

INTERSTATE STREAM COMMISSION NEW MEXICO FIRST TOWN HALL

Final Corrected DRAFT CONSENSUS REPORT

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DEVELOPING A COMPREHENSIVE STATE WATER PLAN

Albuquerque, New Mexico

September 23-25, 2003

The ISC NM First Town Hall convened in Albuquerque on September 23-25, 2003, at an historic moment for the state's stewardship of its water resources. Building on the comments of some 1500 New Mexicans who participated in a comprehensive statewide public listening process, Town Hall attendees developed recommendations for the OSE, the ISC and the Water Trust Board regarding use of water in New Mexico. These recommendations may be utilized in development of a statewide water plan. The plan envisioned by the Town Hall will preserve and protect the quality and quantity of New Mexico's water into the future, acknowledging the essential role of this limited resource in shaping the state as it is and will be. The guidelines respect the diverse lifestyles and values of New Mexico—spiritual, cultural, environmental and economic—and aim justly and equitably to address the water needs of all its people and its ecosystem across geological, political, and cultural boundaries. It is particularly important to recognize government-to-government relations with New Mexico sovereign Indian tribes, nations and Pueblos that maintain jurisdiction over waters within their borders.

Central to the Town Hall's guidelines for a State Water Plan is the belief that balance and sustainability should be the hallmarks of the state water plan. The Town Hall further believes that good stewardship requires partnerships among individuals, institutions, governments and sovereign nations across New Mexico. Thus, education about conservation and innovative water-related technologies must be a centerpiece of the state's active management strategy. The plan that guides their efforts must respect the intrinsic value of water, traditional uses (including but not limited to pueblos, tribes, acequias and irrigation districts) and existing uses such as agriculture, industry, municipal needs, ecosystems, historical, religious and cultural practices. The plan must also

recognize shifts in demand due to evolving economic and social realities, while realizing that water is a limited resource that must be protected for the generations to come.

Believing, then, that balance and sustainability should be the hallmarks of the State Water Plan, the Town Hall recommends the following priorities and specific actions, based on sound science, conservation, active watershed management, and respectful intergovernmental cooperation, acknowledging tribal, local government and regional planning for guidance in dealing with issues within those jurisdictions.

Although the list of concerns that must be addressed, programs that must be developed, and projects that must be launched may be seem daunting, the Town Hall declares that they are all essential to the averting a disastrous outcome of the failure to guard this most important resource.

The Town Hall urges the state to make adequate resources available to complete existing adjudication by 2013 through a logical, transparent process based on the best available data and technology from a variety of sources beyond OSE. The state rapidly should establish a baseline that will specify the scope, schedule, new methods and cost of this effort and serve as a tool for evaluating performance.

The Town Hall attendees agree that establishing a logical, transparent, efficient process of adjudication is an urgent imperative and will require simultaneous efforts in several directions:

- Quantifying New Mexico's water resources must be done promptly in order to provide the necessary data to make wise, responsible decisions regarding rights.
- This inventory must honor and account for pueblo and tribal sovereignty and water rights and also relevant treaties, compacts, and decrees and, where necessary (as in the case of the Guadalupe Hidalgo Treaty), clarify protections for domestic, agriculture, and acequia uses. In order to quantify resources, this process must bring together, at the community level, representatives of federal, state, tribal, city/county and acequia, and land grants, including all appropriate local water entities.
- Educating the public and the judiciary about the nature and process of adjudicating water rights. Providing basic hydrologic data and information about the adjudication process are crucial steps in building trust among all parties. This effort might include development of a comprehensive curriculum for all New Mexicans to address water issues and related concepts and administrative apparatus.
- The state must act quickly to improve the infrastructure of adjudication, implementing state-of-the-art information systems, improving communication among agencies and stakeholders, funding adequate staff for OSE and ISC, pressing the U.S government to appoint adjudication teams for federal claims to water, identifying experienced attorneys to assist claimants through the

adjudication process at the district court level, and designating judges experienced in water law to hear cases.

- Water rights adjudication is currently very time consuming and adversarial. Consideration should be given in the future to overhauling the process.
- The state should set priorities for handling claims disputes, giving precedence to sovereign tribal rights, cases involving pre-1907 claims, land grants, executive orders, prior and paramount rights, and federal treaty obligations including the T of G-H.
- The state should initiate immediate and continuing consultations with individual tribal governments about resolution of Pueblo and tribal water rights.
- The state should initiate immediate and continuing consultation with individual tribal governments and appropriate local water entities about resolution of pueblo and tribal water rights.
- To reduce the adversarial nature of the adjudication process, the state should vigorously promote negotiated settlements with Indian, nations, and pueblos and other users before and/or during litigation. One means for encouraging this alternative approach to dispute resolution is to train mediators to assist in settling claims.
- An ombuds system should be instituted that would provide technical and legal assistance to small water rights holders as part of a major public outreach initiative; review of claims by the ombudsman prior to the filing of an adjudication would be available to seek solutions without litigation. Such assistance might take the form of regional or local adjudications (partial or sub-basin adjudications with notice to all in the basin) following a public defender or water court model. Intergovernmental cooperation and public outreach is crucial to build trust and expedite claims settlements.
- Funding for data collection/analysis, development of models, equipment, and staffing might come from federal matching grants and/or private sources, as appropriate.

ACTIVE MANAGEMENT OF THE WATER RESOURCE

The Town Hall affirms that the OSE is charged with administration of water rights within its jurisdiction through active water resource management. Effective administration depends on good data management and appropriate tools for priority administration and enforcement of water rights. We recognize the role of pueblos and tribes in management of their water resources. The role of acequias and irrigation districts in local water management is also affirmed. The Town Hall makes recommendations in the following areas that should be addressed in the State Water Plan.

Guiding Principles

The Town Hall believes that the State Water Plan should be developed around the reality that water shortage is a condition of life in New Mexico and that perceptions of greater or

lesser supply should not affect the way we manage the resource. The inevitability of reoccurring by drought, therefore, should be implicitly addressed in the State Water Plan.

The Town Hall further agrees that the tools used by the OSE must reflect a proactive, collaborative approach to restoring and maintaining watersheds within the context of a statewide culture of stewardship in which all individuals and institutions take responsibility for protecting and preserving water resources. Within this holistic framework, the OSE has primary responsibility for the vigorous enforcement (“100%”) of water rights. This means that existing tools to assess supply and demand, monitor use, and foster conservation must be used to their full extent. New programs, procedures, and approaches must be developed and instituted, as well, to address these and other issues, particularly such concerns as over-diversion. In addition, the OSE must increase its efficiency, public interest orientation, and coordination with other governmental and local entities.

Although the following list is not exhaustive, the Town Hall recommends that these tools, processes, policies, and programs be incorporated into the State Water Plan:

Administration and Enforcement of Water Rights

- New Mexico’s water resource administration should be guided by:
 - Treaties and Interstate Compacts, decrees and agreements
 - Local forty-year plans
 - Regional Water Plans
 - State Water Plan
 - State Statutes, constitution and rules and regulations
 - Indian nations’, tribes’ and pueblos’ water plans
 - Drought Plan
- Real-time measuring and metering of all water uses (return flows as well as diversions)—using consistent, standardized remote sensing, GIS technologies, modernized gauging stations, improved surface and ground water models, and locking mechanisms—is key to ensuring that users’ rights are not being impaired. Given the commitment to transparency and the need to develop consensus for stewardship among all New Mexicans, all available data derived from measuring/metering should be made available to the public in user-friendly format via a centralized website.
- The OSE should complete and perfect the WATERS (Water Administration Technical Engineering Resource System) database, using sophisticated, comprehensive computerized modeling, to quantify and monitor water supply and quality. This involves updating information on all surface stream systems and water basins and accounting for the interaction between surface and groundwater. Maintenance and expansion of the database should be coordinated with users throughout the state to identify needs as well and to invite cooperation. All parties involved in the development of the WATERS

data base shall strive to achieve compatibility with the data input requirements for the various ground water flow, surface flow, ecological and other models approved for use by the OSE for application to New Mexico water issues. The database should be readily accessible to all water rights holders and the general public, including Indian Tribes, Nations, and Pueblos, and to be used by the OSE for water rights enforcement and administration, particularly in light of long-term cumulative impacts on other water right holders and on interstate compacts.

- Since stewardship is a shared responsibility in New Mexico, enforcement of water rights should involve local communities, which should also monitor compliance with locally developed comprehensive water conservation plans.
- The OSE should evaluate and develop a consistent approach in administering water rights issues involving Mutual Domestic Water Consumers Associations (MDWCA) and other non-municipal water supply entities.
- The OSE should encourage technical and decision-making models that support local participation in management and use field verification to ensure the models are useful.
- The OSE should use and expand existing tools to administer water use, including
 - Conjunctive management of surface and ground water where appropriate, e.g., scientific data show they are hydrologically connected.
 - No new water should be appropriated in a declared fully appropriated basin except when new unappropriated water of that basin becomes available and then only in accordance with existing state law.
 - Credit for return flows.
 - Issuance of cease and desist orders for illegal diversion.
 - We find that the domestic well statute needs to be amended to give the state engineer authority to deny new domestic well permits in critical management areas.

Conservation and Public Stewardship

In the area of conservation, all New Mexicans can demonstrate their commitment to be good stewards of the state's water resources. The State Engineer can foster this commitment through a variety of initiatives, including:

- Encouraging conservation through programs such as incentives to domestic well users to connect into existing public water supply systems; cost-sharing for irrigation efficiencies; and “piggybacking” (using/reusing water for multiple purposes).
- Creating educational programs regarding historical uses of water, legislative policy, and conservation, as well as current information. Possibilities for effective presentation include using GIS to show where water is being used and metering demonstration projects around the state.
- Developing and instituting new programs and approaches, including:

- Statewide conservation programs instituted statewide to decrease loss due to evaporation and over-consumption of water, with information disseminated to users and credits awarded for conservation and re-use practices (“piggybacking”).
- Environmental impact standards to govern water transfer
- Encouraging agreements for sharing during periods of shortage (e.g., the acequia tradition).
- Meeting multiple needs with the same water, such as timing the release of compact delivery water to coordinate with irrigation needs and environmental needs.

Intergovernmental Coordination

Collaborative action should occur to:

- In consultation with those pueblos and tribal governments affected by the plan, mesh regional and state water plans and draw on the expertise of regional planners for assistance in ongoing management of water resources in New Mexico.
- Develop local water budgets to balance the gap between supply and demand.
- Develop and enhance working relationships with other governmental and local entities.
- Engage in government-to-government consultations with Indian tribes, nations, and pueblos to create and implement systems for addressing and resolving water issues that cross-political boundaries.
- The state should seek to facilitate consultation between Indian tribes, nations and pueblos and community acequias, irrigation districts, cities, counties and land grants and political subdivisions of the state regarding local water issues.
- Share and disseminate information to local governments, including geohydrology maps.
- Support and complement acequia administration and management of water rights, particularly with regard to water-sharing customs.
- Strengthen water quality protection programs.

New Initiatives

Consideration should be given to such initiatives as:

- The OSE should improve their notification process regarding the approval of wells that could negatively affect tribal water and cultural resources.
- Acquiring, pursuant to state law, a pool of water for public purposes such as interstate compact compliance, protection of river ecology and satisfaction of tribal water rights.
- Assigning basin engineers or water masters, under the direction of OSE, to administer diversions and existing water rights, as well as to assist with collection of real-time data through metering and measuring and with the

inventorying of existing wells without interfering with the existing authority set forth by statutes for acequias, conservancy and irrigation districts.

- Establishing interstate groundwater compacts.
- Assigning special attorneys district-wide to handle compliance issues to prevent over-diversion or other illegal or unpermitted uses of water.
- Creating incentives for farmers to meter/monitor.

Governmental Efficiencies

Given its enormous responsibility to protect and preserve the state's most vital resource, the OSE should maximize its effectiveness through internal efficiencies such as:

- Instituting consistent policies throughout all offices.
- Following a standard process for reporting and accounting of uses.
- Maintaining effective communication among all the offices.
- Employing sophisticated all-encompassing computerized data bases and decision-support systems.
- Taking advantage of technical expertise at national labs and universities by collaborating to develop technological innovations to achieve the goals of the state water plan.
- Expanding the customer service capacity of OSE staff (through expansion and training).

Special Drought Measures

Although New Mexicans always should be mindful of the desert environment and that water must be conserved for diverse uses and for future generations, certain special measures must be taken in times of scarcity. The Town Hall thus recommends that drought-mitigation strategies be implemented according to standards applied consistently across the state. In addition, the Legislature should expand the authority of the OSE, and allow local governments more flexibility in managing resources and exploring alternative solutions. Specifically, Town Hall attendees urge inclusion in the State Water Plan of the following risk-management (rather than crisis management) actions and policies, with funding approved by the state legislature:

- A strategy for fulfilling compact obligations that may be difficult to meet in times of severe shortage.
- Identification of public supply systems that are vulnerable and the development of contingency plans to meet needs.
- Convening of discussions to encourage voluntary ad hoc shortage-sharing.
- Streamlined process for water sharing agreements, as well as gray water use and reuse.
- Scenario modeling to assist in developing proactive solutions.
- Coordination with tribal governments to execute and enforce moratoriums on new users that affect senior rights.

- Establishment of standard policies for drilling public wells and handling abandoned domestic wells, including restrictions on new domestic wells during drought periods.
- Equitable application of principles of shared shortage to all stakeholders and endangered species, with respect for traditional communities' rights.
- Reinstatement of ISC agricultural task force that included best management practices.
- Implementation of priority administration if required, including the use of water masters.
- Identification of marketing and trading opportunities.
- Marshaling of public education resources to disseminate drought-related information.
- Recognition of existing shortage sharing between acequias.

WATER TRANSFER

Water markets are created and sustained through the exchange of water rights by owners who may put them to beneficial use. The state has an important statutory role regarding transfers which address impairment, public welfare and conservation within New Mexico. The state's regulatory role is increasingly important because of additional demands for limited water resources, the need to prevent new depletions, and the need to protect New Mexico's citizens from potential adverse impacts of water transfers.

Recognizing that there are many different values attached to water, the state should provide protection for communities whose cultures have a special relationship to water. In consultation with tribal governments and traditional communities, the OSE should develop a framework for recognizing this relationship to water resources that would address:

- The impact of transfers of wet water between basins.
- The impact of transfers of significant amounts of water rights from or within basins where there is a limited amount of wet water.
- Specific policy protection for "area of origin" communities such as traditional management areas.
- The interrelationship between ground water and surface water, which needs to be taken into account in any transfer.
- Tribal and pueblo water plans.

Transferring of water rights must recognize the cultural and community value of water and the rights of rural communities to plan for their own futures. As an overlay policy matter, then, the state must define when and to what extent water transfers impact public welfare. In so doing, the state should consider the legal, institutional, cultural, social, environmental, and economic impacts of transfers and recommend appropriate changes in laws or institutional structures to safeguard the public welfare. This process should consider both adverse and beneficial impacts, in move-from and move-to areas, on the economy, ecology, prior permits, and ground water (not just surface water). Limits on

transfers may be more appropriate in situations where the water would be transferred from basin to basin or from downstream to upstream. Impacts from transfers occur in move-from area (drying has economic effects) and move-to areas (effects on groundwater). The state water plan needs to be structured around a watershed-based or groundwater basin-based process that will look at how the transfer will affect the community and whether both locations will be left with adequate water.

Issues of water quality impacts also should be considered in the approval of transfers. An acequia has the statutory authority to establish an approval process for an application to the OSE for the transfer of a water right out of that acequia. Since water transfers in general may have impacts on move-from and move-to communities, Tribal and pueblo governments and political subdivisions should receive direct notice of all water transfer applications into or out of their respective basins.

The state should develop policies with respect to transfers that reflect the concerns and unique issues of the respective regions of the state, including:

- a requirement for comprehensive conservation measures at the move-to location.
- insuring that other water rights holders are not impaired by the transfer.
- proof that wet water follows the water right.
- recognition of regional differences in the water market.
- institution of a transparent process for handling transfers.
- consider appropriate mitigation measures when a transfer will have significant negative socioeconomic effects on a community.
- require that lands from which rights have been transferred have weed and erosion control measures implemented.
- creation of a water bank to hold water voluntarily leased or purchased for public purposes such as compact compliance, river ecosystem protection, and satisfying of Indian water rights.
- provision of additional resources of OSE to review water rights transfer.

- development of water banking where appropriate and implementation of Statue 73 10 48 NMSA, regarding water banking
- In order to protect tribal and pueblo water rights, the OSE must consult with Indian tribes, nations, and pueblos; state and federal governments

- The OSE must assure that implementing water banking will not negatively impact tribal or pueblo water rights.
- Surface water treatments plants should be developed to render local water potable.
- Study the effects from technologies that provide alternatives to transfers, such as the use of non-potable water for irrigation and for watering lawns and turf providing that the use of non-potable water shall not impair senior, downstream users. Another mechanism that could affect the market is the

interruptible or deferred-use water contract that, in effect, pays a farmer to stop diverting.

Legislative Initiatives

The Town Hall attendees urge the State Legislature to take the following actions in support of the Town Hall's policy recommendations:

- Establish definitions procedures to implement water banking.
- Develop legislation to remedy the issue of new depletions occurring on land from all water rights having previously been transferred out.
- In the 2004 session, create and fund a task force to explore the development of a water transfer framework that includes such topics as listed below. The work of the task force shall be completed by the end of 2004.

Topics to be addressed are:

- Consider the purview of state vs. local control.
- Develop area-of-origin protection measures.
- Investigate alternative regulatory strategies for the transfer of different types of water rights (e.g. acequias, individuals).
- Evaluate how markets work in times of shortages.
- Implement pricing transparencies.
- Eliminate gross receipts taxes on water conservation implementations.

ALTERNATIVE WATER SUPPLIES

Research and development of alternative water supplies should aim to meet current short falls and future needs, while balancing private benefits and the public welfare. The OSE should focus on a number of promising projects by creating programs that review regulatory and legislative obstacles, emphasize economically feasible treatment technologies, and thoroughly investigate the consequences of alternative water sources would impair existing water rights.

Alternative water sources fall into the categories of new water and salvaged water, and the OSE should use all means available to evaluate, establish and pursue water supplies such as:

- Inter-basin transfers.
- Acquiring new water, through exchange, lease or purchase.
- Moving water from other states.
- Purchasing compact water.
- Leasing tribal water.
- Using or leasing additional groundwater or surface water not currently in use, such as the Ute Pipeline, Navajo-Gallup, North Plains aquifer, Gila River water, SE San Juan Basin aquifer, Central AZ Project Water.

- Exploring the possibility of using abandoned oil pipelines that exist all over the US to bring water in to the state from other regions, keeping in mind that other states have greater financial resources and thus exercising caution in negotiations.
- Implementing a study of extracting water from air.
- Cloud seeding (precipitation augmentation).
- Investing in research and development for new technology.
- Genetically engineered plants with lower water needs
- Investigating tax credits to fund research/implementation for technology transfers
- Investigating aquifer storage and recovery and wastewater recharge.
- Creating infrastructure for water storage
- Flood control aquifer recovery
- Reusing potable water or reinjecting it into groundwater.
- Land management of bare soil
- Restoring and maintaining watersheds and riparian areas, including forest management on federally controlled lands
- Constructing wetlands/recharge projects
- Controlling non-native phreatophytes as long as there is revegetation and restoration of ecosystem function.
- Aggressive clean-up of contaminated water.
- Reclaiming brackish, uranium mining, and high-saline ground water
- Desalinization (including the construction of desalinization plants) and the quantification of saline water resources.
- The state should also explore interstate and international cooperation in the development of a high-saline treatment facility located at the mouth of the Rio Grande, which would provide freshwater to be piped upstream to Chihuahua, Texas, and New Mexico.
- Expediting the present statute that allows treatment and use of water produced from oil and gas operations.
- Extracting water from oil/mineral development
- Reducing evaporation losses.
- Evaporation suppression on surface water reservoirs and minimizing evaporation through such ways as storage upstream, underground, floating solar panels on Elephant Butte, keeping Elephant Butte at lower level.
- Recovered losses from reservoir evaporation through groundwater storage and retrieval and storage at higher elevations.

However, salvaged water projects must be assessed for their impacts on downstream users and compact deliveries (e.g. significant increases in use of salvaged water will result in declines in return flows that may require offsets to meet downstream obligations).

In the area of salvaged water (that which is reused and conserved), projects recommended for consideration include:

- Rain water harvesting and catchments
- Re-use or piggybacking
- Using geothermal water for energy and re-injection
- Recirculation of hot water
- Gray water use
- Water reclaimed through better more efficient treatment of sewer effluent
- Recycling water where economically feasible

In addition to projects to increase supplies through new and salvaged water, the OSE should pursue policy initiatives aimed at closing the gap between supply and demand, including:

- Developing a regulatory framework for water banking.
- Offering tax incentives to encourage use of produced water (especially water associated with coal bed methane production)
- Sharing the burden of federal mandates, such as ESA and Indian water requirements, with other states; the state should pressure the federal government to make this a reality.
- Tax credits for xeriscaping.
- Requiring some users (such as golf courses) to look into using alternative water instead of depleting municipal water.
- Tax incentives and new regulations to encourage domestic use of gray water

A more complete list of promising initiatives and technologies can be found in the regional water plans for Tularosa Basin Salt Basin, Lower Pecos River Basin, and the Carlsbad River Operation EIS.

State Roles

With regard to the development of alternative water supplies, the OSE should actively pursue strategic partnerships to encourage development of new water supplies.

The State also should finance research on alternative water sources, as well as practices and technologies that reduce residential demand support, and consider establishing a clearinghouse for the development of alternative water supplies. Mechanisms for funneling capital into research and development should include funding demonstration projects' procuring federal grants; and cost-sharing with municipalities or other government entities.

Development of an integrated resources management plan, active watershed management, and coordination of regional and statewide efforts and investigating the viability of promising projects and new approaches to water use are appropriate activities for the OSE, which should be adequately funded to perform these activities.

INCREASED CONSERVATION AND MORE EFFICIENT USE OF WATER

The Town Hall asserts that both conservation and efficiency are generally positive goals. However, neither approach is a “silver bullet” that will solve New Mexico’s water supply challenges. Additionally, conservation and/or increasing efficiency can impair other users’ rights, including the state’s ability to meet compact delivery obligations. Systems also vary from region to region and within regions, so conservation strategies must be locally tailored to cultural values and local hydrology, in accordance with regional and tribal water plans.

The Town Hall adopts the definitions that conservation means using less water and efficiency means achieving the same result with less water, or improved production with the same amount of water. Conservation is rooted in accountability to the system and the land, other users, and for the water one uses. The state must enforce that accountability and can do so only with complete data that quantifies water use and supply. Metering and measuring water uses, even for municipalities and rural areas, is essential.

Recognizing that the OSE currently promotes conservation and efficient use of water, the Town Hall believes the following recommendations in the areas of policy, education, and infrastructure will enhance promotion of conservation and efficient use of water.

Policy

The state should

- Develop conditions and require conservation planning for water transfers based on conservation goals.
- Require conservation and drought contingency planning as a condition of state funding for all water projects. All water subsidies should be tied to conservation and drought contingency or discontinued.
- Promote water conservation through performance-based ordinances adopted by communities and counties. The ordinances should include conservation plumbing, gray water systems, rainfall harvesting, and storm water catchments provided they don’t violate water compacts. Incentives also such as implementing progressive rate structures and metering should be used to promote conservation. Xeriscaping and other landscaping standards, restricting use to certain days of the week, eradicating non-native plant species, avoiding urban sprawl, encouraging golf courses parks, and public and private entities to plant drought-tolerant grasses, and promoting community planning are other useful techniques that can promote conservation and more efficient use of water.
- Establish state conservation requirements for all sectors over which the State has jurisdiction.
- Provide tax incentives/deductions/credits for conservation measures and technologies.

- Provide interest rate incentives, rebates for changing domestic fixtures, and review federal environmental regulatory requirements.
- Incentivize conservation with “sticker shock” water pricing to prompt reduction of use and strategically use seasonal rates. The cost of water to the consumer should fully reflect the cost of producing that water. We should charge consumers not only for delivering water, but also for water itself. Such practices should take into account lower incomes and establish a base amount according to number of people in household, and then add a graduated rate schedule on top of that base. Individuals also should have more say in how their conserved water is used (e.g., a check-off on monthly water bills).
- Promote energy efficient construction through
 - amending building codes to allow or require water harvesting, recirculating hot water systems, and automatic shut-off faucets
 - preparing new building codes to mandate that new construction be water efficient, indoors and out;
 - allowing developers and communities to develop conservation techniques suitable for each project provided they meet overall state agreements
 - develop realistic prices for water by using a fee scale above a certain minimum level of use
 - support research for predicting cost and cost/benefit ratios for various options.

Increased conservation and more efficient use of water can be promoted by implementing innovative new technologies wherever water is use, while ensuring there is not resulting net environmental damage.

- Continue to promote water efficiency agriculture through improved agricultural practices and conveyance systems. We realize that agricultural uses are the largest uses in the state. Although we should encourage conservation and efficiency by all users, saving water in agricultural uses would be more effective than conserving in other uses. Establishing a water bank and offering incentives for retiring water rights can help.
- Facilitate cooperation between irrigation system managers and Indian tribes, nations, and pueblos to foster conservation and efficiency.
- Encourage low water use industries.
- State law and OSE/ISC rules must support incentives for agricultural water conservation.

Infrastructure

- The government should lead by example, using conservation measures in its facilities and creating and implementing statewide policies on best practices to conserve water. It should “walk the talk.”
- Entities needing additional water should fund improved irrigation efficiencies.
- Infrastructure repairs should be made to prevent leakage and waste of water, and operators of water treatment facilities should be trained in conservation measures.
- Concrete line drainage canals can save water, but we recognize that unlined canals contribute recharge to the aquifer and the delay from using the water and return flows can be beneficial to downstream users (this may be more efficient, but may have adverse impacts).
- As a cautionary note, improving conservation and efficiency technology comes with a cost. Easy breakthroughs have already come; remaining breakthroughs will require considerable research efforts.
- Promote composting and recycling facilities. Use compost and ground glass for dust and erosion control to improve water quality.
- Promote water storage that will reduce water depletion due to evaporation (move water storage upstream and underground).

Education

The culture can be changed by educating the public to make a personal commitment to conservation. Materials on conservation measures can be made widely available in order to help achieve this culture change. In addition,

- Conservation measures in state buildings (including the Governor’s Mansion) can help attract attention to the need for individual, as well as institutional, stewardship.
- Strategies to increase conservation and efficiency should be targeted at both the largest use sectors and the sectors in which water use is most rapidly increasing.
- The state should also pursue the goal of water conservation in sewage treatment and industrial operations.

EDUCATION

The Town Hall affirms that creative and wide-ranging education in resource management, conservation and efficiency, and reduction of consumptive use is a vital component of a workable state water plan. Sustained and well-funded efforts are required in these areas if water education is to make a difference for New Mexico.

Education in Schools

The Town Hall recommends that water resource education be integrated into school curricula at all levels, with appropriate funding for districts to develop the curriculum and train teachers in water resource issues. The curriculum should be developed in partnership with the Department of Education and with water resource professionals to include the scientific, historical, cultural and traditional, and ecological dimensions of water, as well as water management. Specific lessons should be multidisciplinary, visual, and experiential. Special focus could be given to water resources by integrating education with existing activities such as a water category in the annual science fair.

At the Higher Education level, the state, universities, and professional societies should provide special prestige scholarships in water resource management.

Self Education

New Mexicans can contribute to good water stewardship by educating themselves about approaches taken by other countries with similar or worse water issues than our own. Additionally, creating and participating in exchange programs across the state and across different water user types and cultures would give citizens a better understanding of water resource values and contexts.

State Offices

The Town Hall believes that the OSE should expand outreach and education activities throughout the state on water issues, water rights administration, and rules and regulations, and that there should be people in all the state agencies committed to the water education effort. The OSE should call upon the governor to assert a high profile in promoting water education. The Town Hall further believes that OSE would benefit from education by the Indian tribes, nations, and pueblos and by acequia associations about traditional uses and religious values of water.

Public Information Campaign

The Town Hall believes a creative public information campaign can result in a more aware and motivated public. Primary areas of the campaign should include:

- Use cyber technology including an informational website
- Expanded demonstration projects with a focus on water
- Annual public reports on water use by water organizations
- Use the media, including: newsletters, video, commercials, news releases, and public service announcements (PSA's) to achieve greater mass media exposure.
- Disseminate information that is easier to understand through avenues accessible to the public, including: GIS, databases, and maps.

- Regional workshops and water fairs should be coordinated with local, state, and tribal events.

Funding of a public information campaign should consider cost-sharing, with other entities utilizing existing resources such as: existing tribal/junior colleges, colleges and universities; local USDA field offices and extension agents.

Collaboration Opportunities for Education

Real Estate

The Realtors Association, as well as new residents to the state, should be educated about the realities of New Mexico water, including disclosure about water problems in real estate transactions. Additionally, the state should encourage the home-building industry to make water efficient demonstration model homes widely available for homebuyer education purposes.

Youth

Young people are the future of New Mexico. Outside of formal educational institutions, additional opportunities exist for including youth in water conservation education by working with youth serving agencies. These include promoting and collaborating with JA, 4H, science fairs and other youth competitions; providing incentives for youth and children to educate the public about water; and providing opportunities for youth to work in watershed restoration and education.

FUNDING PRIORITIES

Funding for new and ongoing activities in the area of active water resource management must be secured immediately, given the urgency of attending to water related issues, and coordinated with federal, state, tribal, regional and local entities. If overall funding is insufficient to pursue all the priority items, the state should pursue creative financing to support these efforts.

The Town Hall paid special attention to the following activities:

Adjudication:

Completing the adjudication of New Mexico’s water rights can’t wait: “Do it now,” says the Town Hall. Funds must be made available for the following tasks:

- Expanding the staff of the OSE in order to shift the agency to a more collaborative position as an advocate for water users.
- Undertaking the many initiatives that will expedite adjudication, including reforms in both the negotiated claims settlement process and the court adjudicated process.

- Implementation of the Settlement Consensus Plan for the Lower Pecos
- Settlement of tribal and pueblo water claims through fostering intergovernmental and interagency dialogue and partnerships for negotiated settlements. Using the Jemez River Basin experience as a model for cooperation and coordination among pueblos and non-Indian neighbors.

Quantification/Data/Metering/Measuring/Monitoring/Enforcement:

After reforms to the adjudication process, the next priority is the characterization of New Mexico's water resources, especially quantification. It also will require investment in technology, data collection, and management systems, and in adequate staff -- especially within the offices of the State Engineer and the Interstate Stream Commission -- for implementation. Funding also will be needed for coordination among various entities for the purpose of consolidating all sources of water information into a single, comprehensive repository accessible to the public and for updating water inventories (water budgets) as new data becomes available.

Enforcement

Funding will be needed for more comprehensive enforcement—an objective that will require additional staff—and for water masters to administer diversions and existing water rights.

Conservation/Efficiency

Also critical are conservation and efficiency, especially infrastructure for conveyance and application of water for agriculture, balanced with aquifer recharge needs. Funding in this category will enable development and implementation of a drought management/response plans. Developing and promoting conservation methods and practices also will require funding.

Education

Outreach and public information will be crucial to the success of the state water plan, as will the development and introduction of programs for all ages that will provide information on water, its history, uses, and conservation.

Additional Resources to Meet OSE's and ISC's Roles

An increase in the OSE's financial and human resources is essential for such activities as the development of new regulations for water quality, reclamation, recharge, and aquifer storage; the completion of the WATERS database and implementation of a comprehensive GIS system accessible to the public; and integration of OSE active water resource management with local land-use planning. Funding will be needed, as well, for collaborative efforts to address endangered species and protect native ecosystems while protecting existing and future uses and state water rights.

Implementing the State and Regional Water Plans

The implementing of these plans involves:

- development, periodic updates, and implementation of regional water plans and projects, as well as the design of a comprehensive state planning process that covers both consumptive and non-consumptive uses; traditional values; non-surface water users; the southern part of the state; and environmental issues such as water quality.

Additional high priority initiatives that will require funding include:

- Watershed restoration, including riparian habitats, ecosystem protection, and recreational uses of water
- Identification of the most promising water projects that produce wet water.
- Needs assessment of communities that have requests for water projects.
- Aid to acequias and other irrigation systems to increase operational efficiencies and administration.
- Endangered species recovery

The state should lobby Congress for federal funding to support endangered species recovery efforts in NM.

- Protecting state interests in federal and interstate lawsuits.
- Meeting requirements of interstate compacts.
- Establishing bona-fide government-to-government relations with tribal entities.
- Water infrastructure projects that address storage, conveyance and delivery needs.

FUNDING CRITERIA

The Town Hall identified criteria for funding state water projects, as well as a list of projects that should be funded; both lists follow. Although it did not provide a rank ordering of either criteria or projects, the Town Hall articulated these principles: that water projects should be funded according to existing criteria developed by the Water Trust Board and other groups such as the Drought Task Force; and that projects proposed by tribal entities should be considered under the same criteria as those proposed by other entities.

Funding Criteria

Funding criteria for projects and activities should include one of more of the following:

- Increase the availability of wet water
- Deliver long term benefits

- Support community and/or traditional values
- Will serve a variety of objectives in a number of communities
- Promote a balance between rural uses and development
- Serve the public welfare
- Show short-term urgent public health and safety issues
- Improve or increase conservation/efficiency
- Degree to which other sources of funding are available
- Degree of funding leveraged by matching state dollars
- Funding balanced by geography (e.g., Congressional districts)
- Consistency with appropriate water drought and conservation plans
- Drought plan and conservation plan
- Address urgent or emergency needs on a small scale and for planning and feasibility studies
- Have a quantitative not qualitative orientation (i.e., spend money to create/develop water, not on plans and studies)
- Have a viable operations and maintenance plan and commitment to operations and maintenance
- Contribute to negotiated resolution of Indian tribal, nation, and pueblo claims
- Benefit the maximum number of people
- Deliver long-term benefit
- Address critical needs of communities, such as projects that get water to people in need, protect public health, provide economic relief, or provide drought relief
- The main criteria for agricultural uses should be conservation and increases in supply of available wet water.

Projects

The Town Hall places a high priority on projects that

- Keep New Mexico's water in New Mexico
- Offer the opportunity to leverage other funding sources
- Are proposed by regional water plans
- Increase the availability of water
- Emphasize preservation and protection of existing water resources and infrastructure (taking care of the resources we have), including such benefits as aquifer restoration and in-stream flows
- Involve partnerships (e.g., among local governments within a region)
- Contribute to negotiated resolution of Indian tribal, nation, and pueblo claims
- Contribute to ESA compliance and to ecosystem health
- Promote compact compliance
- Are in basins where they will support a settlement
- Are in basins that have high priority in a regional water plan.
- Help restore watersheds

- Promote a conservation ethic and minimize our use

FUNDING SOURCES

Since implementation of the recommended activities is critical to the successful resolution of New Mexico's water issues, adequate funding needs to be actively developed and allocated. The Town Hall urges the state to develop a recurring and dedicated funding source (akin to state road funds) for adjudication, water projects and related activities, in addition to expanding existing funding mechanisms and leveraging federal monies. In addition, new, less conventional sources of financial support should be cultivated.

General Strategies

To fund the recommendations of the Town Hall, the OSE should use the following strategies:

- Leveraging all funding sources and grants including local, state, and federal.
- Seeking appropriation funding from the State Legislature, including severance, capital outlays, and general.
- Tapping existing sources
- Consider innovative ways of financing projects

Existing Sources of Funding

- A number of traditional local and state government funding sources already exist; they include, for example, general obligation bonds and impact fees that require development to pay its own way.
- The state should build on and expand existing funding mechanisms such as the New Mexico Finance Authority and the ISC portion of the Trust Fund.
- If used efficiently, money from New Mexico's Upper Basin Fund might be obtained.
- Half of capital outlay money from the Legislature could go to water projects, if the projects are efficient.

Federal Funds

The state should try to leverage federal funds, using the following mechanisms. (However, we will not allow the recipient of these monies to lose control over projects.)

- PILT (payment in lieu of taxes) monies for water projects and related activities. (Given the federal government's ownership of substantial land in New Mexico, this approach seems justified.)
- Clean Water Act funds have been used and can be tapped when concurrent water quality issues are identified.
- Title XVI reclamation-type project funds

- Environmental Protection Agency (EPA) appropriations

Non-traditional Sources

Town Hall attendees suggest creatively pursuing non-traditional sources of funding for water-related activities. Some ideas include:

- using land use impact fees to pay for infrastructure expansion
- special districts
- enlisting celebrities committed to water stewardship in fundraising
- joint ventures
- low cost loans and bonds
- privatization (For example, the state should actively investigate the possibility of allowing private entities to pay for and constructing infrastructure and function as water providers; however, there must be assurance that the state's effective regulation would continue.)
- instituting taxes for fund water activities (for example, a gross receipts tax; pump tax on groundwater diversions, akin to a severance tax; property tax; meter tax, assuming all diversions are metered). If water districts are established throughout the state, a tax on members might be imposed.

Funding mechanisms for small community infrastructure projects should include:

- Water Trust Board funding for a small number of time-critical projects
- Existing federally funded programs made accessible by a streamlined application process that has been developed by the Water Trust Board

Funding for large regional projects should be sought through a fully coordinated effort between the ISC and Water Trust Board proposal for joint state and federal funding.

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