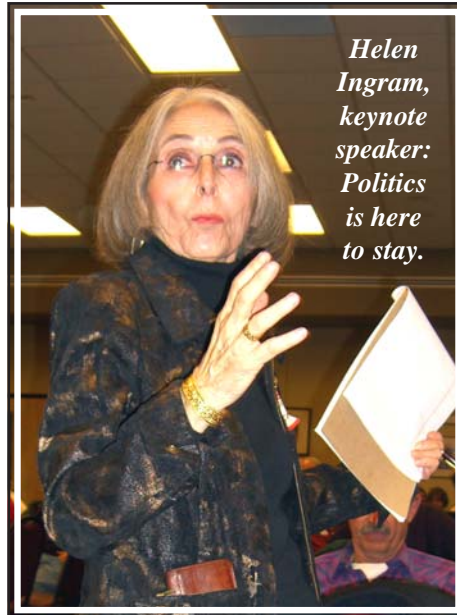


Planning for the Future: 2010 Statewide Meeting

Summary by Lisa Robert

A sign that reads "No Diving From Bridge" hangs absurdly from a railing above a waterless riverbed. "It's a cautionary tale," says Dialogue keynote speaker Helen Ingram, and it's symbolic of what can happen in contemporary water decision-making when policy mandates are borrowed from elsewhere and solutions don't "emerge from the situation." More than anything else, making and implementing successful policy entails *political* energy.

"Politics and water go hand in hand," advises Ingram, a Research Fellow at the University of Arizona's Southwest Center, and Warmington Chair Emerita at the University of California at Irvine.



"Politics ought to be about discourse, about moving across value differences and boundaries. No particular formula fits all; we must proscribe for context." For instance, she says, planners often suppose that water institutions can be designed to match hydrologic boundaries, but the choice of what constitutes a basin or a watershed is itself "a matter of political judgment," and so the resulting entity may have trouble with funding, accountability, jurisdictional conflicts, and plan implementation if political boundaries are not considered. "You in New Mexico have struggled to decide where the boundaries of your water

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Regional Planning Symposium Planned for September

Revitalizing Regional Water Plans: Creating A Better Future

The completion of the last of 16 regional water plans in 2009 was a major accomplishment. People all over New Mexico worked hard to compile and analyze data (often incomplete) and to better understand the present and future issues related to water availability and demand. These regional water plans outlined alternatives for meeting our water needs, especially in areas where demand did or will exceed supply.

It is more than 10 years since the first regional water plans were completed and accepted by the Interstate Stream Commission. Some important actions prioritized in regional water plans have been completed. However, data is becoming outdated,

there is often little or no funding for implementation, and there has been very little money for updates. Even if funding were available, there is no template for what updates can accomplish most effectively. Opportunities for optimizing water supply across regions, incorporating new data on climate variability and impacts to water supply, considering ecological needs for streamflow, and analyzing vulnerabilities warrant further consideration and planning.

Key aspects of regional water planning are: to learn from each others' successes and problems; develop tools for implementation; develop a template for updates, and find the funding for updates and implementation of water plans. Members of the New Mexico Dialogue's board of directors from all

over the state believe we need to have these conversations now.

Please save **Thursday, September 16, 2010, 9:00 am to 4:00 pm** for a symposium to discuss the future of water planning in New Mexico. The meeting will be at **Sevilleta National Wildlife Refuge**. Directions: From I-25 south, take Exit #169 and turn west to the entrance road to Refuge headquarters. Lunch will be provided if you have pre-registered; there is no place to get food nearby so those who haven't pre-registered will need to bring their own lunch. Attendance and lunch are free. Please send your email address to let us know if you want more information or to receive updated announcements. Contact the Dialogue at info@nmwaterdialogue.org.



Summer 2010

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Update from the New President

by Mary Murnane, President, Board of Directors

This is the first column I write as president of the Board of Directors of New Mexico Water Dialogue. I am honored to have been chosen as president, in particular because I have such deep respect for all of my peers on the Dialogue Board. In these past few months as Conci has been providing me with historical files, old Dialogue newsletters and financial and grant information, I have gained even more appreciation of the role of the Dialogue and the commitment of our Dialogue predecessors. I am somewhat awed by the number of dedicated and influential people who have been and continue to be part of the Dialogue. The Board of Directors when the Water Dialogue sought to become a non-profit organization included Myrtle Cox, Rita Horton, and Gary Daves, as well as Hal Engle, Debbie Hughes, Rob Leutheuser, Lora Lucero, Wilfred Rael and others. Board members who continue to participate in the Dialogue from that time (1996) include Michael Benson, Charles Lujan, and Conci Bokum.

It seems to me that the Dialogue has become an organization with a history. Rather than this being a burden, or something that causes the organization to stagnate, it has become a much-needed reference point for how water issues have been successfully resolved in the past, the importance of dialogue, and the need to keep up the good work.

It is with this awareness that the Dialogue will host a Regional Planning Symposium on Thursday, September 16, 2010 at the Sevieta National Wildlife Refuge (see box on front page.) Regional plans and regional planners need the opportunity to reaffirm and re-establish the links that have made us successful in developing re-

gional plans, so that we can be successful in updating and implementing regional plans

I have been attending the Annual Meetings of the Dialogue since 1997 or 1998 at the Indian Pueblo Cultural Center, where we still meet, although we are no longer in the building in the back of the parking lot. At that time, Sharon Hausam and I were working on the Northwest New Mexico Regional Water Plan. Our consulting hydrogeologist for the water supply portion of the plan was Shomaker and Associates, and Lucy Moore facilitated our public meetings. Then, as now, the knowledge and support of dedicated participants, engaged stakeholders and the knowledge of local people, staff and water resource specialists make regional water planning a critical component of water management in New Mexico.

I became a member of the Dialogue Board in 2004. In the six years I have been on the Board, my respect and admiration for my fellow Board members has continued to grow, as has my recognition of the importance of the Dialogue. The Dialogue is the one organization that supports regional water planning, that advocates for a public discussion of our water issues, and that seeks to acknowledge our common hopes and belief in the future of New Mexico.

It is people who attend the Annual Meeting, people who support the Dialogue financially and organizations who have provided grants to the Dialogue, in particular the McCune Foundation, who make the Dialogue a success. It is the dedication of all those who participate as members and as board members who are the true spirit and value of the Dialogue.

Dialogue Letter to OSE and ISC on SWP Update

June 3, 2010

John D'Antonio, State Engineer, OSE
Estevan Lopez, Director, ISC

Dear Messrs. D'Antonio and Lopez:

The Board of Directors of the New Mexico Water Dialogue submits the following comments relative to implementation of the State Water Plan (SWP) and its update. As you are aware, the Water Dialogue drafted the state water planning legislation and, as early as June 2004, wrote to urge that the plan be strengthened. Moreover, we have continued to be active in supporting regional water planning efforts. The issues we address below are critical for our organization.

We continue to believe the development and adoption of the 2003 SWP was a key step forward for water management and protection in our state. The SWP sets the stage for the future of water use and development. The topics it addresses are largely comprehensive, so we have few new additions to suggest. Its primary weakness, however, is in the action, regulation and implementation that must follow adoption of the document. These elements are crucial to the credibility of the SWP.

General and Vision

As you have said, the SWP should be a strategic guide for the OSE, ISC and the sixteen water planning regions. As such, it should clearly set out priorities and strategies for reaching goals. The requirements for an update every five years can help ensure that the document becomes more focused and implementable over time. The updates also clearly acknowledge that planning is a dynamic rather than static process.

The SWP should be based on a vision for the future: what water uses in New Mexico do we value and should State policy encourage, not just immediately, but for many decades to come? It

should provide an enforceable but adaptable water governance blueprint that addresses quality of life relative to all future uses of water. For example, will New Mexico be able to deal with the changing conditions brought about by increasing population and climate variability? Will all the agricultural land disappear as the associated water rights are transferred to municipal and industrial uses? What criteria determine whether such transfers should be halted or slowed and by use of what tools? Will future flows in the rivers provide adequate habitat for the flora and fauna treasured by most New Mexicans? What laws will need to be adopted or changed in order to provide adequate supply, thereby protecting our quality of life for future generations?

Population Growth

Although the general public, the OSE and the ISC have little direct control over growth, growth will have dramatic consequences and should be addressed squarely in the SWP. Growth is the generally unacknowledged, primary reason we must plan and manage water use more intentionally in New Mexico. The underlying assumption in most of this country that economic health is impossible without growth must be challenged.

If there is no increase in population, existing resources can probably be managed to meet future demands. Water needs of the currently projected population cannot be met, at least with current management strategies. The dire consequences that are likely to result from the imbalance between future supply and future demand must be clear. Again, is the reduction in quality of life that will be associated with unmet water demand acceptable?

The OSE, however, does have some ability to "influence" growth. State policy can and should encourage some uses for water and discourage others. Only efficient and sustainable uses

should be considered. Beneficial uses should include environmental, cultural, recreational and riparian uses as well as traditional consumptive uses such as agriculture, municipal and industrial. New manufacturing and mining activity drawn into the state should be water efficient and non-polluting. Use of OSE authority to approve or deny water use and development in water-poor areas should be enhanced through legislation such as amendments to the Subdivision Act. The State should also encourage local governments to deny new development in unsustainable locations through the OSE's and local planning and approval processes. In some areas, shrinking non-Indian water use is counterbalanced by growth in Indian use. The ultimate use in Tribal areas should be determined, though the lack of adjudications complicates this effort.

Limited Resources: Supply & Demand

A good deal of evidence supports the contention that New Mexico's waters are already over appropriated. We are not "living within our means," much less preparing for future demand. Limited water supplies are further threatened by drought, climate changes and growth. There is no "silver bullet" to match future supply with future demand. If over appropriation continues, the OSE will not have fulfilled its responsibility to "protect and maintain water rights and their priority status."

Adjudication

Adjudication of existing rights must be a priority. Without adjudication, the OSE cannot hope to manage the water of the state or accomplish many of the other goals set out in the SWP. The OSE and ISC currently must "tiptoe" around many legal issues because adjudication has not occurred. The limited supply cannot be adequately addressed until available supply and rights have

LETTER—Continued from page 3

been accurately measured and then adjudicated or mediated. Tribal rights remain undefined at the same time that more water rights are being approved. River and environmental needs have been largely ignored. Obviously, adjudication court battles that last for decades are not desirable; alternative methods such as mediation and negotiation should be used more effectively to address this issue.

Water Conservation

Water conservation should be a higher priority, should be better defined relative to future use and should be mandatory throughout the State. Although much success has been achieved in some urbanized areas and with new tools to improve consistency, inefficient use of water continues throughout the State. Must we wait for a crisis to address this issue adequately? Resources for the educational component of the OSE's conservation program are sadly lacking.

River and Environmental Needs

Healthy rivers provide free ecosystem services that are essential for nature and people, such as recharging groundwater, banking floodwater and clean water and providing recreational economic benefits. Two important components of a healthy river ecosystem are a balance in sediment inputs and outputs and a natural flow regime. Through time, these two components have been modified in New Mexico, sometimes significantly, resulting in degraded rivers and loss of habitat for fish and riparian-dependent wildlife. New Mexico State water and wildlife agencies, with the aid of federal and non-profit organizations, should prepare a comprehensive assessment of the ecosystem health of the state's river systems, prioritize those streams or stream reaches facing substantial risks, and identify opportunities to restore or enhance river conditions. Funding to restore the state's rivers, including flow based restoration, should be a priority. The assessment should also look into how agricultural practices

in New Mexico can better support natural river ecosystems to mitigate any negative impacts.

The SWP should incorporate a long-range plan identifying specific actions to implement in individual basins to contribute to recovery of the endangered fish populations. In addition, the ISC should further develop and utilize the Strategic Water Reserve to protect the species already listed as endangered by the US Fish and Wildlife Service and should expand the scope of protection to include the species of concern identified in the New Mexico Comprehensive Wildlife Conservation Strategy. Legislation supporting these efforts, such as laws supporting in-stream uses, should be pursued.

Governance/Enforcement

Plans do not implement themselves; institutional authority, arrangements, responsibility and usually funding are necessary for this to be accomplished. There is currently a lack of clarity concerning which of the various agencies should take authoritative action to implement the SWP (make which decisions, using what processes, and implement and enforce them, using what tools). The SWP does not even indicate how the ISC and OSE will deal with many of the issues raised or actions required.

Accountability/Metrics

The OSE and ISC are to be congratulated for the steps they have taken to develop criteria and metrics, such as the formula for calculating gallons per capita per day, and for better defining the regions' baselines. However, much additional work is needed to ensure that consistent definitions, metrics and baselines are being used across the state. This will facilitate trust-building and, ultimately, cooperation.

The water budget approach should be utilized, even if people are uncomfortable with it. Mandating broad guidelines for water budget accounting also makes sense.

Presumably, compliance with the SWP will help solve our state's water problems – but who is measuring and verifying this impact? The OSE has a

very short definition attached to impact analysis. Will the impacts over several years be documented in a form that can be understood by the general public and utilized to better focus needed changes? The OSE and/or ISC might benefit from use of a decision matrix to test proposed actions (transfers, approvals, etc.) for compliance with the goals of the SWP and the pertinent Regional Water Plans (RWP).

Ad Hoc Management

The OSE, like most agencies, tends to focus on burning short-term issues while long-term, more important issues stay unresolved and unrealized. The allowable issuance of domestic well permits without evaluation is an example of this. The SWP can be a powerful tool for better focusing on a long-term perspective. Many decisions that have far-reaching effects are now being made in the courts, partly because the Legislature has not supported needed new legislation. However, the OSE and ISC should continue to pursue long-term strategies, implementation measures, legislation and regulations to build a future we all aspire to. Working cooperatively with organizations like the Dialogue might help to sway the Legislature. New Mexico also needs consistency and predictability in water management regardless of changing administrations; enforcement should be depoliticized.

Depleting groundwater can greatly impact surface water and sustainability. The disconnect between surface and groundwater management, as well as cumulative impacts, have not been adequately addressed. Understanding of the total supply and effects of diversions cannot be achieved until these disconnects are resolved. The SWP should call for and establish real conjunctive use and administration. Protecting quality must also be part of the strategy.

Regional Water Plans

The relationship between the RWPs and the SWP is unclear, even after seven years of attempts to sort out the roles. If regional water planning is to mean anything, the SWP update must

address this issue. Water may be treated as a commodity for some purposes, but it is also a common-pool resource – a collective good. Thus water's intrinsic properties require that rights to its use be considered beyond purely private property to be traded in an unfettered "free market." The New Mexico legislature recognized this a quarter century ago when it authorized regional water planning, establishing the principle that local needs, priorities and values as expressed in the RWPs must inform decisions made at the State level.

Public Welfare

While some interests (generally those with greater power and wealth) favor a "streamlined" process allowing the market to allocate water rights, such an approach to water resource management ignores, for instance, environmental and traditional agricultural and cultural uses of water. The RWPs, if effectively implemented, provide a counterweight against a decision process that would ignore such "third party" social or ecological costs. Because this is such an important principle, the Dialogue strongly urges that the OSE addresses public welfare in any water use and transfer decision. The SWP should state unambiguously that public welfare definitions and criteria articulated in the pertinent RWPs must be taken into account in making these decisions.

Inter-region Coordination

Because such decisions may often involve more than one region's plan, conflicts between RWPs, including definitions, consistency of data, need to limit additional use, and environmental concerns, will have to be resolved. Processes such as the Dialogue's Upstream - Downstream project on the Middle Rio Grande could be useful in resolving these conflicts. However, our experience suggests that the policy environment is critical to the success of such efforts. Authoritative support of the ISC through the SWP will be instrumental to encourage (or require) consistency and coordination among regions sharing a source of supply, and to encourage basin-level cooperation generally.

Intra-region Coordination

Because the RWPs typically lack procedures and methods for coping with difficult conflicts *within* a region, RWPs and the plans of sub-regional water management entities are often poorly coordinated. The SWP should address this by spelling out a method to assist with resolving such internal-to-region conflicts. Currently, no criteria exist at the local level requiring sub-regional water management entities even to reference the RWPs, much less to promote consistency with them.

Rebuilding and Strengthening RWP Planning Bodies

Through the SWP, the ISC should also encourage strengthening the RWP bodies themselves, particularly relative to spelling out a role for them in evaluating public welfare implications of transfer proposals, as discussed above. Each region should be given resources to develop accurate, up-to-date information on sustainability relative to water development, growth and conservation. Through this process, the ISC can strongly encourage the regions to better address assuring adequate future supply, water conservation, adaptation to climate variability and prioritization and funding for needed infrastructure projects.

Updating the RWPs

Updating the regional plans on a regular basis is necessary, to keep the plans current and viable, to reflect new understanding of technical issues, to continue to engage the agencies that have the authority to make water-related decisions in the region and to document implemen-

tation or lack of it. While funds to support these activities are always limited and some regions lack discernable ongoing planning activity, the SWP should encourage ongoing relationships with and between the regional planning groups and updating of the plans. The Dialogue has submitted a recommended template for these updates to your office to assist the regions.

Funding for RWP Implementation

A lack of resources for RWP bodies to monitor and evaluate plan implementation by water management entities within the regions is perhaps the biggest problem the planning regions now face. Until this becomes a priority for the OSE and the Legislature, it will be difficult or impossible to measure progress in implementing the Regional Water Plans.

Conclusion

The New Mexico Water Dialogue Board thanks you for this opportunity to comment on the SWP, its update and its future use and implementation. The adopted SWP can and should be a key influence on New Mexico's water future. Its further refinement, strengthening and implementation will help realize the strategic management tool for New Mexico's water envisioned in the SWP Act. We believe SWP should fulfill its purpose.

The letter is signed by Mary Murnane, President for the Dialogue Board of Directors. Jean Witherspoon, State Water Plan Chairperson, chaired the writing and editing of the letter.



Photo by James Fisher

Monticello, NM, autumn 2009

—Reports from the Regions—

San Juan Basin Regional Water Planning Update

by Aaron Chavez, San Juan Water Commission

On January 21, 2004, the Interstate Stream Commission approved the Northwest New Mexico Regional Water Plan prepared by the San Juan Water Commission in conjunction with the Navajo Nation, Jicarilla Apache Nation, Interstate Stream Commission, and the San Juan Regional Water Plan Technical and Planning committees.

The water-planning region encompassed San Juan County, and portions of Rio Arriba, McKinley, and Sandoval counties. The principal rivers in the basin are the San Juan, Animas, and La Plata. The major aquifer and water-bearing unit in the San Juan Basin is the Nacimiento-San Jose aquifer.

The San Juan Basin Regional Water Plan (Plan) follows the template in the Interstate Stream Commission's Regional Water Planning Handbook (1994). The Plan includes background information on the Planning Region (San Juan Hydrologic Unit); a discussion of legal issues; an overview of water resources in the Region; estimates of water demand; water resources information provided by the Jicarilla Apache Nation and the Navajo Nation; a discussion of preferred water planning alternatives; and a recommended Water Plan with a 40-year horizon. The Regional Water Plan evaluates the water supply available to New Mexico in seven of the nine watersheds.

The goals of the Plan are to:

- Identify existing and future water demands
- Identify water supplies for the basin
- Determine needs to be met by considered alternatives
- Develop implementable alternatives to meet water needs, including conservation measures.

The Planning Committee developed alternatives to meet extreme drought conditions and the La Plata Watershed agricultural irrigation shortage. It prioritized alternatives for engineering evaluation but elected to not discard any alter-

natives identified by the Committee.

The alternatives recommended for early implementation are:

- Shallow groundwater development and a drought contingency alternative for the Animas watershed.
- Crop leasing and a drought contingency alternative for all watersheds with agricultural irrigation.
- Conservation, including landscape ordinances, mesa development water use limitations by ordinance, and canal and on-farm irrigation practice improvements.

The Water Supply Assessment Report analyzed both surface and groundwater. The primary source of water for all purposes in the San Juan Hydrologic Unit is surface water. Groundwater data is insufficient to determine sustainability, which would likely be area-specific, not watershed or basin-wide.

The Plan looked at demands in three categories.

- Municipal- includes demands for all residents regardless of supply, and all commercial and institutional uses such as schools and parks.
- Agricultural – demands include crops, pastures, or fields that are routinely irrigated.
- Industrial – demands from the power and mining industry not connected to a municipal system.

The Plan describes actions taken through the planning period (2004 through 2044) that will preserve and augment the water supply in the San Juan Hydrologic Unit. Emphasis has been placed on preserving the area's water supply and protecting existing uses by developing the Region's water potential within the constraints of environmental concerns, and providing a consistent water supply to sustain and improve the human quality of life.

The Plan Update

In July 2009, the San Juan Water Commission developed a scope of work for

an update to the Plan which is expected to take several years. The purpose of the updated scope of work is to focus on Water Supply, Water Needs, and Implementation of the Plan.

Recommended updates to the Water Supply are:

- Update the water supply analysis of the San Juan Regional Water Plan by extending historical data through 2008.
- Extend water supply projections through 2050 taking into consideration variability and statistical risks associated with climate change projections of water supply.
- Estimate the water supply impacts of climate changes using existing climate model results.
- Estimate water supply variability and statistical risks of various supply scenarios through 2050 based on existing non-climate change studies, such as tree ring or other paleo climate studies results.

Recommended updates to the Water Needs are:

- Update water needs based on current data on irrigated acreage collected by the State of New Mexico.
- Update the domestic water needs based upon current and forecasted population growth using US Census Bureau and State of New Mexico demographics information
- Extend water needs for municipalities and industrial uses by adding historical uses through 2008 to the existing data set from the Plan
- Summarize and quantify existing water rights.
- Summarize water needs through 2050.

Recommended updates to Implementation are:

- Review and update the Plan implementation strategies.
- Prepare an implementation plan for meeting projected basin-wide water needs.

Jemez y Sangre Region completes Phase II of Plan Update

by Consuelo Bokum, member, Jemez y Sangre Water Planning Council

The Jemez y Sangre Regional Water Plan was accepted by the Interstate Stream Commission in 2003. In 2007, the Jemez y Sangre Regional Planning Council was able to begin work on an update. The report from Phase I of the update focused on whether or not the region had made progress on closing the projected gap between supply and demand and to determine if the actions that communities in the region had taken were successful or not. (See report in the *Dialogue* newsletter, Fall 2008; both the Phase I and II reports can be accessed at www.ose.state.nm.us/isc_regional_plans3.html.) Based on this information, communities could con-

tinue to move forward on other strategies as needed.

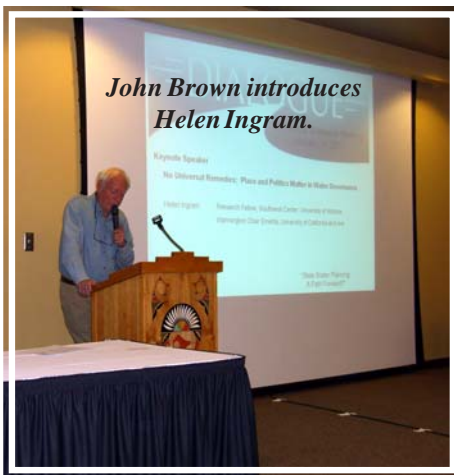
When the Jemez y Sangre Regional Water Planning Council analyzed the data from Phase I, it realized that the 2003 plan had not adequately looked at some issues that were likely to have impacts on the region either because they hadn't been anticipated or the resources to explore them were unavailable. In 2009, Phase II of the plan update was completed. It focused on potential vulnerabilities to the water supply: San Juan-Chama Project delivery reliability, climate change impacts on the region, and aquifer sustainability (as opposed to withdrawals or demand). The report determined that the reliability of both its

San Juan-Chama Project water and its groundwater will be fairly reliable for some time. Impacts from climate change, however, are problematic.

The report recommended that the region develop contingency plans in four areas: drought, extreme precipitation events (including flooding and water quality impacts), land use issues (including crop requirements), and watershed health (particularly risk of catastrophic forest fires). Both the plan and the updates have provided the Jemez y Sangre region with valuable information that enables its communities to improve their planning to increase future water reliability.

PATH FORWARD—Continued from page 1

planning regions are. That's *politics*, and the idea of geographic boundaries doesn't necessarily help you."



Public participation is another ingredient deemed necessary to good policymaking, but it alone is not a panacea for solving water problems. For one thing, public participation needs to result in action, or people "come to believe they are wasting their time." Forums and processes also have to be perceived as fair and open, but water isn't always an engaging subject for the general pub-

lic. More often, water issues are addressed through representative bodies—a council or an executive committee—and selecting those representatives, as well as determining what rules will govern them, are *political* decisions.

Ingram cautions that beyond its economic value, water also has communal and cultural value, neither of which are easily accounted for in the marketplace, that mechanism by which water resources are presently transferred from rural to 'high value uses.' In some places, she acknowledges, market transfers have worked well; in others, they have aroused great resistance because they do not address the conflicts created between areas of origin and areas of receipt. "People understand that more than just money is involved here."

Universal remedies for dealing with water "fail in part because they attempt to gloss over fundamental differences in attitudes and perspectives that divide the water community," Ingram says. "Mul-



iple meanings have emerged through history and are carried over, one layered upon another, sometimes compatible but more often in competition." Those historic views include water as a *product* of natural and engineered delivery systems; water as a *place-based natural element* embedded in ecology; water as a *commodity* and thus subject to the concept of ownership; and water as a *community value*, raising issues of public welfare.

"These multiple meanings are all valid, and they're partially conflicting. How do we reconcile them? The answer, of

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course, is to bring politics back in, and I invite you to think about politics not as a dirty word, but as a way to engage that community notion of 'we.' Rational scientific reasoning, moral and ethical reasoning, spiritual ideas, customs, tradition—all are experiences that need to be consulted. We are always going to have water problems. The question is, are we nimble and clever enough to keep up? Have we built networks that move across boundaries so we can engage others in a collective effort to solve problems? Politics is inevitable. We just need to engage in it more usefully."

Conflicting Priorities and Other Challenges

And just what *are* those water problems that Ingram says we're always going to have? The Dialogue asked a panel of water administrators and advocates to identify the two most critical short and long-term water conflicts or challenges in New Mexico, and to suggest how they might be resolved.

Standing in for Interstate Stream Commission director Estevan Lopez, Rio Grande Bureau Basin Manager and Middle Rio Grande Compact Engineer Advisor *Rolf Schmidt-Petersen* said the two most crucial short-term water challenges are water for environmental needs and mechanisms for wet water management during times of shortage. "Water for environmental needs has the potential to unravel all the best planning efforts, and in times of shortage, there is currently no way of aligning policy from the federal perspective all the way down to the local level." The most critical long-term challenges, Schmidt-Petersen thinks, are the adjudication of water rights and water for future growth. "If we're ever going to be able to adapt to changing demand and situations, water rights need to be defined...and solutions will require people to engage more." As an example

he points to the Middle Rio Grande Endangered Species Collaborative Program, a collective attempt "to find



Denise Fort, flanked by panelists Rolf Schmidt-Petersen (l.), Andrew Lieuwen, Jason John, and Janet Jarratt (r.), calls for water for the environment, not just for people.

sustainability by re-creating some of the natural functions of the river system that don't occur now. We need to find ways to do well with endangered species when we *have* water, and to make sure that we don't lose the gains we've made when we *don't* have water."

Denise Fort, a Professor of Law at UNM, believes the most important short-term challenge is providing water for the environment. "We've lost 90 percent of our natural riparian areas in the state; we don't have any institutional consensus about the value of water in a place; and there's been a lack of initiative on the part of state government in pursuing restoration opportunities." The second short-term problem is continued reliance on supply-side approaches to meeting water needs. Costly and unsustainable water supply projects may use more energy to move water through long distance pipelines than what is actually being transported. Long-term, Fort said, "climate change will make the term 'drought' obsolete," challenging us to re-examine all of our water uses. Another long-term challenge is the lack of "a genuine democracy in water decision-making. As a member of the Water Trust Board, I see water projects being shaped by *consulting firms*...and the results are not necessarily the cheapest or the most sustainable solutions to water problems." As to solutions, Fort notes that despite more social agreement about the protection of rivers, "we're still teaching water law that was created the

century before the *last* century. And we have no agency at the state level for protecting ecosystems. We need to make explicit that that's part of what citizens want from our water agencies."

Andrew Lieuwen, Water Rights Manager for the Albuquerque/Bernalillo County Water Utility Authority, said the most critical short-term challenge is the finiteness of water resources in the basin and the system for allocating it. The second short-term problem is water for ecosystems, particularly for endangered species. "The MRG Collaborative

Program has forced most water interests to the table, but actual water *management* has remained 'ad hoc' from day to day, and season to season." Regarding long-term challenges, Lieuwen agrees the first is adjudication. "There is such a complex web of water users in the basin, and the present way of doing business is unsustainable, so adjudication is needed to reduce some of the uncertainties that preclude effective water planning." In solving the problem of ensuring water for people and ecosystems, Lieuwen believes solutions that come from the demand side are less costly and easier than solutions from the supply side. "We have to be able to do more with the same amount of water. We



Anita Hand stands with ranchers against "Big Water" transfers. Michael Benson lauds sharing among users.

need to abandon traditional unsustainable approaches—building more dams or importing water from somewhere else with no thought to the impacts on areas of origin. The supplies of the future will be more about recycling, reuse, and

eventually, brackish water.”

Jason John, a hydrologist with the Navajo Nation’s Department of Water Resources, thinks the foremost short-range water issue is how streams and rivers are administered in times of drought. “The need to balance water for communities, agriculture, power generation and environment is a challenge, based on the priority system.” Another important short-term issue is securing potable drinking water for members of the Navajo Nation who currently don’t have access to it. Long-term, John believes the entire country will have to address aging water infrastructure, but for the Navajo Nation, surrounded as it is by half a dozen power plants, the major long-range concern is water for energy generation. The solutions to most of the problems lie in cooperation, John suggests. In northwestern New Mexico, a set of collaboratively devised recommendations for operation and administration of the San Juan River has been in effect since 2003. “We call it a ‘shortage sharing agreement’ because it attempts to balance the needs of power plants, cities, agriculture and the environment by developing water budgets for these groups on an annual basis, and by calculating the availability of water on a monthly basis. There’s a trigger for the agreement, based on the elevation of Navajo Reservoir, and in the event of a shortage, all entities participate in sharing it, including the fish.”

Janet Jarratt, a farmer and chair of the Middle Rio Grande Conservancy District, said she initially had one answer to all of the questions: adjudication. “Every issue that has come up regarding water management really hangs on adjudication. It’s not a long-term problem; it’s a *right now* problem. How do you do administration if you don’t know what you’re administering?” Jarratt offered a ‘partial solution’ to adjudicating the middle Rio Grande, since the conservancy has the statutory authority to prioritize water rights inside its boundaries in order to deliver water to lands originally served by 78 acequias. “The conservancy predates the Rio Grande Compact, and it was clearly contemplated that someday, the

MRGCD would do priority deliveries of water.” That very process was initiated in 2009 with revisions to the agency’s water bank policy. In regard to environmental issues, Jarratt noted that even ecological flows could come out of the MRGCD water bank. “We have a highly managed, channelized river, and the only thing that continues to mimic the natural hydrograph is flood irrigation across the valley floor. We can’t really differentiate between ‘the ecosystem’ and agriculture.”

Water Transfers & Public Welfare

A second Dialogue panel explored the topic, “Conflicts and Political Issues Raised by Water Transfers & Public Welfare.”

Gary Esslinger, manager of the Elephant Butte Irrigation District, said, “No commodity has more power to produce conflict than does water.” Growing urbanization, energy production, and new environmental reallocations of water in the West are placing increased pressure on agriculture. Significant re-



duction of domestic food production concurrent with climate change will severely and adversely impact world food production. As municipal and environmental needs increase, EBID is accommodating those uses while “still managing to grow food and fiber.” Under new legislation passed in 2007, municipalities, mutual domestics, etc., can apply for status as a Special Water Users Association, allowing them to “call for water delivery like any other ‘farmer’ in EBID,” meaning that urban water use will now depend on a renewable surface

supply, rather than on unsustainable groundwater pumping.

Catron County rancher *Anita Hand* expressed concern over a proposed water rights application by out-of-state developers to drill 37 2,500-foot-deep wells in the San Augustin basin, with the hope of pumping 54,000 acre-feet a year for transfer to other areas. “That’s knocking on our back door. Our wells are all 200 to 300 feet deep, so they will go dry pretty quick.” Hand reminded listeners that all of the items on the day’s lunch menu were produced by the grace of water. “Without agriculture, people will cease to exist,” she said, “and without water, agriculture will cease to exist.”

New Mexico State Game Commissioner and avid angler “*Dutch*” *Salmon* noted that “while water development and water conservation are always presented as mutable variables where improvements or benefits can be achieved, population growth—the true source of the looming shortage and stress—is always presented as immutable, a given, an ineluctable force, like a hurricane. Further, growth is generally portrayed as a *good*, something to strive for, even as it exacerbates scarcity and contention. The first step in getting a grip on growth is to view it as a manageable dynamic rather than an ineluctable force. Then we should stop subsidizing thinly disguised booster projects.”

Michael Benson of the Navajo Nation’s Water Management Branch, and member of the technical support team for the San Juan River water rights settlement negotiations, said, “There have been, there are, and there always will be conflicts and political issues raised by water transfers everywhere on this earth, but from what I’ve seen in the wonderful state of New Mexico, conflicts and issues are approached with openness to negotiation and compromise.” He thanked the New Mexico Water Dialogue for “contributing to this atmosphere of inclusiveness and fairness in the regional and state water planning processes. It is people like all of you—citizens of New Mexico—who give the state its admirable character of pluralism

PATH FORWARD—Continued from page 9

and brotherhood.” The state’s water planning laws emphasize “easy public access to the discussion,” Benson said. In that light, he advised those contemplating a water project to “go to a regional water planning meeting and announce your project. Get it written into the regional water plan. Let your neighbors know what you want. Abruptly filing a water rights application to announce your project is not the way to persuade your neighbors and other citizens.”

Competing Interests

In preface to the final panel of the day, on “Competing Interests in the Face of Future Changes,” State Engineer *John D’Antonio* said he believes New Mexico’s water community “is becoming more and more a cohesive group... There’s room for all of us... We’ve made progress... and we can make so much more if we stay together, listen to each other, and come up with collaborative solutions.”

Reed Benson, professor and recent addition to UNM’s School of Law, spent nine years in Oregon during an era of conflict over endangered Coho salmon in the Klamath basin. He says efforts at a collaborative process were “always interesting, sometimes fun, and routinely unproductive, because some people were just fine with the status quo.” Others seemed to think they were going to “win,” making them reluctant to compromise. Another factor that stifled a solution to the water problem was that the basin was unadjudicated. “The BOR started in 1995 to develop a long-term plan for the Klamath, and I think if they had finished that, rather than muddling through with a series of annual operating plans, the basin would have had time to adjust before the big drought came along. I hope that here we remember water is a shared resource, not a finite commodity to be divided among competing interest groups. We can’t count

on a Silver Bullet; we have to find viable solutions *before* we spend another decade in political and legal controversy.”

Dave Gutzler, a climatologist, and professor of Earth and Planetary Sciences at UNM, said, “I keep getting dragged out to these conferences to deliver the bad news.” Too many of our laws, regulations and customs concerning water are based on the past, Gutzler explains. “We always count on the past being a guide to the future and that the average flow in the river and the variability from year to year is representative of what we can expect to see. The scientific consensus these days is that



Reed Benson, Dave Gutzler, and Jean Witherspoon present environmental, climate, and conservation challenges.

that assumption is simply no longer true. We expect, as a result of climate change, that the statistics of river flows will change very significantly over our lifetime. How much water can we really count on flowing down the river from diminished snowpacks in the north? This model projects that streamflows will be diminished by anywhere from 10 to 40 percent by the middle of the century. Two of the most affected regions in the world for changes in runoff will be the Rio Grande and Colorado River basins, because both rivers are fed by snowpack, and we expect snowpack to be diminished very significantly as the climate warms. Prolonged drought, superimposed on downward hydrograph trends, all in the context of increased demands and depleted aquifers, is what will nail us.”

Jean Witherspoon, former director of the Albuquerque-Bernalillo County Water Utility Authority’s water conservation program, believes conservation is a partial solution to water problems, “effective for all sectors and uses.” She of-

fered some ‘Highlights’ and ‘Lowlights’ of national, state and local water use. On the national and international front, U.S. water use is down since 1975 despite GNP and population growth; grants are available for conservation efforts; and government agencies are partnering with the private sector to support conservation practices. On the other hand, population is still moving to water-short areas; urban areas routinely waste 40 to 60 percent of their water through faulty infrastructure; and climate change is likely to reverse many of the gains made by water conservation in the past. At the state level, recent court decisions have upheld OSE requirements for water conservation in 40-year plans and permit changes; the state has standardized gpcd (gallons per capita per day) calculations, and changed “unaccounted for water” to “non-revenue water” to emphasize conservation; New Mexico’s growth rate is lower than the rest of the West; and coastal states are being encouraged to turn to

desalination, allowing Colorado River water to serve the interior states. In contrast, Arizona is backtracking on its progressive groundwater regulations; budget cuts are affecting agencies from the State Engineer to small towns; and attempts are being made to weaken New Mexico’s current Water Quality Act. On the regional/local front, water use per person continues to decrease; there’s more use of non-potable water for irrigation; and interest in water harvesting is growing. At the same time, some utility customers still squander 3,000 gallons a day; there’s still too much “unnecessary grass”; we don’t pay for water itself, only the costs for delivering it; and water metering is still not universally required. Witherspoon believes a strong State Water Plan can help. “It sets the stage for everything that happens with water planning, so the more it promotes water conservation and shows ways to do it, the more that will occur. It’s also an educating tool, and someday, it may be a regulating tool, as well.”

E-Flows Memorial flows thru the HENRC gate

During the 2009 legislative session, at the request of several organizations including Rio Grande Restoration, the Audubon Society, and the NM Wildlife Federation, Rep. Mimi Stewart sponsored House Joint Memorial 3, an appeal to “the water cabinet, in consultation with water user and other conservation groups, appropriate scientists and other agencies, to identify streams at risk of degradation by hydrologic alteration.”

This most recent Environmental Flow, or E-Flow, memorial seemed to be on the same doomed trajectory as its many predecessors, guided by the notion that agriculture and the environment are inherently at odds and compete for the same water. This oppositional paradigm is the usual setting in the House Energy and Natural Resource Committee (HENRC). This time, however, at the suggestion of Steve Harris (Rio Grande Restoration) and Alan Hamilton (NM Wildlife Federation), Janet Jarratt of the NM Farm & Livestock Bureau was asked to review the memorial to help create a document that agricultural groups could support. Jarratt, a second generation dairy farmer from Los Lunas, was incredibly helpful in drafting a number of amendments to HJM3.

The memorial was crafted to emphasize the *interdependency* of rivers, riparian areas, and agricultural lands, and for that reason, HJM3 passed the committee. The memorial made it all the way to the Senate floor, but time ran out on the legislative session.

Still, this marks a turning point in that agricultural and conservation proponents have defined a common interest: the survival and protection of rivers, wildlife, and farmlands, realizing that *all* are threatened by the irresponsible exploitation of water. The dialogue generated enough momentum to move forward with the memorial’s intent—to address the multi-jurisdictional issue of environmental flow. Under the leadership of Steve Harris, a steering committee was formed to hold an environmental flow workshop (story this page).

Utton Center holds E-Flows Workshop

Articles by Alan Hamilton, NM Wildlife Federation

On March 15, 2010, the Utton Center at the UNM School of Law hosted the daylong “New Mexico E-Flows Workshop.” Attendees included staff of the five state agencies that have responsibilities in water supply and water quality administration, wildlife, forestry and agricultural management. Pueblos, acequias, agricultural producers, and conservation groups were also in the room, along with state representatives Mimi Stewart and Don Tripp, members of federal agencies, consulting firms and universities.

The goal of the workshop was to provide stakeholders, decision-makers and agencies with some perspectives on environmental flow management. After an introduction from Reed Benson, UNM School of Law, and Susan Kelly, Utton Center, Denise Fort, also UNM School of Law, moderated a panel that discussed efforts in neighboring states (WY, CO, and TX) to establish environmental flow programs. A second panel (Adrian Olglesby, Kristina Fisher, Claudia Borchert, and Gary Esslinger), moderated by Craig Roepke of the ISC, focused on current flow-related programs in New Mexico.

Another panel addressed potential impacts of river flow enhancement on important stakeholders: tribes, acequias, agricultural producers, business and recreation. Representatives included Max Zuni, First Lt. Gov. of Isleta Pueblo; Harold Trujillo from the NM Acequia Association; Janet Jarratt, dairy producer; attorney and development advocate Michelle Henrie; and Steve Harris of Rio Grande Restoration.

The last panel of the day was designed to give an overview of the existing data available on New Mexico’s river environments, including water quality (Stephanie Carman, NM Department of Game and Fish), riparian areas and upper watershed conditions (Mary Stuever, NM Energy Minerals and Natural Recourse Department), geomorphic function and surface-connected aquifers, (Shann Stringer, Tetra Tech, Inc.),

and the condition of the agro-ecosystem and climate/drought vulnerability (Brian Hurd from NMSU).

Kyle Harwood of Harwood Consulting brought the workshop to a close by moderating a final discussion between workshop participants and two guest experts, Tom Annear from the Wyoming Department of Game and Fish, and Sandra Postel of the Global Water Policy Project. Despite that NM is ranked last of the 10 western states with regard to the development of E-flow policy and programs, Annear said he was encouraged by what he had heard at the workshop. He said water issues in NM are similar to those throughout the western US, but that NM has the additional challenge of being a state where all surface water is appropriated, and most of it remains unadjudicated. He cautioned that the process of developing statewide goals and policy around E-flow is always cumbersome, and that workshops are critical in getting past the “us-vs.-them” paradigm and moving stakeholders toward an expanded understanding of what constitutes beneficial use. He also suggested that the next step for NM may be to consider developing a technical team with some institutional support—a suggestion that has been taken to heart as a Technical Team has already been established to consider strategies for implementing a HJM3 study (see sidebar).

Sandra Postel used Texas as an excellent example of success built on a commitment to the meaningful integration of science and policy. She also pointed out the importance of Federal involvement, so that environmental flow requirements may be integrated into the complex management of water flows from reservoirs. She ended by emphasizing the importance of “sharing” as a fundamental principle, goal, or core value.

A link to the presentations may be found at: uttoncenter.unm.edu/E-Flows.html. Background papers are posted at: allaboutwatersheds.org/groups/EFWG.

Thanks to our Contributors

The Board thanks all the individuals and organizations that support the New Mexico Water Dialogue and make our work possible. Despite cut backs in foundation funding, the people who are on the Board have taken on more responsibility and there hasn't been any impact to our work or the quality of our work.

Because our other funding sources are shrinking as well as to maintain our independent voice, however, we must rely more on the generosity of our donors. The more of you who contribute annually – even small amounts – the stronger the Dialogue becomes.

If you can, please send the Dialogue a tax-deductible donation to go toward our work which includes the annual statewide meeting, the *Dialogue* newsletter, and other events and activities such as the Regional Water Planning Symposium this fall.

The Dialogue Board of Directors has approved a system for collecting annual membership fees, contributions, and meeting registration fees online (via credit card) to make it easier for individuals and groups to make donations to the Dialogue. So far, we have “up and running” a membership form that seems to work for the first two purposes. We encourage all readers of *Dialogue* (even if you're on the mailing list) to “join” the Dialogue by paying the \$20 membership fee and, if you can afford to, making an additional donation or any contribution. By filling out the membership form you automatically subscribe to *Dialogue*. You can also choose to receive it electronically, simply by checking a box. Next year, you will get a renewal notice (which we've never sent before!). If you want to pay by purchase order or check, the system generates an invoice for you and tells you where to send your payment. If this system works as well as we expect, we will also use it to process online early registrations for the Annual Statewide Meeting. Meanwhile, we urge you to become a member! To join, go to <http://nmwaterdialogue.org> (home page) and select either the link “[here](#)” in the paragraph that begins “New!” or the “Join/Donate” tab in the left-hand column. Either will take you to the membership form in a separate window.

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