The Denver Water System

- Established in 1918
- Unique structure
- Serves 1.3 million people — 25% of Colorado’s population
- System footprint - 4,000 square miles (2.5 million acres)
- 19 raw water reservoirs
Critical Milestones

- Cheesman/Kassler
- Moffat Tunnel
- Gross Reservoir
- Dillon/Roberts Tunnel
- Foothills Treatment Plant
- Two Forks Permit Veto
- Reuse System
Denver Water’s Service Area
Denver System Characteristics

- Reliable and robust system
- Financially strong
- High-quality water at a reasonable, but rising, cost
- Maintaining infrastructure with aggressive replacement and rehabilitation plan
- Simultaneous investment in aging system and new supplies
- $1.6 billion in capital projects over the next 10 years
Colorado Water Use

Source: 2005 United States Geological Survey Data, Summit/Adams
Denver Water serves 25% of Colorado’s population with only 2% of the state’s water.
Supply and Demand

- Historic notions re supply, demand and “firm yield”
- Projections of future needs
- Role of conservation/demand management and reuse
- System challenges and vulnerabilities going forward
Demand Management

- Unmetered system into the 1980s
- Initial two block rate system
- Current four block system with 4:1 curve
- Conservation success since 2005 – 20-25% reduction in demand
- Building a culture of conservation
- Urban form/water demand linkage
Population Increase 2000–2010

Source: U.S. Census Bureau Publication C2010BR-01
Colorado Water Demand Projections

Figure ES-13 Existing and Future M&I and SSI Demands
Denver Water Supply and Projected Demand

* A 30,000 acre foot strategic water reserve is kept in addition to 345,000 acre feet of water supply.
* The increase in supply in 2020 is a depiction of the Gross reservoir enlargement project.

Source: 2002 Integrated Resource Plan
“All of the Above” Strategy

• Plans for meeting future growth:
  • Conservation
  • Recycled water
  • Ag sharing
  • System enhancements
  • WISE
  • Gross expansion
Gross Reservoir — Need for Expansion

- Reliability
- Vulnerability
- Supply
Issues Facing Denver’s Water Supply

- Climate Change
- Drought
- Catastrophic Wildfires
- Terrorism
- Regulatory Requirements
- Colorado River Compact Call
- Growth
What Everyone Wants

- Good stewardship of the resource
- High quality, durable water supplies
- Healthy riparian environments/aquatic systems
- Systems that support the recreational economy and local communities
- Ability to cope with continuing population growth/climate change
Denver’s Interests

- More certainty
- Fewer resources devoted to conflict
- More yield
- Address vulnerability of north end
- Clarity – Green Mt., Shoshone, conditional rights
- Address regional problems beyond the Denver system
- Build statewide ethic about efficiency
Ultimate Premise

Better, more diverse system w/ more certainty but also more constraints and obligations is better than what a more autonomous future would yield cooperating selectively and fighting most of the time

Approach yields more benefits for customers, nature, West Slope communities and the state. Also sets the stage for collaboration on bigger challenges ahead that we all face
Colorado River Cooperative Agreement

- Largest of its kind in the history of Colorado
- April 28, 2011: Denver Water and 40 West Slope entities announced proposed agreement.
- To date: Signed by Grand, Summit and Eagle counties; Denver Water; Glenwood Springs and others
- Remaining signatures expected within the next couple of months
Colorado River Cooperative Agreement

- Resolves historic conflicts and creates holistic approach to resolving Colorado water disputes
- Establishes cooperative, long-term efforts to improve the health of the Colorado River and its tributaries
- Creates additional water supply for those who live, work and play on the West Slope and for customers of Denver Water
Benefits for Colorado

• Ensures future Denver Water projects on the West Slope will be cooperative projects
• Protects and restores stream health
• Increases amount of Denver Water’s conservation and/or recycled water
• Dedicates funds for watershed, water treatment and aquatic habitat improvements
Benefits for Denver Water

- Secures future water for customers by resolving long-standing disputes over service area
- Increases certainty and secures West Slope support for the Moffat Collection System Project
- Allows WISE to move forward
- All parties work cooperatively on future water issues
- Provides environmental protection and enhancements
New Way of Doing Business

• Water utilities in the West must do business in a new way

• Collaboration to solve our problems is critical

• Cooperating and negotiating will be the key

• The Colorado River Cooperative Agreement is the leading example

“Collaboration can move mountains, and move water wars. We are interconnected in a way that demands this type of approach.”
—Gov. Hickenlooper
Future Issues and Collaboration

- Managing Compact obligations
- Challenges of climate change
- Driving efficiency statewide
- Managing for multiple objectives
- More vehicles for sharing, a more effective market