

Western States Water Council 2009 Symposium

Water & Land Use Planning for a Sustainable Future: Scaling and Integrating
Red Lion Hotel, 4040 Quebec Street, Denver, CO

September 28th – 30th, 2009

Notes of Panel Presentations

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Notes on Panel: Planning for Water Demand in the West

Panelists:

Jennifer Gimbel, Executive Director, Colorado Water Conservation Board (moderator)

Kay Brothers, Deputy General Manager, Southern Nevada Water Authority

Carolyn Brittin, Deputy Executive Administrator, Texas Water Development Board

Water Demand Planning in New Mexico. **John Longworth**, Bureau Chief, Water Use and Conservation Bureau, New Mexico State Engineer's Office

Kay Brothers, Southern Nevada Water Authority

History of Las Vegas: rapid growth

Competition for Colorado River water

- Water agencies were operating independently – no coordination of resources, demands, etc.
- Each agency was negotiating its own best deal for future supplies with the Colorado River Commission – “every-man-for-himself.”

No coordinated conservation plan

- There was no incentive to save water - agencies were allocated water based on the prior year's use – the more they used, the more they got.
- If an agency used less than its allocated amount, its water share was reduced accordingly.

Differing municipalities in Clark County, NV: use determined share

- Henderson, Las Vegas, Summerlin, North Las Vegas, unincorporated Clark County

Tremendous demand: need to supplement Colorado River water

SNWA formed in 1991:

- Regional agency for water purveyors and wastewater purveyors treated water returned back to Colorado River

Yearly development of resource plan: population changes taken into account annually, determine that there are water resources available

Colorado River resources

- Nevada receives return-flow credits for all water that is used indoors;
- Water is treated and then returned to Lake Mead, stretching the state's Colorado River allocation.

2009 plan:

- The SNWA Resource Plan has evolved over time, but has always included a portfolio of resource options.
- Options are assessed and prioritized based on need, accessibility, availability and cost.

- Conservation plays large role in meeting demand
 - Pursue more aggressive promotion of water conservation and regulation of water use through methods such as the reduction of turf
 - Rebated \$150 million dollars for more than 136 million square feet of turf converted, saving Southern Nevada more than 7.5 billion gallons of water annually
 - Decrease total water demand from 272 GPCD to 250 GPCD by 2010 and to 245 GPCD by 2035
 - Reduced water demand to less than 250 GPCD in 2008
 - Assess conservation achievement annually, investigate the potential for further GPCD reductions and revise conservation goals accordingly
 - Set new conservation goal of 199 GPCD by 2035

In-state plan important to replace temporary supplies

- Former plan to use unused AZ water until 2025
- 1996: AZ implements water banking
- 1999: surplus guidelines

Need to diversify resources: 1989 NV groundwater resources plan

Recommendations from Citizens' Committee:

- Conservation
- Resource Development

Resource Development Strategies:

- Pursue development of all the resource options considered in the IWPAC planning scenarios
 - AZ Water Bank
 - Coyote Spring Valley Groundwater Rights
 - Pre-Compact Water Rights (Virgin and Muddy Rivers)
 - Three Lakes Valley Groundwater Rights
 - Virgin River Water Rights
 - Augmentation Credits
 - Additional Conservation
 - Clark, Lincoln and White Pine Counties Groundwater Applications
- Provide additional safeguards for communities and the environment in areas where in-state groundwater resources are developed
 - Entered into monitoring, mitigation and protection plans for federal basins
- Work with the Colorado River Basin States and the Bureau of Reclamation to implement augmentation credits for in-state, non-Colorado River resources

- Revised return-flow credit methodology to include in-state groundwater
- Pursue delivery of pre-compact Muddy and Virgin River water rights through Lake Mead and the existing Southern Nevada Water System (“lake conveyance”)
 - Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead Record of Decision allows for up to 50,000 AFY
- Utilize the Southern Nevada Water Bank and California Water Bank as “bridge resources” to help meet any supply deficits
 - Banked more than 300,000 AF in Southern Nevada and 70,000 AF in California, in addition to 1.25 million AF banked in Arizona
- Utilize surplus and interim surplus Colorado River water, if and when they are available
 - Lake Mead above elevation 1145 - Nevada’s allocation increases to 400,000 AFY
- Continue to pursue ocean desalination as a long-term resource
 - 7 states pursuing augmentation and Nevada will get first 75,000 AF

Colorado River Basis treaty: impetus for development of in-state resources in-state water returned to Lake Mead: increased allocation?

300,000 acre-ft banked in NV, CA

Utilize available surplus

Pursue desalination (w/other states)

Fewer gallons per capita in 2005 than 1990

Carolyn Brittin, Texas Water Development Board

Reservoir development focus of new water sources

Drought an overriding concern for Texas water planners

- Brazos Reservoir surpassed previous drought record
- \$4.5 billion economic development in state: cost

New process: consensus-driven, bottom-up

- Design areas and give technical support for regional water planning agencies,
- resolving over allocation disputes/mediation: compiled into state water plan annually, aquifer desalinization

Voluntary transfers, voluntary conservation, transfers to meet demand, leg recommendations

Individual plans: 2564

Conservation/efficiency considered a management strategy

Some supplies not connected, not legally available, costs involved in making available

Costs/impact, water quality evaluated in regional plans

Conservation has doubled: 23% of water needs in 2007 met through conservation

- Wastewater effluent treated through wetlands, aquifers
- Environmental concerns about impact on withdrawal of wastewater discharge

Diverse terrain/diverse water resources, availability

Water demand to increase: double current population by 2060

Need 8.9 million acre-feet

Over planned? 1.3million acre-feet of agricultural need not met currently

How much does the environment need? How to meet that need in over-appropriated basin?

Consistency with regional water plans necessary for approval of local plans

Land-use planning not used in Texas

1.1 million new acre-feet from new reservoirs planned

Legislature designates unique sites for reservoirs

2007: state water plan recommends 19 new reservoirs

Impetus for action: F+W designated refuge at potential site, Texas files suit

- Federal officials override state water planning process to detrimental effect, w/ no recourse for state

Restriction of state imminent domain powers: could be detrimental to reservoir plans

19 sites designated, but must be acted on: 2015 sunset on designation

John Longworth, New Mexico State Engineer's Office

Water use planning requirements driven by climate

Empty reservoirs, Pecos River drought in 2003

Municipal and Industrial source water: 90% groundwater, junior water rights

Demographic Climate

- Projected Trends M&I Uses Next 30 years
 - 856,000 new residents in State
 - 84% in the Rio Grande Basin
 - 72% in the Middle Rio Grande
- Rio Grande Basin water use
 - No new appropriations
 - 100,000 AF/y of new demand (@ 160 GPCD)
 - Approximately 10% of Rio Grande's average surface water supply

Legal Climate

- Western Water Law
 - Doctrine of prior appropriation
 - Interstate compacts
 - Native American

- Endangered Species Act

Indian nations rights: complicating factor in water use planning

State water plan: broad-based policy document

- Municipal Act
 - Generally served by a water utility
 - There are exceptions
 - Utilities require a State Engineer permit
 - Water Development Plans
 - Provide the basis for holding water rights unused
 - This is the intersection for utilities to demonstrate non-speculative appropriation/use
- Subdivision act: req. state engineer positive/negative opinion
- Involves water quality, not simply quantity
- Dual-authority zone: counties generally defer to cities

Legislation requires meeting of stakeholder groups to discuss statutes required in Water Development Plans

- 40 year requirement: drought exception

Constitutionality of domestic wells

Water availability

- Demonstrate water rights
- Hydrological component

Audience Questions

Q. What is the effect of density on water planning?

Kay Brothers: Peak demand is changing

John Longworth: Subdivisions- SE looks at overall site plan, likely impact. Municipalities: moving in direction of looking more at zoning/density effects on water use/trends

Q. What are Texas' conservation efforts?

Carolyn Brittin: Implementation of conservation measures, leveling demand in DFW area after reservoirs down to 1-years supply in 2004. Projecting water demand based on: existing use, advantages of annual water usage surveys, continuing to refine numbers, looking at most current information

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Red Lion Hotel, 4040 Quebec Street, Denver, CO

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Notes on Panel: State Efforts

Panelists:

Alex Davis, Assistant Deputy Director for Water, Colorado Department of Natural Resources
(moderator)

- *Coordination of Land Use Planning and Water Supply Planning: The California Experience.* **Roderick Walston**, Best Best & Krieger, LLP
- *Arizona Ground Water Management/Assured Water Supply Subdivision Requirements.* **Sandy Fabritz-Whitney**, Assistant Director, Water Management, Arizona Department of Water Resources
- *Water and Land Use Planning in Washington State.* **Brian Walsh**, Department of Ecology, State of Washington

Roderick Walston, Best Best & Krieger, LLP

Coordination of Land Use Planning and Water Supply Planning: The California Experience

Traditionally, water discussions have focused on water quantity and quality. As the West has grown, especially California and Colorado, there has been more focus on how you coordinate water supply with population growth and land use. You can't integrate land and water use unless you know how land is used and can't plan land use unless you know where water is going to come from.

California passed California Environmental Planning Act (CEPA) in 1970s, which required developers to issue environmental impact report before beginning a project. Cities must consider environmental impact before project is approved. CEPA was modeled under national act. Under national act, federal agencies must issue environmental impact report before starting a project. Local government can choose whether or not environmental impact is acceptable.

Court decisions found that if project affects water supplies, then local governments must consider that with environmental impact. The local agency is required to consider the effects but not necessarily disapprove the plans if water is affected. Some impact assessments have been struck down by courts because there was not sufficient coordination of water supply issues.

Other California statutes:

Urban Water Management Plans- every 5 years agencies must inventory their water supplies, compare water usage and supplies for next 20 years.

Water Supply Assessment Statute- When local government considers a project, water supply agency must prepare assessment and state whether there is enough water for the next 20 years.

These may be the kind of laws of the future of the West.

What about the California example? Is it a good example, or is there a better way to coordinate the water supply? What is the role of courts in addressing water supply? In California, they tend to defer to local governments. Could/should courts take more of a role? Should the legislature require disapproval of projects with environmental impacts, or should they just require that the impacts be considered?

Sandy Fabritz-Whitney, Arizona Department of Water Resources

Arizona Ground Water Management/Assured Water Supply Subdivision Requirements

Arizona is ranked 38th among states in population; 20th in 2000 and projected to be 10th by 2030.

Population density is most significant in the driest part of the state.

Of the states that get water from the Colorado River, Arizona is the last.

Agriculture is the largest water user in Arizona, using 70% of water. The Phoenix area used to be majority agricultural and only within the past 20 years has it changed.

The first program that really looked at both water and land use was 1973 Water Adequacy program; mostly consumer information program. It required that land owners be notified if there was not adequate water supply.

1980 Groundwater Management Act

- More regulations
- Assured Water Supply Program

1995 Assured & Adequate Water Supply Rules

- Demonstration of 100 Year Water Supply for New Subdivisions; cannot sell a lot unless you can demonstrate a legal right to a 100 year supply.
- Significant change from 1973 Water Adequacy Act which just required disclosure.

1998 & 2000 Growing Smarter

- included water element in planning

2004 State Drought and Water Conservation Plan

- First drought plan
- Community Water Plans that include drought, conservations and water supply plans

Brian Walsh, Department of Ecology, State of Washington

Water and Land Use Planning in Washington State

Legislative History- water code dating back to 1917 but focusing on more recent Acts

Washington has approximately 6.5 million population, third largest of western states after California and Texas, just above Arizona. Separated into east and west by Cascade Mountains. East side is much drier. Growth projection is 2 million years in the next 20 years. Also endangered species are found all over the state.

Growth Management Act 1990

- Required state and local governments to coordinate growth; growing together, not just pushing all the growth to one area of the state.
- Also meant to protect environment and quality of living
- Looking for both physically and legally available water for growth

Watershed Planning Act 1998

- Purpose was to integrate water supply, water quality and habitat planning, including developing option for current and future supply needs.
- Groups could apply to state for funds to address water issues; groups could be voluntary.
- Plan have been written and approved for 36 watersheds

Municipal Water Law

- Growing Communities Doctrine- Provides more certainty and flexibility for water rights held by water systems
- More closely ties water system planning and engineering approvals by Dept of Health to water rights administered by the state Department of Ecology.
- Improves the ability to plan for future growth.
- Offers greater flexibility to solve public health problems with water right changes and transfers
- Advances water use efficiency
- Assure greater reliability of safe drinking water for communities

Columbia River Basin Water Management Program

- Lake Roosevelt Storage Releases
- Legislation directs the WA Department of Ecology to aggressively pursue development of water supplies to benefit both in stream and out-of-stream uses through storage, conservation and voluntary regional water management agreements.

Adjudications Reform

- Legislature enacted Ecology proposed adjudication modernization legislation
- Legislation drew from *Water Disputes Task Force Report of 2003*
- Updates adjudication process to make it faster and less complicated
- Addresses both judicial & non-judicial aspects of law
- Encourages courts to direct parties toward alternative dispute resolution, mediation and settlement
- Encourages innovative practices and technologies (electronic filing, teleconferencing, allowing pre-filing of testimony, etc.)
- Allows service of summons by certified mail vs. personal service
- Water users served by irrigation districts or public utility districts would not parties to case

Water Banking

- Authorized by legislature last year, moving water around
- Uses state Trust Water Program for banking
- Clarifies Ecology authority to do water banking statewide
- Expanded to include groundwater
- Consumptive quantity of a water right removed from trust is equal to the consumptive quantity prior to going into trust
- Ecology may recover costs for water service contracts with federal agencies from individuals receiving water

Water and Land Use Planning Challenges

- No statewide plan
- Uncertainty about water rights
- Watershed planning patchwork
- Municipal water law conflict
- Relinquishment – “Use it or lose it”
- Permit exempt wells
- Need to integrate planning
- Relationship of statutes
- Climate change

Water and Land Use Planning Opportunities

- Water conservation, banking, acquisition, reclamation
- Columbia River Program
- Puget Sound Program

- Storm water management
- Rainwater harvest
- Aquifer storage recovery
- Low impact development
- Climate change

Audience Questions

Q: What is most effective?

Roderick Walston: In California, the direct involvement by the legislature. The two Acts discussed in the presentation. Drought has imposed demands, so local governments have begun coordinating ground and surface water supplies- conjunctive use programs have been done at the regional level. What is not working is that the legislature has not required the use of conjunctive use programs. California also is the only one in the West that does not regulate ground water: local governments are not required to manage ground water, but they have the option to adopt a groundwater management plan. There needs to be a state program or requirement for local governments to do it. State also does not mandate water transfers; again, it is up to the local water management agency. On top of that, everything is dependent on the Endangered Species Act. It is difficult to plan when you don't know what the courts will impose. California lost one third of their water supplies because of federal requirement to reserve more water in the San Joaquin basin. There have also been several court decisions that disapproved development plans because environmental impact report was not satisfactory.

CEPA was not originally a water supply mechanism, only a land use. Courts interpreted it that it addresses water, and it is logical, but it was not designed to include water planning, so it does not address some of the nuances of water planning.

Q: Can you speak to a particular obstacle that your state has overcome in getting the various entities and stakeholders to work together?

Sandy Fabritz-Whitney: In Arizona it is very difficult. It is a struggle to keep the integrity of the Groundwater Management Act in place. People are always asking for exemptions. It has been 30 years, and there has been a lot of backlash, and some weakening of the code. There has also been the "Don't let Phoenix take my water" sentiment. There is a law against transporting water across basin boundaries. There is more chance for success at the regional level.

Brian Walsh: In Washington we are also struggling, no clear answer. Surface water has been appropriated since 1985, so there can be curtailments. The town of Roslyn had their water shut off, but you could go outside the boundaries and dig a well still.

Roderick Walston: In California there is a North/South dispute. North has the water and South has the population. There is also an Initiative process regarding the budget that other states

don't have. The question about allocating water supply is bound up in CA political climate. There is a statewide mechanism to manage appropriation of water supply but not the coordination of planning.

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Notes on Panel: Local and County Efforts

Panelists:

Julio Iturreria, Long Range Program Manager, Arapahoe County, Colorado

- *City of Boulder's Land Use Policies: Local and Regional Impact.* **Peter Pollock**, Ronald Smith Fellow, Lincoln Institute of Land Policy
- *Land Use and Water Connection in Oregon: Past Practices and Innovations.* **Lorna Stickel**, Portland Water Bureau
- *Water in Douglas County, Colorado: Past, Present & Future.* **Mark Shively**, Executive Director, Douglas County Water Resource Authority

Peter Pollock, Lincoln Institute of Land Policy

City of Boulder's Land Use Policies: Local and Regional Impact

As the former planning director of the City of Boulder, Colorado, I will discuss the impact of Boulder's land use policies

Boulder, unlike many Colorado communities, has plenty of water, due to foresighted early planning- water availability not an issue

Is it enough for local governments to individually do a better job? (*Slide 2*)

- We can certainly do better at the local level; however, lots of good local plans will not add up to a sustainable regional development pattern
- Water availability should be used as a tool for creating more sustainable land use patterns

Drawing on Bill Klein's five strategic points of intervention, I will frame Boulder's development. The five strategic points are (*Slide 3*)

1. Visioning and Goal Setting
2. Plan Making
3. Management tools: laws and incentives
4. Development review
5. Public Investments

Applying the strategic points of intervention:

1. **Visioning and Goal Setting:** (*Slide 4*)

- Needs to be a community exercise
- Environment, Economy, Equity issues must be considered in creating a sustainable plan
- Addresses active growth management

Boulder's vision is *(Slide 5)*

- A compact city surrounded by open space
- Community Sustainability
- Growth management: How much growth, what kind, how fast, and with what impact?

In Boulder, plans were jointly adopted with Boulder County

Job of the planning process is to accommodate the integration of possibly conflicting goals *(Slide 6)*

- Sustainability
- Intergovernmental cooperation
- Growth management
- Community design
- Facilities and services
- Environment
- Economy
- Transportation
- Housing
- Human services

Policy framework created around water: Protect/Improve water quality *(Slide 7)*

- Protection of water quality
- Water resource planning
- Water acquisition
- Drinking water
- Storm water
- Minimum flow program
- Groundwater
- Pollution control
- Wastewater

2. Plan Making *(Slide 8)*

Opportunities in Comprehensive Planning: asking the long-term questions *(Slide 9)*

- Build-out analysis:

- Zoning and planning for the future
- Alternative scenarios for future development
 - Alternative scenarios of differing scenarios on water quality/quantity
- Land use suitability analysis
 - Sustainability panels: discussion of wetlands, etc
- Defining service areas
- Land use map anticipating uses

3. Management tools: Laws and Incentives (Slide 10)

Functional Master Plans: feeds into discussions about how functions of local government are going to be dealt with. These are linked with land-use projections and in terms of water include: (Slide 11)

- Source water master plan
- Treated water facilities master plan
- Wastewater treatment plant master plan
- Wastewater collection system master plan
- Comprehensive flood and storm water utility master plan....all linked to the land use and growth projections

4. Development Review (Slide 12)

Development Review = points of control. These are strategic points for the community and include defining standards: (Slide 13)

- Service area changes
- Annexation/initial zoning
- Subdivision
- Discretionary reviews
- Building permits
- Utility connection permits
- Right-of-way permits

5. Public investments (Slide 14)

Capital Improvement Program - CIP (Slide 15)

- Six year projection of capital fund uses and sources. First year = capital budget
- Are we keeping up with growth?
- Are we directing improvements to the right locations?
- Are we taking advantage of efficiencies?

Is it enough for each local jurisdiction to do a great job of integrating land use and water planning? *(Slide 16)*

- How much state control would be required to get localities to plan together?
- Political climate feasible? *(Slide 17)*

Broad scale of regional development *(Slide 18)*

- Local governments will continue to compete. It is the default position.

Boulder looks for tools to control growth somewhat outside city *(Slide 19)*

- Spokes of the Wheel
- Robinson case
- Service Area concept
- Boulder Valley Comp Plan – County Intergovernmental Agreement (IGA)
 - Multiple municipalities: Super IGA
- Fort Collins and others are following Boulder's lead *(Slide 20)*

Denver Regional Council of Governments (DRCOG) *(Slide 21)*

- Is an effort to bring together local governments to discuss land use decisions
- Controlling federal investments to promote uniform standards

Brookings Institute: Mountain Megs *(Slide 22)*

- Brookings identified five high growth areas in the intermountain West
 - Colorado's Front Range
 - Northern New Mexico
 - Arizona's "Sun Corridor"
 - Nevada's greater Las Vegas area
 - Utah's Wasatch Front

Lincoln Land Institute: Emerging Mega regions *(Slide 23)*

Both Institutes point to the need for *(Slide 24)*

Policies that support more compact, mixed-use development and reinforce its ability to reduce VMT, energy use, and CO2 emissions should be encouraged.

-National Academy of Sciences, 2009

- Infrastructure investments at a broader, regional scale
- Transportation planning as an opportunity to influence land use
 - Efforts can be used as an example for how to do water/land use planning on a regional basis *(Slide 25)*

Need more coordination, education, incentives (funding) *(Slide 26)*

- Governments "shooting low" in coordination of individual development with water resources

- We can do better. We have tools that can be used and sufficient knowledge of the interaction between land use and water.

Lorna Stickel, Portland Water Bureau

Land Use and Water Connection in Oregon: Past Practices and Innovations

Land Use and Water Supply Connection 1 (Slide 3)

- Vital, influence on growth, public health
 - Water supply is vital to urban settlement and migration, and urban water systems have been founded on public health concerns and adequate quantities to meet needs.
- Institutional divisions in land use/ water planning
 - Institutional complexity with water supply presents challenges. (Cities, special districts, PUD's, counties, state water right and other permitting)
- Turf issues between state and local issues
 - Land use is often planned and decided independently of water supply planning and infrastructure implementation – turf issues.

Land Use and Water Supply Connection 2 (Slide 4)

- Water is only one of other vital infrastructure services needed to provide for growth.
- Lack of data about water resources is an impediment to including it in land use planning in many cases.
- Is there really a carrying capacity for development based on water?
- Rural and small water systems present unique issues, turf issues between state water right permitting and land use permitting.

Oregon Planning Requirements (Slide 5)

- Statewide mandated land use planning program since 1972
 - 19 Statewide Goals, water mentioned in many of them, but detail really only provided in protection of wetlands and preparing public facilities plans.
 - Not a lot of coordination in many cases between water supply and local land use plans, particularly when political boundaries are taken into account that bisect watersheds/groundwater basins.
 - The land use planning and permitting agencies are cities and districts; there are 277 of these in Oregon. Each one will direct their permitting processes a little bit differently.

Required comprehensive plans

- Water as a growth control mechanism has problems – Oregon does not allow permanent moratoriums. Local Government is encouraged to find ways to manage growth, but not limit it.
- Lack of coordination w/ water planning

- Each planning agency addresses permitting differently
- At the time of issuance of building permit, must address water supply
- Public facilities plans required for >2500 for public facilities
- Annexation rules on absorbing water districts: difficulties in providing services
- Statewide water protections programs
- Challenges of statewide water management
- Political overlap
- water providers not willing to work w/ planners for
- Live actions plans
- Green building code (in process of revision)
- Major issue: decentralized water and wastewater systems relevant on individuals to maintain/ protect
- Transportation, Energy costs, Water: latter needs to fit into larger planning efforts

Mark Shively, Douglas County Water Resource Authority

Water in Douglas County, Colorado: Past, Present & Future

- Issues not limited to Douglas County
 - Reliant on Denver-based groundwater
 - Dependent on aquifers
 - 24+ water providers and individual wells
 - conflicts with Reclamation's 2025 plan
- Poundstone Amendment limits Denver growth to existing county (de facto)
- Denver water's role as regional water provider threatened by the veto for the Two Forks project
- South Metro Water Supply study identifying water supply, aquifer storage and reclamation
- Douglas County government
 - Land use planning
 - Audit of indoor/outdoor water use
 - Conservation plans for outlying areas
- Douglas County Water Resources Authority
 - Public policy
 - 40% open space in perpetuity: conservation easements, national forests, etc
- South Metro Water Supply Board
- Making the best of regional water resources:
- Education programs (water ambassadors- high school, elementary school outreach)
- IGA w/ Denver Water, Aurora, S Metro, Reclamation

- Grant from CO water conservation board to study IGA efforts
- Monthly dialogues with different stakeholders: Board of County Commissioners, South Metro Water Services authority, County, Douglas County Water Resource Authority
- Overview of why conservation matters: training and education efforts about importance, reasons for water conservation
- Special Districts: good for regional planning?
- State pilot study: rainwater used for water supply (infringement on water rights?)
- Larger perspective on watershed planning: expand definition of our watershed (CA example?)

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Notes on Luncheon Panel: Two Sides Talking

Panelists:

Peter Nichols, Attorney, Trout, Raley, Montano, Witwer & Freeman, (moderator)

- **Chips Barry**, Denver Water and **Mayor John Hickenlooper**, City of Denver
- **Mark Pifher**, Aurora Water and **Mayor Ed Tauer**, City of Aurora
- **Eric Kuhn**, Colorado River Water Conservation District & **Greg Trainor**, Utilities Manager, City of Grand Junction

Mayor John Hickenlooper, City of Denver

When Douglas County or Aurora gets into trouble with a lack of water, it will affect the value of everyone on the Front Range. The tenor of the discussion has to be one of regional cooperation. We are so far down the road in how to save water in Denver. Chips said 2.5 years ago to me that we would drop per capita consumption by 2015 what had been a 50 year goal. And Denver now is on track to exceed the 2015 goal.

How do we talk about land use planning and have water experts at the table during our planning processes?

Denser development uses less water and less energy. Need to fully utilize our existing infrastructure.

Denver Water has removed 27 acres of blue grass in park system. Found resources to be more efficient in bonds – 27 million dollars to improve water efficiency. DNC was hallmark of water conservation. Today we use 28% less water being than in 2001.

The great battle is public sentiment. With public sentiment, nothing can fail. Without it nothing can succeed. Denver Water has won several national advertising awards.

Peter Nichols asks: What more can you do to foster a regional approach?

A: Ultimately, we are going to rise or fall together. Through many methods – technology, conservation efforts. Col-labor-ate (center of the word collaborate is “to work”).

Chips Barry, Denver Water

Two sides talking – what are the sides?

- The haves versus the have not's
- The east v west
- Developers vs. environmentalists?

Still doesn't know but believes that two sides talking is the way we must precede. Need shared objectives: sustainable community, healthy environment, etc. If it is to put more money in private development, that is not a shared objective.

Density increase will decrease water per capita consumption. You densify urban development, decrease lower per capita but higher gallons per day per acre.

Denver is in a formal mediation with Colorado River District, Summit County, Eagle County, and Mesa County to settle a 50 year dispute.

- Denver wants certainty on Green Mountain reservoir, Wolford pump back, enlargement of Gross reservoir
- West Slope wants certainty on how much Denver will take from the West Slope
- The past 50 years have been endless litigation which has not served anyone well.
- West Slope is beginning to understand that having parts of the Front Range doesn't help any part of the state.
- The mediation is making progress.

In Metro area we have Intergovernmental Agreements (IGAs) with Douglas County and Aurora to talk about how to share resources with each other.

- e.g., Denver has excess amount of reusable effluent. It can be used by Aurora in their pipeline and used by them or Douglas County.

Seeking to enlarge Gross Reservoir by 1800 acre feet of yield.

- Gone to Boulder County to see if they are interested in some of it and help pay for it. Yes, Boulder is.
- \$8 million.
 - Denver will pay \$4 million
 - Cities of Boulder and Lafayette will pay \$4 million
 - For that they have storage rights in Gross Reservoir

Peter Nichols asks: What more can you do to foster regional approach?

A: We are going to work with Aurora and Douglas County and others up to the point that we will be responsible for their build out. We can take part of our water and share it but not so

much that we take it away from the needs of our customers. Tells about running toilet advertising campaign and says “we’re willing to share that costume!”

Peter Nichols asks: Greater state involvement?

A: We have no tradition or history here. Most of the knowledge about water treatment and supply is not vested in state government. Some history with agriculture but not with cities. It would work in Colorado if we ever built one of the mega projects (e.g., Big Straw) then you’d need state involvement in financing.

Greg Trainor, Utilities Manager, City of Grand Junction

Delph Carpenter quote on establishing ground rules and rights between parties. Greg advocates for a new compact: Using hb1177 process, establishing an agreed upon set of principles and how water should be shared and moved forward. 1177 process is important b/c you need a broad base of citizen support to deal with statewide solutions. One statewide solution is the CO river basin proposal and those will need to come back to the basin RTs. Need peer review of state water availability studies.

Need to examine the function of the CFWE and use them. Need to mold public thinking. Need story tellers that can boil down the technical data and make it understandable to the citizens so that they support it.

Need visionaries – Manhattan-style project. Need to be proactive, visionary.

Peter Nichols asks: On the west slope we often hear “not one more drop.” What sort of regional cooperation is the West Slope willing to do?

A: As Water supply diminish, our view of the watershed changes. We do understand that the prosperity of the FR is the West Slope’s as well. One of our principles is agriculture and non-consumptive uses are important and we see Round Tables embracing it. It is how the drops are developed and delivered – not one more drop.

Peter Nichols asks: Greater state involvement? Yes, if we believe in the state water supply analysis, then the gaps need to be addressed and the state will have to be involved.

Eric Kuhn, Colorado River Water Conservation District

Colorado water community needs a cultural change – but more than that, so do the other compact states. We all need to go through a culture change. We’re at a place where the tools of the past will not work for the uncertainty of the future.

Two myths:

1. The water we think we have will always be there in the future.
2. The growth we experienced will always be there in the future.

Both are possible but there are all types of possibilities where one or both are not true.

Points out that growth may not really happen as we project. Gives example of Denmark. Cut out immigration, and we are not growing as much as we think.

Can run scenarios – many are likely to occur. Need to look at water like Las Vegas looks at slot machine payoffs. Need to have a surplus left over after all probable scenarios are taken into account. Commends Chips Barry.

It's how the drops impact the lives and livelihood of the Western Slope. The Western Slope cannot be a water farm for the East Slope.

Mayor Ed Tauer, City of Aurora

Ten years ago if we tried to have this conversation, no one was listening. But today is completely different. Ten years ago, Aurora required bluegrass to prevent people from putting rocks in their yards. Not today. A lot has changed in ten years. 2002 we had a 300 year drought and that spurred change. Primary driver in how Aurora thought about how they would grow. Xeriscape is promoted. Water efficient appliances. More than how we are talking together, we have changed the culture in this state. Denver says "Use only what you need." We say "Use as much as you can afford with our new water rights" (joke!!)

Conservation has become a culture change. But crisis fade in time. With a wet year, we can lose the culture change. Economic viability is connected to West Slope – a culture change.

Best gift we received in water and land planning was the drought of 2002. Now it's about partnerships. It's not the low flow showers or xeriscape – it's the new partnerships that can make lasting change in Colorado.

Peter Nichols asks: Does the support for regionalism extend to a compact or an agreement on how the water would be used?

A: The question is almost like how do we shackle you? But it should be how to we succeed together? How do we ensure there is plenty for us so we can help you and you help us? We only have seven Representatives and two Senators in DC. We only make progress by doing it together. How do we make sure everyone is better off by working together than if we do it on our own?

Peter Nichols asks: State involvement?

A: Our water resource people in the state of Colorado are great. But we don't have a tradition of Uber governments. I like the ability to talk face to face with partners in the Valley. Last thing I want to do is go to the legislature and lobby for our needs while the others are lobbying against it.

Mark Pifer, Aurora Water

City of Aurora has a comprehensive plan with a section on water and water resources development. Addresses water more general terms such as promoting regional partnerships. It

doesn't get to the details on land use and water consumption/delivery. But we are engaged in water conservation activities. Close connection to how land is developed. It's not just the local impact on local lands in your community. It's also the cost of developing the water resource – agricultural impact, flows in basin of origin if it is a transbasin diversion.

Conservation includes: irrigation audits, xeriscape, vegetation requirements, educational center, aggressive tiered rate structure, study on reclamation and expansion, non-potable water for parks.

Prairie Waters Project: 34 miles pipeline that brings reusable flow back to the city. 90% of Aurora's water is eligible for reuse. This has been under utilized. Develop it minimizes need for transbasin diversion and agricultural transfers. This water can be used to extinction. Looked at a lot of different treatment technologies, including their own. The water that is available is of poor quality. The brine disposal issue is a major land use issue.

Leasing/fallowing. Aurora is a trend setter in interruptible supply arrangements. Very successful project from Arkansas Valley – brought water to Aurora and left \$10 million in cash and infrastructure to the Valley. Truly "saved the farm" for many.

Platte River roundtable business plan on interruptible supply.

Water infrastructure supply enhancement partnership: WISE Partnership. Saves them in times of drought or Colorado River compact call allows them to use existing supplies.

Infrastructure is too expensive to do on your own. We have to partner.

What will cause people to change urban growth? The market place. Believes that given the cost of water due to scarcity and infrastructure to transport and treatment to make it potable – the cost to the consumer and developer's tap fees, that it will become self-regulating as the fees rise to reflect the actual costs.

Peter Nichols asks: Does the support for regionalism extend to a compact or an agreement on how the water would be used?

A: The compact concept is acceptable but the devil is in the details. How much water is allocated and how is it enforced (many water rights holders are not signatories to compact). The concept to agree on transfers is good. Agreements as to how to move it is here now. But it's how – IGAs, MOU? Prefers IGAs.

Peter Nichols asks: State involvement?

A: How you achieve it is a local issue. But financing role for the state for a large multi-purpose project is appropriate.

Audience Questions

Q. What is DRCOG's Metro Vision and Mile High Compact – is that working?

Mayor Ed Tauer: It is working but not doing what you want it to because it wasn't thought about as water. Rather, it was about contiguous growth (limit leap frog development). It was not designed to put water into land use plans. Believes it can be lobbied better at the local level.

Q. Where are the IBCC Round Tables going at this point?

Greg Trainor: Believes in the process. It is educating a generation. A compact can be an agreement on principles.

Chips Barry: The Round Table process has served a purpose and may continue to serve a purpose. But no Round Table or the IBCC has any authority – they can opine and educate and that is important but it is limited. The dialogue is valuable but just as the Round Table has no authority; none of these people have the ability to bind anyone else in this state so the intrastate compact can't work like the interstate compacts. The formalized compact idea cannot work.

Western States Water Council 2009 Symposium

Water & Land Use Planning for a Sustainable Future: Scaling and Integrating
Red Lion Hotel, 4040 Quebec Street, Denver, CO

September 28th – 30th, 2009

Notes on Panel: Private and NGO Efforts

Panelists:

Dave Merritt, Senior Water Resources Program Leader, HDR Engineering (Moderator)

- *How to Plan for Water-wise Growth.* **Clark Anderson**, Director, Western Colorado Legacy Program at the Sonoran Institute.
- *LEED Standards for Neighborhood Development.* **Conor Merrigan**, Chair, LEED ND Interest Group, U.S. Green Building Council, Colorado Chapter.
- *Case Studies in Water-Smart Development.* **Drew Beckwith**, Water Policy Analyst, Western Resource Advocates.
- *A Developer's Perspective.* **Doug Scott**, Shea Properties.

Clark Anderson, Sonoran Institute

How to Plan for Water-wise Growth

How do we get to the planning and design solutions to build water friendly communities? The discussion here today really recognizes the importance of the designed and built environments, and I am pleased to see the level of sophistication in the discussion today. My role today is to talk about the big picture.

Why connect water and land use? We are growing! Colorado will add about 2.5 million people from now to 2035. The Front Range alone will add about 2 million people, growing from 4,263,593 to 6,215,054 between 2010 and 2035.

We don't know for certain that we will grow this much, but we do know that we **will** grow.

There is no no-growth scenario, and if you hear one it is really just a no action scenario!

All land, developed or not, is a watershed.

In a healthy watershed, you have healthy soils, vegetation, wetlands, etc. When you add human growth, you cap over the natural surface cover and reduce the natural capacity of the ground to collect water. Water pools up on our streets and sidewalks and collects pollution and then washes into our streams and reservoirs.

As we plan for growth, we must respect and appreciate that there is always an impact to growth. The question is how to limit those impacts.

Most of our recent growth in Colorado is low density growth, or growth at the edge, but what we need is high density growth. Auto-oriented design, or sprawl, is what we must work to avoid. Low density patterns have higher water demands. Low density planning also has negative impacts on infrastructure needs, like longer transmission lines.

As far as water quality goes, the EPA recently did a study and found that high density scenarios had the best impact on water quality; much better than low density scenarios.

Improving development patterns and protecting the natural infrastructure: these are related! Some areas are not as suitable for growth—flood prone areas, riparian zones, ecologically sensitive areas,

A combo of strategies is needed:

- Water smart community design. Compact form, infill, redevelopment—these types of development are all about location! The power of infill and redevelopment is incredible—it’s an opportunity to develop your community as well as conserve water and reduce pollution.
- Community form: compact form, mixed uses, walk-able design, transit-oriented development—these are all critical to good growth design for water use.
- Our building and zoning codes right now call for a low density growth design; they need to be retooled to encourage the type of development we want.
- Regional coordination: we can’t achieve any of the goals we are talking about today without much better coordination between cities and counties, housing, transportation, etc.

Conor Merrigan, U.S. Green Building Council, Colorado Chapter

LEED Standards for Neighborhood Development

I am here on behalf of the US Green Building Council, and will focus on some of the nuances of how water works in the LEED system. The LEED-Neighborhood Development (ND) rating looks at things on a neighborhood scale. LEED-ND is a collaboration of the US Green Building Council, the NRDC, and the Congress for the New Urbanism.

The rating system has been through the pilot phase, and it will probably be passed by about mid November. Coming soon to a consultant’s office near you! There will also be an associated professional designation for it in a year or so.

LEED-ND and Water: Smart Location and Linkage (SLL):

SLLp2: Proximity to water and wastewater infrastructure

SLLp4: Wetland and Water Body Conservation

SLLp6: Flood-plain Avoidance

SLLp6: Steep Slope avoidance

SLLp7: Site design for habitat or wetland conservation

SLLp8: restoration of habitat or wetland

SLLp9: Conservation management of habitat or wetland

LEED-ND and Water: Green Infrastructure and Buildings

GIBc3: Minimum water efficiency

GIBc3: Water efficiency landscaping—50% reduction

Examples:

Washington Village Cohousing—Boulder (<http://washington-village.com/>). They are looking at a silver or gold LEED designation. Depending on how much of the property can capture stormwater, you can gain points on your LEED rating.

The Geos Development in Arvada (<http://discovergeos.com/>) is doing a lot of things right. Infiltration spreaders, percolation parks. They did a nice job of blending civic water uses with storm-water retention.

Drew Beckwith, Western Resource Advocates

Case Studies in Water-Smart Development

Western Resource Advocates is releasing a new report this week called *New House, New Paradigm: How to Plan, Build and Live Water Smart* (<http://www.westernresourceadvocates.org/water/newparadigm/NewParadigmReport.pdf>). It looks at the integration of smart planning, green building, ongoing programs, and existing developments provide case studies.

There are water-smart developments in

- Stapleton, <http://discover.stapletondenver.com/>
- Daybreak in Utah, <http://www.daybreakutah.com/#>
- Sterling Ranch in Colorado, <http://sterlingranchcolorado.com/>

Civano, Arizona: This is a city oriented effort. IMPACT System, energy/water reports, specified plant list, alternative supplies (reclaimed water, cisterns , etc). Civano is extremely aggressive in solar energy and extremely stingy in water use. They required people to track annual water needs. Civano is using 30-40 percent less water overall than Tucson. It is the peaks of water use that drives utility infrastructure needs, so keeping those peaks down is important. For more information see <http://www.terrain.org/unsprawl/5/> and <http://www.civanoneighbors.com/>

Southern Nevada Water Authority (SNWA) Water Smart Homes: partner with Southern Nevada Home Builders Association (SNHBA), community scale, indoor and outdoor requirements. Required to build whole neighborhoods of water smart homes. The water smart homes had significant reductions in the summertime peak load. For more information see http://www.snwa.com/html/cons_wshome.html

Oshara Village, New Mexico (<http://osharavillage.com/>). This project was held to very strict water requirements, so they did a water budget approach. They have small lots, and there are strict restrictions like no potable taps on the outside of homes. On site wastewater treatment. Not surprisingly, their water use is pretty low, around half of what's used in the Santa Fe area.

Take home messages:

- Land use planning = new water supply.
- Holistic integration required.
- Water/land use planning is feasible and desirable.

The report is available at <http://www.westernresourceadvocates.org>

Doug Scott, Shea Properties

A Developer's Perspective

Fish need water every day!

I work on the property side inside the City and County of Denver. Infill is very expensive! You need community meetings, rezoning, planting, etc.

There is a great deal of parity in the cost of living in the fast growing Front Range counties.

A \$35 million office building gets a 29% assessment, and then that is taxed by the mill levy.

Metro area schools: there are 250,000 kids in schools. As long as school systems want to expand their boundaries, people will put houses in there. It is a huge incentive to be in a school district in the Denver metro area.

Median Family income: the Front Range is about 50,000 per year (2007).

All costs that developers incur are passed through to the homeowner. \$25K of improvements costs more than the water before the improvements costs, so there is very little incentive to make improvements.

Space is cheap; people are expensive! Corporations don't spend a lot of money on water. However the home water bills of the people who work for corporation is very expensive, so it is a factor.

In Denver: 21% of our houses were built between 2001 and 2008.

What developers want in new rules is consistency across multiple markets, lead time, incremental steps, and realistic regulations. We don't mind regulations as long as they are consistent!

Audience Questions

Q. Have there been reevaluation of LEED projects?

A lot of projects modeled to be at code are not even meeting energy star. This is an ongoing question in LEED development. The existing building operations and maintenance rating system is where some of these problems can be addressed. For ND, it's the performance metrics we'll be looking at. The single biggest way to measure is in reduction of vehicle miles traveled.

Q. How do you see volunteer efforts at being successful at water and land use planning?

It is a big challenge. As individuals we can only do so much. At the broader level of encouraging conservation at the utility or local government scale, if the incentives are put in place correctly, we can do that. Mobilizing communities is a good idea. Public engagement is really critical. We can't do what we're trying to do without making it matter to people. Engaging the public and getting them excited about these things is a big challenge—it's kind of wonky.

Q. How do we accomplish regulatory consistency?

Local governments with different regulations create an incentive for developers to shop their plans around. That is a real problem because it causes a race to the bottom. Our zoning codes make it hard to do the good thing. It makes it tougher to build sustainable projects. Going from one community to the next there will be different elements in the codes. It is very frustrating for developers. There are reasons why codes vary, but in many places communities are trying to encourage the right kind of development.

Q. Infill verse new development: is it really more expensive to do infill than new development?

Give developers a standard across the state or the Front Range for water need! It is expensive to figure out what each community needs.

Q. Water quality issues associated with grey water use?

None of the developments discussed today had grey water quality issues. All states tend to make it too hard to do grey water, which means that almost all grey water systems are under the legal radar. However, having illegal grey water systems is a big opportunity for water quality issues, so we might want to think about making it easier to do grey water, so we can regulate it better.

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Red Lion Hotel, 4040 Quebec Street, Denver, CO

September 28th – 30th, 2009

Notes on Panel: Cooperating Across Scales: Local, County, Region & State

Panelists:

Barbara Biggs, Governmental Affairs Officer, Metro Wastewater Reclamation District in Denver
(moderator)

- *Local Land Use Planners' Role in Assuring Sustainable Water Supply*, **Graham Billingsley**, Principal, Billingsley Consultants; and Commissioner on the American Institute of Certified Planners.
- *Sustainable Community Development in Colorado: Linking Land Use and Water Planning*. **Andy Hill**, Colorado Department of Local Affairs.
- *HB08-1141: Development Permits*, **Representative Kathleen Curry**, Colorado General Assembly.
- *Special Districts*, **Tom Grimshaw**, of Counsel, Grimshaw & Harring.

Graham Billingsley, Billingsley Consultants

Local Land Use Planners' Role in Assuring Sustainable Water Supply

Communication is key: how to communicate and who to talk to in the planning process

Sustainability has been a historical theme of planning but can come across as “preachy” to some people

- Urban design in Greensboro: how to make sustainable as well?
 - Staff meeting: no issue, all the water you need (construction of reservoirs, not resolving root issues)
 - Need to talk about what sustainability means

Because they work with various stakeholders across a variety of issues, planners

- Can act as facilitators for communication and to bring ideas together into cohesive visions.
- Are in a position to understand problems holistically -- all aspects

However, planners are generally ignorant of the water issues in their communities, aside from comprehensive plans, and unaware of watersheds as they relate to agriculture, forests, ranchlands, changes in watershed land use and effects on water supply

Comprehensive plan can work to bring disparate elements together:

Areas for:

- conservation
- development
- preservation

The reality is that cities need growth to become sustainable

With water supply, consider the pollution threat: point, non-point, habitat protection

Planners work for communities and generally don't think of the regional perspective

Consideration of problems upstream

Water planners are in a better position to understand regional effects, but communication does not always go through to everyone who needs to understand issues. This is a critical communication gap for fast-growing areas such as the West

Best management practices for a region must be pursued but how do you start a dialogue?

Enforcement through a watershed approach to water planning has made many officials more aware of impacts of development and land use on water supply

Implementation strategies include:

- Riparian buffers
- Storm water management
- Nitrate regulation
- Zoning flood plain land-use controls

We need to encourage:

- compact development
- new parks to mitigate:
 - social spaces
 - impervious mitigation
- more efficient use of water
- smart development and smart growth needs to be part of practice, not just lexicon
- capital improvements: assure that they won't threaten existing supplies, design sensitivity in transportation, development

Open space movement started in 1860s: concern for light and open space for citizens

- Also important as a water resource
- Not enough money for open space projects
- Current recreation emphasis in conservation projects

Communication: no actor can work on water issues alone, no matter how competent

We need to find the best way professionals can engage citizens in serious discussions

- advantage in planning issues: popular press is picking up language of sustainability, understanding of broader issues, potential for education

- Look at political agendas: figure out how far you can go, how much change you can make
 - (Easier after communication and coming together with a single voice)

Andy Hill, Colorado Department of Local Affairs

Sustainable Community Development in Colorado: Linking Land Use and Water Planning

Planning commissions: providing window in to local governments and their needs/perspectives

Strong tradition of local control in Colorado will influence solutions reflecting local culture

No state land use plan, no comprehensive state database of land use

Communities evolve and find their own ways to plan: public sentiment important in creating plans

Danger in thinking of single solution for the whole state: won't fit everywhere, can't impose.

Absence of state mandates: communities innovate with enabling and pressure to come up with solutions: DOLA attempts to nurture innovation w/ information, technical and financial assistance

How does DOLA invest?

- Mission to strengthen Colorado communities and their needs/wants
- Has funded water efficient landscape design code (said to be Front-Range specific but West Slope communities creating list of plants appropriate for them)
- On website are county and municipal codes

Planning: potential to build support, dependent on community support and input

- Many communities do urban growth/service area agreements (IGAs)
- Regulation: taking to next step: cluster zoning, annexation policies need to be better considered Green building programs
- Many local plans do not add up to regional solutions

Important to promote regional solutions that will last and have greater impact

IGA examples:

- Clifton Water District and Lincoln County IGA
- Pueblo Metro Districts: appropriate development and how to provide services

Changes in development patterns, how we live, need for education:

- Initiatives
- Changing behaviors
- Making it meaningful for general public
- Make green development more affordable

Individual effort

Sustainable Community Development

Focus on what communities say they need

Broadening focus to include sustainability

Formalizing partnerships

Solutions teams

Leverage funding, funding cycles: how to better for community needs

Partnerships and coordination in sustainability context

Way to consider making grant criteria fund projects that are more sustainable: so it works for counties across the entire state

Partnership with Governor's energy office

- Energy grants program: required to form regional partnerships
- hard to develop projects, and contracting projects
- helped to fund/ create partnerships at the regional level

Energy efficient, transportation, public health

New state construction must meet sustainability standards

- DOLA can assist in implementing high-performance specifications

Sharing best practices, having all the resource that communities need to get through sustainability process: can be overwhelming for communities

Submit good models to DOLA office: www.dola.colorado.gov/sustainability

- thinking more carefully about investment decisions
- facilitate regulatory solutions
- inform communities about projects across the state

Representative Kathleen Curry, Colorado General Assembly

HB08-1141: Development Permits

Adequate water supply for development

Local government shall not approve application for development unless application demonstrates water supply is adequate

Improving communication between localities and water suppliers

Local control: strong influence in state

Colorado Municipal League: very powerful actor in state government represents local governments

Different jurisdictional district requirements here to stay: opposition to uniform standards for water management

Bill: basic communication between water suppliers and development/approvers

Some municipalities have to duplicate communication under bill: inefficient process

More workable process: special districts

- weak link in process but major player
- must contend with special district being part of the system
- don't always have a direct link to the county government

Whole water supply in hand? Build-out timetable

Statutes for counties: had to send to state engineer in Denver

- Required to reply to county w/ assessment of water supply adequacy

Bringing municipalities and special districts into fold

Hard to document effects of bill

Pagosa Springs/Archuleta County:

- town council offering vested rights to increase revenue w/o consulting water suppliers
- water district obligated to supply denser development into the future
- unsure that water supply can meet needs
- Lack of communication between supplier and city council (bill requires)

Big picture (opinions):

Tax policy major driver in water policy implementation

- Municipalities reliant on sales tax and property tax revenue: have to keep getting more with increasing public services: have to approve additional development for additional revenue
- How do municipalities meet those needs/service requirements?
 - TABOR (1992): elimination of real estate transfer tax
 - Helpful to supplement sales tax revenue
 - Not enough tools avail to deal with needs of constituents

Private property rights; major factor in municipal development and water development

35-acre exemptions: not amendable, considered as a right by property owners

Vested rights: hands are tied because zoning rights set that people are relying on (inflexible) creation of incentives when changing

Water supply: Balancing agricultural producers needs (municipalities competing with developers for right to use water)

Big factor: manner in which appropriation system works: strict in Colorado ownership of rights challenge

There is a role for the state because the state is involved in helping communities deal with adequacy of water supply (need resources):

- helping small towns without engineers, professionals on staff

Many counties dependent on government help to determine suitability of water supply

- State should be part of the conversation

Future: incentive-driven process respecting local control will be more effective than top-down approaches

How to take to next level:

- How can state government help local officials?

State should not stand in the way, but provide financial, technical assistance

Tom Grimshaw, Grimshaw & Haring

Special Districts

As of September 21, 2009, there were 1872 special districts in Colorado

- 200 water or water/ sanitary districts
- 18 metro districts: can provide more than one service

Water significant function for many special districts in Colorado

Relationship of special districts to land use:

- No district can be formed without consent of city or county
 - Must submit service plan: plan for infrastructure necessary to provide water, physically possible to provide water

Gunnison example: independent engineer to assess, lawyer for ordinance for adopting service plan

- Knew the right questions, now what they were doing, fully informed

No special district in Colorado has any land use power whatsoever:

- No reference in statute that enables them to have that right;
- Special districts per se should not constitute impediments to city/county comprehensive plans

Why are there so many in Colorado?

- Economics: special districts efficient in achieving objects and relatively inexpensive compared to alternatives in funding infrastructure
- No tax exemptions for ordinary funding mechanisms, but in special districts, tax incentives for investing in infrastructure (ad valorem tax)- costs subsidized by government
- Cities/counties restricted from other funding mechanisms because of TABOR
- Under this environment, special districts have thrived