-groundwater), and developers must be able to show that a supply of water for 100 years will exist for new developments.

Groundwater goals are to achieve "safe-yield" status for all AMAs by 2025, if not sooner, and maintain that status permanently to prevent long-term groundwater depletion. Safe-yield status exists when the amount of groundwater recharge equals the amount of removal. Each of the five AMAs has an area director appointed by the director of the ADWR, and a Groundwater Users Advisory Council. The Councils are composed of five Governor-appointed individuals to represent groundwater users in AMAs, and advise the AMA area director and ADWR on policies regarding each AMA.

Since 1980, the Department has implemented or will implement five management periods from 1980 to 2025. The Third Management plan was from 2001 to 2010, and the Fourth Management plan is in the process of being initiated. The area director must develop a management plan for each of these periods in each of the AMAs with mandatory water conservation measures that gradually increase in intensity or scope.

Surface Water

The Department's management of surface water includes four main components: Providing administrative and technical assistance to adjudicate surface water rights, managing the state's share of the Colorado River (which serves seven states), managing flood plains and non-federal dams, and conducting statewide water resource planning. Rights to surface water use also require ADWR permits. Several planning initiatives have been conducted by or through the ADWR as a result of Governor or Legislature initiated projects.

Specific Planning Initiatives and Entities

The ADWR recently completed the Arizona Water Atlas. The Atlas documents and synthesizes water supply and demand for the entire state for each of the seven planning areas based on information for 2001-2006. Public comment was collected on the Atlas from 2007-2008, and is continually updated and augmented. The Atlas contains an overview on water adequacy, climate, demand, geography, hydrology, land ownership, and surface water for each of the planning areas. It serves as the informational basis for water policy making in the state, and is available online at the ADWR website.

In 2003, the ADWR sent a survey to approximately 600 water providers across the state assessing water needs across the state. A similar survey was sent in 2004 to 360 rural water providers. Survey results

indicated that the main priority issues facing the state were overall needs for additional water, aging water infrastructure, and inadequate funding for infrastructure updating and improvement.

In 2010, the Legislature created the Water Resources Development Commission to consider water needs for all counties for the next 25, 50 and 100 years, identify potential water sources, and identify funding mechanisms to secure the provision of water and for infrastructure. The Commission members were appointed by the ADWR, and include local, state, and tribal government representatives, interest group representatives, and state senators. The Commission is divided into working groups for the environment, water supply and demand, finance, population projections, and legislative recommendations. The Commission must issue a report for recommended legislation by October 2011.

Arizona benefits from having a Groundwater Code that is a powerful instrument for maintaining long-term sustainability of groundwater resources. The code has been in place for several decades and has become well-accepted part of the water management and use milieu.

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Colorado

Statewide Plan:

Yes, although it is not called a “State Plan.” Colorado has a water supply planning process through the Statewide Water Supply Initiative (SWSI) which produced reports in 2004, 2007, and 2010. SWSI identifies statewide policy level strategies for addressing Colorado’s water supply and demand needs.

Primary Government Entities Involved in Water Supply Management:

The Division of Water Resources of the Colorado Department of Natural Resources is charged with administration of all water rights and decrees and enforcement of priority rights. The Division is also charged with well drilling and spacing, and approval of infrastructure project construction. The Division is the same as the Office of the State Engineer. Specialized water courts, which are sections of district courts, approve all water rights in Colorado with a few minor exceptions. There are water courts in each of Colorado’s major river basins.

The 1965 Colorado Ground Water Management Act created the Colorado Groundwater Commission (CGWC), which designated the state’s eight groundwater basins and retains jurisdiction over them. The CGWC adjudicates groundwater use rights in those areas, and issues well permits. The Commission is composed of 12 members, 9 of which are appointed by the Governor, plus the Executive Director of the Department of Natural Resources, the Director of the Colorado Water Conservation Board, and the State Engineer. Local groundwater districts are created by the Commission and are subject to their rules.

The Colorado Water Conservation Board (CWCB) is the state agency charged with overall statewide water planning, as well as conservation, stream restoration, drought planning, and project finance. The Water Supply Planning section is the specific entity within the CWCB that is responsible for identifying current and future water demand and strategies to address that demand. The CWCB has a 15 member board. Ten voting members represent each of Colorado’s eight major river basins, the Denver metropolitan area, and the office of the Director of the Department of Natural Resources. Five non-voting members include the Director of the CWCB, State Engineer, Attorney General, Director of the Division of Parks & Wildlife, and Commissioner of Agriculture. Board members serve three years and are appointed by the Governor.

The 2005 Colorado Water for the 21st Century Act formally created permanent basin roundtables after experimenting with that format in earlier planning efforts. The basin roundtables encourage locally driven collaborative solutions to water supply challenges. Each roundtable is charged with determining basin-specific water needs assessments, and actively seeking the input of affected local governments and other stakeholders into planning activities. There are a total of nine roundtables, one for each of the state’s main river basins, and one representing the Denver metropolitan area. Each roundtable has designated members consisting of one member appointed by counties within the basin, one member jointly appointed by all municipalities for each county, one member appointed by each water conservation district and water conservancy within the basin, and one member jointly appointed by state house and senate agriculture committee chairs. There are also ten at-large members appointed by the designated members. At-large members consist of one individual each representing agricultural interests, recreational interests, domestic water providers, industrial interests, and environmental interests. There are also non-voting state and federal agency representatives for each basin.

The Colorado Water for the 21st Century Act also created the Inter-Basin Compact Committee (IBCC), a 27 member committee created to serve as a forum for a statewide dialogue on water and to coordinate inter-basin issues. The IBCC is composed of two representatives from each of the nine basin roundtables, six individuals appointed by the Governor to represent geographically diverse parts of the state, two individuals appointed by the senate and house agriculture committees, respectively, and a Director of Compact Negotiations appointed by the Governor who chairs the IBCC.

Ground and Surface Water:

Colorado follows the doctrine of prior appropriation for ground and surface water although there are exceptions with regard to areas of the state where groundwater is not hydro-logically connected to surface water. Ground and surface water is presumed to be hydro-logically connected until proven otherwise. In those parts of the state where there are designated groundwater basins that are not connected to surface water, a different governance structure is used and the groundwater commission has jurisdiction over those areas.

Groundwater is categorized into four different types: designated basins (groundwater basins not connected with surface water), tributary water (groundwater connected to surface streams), non-tributary water (groundwater not connected to surface streams that are not part of designated basins), and Denver basin groundwater (groundwater that is regulated and managed specifically for the needs of the Denver metropolitan area). Tributary groundwater is governed by the doctrine of prior appropriation, as with surface water. The Office of the State Engineer issues water rights and the water courts maintain jurisdiction over tributary groundwater to adjudicate disputes. Designated basins are governed under a variation of prior appropriation, and regulated by the Groundwater Commission, which can restrict levels of pumping to reasonable uses that do not interfere with prior appropriations or long-term sustainability. Non-tributary groundwater outside the designated basins is considered the property of overlying land owners, and prior appropriation thus does not apply. The State Engineer regulates water rights in these areas, and water courts also have authority regarding disputed claims.

Planning:

Colorado had previously focused much of its planning at the watershed basin-level until a major drought occurred in 2002. This prompted interest in addressing the overall statewide water supply. A Statewide Water Supply Initiative (SWSI) was first convened in 2003-04 to identify a statewide water demand and supply balance. Basin roundtables were first developed informally in this initiative as a means of coordinating and gathering local input on water supply needs. The roundtables' format was later made permanent through the 2005 Colorado Water for the 21st Century Act.

Each of the state's nine basin roundtables is charged with developing a four-part basin-wide needs assessment that identifies 1) consumptive water needs (municipal, industrial, agricultural), 2) non-consumptive water needs (environmental and recreational), 3) available surface and groundwater supplies, and 4) proposed projects or methods to meet identified water needs and achieve water sustainability. Roundtables must actively take measures to include the input of local governments, water purveyors and providers, stakeholders, and the general public into water planning activities.

Roundtables serve to provide consultation to the CWCB about water policy and planning related items occurring in their basins, and serve as intermediaries between local communities and users and state bodies such as the CWCB. Although planning recommendations from the basin roundtables are only

considered to be consultative in nature, the basin-specific plans typically amount to the de facto water plans for that specific basin, particularly when consensus is reached within roundtables. The CWCB likewise may defer to a great extent to consensus opinions or recommendations of the IBCC as the entity which represents interests from all the basins.

The CWCB provides grants to roundtables to assist them with identifying water supply and demand, gathering local input, and implementing planning projects. However, other than requirements that might be stipulated by law or regulation, the CWCB does not dictate policy directives to the roundtables when it comes to their planning efforts. Basin roundtables typically partner with university or civic engagement groups to apply for CWCB grants to conduct planning and outreach activities. Commonly-used public outreach activities conducted by roundtables include giving public presentations, generating educational materials, and informing civic organizations about roundtable objectives and activities. The CWCB also provides staff support to basin roundtables to assist them with planning, and also provides them with technical support and studies, and grant money. Roundtables typically meet on a monthly or quarterly basis. When they were first established, approximately two FTE from the CDNR were dedicated to facilitating development of the roundtable structure. Administrative functions at the roundtable level are grant funded, supported by volunteers, or supported by various personnel associated with representative entities.

A SWSI 2010 process was recently convened which was based on previous efforts and relied on the basin roundtable framework for collecting local input. Under SWSI 2010, basins identified water needs for consumptive and non-consumptive use through 2050, and proposed projects and methods to meet those needs. All basin roundtable meetings are subject to open meeting laws and involved considerable public input.

The current planning and governance structure that was created under SWSI and codified under the Colorado Water for the 21st Century Act has led to the development of a broad-based framework for obtaining public input and local stakeholder involvement in water policy. Because of wide ranging stakeholder input, reaching consensus can take a considerable amount of time, but when obtained can result in solutions that are supported by diverse coalitions.

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Kansas

Kansas solicits public input through the use of region-specific basin advisory committees. There are a total of 12 basin advisory committees operating in Kansas, corresponding to major river basins/usage areas in the state. The advisory committees provide consultation to the Kansas Water Authority, an entity within the Kansas Water Office that advises the governor and state legislature on water policy issues and is responsible for approving the state's water plan developed by the Office. The basin advisory committee system was developed out of the Kansas State Water Resources Planning Act, and first established in 1985. Not unlike basin roundtables in Colorado, the Kansas basin advisory committees fulfill a statutory mandate to have committees of individuals from the planning areas in the state; the makeup of the committees, which have representatives from a set of core water-related interests, is established by the Authority through policy. Individual members are volunteers that serve four-year terms, selected and approved locally by each committee, but are also subject to approval by the Kansas Water Authority to become official members. Each basin committee also has the ability to create and designate additional representative slots beyond the core positions in order to reflect the diverse character of water use and interests in each basin.

The Kansas Water Authority is responsible for regularly approving updates to the statewide water plan and making water policy decisions for the state. It has sole authority to approve the state plan developed by the Office. The Water Authority actively and regularly consults with the advisory committees, who assist the state by recommending priority issues for their basin, and also collect input from local residents at regular advisory committee meetings. Although the Water Authority will defer to a great extent to local basin concerns and recommendations in developing or updating the overall state plan, the basin advisory committees only retain advisory powers to recommend planning and policy matters to the Kansas Water Authority:

"The 'A' in the BAC is advisory. They are not an authority, they are advisory. There are times that causes some issues, because there are times that a local group would like to see things done differently or would like to see things or projects move faster or at a higher priority. So there are times when them not having as much authority creates a little state/local friction."

Basin advisory committees in Kansas meet on an as needed basis, typically three to five times a year. Each basin advisory committee also has chairs and vice-chairs that are elected locally and approved by the Kansas Water Authority. The chairs meet on a regular basis with themselves to discuss inter-basin issues, typically during quarterly meetings with the Kansas Water Authority. Every January, the chairs of the advisory committees also meet with state legislators to brief them about local water concerns. The Kansas Water Office staff provides support to the individual advisory committees, through setting up meetings, taking meeting minutes and communicating necessary information back to the Water Authority. Dedicated state staffing and expenses to the advisory committee process are thus minimal. The primary state support is in the development of the water plan to address issues raised by the committees.

The basin advisory committee process is highly structured and has become a well-established process in Kansas for the generation and solicitation of public input. Since its inception in 1985, local stakeholders have become invested and supportive of the process, particularly because of the degree to which local concerns can be addressed through the advisory committees:

“The pros are that it’s a pretty deliberative process. Everyone has a chance to say what they want to say, and we move at a slow enough pace that there is comfort in the fact that there won’t be significant changes in policy without giving people a chance to talk about it and adjust. There are a lot of opportunities for people to get engaged in the discussion.... Having that openness and deliberativeness and transparency give people a lot of comfort....Now the cons are, can government ever move fast enough? That long, deliberative process means you can’t always respond quickly enough to a problem or opportunity. So that deliberativeness can be both a pro and a con.”

Statewide Plan:

Yes

Primary Government Entities Involved in Water Supply Management:

The Kansas Water Office (KWO) is charged with coordinating and developing the state’s water plan. The Kansas Water Authority (KWA) is the specific entity within the Water Office with responsibility for reviewing and approving the plan, and also serves as the board of directors for the KWO. The KWA also advises the Governor, legislature, and director of the Kansas Water Office on water policy issues. It comprises 24 members: 13 individuals appointed by the Governor and legislative leadership to represent different water interests and user groups across the state, and 11 non-voting members representing state agencies that serve ex officio. Both the KWO and KWA were created in 1981.

The state is composed of 12 water planning areas designated by the Kansas Water Office that correspond to major water basins. Each planning area has a Basin Advisory Committee (BAC) that provides recommendations to the Kansas Water Authority and engages stakeholders and the general public about water policy issues and the state water plan. All BACs must have individuals representing core sectors of agriculture, conservation/environment, fish and wildlife, industry/commerce, municipal public water suppliers, recreation, and an at-large representative of the general public. Representatives for these core sectors for all BACs are approved by the KWA from a nominations process. BACs can create additional membership positions that reflect that region’s water use profile, and individuals who fill those positions are also subject to approval by the KWA.

Water use rights are administered by the Kansas Department of Agriculture’s Division of Water Resources. The Chief Engineer is the director of the Division. Under the Kansas Water Appropriation Act, all water users must have a water right to use water with the exception of for domestic use. The Water Appropriation section of the Division is specifically responsible for administration of water rights. The Water Structures section regulates large infrastructure, and the Water Management Services section conducts research and provides technical support and administrative activities related to compliance with the state’s interstate compacts. Additionally, the Basin Management Team of the Water Management Services section is responsible for conducting analysis on basin water systems and groundwater model development. The team helps facilitate planning priorities identified under the state water plan, particularly when it comes to assessing hydrologically-connected ground and surface water systems that implicate stream flow and overall water supply and sustainability issues.

Ground and Surface Water:

Both ground and surface water is subject to state control, and the state has statutory authority to administer all water use rights in Kansas. Both ground and surface water is conjunctively managed in

Kansas by the state. The conjunctive management approach was first recognized in 1945 in the Kansas Water Appropriation Act, and has become a well-established practice.

Planning:

The state water plan is a living document that is continually updated to reflect the state's water needs and changes in overall policy. It was first created in the mid-1960s. The current planning process derives its overall objectives from the State Water Resources Planning Act, which mandates comprehensive adaptive planning.

Individual parts of the plan are updated in an iterative process employed by the KWO. There are two types of planning processes under the Kansas Water Plan— a process for revising overall state policy issues, and a process for addressing basin-specific issues. The process for policy issue changes begins with the drafting of a concept paper authorized by the KWA. Upon approval, a background paper that identifies both applicable state laws, rules, and administrative issues and federal implications is drafted, alongside a draft of the revised plan component. An implementation schedule is developed that includes formal opportunities for public input through written comment as well as through public hearings at the state-level and basin-level vis-à-vis the BACs. A final draft of the revised section is then created, which the KWA reviews and approves.

The basin-specific planning process follows a similar template. A priority basin issue is identified by the applicable BAC, and an issue paper is developed by the KWO and then reviewed by the BAC. Upon approval by the KWA, preliminary draft plan sections are developed, and public hearings are conducted. At each stage of plan development, working drafts are made available to the public for written comment or input at hearings. The final draft requires both BAC and KWA approval.

The KWO assigns specific staff members as liaisons with each of the BACs to help facilitate plan development, and provide technical support. There is constant communication between the BACs and KWO on policy issues. Additionally, the BAC chairs meet on a regular basis with themselves and with the KWA during quarterly KWA meetings. The BAC chair meetings serve as an opportunity for all the BACs to discuss policy issues that affect multiple basins, and advise the KWA appropriately. Every January during a KWA meeting, BAC chairs also have an opportunity to meet with state legislators and brief them on local concerns about water.

The BACs serve as the essential advisory bodies to the state vis-à-vis the KWA on water planning issues, but do not have independent autonomy to make and approve statewide water policy issues on their own. The KWA has sole authority to approve the state water plan, however, it will defer to a significant extent to the BACs when it comes to their identification of basin-specific priority issues that are included in the plan. Because BACs are able to identify local priority issues that the state will address in planning, they have a significant amount of leverage when it comes to influencing the state water plan. Additionally, BACs have exchange meetings with surrounding BACs to coordinate about water issues that are shared across the planning regions.

The water planning process in Kansas, and the entities involved with planning, are both well-established and supported by stakeholders. The process of revising plan components does take a considerable amount of time, but it ensures that a fair amount of public input is generated at both the BAC and state levels. The individual BACs do struggle at times with filling all committee slots within their planning areas.

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New Mexico

Statewide Plan:

Yes

Primary Government Entities Involved in Water Supply Management:

The New Mexico Office of the State Engineer (OSE) has overall responsibility for administering the state's surface and groundwater resources. That includes administering surface and groundwater rights, managing appropriation and allocation, and all related data collection and studies. The State Engineer is appointed by the Governor.

Within the OSE is the Interstate Stream Commission (ISC), which is tasked with managing compliance with the eight interstate water compacts that New Mexico is party to, as well as planning and conservation generally, including administration of funds for state and regional water planning. The ISC is composed of nine individuals. It is chaired by the State Engineer and the remaining eight members are appointed by the Governor.

The Water Trust Board recommends water projects to the state legislature. It was created to provide grants or loans for large statewide water projects from funds appropriated from the legislature. The 16 member board is composed of the State Engineer and representatives from state agencies, tribal nations, and public stakeholders. It is housed within the New Mexico Finance Authority, whose staff provides administrative support to the Board.

Ground and Surface Water:

Both ground and surface water are conjunctively managed by the OSE under the doctrine of prior appropriation. Surface water rights are generally provided by the OSE upon a finding that there is available water that has not yet been appropriated, and usage is not contrary to conservation objectives or the public welfare. The appropriations process for both surface and groundwater is similar in New Mexico, and requires permitting by the OSE.

There are over 30 declared underground water basins in New Mexico. The vast majority of the state is fully appropriated. Groundwater appropriation within these basins also requires permitting by the OSE. Outside of those areas, groundwater rights are established by diversion for beneficial use. Although the state is dependent on groundwater, it allows withdrawal so long as it does not lead to long-term depletion. Depletion can be offset by return of water to streams, such as returning treated effluent to rivers.

Planning:

Statewide water planning is mandated by a 2003 state statute that directs the OSE, ISC, and Water Trust Board to develop a comprehensive plan to manage New Mexico's ground and surface water, protect existing water rights, promote conservation, and comply with obligations under interstate compacts. The state entities are also directed to consult and coordinate with Indian nations and ensure that public participation is included in all planning activities. Under the law, a new state plan must be created every five years.

The state is divided into sixteen planning regions that comprise the overall state plan. The local planning regions are based on a combination of political and hydrological boundaries. The ISC oversees regional planning, provides grants for planning processes, and has issued a template that all regional plans must follow as a condition of receiving funds from the ISC. The regional plans must address available water supply in the region, current and projected water uses for up to six decades into the future, and possible alternatives to meet future demands and their associated implementation options. Public involvement is mandated for all regional planning processes, as is involvement of tribal entities impacted by the plan. The regional planning requirements do not specify detailed guidelines on planning approaches, and defer to regional groups to develop their own specific approaches so long as the general requirements for regional planning are met. The ISC accepts regional plans after they are completed.

The ISC is responsible for coordinating the regional planning effort because interstate water compacts have historically had a large influence on water supply in New Mexico. The state has been vulnerable to lawsuits from neighboring states for alleged breaches of water compacts.

The state developed a statewide water plan in 2003, and is currently in the process of developing an updated plan. Public participation for development of the 2003 water plan included convening 29 public meetings across the state in each of the 16 planning districts, and a statewide town hall session. A total of about 1,500 people attended the meetings, and the OSE/ISC also received about 1,500 comments as well. At each of the public meetings, input was sought specifically on stewardship and values, considerations regarding water supply and demand, ideas for drought management and response, and reform of water administration processes. The statewide water plan is to be updated every five years. The plan is currently being updated, and another large-scale public participation plan was convened in 2009 with multiple public meetings across the state. Currently, some aspects of regional planning have been integrated into the state plan, but the regional plans themselves do not compose the state plan.

Regional planning has been facilitated by the Interstate Stream Commission, with the assistance of the New Mexico Regional Water Dialogue. This is a privately funded forum designed to help facilitate the regional water planning process by bringing together stakeholders, policymakers, agency representatives, and other community members and involving them in the regional planning process, linking up experienced with newer regional planning efforts, and providing facilitation and other resources. However, neither entity dictates or has a strong presence in the substantive creation of regional plans, which is determined largely by the regional planning groups themselves. State ISC staff dedicated to regional planning was thus somewhat limited.

Other than general guidance, the statute provides a great deal of deference to the regions to develop specific planning approaches to water planning in their respective regional areas. There are thus differences among regions in regards to the composition of regional planning groups and overall planning approaches. Regional councils of governments (associations of county and municipal governments) tend to be the main players in regional planning efforts, but not the sole ones. These coalitions of local governments thus apply for grants from the ISC to conduct planning. They typically work with citizen groups as part of grant requirements to involve the public in planning. Regional planning groups benefit from donated time and resources provided by partners to regional planning efforts. Funds provided from the state mainly are directed towards third party contractors and facilitators who played key roles in assisting the regions with plan development. Public participation at the regional level was promoted through newspapers, radio promotions, and word of mouth. Pueblos (land bases for tribal communities) sometimes work with these local coalitions on regional efforts, though they sometimes prefer to engage the state directly and with local governments since they enjoy

sovereignty as independent nations. Many of the tribes thus participate in the regional planning process as observers, and not official participants.

Regional planning funds have become scarce in recent years, and therefore the ISC has not funded regional planning efforts at significant levels for several years. Because regional planning occurs within each of the regions independently, more comprehensive needs that cut across regions may be missed. For example, a number of the regional plans depend upon accessing water from other local regions, though those regions may not have supply available. The ISC is trying to align independent regional plans with inter-regional and statewide needs. It should be noted that the ISC accepts regional plans, but acceptance does not equate with endorsement of regional planning strategies. The regional plans do not have statutorily-based authority, and basically amount to recommendations for planning in the local regions. The state is currently considering options for formalizing the regional water plans, finding a source of funding to pay for regional planning, and giving regional plans legal authority.

A major issue facing the state is that most of the senior water rights are held by tribes, but a significant quantity of water resources that fall within tribal jurisdiction remain un-quantified. Water rights have generally not been adjudicated to completion in New Mexico, so there is a lack of detailed information on water demand and use. Although the state does estimate overall water use and demand, detailed information is still lacking. Domestic households do not have to adhere to water use rights regulations, and may pump groundwater at will, even though almost all parts of the state have been declared fully or over appropriated.

Because land use and development decisions are made locally, and there may not always be local ordinances or other regulations in place that dictate that water planning considerations have to be reviewed alongside development decisions. Major urban centers in New Mexico typically do mandate that water supply be considered alongside development decisions, but there is no statewide mandate to do so in all communities.

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North Dakota

Statewide Plan:

Yes

Primary Government Entities Involved in Water Supply Management:

North Dakota state law provides that the North Dakota State Engineer and State Water Commission share authority to manage the state's water resources. The entities are integrated, however they are technically separate. The State Engineer is the Chief Engineer and Secretary for the NDSWC. The State Engineer is appointed by the Governor, who is the nominal chair of the NDSWC. The Commissioner for the Department of Agriculture also sits on the NDSWC. Seven other members are jointly appointed by the Governor and Department of Agriculture Commissioner. The Chief Engineer and Secretary to the Water Commission (the State Engineer) then employ a staff to oversee and advance the directives of the Commission. The North Dakota State Water Commission (NDSWC) is charged with investigating, planning, constructing, and developing various types of water projects throughout the state. The Commission has four separate divisions: Atmospheric Resources (cloud seeding), Planning and Education, Water Appropriations, and Water Development.

In contrast, regulatory functions such as the allocation of water, and the permitting of dams, drains, and activities on state sovereign lands below the ordinary high water mark, are under the Office of the State Engineer.

Ground and Surface Water:

The State follows the prior appropriation doctrine to determine water allocation rights.

Planning:

North Dakota state law requires the NDSWC to maintain a statewide water plan. The first plan was created in 1968, and subsequently updated in 1983, 1992, 1999, and 2009. In between comprehensive statewide plans, the NDSWC also issues water development reports that update statewide plans on an incremental basis every biennium. The last water development report was issued in 2010 for the years 2011-2013.

North Dakota has engaged in several large participatory initiatives in its statewide water planning efforts. North Dakota's first major participatory initiative was conducted as part of its drafting process for the state's 1983 Water Plan. The state plan was a combination of five separate plans for the five major hydrologic regions which compose the state. Seventeen public involvement regions were created for purposes of identifying and engaging stakeholders from the public about the plan. The public involvement regions adhered to a combination of watershed and county boundaries.

Each of the 17 regions had a citizen advisory board consisting of a representative from each region's water resources districts, and an approximately equal number of citizen representatives. Citizens were identified with the help of municipal associations. Board sizes ranged from 5 to 14 members, and each one appointed a chairperson. Over a 16 month period, 85 public meetings were held with the State

Water Commission and each of the 17 citizen advisory boards (5 meetings per board). All board meetings were open to the public, and promoted through the media.

To help facilitate the advisory boards' deliberations, each board was provided with information about water management issues, and project ideas and strategies that had been proposed before but not implemented. Boards identified and recommended state goals and objectives for a strategic state plan. They were asked to identify problems facing each public involvement region.

The planning process resulted in a comprehensive summary of water management problems identified by each advisory board. Each board also adopted a set of recommendations to the State Water Commission of management practices and priorities they deemed most appropriate for the water management issues they were facing. The final 1983 plan contained recommendations for water projects prioritized into three implementation time frames, ending in 1990, 2000, and 2020.

The state's 1992 plan continued from some of the participatory efforts of the 1983 plan. A steering committee to review and approve the planning process and a technical review committee to coordinate data and facilitate cooperation with all state and federal agencies involved in water management were formed and consulted with throughout the process. In the 1992 plan, the state was divided into 8 public involvement regions instead of 17, each roughly corresponding to hydrologic or political boundaries. A citizen advisory board was appointed by the Commission from nominations by water resource districts and various civic, municipal and tribal groups. Each board met four times from 1991-1992.

Boards reviewed and revised goals and objectives identified in the 1983 plan. They also reviewed and revised water management problems and options from the prior plan, and then recommended projects for each problem. Additionally, the Water Commission constructed a survey for the general public about water management priorities for the state. A random survey was conducted from lists of residents obtained from the motor vehicles department. Survey results were presented to the citizen advisory board members for their review.

The final document for the 1992 planning process was not meant to be binding, but served as a guide for the Commission to pursue various water management projects, reflect the degree of public support for each project, and outline long-term spending projections. In the 1983 and 1992 planning processes, projects that were deemed high priority in the participatory planning efforts underwent a more focused impact assessment for potential implementation. Commission staff noted that local water resource districts worked well with the Commission in their planning efforts. Local stakeholders previously had not engaged in such a planning process due to lack of funds, staff resources, or time, and were thus supportive of the state-led processes.

Due to funding and time constraints, the NDSWC has not employed a large-scale participatory planning process since 1992. The Commission instead relies on gathering input from various organizations and entities that compose regular water stakeholders in the state. A survey is sent to stakeholders including local rural water systems, municipalities, water purveyors, and other entities associated with water development projects. Water development projects are regularly monitored for progress through budget cycles.

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Oklahoma

Statewide Plan:

Yes

Primary Government Entities Involved in Water Supply Management:

The Oklahoma Water Resources Board (OWRB) is charged with managing and protecting the state's water resources and conducting long-term planning and sustainability activities. The OWRB is composed of nine individuals who represent all parts of the state, and are appointed by the Governor for seven-year terms. The Board has four divisions: administration, financial assistance, planning and management, and water quality. The Board maintains authority over the administration of water use rights in the state for both surface and groundwater, and operates financing programs for water infrastructure projects. The Board has responsibilities for setting water quality standards, but does not regulate discharge. The Board also is in charge of water planning for the state

The Oklahoma Water Resources Research Institute (OWRRI) at Oklahoma State University assists the OWRB in its planning efforts, particularly in regards to facilitating public involvement in the state's water planning efforts, and providing research and data.

Ground and Surface Water:

Ground and surface water are not conjunctively managed in Oklahoma. The OWRB administers water rights through a permitting process for surface and groundwater but without considerations of interconnectivity. Surface water is owned by the public and usage rights are administered using the doctrine of prior appropriation. Obtaining a permit for surface water stream usage is contingent on the diversion being for water that is un-appropriated and available, put to beneficial use, and will not interfere with existing uses (domestic or appropriative) in the stream system.

Groundwater in Oklahoma is owned by the land surface property owner, and its use is governed by the Oklahoma Groundwater statute subject to reasonable regulation by the OWRB. Under the groundwater law, groundwater withdrawal rights are determined by the amount of available water in the applicable groundwater basin. The maximum annual yield—the amount that can be withdrawn while sustaining the groundwater basin for at least 20 years—is divided up among all landowners proportional to the amount of land they own over the basin. A permit is then issued for the specified amount that complies with the total maximum annual yield, contingent on beneficial use of the groundwater and that waste will not occur. In areas where the maximum annual yield has not yet been determined, a temporary permit can be issued on a year to year basis for a specified amount set by the statute. Maximum annual yields have been completed for about half of the underground water basins in the state, and the remainder will be studied later.

Planning:

Oklahoma statute requires that statewide planning be conducted by the OWRB and updated periodically. The state water plan was completed in 1980 and updated in 1995. Oklahoma is now in the process of updating the plan and expects to complete its revision in 2011. To update the plan, the OWRB has contracted with the OWRRI at Oklahoma State University. The overall strategy of the update is to base planning around 1) up-to-date scientific research and technical studies on water demand/supply,

and 2) input from the public and stakeholders. The OWRRI is facilitating only the latter aspect of this planning strategy. The OWRB, in concert with the USACE and Reclamation, are coordinating the first part. The objective of the current planning process is a series of recommendations generated from public input for consideration by the OWRB.

The public input process began in 2007 and has developed in stages. A water planning advisory board was created to lead the overall process. In 2007, the OWRI convened 42 local input meetings across the state to identify general water issues and concerns that need to be considered in the planning process. Over 2,300 people attended the meetings, and over 2,500 comments solicited from attendees and others online.

The local input meetings were followed by 11 regional input meetings in 2008, in which 368 individuals provided input as to which water-related issues should be emphasized and prioritized for consideration in the plan. The individuals who participated in the regional meetings were screened by OWRRI to ensure there was representativeness and diversity in perspectives. Eleven consensus priorities were identified at the regional level for statewide planning efforts. In 2009, a series of three planning workshops were convened to focus on developing management strategies around each of the consensus priority areas. Stakeholders were invited to participate in each of the planning workshops, which also featured panels of experts on various water-related themes.

In 2010, a Water Town Hall was convened in which nearly 200 individuals were invited to develop a consensus on strategic recommendations to the OWRB for the updated plan based on all the prior input generated. The three-day event was convened in partnership with the Oklahoma Academy for State Goals, a non-profit organization that supports civic engagement activities in Oklahoma. Recommendations from the Town Hall have been documented in a final report. It should be noted that participants in the regional, planning, and town hall meetings were all screened by the OWRRI to participate directly in the process, though the meetings were open for the public to observe and provide comments.

The planning process is in its final stage. A total of approximately 70 recommendations were identified from the entire participatory process for the state water plan. A series of 13 feedback meetings was convened across the state for people to provide input and comment about a draft plan update featuring fifteen priority recommendations that the state identified from all the public input. The remaining recommendations were considered supporting recommendations that were not as important as priority issues. A final draft water plan with eight priority water recommendations has been developed by the OWRB for final review by the public through meetings and a commenting process.

The focus of recent planning activities was on generating public input from communities and local stakeholders, and not the involvement of government agencies or legislators because their input came later in the process.

The participatory process has generated a high degree of visibility for water planning and water issues in communities through word of mouth, media activity, and support from legislators. It has also created a reservoir of public support for the state's current water plan, and the perception that the plan is based on a legitimate process.

One of the recommendations that have emerged from the participatory process is that the state should pursue conjunctive management. This recommendation has encountered resistance from established

stakeholders, particularly in agriculture and commerce, who prefer the status quo in water planning, and believe that conjunctive management will upset supply issues.

Resources:

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