Denver Water: The Path toward a Secure Water Future

Denver Regional Council of Governments
August 18, 2010
Overview of Denver Water

- Independent agency established by Denver City Charter
- Fully funded by water rates and system charges
  - No tax revenue
  - Not for profit
- Largest water utility in Colorado
  - Supply 1.3 million people
Overview of Denver Water

- More than 3,000 miles of pipe
- Number of pumping stations: 22
- Underground reservoirs in various city locations: 34
- Provide service to more than 19,000 water fire hydrants
- Total watershed area: 4,000 square miles (2.5 million acres)
Cities and Counties Served

Cities
- Arvada
- Bow Mar
- Broomfield
- Centennial
- Cherry Hills Village
- Commerce City
- Denver
- Edgewater
- Glendale
- Greenwood Village
- Lakewood
- Littleton
- Lone Tree
- Sheridan
- Westminster
- Wheat Ridge

Counties
- Adams
- Arapahoe
- Broomfield
- Denver
- Jefferson
Retail and Wholesale Customers

Water served is split 50/50 between Denver and Suburbs
66 different distributors
• Total Service
• Read and Bill
• Master Meter
20+ fixed contracts
Colorado

Historic Average Annual Stream Flow

West Toward
Gulf of California
9,097,000 AF

East Toward
Gulf of Mexico
1,337,000 AF
Challenges to a Secure Water Future

- Increasing population
  - 40% growth in service area by 2050

- Climate change uncertainties
  - Hotter, but will it be drier or wetter?

- Aging infrastructure
  - Much of our infrastructure dates to WWII

- Increasing competition for future supplies
Denver Water’s Plan To Meet These Challenges

• Conservation
• New Supply
• Increase use of Recycled Water
• Infrastructure Investments
Denver Water’s Plan (cont’d)

• Conservation
  • A commitment of Denver Water Board and Staff
    • Use Only What You Need campaign has been very effective
    • Nationally and internationally recognized
  • Goal: cut consumption by 22% from pre-drought years
  • 16,000 acre-feet of future demand will be met by additional conservation
Demand since drought restrictions ended in 2004 has stayed below pre-drought levels. It is not yet known whether these savings are permanent or only temporary. Denver Water's new Tap-Smart conservation plan is designed to make these savings permanent.
Why Conservation Can’t Do it All

- Reliability Issues
  - Behavior change, is it permanent?
- Water where and when we need it
- Water efficiency vs. drought
  - The double edged sword
Denver Water’s Plan (cont’d)

• New Water Supply
  • Gravel pits to storage
  • System enhancements
  • Enlarging Gross Reservoir
    • First major water supply project since Dillon Reservoir
Denver Water’s Plan (cont’d)

- **Gross Reservoir Project**
  - Addresses 3 weaknesses in Denver Water’s collection system
    - **Vulnerability:** An imbalance in collection system with 90% of water above Strontia Springs Reservoir
    - **Reliability:** Significant risk of running out of water on North end in a single dry year
    - **Supply:** A supply shortfall that will grow to 34,000 acre-feet by 2030
Denver Water’s Plan (cont’d)

• Recycled Water
  • Currently serves irrigation and industrial needs
  • Expanding system to serve 5 billion gallons of water a day
Denver Water’s Plan

• Infrastructure Renewal
  • More than 3,000 miles of pipe
    • 325 miles of pipe built 1880–1920
    • Annually replace about 30,000 feet of pipe and rehabilitate another 30,000 feet
      • At this rate, it would take 200 years to replace or rehab all pipe. We will double rate of rehab & replacement over the next 10 years.

• Aging dams, canals, tunnels, treatment plants and pump stations
  • Some more than 100 years old
Denver Water’s Plan (cont’)

• Infrastructure Renewal
  • A key part of our capital plan and our long-term plan for a secure water future
    • Cheesman Reservoir
    • Pipe rehabilitation
    • Treatment plant upgrades to Marston WTP
    • Enhancements to Williams Fork Dam
    • Strontia Springs sediment removal
An Era of Infrastructure Investment

• Investing in the system is key to this plan for a secure water future
• Capital Plan calls for $1.3 billion of investments in infrastructure, water supply, recycled water and more over the next 10 years
• Impact on rates
  • Rates will continue to increase
• Keep you updated
Questions?