Municipal Water Utilities Careers and Opportunities

- Denver Water Overview
- Working for a Municipal Water Provider
- Water Resources Challenges
- Career Development
- Conclusions
- Discussion

Cheesman Reservoir
Denver Water Facts

- Established in 1918
- Independent city agency
- Serve 1.3 million people or 25% of Colorado’s population
- Only 2% of Colorado’s consumptive use of water
- Large water storage and collection system

Cheesman Reservoir
Overview of Denver Water

- Annual revenue: $250 million
- Average water use: 270,000 acre-feet per year
- Watershed area: 4,000 square miles
- Energy use: 99% of the source water is delivered by gravity. Net energy producer
- Storage: 520,000 AF in 10 reservoirs
- Pipe: more than 3,000 miles
- Pump stations: 22
- Underground reservoirs: 34
- Fire hydrants: more than 19,000
Denver Water Service Area
Treated Water Use
Gallons per Capita per Day (GCD)
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Working for a Municipal Water Provider

- At the hub of water resources challenges
- Good experience for consulting, government, NGO, academic and other fields
- Areas to work in:
  - Watersheds, supply, collection, storage, treatment, conveyance, treatments, distribution, reuse, green infrastructure, demand, conservation, planning and policy
- Motivations – stability, regional interests, environmental management, at the hub, practical, on-the-ground, customer focus, etc
- Advantages of big and small utilities
Water Resources Jobs at Denver Water

- Engineering – design and project management
- Operations – facility operations and management
- Public Affairs – stakeholders, lobbying, media, customer relations and conservation
- Planning
  - Water rights
  - Water resources analysis - modeling and GIS
  - Water resources planning
  - Raw water system operations
  - Environmental planning and watershed management
  - Demand planning
  - Treated water system modeling and analysis
Water Resources Challenges

- Population Growth
- Drought
- Endangered Species
- Greater Efficiencies
- Water Quality
- Colorado River
- Compact Call
- Climate Change
- Douglas County Groundwater
- Wildfire
- Pine Beetle Epidemic
- Aging Infrastructure
Colorado Population, Irrigated Acres and Flows

- **West Slope**
  - Population: 578,000
  - Irrigated Acres: 860,000

- **East Slope**
  - Population: 4,491,000
  - Irrigated Acres: 1,738,000

Inflows:
- **Yampa**: 1,530,000 AFY
- **White**: 560,000 AFY
- **Colorado**: 4,500,000 AFY
- **Gunnison**: 510,000 AFY

Outflows:
- **Arkansas**: 164,000 AFY
- **Rio Grande**: 1,780,000 AFY
- **San Juan**: 320,000 AFY

Rivers:
- **North Platte**: 310,000 AFY
- **Laramie**: 110,000 AFY
- **South Platte**: 400,000 AFY

**Denver Water**

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Scenario Planning

- Planning futures represent uncertainties
- Near-term strategy to prepare for a range of future conditions
- Creating and preserving options in vital decision points
New Areas of Interests

- Green infrastructure and One Water management
- Adaptive planning techniques
- Climate change planning
- Holistic watershed management
- Potable reuse
- Regional projects
- Off stream storage and ASR
- Land using planning
- Demand modeling
- Emergency demand management
- Water quality management
- Program management – watersheds, reuse, climate change and sustainability
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* New areas of expertise
Important Skills

- Clear interest in work
- Hard worker
- Communicate well
- Personality and interests fit well
- Flexible and have a range of skills
- New technical expertise
- Program manager ability
- Use illustrative examples and be concise
Job and Career Development

• Be a sponge - learn a lot and become knowledgeable of the bigger picture
• Test the waters - try things and get to know your interests, personality and strengths
• Establish an area of technical excellence
• Develop good team works skills and project management skills
• Continually improve communication skills
• Get a mentor
• Be aware of what matter most to organizations, their personalities and values
• Stand out – volunteer, take on extra tasks, get your work noticed, develop relationship with higher ups
• Network
• Find the right work/life balance
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