

# DENVER WATER

## 2010 BUDGET

Denver Water proudly serves high-quality water and promotes its efficient use to 1.3 million people in the city of Denver and many surrounding suburbs. Established in 1918, the utility is a public agency funded by water rates and new tap fees, not taxes. It is Colorado's oldest and largest water utility.





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To Our Customers and Other Interested Readers:

Denver Water's 2010 budget and 2009 operations attest to our commitment to provide our customers with water and service of the highest quality. This commitment includes an obligation to provide adequate supplies of high-quality water now and in the future, a responsibility to protect the utility's assets and expand them as needed, and a desire to enhance communication with customers and help them use water as wisely as possible.

Two of Denver Water's major accomplishments in 2009 involved using technology to improve our ability to communicate with customers. First, our new Customer Information System (CIS) went on line in July, enabling us to bill customers every month, as opposed to every other month. Giving customers more frequent feedback about the amount of water they use helps them monitor and adjust their water use habits in a timelier manner. In addition, the new CIS boosts our ability to track customer account information, analyze water savings, and administer more sophisticated rate designs.



*The new CIS boosts our ability to track customer account information, analyze water savings, and administer more sophisticated rate designs.*

Also in July we unveiled our revamped Web site at [denverwater.org](http://denverwater.org). The newly designed site provides easy-to-access information on topics ranging from billing and rates, conservation, and water quality to recreation, construction projects, and consumer education. A conservation link, for example, offers tips on efficient water use, plus information about rebates, incentive programs, and water use rules. A water service and support link contains advice for troubleshooting water service problems and phone numbers for requesting help. Customers can also use the site to manage their accounts, pay their water bills, or sign up for an Automatic Payment Plan.

*Our new [denverwater.org](http://denverwater.org) site provides easy-to-access information on topics ranging from billing and rates, conservation, and water quality to recreation, construction projects, and consumer education.*

We also made progress in our efforts to ensure that the water system—the collection, treatment, distribution, and recycling systems—can continue to provide an adequate supply of water for our expanding customer base. Planning projections indicate that, without preventive measures, Denver Water will experience a water supply shortage of 34,000 acre-feet by 2030. (An acre-foot, or 325,851 gallons, is enough to cover Invesco Field at Mile High with a foot of water; it is also enough to serve roughly 2.5 households for a year). To make sure our supplies keep up with demand, we are pursuing a multifaceted strategy—expanding storage capacity in the Moffat Collection System at the north end of the water system, expanding our recycled water system, and saving water through conservation.

The Moffat System currently provides approximately 10 percent of Denver Water's supply and is at risk of running out of water in a single dry year. To achieve a better balance between our collection systems, the Board has recommended enlarging Gross Reservoir, Moffat's primary storage facility. Adding storage capacity in this reservoir will help address the projected supply shortage, assist us in dealing with future droughts, and serve as a safety net if the south end of the water system faces unexpected challenges such as those caused by recent wildfires in our watersheds.

The plan to raise the reservoir's dam by 125 feet will provide an additional 18,000 acre-feet of water, enough to serve roughly 45,000 households every year. Because the reservoir was originally designed to be this larger size, ancillary facilities such as the Moffat Tunnel and South Boulder Canal will not have to be modified, and no additional water rights will be needed.

In October 2009, the U.S. Army Corps of Engineers released a Draft Environmental Impact Statement (EIS) describing the potential environmental effects of the proposed project. The public comment period for the Draft EIS ends March 1, 2010. Prior to the draft document's release, Denver Water assisted the Corps in responding to comments from the U.S. Environmental Protection Agency, the Federal Energy Regulatory Commission (FERC), and officials in Grand County. We also developed a mitigation plan with input from the environmental community and obtained a Final Biological Opinion from the U.S. Fish and Wildlife Service.

Denver Water aims to acquire the remaining 16,000 acre-feet of needed supply through conservation measures, with the goal of reducing average per capita water use to 165 gallons per day by 2016. Thanks to customers' altered water use habits during the dry years of 2002–2004 and their response to an accelerated program of water efficiency measures launched in 2007, we are well on our way to achieving this goal.

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Numerous conservation measures supported customers in attaining water savings. They included educational programs such as water use audits and the "Use Only What You Need" advertising campaign, rebates on the cost of water-efficient appliances and irrigation equipment, and financial incentives for efficient use by large-volume water users such as commercial and industrial customers and homeowner associations that irrigate large tracts of land.

By the end of 2009, Denver Water had issued almost \$1.8 million in rebates to residential customers who replaced water-guzzling household plumbing fixtures and appliances with water-efficient models. Rebates for low-water-use clothes washers and high-efficiency toilets accounted for 97 percent of these payments. Staff estimates that installation of these water efficient fixtures and appliances will save almost 400 acre-feet of water per year.

Our commercial and industrial customers earned rebates of more than \$300,000 through the end of 2009. Payments for the installation of high-efficiency toilets and submeters represented 60 percent of this total. The 30 businesses and homeowners associations currently participating in our irrigation efficiency contracts received \$7,000 for each acre-foot of water they saved during 2009.

For the third consecutive year, we partnered with the Mile High Youth Corps to retrofit low-income households and nonprofit facilities with water-efficient toilets, showerheads, and faucet aerators. Since this program began in 2007, we have extended its area of operation from the City and County of Denver to other locations in our combined service area. We have also increased the number of retrofits each year—854 high-efficiency toilets were installed in 2007, 1,500 in 2008, and more than 2,000 in 2009.

*For the third consecutive year, we partnered with the Mile High Youth Corps to retrofit low-income households and nonprofit facilities with water-efficient toilets, showerheads, and faucet aerators.*

Our water use enforcement program helps customers comply with Denver Water's operating rules such as refraining from lawn-watering between 10 A.M. and 6 P.M., amending soil before installing turf and other plants at new tap sites, and abiding by the water budgets established for lawns larger than one acre. From May through September 2009, 12 temporary workers patrolled Denver Water's service area, monitoring water use and talking with more than 3,000 customers about observed or reported water waste.

Denver Water's Recycled Water System also helps to stretch Colorado's limited water supplies. The system currently treats and distributes approximately 2.3 billion gallons of recycled water for irrigation and certain industrial purposes. In July and August 2009, four northeast Denver parks—Crescent, Denison, McNichols, and Verbena—were added to the recycled water distribution system. With these additions, the system now supplies irrigation water to 15 parks, three schools, three golf courses, and the Denver Zoo.

In addition to providing adequate supplies, our commitment to customers includes ensuring the water system's reliability. This involves making certain that existing facilities such as reservoirs, treatment plants, and distribution mains function optimally and that new facilities are added as necessary.

As part of an ongoing program to protect the integrity of our potable water distribution system, we cleaned and lined more than 20,000 linear feet of unlined cast iron water mains in 2009 and replaced another 240 feet of distribution pipe. In May we began a three-year, multimillion-dollar project to overhaul a 1960s-era filtration system at the Marston Treatment Plant. We cooperated with stakeholders in Summit County to complete a vulnerability assessment for the dam at Dillon Reservoir and to develop security measures related to the road traversing the dam.

Careful planning and management of capital projects constitute a vital part of ensuring water system reliability. In 2009, our Capital Program Review (CPR) Committee instituted a new review process to make sure Denver Water's 10-year Capital Improvement Plan is implemented on schedule. The committee consists of the directors of four Denver Water divisions—Engineering, Operations & Maintenance, Finance, and Planning.

The new review process delineates stringent procedures that must be followed before project priorities can be shifted or resources diverted from those designated in the capital plan. Another directive specifies that the increased workload dictated by the capital program requires staff to spend more time managing rather than performing tasks related to capital projects. Needed skill sets generally will be augmented by contracting with outside resources rather than adding permanent staff positions.

In September, the CPR Committee began holding monthly meetings with the project managers of Denver Water's 25 largest capital projects. These meetings provide a forum for coordinating project status and budget issues and making certain that project managers have the resources they need to complete projects on time and within budget. The meetings also help project managers understand how their projects fit into the bigger picture and how changes in one project's schedule can affect the implementation of others. Discussions typically include topics such as changes in scope-of-work, staffing needs, permitting, major hurdles, and milestones.

To help fund its capital projects, Denver Water became the first agency in Colorado to issue Build America Bonds, a new financing tool for state and local governments created by the American Recovery and Reinvestment Act of 2009. Unlike the tax-exempt bonds traditionally issued by government agencies, Build America Bonds are taxable, but they come with a 35 percent federal subsidy on interest costs. In May 2009, Denver Water issued \$44 million of Build America Bonds at an interest rate of just over 6 percent. With the federal tax subsidy, however, Denver Water actually will pay only 3.94 percent, a lower interest rate than the 4.23 percent average rate it pays on its currently outstanding tax-exempt bonds.

Our most significant plans for continuing to provide adequate high-quality water supplies and reliable service are described in the following section, which summarizes Denver Water's 2010 goals and objectives.

## 2010 Goals and Objectives

### Complete Denver Water's New Integrated Resources Plan

Long-term planning has been a consistent element in Denver Water's ability to meet customer needs in this fast-growing, semi-arid region. Many aspects of the water system that customers rely on today were planned decades ago.

*Many aspects of the water system that customers rely on today were planned decades ago.*

In 2008, the staff and Board began updating Denver Water's Integrated Resource Plan (IRP), a comprehensive plan that will guide decisions related to the water system over the next 40 years. This long-range planning effort continued throughout 2009, and publication of the completed plan is slated for late 2010.

Provisions of the new IRP will establish the level of service Denver Water intends to provide to customers, scrutinize water-demand projections and demand-management alternatives, and identify water efficiency opportunities and new facility needs. It will also examine potential challenges to the water system—for example, climate change effects, more severe and frequent droughts, changes in demographics and water use patterns, watershed alterations such as those caused by beetle kill and forest fires, Colorado River water shortages, and economic and regulatory changes. In addition, the IRP will clarify the Board's goals regarding system reliability, strategic water reserves, and Denver Water's role in regional and statewide water activities.

The updated IRP will address future supply uncertainties by planning for a range of alternative outcomes, rather than taking the more traditional approach of projecting a single outcome and planning for that. A sophisticated new demand model enhances our understanding of the key



determinants of water use and thus helps us better prepare for a variety of changing demand patterns. The final plan will include strategies for implementing and paying for each alternative outcome, and it will examine three types of costs related to these strategies—financial, environmental, and social.

*An updated demand model helps us better prepare for a variety of changing demand patterns.*

The task of developing the new IRP involves Board members and staff members working on five teams and contributing expertise from various functional groups, including Finance, Engineering, Operations and Maintenance, Legal, and Public Affairs. The plan will also reflect input from customers, the Citizens Advisory Committee, Denver Water's distributors, public entities, environmental and other special-interest groups, neighboring Front Range utilities, and industry experts.

### **Secure Approvals to Enlarge Gross Reservoir**

After reviewing public comments on the draft EIS for the proposed project to enlarge Gross Reservoir, the U.S. Army Corps of Engineers will complete a Final EIS and issue a Record of Decision. Denver Water will assist the Corps in responding to the public's comments and will finalize its mitigation plan and associated agreements with stakeholders. Once the Corps has issued a Record of Decision and a permit, Denver Water will proceed with finalizing its application for an amendment to the Gross Reservoir FERC license. Though some preliminary design work was required for an adequate description of the proposed project, the permit from the Corps, the FERC amendment, and several other permits are needed before the project's design can be completed and construction can begin.

### **Ensure Successful Implementation the Board's 10-Year Capital Plan**

As part of Denver Water's \$1.3 billion 10-year Capital Improvement Plan, the Board has approved a \$94.1 million capital plan for 2010. Dam upgrades at two of our reservoirs—Cheesman and Williams Fork—account for \$24.6 million, or 26 percent of the 2010 capital budget. All together, the 2010 capital plan covers 183 projects. In addition, the 10-year plan directs staff to accelerate its pipe rehabilitation and replacement program by 10 percent each year.

### **Launch a Project to Dredge Sediment From Strontia Springs Reservoir**

The 1996 Buffalo Creek Fire and the 2002 Hayman Fire destroyed much of the vegetation in the watershed surrounding Cheesman and Strontia Springs reservoirs. Subsequent erosion has resulted in huge volumes of sediment and debris being deposited in these two reservoirs, causing Strontia Springs to lose 8 to 10 percent of its storage capacity. To regain this lost capacity, Denver Water will launch a two-year, \$26 million dredging operation at Strontia Springs in mid- to late 2010. Sediment removed from the reservoir will be piped to Denver Water's Kassler facility, a no-longer-operational, nineteenth-century sand filtration plant more than six miles downstream. The dredging project, delayed because of a Board directive to reduce operating expenses in 2009, represents Denver Water's single largest operating expense over the current 10-year planning horizon.

## Continue to Monitor Effects of the Economy, Weather, and Conservation Measures on Customer Water Use and Denver Water's Finances

Uncertainties about the economy, climate change, and the long-term impact of Denver Water's conservation programs make predicting future water demand a challenging task. Staff will monitor these variables continually and make adjustments if revenues end up being less than expected.

Recognizing that other water utilities face similar challenges, staff members will also continue to consult with their peers in the industry and in the region in 2010 to exchange information related to planning for an uncertain future.

*Uncertainties about the economy, climate change, and the long-term impact of Denver Water's conservation programs make predicting future water demand a challenging task.*

## Ensure a Smooth Transition in Denver Water's Leadership

My pending retirement in the late spring or early summer of 2010 means that Denver Water must find a new general manager. I have offered to continue serving as manager until my successor takes over, but the exact date of the transition depends on the timing of the Board's decision and the new leader's availability.

In its first step toward selecting a new manager, the Board hired a consultant to interview employees, distributors, and Citizens Advisory Committee members in order to identify the primary responsibilities of the manager's position and to determine the critical characteristics and skills a new leader should bring to the job. One result of this analysis was the determination that the manager's position should be defined more clearly as a chief executive officer (CEO). Because of requirements in Denver Water's charter, the position will now be referred to in legal documents as the Manager, serving as CEO.

A detailed list of job responsibilities and qualifications was posted at [denverwater.org](http://denverwater.org) in January 2010, along with instructions for potential applicants. No other organizational changes are anticipated at this time.

## 2010 Budget

### Sources of Funds

The 2010 budget for **Water Sales** is \$223.3 million. This figure is based on a treated water demand forecast that is 5 percent less than the projection used in August to develop 2010 water rates. We have also used a very conservative estimate to project 2010 **System Development Charges** (SDCs). Based on the continued downturn in the housing market, we estimate that SDC collections will be only 37 percent of the amount we would expect in a normal year.

The remaining revenue categories are generally comparable to those in 2009, with the exception of participation receipts. Two entities—South Adams County Water and Sanitation District and Farmers Reservoir and Irrigation Company—made one-time payments to Denver Water in 2009 for their share of the purchase price for Lupton Lakes Gravel Pit. These payments totaled \$10.3 million. In 2010, the **Participation Budget** will return to a more normal year of \$4.8 million.

Denver Water has projected the issuance of \$39.0 million in **Revenue Bonds** in 2010. As always, the staff and Board will monitor market conditions and capital projects to determine the most advantageous timing and amount for the bond issue.

*Denver Water has projected the issuance of \$39.0 million in Revenue Bonds in 2010.*

## Uses of Funds

Total 2010 **Payroll Expenditures**—including regular wages, paid leaves of absence, and overtime and disability payments—are projected at \$75.1 million. In recognition of the current economic situation and in an effort to keep costs as low as possible, staff recommended, and the Board approved, no market adjustment to employee wages in 2010.

Of the total amount budgeted for payroll expenditures, 11 percent will be assigned to staff working with capital projects and 89 percent will be allocated to employees engaged in other utility activities. The 2010 capital allocation is slightly lower than our historical figure.

**Operations and Maintenance (O&M) Costs** for 2010 are budgeted at \$193.9 million, 18.6 percent more than the amount budgeted in 2009. The principal driver of this increase is the beginning of a multi-year project to regain lost capacity in Strontia Springs Reservoir by dredging sediment from the bottom and pumping it down Waterton Canyon to the old Kassler facility.

The 2010 budget for conservation programs reflects the Board's continuing commitment to accelerate water savings throughout Denver Water's combined service area. The total **Conservation Budget** for 2010 is \$11.4 million, an increase of 18.4 percent compared with the 2009 budget.

For the first time since the Board implemented a change in the design of the **Employee Health Care Insurance** program in 2007, the Board's share of health care insurance costs rose in 2009. As a result, the Board has implemented new changes designed to shift more of the burden of health care costs to employees in 2010. Despite higher premiums and the change in plan design, the 2010 budget for employee and retiree health care insurance is \$13.0 million, 7.4 percent higher than the amount budgeted in 2009.

Spending on **Capital Projects** in 2010 is budgeted at \$94.1 million. The 2010 Capital Improvement Plan calls for work on 183 projects. The four largest projects have a combined annual budget of \$36.1 million and comprise 38.4 percent of the 2010 capital budget.

**Debt service** and related costs are budgeted at \$50.5 million.

## Investment Balance

Based on projected 2010 receipts and uses of funds, we estimate that Denver Water's **Investment Balance**, or cash reserves, will decrease by \$47.2 million to \$146.8 million by the end of 2010.

## 2009 Budget Performance

### Sources of Funds

Total sources of funds for 2009 were budgeted at \$296.3 million. We ended 2009 with \$270.5 million in receipts, \$25.3 million less than the budgeted amount. The decrease was primarily the result of reduced revenues from water sales.

**Water Sales** for 2009 were originally forecast at \$224.0 million but subsequently budgeted at the reduced amount of \$212.0 million in anticipation of the economy's impact on demand. In fact, the economy, the unusually wet summer, and our customers' conservation efforts resulted in water sales revenue that was \$23.7 million (11.2 percent) below the budgeted amount of \$212 million.

In contrast to the decreased revenue from water sales, the wet weather enabled us to release more water over our dams, generating 49.7 percent more **Hydropower Revenue** than projected for the year. **Interest Income** also slightly surpassed the budgeted amount in 2009.

*In contrast to the decreased revenue from water sales, the wet weather enabled us to release more water over our dams, generating 49.7 percent more Hydropower Revenue than projected for the year.*

We also managed to exceed our conservative estimate for receipts from **System Development Charges** (SDCs) in 2009. Total SDC receipts were \$9.0 million, or 12.7 percent, more than the budgeted amount. Still, total SDC collections in 2009 were significantly lower than the approximately \$22.0 million we would expect in a normal year.

### Uses of Funds

**Capital Spending** in 2009 totaled \$69.1 million, \$26.2 million less than the budgeted amount. Most of this variance was caused by unforeseen delays in our two largest capital projects—installation of new inlet controls at Cheesman Dam and a new hydropower facility at Williams Fork Reservoir. Both of these projects are currently underway, and we are working hard to keep them on track in 2010.

**Operating Expenses** in 2009 were \$168.6 million, 3.1 percent over the budgeted amount. The extra expenditures resulted primarily from higher-than-expected costs for employee and retiree health care insurance (\$2.3 million) and the unanticipated emergency repairs at Foothills Water Treatment Plant (\$0.7 million).

**Debt Service** payments for 2009 totaled \$50.8 million.

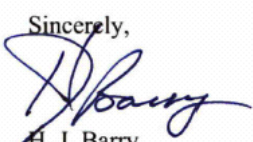
### Investment Balance

Denver Water ended the year with an **Investment Balance** of \$194.0 million, which is \$10.2 million more than the budgeted amount in 2009.

## Financial Overview

Denver Water's strong financial status is projected to continue during the current 10-year planning horizon. Ratings of our revenue bonds by Moody's, Fitch Ratings, and Standard & Poor's are Aa2, AA+, and AAA, respectively. We will continue to monitor water rates, capital expenditures, debt levels, and investment balances to minimize rate increases while providing reliable service to customers and maintaining Denver Water's financial well-being.

I am confident that the 2010 budget provides a responsible plan for both fiscal and physical operations and is sufficiently conservative to enable us to adapt to changes in the economy during the coming year.

Sincerely,  
  
H. J. Barry  
Manager

## Board of Water Commissioners

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### **Penfield Tate III, President, Appointed October 2005**



Penfield Tate III is a former state legislator and a shareholder in the Public Finance Group at the law firm of Greenberg Traurig. He is a graduate of Colorado State University and Antioch School of Law. He has served on the boards for the Colorado Bar Association, State of Colorado Banking Board, Cerebral Palsy of Colorado, Colorado Housing and Finance Authority, Five Points Community Center, and Metropolitan State College of Denver Foundation. He has been the executive director of the Colorado Department of Administration, an aide to former Denver Mayor Federico Peña, and a trade regulation attorney for the Federal Trade Commission.

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### **John Lucero, First Vice President, Appointed September 2007**

John Lucero is a broker associate at Lucero Real Estate, Inc., a local real estate company that offers residential, commercial, development and investment real estate expertise. He also is a former director of the Denver Board of Realtors, where he received the 2007 President's Distinguished Service Award and has been a member of numerous committees. Lucero also has served on several committees for the Colorado Association of Realtors and the Colorado Association of Hispanic Real Estate Professionals. He currently serves as a member of the Denver Zoning Code Task Force and was a member of the mayor's transition team for Community Planning and Development in 2003.



### **Thomas A. Gougeon, Vice President, Appointed August 2004**



Tom Gougeon is a principal in Continuum Partners LLC, a Colorado-based development company known for mixed use and transit oriented "green" building projects. He served as chief executive officer of the Stapleton Redevelopment Foundation, assistant to the mayor of Denver, executive director of a charitable foundation, and was a research associate at the Denver Research Institute in community planning and natural resource economics.

Gougeon also worked at the U.S. Environmental Protection Agency, where he worked on the Clean Air Act, western energy development and public lands issues. He is a former chair of the Nature Conservancy of Colorado and Volunteers for Outdoor Colorado, and he has served on the board of the Denver Urban Renewal Authority and many other community organizations. He holds a bachelor's degree in economics from the University of Denver and a master's degree in city and regional planning from Harvard University.

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**Paula Herzmark, Vice President, Appointed April 2009**

Paula Herzmark is the executive director of the Denver Health Foundation, a nonprofit organization that supports Denver Health. She previously worked as the chief executive officer of the Robert E. Loup Jewish Community Center, as well as the president and chief executive officer of Prime Time Cable Corp., a private cable television company. She also served in Gov. Richard Lamm's cabinet as the executive director of the Colorado Department of Local Affairs for five years, after having served as the governor's legislative liaison.



Herzmark has been active in several boards in the community, including Opera Colorado, Stapleton Foundation, Denver Judicial Nominating Commission, Rocky Mountain Planned Parenthood, National Jewish Hospital, the Denver Health and Hospitals and the Downtown Denver Partnership.



**Greg Austin, Vice President, Appointed: July 2009**

Greg Austin is a former partner in the Denver law firm Holland & Hart LLP. He retired from the partnership in 2001 but continued serving as counsel to the firm until July 2009. Austin left Holland & Hart from 1973 to 1977 to serve as general counsel to the U.S. Small Business Administration, and later as solicitor (general counsel) of the U.S. Department of the Interior. Austin serves on the board of directors of Craig Hospital, Rocky Mountain Public Broadcasting System, the Denver Police Foundation and the Holland & Hart Foundation. He also is a member of the Secretary of State's Advisory Committee and has served on the Colorado State Treasurer's Advisory Commission.

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**LAST 20 COMMISSIONERS**

Charles G. Jordan	1983 to 1985	Ronald L. Lehr	1993 to 1999
D. Dale Shaffer	1978 to 1985	Joe Shoemaker	1995 to 2001
John A. Yelenick	1969 to 1987	Andrew D. Wallach	2001 to 2003
Marguerite S. Pugsley	1978 to 1987	Daniel E. Muse	2000 to 2003
Elizabeth Hennessey	1985 to 1989	Richard A. Kirk	1993 to 2005
Malcolm M. Murray	1987 to 1993	William R. Roberts	1997 to 2005
Donald L. Kortz	1987 to 1993	Denise S. Maes	1995 to 2007
Monte Pascoe	1983 to 1995	Harris D. Sherman	2005 to 2007
Romaine Pacheco	1989 to 1995	Susan Daggett	2007 to 2009
Hubert A. Farbes, Jr.	1985 to 1997	George Beardsley	2004 to 2009

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## Contact Us

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Director of Finance

David L. Little, 303.628.6533  
Director of Planning

Robert J. Mahoney, 303.628.6611  
Director of Engineering

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### WITH QUESTIONS CONCERNING THE 2009 BUDGET DOCUMENT PLEASE CONTACT:

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# About Denver Water






















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## Conservation Through the Years

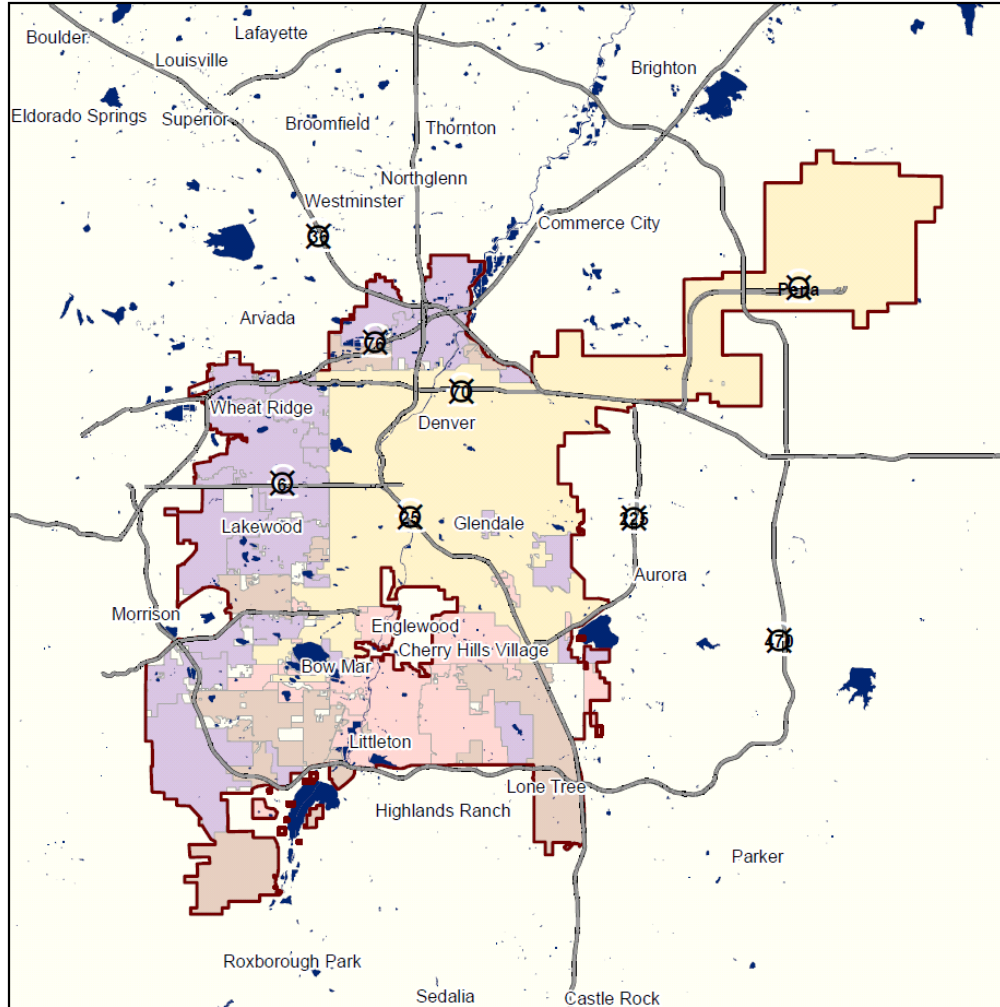
Denver Water has been asking customers to conserve for years, as shown in this 1939 photo of crews dismantling a water tank at 32nd Avenue and Zenobia Street. In the early 1930s, Denver Water advertised on streetcar trolleys with the message, "Water is Denver's Greatest Natural Asset – Please Don't Waste It." And after a drought in the late 1970s, Denver Water coined the term Xeriscape to promote low-water-use landscapes. Since then, Denver Water has pushed the advertising limits, flashing its signature Use Only What You Need message with costumed toilet runners, towers of bright orange 50-gallon drums and a taxi left with only what it needed to run.

## Denver Water Recreation Opportunities

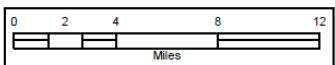
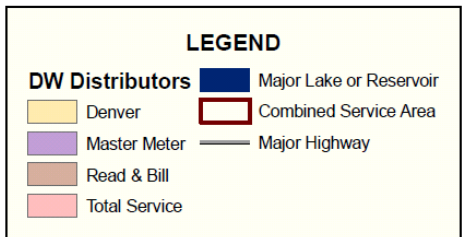
	<a href="#">Antero</a>	<a href="#">Cheesman</a>	<a href="#">Dillon</a>	<a href="#">Eleven Mile Canyon</a>	<a href="#">Gross</a>	<a href="#">High Line Canal</a>	<a href="#">Waterton Canyon</a>	<a href="#">Williams Fork</a>
 bicycling			✓	✓		✓	✓	
 camping	✓		✓	✓	✓			✓
 canoeing	✓		✓	✓	✓			
 cross country skiing			✓					
 fishing	✓	✓		✓	✓		✓	✓
 hiking		✓	✓	✓	✓	✓	✓	
 horseback riding				✓		✓	✓	
 hunting: big game								✓
 hunting: fowl			✓					
 ice fishing	✓		✓	✓	✓			✓
 jet skiing				✓				
 kayaking	✓		✓		✓			
 motorboating	✓		✓	✓				✓
 nature viewing						✓	✓	
 picnicking	✓			✓	✓	✓	✓	✓
 renting			✓	✓				
 sailboating	✓		✓	✓				
 scenic overview		✓	✓					
 small water craft	✓		✓					
 snowmobiling			✓					
 windsurfing			✓	✓				✓

City and County of Denver  
Board of Water Commissioners

# Denver Water Service Area



Englewood is not part of the Denver Water Service Area



This Geographic Information Systems (GIS) map is provided 'as is' with no claim by the Denver Water Board as to the completeness, usefulness or accuracy of its content. © 2009 Denver Water



## **Denver Water:**

*Denver Water was established in 1918 (Denver citizens purchased water system from a private company).*

*Is Colorado's oldest and largest water utility.*

*Is responsible for the collection, storage, quality control and distribution of drinking water to nearly one-fourth of all Coloradoans.*

*Ensures a continuous supply of water to the City and County of Denver and Denver Water customers who live in the surrounding suburbs.*

*Other sources: Fraser River, Williams Fork River, South Boulder Creek, Ralston Creek, Bear Creek.*

## **Water Rates & Fees:**

*Set by Board of Water Commissioners.*

*Since its inception, the Board has set rates at a level sufficient to service its debt and meet its expenses of operation and maintenance.*

*City Charter requires the Board to recover full costs plus an additional amount to customers who live outside the City and County of Denver.*

## **Finances:**

*Denver Water operates from the Water Works Fund, which ensures financial separation between Denver Water and the City. The general city government has no access to the Water Works Fund and the Water Board has no access to the City's general fund.*

*Denver Water generates revenues from sale of water to Denver and suburban customers and from the sale of hydropower to electric utility companies.*

## **General**



## **History:**

In 1918, Denver residents voted to create a five-member Board of Water Commissioners and buy the Denver Union Water Company's water system for \$14 million, creating Denver Water.

From that time on, Denver Water planned and developed a system to meet the needs of the people of Denver and the surrounding areas. Before World War II, Moffat Tunnel and Eleven Mile Canyon Reservoir were added to the system. Gross, Dillon and Williams Fork reservoirs were added in midcentury. The 23-mile Harold D. Roberts Tunnel was completed in 1962, bringing water to Denver from the other side of the Continental Divide.

Today, Denver Water's service area covers more than 335 square miles, including the City and County of Denver and several suburban areas. A system of reservoirs networked by tunnels and canals provides water to more than a million people. Three major treatment plants – Marston, Moffat and Foothills – maintain water quality under the watchful eye of the Denver Water Quality Control Laboratory.



### Denver Water and the Community:

Denver Water serves more than a million people in Denver and its surrounding suburbs. The majority of Denver's water comes from rivers and streams fed by mountain snowmelt. The South Platte River, Blue River, Williams Fork River and Fraser River watersheds are Denver Water's primary water sources, but it also uses water from the South Boulder Creek, Ralston Creek and Bear Creek watersheds.

Denver Water produces one-third of the state's treated water supply, which is about 234,000 acre-feet per year. An acre-foot equals 325,851 gallons of water and is enough for about 2 ½ households for one year. Denver Water customers use about 265,000 acre-feet of water a year, which is about 2 percent of all water, treated and untreated, in Colorado.

### ***Our Distribution System:***

*2681 miles of water mains (pipelines).*

*36.5 miles of non-potable pipes in the system.*

*18 pumping stations.*

*34 underground reservoirs in various city locations.*

### ***Treatment Plant Capacity:***

*Marston: 250 million gallons per day*

*Moffat: 185 million gallons per day*

*Foothills: 280 million gallons per day*

### ***Recycled Water Treatment Plant:***

*Recycled water is used for industrial purposes and for outdoor irrigation in parks, golf courses and other public spaces.*

*Treatment at the Recycle Plant incorporates biologically aerated filtration: coagulation, sedimentation, filtration and disinfection, to produce water that meets State regulatory requirements.*

*Recycling water enables Denver Water to use more of the water in its reservoirs to provide drinking water to Denver-area residents.*

**Water Use:**

Average annual use for typical family home: 125,000 gallons per year (a little less than half an acre foot).

\*Acre foot is a volume of water equal to one foot in depth covering an area of one acre or approximately 325,851 gallons

**Total Water Use by Category:**

- 48% Single Family Homes
- 21% Business & Industry
- 17% Multifamily Homes
- 9% Public Agencies
- 5% Unaccounted

**Residential Water Use by Category:**

- 54% Landscaping
- 13% Toilets
- 11% Laundry
- 10% Shower/baths
- 6% Faucets
- 5% Leaks
- 1% Dishwashers

**Where Your Water Goes**

<b>Bathroom</b>				
Activity	Number of Times*	Circumstances	Water Used*	Total Use (gallons)*
Toilet	Five	Conventional toilet	3.5 - 5 gallons per flush	17.5 - 25
		Low-flow toilet	1.6 gallons per flush	8
		High-efficiency toilet	1.28 gallons per flush	6.4
Shower	One (8 minutes long)	Pre-1993 showerhead	3 - 8 gallons per minute	24 - 64
		Standard showerhead	2.5 gallons per minute	20
		Low-flow showerhead	1.5 gallons per minute	12
Bath	Once	Tub 1/4 to 1/3 full	7.5 - 15 gallons	7.5 - 15
		Full tub	30 - 45 gallons	30 - 45
Shaving	Once	1 full basin	1 gallon	1
		Running water, five minutes	2.2 gallons per minute	11
Brushing teeth	Twice	Brush and rinse	0.25 - 0.5 gallon	0.5 - 1
		Running water, two minutes	2.2 gallons per minute	4.4
Hand washing	Seven (15 seconds)	Standard aerator	2.2 gallons per minute	7.7
		Low-flow aerator	0.5 gallon per minute	0.875
* Per person per day				
<b>Kitchen</b>				
Activity	Number of Times*	Circumstances	Water Used*	Total Use (gallons)*
Cooking	Washing produce	One full kitchen basin	1 - 2 gallons	1 - 2
		Running water, three minutes	2.2 gallons per minute	6.6
Dishwasher	Once - full load	Water-conserving model	4.5 - 7 gallons	4.5 - 7
		Standard cycle	10 - 14 gallons	10 - 14
Dishwashing by hand	Once	Full basin/wash and rinse	2 - 4 gallons	2 - 4
		Running water, five minutes	2.2 gallons per minute	11
* Per day				
<b>Miscellaneous</b>				
Activity	Number of Times*	Circumstances	Water Used	Total Use (gallons)
Laundry	Once	Front-load washer	13 - 20 gallons/load	13 - 20
		Conventional top-loader	35 - 50 gallons/load	35 - 50
Car washing	Once	Five full two-gallon buckets	10 gallons/wash	10
		Hose for 5 minutes	5/8-inch hose	32
Lawn watering	During hot dry spells, Kentucky bluegrass needs 3/4 of an inch of water twice a week, turf-type tall fescue needs 1/2 to 3/4 of an inch of water twice a week, and buffalo grass needs 1/4 to 3/4 of an inch every other week.			

www.denverwater.org

## Denver Community Profile

### Metro Denver

Square Miles	4,531
Population 2008	2,788,865
Population 2009	2,833,765
Population 2010*	2,877,742
Labor Force	1,546,648
Employment	1,384,905
Average Annual Wage	\$51,686
Median Age	35.6
Households	1,144,992

\* Projected.

### Population

Metro Denver Counties	Population
Adams	444,869
Arapahoe	573,762
Boulder	300,136
Broomfield (City/County)	56,960
Denver (City/County)	615,109
Douglas	295,479
Jefferson	547,449
<b>Total</b>	<b>2,833,765</b>

Sources: U.S. Department of Commerce, Bureau of the Census; Colorado Division of Local Government, State Demography Office.

### Population by Age, 2009

Age	Metro Denver
0-14 years	21.2%
15-29 years	20.8%
30-44 years	22.0%
45-59 years	21.6%
60-74 years	10.2%
75-89 years	3.9%
90 years & older	0.4%
<b>Median Age</b>	<b>35.6</b>

Sources: U.S. Department of Commerce, Bureau of the Census; Colorado Division of Local Government, State Demography Office.

### Cultural Diversity Population Composition

Race	Metro Denver
White	67.6%
Black	4.8%
American Indian	0.6%
Asian	3.4%
Hispanic Origin*	21.8%

\* Persons of Hispanic Origin may be of any race. Source: U.S. Census Bureau, Population Estimates Program.

### Major Employers - Metro Denver

Company	Employment
HealthONE Corporation	9,180
Lockheed Martin Corporation	8,200
Qwest Communications	7,500
Exempla Healthcare	6,230
Centura Health	5,830
Kaiser Permanente	5,570
Denver Health	5,100
United Airlines	5,000
IBM Corporation	4,300
Frontier Airlines	4,220

Source: Development Research Partners, February 2009.

### Labor Force

Total	Metro Denver	Colorado
<b>Total</b>	<b>1,546,648</b>	<b>2,730,477</b>
Employed	1,470,229	2,596,309
Unemployed	76,419	134,138
Unemployment Rate	4.9%	4.9%

Source: Colorado Department of Labor and Employment, Local Area Unemployment Statistics, 2008.

### Income

Income 2007	Metro Denver	Colorado
Per Capita Personal	\$47,327	\$41,192
Median Household	\$58,875	\$55,212

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Colorado Per Capita Personal

Income. Released April 2009. U.S. Census Bureau, American Community Survey, 2007.

### Climate

The region has a semi-arid, four-season climate with mild temperatures and 300 days of annual sunshine.	
Coldest Month	January, 43 degrees average
Warmest Month	July, 88 degrees average
Average Humidity	40%
Average Precipitation	15.81 inches
Average Snowfall	60.3 inches
Average % Sunshine	69%

Source: U.S. National Oceanic and Atmospheric Administration, 2009.

### Metro Denver Housing

Home Price, 2008	\$219,300 Median
Apartment Rent, 4Q 2008	\$889 Average Monthly

Sources: Colorado Comps, National Association of Realtors., The Group, Inc., and the Colorado Department of Local Affairs, Division of Housing.

## Mission and Values

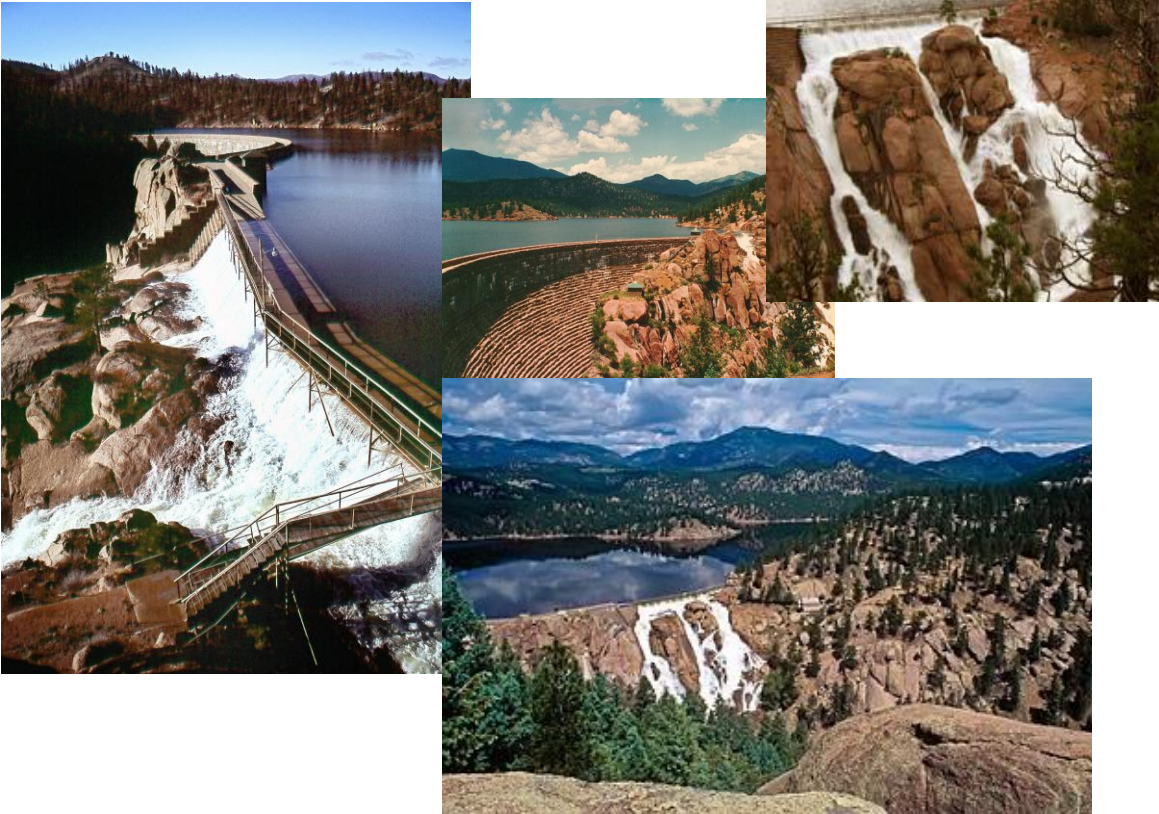


- **Mission:** Denver Water will provide our customers with a reliable, high-quality water supply and excellent service. We will be responsible and creative stewards of the assets we manage. We will actively participate in and be a responsible member of our communities. We will accomplish this mission with a productive and diverse work force.
- **Value:** Our values describe the guiding principles and beliefs of Denver Water. We recognize it is every employee's responsibility to uphold these values in order to carry out and align the mission with the vision of the organization. These values provide the framework and guidance for decision making, daily performance, and ensuring consistency and excellence throughout Denver Water.



# Organization

<b>Denver Water</b>	<b>20-21</b>
<b>Manager and Staff</b>	<b>22-23</b>
<b>Human Resources</b>	<b>24-25</b>
<b>Public Affairs</b>	<b>26-27</b>
<b>Legal</b>	<b>28-29</b>
<b>Information Technology</b>	<b>30-31</b>
<b>Finance</b>	<b>32-33</b>
<b>Engineering</b>	<b>34-35</b>
<b>Operations &amp; Maintenance</b>	<b>36-37</b>
<b>Planning</b>	<b>38-39</b>



**Cheesman Reservoir**  
Owned and Operated by Denver Water  
Elevation: 6,842 feet (2,085 meters) – spillway crest  
Capacity: 79,064 acre feet (1 acre foot = 325,851 gallons)




## Cheesman Reservoir

### Background

Named for Denver water pioneer Walter S. Cheesman, the dam was once the world's tallest at 221 feet above the streambed when completed in 1905. The reservoir and related facilities were purchased in November 1918 by the Denver Water Board. Cheesman was the first reservoir of Denver's mountain storage facilities and has been designated a National Historic Civil Engineering Landmark. More information about [Cheesman Reservoir history](#) is available in the About Us section.

### Recreation Opportunities

Overview of available activities

 fishing	Fishing is allowed ONLY on the Goose Lake Arm.
 hiking  scenic overview	The Upper Cheesman Canyon trail provides scenic views of the reservoir. Parking for the trailhead is located 200 yards north of the main parking for the reservoir.

**Note:** Water contact sports such as swimming, water skiing, wading and scuba diving are prohibited.

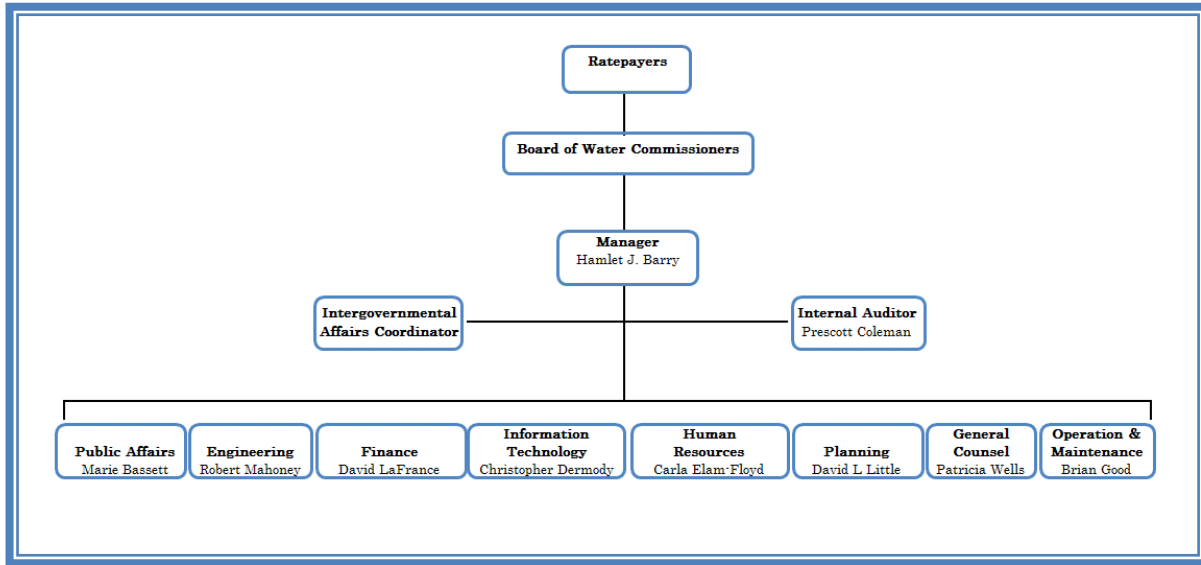
### Cheesman Reservoir Closed to Visitors in 2010

**Dec. 21, 2009** - [Cheesman Reservoir](#) will be closed to visitors beginning Jan. 1, 2010, as Denver Water makes essential upgrades to the dam, which was built in 1905. The reservoir is scheduled to reopen May 1, 2011. Upper and lower Gill Trail will remain open to hikers who want to access Cheesman Canyon throughout the closure period.

During the closure, Denver Water will be upgrading the dam's valve system, which was installed when the dam was built in 1905, and will be installing underwater trash racks to prevent debris from clogging the valves.

"Cheesman is more than 100 years old, and the underwater valves we are replacing were installed in 1905 and the late 1920s," said Brian Good, director of operations and maintenance. "Upgrading our aging infrastructure is vital to maintaining dam safety, providing a viable water supply and ensuring smooth operations."

Most of the construction at the site will take place underwater through specialized underwater diving construction techniques.



### Denver Water Highlights

Established in 1918, Denver Water is Colorado’s oldest and largest water utility. In general we ensure a continuous supply of water to the City and County of Denver and Denver Water Customers who live in the surrounding suburbs. We are responsible for the collection, storage, quality control and distribution of drinking water to nearly one-fourth of all Coloradoans.

The leadership of Denver Water consists of a five-member Board of Water Commissioners which is appointed by the Mayor of Denver to staggered six-year terms. The Board appoints a Manager who is chief executive officer of day-to-day operations; the Manager also serves as Secretary to the Board.

### Denver Water Regular & Introductory Employees (At End of Year)

Section	2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
*Manager & Staff	14.0	15.0	16.0	7.0	8.0
*Human Resources	20.0	20.0	21.0	22.8	22.8
*Public Affairs	146.3	161.0	188.6	176.6	190.6
*Engineering	139.0	147.0	162.0	159.0	163.0
*Finance	54.0	56.0	59.0	58.0	60.0
*Information Technology	57.8	61.0	70.0	69.0	70.7
*Planning	41.4	45.0	47.6	46.6	48.6
*Operations & Maintenance	521.0	538.0	563.0	541.5	562.5
*Legal	13.8	12.0	13.6	14.6	14.6
<b>Total</b>	<b>1,007.3</b>	<b>1,055.0</b>	<b>1,140.8</b>	<b>1,095.1</b>	<b>1,140.8</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions.

## Denver Water Goals for 2010

- Assist the Board and the organization through a smooth transition to a new manager.
- Plan for future uncertainties that may affect water supplies.
- Be responsible stewards of our natural resources.
- Apply technology to strengthen Denver Water's focus on customers.
- Ensure that Denver Water is an efficient, effective, desirable place to work.
- Monitor the volatile economy and prepare for potential effects to Denver Water and its customers.

### Denver Water Goals

#### Customer

- ✓ Provide reliable service
- ✓ Provide excellent service
- ✓ Provide high quality water

#### Financial

- ✓ Exercise responsible financial stewardship

#### Public Responsibility

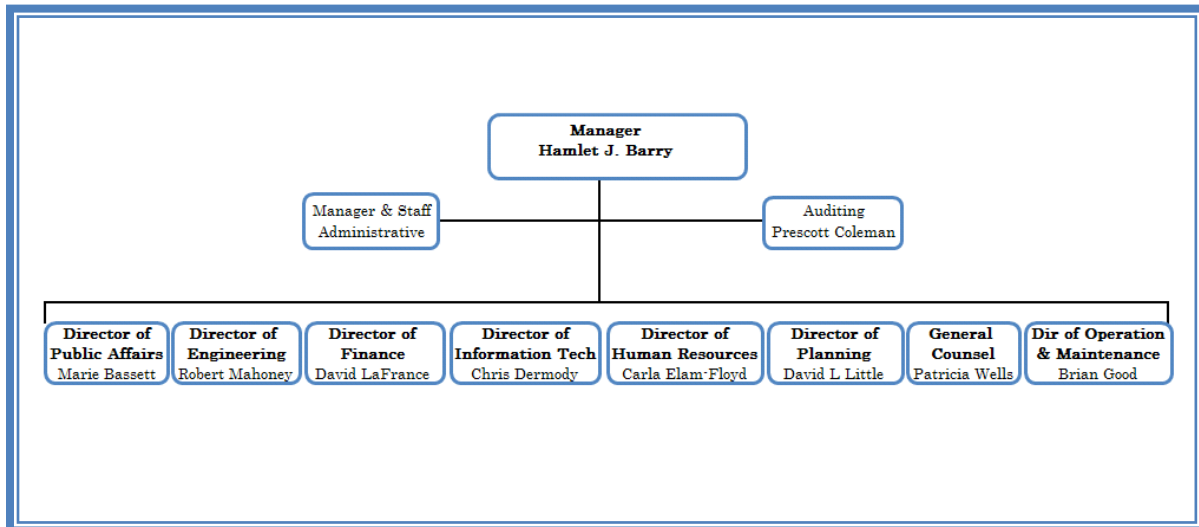
- ✓ Promote water efficiency and wise water use
- ✓ Develop additional supplies for the future

#### Organization

- ✓ Promote accountability
- ✓ Improve efficiencies
- ✓ Communication

## Denver Water - Expenditure History (Thousands of Dollars)

		<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2009</u>	<u>2010</u>
		<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$	64,833	68,820	70,672	73,875	75,111
Employee Benefits		28,207	27,926	37,078	39,399	36,908
Material & Supplies/Plant Equip		19,557	26,895	27,854	24,876	28,212
Utility & Pumping		6,934	8,430	8,812	7,671	10,884
Professional & Other Services		37,396	55,979	53,573	52,288	50,409
General Equipment		2,593	3,026	3,615	3,816	4,965
Contract Payments		53,959	37,044	53,559	29,870	76,516
Refunds		865	2,162	673	1,801	1,170
Debt Service		53,678	49,575	51,655	50,616	50,324
All Other Miscellaneous		2,031	3,643	3,312	4,347	4,066
<b>Total</b>	<b>\$</b>	<b>270,053</b>	<b>283,500</b>	<b>310,803</b>	<b>288,559</b>	<b>338,565</b>



### Manager and Staff Highlights



Hamlet "Chips" Barry  
Secretary-Manager

The Manager is the chief executive officer for Denver Water, Secretary to the Board of Water Commissioners and custodian of all records. He carries out all other duties and responsibilities as assigned by the Board as it fulfills its City Charter obligations.

The Manager executes the policies and decisions of the Board and reviews and recommends to the Board changes in rules and regulations with respect to all matters appropriate for its action.

In addition, the Manager gives overall direction to employees and oversees the work necessary to provide an adequate supply of water to the citizens of the City and County of Denver, and areas economically and socially integrated with the City with whom Denver Water has a water service contract.

The Manager represents the Board in ongoing relationships with all levels of government, community organizations, and the public served and recommends to the Board a rate structure and other income producing procedures that will assure adequate sources of funds to meet operating and maintenance costs, finance of ongoing capital improvement programs, and the principal and interest payments on long-term debts.

### Manager & Staff Regular & Introductory Employees (At End of Year)

Section	2007 <u>Actual</u>	2008 <u>Actual</u>	2009 <u>Budget</u>	2009 <u>Actual</u>	2010 <u>Budget</u>
* Manager & Staff	14.0	15.0	16.0	5.0	6.0
** Internal Auditor				2.0	2.0
<b>Total</b>	<b>14.0</b>	<b>15.0</b>	<b>16.0</b>	<b>7.0</b>	<b>8.0</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions.

\*\*New section for Internal Audit.

### Manager and Staff Goals for 2010

- Clearly articulate Denver Water’s current direction and vision.
- Share information with and receive feedback from all levels of the organization.
- Gain a deeper understanding of the goals of individual Board members and assist the Board in defining their collective goals.

### Accomplishments During 2009

- Developed opportunities for Manager and Executive Staff to interact with customers and employees in the field.
- Supported strategies that allow executive staff to delegate work and spend more time thinking strategically.

#### Manager and Staff Goals

##### **Financial**

- ✓ Exercise responsible financial stewardship

##### **Public Responsibility**

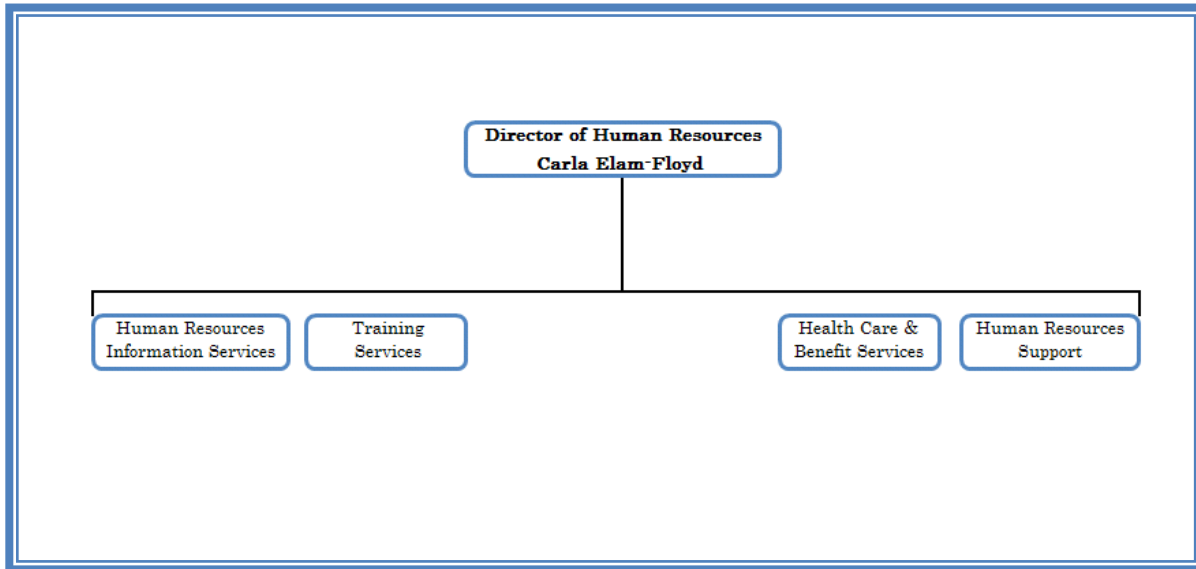
- ✓ Promote water efficiency and wise water use
- ✓ Develop additional supplies for the future

##### **Organization**

- ✓ Promote accountability
- ✓ Improve efficiencies
- ✓ Communication

### Manager & Staff - Expenditure History (Thousands of Dollars)

		2007	2008	2009	2009	2010
		<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$	1,947	2,087	2,049	2,054	821
Materials & Supplies/Plant Equip		3	12	7	4	5
Professionanl & Other Services		550	597	320	298	758
<b>Total</b>	<b>\$</b>	<b>2,500</b>	<b>2,696</b>	<b>2,376</b>	<b>2,356</b>	<b>1,584</b>



### Human Resources Division Highlights

Under the direction of the Manager, the Human Resources Division is responsible for interpreting, updating and enforcing Denver Water’s Personnel Policies; maintaining and revising Denver Water’s classification and pay plans; establishing and maintaining employees’ personnel records; implementing policies, procedures and programs relative to recruiting, hiring, managing and retaining Denver Water employees; developing programs for training, education, personal, professional and organization development; implementing programs related to health promotion, counseling, support, employee relations and equal opportunity; administering Denver Water’s employee benefits and retirement programs; investigating internal and external employee complaints; and developing community outreach efforts with the goal of establishing Denver Water as an employer of choice.

### Human Resources Division Regular & Introductory Employees (At End of Year)

Section	2007 <u>Actual</u>	2008 <u>Actual</u>	2009 <u>Budget</u>	2009 <u>Actual</u>	2010 <u>Budget</u>
* Human Resources	20.0	20.0	21.0	22.8	22.8
<b>Total</b>	<b>20.0</b>	<b>20.0</b>	<b>21.0</b>	<b>22.8</b>	<b>22.8</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions.

## Human Resources Division Goals for 2010

- Implement changes to the retiree medical program and ensure that Denver Water offers benefits comparable to peer organizations.
- Develop strategic communication plans that engage employees by giving them information about the organization and how the work they perform fits into Denver Water's mission and vision.
- Develop a proposal to make changes in Denver Water's compensation structure that allow employees to be compensated at a level equal to their contribution to the organization.

## Accomplishments During 2009

- Renewed healthcare benefit plans with changes to help control costs and create more accountability on the part of employees for the services used.
- Conducted annual compensation review and performed extensive analyses for Senior Staff and the Board in order to make difficult decisions regarding employee compensation.
- Visited outlying area employees and discussed upcoming Human Resources information and changes. Encouraged employees to send concerns and comments to HRQuestions.com. The information gathered from employees was shared with Staff and the Board for use in making compensation and benefit decisions.
- Working in conjunction with Legal, defined and implemented new Temporary Employee guidelines to establish clarity and provide flexible staffing options.

### Human Resources Division Goals

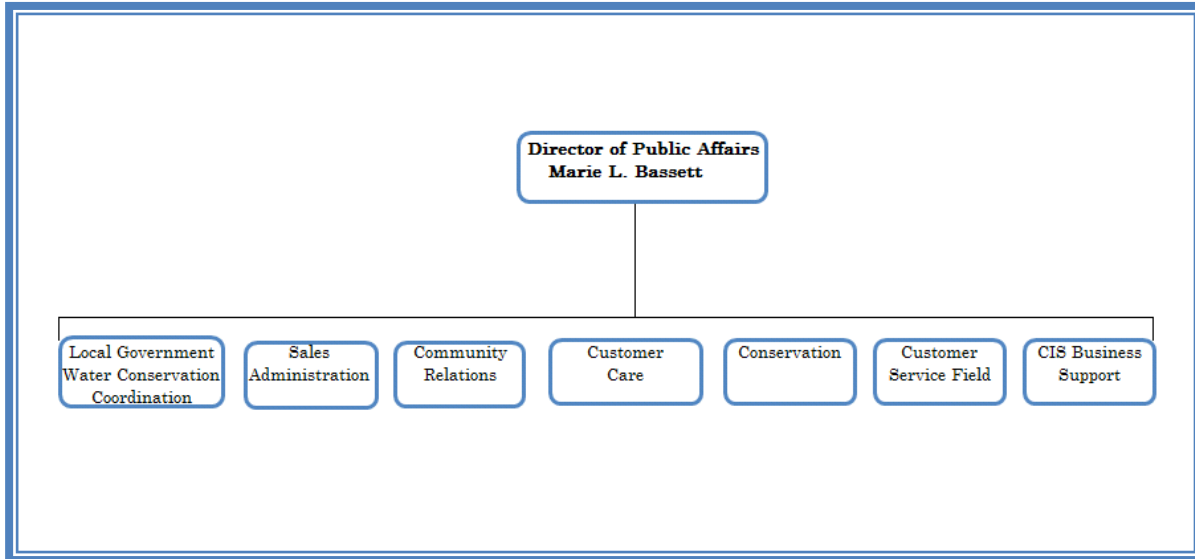
#### Organization

- ✓ Promote accountability
- ✓ Improve efficiencies
- ✓ Communication

### Human Resources Division - Expenditure History (Thousands of Dollars)

		2007	2008	2009	2009	2010
		<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$	3,536	2,230	2,230	1,976	2,408
Employee Benefits		12,596	11,358	13,646	15,402	14,604
Materials & Supplies/Plant Equip		239	295	169	168	158
Professional & Other Services		2,242	2,165	2,266	1,361	2,560
<b>Total</b>	<b>\$</b>	<b>18,613</b>	<b>16,048</b>	<b>18,311</b>	<b>18,907</b>	<b>19,730</b>





### Public Affairs Division Highlights

Under the direction of the Manager, the Public Affairs Division facilitates relationships with people and entities outside of Denver Water. The division responds to customer concerns and manages customer relations, maintains cooperative relationships with Denver City administration and governmental agencies whose sphere of operation affects Denver Water, coordinates the administration of distributor contracts, and facilitates Denver Water's relations with its various publics.

### Public Affairs Division Regular & Introductory Employees (At End of Year)

Section	2007	2008	2009	2009	2010
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
* Director of Public Affairs	7.0	8.0	8.0	4.0	5.0
* Community Relations	5.4	6.0	7.6	9.6	9.6
* Conservation	12.0	15.0	17.0	17.0	18.0
Central Services	3.0	3.0	3.0	3.0	3.0
* Customer Care	39.3	43.0	45.2	41.2	43.2
** CIS Business Support	0.0	0.0	1.0	5.0	5.0
* Customer Services - Field	60.0	66.0	85.0	75.0	82.0
Meter Inspection Group	7.0	8.0	8.0	5.0	8.0
* Sales Administration	12.6	12.0	14.8	16.8	16.8
<b>Total</b>	<b>146.3</b>	<b>161.0</b>	<b>189.6</b>	<b>176.6</b>	<b>190.6</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions, and section managers to their respective sections.

\*\*CIS Business Support was created to support the monthly billing system.

## Public Affairs Division Goals for 2010

- Continue implementation of Customer Information System to provide better service by allowing employees to retrieve all customer information at one time.
- Communicate the Board's resource strategies throughout the permit process for enlarging Gross Dam.
- Support Planning Division's IRP process and the transition to a new Denver Water Manager

## Accomplishments During 2009

- Provided water efficient hardware to schools, non-profits and low-income customers to increase water conservation.
- Accomplished July transition to new Customer Information System and monthly billing. The efficiencies allowed by the new software will be used to increase the spectrum of services offered to customers.

### Public Affairs Division Goals

#### Customer

- ✓ Provide reliable service
- ✓ Provide excellent service

#### Public Responsibility

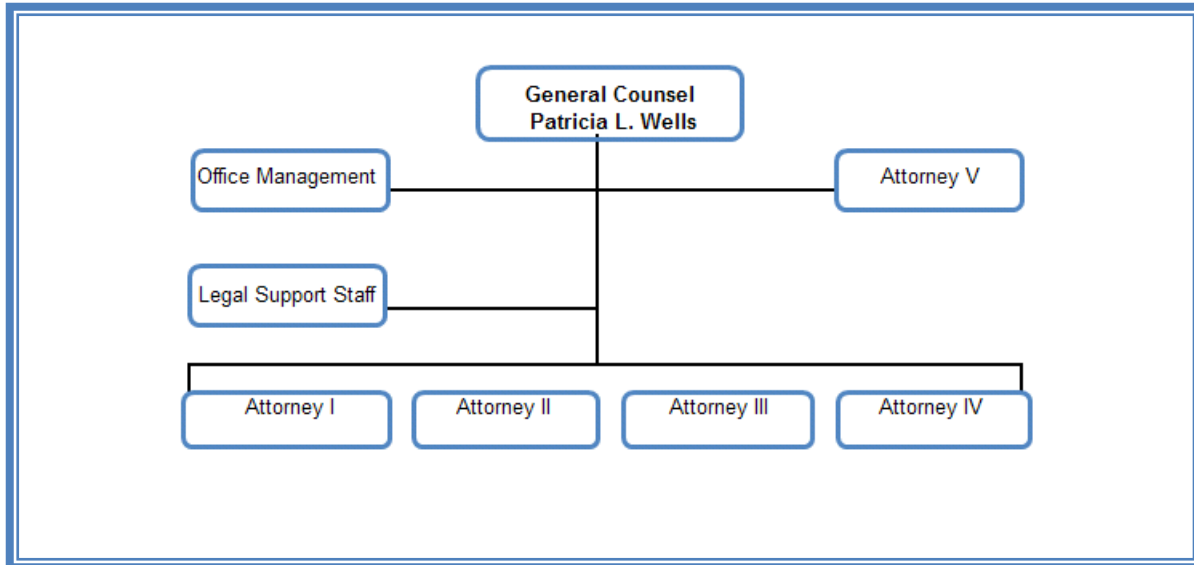
- ✓ Promote water efficiency and wise water use

#### Organization

- ✓ Communication

## Public Affairs Division - Expenditure History (Thousands of Dollars)

		2007	2008	2009	2009	2010
		<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$	6,911	8,321	8,879	9,673	10,149
Materials & Supplies/Plant Equip		1,689	3,216	4,609	4,092	8,156
Professional & Other Services		3,907	3,691	5,886	4,355	7,148
General Equipment		7	158	31	-	3
Refunds		776	1,048	580	1,484	1,080
All Other Miscellaneous		1,627	2,055	2,472	3,074	3,221
<b>Total</b>	<b>\$</b>	<b>14,917</b>	<b>18,489</b>	<b>22,457</b>	<b>22,678</b>	<b>29,757</b>



Patricia L. Wells  
General Counsel

### Legal Division Highlights

The Legal Division represents and gives legal advice to Denver’s Board of Water Commissioners, the Manager and the various divisions of Denver Water. It also handles all of Denver Water’s litigation.

The types of legal representation include water rights and diligence proceedings, administrative proceedings before state and federal agencies, contracts, civil rights, tort claims, real estate and condemnations, and municipal, employment, environmental and regulatory law. When special counsel are hired, the Legal Division collaborates in and supervises their activities.

In addition, the Legal Division represents Board interests in internal administrative appeals relating to personnel problems and customer complaints, reviews and advises upon matters of pending legislation, and prepares and reviews contract documents of all kinds.

### Legal Division Regular & Introductory Employees (At End of Year)

Section	2007 <u>Actual</u>	2008 <u>Actual</u>	2009 <u>Budget</u>	2009 <u>Actual</u>	2010 <u>Budget</u>
* Legal	13.75	12.0	13.6	14.6	14.6
<b>Total</b>	<b>13.8</b>	<b>12.0</b>	<b>13.6</b>	<b>14.6</b>	<b>14.6</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions.

### Legal Division Goals for 2010

- Continue to provide legal advice and assistance as needed to assist other divisions in accomplishing their goals.
- Resolve through negotiation or litigation the various claims and lawsuits brought against Denver Water.
- Participate in mediation efforts with West Slope entities to help formulate workable agreements as consensus is reached.

### Accomplishments During 2009

- Provided legal expertise and opinions in the mediation with Western Slope water users that has made progress during the past year.
- Updated standard contract formats with regard to several legal issues, and created formats for contracts related to water conservation incentives.
- Provided guidance and legal assistance during the National Environmental Policy Act (NEPA) permitting process for the enlargement of Gross Reservoir.

#### Legal Division Goals

##### Customer

- ✓ Provide reliable service

##### Financial

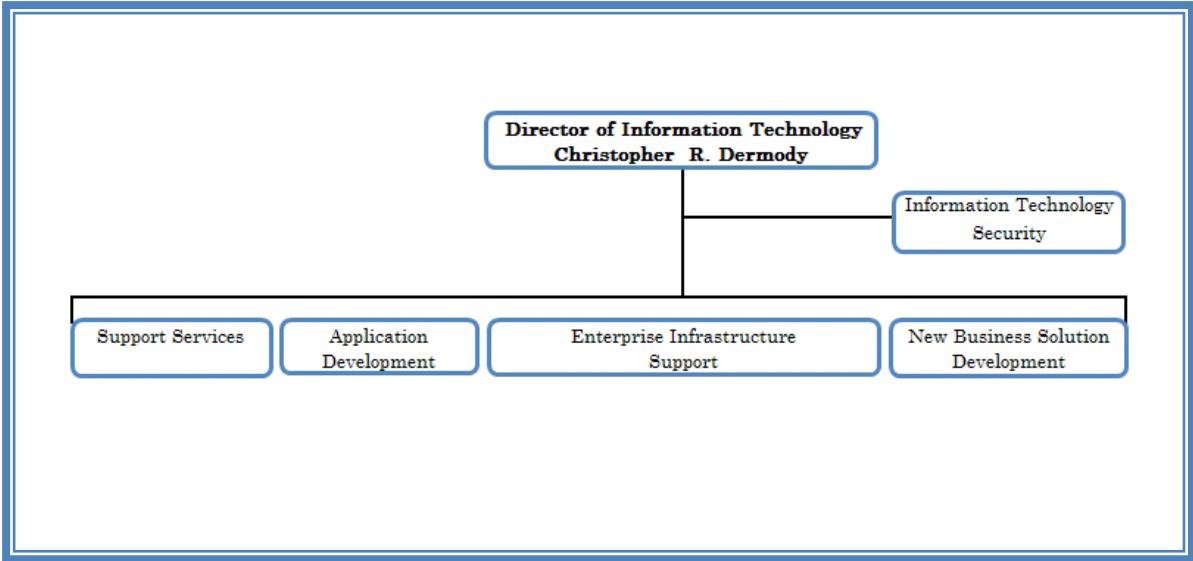
- ✓ Exercise responsible financial stewardship

##### Organization

- ✓ Promote accountability
- ✓ Improve efficiencies
- ✓ Communication

### Legal Division - Expenditure History (Thousands of Dollars)

	2007	2008	2009	2009	2010
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$ 1,110	1,178	1,165	1,183	1,403
Materials & Supplies/Plant Equip	4	3	2	6	3
Professional & Other Services	386	1,398	316	1,294	938
All Other Miscellaneous	353	1,544	730	1,247	735
<b>Total</b>	<b>\$ 1,853</b>	<b>4,123</b>	<b>2,213</b>	<b>3,730</b>	<b>3,079</b>



Christopher R. Dermody  
Director of Information  
Technology

### Information Technology Division Highlights

Under the direction of the Manager, the Information Technology Division develops, implements and supports computer applications, data-center operations and the technology infrastructure for Denver Water. This involves identifying and implementing appropriate technologies to meet the business needs of Denver Water, providing appropriate resources to support technologies that are implemented, providing availability of these technologies 24 hours per day, seven days per week and providing security for information maintained on the various computer systems.

### Information Technology Division Regular & Introductory Employees (At End of Year)

Section	2007 <u>Actual</u>	2008 <u>Actual</u>	2009 <u>Budget</u>	2009 <u>Actual</u>	2010 <u>Budget</u>
* Information Technology	57.8	61.0	70.0	69.0	70.7
<b>Total</b>	<b>57.8</b>	<b>61.0</b>	<b>70.0</b>	<b>69.0</b>	<b>70.7</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions.

## Information Technology Division Goals for 2010

- Improve Asset Management capabilities through automation solutions related to work management, GIS information access, accounting process for Use of Funds tracking, asset information management and O&M information management.
- Improve time keeping capabilities, efficiencies and accuracy by completing the implementation of the Enterprise Time Management System.
- Improve information reporting and analysis by completing the development of a new Customer Data Warehouse.
- Improve various customer service and conservation related capabilities through enhancements to the CIS System.

## Accomplishments for 2009

- Improved customer service capabilities, rate design capabilities, billing flexibility, and internal efficiencies with the implementation of the new Customer Information System.
- Improved Asset Management capabilities.
- Improved contract administration capabilities by enhancing the Contract Administration System to better handle SDBE information management and tracking of insurance information.
- Improved the management of Health & Safety tracking system.
- Improved Conservation capabilities through enhancements to the mobile and back-office systems.
- Improved Engineering and Budgeting capabilities through various enhancements to the Engineering Project Planning and Enterprise Budgeting Systems.

### Information Technology Division Goals

#### Customer

- ✓ Provide reliable service

#### Financial

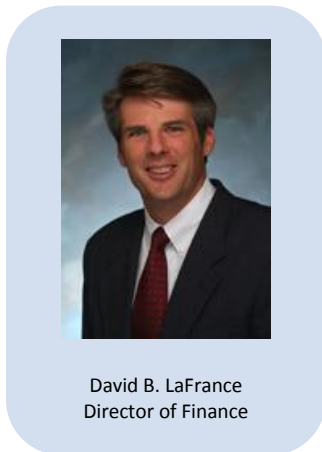
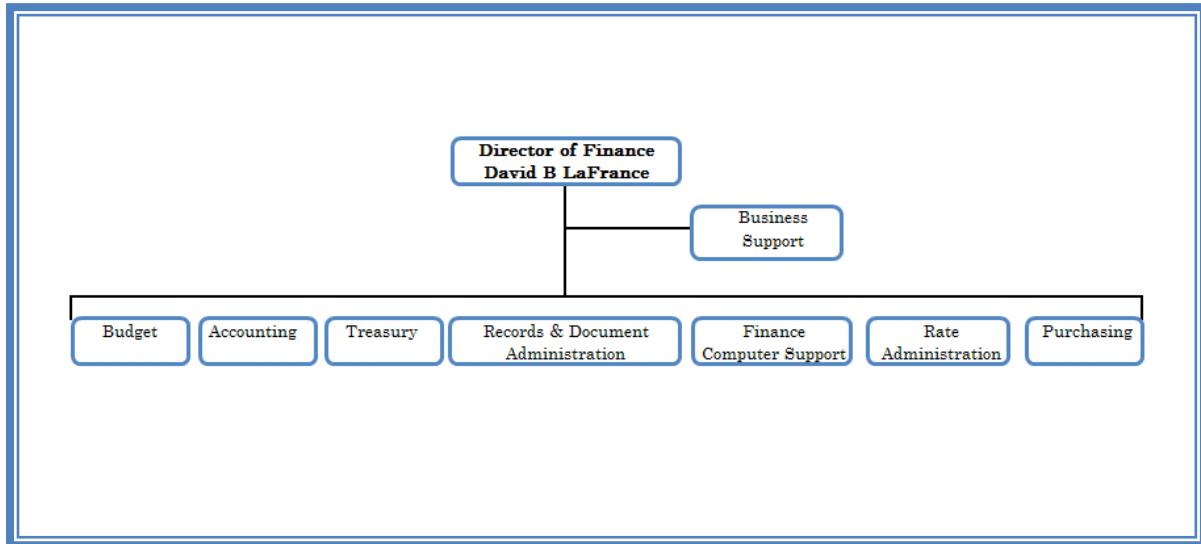
- ✓ Exercise responsible financial stewardship

#### Organization

- ✓ Promote accountability
- ✓ Improve efficiencies
- ✓ Communication

## Information Technology Division - Expenditure History (Thousands of Dollars)

	2007	2008	2009	2009	2010
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$ 5,267	5,369	5,550	6,415	6,698
Materials & Supplies/Plant Equip	2,133	2,677	1,767	2,138	1,223
Utility & Pumping	1,402	1,458	1,617	1,854	2,584
Professional & Other Services	6,566	16,216	20,184	14,333	10,292
General Equipment	338	53	59	45	1,588
<b>Total</b>	<b>\$ 15,706</b>	<b>25,773</b>	<b>29,177</b>	<b>24,785</b>	<b>22,385</b>



### Finance Division Highlights

Under the direction of the Manager, the Finance Division is responsible for managing financial resources, acting as the disbursing authority for the Manager and providing electronic record keeping.

### Finance Division Regular & Introductory Employees (At End of Year)

Section	2007	2008	2009	2009	2010
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
* Director	9.0	9.0	10.0	2.0	3.0
** Finance Computer Support	0.0	0.0	0.0	2.0	2.0
* Treasury Operations	7.0	7.0	7.0	8.0	8.0
* Budget Section	4.0	4.0	4.0	5.0	5.0
* Accounting	18.0	19.0	19.0	19.0	20.0
* Rate Administration	2.0	3.0	3.0	4.0	4.0
* Records & Document Admin	6.0	6.0	8.0	9.0	9.0
* Purchasing	8.0	8.0	8.0	9.0	9.0
<b>Total</b>	<b>54.0</b>	<b>56.0</b>	<b>59.0</b>	<b>58.0</b>	<b>60.0</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions, and section managers to their respective sections.

\*\*Finance Computer Support was previously included with Director.

## Finance Division Goals for 2010

- Provide leadership, guidance and support as part of a smooth and seamless management transition.
- Provide financial leadership for strategic Board initiatives such as the Western Slope mediation, Wise project and Gross Enlargement and keep Denver Water financially strong and fiscally responsible.
- Continue to work toward breaking down barriers between divisions.

## Accomplishments for 2009

- Provided financial leadership on several enterprise initiatives such as the CIS implementation, CIS-City financing, gravel pit financing, and retirement plan assessment recommendation.
- First issuer of Build America Bonds in Colorado.
- Improved budget processes and integrated work teams, improved contract controls, updated retention schedules, obtained numerous competitive bids, and achieved GFOA awards.
- Increased financial employee understanding of Denver Water's governance and strategic vision by their attendance at a Board meeting and reading the draft strategic plan.

### Finance Division Goals

#### Financial

- ✓ Exercise responsible financial stewardship

#### Public Responsibility

- ✓ Promote water efficiency and wise water use
- ✓ Develop additional supplies for the future

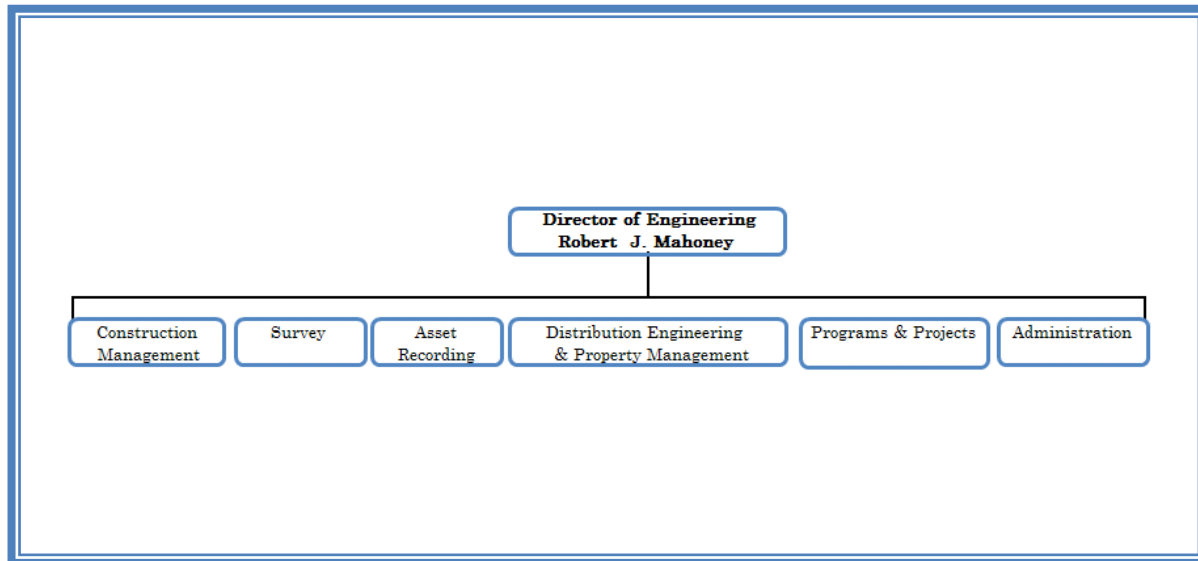
#### Organization

- ✓ Improve efficiencies

## Finance Division - Expenditure History (Thousands of Dollars)

	2007	2008	2009	2009	2010
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$ 3,343	3,629	3,701	3,870	4,191
Employee Benefits	14,868	15,844	23,431	23,396	22,305
Materials & Supplies/Plant Equip	651	456	546	652	561
Professional & Other Services	1,995	1,877	2,685	2,575	2,718
General Equipment	-	-	-	213	50
Contract Payments	-	123	-	-	-
Refunds	85	1,102	93	277	90
Debt Service	53,678	49,575	51,655	50,616	50,324
All Other	32	36	40	15	40
<b>Total</b>	<b>\$ 74,652</b>	<b>72,642</b>	<b>82,151</b>	<b>81,614</b>	<b>80,279</b>





Robert J. Mahoney  
Director of Engineering

### Engineering Division Highlights

Under the direction of the Manager, the Engineering Division is responsible for the design, construction and related engineering aspects of physical additions or improvements to the water system.

### Engineering Division Regular & Introductory Employees (At End of Year)

Section	2007 <u>Actual</u>	2008 <u>Actual</u>	2009 <u>Budget</u>	2009 <u>Actual</u>	2010 <u>Budget</u>
* Director of Engineering	4.0	3.0	4.0	6.0	6.0
Programs & Projects	41.0	49.0	55.0	57.0	59.0
Survey	25.0	26.0	27.0	26.0	26.0
Asset Recording	7.0	7.0	8.0	7.0	7.0
Distribution/Property Mgmt	39.0	41.0	44.0	40.0	41.0
Construction Management	23.0	21.0	24.0	23.0	24.0
<b>Total</b>	<b>139.0</b>	<b>147.0</b>	<b>162.0</b>	<b>159.0</b>	<b>163.0</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions.

## Engineering Division Goals for 2010

- Start and complete construction of the Einfeldt Decentralization Station.
- Complete construction of new inlet control at Cheesman Dam and begin demolition of original valves.
- Continue progress on the Vault and Pipe Rehabilitation programs.
- Initiate new Project Management training series to enhance project delivery capabilities.
- Complete design and start construction of Siphon 5 on the Moffat Collection System.

## Accomplishments for 2009

- Placed Miller Reservoir online and completed construction of Cat Reservoir Pump Station.
- Continued work on the Pipe and Vault Rehabilitation programs and the South Boulder Diversion Canal Replacement Program.
- Published first draft of system wide Infrastructure Master Plan.

### Engineering Division Goals

#### **Customer**

- ✓ Provide reliable service
- ✓ Provide excellent service

#### **Financial**

- ✓ Exercise responsible financial stewardship

#### **Public Responsibility**

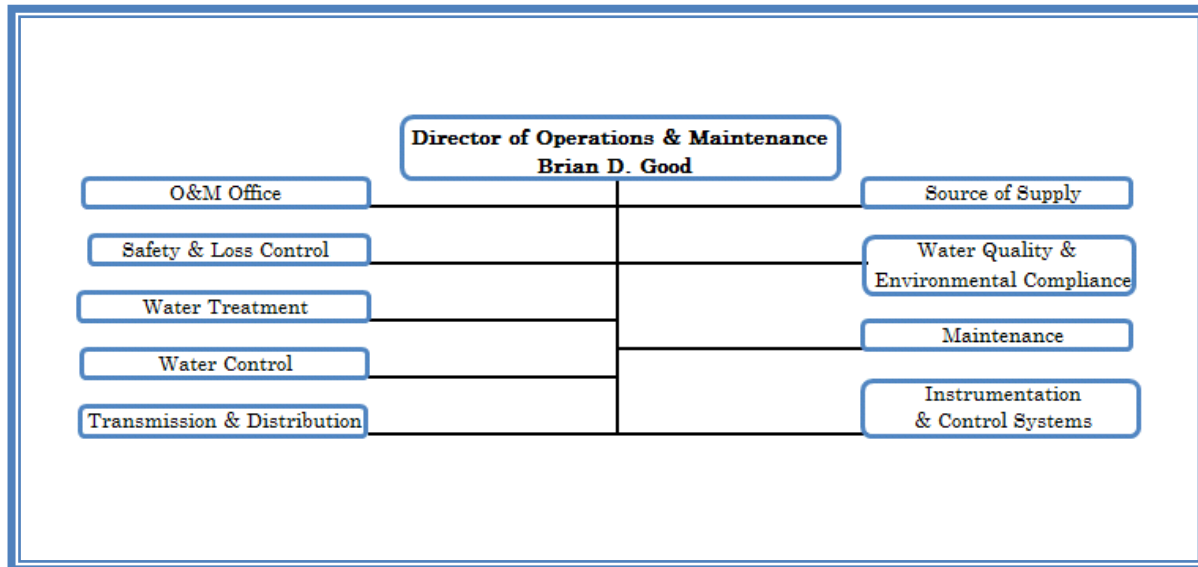
- ✓ Develop additional supplies for the future

#### **Organization**

- ✓ Promote accountability
- ✓ Improve efficiencies

### Engineering Division - Expenditure History (Thousands of Dollars)

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2009</u>	<u>2010</u>
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$ 9,359	10,528	10,904	11,837	12,751
Materials & Supplies/Plant Equip	1,597	3,016	4,669	2,305	1,810
Utility & Pumping	177	152	145	151	115
Professional & Other Services	8,783	13,410	5,083	11,065	6,874
General Equipment	231	409	375	524	175
Contract Payments	53,953	36,904	53,500	29,870	76,255
Refunds	2	9	-	3	-
<b>Total</b>	<b>\$ 74,102</b>	<b>64,428</b>	<b>74,676</b>	<b>55,755</b>	<b>97,980</b>



Brian D. Good  
Director of Operations  
& Maintenance

### Operations and Maintenance Division Highlights

The Operations and Maintenance Division is responsible for the collection, treatment, and distribution of potable and recycled water. The Division operates and maintains major dams and reservoirs, hydropower generating facilities, multiple raw water tunnels and canals, treatment plants, finished water reservoirs with pump stations, and nearly 2,700 miles of water mains throughout Denver and its Total Service area.

### Operation & Maintenance Division Regular & Introductory Employees (At End of Year)

Section	2007	2008	2009	2009	2010
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Recycled Water Program	0.0	0.0	0.0	1.0	1.0
* Plant Office	3.0	3.0	4.0	4.0	4.0
Water Quality & Compliance	32.0	32.0	33.0	32.0	33.0
Safety & Loss Control	14.0	15.0	16.0	16.0	16.0
Source of Supply	53.0	60.0	62.0	60.0	62.0
Water Treatment	90.0	92.0	92.0	89.0	91.0
Water Control	54.0	57.0	61.0	57.5	60.5
Transmission & Distribution	144.0	145.0	158.0	149.0	158.0
Instrumentation & Control	11.0	11.0	13.0	12.0	13.0
Maintenance and Warehouse	120.0	123.0	124.0	121.0	124.0
<b>Total</b>	<b>521.0</b>	<b>538.0</b>	<b>563.0</b>	<b>541.5</b>	<b>562.5</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions.

**Operation & Maintenance Division Goals for 2010**

- Participation in various master planning efforts.
- Improve two-way communication throughout O&M to improve efficiency and to ensure compliance with various initiatives.
- Improve employee training and the transfer of knowledge due to continued workforce turnover.

**Accomplishments for 2009**

- Designed, constructed and initiated test of a pilot plant looking at sodium hypochlorite as an alternative disinfectant to chlorine. Final testing and a written report are due in 2010.
- Participated in various stakeholder groups such as the Douglas County Local Emergency Planning Council and regulatory groups such as the Water Utility Council and Water Treatment Residuals Committee.
- Fleet and maintenance shops improved efficiency and provided better asset management through use of predictive-maintenance procedures and our computerized maintenance management system. Implemented new, more flexible and fuel-efficient vehicles.
- Water Control developed new operator-training programs, commissioned the new backup operations facility, updated all existing standard operating procedures and began development of new procedures using SharePoint as a tool to coordinate and share information.
- Continued to redevelop our cross-connection control program, implementing a new software program in conjunction with the CIS and working diligently with Denver Parks and our distributors to update our records and ensure compliance with state regulations. A new Cross-Connection-Control-Tester certification program was developed.

**Operation & Maintenance  
Division Goals**

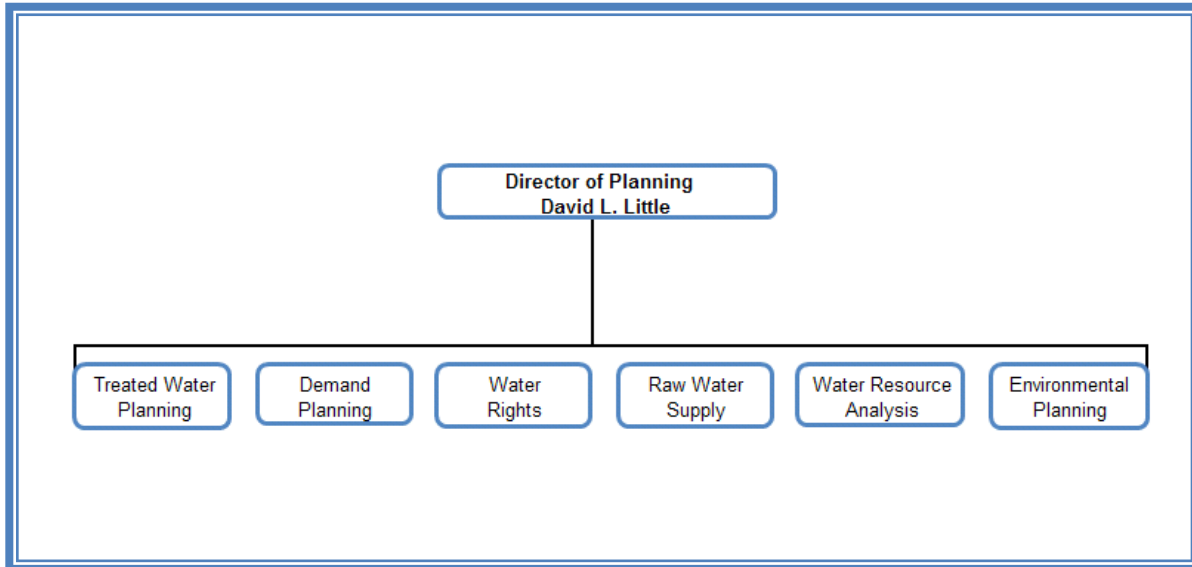
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**Customer**  
✓ Provide reliable service

**Organization**  
✓ Promote accountability  
✓ Improve efficiencies  
✓ Communication

**Operations & Maintenance Division - Expenditure History**  
(Thousands of Dollars)

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2009</u>	<u>2010</u>
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$ 29,979	31,917	32,264	32,858	34,615
Materials & Supplies/Plant Equip	13,196	17,180	16,030	15,486	16,242
Utility & Pumping	5,141	6,537	6,797	5,353	6,968
Professional & Other Services	10,679	13,344	12,706	13,857	14,766
General Equipment	2,017	2,405	3,144	3,033	3,145
<b>Total</b>	<b>\$ 61,012</b>	<b>71,383</b>	<b>70,941</b>	<b>70,587</b>	<b>75,736</b>



### Planning Division Highlights



David Little  
Director of Planning

The Planning Division identifies the future water and facilities needs of Denver Water and develops strategies for meeting those needs. As it plans for the future, Planning must consider how new water rights, infrastructure and resource management alternatives will work with the Board's existing raw water collection and treated water distribution systems.

### Planning Division (Thousands of Dollars)

Section	2007	2008	2009	2009	2010
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
* Director of Planning	2.0	2.0	2.0	3.0	3.0
Environmental Planning	4.6	5.0	5.6	5.6	5.6
Raw Water Supply	6.0	6.0	6.0	6.0	6.0
Water Rights	7.0	7.0	8.0	7.0	8.0
Raw Water Planning	10.8	11.0	11.0	11.0	11.0
Water Resource Planning	4.0	2.0	2.0	2.0	2.0
Demand Planning		4.0	5.0	4.0	5.0
Treated Water Planning	7.0	8.0	8.0	8.0	8.0
<b>Total</b>	<b>41.4</b>	<b>45.0</b>	<b>47.6</b>	<b>46.6</b>	<b>48.6</b>

\*Starting with 2009 Actual, Director positions moved from Manager & Staff to their respective divisions.

## Planning Division Goals for 2010

- Continue progress towards obtaining the Final Moffat Supply project Environmental Impact Statement.
- Complete critical Watershed Wildfire Protection Plans Assessments and Prioritization for the St. Vrain (Gross Reservoir) watershed and continue to identify and implement on-the-ground forest treatments in Denver Water's collection system.
- Take the lead in deciding if and how to proceed as a partner in the WISE project.
- Complete the new Integrated Resource Plan.
- Complete the treated Water Planning Study.
- Resolve mediation efforts of Green Mountain Reservoir and operating mechanisms.
- Continue development of Denver Water's Conservation Plan.
- Support the Board initiative for the Western Slope mediation.

### Planning Division Goals

#### Financial

- ✓ Exercise responsible financial stewardship

#### Public Responsibility

- ✓ Promote water efficiency and wise water use
- ✓ Develop additional supplies for the future

#### Organization

- ✓ Promote accountability
- ✓ Improve efficiencies
- ✓ Communication

## Accomplishments for 2009

- Completed the draft Environmental Impact Statement (EIS) for the Moffat Collection System Project and attended Public Hearings.
- Upper Colorado and Blue River Watershed Wildfire Protection Plans Assessments completed.
- Incorporated the south gravel pit complex into raw water operations.
- Continued planning for development of the treated water distribution system.
- Preserved water resources by successfully addressing water rights issues, endangered species studies, and other environmental concerns.
- Established a more efficient 10-Year capital plan/annual budget process.

### Planning Division - Expenditure History (Thousands of Dollars)

	2007	2008	2009	2009	2010
	<u>Actual</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Salaries & Wages	\$ 3,381	3,561	3,928	4,008	4,299
Materials & Supplies/Plant Equip	45	39	54	26	55
Utility & Pumping	215	283	253	309	1,217
Professional & Other Services	2,968	3,310	4,246	3,201	4,669
Contract Payments	-	-	16	-	16
General Equipment	-	-	-	-	5
<b>Total</b>	<b>\$ 6,609</b>	<b>7,193</b>	<b>8,497</b>	<b>7,544</b>	<b>10,261</b>

# Strategic Overview

<b>Long-Range Planning</b>	<b>40</b>
<b>Strategic Planning</b>	<b>40-41</b>
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**Dillon Reservoir**  
Owned and Operated by Denver Water  
Elevation: 9,017 feet (2748 meters) – spillway  
Capacity: 257,304 acre feet (1 acre foot = 325,851 gallons)









## Dillon Reservoir

### Background

Completed in September 1963, Dillon Reservoir is the largest water storage facility in the Denver Water system. The entire town of Dillon, Colorado, and a hydroelectric plant were relocated to build the dam. The dam was built to divert water from the Blue River Basin through the Harold D. Roberts Tunnel under the Continental Divide into the South Platte River Basin. Dillon Dam is an earth-fill dam, 5,888 feet long by 231 feet above the Blue River stream bed. Dillon Reservoir's surface area of 3,233 acres and 26.8 miles of shoreline supports many recreational activities.

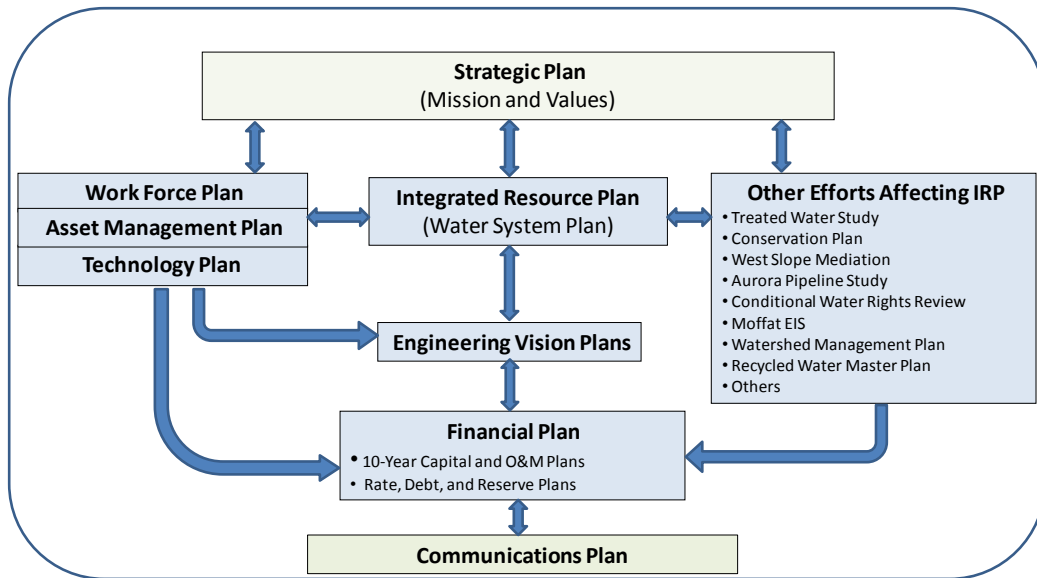
### Recreational Opportunities

Overview of available activities

 motorboating	Boating includes boat fishing, sailboating and motorboating. Boaters must observe Summit County and Colorado Boating Statues and Regulations. Marinas are operated from the towns of <a href="#">Dillon</a> and <a href="#">Frisco</a> . The reservoir's high water elevation is 9017 feet.
 sailboating	Dillon Marina's boat ramp is unusable for most motorized craft when the water is at elevation 8971 feet. Frisco Bay Marina's boat ramp is unusable for most motorized craft when the water is at elevation 9009 feet. <a href="#">Most current water elevation at Dillon.</a>
 canoeing	Canoeing is permitted. Other portable water crafts allowed include kayaks, canvas boats, and inflatables.
 kayaking	
 small water craft	
 windsurfing	Windsurfing (sailboarding) is permitted with full wet or dry suits.
 fishing	<a href="#">Both lake and stream fishing are available. Below the dam, the state designated the Blue River as Gold Medal waters. Check the Colorado Division of Wildlife for special regulations above the reservoir.</a>
 ice fishing	Ice fishing when conditions permit. Denver Water does not monitor ice conditions and those entering onto the ice should be aware of changing ice conditions and proceed at their own risk.
 camping	Dillon's 344 campsites accommodate tents, pickup campers, RVs and trailers. All campgrounds have a drinking water supply. Camping is allowed in designated sites only. Most campgrounds are provided by U.S. Forest Service. Reservation number: 1-877-444-6777.
 hiking	The recreation area provides a variety of hiking and bicycle trails, including more than seven paved miles of the 50-mile Summit County trail system. The Sapphire Point trail follows a half-mile path to the scenic overlook. The Old Dillon Reservoir trail connects to the lake which supplied the drinking water for the old town of Dillon.
 bicycling	
 scenic overview	Several overlooks are available around Dillon reservoir to view the dramatic backdrop of the Gore, Williams Fork and Ten Mile mountain ranges. See area map.
 hunting: fowl	Waterfowl hunting is allowed in the Dillon Reservoir Recreation Area boundaries strictly in accordance with all applicable federal, state, and local regulations.
 cross country skiing	The Frisco Nordic Ski area provides a cross-country ski trail system and ski rentals.
 renting	Fishing boats, sailboats, kayaks and canoes can be rented at the area shops. Sailboat tours originate from the Dillon Marina. Canoe tours, rental canoes and fishing boats also launch at the Frisco Bay Marina.



## Denver Water Long-Range Planning Activities



### Long-Range Planning

The Denver Water Board engages in a number of long-range planning efforts, all of which have a direct impact on the budget. The diagram above illustrates the intricate linkage between these various planning efforts.

### Strategic Planning

In 2008, Denver Water staff began the process of revising the Strategic Plan for the first time in more than 10 years. The process began by hiring a strategic planning professional who led interviews with executive staff and Board Members, as well as a series of employee and stakeholder focus groups. All employees were invited to give input and provide feedback throughout the process. Through this process recurring issues to be addressed were identified and a two-day strategic planning retreat was held to refine our Mission Statement and Values and develop draft strategies to advance the organization toward a 2013 Vision.

The major themes addressed during the 2009 Strategic Plan update were related to customers, employees, management roles and responsibilities, Board roles and responsibilities, proactively addressing change, and stewardship of our assets and water supply.

## Our Vision for 2013

1. We are recognized as the best water utility in the country and consistently are among the most desirable places to work in the state.
2. We have the trust of our customers, Board and employees.
3. Employees feel valued and believe their work makes a difference. Everyone within Denver Water is fully engaged and committed to achieving the goals of the organization.
4. We have become a more green organization.
5. We are highly regarded for planning for uncertainties such as climate, regulatory and demographic changes.
6. We have played a key role and been the catalyst for solving Front Range water supply problems.
7. We are a responsible steward of the natural environment.
8. We have reduced the controversies regarding our water rights.
9. Denver Water maintains a leadership role within Colorado regarding Colorado River Compact issues.
10. The 2010 Integrated Resource Plan is being successfully implemented.
11. Denver Water has a reputation for being a good neighbor and a community resource.
12. Water conservation is recognized by our employees and customers as necessary and important in managing water as a precious resource.
13. Wasting water is universally viewed as being socially irresponsible.
14. We have a highly reliable and well maintained infrastructure.
15. We have become a well respected applied research organization.
16. We are financially strong and fiscally prudent.
17. Denver Water is a leader among water utilities in optimizing the use of technology.
18. We have achieved the goals set forth in the 2009 Strategic Plan.

The table to the left outlines the Denver Water Vision for 2013. In the Draft Strategic Plan, strategies have been identified to ensure that the organization achieves this vision. Many of the strategies outlined in the plan do not have a direct budgetary impact. Examples of such strategies include having executive-level staff spend more time in the field to promote an understanding of what employees do every day, improving communications, attending more community meetings, and encouraging employees to volunteer in the community. Other strategies, such as implementing the Conservation Plan, visiting other utilities to gain efficiencies through best practices, and developing an enterprise-wide asset management plan, will require the dedication of financial resources and are reflected either in the 2009 Annual Budget or the long-range plans.

Although many aspects of our Draft Strategic Plan are currently implemented, the Board is delaying official implementation until a new Chief Executive Officer is hired.

## **Integrated Resource Planning**

In 1997, Denver Water was one of the first water utilities in the country to prepare an Integrated Resource Plan (IRP) to address changes in the water service industry that could impact our service area. The IRP is narrower in scope, but more detailed than the Strategic Plan and specifically addresses the level of system reliability we want to provide to customers, new facility needs, water quality issues, and operations and maintenance direction for our treatment and distribution systems. The 1997 plan resulted in the Board issuing a Resource Statement that identified a near-term strategy of conservation, non-potable reuse, system refinements, cooperative resource projects and supply projects. These projects are currently under development.

Efforts are currently underway to update the IRP. It has become apparent that the future for which the organization is planning is uncertain. New developments that could influence the Board's future actions include the severe drought, catastrophic wildfires, terrorist attacks, climate change, the pine beetle impact on our watersheds, and new risks of regulatory changes. The new IRP process addresses the need for an expanded, more fully integrated long-range planning process that will:

1. Incorporate new demand planning and conservation opportunities.
2. Address emerging water quality challenges.
3. Integrate planning across the raw water, treatment, distribution, and recycling water systems in a more complete manner.
4. Redefine the appropriate levels for system reliability and water service goals.
5. Develop planning strategies for addressing new uncertainties from climate changes, regulatory risks, demand pattern changes, system failure risks and rehabilitation requirements, and others.
6. Reassess the Board's role in regional and statewide water activities.
7. Integrate the results of the new IRP into future Capital Plans.

The projects that were identified in the 1997 IRP and subsequent 2002 update are underway and are included in our 10-Year Capital Plan. Examples of these projects are the Moffat Collection System and Gravel Pit storage, which are discussed in the section below. When the new IRP is completed in 2010, the results will be integrated into the long-range Capital Plan.

## **10-Year Financial Planning**

Each year Denver Water engages in a 10-Year Financial planning process that looks at capital and operating priorities over the next ten years. Finance Division staff then conduct an analysis to determine the appropriate combination of rate revenue, debt, and cash reserves needed to finance the plan.

The 2010-2019 Financial Plan reflects Denver Water's focus on planning for the water needs of our customers and our neighbors in the coming years. Our organizational commitment to meeting these needs through a combination of new water supply, water conservation, and water reuse is apparent in these documents.

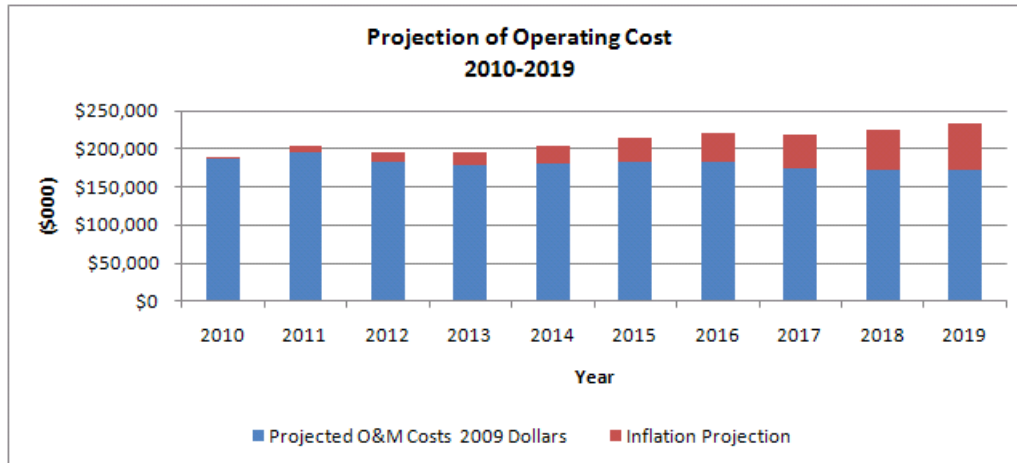
The single largest project in the 10-Year Capital Plan is the Moffat Collection System project. Currently, over 80% of Denver Water's system relies on the unimpeded operation of just one of our reservoirs (Strontia Springs). An emergency above this reservoir or an extreme drought could result in a shortage of water in the Moffat Collection System. Denver Water has performed extensive reviews of alternatives to increase water supply to this system. Enlarging Gross Reservoir is the least costly and most environmentally friendly means to achieve the required additional water supply. The current 10-Year Plan estimate for the project is \$226 million, with construction scheduled for 2012-2016. In late 2009, the U.S. Army Corps of Engineers issued a draft Environmental Impact Statement for this project and instituted a public comment period that will go through March, 2010. Once the comment period is closed, the Corps will analyze the comments and incorporate them where appropriate. If major changes to the scope of the project are not required, the Corps could issue Denver Water a permit for the project by the end of 2010. The 2010 budget contains \$1.4 million for the completion of the Environmental Impact Statement and the commencement of design work.

*The single largest project in the 10-Year Capital Plan is the Moffat Collection System project.*

The 10-Year Capital Plan also outlines \$51.1 million in funding for our Gravel Pit Storage Projects. These projects, which are being developed cooperatively with other Denver Metro area water users, reclaim mined gravel pits and convert them into water storage which can be used for river exchanges or to supplement water available to the non-potable reuse plant. For 2010, just over \$5.0 million has been allocated for construction work on the gravel pits, including construction of a pump station, an interconnect pipe, and additional land purchases.

The Denver Water commitment to non-potable reuse is also reflected in the 10-Year Capital Plan. The Board of Water Commissioners has expressed a desire to accelerate the build out of the recycled water system to 2020. There is a total of \$130.0 million allocated to the expansion of the recycled water plant and distribution system. The distribution system will grow to connect new customers to the system. An expansion of the recycled water plant is scheduled for 2017-2019 and will add 15MGD capacity to the facility. The 2010 capital improvement plan provides \$4.8 million for the expansion of our recycled distribution system.

As is the case with most water utilities, Denver Water is faced with an aging infrastructure, with some parts of the collection, treatment, and delivery system nearing the end of their useful life. In order to meet our strategic objective and charter requirement to deliver high quality water at the lowest possible cost, we must step up our efforts to replace this aging infrastructure. This commitment is also reflected in the 10-Year Capital Plan where we have budgeted \$130.0 million for pipe replacements and rehabilitation, more than double the amount spent in the previous 10 years. The 2010 capital improvement plan includes a 10% funding increase for system reinvestment.



The graph presented here shows how Denver Water’s Operating Costs are expected to grow over the next 10 years. Much of the growth represented in this chart is related to our commitment to water supply, reuse, and conservation as outlined above.

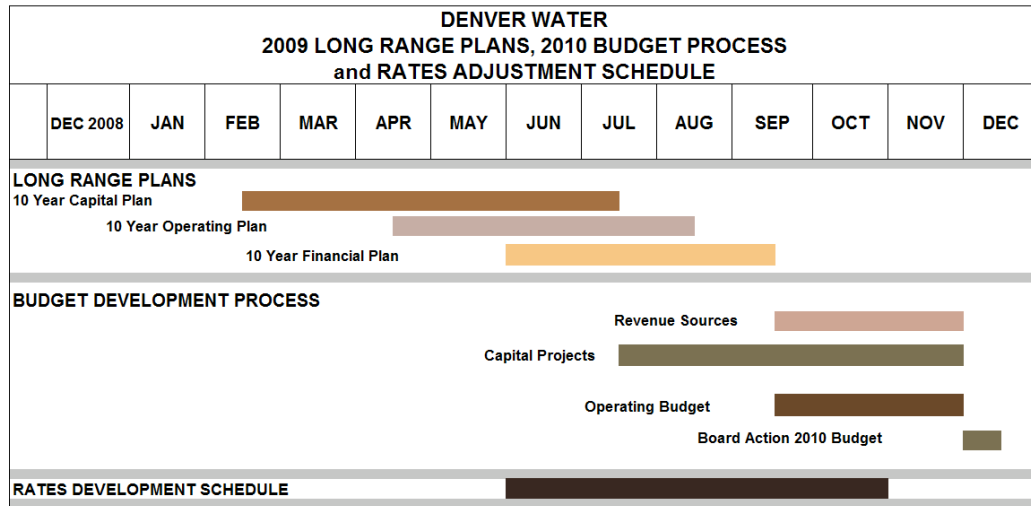
The largest single operating expenditure in the planning horizon is the removal of sediment from the Strontia Springs Reservoir. During the Buffalo Creek (1996) and Hayman (2002) fires, much of the vegetation in this watershed was destroyed. As a result, rainstorms now push sediment into the reservoir and 8-10% of the storage capacity has been lost. This project was originally scheduled to begin in 2009, but was delayed one year when the Board adopted a revised budget in April, 2009. In the next two years, Denver Water will engage in a \$26 million project to regain lost capacity by removing the sediment and piping it to our Kassler Facility, over 6 miles downstream. The 2010 Approved Budget allocates \$8.0 million for design and construction work on this project.

The 2010-2019 Operating Plan also reflects Denver Water’s continued efforts to encourage our customers to use water wisely in all situations. In 2006, the Denver Water Board directed staff to accelerate conservation programs in order to achieve its stated goal of 29,000 acre-feet of water savings in 2016 rather than in 2050 as originally planned. Denver Water expects to spend \$89.0 million on conservation programs in the next 10 years. In 2010, \$11.4 million will be spent on education and outreach, rebates and incentives, and monitoring and evaluation of each program.

As with most public sector enterprises, Denver Water is also anticipating significant future cost increases for chemicals, maintenance, security, and employee benefits. These increases are reflected in the 10-Year Plan and the 2010 Annual Budget.

Once the 10-Year Capital and Operating priorities have been finalized and incorporated into the Financial Plan, the Finance Division, works to develop the strategy to finance the plan. The draft 10-Year Financial Plan is presented to the Board in July. After Board approval, the water rates are developed for the following year.

## Annual Budget Process



The annual budget process begins in July, when the 10-Year Financial Plan has been finalized. The first year of the completed Financial Plan is presumed to be the following year's annual budget. Measurable changes are made to the annual Capital and Operating budgets as estimates for revenues, staffing levels, salaries, benefits, and project schedules are refined. Throughout the fall, meetings are held with the Board's Budget subcommittee to discuss budget assumptions or changes that have occurred since the rates were adopted. At the public Board workshop in November, the full Board is presented with a draft of the annual budget. Feedback is incorporated into the budget and the final budget is presented to the Board for adoption at a public meeting in early December.

### Amending the Budget

Budgets for projects or activities may be added or revised during the year. When possible, funds are transferred from another project that has been delayed or cancelled. All changes must be requested via an official variance notification to the Budget Manager and signed by the appropriate Division Director. Division Directors can authorize expenditures up to \$10,000 without further approval. Expenditures up to \$100,000 can be authorized by the Manager, but all contracts and purchases over \$100,000, whether budgeted or unbudgeted, must be authorized by the Board of Water Commissioners. The Board Agenda Item form provides transparent information as to whether a particular item was budgeted in the current year.

The Budget Office provides a variance report and updated forecast at the end of each quarter to the executive staff and the Board Budget Subcommittee. These reports provide information about year-to-date budget performance and changes which occurred during the previous quarter and their impact on reserve balances.

## Summary of Financial Policies

The Board has established financial policies that constitute the basic framework for the financial management of Denver Water. These policies are intended to assist members of the Board and Denver Water's staff in evaluating current activities and proposals for future programs, and are reviewed on an annual basis and modified to accommodate changing circumstances or conditions. Where applicable, copies of the financial policies are included in the appendix at the end of this document. A summary of these policies is presented below:

- Balanced Budget:* The Denver Board of Water Commissioners has not adopted an official policy on a balanced budget. Our practice is to balance the budget by the planned use or contribution to investment balances.
- Cash Reserves:* The Charter of the City and County of Denver specifically allows the accumulation of reserves "sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions, and betterments, including those reasonably required for anticipated growth of the Denver Metropolitan area and to provide for Denver's general welfare." The Board's practice is to maintain reserves that are sufficient to provide 25% of the next year's operating costs, 50% of replacement capital and equipment purchases, one year of debt service, and a 5% self-insurance reserve.
- Basis of Accounting:* The Board's financial statements are accounted for on the flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets and liabilities associated with operations are included on the statement of net assets, revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred. This is different from the basis of budgeting. The Denver Water budget is prepared using the modified accrual basis in which revenues are recorded when they become available and expenditures are recorded at the time liabilities are incurred.
- Accounting Standards:* The Board's financial statements are prepared in accordance with principles generally accepted in the United States of America (GAAP). Additionally, the Board applies all applicable pronouncements of the Governmental Accounting Standards Board (GASB).
- Chart of Accounts:* The Chart of Accounts utilized by Denver Water generally follows the structure presented by the National Association of Regulatory Utility Commissioners for Class A Water Utilities (NARUC).
- Capital Policy:* Initial acquisition costs of assets are capitalized if they have a service life of more than one year and a cost of \$5,000 or more. Costs not meeting these criteria are expensed. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective asset classes.

*Revenues:* Denver Water is completely funded through rates, fees and charges for services provided by Denver Water. There are no transfers to or from the City's general fund. Water rates pay for operation and maintenance expenses, repair, capital replacements and modifications to existing facilities, debt service and a portion of the costs of new facilities and water supply.

*Expenditures:* In planning expenditures, Denver Water follows the City Charter's mandate to keep rates as low as good service will permit. In practice this means that Denver Water will properly maintain its facilities and continuously seek ways to operate more efficiently.

*Risk Management:* The Board is exposed to various risks of loss, including general liability, (limited under the Colorado Governmental Immunity Act to \$150,000 per person and \$600,000 per occurrence) property damage, employee life, medical, dental and accident benefits. The Board has a risk-management program that includes self-insurance for liability, employee medical, dental and vision. The Board carries commercial property insurance for catastrophic losses, including floods, fires, earthquakes and terrorism for identified major facilities.

*Investments:* The Board has protection of principal as its primary investment policy objective. The Board designates its authority to invest monies deposited in the Water Works Fund to the Manager and the Director of Finance. According to the current investment policy, U.S. Government obligations and government sponsored federal agency securities, commercial paper, corporate fixed income securities, money market funds and repurchase agreements are permissible investments. The official policy outlines allowable credit risk and maximum maturities for each investment type.

*Debt Guidelines:* Denver Water has no legal debt limits. However, the Board has adopted Debt Guidelines to guide the timing and use of debt in the future. The guidelines set forth a policy that prevents debt proceeds from being used to pay operating and maintenance expenditures. The guidelines instruct that debt proceeds will be used only for current refunding, advanced refunding and payment for non-recurring capital projects that expand the system or are otherwise unusual in nature or amount.



## Fund Structure

Denver Water is an “enterprise” of the City within the meaning of Article X, Section 20 of the Colorado Constitution. The Board maintains a single fund as mandated by the City Charter which states:

“There is hereby created a Water Works Fund into which shall be placed all revenues received from the operation of the Water Works system and plant together with all monies received by the Board from other sources...”

Although the Board approves the rates and the annual budget, no funds are appropriated.

Fund Balance: Denver Water defines fund balance for the Water Works Fund as the balance at the beginning of the period, plus the total sources of funds, less total uses of funds for the period. Within the Water Works Fund there are legally restricted funds and Board designated funds. As outlined above, the Board targets reserves to pay for operating, capital, self-insurance and debt service in an emergency, in addition to the restricted and designated funds. Any excess funds above these target amounts are considered available for future capital projects.

2010 Investment Balance Summary (\$000)			
	2009 Actual (12/31/2009)	2010 Projected (12/31/2010)	Change 2010-2009
Beginning Balance 01/01	\$ 198,311	\$ 194,012	
Total Sources	\$ 290,306	\$ 291,336	
Total Uses	\$ 288,558	\$ 338,565	
	\$ (6,047)	\$ -	
Ending Investment Balance 12/31	\$ 194,012	\$ 146,783	\$ (47,229)
Less: Board Designated Cash			
Land Sale Proceeds	\$ 11,969	\$ 11,969	\$ (0)
Blue River Decree Litigation	\$ 4,443	\$ 3,500	\$ (943)
OPEB Designated Funds	\$ 6,189	\$ 7,800	\$ 1,611
Total Board Designated Cash	\$ 22,601	\$ 23,269	\$ 668
Less: Legally Restricted Cash:			
Debt Reserve Funds and Capital Project Accounts	\$ 10,085	\$ 6,451	\$ (3,634)
Total Legally Restricted Cash	\$ 10,085	\$ 6,451	\$ (3,634)
Available Investment Balance	\$ 161,326	\$ 117,063	\$ (44,263)
Less: Operating/Insurance Reserve (30% of Operating)			
	\$ 58,175	\$ 58,482	\$ 308
Less: Part II/III Capital Reserve (50% Replacement Capital)			
	\$ 20,653	\$ 24,431	\$ 3,778
Available for Future Operating & Capital 12/31	\$ 82,498	\$ 34,150	\$ (48,348)

## Debt Information

As set forth in the debt guidelines adopted in May, 2003, Denver Water issues debt only for refunding current maturities of existing debt (current refunding), refunding future maturities of existing debt (advance refunding), and for non-recurring capital expenditures. Operating expenses and capital improvements of a normal recurring nature are included in the calculation of the revenue requirement from rates and are, therefore, financed on a “pay-as-you-go” basis.

The Treasury section monitors the marketplace and evaluates the appropriateness of various financing sources for specific capital projects. The expected life of the asset, the nature of the covenants, and the impact on the organization’s future financial flexibility and whether Denver Water will be able to support the projected level of debt are analyzed.

Denver Water’s policy is to structure current refunding so that the final maturity of the debt does not exceed the useful life of the asset. Advance refunding is considered when the net present value savings on the bonds being refunded are greater than 3% and the refunding is permitted by statutory regulations.

Denver Water’s debt guidelines state the organization’s desire to maintain the stand-alone revenue bond rating at a level of AA or better. In order to maintain or exceed this rating Denver Water uses the following, guidelines in financial planning activities:

- a. The Debt Ratio (Total Debt divided by the sum of net fixed assets plus net working capital) should not exceed 40%.
- b. Interest Coverage (Net Revenues divided by Interest Requirements-excluding System Development Charges) should be equal to or greater than 2.5x.
- c. Debt Service Coverage, as defined in the Master Bond Resolution should be equal to or greater than 2.2x.
- d. The year-end balance in the Water Works Fund, net of Principal and Interest Requirements for the next 12 months should be equal to or greater than \$5 million.

### Debt Principal and Interest Obligations

(in Millions of dollars)

Year	Principal	Interest	Total
2010	\$ 32.2	\$ 19.1	\$ 51.3
2011	24.0	17.4	41.4
2012	19.7	16.2	35.9
2013	21.1	15.3	36.4
2014	22.1	14.3	36.4
2015	23.2	13.2	36.4

# Budget Summary

**Comparison of Sources and Uses of Funds**

**50**

**Priorities and Issues**

**51-54**



Photo by Jackie Shumaker



Photo by Jackie Shumaker



Photo by Jackie Shumaker

## **Eleven Mile Canyon Reservoir**

**Owned and Operated by Denver Water**

**Elevation:** 8,602 ft. (2,261m) – top of dam

**Capacity:** 97,779 acre feet (one acre foot = 325,851 gallons)




## Eleven Mile Canyon Reservoir

### Background

Completed in 1932 after two years of construction at a cost of only \$1.5 million, Eleven Mile stands 135 feet above the South Platte riverbed. The six-mile long reservoir is second largest in the Denver system and one of the largest bodies of water east of the Continental Divide. Eleven Mile has a surface area of 3,405 acres and 23.9 miles of shoreline.

### Recreation Opportunities

Overview of available activities

 <p>motorboating</p>	<p>Power boats, canoes, sailboats, windsurfing, and jet-skis are permitted. Boaters must observe Colorado boating statutes and regulations. All islands within the reservoir are closed to public use, and reservoir is closed to night boating from half an hour after sunset to half an hour before sunrise.</p> <p>Boat ramps are located at the North Shore campground, Witcher Cove campground and Little Cove.</p>
 <p>sailboating</p>	<p>The reservoir's high water elevation is 8594 feet.</p>
 <p>canoeing</p>	<p>Boat ramps may not be used for most motorized craft when the water is at the following elevations: North Shore campground – 8571 feet; Witcher Cove campground – 8594 feet; Little Cove – 8594 feet.</p> <p>Current water elevations at Eleven Mile.</p>
 <p>windsurfing</p>	
 <p>jet skiing</p>	
 <p>renting</p>	
 <p>fishing</p>	<p>Rainbow, brown and cutthroat trout, kokanee salmon, northern pike and carp are found at the reservoir.</p>
 <p>ice fishing</p>	<p><a href="#">Ice fishing when conditions permit. Denver Water does not monitor ice conditions and those entering the ice should be aware of changing ice conditions and proceed at their own risk. Check with State Parks.</a></p>
 <p>camping</p>	<p>State Parks Campground Classifications</p> <p>Class A – Deluxe, Class B – Improved Class C – Basic, Class D – Semi-primitive, Class E – Primitive.</p> <p><a href="#">Fees vary according to classification. See Colorado State Parks.</a></p>
 <p>picnicking</p>	<p>Picnic areas available for day use.</p>
 <p>hiking</p>	<p>The area offers eight miles of scenic hiking, biking and horseback riding trails.</p>
 <p>bicycling</p>	
 <p>horseback riding</p>	

<b>Comparison of Sources and Uses of Funds</b>					
<b>(Thousands of Dollars)</b>					
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2009</b>	<b>2010</b>
	<b>Actual</b>	<b>Actual</b>	<b>Budget</b>	<b>Actual</b>	<b>Budget</b>
<b>Beginning Investment Balance</b>	<b>\$149,198</b>	<b>\$226,160</b>	<b>\$198,311</b>	<b>\$198,311</b>	<b>\$194,012</b>
<b>Sources of Funds:</b>					
Operating Revenue	\$ 194,224	\$ 204,232	\$ 212,028	\$ 188,293	\$ 223,305
Non-Operating	2,843	3,140	3,157	2,467	3,482
Hydropower	2,392	4,315	3,305	4,949	3,797
System Development Charges	26,213	19,138	8,000	9,013	8,000
Participation, Reimbursements & Grants	3,327	5,197	11,605	10,938	4,863
Interest on Investments	9,295	8,133	4,944	5,183	704
Other	9,563	9,696	9,170	5,675	8,185
<b>Subtotal Sources of Funds</b>	<b>\$ 247,857</b>	<b>\$ 253,851</b>	<b>\$ 252,209</b>	<b>\$ 226,518</b>	<b>\$ 252,336</b>
Debt Proceeds	99,158	1,800	44,075	44,000	39,000
<b>Total Sources of Funds</b>	<b>\$ 347,015</b>	<b>\$ 255,651</b>	<b>\$ 296,284</b>	<b>\$ 270,518</b>	<b>\$ 291,336</b>
<b>Uses of Funds:</b>					
<b>Operation &amp; Maintenance Programs:</b>					
Raw Water	\$ 7,962	\$ 8,857	\$ 12,325	\$ 9,411	\$ 23,766
Recycled Water	2,203	2,786	3,517	2,729	3,700
Water Treatment	13,220	15,635	16,972	16,109	18,825
Delivery	16,597	19,824	17,095	18,161	19,983
Conservation	4,722	6,568	9,665	8,741	11,444
Customer Service	6,962	7,968	9,209	10,085	14,862
General Plant	7,447	10,049	9,241	10,514	9,538
Administration	33,251	38,623	36,865	40,422	44,347
Distributed Indirect Costs	40,747	40,789	48,644	52,439	47,450
<b>Total Operation &amp; Maintenance</b>	<b>\$ 133,111</b>	<b>\$ 151,099</b>	<b>\$ 163,533</b>	<b>\$ 168,611</b>	<b>\$ 193,915</b>
<b>Capital Programs:</b>					
Raw Water	\$ 22,983	\$ 25,366	\$ 33,021	\$ 23,045	\$ 38,999
Recycled Water	20,632	2,695	1,552	702	5,198
Water Treatment	11,375	17,843	12,570	10,019	10,628
Delivery	18,528	13,677	20,077	16,591	24,885
General Plant	9,515	23,216	28,117	18,791	14,415
<b>Total Capital</b>	<b>\$ 83,033</b>	<b>\$ 82,797</b>	<b>\$ 95,337</b>	<b>\$ 69,148</b>	<b>\$ 94,125</b>
<b>Debt Service:</b>					
Debt Service	53,909	49,604	51,933	50,800	50,525
<b>Total Uses of Funds</b>	<b>\$ 270,053</b>	<b>\$ 283,500</b>	<b>\$ 310,803</b>	<b>\$ 288,559</b>	<b>\$ 338,565</b>
Cash Balance Adjustment*				\$ 13,742	
<b>Net Cash Flow</b>	<b>\$ 76,962</b>	<b>\$ (27,849)</b>	<b>\$ (14,519)</b>	<b>\$ (4,299)</b>	<b>\$ (47,229)</b>
<b>Ending Investment Balance</b>	<b>\$ 226,160</b>	<b>\$ 198,311</b>	<b>\$ 183,792</b>	<b>\$ 194,012</b>	<b>\$ 146,783</b>

\*Cash Balance Adjustment is required to reflect the Ending Investment Balance due to Accrual Based Expenditures.

*The above table shows a comparison of Denver Water's 2010 Budget to the 2009 Budget and actual expenditures from 2007-2009.*

## **Priorities and Issues**

Denver Water operates on a cost-of-service basis, a system through which rates are established in order to reimburse the utility for legitimate costs it encounters in serving customers. In a typical year we examine priorities, demand forecasts, and financial conditions and then set revenue and expenditure projections through our 10-year planning process in June. The resulting rates and expenditures become the basis for the following year's annual budget, although some small changes are made in the interim.

## **Revenue Issues**

### Weather

Fluctuations in seasonal weather patterns have a significant impact on customer demand for water and, therefore, on Denver Water's operating revenues. Although water utilities tend to focus on drought planning, unusually wet weather can have similar financial impacts and this is what happened in 2009. Denver Water's 2009 revenue projections were calculated using a normalized historical water consumption assumption of 70 billion gallons of treated water. Our actual treated water demand for 2009 was 61.4 billion gallons and, as a result, revenue from water sales were \$23.8 million (11.2%) lower than the budgeted amount. The amount of treated water used by our customers in 2009 is comparable to the amount used at the height of our most recent drought in 2004.

Due mainly to concerns about the sluggish economy and its impact on our customers' water consumption, the Board of Water Commissioners adopted a revised budget in April 2009 that included a reduction in the operating expense budget. This action, combined with unanticipated delays in several of our major capital projects, allowed Denver Water to weather reduced revenues in 2009 while adding to our reserves.

As we begin 2010, Denver Water is again concerned about the impact weather may have on our revenues. As of mid-January, snowpack in Colorado's mountain river basins was only 79 to 90% of average. Runoff from melting mountain snows account for the majority of Denver Water's water supply. If snowpack and runoff figures are low enough, Denver Water may need to implement summer watering restrictions, which could result in another year of lower than anticipated revenue. Although significant winter storms in the mountains can still change the picture, Denver Water is monitoring the situation closely and will seek to respond nimbly to any further revenue shortfalls in a way that enables us to operate our system efficiently, meet our system expansion and improvement needs, and remain financially healthy.

## The Economy

Denver Water is an enterprise fund operating on an enterprise basis and, therefore, we do not receive any revenue from taxes. Our revenue vulnerabilities are largely related to water consumption and not the economic climate. While we face revenue shortfalls in an abnormally wet or dry year, consumer spending does not impact our revenue.

One aspect of the economy that impacts Denver Water's revenue projections is housing starts. Denver Water assesses a fee, known as a System Development Charge (SDC), for new connections to our system. These fees are used to fund expansion capital. As a result of the slumping housing market, receipts from SDCs were only 40% of normal in 2009. Based on information from the local Home Builders Association, we do not anticipate significant improvement in 2010. We have projected 2010 receipts from SDCs to be \$8.0 million, a considerable decrease from the \$22.0 million we would expect in a normal housing market.

*Our revenue vulnerabilities are largely related to water consumption and not the economic climate.*

## **Expenditure Issues**

### Capital Expenditures

During the drought of 2002-2004, Denver Water delayed or deferred over \$20 million in scheduled capital projects, resulting in a substantial backlog and increased risk to our system. The 2009 budget delayed an additional \$20.0 million in capital spending and unanticipated project delays resulted in actual expenditures that were \$26.0 million below the budgeted amount. The result of these delays is a "bubble" of capital projects that adds increasing risk to our system as it grows.

In an effort to eliminate the capital project backlog, Staff recommended, and the Board adopted, an ambitious \$1.3 billion 10-year capital expenditure program that includes funds to double our annual rate of system reinvestment, build out our recycled water and gravel pit storage systems by 2020, and complete a \$226 million project to raise the dam and expand storage capacity at Gross Reservoir. It is critical to our customers that we keep this capital program on track and not continue to push projects into later years.

New management strategies have been put into place to ensure these projects stay on schedule to the extent possible. The new approach includes the addition of an Assistant Chief of Engineering tasked with keeping projects on track, extensive project management training for project engineers, and a Capital Program Review (CPR) committee that meets once per month with the objective of breaking down barriers and improving communication between the Engineering, Operations, Planning, and Finance Divisions. The results so far have been impressive and the CPR group is already looking ahead to 2011 to ensure projects scheduled for that year are moving at an

appropriate pace. In fact, several 2011 projects are designed and ready to bid and can be substituted should any of the 2010 projects run into unanticipated design, permitting or legal issues.

A second year of significant revenue loss would present a major challenge to keeping our 10-year capital program on track, especially given SDC receipts that are likely to be less than half of normal. Staff is monitoring the situation on a monthly basis and if the revenue shortfall materializes we will be prepared to respond accordingly with a larger debt issue or use of cash reserves. Delaying scheduled capital projects will be the option of last resort.

### Operating Expenses

Most of Denver Water's operating expenses are fixed. In fact, only 7% of our operating costs are variable. This fact is of special concern when you consider that only 4.4% of our revenues are fixed. In other words, when revenue is significantly reduced due to low customer demand, we still have to operate our reservoirs, treatment plants, and distribution systems, read meters and bill customers, operate computer systems, and process payments and payroll. Therefore, it is not easy to reduce operating expenses significantly when revenues are down.

*Most of Denver Water's operating expenses are fixed.  
In fact, only 7% of our operating costs are variable.*

Recent circumstances are putting upward pressure on our operating expense budget. For example, in 2009 we moved from bi-monthly to monthly billing in an effort to give our customers more timely information about their water consumption. Although this move will benefit our conservation efforts, it also doubled our meter reading and billing costs. Employee and retiree health care costs are increasing rapidly, as are costs for security at our outlying facilities. As outlined in the budget message, a major dredging project to regain lost capacity in Strontia Springs Reservoir will add \$8.0 million to the operating budget in 2010, and another \$16.8 million in 2011.

Despite these difficulties, Denver Water has made a concerted effort to reduce operating expenses where possible. In 2009, training, travel, and consultant services were reduced significantly. In 2010, budgets for these items have been increased slightly, but still do not exceed 2008 levels. In an effort to keep costs low, Staff recommended, and the Board approved, a salary schedule that eliminated market adjustments for 2010. The Board also adopted major health insurance plan design changes and premium increases, effective January 1, 2010, which should help contain health care costs. Staff is also analyzing changes to our retiree medical program that may reduce our Other Post Employment Benefit (OPEB) liability in the future.



## **Financial Impact of Conservation**

Denver Water is faced with the seemingly contradictory relationship between water conservation and revenues. Denver Water sets water rates based on the cost of service ratemaking methodology and, therefore, sets rates to cover the costs of maintaining and operating the water system. The majority of our operating costs are fixed, and as a result, when water consumption is reduced revenues fall and rates must be raised to cover costs. Although water conservation will result in reduced costs for capacity additions in the future, most customers focus on the short-term impacts and believe they are being punished for conserving water.

This perceived conflict means that, while Denver Water must continue to cover full cost of service through water rates, we must also be aware of the impact on our customers. As part of this effort, proposed costs are evaluated each year with a mind toward the resulting rate increases. Through our Strategic Planning Process we have identified the need to educate our customers on the importance of water conservation and the future costs that can be avoided if we use water wisely.

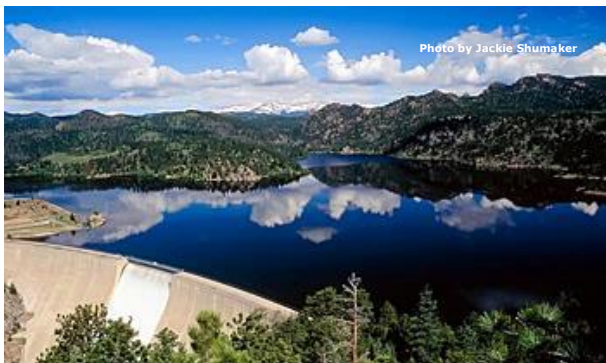
### ***Summary***

Denver Water begins 2010 in a strong financial position with a watchful eye on the weather and the potential financial impact of another year of revenue shortfall. In the sections that follow, our revenue projections and budget drivers for 2010 are described in detail.

Our commitment to providing high quality service at the lowest possible rates is reflected throughout the discussion of revenue and expenditures. The 2010 budget also has strong linkages to our long-term and strategic planning objectives.

# Sources of Funds

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<b>Interest on Investments</b>	<b>62</b>
<b>Other</b>	<b>63</b>
<b>Debt Proceeds</b>	<b>63</b>



## **Gross Reservoir**

**Owned and Operated by Denver Water**

**Elevation:** 7,225 feet (2,220 meters) – spillway

**Capacity:** 41,811 acre feet (one acre foot = 325,851 gallons)

## Gross Reservoir





### Background

Named for Denver Water former Chief Engineer Dwight D. Gross, the reservoir was completed in 1954. It serves as a combination storage and regulating facility for water that flows under the Continental Divide through the Moffat Tunnel.

Standing 340 feet above the South Boulder Creek streambed, Gross Dam contains some 627,559 cubic yards of concrete. Gross Reservoir has a surface area of 440 acres and 10.9 miles of shoreline.

### Recreation Opportunities

Overview of available activities

 <p>fishing</p>	<p>Cold water fishing; stocked by <a href="#">Colorado Division of Wildlife</a>. Also see <a href="#">Stocking Reports</a>.</p>
 <p>ice fishing</p>	<p>Ice fishing when conditions permit. Denver Water does not monitor ice conditions and those entering the ice should be aware of changing ice conditions and proceed at their own risk. Check with <a href="#">State Parks</a>.</p>
 <p>canoeing</p>  <p>kayaking</p>	<p>Boating is allowed (car-top non-motorized only) from Memorial Day through the end of September. <b>No trailer-hitched boats are allowed.</b></p> <p>Kayak access to the river below Gross Reservoir is available at the parking area below the dam. See map.</p>
 <p>picnicking</p>	<p>The east side developed areas are for day use only. Sheltered tables also available.</p>
 <p>camping</p>	<p>Limited access. High clearance vehicles required. West side managed by Roosevelt National Forest. Area has seasonal closure; check with Boulder District.</p>
 <p>hiking</p>	<p>Hiking is permitted from North Shore picnic area (trailhead to Rocky Point), South Side Dam, Miramonte picnic area, and Osprey Point (trailhead), to South Boulder Creek inlet.</p>

**2007-2010 COMPARISON OF SOURCES OF FUNDS**  
(In Thousands of Dollars)

	<b>2007 Actual</b>	<b>2008 Actual</b>	<b>2009 Budget</b>	<b>2009 Actual</b>	<b>2010 Budget</b>
Operating (Water Sales)	\$ 194,224	\$ 204,232	\$ 212,028	\$ 188,293	\$ 223,305
Non-Operating	2,843	3,140	3,157	2,467	3,482
Hydropower	2,392	4,315	3,305	4,949	3,797
System Development Charges	26,213	19,138	8,000	9,013	8,000
Participation/Reimbursements & Grants	3,327	5,197	11,605	10,938	4,863
Interest on Investments	9,295	8,133	4,944	5,183	704
Other	9,563	9,696	9,170	5,675	8,185
<b>Subtotal Sources</b>	<b>\$247,857</b>	<b>\$253,851</b>	<b>\$252,209</b>	<b>\$226,518</b>	<b>\$252,336</b>
Debt Proceeds	99,158	1,800	44,075	44,000	39,000
<b>Total Sources:</b>	<b>\$347,015</b>	<b>\$255,651</b>	<b>\$296,284</b>	<b>\$270,518</b>	<b>\$291,336</b>

The projected sources of funds for Denver Water in 2010 are \$291.3 million.



## Key Issues - Water Rates

### Water Rates

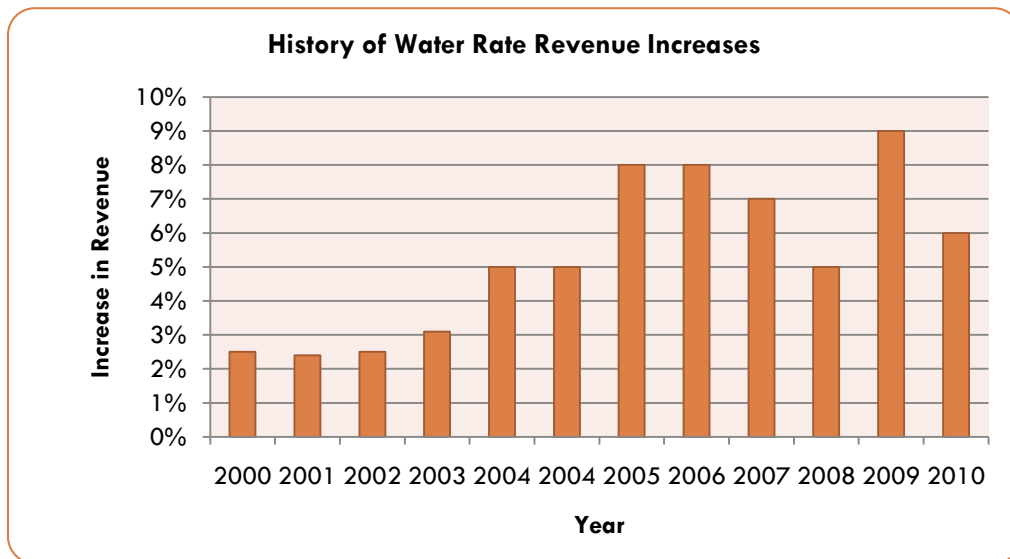
- The Board of Water Commissioners adjusts water rates annually to adequately recover the cost of providing service. These costs include operations and maintenance, debt service and rate financed capital.

### Rate Increase

- Effective February 2010, Denver Water's rates will increase. Typical residential customers will see their bills increase by about \$40 a year. Typical suburban residential customers served by Denver Water will see an increase of \$51 per year. The amount of the bill will vary depending on how much water the customer uses.

### Why Is the Rate Increase Necessary?

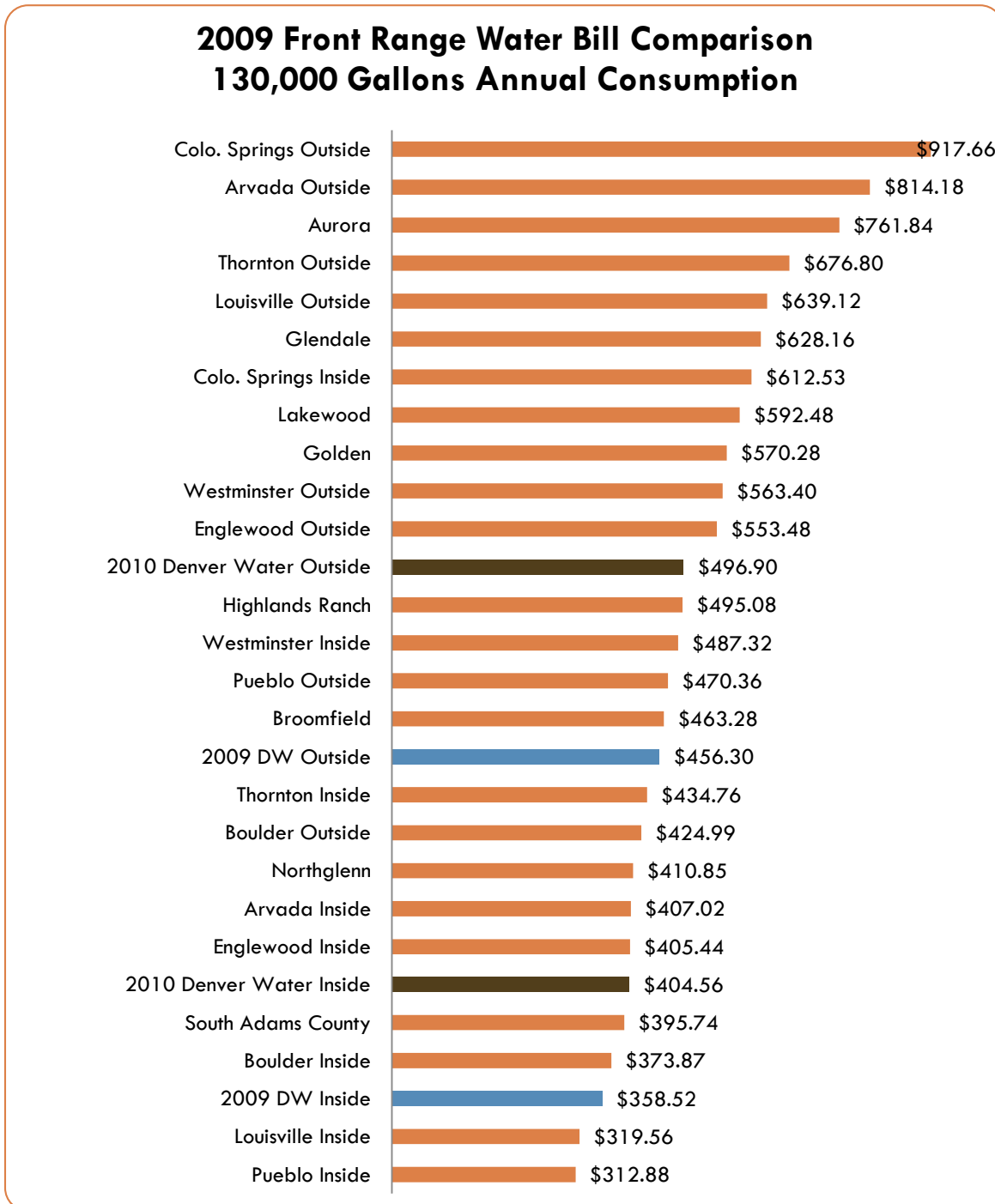
- Our most important responsibility is to ensure our community has a safe and reliable supply of clean water. Today, we are at a pivotal point. Our distribution system is aging. Over the long term, demand for water will continue to increase while the supplies to meet that demand will become increasingly limited. Also, the threat of climate change creates greater uncertainty with regard to our water supplies, 80 percent of which come from snow.



## Comparative Water Bills

The following table compares Denver’s annual residential water bills with those of the other independent suppliers in the Denver Metropolitan area for a representative residential customer based on usage of 130,000 gallons per year. This information is for comparison purposes only.

Rates for Denver Water customers living inside the city remain among the lowest in the metro area.



## Types of Water Service

Water rates are based on four types of retail metered service: Inside City, Outside City Read and Bill, Outside City Total Service and Master Meter Distributors. Inside City service refers to all water users inside Denver. Outside City Read and Bill service refers to areas outside the City where Denver Water is responsible for water delivery to a distributor and for reading meters and billing customers, while the distributor is responsible for operation and maintenance of the distribution system. Outside City Total Service refers to areas outside the City where Denver Water is responsible for water delivery, reading meters, and billing customers, as well as operation and maintenance of the distribution system.



⇒ 51% of our Customers live in the City and generate 44% of water sales revenue.

49% of our Customers live outside the City and generate 56% of water sales revenue. (Includes Master Meter Distributors)



A variation to the standard “Total Service” Contract is the Total Service Improvement Contract. Under this contract a Distributor whose system does not currently meet Denver Water Engineering Standards may request to enter into a “Total Service” Contract that includes special provisions for Denver Water to take dominion over the Distributor’s existing water system and to upgrade the Distributor’s water system to meet Denver Water Engineering Standards. A surcharge is assessed to each of the customers within the Distributor’s service area to pay for the improvements.

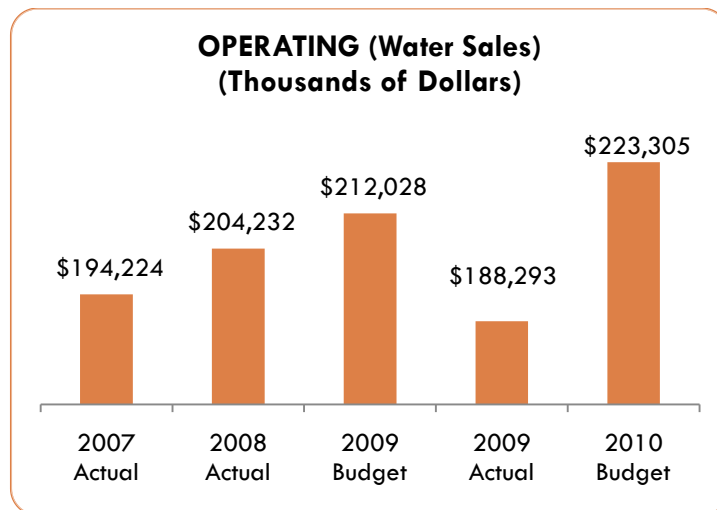
Denver Water also provides wholesale water service to Master Meter Distributors (water districts outside the City) that own and operate their own water system, perform their own meter reading and customer billing, and purchase water on a wholesale basis for distribution to their respective retail customers. Denver Water will bill the Distributor through master meters at a rate that reflects the cost of providing this additional service. Wholesale water distributors account for approximately 24% of our revenue from water sales.

### Operating (Water Sales)

Operating Revenues are generated from the sale of water to customers. In 2010, we anticipate that 88% of our revenue (not including debt) will result from water sales. The funds are used to pay normal operation and maintenance costs, replacement of facilities, and plant additions, as well as debt service.

Operating projections are based on an assumption of total demand for water compared to historic normal demand. Historically, Denver Water has been able to predict our consumer's water consumption patterns with a fair degree of accuracy. However, the recent drought and resulting change in our customers' water use has added a degree of uncertainty to our forecasting.

The 2010 forecast of revenues from the sale of water was based on a demand forecast of 70 billion gallons of treated water. This number is 18.4% below the historical normal demand projection. The 2010 Budget was reduced for Water Sales Revenue an additional 5% in an effort to mitigate any impacts the economy or weather may have on our customer's water use patterns.



#### 2010 Budget for Operating (Water Sales)

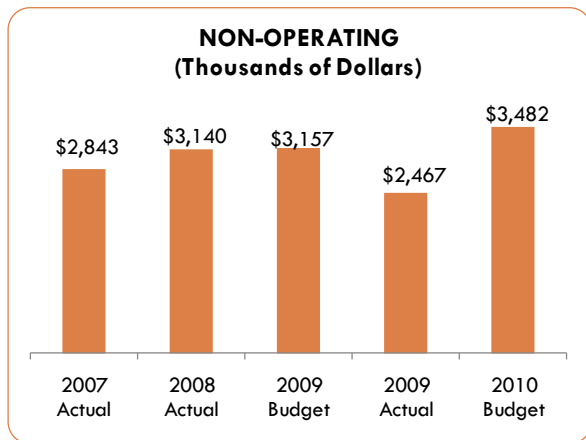
- Metered Water Sales \$155.4 million
- Private Fire Protection \$1.0 million
- Government Water Sales \$9.3 million
- Master Meter \$51.0 million
- Non-Potable Water \$5.6 million
- Non-Potable for Resale \$1.0 million



## Non-Operating

These funds are obtained from payments for services that Denver Water renders such as ditch assessments, irrigation, main inspections, installation of taps, calculating and mailing sewer bills, rents on Denver Water facilities and other such services.

Non-Operating cash receipts are estimated based on historical trends. The 2010 budget has increased as we anticipate larger payments from metro wastewater for sewer billing and collections.



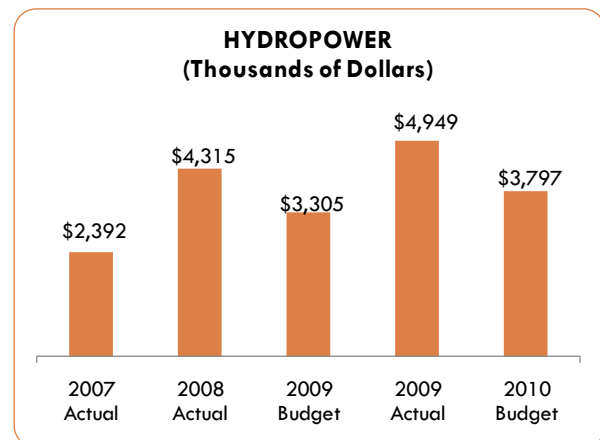
**2010 Budget for Non-Operating**  
Contract Work \$1.1 million  
Other Non-Operating Income \$2.4 million

## Hydropower

Denver Water generates hydroelectric power from our facilities at Dillon, Strontia Springs, Williams Fork and Gross Reservoirs as well as generation facilities at the Roberts Tunnel, Foothills Treatment Plant and Hillcrest Reservoir. Denver Water enters into agreements with electric utilities that purchase the generated power.

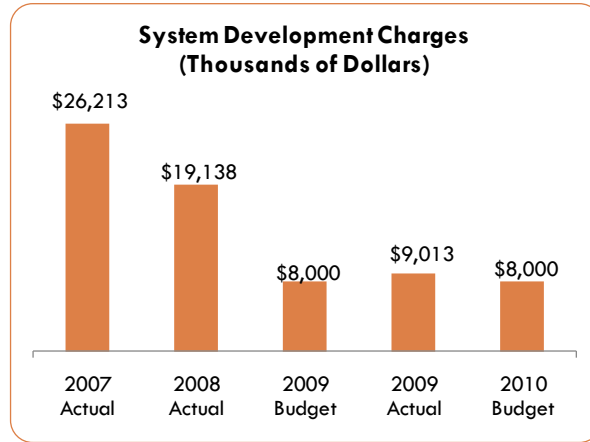
Projections are based on assumptions of normal weather, and hydrological conditions. Actual revenues vary depending on precipitation and reservoir levels. In 2010, Hydropower Revenues will decrease as our Williams Fork facility is taken out of service for upgrades.

**2010 Budget for Hydropower**  
Hydropower \$3.8 million



### System Development Charges

The System Development Charge (SDC) is a fee received for new connections to Denver Water's system. This charge applies to any applicant who is granted a license to take water through Denver Water's system or a system deriving its supply from Denver Water. The SDC, first implemented in 1973, provides a source of funds for expansion capital.



The charge is based upon the gross square footage of the single family residential lot or the number of units in a multi-family building, the size of the connection required, or estimated volume of water needed.

System Development Charge receipt projections are based on an estimate of the blended average cost for new taps, the anticipated growth rate for the number of new taps, and any anticipated rate increases. In calculating the 2010 estimated receipts from System Development Charges, the Rate Administration Section assumed a .67% growth rate and a 10% increase in SDC Revenue. In developing the 2010 SDC budget, we reduced the projected amount to the 2009 SDC budget level in anticipation of a continued slowdown in the construction industry.

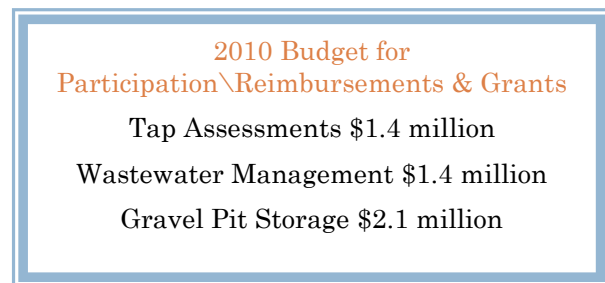
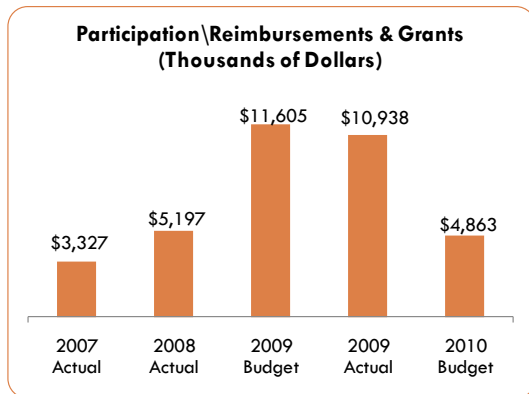
**2010 Budget for System Development Charges**  
System Development Charges \$8.0 million

## Participation\Reimbursements & Grants

A participation agreement is one in which a Distributor or Developer pays for a portion of the costs of the Denver Water distribution facilities such as conduits, treated water reservoirs, or pump stations required to provide service to that district. Estimates are based on the existence of contractual obligations.

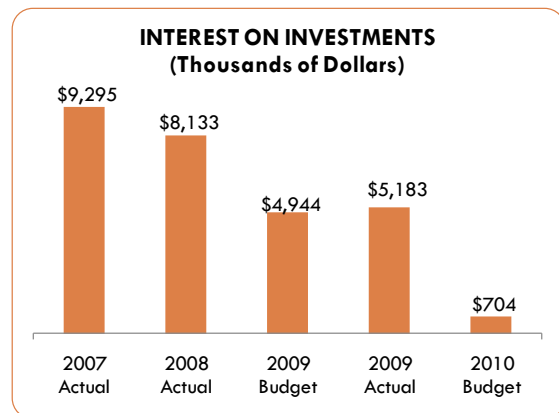
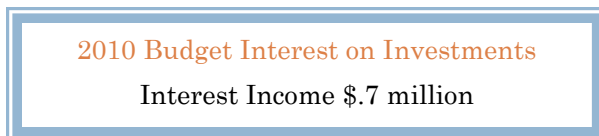
Reimbursements are compensation received from another entity for money already spent on collaborative projects. Grants are an award of financial assistance given by the government or some other organization.

In 2010 we are expecting \$1.4 million from Wastewater Management Division for their portion of cost for the Customer Information System Project and the \$2.1 million from South Adams County for previously completed work on gravel pit storage projects. The 2010 Budget was reduced by two large one-time payments received in 2009 from Farmers Reservoir & Irrigation Company and South Adams County Water and Sanitation District related to the Lupton Lakes property purchase.



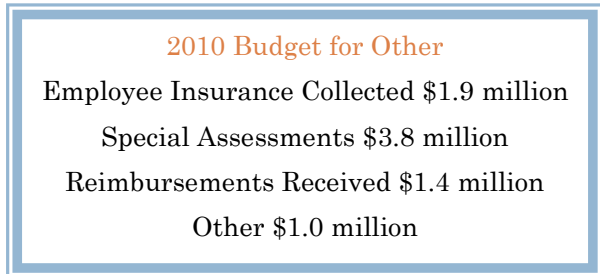
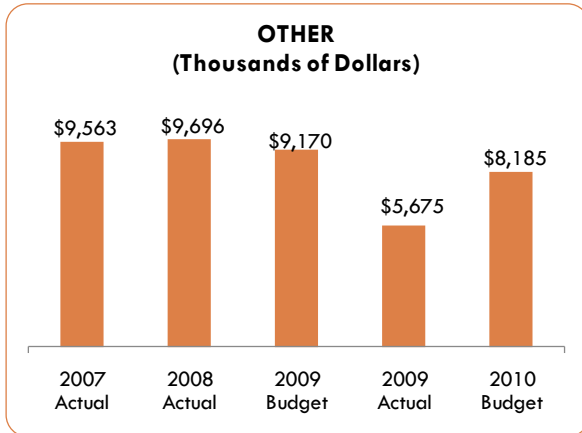
## Interest on Investments

The projection for interest on investments is based on estimates of month-by-month investment balances and assumptions about prevailing interest rates on authorized investments. Due to the current low yields on treasury securities and other approved investments, interest in 2010 is projected to be significantly lower than in 2009.



## Other

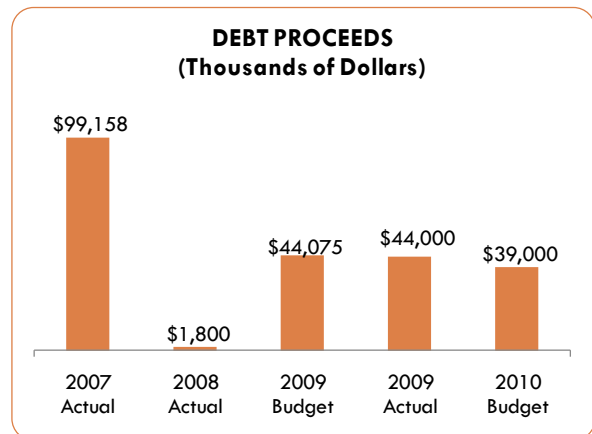
Other sources of funds consist of reimbursements for the relocation of mains and hydrants, proceeds from the sale of surplus assets, employee payments for health and dental insurance, and minor items not included elsewhere. Projections are based on historical experience and knowledge of upcoming changes.



## Debt Proceeds

Bonds are issued in order to build facilities or make improvements to a public property. Denver Water Board practice is to use debt proceeds to finance expansion capital projects.

Denver Water anticipates issuing \$39 million in bonds, but may issue a different amount if market conditions or construction progress warrant the change.



# Uses of Funds

<b>Uses of Funds by Type</b>	<b>64-68</b>
<b>Salaries and Wages</b>	<b>65</b>
<b>Employee Benefits</b>	<b>65</b>
<b>Materials &amp; Supplies</b>	<b>66</b>
<b>Utility &amp; Pumping</b>	<b>66</b>
<b>Professional &amp; Other</b>	<b>67</b>
<b>General Equipment</b>	<b>67</b>
<b>Contract Payments</b>	<b>68</b>
<b>Refunds, Debt and Misc</b>	<b>68</b>
<b>Uses of Funds by Program</b>	<b>69-80</b>
<b>Operations &amp; Maintenance</b>	<b>71-76</b>
<b>Capital</b>	<b>77-80</b>



**Williams Fork Reservoir**  
Owned and Operated by Denver Water  
Elevation: 7,814 feet (2,381 meters) – top of dam  
Capacity: 96,822 acre feet (one acre foot=325,851 gallons)

## Williams Fork Reservoir

### Background

Completed in 1959, Williams Fork Dam & Power Plant sends water and electricity to the Western Slope when Denver diverts water to the city elsewhere. Standing 217 feet above the Williams Fork River streambed, the dam backs up a reservoir of nearly 97,000 acre feet of water, and the power plant contains a 3,158-kilovolt generator. Williams Fork Reservoir's surface area is 1,860 acres with a shoreline of 15.8 miles.

### Recreation Opportunities

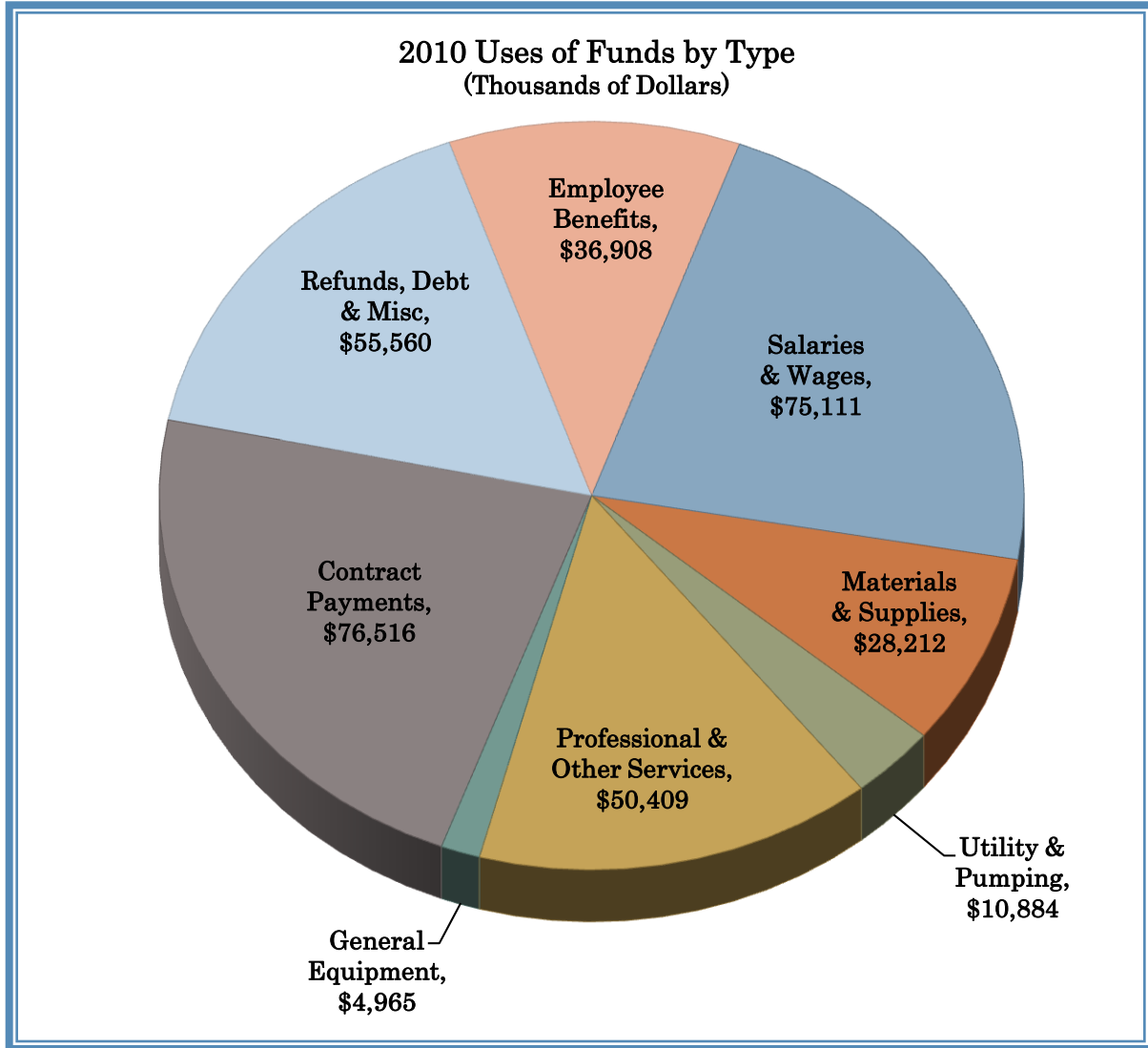
Overview of available activities

 motorboating	<p>Public boat ramp located at the east side campground.</p> <p>The Reservoir is full at elevation 7811 feet. The boat ramps are unusable for most motorized craft when the water elevation is 7790' or less.</p> <p>Most current water elevations at Williams Fork</p>
 windsurfing	<p>Windsurfing (sailboarding) permitted with full wet or dry suits.</p>
 fishing	<p>Reservoir stocked by <a href="#">Colorado Division of Wildlife</a> (also see <a href="#">stocking reports</a>). Northern pike 26 - 34 inches must be returned to water immediately.</p>
 ice fishing	<p>Ice fishing when conditions permit. Denver Water does not monitor ice conditions and those entering onto the ice should be aware of changing ice conditions and proceed at their own risk.</p>
 camping	<p>The majority of camp sites are set-up for trailer or RV camping. There are some tent camping sites on the peninsula and east side camping grounds.</p>
 hunting: big game	<p>Big game hunting allowed in the surrounding area, but not within the posted "safety zone" on the northwest side of the reservoir.</p>
 picnicking	<p>The inlet picnic area is for day use <b>ONLY</b>. No overnight camping is permitted on this sit</p>

## 2010 Uses of Funds by Type

The projected Uses of Funds budget for Denver Water in 2010 is \$338.6 million. Costs are displayed in categories by type, regardless of whether the cost is operating or capital.

Categorizing data this way is useful for trend analysis and for highlighting the impact different costs have on the budget.

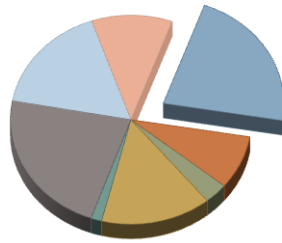


<b>2010 Uses of Funds</b> (In Thousands of Dollars)				
2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$270,053	\$283,500	\$310,803	\$288,559	\$338,565

## Salaries and Wages

Under normal economic conditions, wage and salary adjustments are based on the annual market survey. Due to the downturn in the economy and employment market, Denver Water will not grant any salary adjustment for 2010.

Total payroll for 2010 is project at \$75.1 million and will support 1,140.8 regular employees as well as 103.7 full time temporary positions. The total payroll also assumes a 4% overall vacancy rate, 1% lower than the 2009 vacancy rate.



**SALARIES AND WAGES**  
(In Thousands of Dollars)

2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$64,833	\$68,820	\$70,672	\$73,875	\$75,111

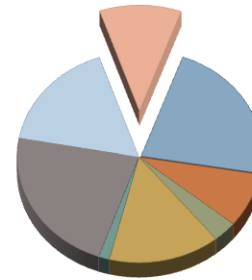
### ***2010 BUDGET:***

*Regular Wages \$63.5 million*  
*Overtime Pay \$2.3 million*  
*Holiday, Vacation, Sick \$7.5 million*  
*Other Pay \$1.8 million*

## Employee Benefits

This category of costs covers employee medical, dental, vision and life insurance, as well as the defined benefit and defined contribution retirement programs. FICA, Medicare, Long Term Disability, and Worker's Compensation are also included in this category.

The decrease in the 2010 Budget is related to an over funding in the 2009 retirement plan contribution which will require less funding in 2010. In addition, more controlled health costs will be achieved through plan design changes which will move more costs to the employee.



**EMPLOYEE BENEFITS**  
(In Thousands of Dollars)

2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$28,207	\$27,926	\$37,078	\$39,399	\$36,908

### ***2010 BUDGET:***

*Retirement Plan Contribution \$13.3 million*  
*Health Insurance \$13.0 million*  
*All Other Benefits \$10.6 million*

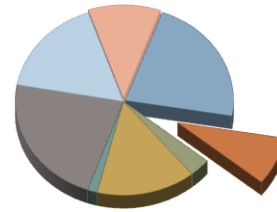


## Materials & Supplies

The 2010 Budget is an increase of \$943,000 from the 2009 Budget.

This area includes materials and supplies purchased for direct use and for warehouse stock. Office supplies, pipe, sand, and chemicals fall into this category, as do fuel and employee safety equipment.

Projected costs in this category have been trending upward as the prices of steel, concrete, asphalt, water treatment chemicals, and other supplies have risen.



**MATERIALS & SUPPLIES**  
(In Thousands of Dollars)

2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$19,557	\$26,895	\$27,854	\$24,876	\$28,212

### 2010 BUDGET:

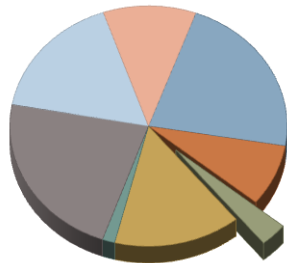
*Materials and Supplies for Direct Use \$11.1 million*  
*Chemicals Purchased for Direct Use \$5.7 million*  
*Store Issues \$11.4 million*

## Utility & Pumping

The 2010 Budget is an increase of \$2.1 million from the 2009 Budget.

This category includes power and diesel fuel for pumping water and our utility bills. Electricity, gas, water, sewer, telephone and cellular service are included in this group.

A significant portion of the 2010 Budget increase in Utility & Pumping is for a payment to the Federal Energy Regulatory Commission (FERC) related to the Gross Dam Hydropower operations. The remaining increase is related to higher communication costs, which includes the communication installation at the Quivas administration building, and capital improvements in communication hardware.



**UTILITY & PUMPING**  
(In Thousands of Dollars)

2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$6,934	\$8,430	\$8,812	\$7,671	\$10,884

### 2010 BUDGET:

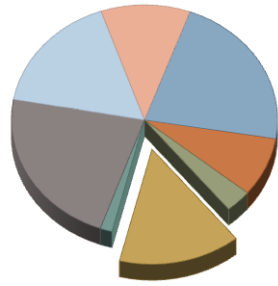
*Electricity, Gas, Water & Sewer \$5.1 million*  
*Communications \$2.6 million*  
*Power Purchased for Pumping Water \$3.2 million*

## Professional & Other

The 2010 Budget is a decrease of \$3.2 million from the 2009 Budget.

This category includes funds for consultants with expertise in IT, Engineering, Finance, Planning and other areas. Labor services such as those for landscaping, paving, equipment rentals and temporary employment are also included in other services. Employee costs such as travel, training, conferences and meeting related costs budgeted are also under other services.

The 2010 Professional & Other Services Budget was reduced due to the Customer Information System becoming operational in 2009.



**PROFESSIONAL & OTHER**  
(In Thousands of Dollars)

2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$37,396	\$55,979	\$53,573	\$52,288	\$50,409

### 2010 BUDGET:

*Professional Services \$24.9 million*

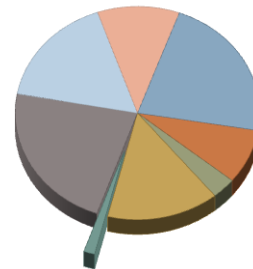
*Other Services \$25.5 million*

## General Equipment

The 2010 Budget is an increase of \$1.3 million from the 2009 Budget.

General equipment includes communication equipment, personal computers, hardware and software, office furniture, laboratory instruments, garage and shop machines, and vehicles.

The increase in general equipment for 2010 is primarily a result of required purchases of mainframe hardware and system software to support Phase II of the Customer Information System and continued operating requirements.



**GENERAL EQUIPMENT**  
(In Thousands of Dollars)

2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$2,593	\$3,026	\$3,615	\$3,816	\$4,965

### 2010 BUDGET:

*Vehicles \$3.0 million*

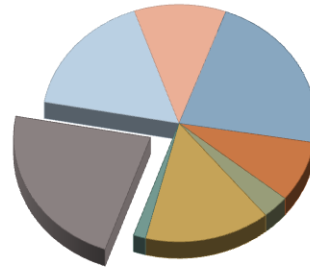
*All Other General Equipment \$1.9 million*

## Contract Payments

The 2010 Budget is an increase of \$22.9 million from the 2009 Budget.

This grouping includes construction contract payments for capital projects, land and land rights, contract materials and supplies, land, land rights and water rights purchases, and construction materials purchased by contractors.

The increase in contract payments reflect anticipated system expansion and reinvestment projects related to the sedimentation remediation at Strontia Springs.

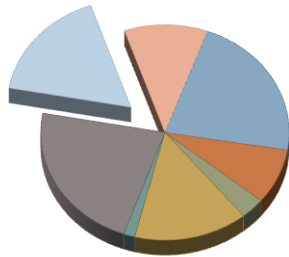


**CONTRACT PAYMENTS**  
(In Thousands of Dollars)

2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$53,959	\$37,044	\$53,559	\$29,870	\$76,516

### ***2010 BUDGET:***

*Contract Payments and Construction Materials- \$76.4 million  
Land, Land Rights and Water Rights \$.1 million*



**REFUNDS, DEBT AND MISC**  
(In Thousands of Dollars)

2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget
\$56,574	\$55,380	\$55,640	\$56,764	\$55,560

## Refunds, Debt and Misc

The 2010 Budget is a decrease of \$80,000 from the 2009 Budget.

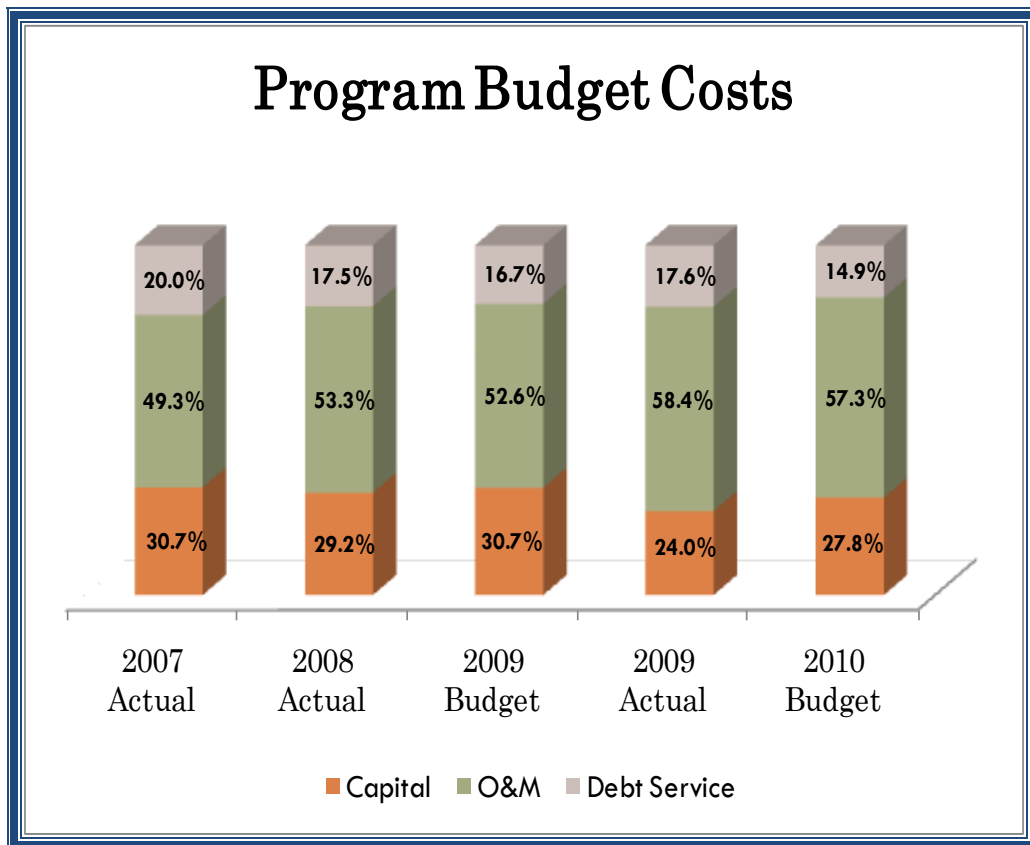
Debt service comprises 91% of the costs budgeted in this category. The remaining 9% is made up of conservation incentives, unemployment insurance and insurance/legal claims.

The 2010 Budget is not significantly different from prior years.

### ***2010 BUDGET:***

*Refunds \$1.2 million  
Debt Service \$50.3 million  
All Other Miscellaneous \$4.0 million*

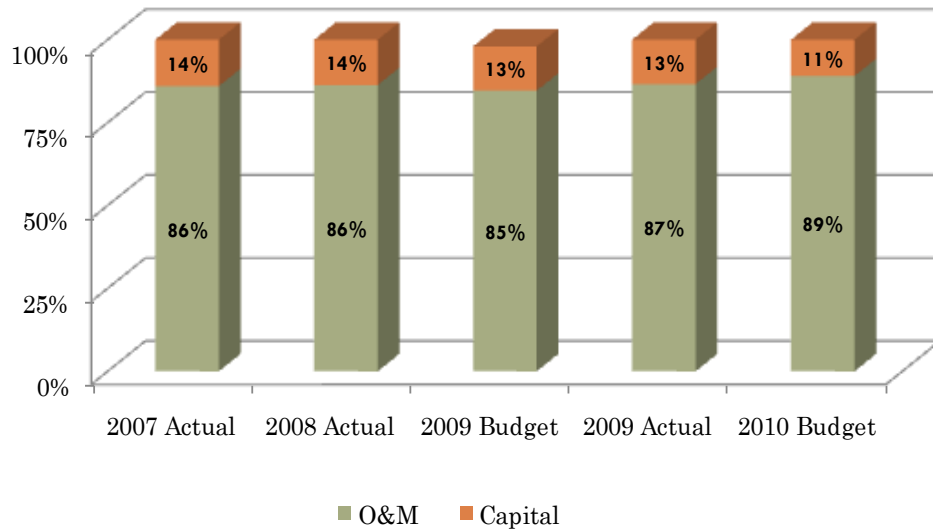
# Uses of Funds by Program



**Uses of Funds by Program Summary**  
(Thousands of Dollars)

<b>Operation and Maintenance Programs:</b>	<b>2007 Actuals</b>	<b>2008 Actuals</b>	<b>2009 Budget</b>	<b>2009 Actual</b>	<b>2010 Budget</b>
Raw Water	\$ 7,962	\$ 8,857	\$ 12,325	\$ 9,411	23,766
Recycled Water	2,203	2,786	3,517	2,729	3,700
Water Treatment	13,220	15,635	16,972	16,109	18,825
Delivery	16,597	19,824	17,095	18,161	19,983
Conservation	4,722	6,568	9,665	8,741	11,444
Customer Service	6,962	7,968	9,209	10,085	14,862
General Plant	7,447	10,049	9,241	10,514	9,538
Administration	33,251	38,623	36,865	40,422	44,347
Distributed Indirect Costs	40,747	40,789	48,644	52,439	47,450
<b>Total Operation and Maintenance</b>	<b>\$ 133,111</b>	<b>\$ 151,099</b>	<b>\$ 163,533</b>	<b>\$ 168,611</b>	<b>\$ 193,915</b>
<b>Capital Programs:</b>					
Raw Water	\$ 22,983	\$ 25,366	\$ 33,021	\$ 23,045	38,999
Recycled Water	20,632	2,695	1,552	702	5,198
Water Treatment	11,375	17,843	12,570	10,019	10,628
Delivery	18,528	13,677	20,077	16,591	24,885
General Plant	9,515	23,216	28,117	18,791	14,415
<b>Total Capital</b>	<b>\$ 83,033</b>	<b>\$ 82,797</b>	<b>\$ 95,337</b>	<b>\$ 69,148</b>	<b>\$ 94,125</b>
<b>Debt Service:</b>					
Debt Service	\$ 53,909	\$ 49,604	\$ 51,933	\$ 50,800	\$ 50,525
<b>Total Uses of Funds</b>	<b>\$ 270,053</b>	<b>\$ 283,500</b>	<b>\$ 310,803</b>	<b>\$ 288,559</b>	<b>\$ 338,565</b>

## Operating and Capital Payroll Distribution



## Payroll Costs

Payroll costs are distributed between capital projects and operating activities. The cost of payroll for employees directly related to the completion of capital projects may be capitalized. The chart above shows the percentage of payroll allocated between capital and operations.

Of the total amount budgeted for payroll expenditures, 11 percent will be assigned to staff working with capital projects and 89 percent will be allocated to employees engaged in other utility activities. The 2010 capital allocation is slightly lower than prior years.

# Operations & Maintenance

## Key Impacts to the 2010 Operating Budget

- Strontia Springs Sedimentation Remediation
- ERTs Replacement Program
- Capital Projects Reclassified as Operating
- Move from Bi-Monthly to Monthly Billing

Operations & Maintenance						
<i>(In Thousands of Dollars)</i>						
	2007 Actual	2008 Actual	2009 Budget	2009 Actual	2010 Budget	
Raw Water	\$ 7,962	\$ 8,857	\$ 12,325	\$ 9,411	\$ 23,766	
Recycled Water	2,203	2,786	3,517	2,729	3,700	
Water Treatment	13,220	15,635	16,972	16,109	18,825	
Delivery	16,597	19,824	17,095	18,161	19,983	
Conservation	4,722	6,568	9,665	8,741	11,444	
Customer Service	6,962	7,968	9,209	10,085	14,862	
General Plant	7,447	10,049	9,241	10,514	9,538	
Administration	33,251	38,623	36,865	40,422	44,347	
Distributed Indirect Costs	40,747	40,789	48,644	52,439	47,450	
<b>Total O&amp;M</b>	<b>\$ 133,111</b>	<b>\$ 151,099</b>	<b>\$ 163,533</b>	<b>\$ 168,611</b>	<b>\$ 193,915</b>	

## Operations & Maintenance

Operations & Maintenance (O&M) costs are budgeted at \$193.9 million for 2010, 18.6 percent more than the amount budgeted in 2009.

The principal driver of this increase is the beginning of a multi-year project to regain lost capacity in Strontia Springs Reservoir by dredging sediment from the bottom and pumping it down Waterton Canyon to the old Kassler facility. The sediment removal from the reservoir is a result of the 2002 Hayman Fire.

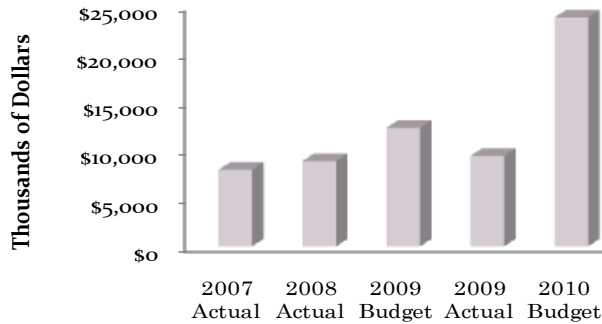
Another key impact in 2010 is Denver Water's Electric Register Transmitters, ERTs, Replacement Program. ERTs are part of our auto meter reading program which allows a meter reader using a handheld or vehicle-based radio device to collect meter readings more efficiently. Beginning in 2010, this three year program will replace electronic register transmitters with units that have a longer battery life (around 20 years).

The 2010 Operating Plan contains \$1.3 million in projects that were initially identified as capital expenditures but were reclassified to operating expenses based on general accounting standards.

Denver Water moved from bi-monthly to monthly billing beginning in July of 2009. Costs related to reading meters, printing and mailing bills, and processing payments have increased as a result. Additional vehicles required for meter reading increase fuel and maintenance costs.

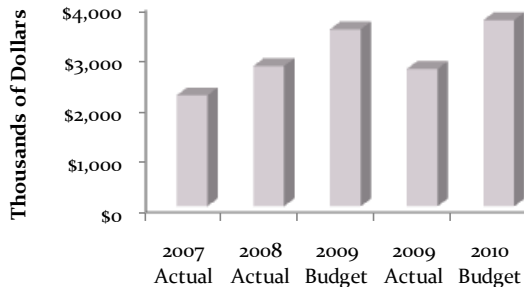
## Raw Water

The total 2010 O&M Budget for the Raw Water Program is \$23.8 million. This amount is \$11.5 million higher than the 2009 Budget of \$12.3 million. The major driver increasing costs is the Strontia Sedimentation Remediation. The 2010 budget for this project reflects the procurement of materials needed for the actual dredging project which begins in 2011.



## Recycled Water

Operating since 2004, Denver Water’s Recycled Water Plant receives wastewater from the Metro Wastewater facility after its treatment process, treats it and delivers the water to our industrial and irrigation customers. Long term plans include recycled water distribution system expansion to meet the needs of our future customers. The 2010 O&M budget for Recycled Water is \$3.7 million based on 3,323 mgd estimate which is \$182,742 higher than the 2009 Budget. This increase reflects higher chemical costs, power and maintenance of the plant.



### Recycled Water

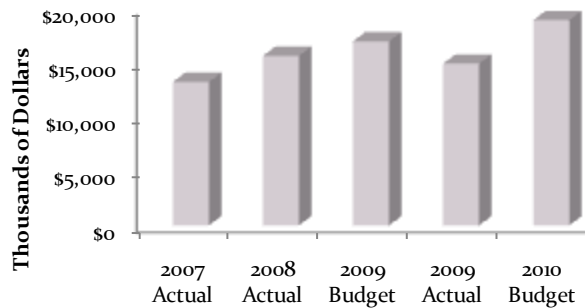
Water is a precious resource here in the West, much too precious to use just once. That’s why Denver Water started a program to treat and recycle wastewater from the [Robert W. Hite Treatment Plant](#). Once build-out is complete, the project will supply more than five billion gallons of recycled water every year — water for irrigation, for industrial use, for lakes in our parks and for golf courses — water we don’t have to take from a reservoir.



## Water Treatment

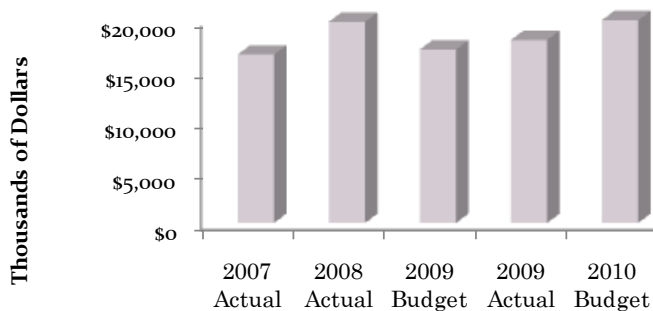
The O&M budget for Water Treatment is developed using a demand estimate of 70,500 mg in 2010. The demand information is used to project chemical costs.

Chemicals comprise 26.7% of the total Water Treatment budget. Actual costs for chemical use are dependent on water demand. The 2010 budget is \$18.8 million which is \$1.9 million higher than the 2009 Budget. The increase in cost is due to higher chemical costs, as well as, the need to develop as-built drawings for our treatment plants and projects that were planned as capital and are now classified as operating.



## Delivery

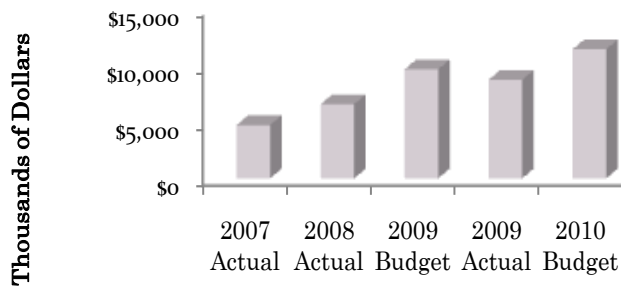
The O&M budget for Delivery of \$19.9 million which is \$2.8 million higher than the 2009 Budget. These costs are related to maintaining our pumping and clear water storage facilities, as well as those for operating our distribution system. Denver Water has 18 treated water pump stations with a maximum pumping capacity of 1,097.4 mgd. Maintaining our system includes emergency leak repairs and leak detection in the system. Cost impacts include material prices and utility costs incurred for pumping operations and materials and other services for pipe and street repairs.



## Conservation

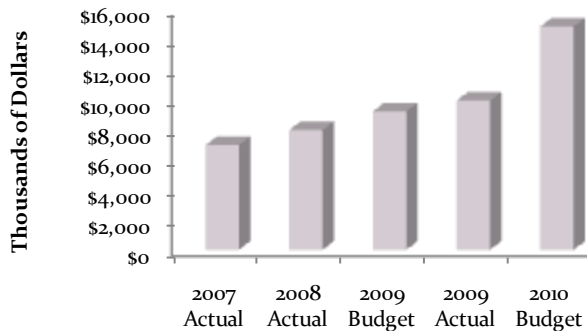
The Conservation O&M budget for 2010 is \$11.4 million, which is \$1.8 million higher than the 2009 Budget. Denver Water's conservation plan involves accelerating the pace of water conservation in its service area and to reduce overall water use from the 2001 pre-drought usage by 22% before 2016. This plan is a primary part of Denver Water's future water supply planning. In order to provide long-term, reliable supplies for its customers, Denver water utilizes three strategies: conservation, recycled water and developing new supplies.

Some of Conservation's efforts include programs such as Education and Outreach whereby conservation staff visits area schools, providing conservation knowledge to students through presentations and materials, promoting hands-on student experiences that will bring a deeper appreciation of water's importance. Other programs are the Rebates and Incentives which encourages the public to replace toilets, clothes washers with water efficient products.



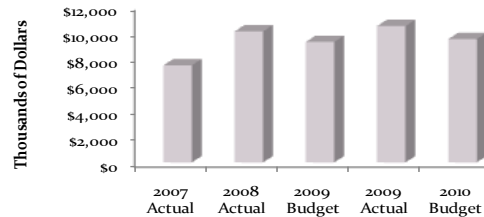
## Customer Service

The Customer Service 2010 Budget is \$14.9 million, which is \$5.7 million higher than the 2009 Budget. In April 2010 we will begin a three year project that will replace current ERT's that have a battery life of 6 to 10 years with ones that are not only more cost effective but have a 20 year life. Along with reading customer water consumption, Denver Water has moved from a bi-monthly billing to monthly billing which has increased operating costs. The costs include reading meters, printing and mailing bills, and processing payments. Also more vehicles are required for meter reading as well as increase fuel and maintenance costs.



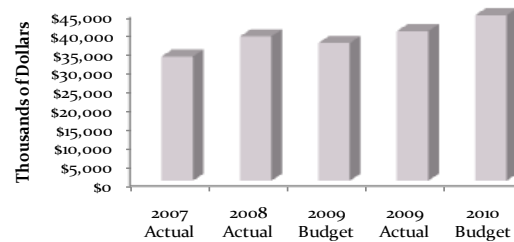
## General Plant

The General Plant program encompasses activities related to the operation and maintenance of our vehicles, equipment and administrative facilities as well safety, security and small tools. Cost impacts included increased security at Dillon Dam and preparing the Quivas Administration building for operations. The 2010 O&M Budget for General Plant is \$9.5 million, \$296,942 higher than the 2009 Budget.



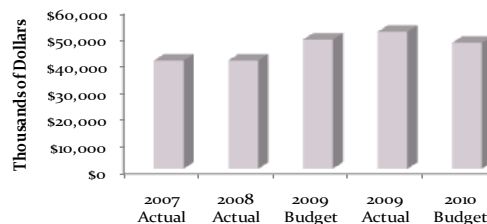
## Administration

The Administration program comprises our overhead costs for administrative activities, maintenance shops, computer related operation and maintenance, and other related activities. The 2010 O&M Budget for Administration is \$44.3 million, \$7.4 million higher than the 2009 Budget. Costs include maintaining our new billing computer system, communication installation required at the Quivas Administration building, and capital computer system maintenance.



## Distributed Indirect Costs

The Distributed Indirect Costs Program contains the employee benefits and general liability and other insurances. The 2010 O&M Budget is \$47.4 million, \$1.2 million lower than the 2009 Budget. Budgeted Retirement Plan Contributions will be less than 2009 contributions as a result of the plan being over funded to offset prior year losses due to poor market performance. Further anticipated costs reductions are a result of health plan design changes and shifting more costs to the employee.



Capital Improvement Plan (In Millions)			
Year	Budget	Actual	Variance
2007	\$ 99.1	\$ 83.0	\$ (16.1)
2008	\$ 87.6	\$ 82.8	\$ (4.8)
2009	\$ 95.3	\$ 69.1	\$ (26.2)
2010	\$ 94.1	\$ -	\$ -

### Major 2010 Capital Projects

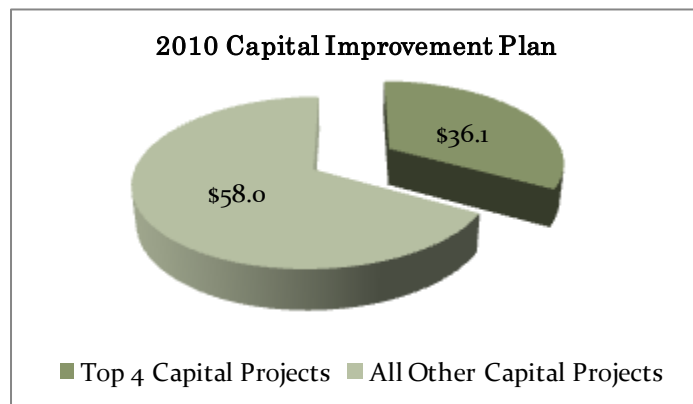
The 2010 budget has four projects that are over \$5.0 million and account for \$36.1 million or 38.4% of the total Capital Improvement Plan.

The Cheesman Reservoir slide gate project is the largest of the four capital projects. Three new slide gates and a new jet flow will be designed and installed. Additionally, the spillway bridge, crest and stand-by generator will be replaced along with the updating of the electrical system.

The second largest project, Williams Fork Dam, will replace the outlet works and include a small hydro plant. The upgraded outlet works will resolve current deficiencies and replace aging equipment while the hydro plant will have hydropower revenue potential.

Main Improvements, the third project, is a continuous project that allows for the installation of new pipe for looping, system improvements and replaces obsolete deteriorating pipes.

The fourth project, Marston Plant 2 Improvements, will rebuild plant #2 with new media and controls to enhance performance and increase capacity to provide better operation.



## 2010 Top 10 Capital Projects

**Cheesman Reservoir**- Design, purchase and install 3 new slide gates and a new jet flow gate. Replace spillway-bridge, spillway crest, stand-by generator and update dam's electrical system. No impact on operating budget.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ 397	\$ 955	\$ 917	\$ 15,792



**Williams Fork Dam**- A new outlet works will be constructed in conjunction with a small hydro installation. The project is scheduled to be completed in 2012. Operating impacts will be the potential increase in hydropower revenue.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ 323	\$ 1,783	\$ 3,467	\$ 8,867



**Main Replacements**- This project includes installation of new mains for looping and other system improvements. Also includes replacement of deteriorated, obsolete and leaking mains under 24" in diameter. This is a continuous program. Lower operating costs related to emergency main breaks, water damage and leaks are anticipated.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ 5,801	\$ 4,932	\$ 5,720	\$ 6,422



**Marston Plant 2 Improvements** - This project involves rebuilding the existing Filter Plant 2 with new media and controls to allow for enhanced performance, increased capacity, and better operation. A larger backup generator and housing will also be installed to provide additional backup power at the plant.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ 6	\$ 1,025	\$ 6,663	\$ 5,015



**Conduit and Main Rehabilitation**- A continuous program to clean and reline conduits and mains to restore their carrying capacities, whereby lowering operating costs related to emergency main breaks, water damage and leaks.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ 3,621	\$ 2,904	\$ 1,643	\$ 4,499



**Conduit 302 Stapleton S. to Rocky Mountain Arsenal**- This recycled water conduit will be constructed to provide water to the Rocky Mountain Arsenal. The project is anticipated to be complete by 2011. No impact on operating budget.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ -	\$ -	\$ 128	\$ 3,209



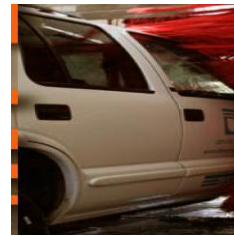
**Decentralization Station at Einfeldt-** Includes the construction of an office building and garages to expand the existing facility. This location allows for immediate access to I-25, University Boulevard and Colorado Boulevard. Once complete the site will allow Denver Water to increase crew and equipment for scheduled and emergency dispatching. No impact on operating budget this year.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ -	\$ 56	\$ 274	\$ 2,222



**Vehicles and Comm. Motor Vehicles-** New and replacement vehicles for the fleet. Maintain levels in the fleet by replacement of deteriorated vehicles.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ 1,089	\$ 1,337	\$ 1,846	\$ 1,960



**Gravel Pit- Fulton Ditch Pipeline to Hazeltine PS-** Provide a pipeline from the Fulton Ditch to the Hazeltine Pump Station to allow for the North Metro Gravel Pits to be filled

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ -	\$ 100	\$ 371	\$ 1,922



**Customer Information System-** Enhance customer care/billing system and business intelligence tools, improve billing accuracy, enhance customer service, and better understand customer needs. Operating impacts include costs for staff, postage, fuel and vehicles. These costs are included in the 2010 operating budget.

(Thousands of Dollars)			
2007	2008	2009	2010
Actual	Actual	Actual	Budget
\$ 1,277	\$ 9,648	\$ 6,743	\$ 1,570



# Glossary

**Acronyms**

**83-84**

**Definitions**

**85-95**



Photo by Jackie Shumaker



## **Antero Reservoir**

**Owned and Operated by Denver Water**

**Elevation:** 8,942 feet (2,656 meters) – high water line

**Capacity:** 19,881 acre feet (1 acre foot = 325,851 gallons)












## Antero Reservoir

### Background

Antero is derived from the Spanish word "first," as it was the first dam on the South Platte River near the river's origin. Antero Dam is an earth-fill dam built in 1909. Geologists believe the reservoir occupies the site of a former lakebed, probably no more than 300 years old. Green Lake lies submerged within Antero Reservoir.

### Recreation Opportunities

Overview of available activities

 motorboating  sailboating	<p>Boating includes boat fishing, sail boating and recreational boating. Boaters must observe the Colorado Boating Statues and Regulations.</p> <p>Boat inspections are <i>mandatory for all trailered boats</i>. Inspections occur at the south boat ramp <i>only</i> seven days a week.</p>
 canoeing  kayaking  small water craft	<p>Portable crafts allowed include kayaks, canoes and inflatable crafts.</p> <p>The north boat ramp may be used to launch small car top carried boats. No trailered boats allowed at the north boat ramp.</p>
 fishing	<p>Both lake and stream fishing is available.</p>
 ice fishing	<p>Ice fishing when conditions permit. Denver Water does not monitor ice conditions and those entering onto the ice should be aware of changing ice conditions and proceed at their own risk.</p>
 camping	<p>There are 38 campsites available at the south side campground and boat ramp.</p>
 picnicking	<p>The north side area is day use area only, no camping is allowed.</p>

# Acronyms A-E

**ACP**

Accelerated Conservation Plan

**AF**

Acre Foot

**AMWA**

Association of Metropolitan Water Agencies

**BABS**

Build American Bonds

**BPPI**

Budget and Planning Process Improvement

**CAFR**

Comprehensive annual financial Report

**CBSM**

Community Based Social Marketing

**COP**

Certification of Participation

**CIP**

Capital Improvement Plan

**CIS**

Customer Information System

**CWA**

Clean Water Act

**DIA**

Denver International Airport

**DW**

Denver Water

**EIS**

Environmental Impact Statement

**EPA**

Environmental Protection Agency

**ERT**

Encoder Receiver Transmitter



*Antero*



*This 1915 photo shows a caretaker standing at the head gate for a ditch flowing into Antero Reservoir.*

**FERC**

Federal Regulatory Energy Commission

**GAAP**

Generally Accepted Accounting Principles

**GAD**

Gallons Per Account Per Day

**GASB**

Governmental Accounting Standards Board

**GIS**

Geographic Information System

**G.O. Bonds**

General Obligation Bonds

**IRP**

Integrated Resource Planning

**MGD**

Millions of Gallons Per Day

**NARUC**

National Association of Regulatory utility Commissioners

**NEPA**

National Environmental Policy Act

**NRCS**

Natural Resource Conservation Service

**NWRS**

National Water Resource Association

**OPEB**

Other Post-Employment Benefits

**RCRA**

Resource Conservaton and Recovery Act

**PACSM**

Platte and Colorado simulation Model

**POS**

Point of Service

**SDBE**

Small Disadvantaged Business Enterprise

**WISE**

Water Infrastructure Supply Efficiency Partnership

**WUWC**

Western urban Water Coalition



*Antero*

# DEFINITIONS

## A-B

### **Accounting Standards**

The Board's financial statements are prepared in accordance with principles generally accepted in the United States of America (GAAP). Additionally, the Board applies all applicable pronouncements of the GASB.

### **Acre Foot**

Volume of water equal to one foot in depth covering an area of one acre, or 43,560 cubic feet; approximately 325,851 gallons. Roughly two-thirds of an acre foot serves the needs of a typical family of four for a year.

### **Annual Yield**

Maximum basic demand the water supply could meet throughout a period of historical or synthesized hydrological conditions.

### **Average Winter Consumption**

The amount of water used on average by a customer during the winter; provides a good indication of indoor water use.

### **Balanced Budget**

The Denver Board of Water Commissioners has not adopted an official policy on a balanced budget. Our practice is to balance the budget by the planned use of contribution to investment balances.

### **Basis of Accounting**

The Board's financial statements are accounted for on the flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets and liabilities associated with operations are included on the statement of net assets, revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred. This is different from the basis of budgeting. The Denver Water budget is prepared using the modified accrual basis in which revenues are recorded when they become available and expenditures are recorded at the time liabilities are incurred.

### **Block**

A volume of water used in setting water rates; a quantity or volume of water sold at a particular rate.

### **Bonds**

Debt instruments. According to the Charter, the Board may issue revenue bonds which are secured solely by its revenue. In the past it was able to issue general obligation bonds that were secured by the full faith and credit of the City of Denver.

### **Budget**

A financial plan for a specified period of time (fiscal year) that assigns resources to each activity in sufficient amounts so as to reasonably expect accomplishment of the objectives in the most cost effective manner.

# DEFINITIONS

## C



*Antero*

### **Capital Expenditure**

Expenditures having a depreciable life of over one year and a cost of over \$5,000.

### **Capital Improvement Plan**

Projects and equipment purchases and provides prioritization, scheduling, and financing options.

### **Capital Leases**

A lease having essentially the same economic consequences as if the lessee had secured a loan and purchased the leased asset.

### **Capital Policy**

Initial acquisition costs of assets are capitalized if they have a service life of more than one year and a cost of \$5,000 or more. Costs not meeting these criteria are expensed. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective asset classes.

### **Cash Flow Adjustment**

The cash flow adjustment is the difference between expenditures as booked and disbursed. Expenditures are budgeted and reported on a modified accrual basis (as booked). Total expenditures are then converted to a cash basis (disbursed) for purposes of determining year-end designated balances.

### **Cash Reserves**

The Charter of the City and County of Denver specifically allows the accumulation of reserves “sufficient to pay for operation, maintenance, reserves, debt service, additions, extensions, and betterments, including those reasonably required for anticipated growth of the Denver Metropolitan area and to provide for Denver’s general welfare.” The Board’s practice is to maintain reserves that are sufficient to provide 25% of the next year’s operating costs, 50% of replacement and equipment purchases, 1 year of debt service, and a 5% self-insurance reserve.

### **Certificate of Participation**

Evidence of assignment of proportionate interests in rights to receive certain revenues pursuant to a lease purchase agreement.

### **Chart of Accounts**

The Chart of Accounts utilized by Denver Water generally follows the structure presented by the National Association of Regulatory Utility Commissioners for Class A Water Utilities (NARUC).

### **Clean Water Act**

The federal law that establishes how the United States will restore and maintain the chemical, physical and biological integrity of the country’s waters (oceans, lakes, streams and rivers, ground water and wetlands.) The law provides protection for the country’s waters from both point and non-point sources of pollution.



*Antero*

## DEFINITIONS C-D

### **Conduit**

A 24-inch (or larger) diameter pipe carrying raw or potable water from or to treatment facilities, reservoirs and delivery points feeding a distribution system.

### **Contract Payments**

Consists of contract payments for construction, materials purchased for contractor installation, acquisition of land and land rights and water rights.

### **Corporate Culture**

Values that set a pattern for a company's activities, opinions and actions.

### **Cost Control Center**

A term used to denote a responsibility center. It is an organizational unit that has been placed in charge of accomplishing certain specified tasks. Example: Water Control Section.

### **Customer Information System**

The multifaceted, multimillion-dollar project to modernize our aging Customer Information System (CIS) will enhance the system's capabilities, performance, and security. Among numerous other objectives, an up-to-date CIS will boost our ability to track customer account information, analyze water savings, and administer more sophisticated rate designs aimed at achieving our demand-management and revenue goals. A more contemporary CIS will also accommodate the switch from bimonthly to monthly billing.

### **Debt Guidelines**

Denver Water has no legal debt limits. However, the Board has adopted Debt Guidelines to guide the timing and use of debt in the future. The guidelines set forth a policy that prevents debt proceeds from being used to pay operating and maintenance expenditures. The guidelines instruct that debt proceeds will be used only for current refunding, advanced refunding and payment for non-recurring capital projects that expand the system or are otherwise unusual in nature or amount.

### **Debt Service**

Principal and interest on debt and payments under capital leases.

### **Demand Side Management**

Term used to describe policies aimed at increasing long-term supply by decreasing customer demand for water, typically through conservation programs.

### **Direct Materials**

Includes materials and supplies purchased for direct use and fuel and oil for vehicles and equipment (non-stores issues only).

# DEFINITIONS

## D-F



*Antero*

### **Disbursements**

Money paid out for expenses, liabilities or assets.

### **Discretionary Employee**

The charter of the City and County of Denver allows the Board to establish a classification of employees who have "executive discretion", who shall number no more than 2% of all persons employed, and shall serve solely at the pleasure of the Board.

### **Division**

Largest organizational unit reporting to the Manager.

### **Employee Benefits**

Employee Benefits are expenditures paid by Denver Water for Worker's Compensation, Social Security, Retirement, Employee Assistance Program, Health and other insurances. It does not include employee withholdings or unemployment insurance.

### **EPA Section 319**

Environmental Protection Agency Program to provide funds to agencies to assist in clean water protection.

### **Encoder Receiver Transmitter**

An electronic device that receives a signal from a water meter, encodes the current reading into a digital signal, and transmits it to a meter reader.

### **Expenditures**

In planning expenditures, Denver Water follows the City Charter's mandate to keep rates as low as good service will permit. In practice this means that Denver Water will properly maintain its facilities and continuously seek ways to operate more efficiently.

### **Fund**

An accounting entity with a set of self-balancing accounts that is used to account for financial transactions for specific activities or government functions. By Charter, Denver Water is reflected in the City's financial statement in a single fund-The Water Works Fund.

### **Fund Balance**

The balance in the Water Works Fund. Fund Balance is calculated each year by adding total sources of funds to the balance at the beginning of the year and then subtracting total expenditures.



*Antero*

# DEFINITIONS

## G-I

### **General Equipment**

Computer equipment, office furniture and equipment, transportation equipment, storehouse equipment, construction and maintenance tools and equipment, chemical laboratory equipment, power operated equipment, communication equipment, garage and shops equipment and miscellaneous equipment.

### **General Obligation Bonds**

A security representing the promise to repay borrowed money secured by the full faith and credit of the governmental borrower.

### **Geographic Information System**

A component of our Enterprise Asset Management system. This system is used in large part to record the geographic location and many other attributes of Distribution and Collection system assets. From the GIS, we produce many types of maps, as well as analysis related to our assets, and the world around them.

### **Goals**

Overall end toward which effort is directed.

### **Governmental Accounting Standards Board**

A board which establishes the generally accepted accounting principles for state and local governmental units.

### **Gross Revenue**

All income and revenues, from whatever source, including system development charges and participation payments, excluding only money borrowed and used for providing capital improvements or other revenues legally restricted to capital expenditures.

### **Hydropower**

Hydroelectric power of/or relating to production of electricity by water power.

### **Infill**

Undeveloped areas within the combined service area that Denver Water would be expected to serve in the future.

### **Integrated Resource Planning**

A method for looking ahead using environmental, engineering, social, financial and economic considerations; includes using the same criteria to evaluate both supply and demand options while involving customers and other stakeholders in the process.

### **Interest Requirements**

As used in the debt guidelines, scheduled interest payments during the 12 month period following the date of calculation.



# DEFINITIONS

## I-M



*Antero*

### **Investment Balance**

The total sum held in cash and investments net of uncleared warrants.

### **Introductory Employee**

An employee who is newly appointed to a position and is serving an introductory period, generally of six month's duration.

### **Investments**

The Board has protection of principal as its primary investment policy objective. The Board designates its authority to invest monies deposited in the Water Works Fund to the Manager and the Director of Finance. According to the current investment policy U.S. Government obligations and government sponsored federal agency securities, commercial paper, corporate fixed income securities, money market funds and repurchase agreements are permissible investments. The official policy outlines allowable credit risk and maximum maturities for each investment type.

### **Lease Payments**

Periodic payments made in order to obtain use of a facility or piece of equipment.

### **Long-Term Debt**

Debt with a maturity of more than one year from date reported.

### **Master Plan**

Expenditures identified by projects and activities that are necessary to accomplish the Department's overall operating goals and objectives. The Master Plan, or Program Budget, is divided into a Capital Work Plan and an O&M Work Plan.

### **Master Plan Item**

A specific activity or project that is identified in the Master Plan.

### **Maximo**

Maximo (work and maintenance management system) is a component of our Enterprise Asset Management system, and is used to manage work activities and programs related to operational assets.

### **Mobile Workforce**

Mobile Workforce (the Service Suite system) is a component of our Enterprise Asset Management system that enables scheduling, dispatching, sharing of work order information and work completion reporting for our field workers.

### **Modified Accrual Basis**

Accounting method in which basis in which revenues are budgeted and recorded when received and expenditures are recorded when incurred, regardless of when payment is made.



*Antero*

# DEFINITIONS

## M-N

### **Municipal Water Utilities**

Public entities whose responsibility is to deliver water to the customers.

### **Master Plan**

Expenditures identified by projects and activities that are necessary to accomplish the Department's overall operating goals and objectives. The Master Plan, or Program Budget, is divided into a Capital Work Plan and an O&M Work Plan.

### **Master Plan Item**

A specific activity or project that is identified in the Master Plan.

### **Maximo**

Maximo (work and maintenance management system) is a component of our Enterprise Asset Management system, and is used to manage work activities and programs related to operational assets.

### **Mobile Workforce**

Mobile Workforce (the Service Suite system) is a component of our Enterprise Asset Management system that enables scheduling, dispatching, sharing of work order information and work completion reporting for our field workers.

### **Modified Accrual Basis**

Accounting method in which basis in which revenues are budgeted and recorded when received and expenditures are recorded when incurred, regardless of when payment is made.

### **Municipal Water Utilities**

Public entities whose responsibility is to deliver water to the customers.

### **Net Revenues**

Gross Revenue less Operating and Maintenance Expenses.

### **Non-Operating Revenue**

As used in this document, revenue received from payments for services such as main inspections, installation of taps, calculating and mailing of sewer bills and other such services.

### **Non-Potable**

Water not suitable for drinking. (See also Potable)

# DEFINITIONS

## O-P



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### **Objectives**

Something toward which effort is directed - an aim, goal or end of action.

### **Operating Reserves and Restricted Funds**

The amount of cash and invested funds available at any point in time. The balance is the Water Works Fund as defined in this glossary.

### **Operating Revenue**

Revenue obtained from the sale of water.

### **Operation and Maintenance (O&M) Work Plan**

A category of Master Plan items not capital in nature, that are normally ongoing activities and pertain to the general operations of Denver Water.

### **Other**

Expenditures for items such as payroll deductions, sales tax, insurance claims, cash over and short, and budget adjustments.

### **Other Services**

Expenditures for items such as training, employee expenses, rents and leases, ditch assessments, convention and conference expenses, subscriptions, maintenance and repair agreements and memberships.

### **Participation Agreement**

An agreement in which a distributor or developer pays for the cost of the distribution facilities such as conduits, treated water reservoirs or pump stations required to provide service within that district from the nearest existing available source.

### **Potable**

Water that does not contain pollution, contamination, objectionable minerals or infective agents and is considered safe for domestic consumption; drinkable. (See also Nonpotable)

### **Principal and Interest Requirements**

As used in the debt guidelines, interest requirements plus the current portion of long-term debt. (Includes general obligation bonds, certificates of participation, and capital leases.)

### **Professional Services**

Consists of consultant payments for consultants to provide services such as facility design, legal work and auditors.

### **Program**

An organized group of activities and the resources to carry them out, aimed at achieving related goals.



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# DEFINITIONS

## P-R

### **Program Budget**

A method of budgeting in which the focus is on the project and activities that are required to accomplish Denver Water's mission, goals and objectives. It provides for consideration of alternative means to accomplish these criteria. It also provides a control device for higher level management and cuts across organizational lines. Resources are allocated along program lines and across organizational lines.

### **Program Element**

Series of smaller categories of activities contained in the program such as raw water, water treatment, etc.

### **Project Employee**

A contract worker assigned to a project of more than one year's duration and receiving a limited benefits package.

### **Raw Water**

Untreated water.

### **Recycled Water**

Application of appropriately treated effluent to a constructive purpose. In Colorado, the source of recycled water must be another basin. Also, to intercept – either directly or by exchange – water that would otherwise return to the stream system for subsequent beneficial use. Sometimes recycled water is called reclaimed, gray or reuse water.

### **Refunds**

Includes System Development Charge Refunds and Customer Refunds.

### **Regular Employee**

An employee who has satisfactorily completed an introductory period and has been approved by the Board to receive the rights and privileges of a tenured employee.

### **Regular Pay**

Includes all straight-time salaries and wages earned, leaves, tuition refunds, suggestion awards, swing and graveyard shift payrolls, and safety equipment allowances. Regular pay consists of all payroll items except for overtime pay.

### **Reservoir**

An impoundment to collect and store water. Raw water reservoirs impound water in a watershed; terminal reservoirs collect water where it leaves a watershed to enter the treatment process, and treated-water reservoirs are tanks or cisterns used to store potable water.

# DEFINITIONS

## R-T



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### **Revenues**

The Denver Water System is completely funded through rates, fees and charges for services provided by Denver Water. There are no transfers to or from the City's general fund. Water rates pay for operation and maintenance expenses, repair, capital replacements and modifications to existing facilities, debt service and a portion of the costs of new facilities and water supply.

### **Risk Management**

The Board is exposed to various risks of losses including general liability (limited under the Colorado Governmental Immunity Act to \$150,000 per person and \$600,000 per occurrence), property damage, and employee life, medical dental and accident benefits. The Board has a risk-management program that includes self-insurance for liability, employee medical, dental and vision. The Board carries commercial property insurance for catastrophic losses including floods, fires, earthquakes and terrorism for scheduled major facilities.

### **Safe Drinking Water Act**

Federal legislation passed in 1974 that regulates the treatment of water for human consumption and requires testing for and elimination of contaminants that might be present in the water.

### **Stores Issues**

Includes materials and supplies issued from inventory and fuel and oil for vehicles and equipment

### **Strategic Plan**

Process that is a practical method used by organizations identifying goals and resources that are important to the long-term well being of its future.

### **System Development Charges**

A one-time connection charge that provides a means for financing a portion of the source of supply, raw water transmission facilities, treatment plants and backbone treated water transmission facilities required to provide service to a new customer. Sometimes called a tap fee.

### **Tap**

A physical connection made to a public water distribution system that provides service to an individual customer.

### **Temporary Employee**

An employee hired as an interim replacement or temporary supplement of the work force. Assignments in this category can be of limited duration or indefinite duration, but generally do not exceed one year.



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## DEFINITIONS T-Z

### **Type of Expenditure**

A classification of resources or commodities that will be budgeted and charged to projects and activities by Cost Control Centers.

### **Utilities & Pumping**

Consists of gas, electric and telephone, electricity wheeling charges, replacement power purchased and power purchased for pumping.

### **Warehouse Purchases**

Adjustments related to the timing of purchases and issues of warehouse stock. Denver Water maintains a warehousing operation that purchases materials and supplies into stock. These items are then issued and charged to jobs as needed. The warehouse purchases and issues adjustment is required to insure that the total of materials as issued balances to the amount of purchases made for the warehouse stock.

### **Water Conservation**

Obtaining the benefits of water more efficiently, resulting in reduced demand for water. Sometimes called “end-use efficiency” or “demand management.”

### **Water Revenues**

Revenues generated through billing process from the sale of water.

### **Water Works Fund**

A fund into which are placed all revenues received for the operation of the water works system and plant together with all monies coming into said fund from other sources. The City Charter creates, the Water Works Fund, in which all activities of Denver Water are reported in the City’s financial statements. All revenues and expenditures of Denver Water flow through the Water Works Fund. The balance of the Water Works Fund is referred to in this budget document as the Designated Balances, Capital and Land Sales Account.

# **Appendix - Debt Guidelines**





## Denver Water Debt Guidelines

as adopted by the Board on

May 28, 2003 - Item V-G-4

### Denver Water will use the following guidelines to evaluate when and how to use debt financing in the future.

1. Debt proceeds may not be used to pay operating and maintenance expenditures.
2. Debt may be used only for refunding current maturities of existing debt (called *current refundings*), refunding future maturities of existing debt (*called advance refundings*) and for capital improvements.
3. Current refundings will be structured so that the final maturity of the debt does not exceed the useful life of the asset. In addition, refundings will be structured to facilitate an orderly and regular retirement of debt and to comply with statutory regulations while taking advantage of favorable market conditions.
4. Advance refundings will be considered when the net present value savings on the bonds being refunded is greater than 3.0% and the refunding is permitted by existing statutory regulations; or if extraordinary circumstances exist, when the net present value of savings is sufficient to satisfy existing statutory regulations.
5. Capital improvements of a normal, recurring nature and amount will generally not be financed with debt. Rather, this type of improvement will be included in the calculation of the revenue requirement from rates. This will result in routine capital expenditures being financed internally on a "pay-as-you-go" basis.
6. Non-recurring capital projects that expand the system or that are otherwise unusual in nature or amount may be financed externally. Because capital outlays for projects of this type are often made in advance of growth in demand, repayment of debt used to finance such projects may be deferred until revenues begin to be collected.
7. As there is a limited pool of resources, whether from internal sources or from debt, each proposed capital improvement will be assessed within the context of how it impacts the reliability and integrity of the total system and whether it is consistent with Denver Water's mission and long-term goals. During the capital planning and budgeting process, projects will be ranked to determine which ones are most essential to meet the Board's overall objectives. Projects that are ranked highest will then be reviewed with respect to appropriateness for external financing. An assessment of the impact on Denver Water's bond rating given the availability and cost of external financing will be made prior to final approval of the proposed projects for inclusion in the budget and capital plan.
8. Denver Water's treasury section will monitor the marketplace and stay abreast of new types of financing instruments and sources of funds. In evaluating the appropriateness of various financing sources for specific projects, Denver Water will consider the expected life of the asset, the nature of covenants, the impact on the organization's future financial flexibility, the amount of uncertainty and market risk associated with the type of financing being considered, the current regulatory and economic environment and whether revenue and expense projections indicate that Denver Water will be able to support the projected level of debt.
9. Denver Water desires to maintain its stand-alone revenue bond rating at a level of AA or better. After consulting with the rating agencies, Denver Water understands that maintaining its actual and historical level of debt service coverage rate of 2.2x or better will be important to maintaining the rating. Merely meeting the covenants contained in the bond resolution is not expected to be adequate. For that reason, the following, more stringent guidelines will be used in financial planning activities:
  - a. The Debt Ratio should not exceed 40%.
  - b. Interest Coverage (excluding System Development charges) should be equal to or greater than 2.5x
  - c. Debt Service Coverage, as defined in the Bond Resolution should be equal to or greater than 2.2x
  - d. The year-end balance in the Water Works Fund, net of Principal and Interest Requirements for the next 12 months should be equal to or greater than \$5 million.

## Calculations

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**Debt Ratio** - Total Debt divided by the sum of net fixed assets plus net working capital.

**Debt Service Coverage** - Net Revenues divided by scheduled principal and interest payments, before any refunding, for the same 12 month period.

**Interest Coverage** - Net Revenues divided by Interest Requirements

### Summary of Definitions

*(for more extensive definition, see Series 2003A Bond Resolution)*

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**Total Debt** - The principal amount of long-term debt plus the current portion of long-term debt plus accrued interest payable less the balance in any Debt Service Reserve Funds or Debt Service Funds. *(Includes general obligation bonds, certificates of participation, revenue bonds and capital leases.)*

**Gross Revenue** – All income and revenues, from whatever source, including system development charges and participation payments, excluding only moneys borrowed and used for providing capital improvements or other receipts legally restricted to capital expenditures.

**Operating and Maintenance Expenses** - Operating and maintenance expenses, net of depreciation, amortization and gross interest expenses, all calculated in accordance with generally accepted accounting principles, for the 12 month period ending on the date of the calculation.

**Net Revenues** - Gross Revenue less Operating and Maintenance Expenses.

**Interest Requirements** - Scheduled interest payments during the 12 month period following the date of calculation.

**Principal and Interest Requirements** - Interest Requirements plus the current portion of long-term debt. *(Includes general obligation bonds, certificates of participation, and capital leases.)*

# **Appendix – Financial Policy**



**TAB G – ACCOUNTING POLICIES**  
**PLANT AND EQUIPMENT**

- 2. a replacement of a retirement unit for another retirement unit (regardless of whether the replacement is similar to or better than the original - as long as they are both retirement units).
- b. The initial repairing, altering, painting, or otherwise improving retirement units acquired in a used condition in order to bring them up to normal operating standards
- c. Preparing retirement units for serviceable use (installing, testing, etc.)

Elements of Cost include:

Purchase Costs - the purchase price of the property (or a reasonable allocation if the total price includes land or other assets), plus related legal and transfer fees paid by the buyer; obligations for liens; interest attaching to the properties that may be assumed by the buyer; freight and transportation charges (Plant items only); costs of purchase options related to the property purchased; sales, use and other taxes payable on purchase; and any other acquisition costs directly associated with the property. Purchase costs are reduced by trade discounts and quantity discounts granted on the purchase. Items not to be considered as a part of the purchase price include, credits for trade-ins, maintenance agreements and, extended warranties. If the trade-in value has been netted against the new purchase that amount will need to be added back to arrive at the true capitalized cost. Trade-in values need to go against the 434.100 account as well as the net plant value of the retired asset.

Construction Costs - the purchase price (less trade and quantity discounts allowed) or inventory value of parts, components, materials and supplies consumed in the process of construction; cost of DW labor directly employed in construction; authorized overhead allocations; cost of outside construction contract services; depreciation (if not included in overhead); rental of equipment used in construction; cost of construction insurance obtained outside of DW; permit fees; architects' and builders' fees; and capitalized interest during construction, if applicable.

Equipment Installation Costs - the purchase price or inventory values of materials, parts, and supplies (including freight and taxes) used in installing purchased movable or removable equipment; DW labor used directly in installation (including actual employee benefit burden); authorized overhead allocations; and outside contract fees.

***Postacquisition Costs*** - Costs incurred for servicing or modifying retirement units during the ownership period after they have been acquired and placed into use. They may be maintenance and repair expenditures for the purpose of preserving the appearance and continuing operating efficiency and utility of the property to the end of its originally contemplated serviceable life, or they may be betterments.

***Retirement Unit*** - A base unit of property for capitalization, depreciation, and retirement

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**PLANT AND EQUIPMENT**

purposes, that performs a distinctive functional service, either independently or in conjunction or unison with other retirement units. It may be a single unit of property or an assembly of parts and components. It may be part of a larger assembly, but is readily separable and separately useful from the larger assembly of which it is attached. For example, a pump, a vehicle, and a building may be retirement units.

***Retirement Unit Component*** - An item of property that does not perform a distinctive functional service but is incorporated as a part or component of a retirement unit. For example, a pump part, a vehicle tire, and a roof of a building may be retirement unit components.

**POLICY:**

**Capitalization**

A. Initial Acquisition Costs

**Initial acquisition costs of retirement units** are capitalized if the **retirement unit** has an estimated future serviceable life of more than one year and has a cost of \$5,000 or more.

**Initial acquisition costs** of property with a life of one year or less or have a cost of less than \$5,000 are expensed.

An exception to the \$5,000 per item limit is an initial complement of a large facility, such as a complete furnishing of a new office facility, or a complete refurbishing of an existing facility. In such case, the entire initial complement may be capitalized if material.

When plant and equipment is purchased jointly with land, the total purchase cost is allocated for capitalization between the land and the plant and equipment. For allocation methods, see Accounting Policy "Land, Land Improvements, Land Rights, and Options."

Assets acquired or constructed under participation agreements with other entities, where DW retains 100% legal ownership, are recorded and depreciated based on gross costs of the participation project. (See Accounting Policy "Participation Projects").

B. Postacquisition Costs

1. Capitalization Criteria

**Post-acquisition costs** of a retirement unit are capitalized if they meet all of the

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following three conditions:

- a. The **retirement unit** has an estimated remaining serviceable life of more than one year (See Accounting Policy "Leasehold Improvements" for assets held under operating or capital leases),
- b. The **post-acquisition costs** are \$5,000 or more, and
- c. The costs result in at least a 20% **betterment** over and above the original quality characteristics of the property.

**Post-acquisition costs** for repair and maintenance or for items not meeting the above three conditions are charged to maintenance expense. This includes replacements of **retirement unit components** not involving **betterments**, regardless of cost.

2. Accounting for Betterments

- a. Capitalized **post-acquisition costs** are added to the original cost of the **retirement unit**. The depreciation rate is adjusted on a prospective basis to take into account the revised cost and life, if applicable.
- b. Dismantling and removal costs, less any salvage realized, incurred in connection with the reconstruction, conversion, **betterment** or renewal of existing plant and equipment are capitalized as part of the capitalized **post-acquisition costs**.

3. Moving and Relocation

Costs of moving or relocating plant and equipment within a facility or from one facility to another are generally expensed when incurred, unless connected with major reconstruction, conversion, **betterment**, or renewal projects, in which case they may be capitalized.

Depreciation

A. Record Date

Depreciation calculations in any month are based on depreciable cost of record as of the prior month end.

B. Commencement/Cessation Dates

1. General Equipment

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Depreciation begins the month following the month in which the equipment is placed in service, and a full month of depreciation is taken in the month in which the equipment is retired.

2. Plant Equipment

Depreciation begins the month following the quarterly transfer from construction work in progress (March, June, September, or December), and a full quarter's depreciation is taken in the quarter of retirement. (See paragraph D under "Administration" below for definitions of general and plant equipment).

C. Depreciable Base/Salvage Value

The historical capitalized cost of plant and equipment, without adjustment for salvage value, is used as the depreciable cost of the property, unless the estimated salvage value (gross proceeds upon retirement) exceeds 25% of the historical capitalized cost, in which case salvage value is taken into account.

D. Depreciation Method

Depreciation is computed using the straight-line method over the estimated useful lives of the respective depreciable asset classes.

The "unit" or "item" method of depreciation is used, as opposed to the "group" method.

E. Determination of Serviceable Life

A serviceable life is estimated for each **retirement unit** for depreciation/retirement purposes. Estimated serviceable lives are influenced by the following considerations:

1. Past experience relating to retirements of plant and equipment (including reasons for retirements).
2. Published statistics and guidelines (industry experience).
3. DW policies with respect to repair and maintenance of plant and equipment.
4. Anticipated business conditions, environmental legislation and requirements, obsolescence potential, etc.
5. Internal research and engineering judgment especially in relation to new processes, equipment, etc.

Property Accounting maintains a complete list of serviceable lives by plant and



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equipment category/type codes.

See Accounting Policy "Leasehold Improvements," for serviceable lives of assets held under operating or capital leases.

**F. Changes in Serviceable Life Estimates**

Serviceable life estimates are subject to review and revision based upon **betterments** or discovery of new facts indicating that the original estimates were significantly different, e.g.,

1. greater or lesser than anticipated wear and obsolescence,
2. higher or lower than anticipated level of maintenance and repair work, or
3. general reappraisals concerning estimated remaining serviceable lives of properties in use.

For purposes of the above, a change of 25% or more in the serviceable life of a base unit is considered to be significant.

Changes in the allocation of depreciation charges as a result of changing serviceable life estimates are handled on a prospective basis, i.e., adjustments for under or over depreciation are equalized over the remaining life of the property.

**G. Cessation of Depreciation**

Depreciation is terminated on the depreciable cost of plant and equipment only when:

1. the property is retired or permanently idled (for idle property, see Accounting Policy "Idle Plant and Equipment."), or
2. the property is fully depreciated, i.e., accumulated depreciation equals depreciable cost.

**Retirement**

**A. Retirement Units**

The disposition of a **retirement unit** (property that is sold, junked, scrapped, abandoned, reverted to lessors upon the termination of a capital lease, etc.) is accounted for by removing the asset cost and accumulated depreciation from the accounts, and recognizing the gain or loss in current income.

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This is accomplished by two separate entries, one for the receipt of cash, if any, and the other to remove the asset accounts from the books.

**B. Retirement Unit Components**

**1. Replacements**

**a. Without Betterment**

Replacements of **retirement unit components** not involving **betterments** are charged to maintenance expense. Original costs of any replaced parts remain in the asset accounts.

**b. With Betterment**

Replacements of **retirement unit components** involving **betterments** are described in Paragraph B.2 under "Capitalization" above.

**2. Retirements Without Replacement**

Retirements of **retirement unit components** without replacement are accounted for in the same manner as for **retirement units** if the original costs are known or can be reasonably estimated. If the original costs are not known or cannot be reasonably estimated, they remain in the asset accounts.

**C. Special Retirement Considerations**

**1. Trade-in allowances**

Equipment trade-in allowances are treated as proceeds from the disposal of the equipment traded in, and are taken into account in calculating the gain or loss on disposition of the equipment traded in.

**2. Dismantling, Removal and Selling Costs**

Dismantling, removal, and selling costs, less any salvage realized, incurred in connection with the selling, junking, scrapping, abandonment, etc. of existing plant and equipment are recorded as a deferred charge until the work order is closed, whereupon they are charged to gain or loss on disposition of the asset.

**3. Costs of Abandoned Construction**

Accumulated costs of construction projects that are completely abandoned with no intention to pursue the project are expensed.

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Administration

A. Authorization for Capital Acquisitions

1. The Purchase Requisition System (discussed in Tab E of the Accounts Manual) is used for purchase of all materials, supplies, equipment, routine services, equipment leasing, and rentals.
2. The Work Order System (discussed in Tab I of the Accounts Manual) is used for construction of a project or removal of an asset from service.

B. Construction Work in Progress (CWIP)

Control of construction costs to be capitalized as plant and equipment is maintained through a separate CWIP account and subsidiary records that accumulate the costs before they are finally cleared to the appropriate plant and equipment accounts. Detail records are maintained for in-progress expenditures by work order to insure that all costs are properly authorized, identified, and classified. All capitalized construction costs of plant and equipment are cleared through CWIP before transfer to the applicable plant and equipment accounts.

C. Clearing CWIP

Project costs are cleared from CWIP to plant or equipment on a quarterly basis (March, June, September, or December) when the project is ready for use and all pertinent costs have been recorded. Individual **retirement units** are identified and classified through the plant analysis procedure.

D. Types of Equipment

Equipment is classified into two basic types - plant equipment and general equipment. Plant equipment additions result from CWIP transfers and contributions, while general equipment additions result from CWIP transfers, contributions, and direct purchases. The characteristics of each type are as follows:

**GENERAL CHARACTERISTICS OF EQUIPMENT**

Characteristic	General (TOE 7000's)	Plant (TOE 3800)
Life	1-20 years	Generally 20 years or more
Use	Does not function as an integral part nor is an appurtenance to a structure.	Is an appurtenance to or functions as an integral part of a structure or process (such as chlorination)



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Portability	Portable in nature. Does not usually require installation. Includes vehicles & "M" Machines.	Permanent in nature. Requires installation or used for a specific function only
Physical Inventory	Identifiable as a complete unit. Can be marked with ID tag.	May be identified as a complete unit. Sometimes inaccessible and/or cannot be marked with ID tag, but is identified on the system
Cost	\$5,000 or more. Items of high "home value" i.e. computers, generators, air compressors, digital cameras, and certain other electrical equipment such as radios, scanners, VCR's and VCR cameras costing less than \$5,000 may be included on an individual basis.	\$5,000 or more.

**BACKGROUND:**

Capitalization - To facilitate the accounting for plant and equipment, initial acquisition costs are differentiated from post-acquisition costs, and retirement units are differentiated from retirement unit components.

To avoid undue refinement for initial acquisition costs, a minimum capitalization amount of \$5,000 is established. The \$5,000 capitalization minimum is considered necessary to preclude burdensome record keeping on numerous small items, the total cost of which normally does not have a material effect upon financial results, whether capitalized or currently expensed. Items below this minimum are generally items of relatively small value such as working tools and implements and minor office equipment. They are usually small in size, very portable, and difficult to track and control in any formal accounting system, and are often moved or replaced without notification to the Accounting Section. Because of these characteristics, any attempts at capitalization and effective control would be counterproductive, so they are expensed when acquired. However, individual sections may inventory and control these items if they so desire.

The classification of assets between retirement units and retirement unit parts or components is specified by the National Association of Regulatory Utility Commissioners (NARUC) in the "Uniform System of Accounts for Class A Water Utilities," for the purpose of simplifying the accounting for additions, retirements, and replacements. NARUC specifies that replacement parts or components should be expensed regardless

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of cost, unless they are betterments, which eliminates the burden of capitalizing and retiring immaterial amounts. This concept is also accepted practice in non-utility accounting, although other terminology may be used for "retirement unit," such as "complete functional entity." The criteria for capitalizing post-acquisition costs are: (1) betterment - they must generate a substantial improvement over and above the original quality characteristics of the property for which they are incurred, and (2) materiality - betterment costs must amount to the capitalization limit of \$5,000 for each retirement unit on which the work is performed.

The betterment criterion is based on accepted accounting standards that exclude ordinary maintenance and repair costs from capitalization. The materiality criterion is designed to eliminate record keeping on relatively minor property improvement costs by treating them as period maintenance and repair expenses.

Individual judgment will be used to apply the betterment criterion to distinguish a substantial betterment from ordinary repair and maintenance. Plant or engineering personnel will be involved in this evaluation, when necessary. The use of an objective criterion such as a minimum betterment percentage was considered but was rejected. DW has chosen not to follow the procedure for accounting for betterments specified by NARUC of adding the excess cost of the replacement over the estimated cost at current prices of replacing without betterment to the asset. Instead, DW has chosen to remove the old cost and accumulated depreciation from the accounts if known or can be reasonably estimated, and capitalize the new cost. If not known or cannot be reasonably estimated, the old costs remain in the accounts.

Depreciation - DWB acquires plant and equipment with the intent of keeping and using them over their full productive or useful lives. Salvage values at the end of that time historically have been negligible or nonexistent, therefore, no provision for salvage value is made for most assets, and generally, original costs are considered as the depreciable costs. In some cases where technological obsolescence is an important factor, e.g., computer hardware, or in any other specific cases where potential salvage may be significant, exceptions are made for salvage recognition. "Significant" salvage is defined as gross proceeds upon retirement exceeding 25% of the historical capitalized cost.

Retirement - DW has chosen not to follow the procedure for retiring retirement units specified by NARUC, but instead follows conventional non-utility accounting procedure. NARUC uses the group method of depreciation extended to the utility plant as a whole, in order to stabilize the rate base and minimize the need for frequent rate changes that result from property retirements. Under this method, gains and losses on dispositions of retirement units are not recognized in current income but are recorded against accumulated depreciation. Since DW calculates rate adjustments by using a cash requirements approach rather than a cost of services approach, and does not come under the jurisdiction of a regulatory authority other than its own Board of Water Commissioners, it has rejected this method in favor of the conventional unit method, which recognizes

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gains and losses in current income.

