



City of Boulder

**Public Works Department - Utilities Division**

**Water Utility**

**Quick facts:**

- 28,519 billing accounts
- 463 miles of watermain
- 75 employees (for more detail on staffing levels see the [Utilities Staffing Levels by Program](#) sheet)

**Boulder receives its raw water supply from three sources:**

1. The Silver Lake Watershed and North Boulder Creek;
2. Barker Reservoir and Middle Boulder Creek; and
3. Boulder Reservoir from the Colorado-Big Thompson Project and the Windy Gap Project, owned by the Bureau of Reclamation and operated by the Northern Colorado Water Conservancy District, which delivers west-slope water to the Front Range.

**Annual, average day & peak day water demands (million gallons)**

	2008	2009	2010	2011
<b>Annual</b>	6,173	5,623	6,215	6,112
<b>Average day</b>	16.9	15.4	17.0	17.0
<b>Peak day</b>	36.5	30.5	33.6	36

**Master Plans: (refer to Resource web site)**

- Water Utility Master Plan, draft version, Fall 2011
- Source Water Master Plan, 2009
- Water Quality Strategic Plan, 2009
- Water Conservation Futures Study, 2000

**Facilities**

- Two water treatment facilities:
  - Betasso Water Treatment Facility – conventional treatment with coagulation, flocculation, sedimentation, mixed media filtration and sodium hypochlorite disinfection. Rated treatment capacity is 35-40 MGD
  - Boulder Reservoir Water Treatment Facility – conventional treatment with coagulation, flocculation, Dissolved Air Flotation (DAF), mixed media filtration and sodium hypochlorite disinfection. Rated treatment capacity is 16 MGD
- Eight hydroelectric facilities.
  - In 2010, the city received \$2,463,102 in hydroelectric revenues from Xcel Energy.
  - The plants generated 50,266,657 kilowatt-hours (50,267 megawatt-hours) of power in 2011.
- The division maintains six treated water storage reservoirs, ranging in size from 0.6 MG to 9.5 MG, with a total storage capacity of approximately 35 MG.

**Financial**

2012 Operating budget           \$14,904,545  
 2012 Capital budget           \$ 3,746,754

Revenue bond info – outstanding principal is \$37,070,000

**Asset Value:**

Water Rights	\$ 364,000,000
Land	\$ 269,000,000
Buildings	\$ 2,000,000
WTFs	\$ 89,000,000
Storage Tanks/Res.	\$ 27,000,000
Hydroelectric Plants	\$ 25,000,000
Pipes, services, etc	\$ 319,000,000
<b>Total Value</b>	<b>\$1,095,000,000</b>

**Wastewater Utility**

**Quick facts:**

- 27,187 billing accounts
- 375 miles of sewermain
- 58 employees (for more detail on staffing levels see the [Utilities Staffing Levels by Program](#) sheet)

**Wastewater flows**

	2008	2009	2010	2011
<b>Average day flows (MGD)</b>	13.2	13.5	13.8	12.5

**Master Plans: (refer to [Resource web site](#))**

- Wastewater Utility Master Plan - October 2011
- Water Quality Strategic Plan - 2009
- Wastewater Treatment Plant Master Plan - 2007
- Wastewater Collection System Master Plan - 2008

**Facilities**

- The 75<sup>th</sup> Street Wastewater Treatment Facility including headworks, primary clarification, biological nutrient removal activated sludge, ultraviolet disinfection (to be operational in 2012), anaerobic digestion, biosolids handling, rated capacity 25 MGD max month.
- One sewage lift station

### **Wastewater treatment facility discharge permit status**

In May 2011, the city received a new wastewater facility discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division. The new permit has restrictive ammonia effluent limits, restrictive arsenic effluent limits and nitrate effluent limits, in addition to other standard parameters such as metals.

### **Marshall landfill groundwater treatment facility status**

The Marshall/Boulder Landfill was operated from 1965 to 1992, during which time stabilized sludge from the 75<sup>th</sup> Street Wastewater Treatment Facility was disposed at the landfill. The Landfill was placed on the National Priorities List in 1983 due to contamination of nearby surface and groundwater and the city was named as a Primary Responsible Party in a 1989 US EPA Consent Decree. The city and private entities have been responsible for operating and maintaining the groundwater treatment facility and groundwater collection system as well as extensive water sampling and analysis at the Marshall/Boulder Landfill since 1993. Over the years of treating the collected groundwater, the influent concentrations of pollutants steadily decreased to the point that the influent water quality met effluent limits without treatment. The treatment plant is now shut-down and in the de-commissioning phase. EPA conducted the most recent five-year review in 2011 and has directed a continuation of site monitoring, but agrees that the groundwater treatment facility can remain in mothball status.

### **Financial**

2012 Operating budget	\$8,893,482
2012 Capital budget	\$1,165,000

Revenue bond info – outstanding principal is \$44,920,000

#### Asset Value:

Land	\$ 58,000,000
Buildings	\$ 1,000,000
WWTFs	\$ 75,000,000
<u>Pipes, etc</u>	<u>\$ 172,000,000</u>
Total Value	\$ 306,000,000

### **Stormwater / Flood Management Utility**

#### **Quick facts:**

- 23,715 billing accounts
- 160 miles of stormsewer pipes
- 21 employees (for more detail on staffing levels see the [Utilities Staffing Levels by Program](#) sheet)

#### **Flood channels and stormsewers**

The City of Boulder is located along the front range of the Rocky Mountains and is the #1 rated flash-flood community in the state. This rating is due to the city's location at the mouth of Boulder Canyon and the number of people who live and work in the Boulder Creek floodplain. Within the city, there are 15 major creeks that generally flow from west to east as they converge on Boulder Creek, which is the main tributary

flowing through the city.

**Federal Emergency Management Agency interaction**

Boulder participates in the National Flood Insurance Program and has a “7” rating in the Community Rating System (CRS). The goal in the 2012-1015 timeframe is to achieve a rating of 6. City staff has meet with the CRS committee to discuss changes to the rating system that will likely become effective in 2012.

**Urban Drainage and Flood Control District / Office of Emergency Management**

**Early warning system**

The city is a member of the Urban Drainage and Flood Control District (UDFCD), which was established by the Colorado legislature in 1969, for the purpose of assisting local governments in the Denver metropolitan area with multi-jurisdictional drainage and flood control problems. The city partners with Boulder County and the UDFCD to operate the Boulder Office of Emergency Management (OEM) which, among other responsibilities, includes the Early Warning System and emergency response operations for flood events.

**Master Plans: (refer to [Resource web site](#))**

- Comprehensive Flood and Stormwater Master Plan - 2004
- Major Drainageway Planning - Varies
- Stormwater Master Plan - 2007

**Financial**

2012 Operating budget	\$3,243,108
2012 Capital budget	\$2,147,500

Revenue bond info - outstanding principal is \$425,000

**Asset Value:**

Land	\$ 193,000,000
<u>Pipes, etc</u>	<u>\$ 109,000,000</u>
Total Value	\$ 302,000,000