## Serving our Community; Protecting our Environment

DRINKING WATER

STORMWATER

WASTEWATER

STREET LIGHTING

## 2014 ANNUAL REPORT SALT LAKE CITY PUBLIC UTILITIES



## **DIRECTOR'S MESSAGE**

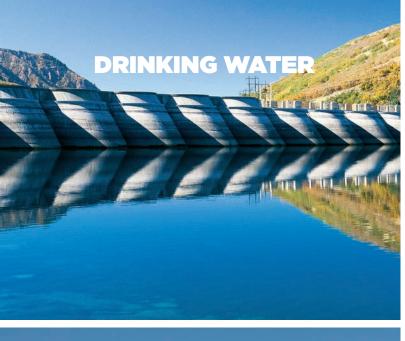


#### SERVING OUR COMMUNITY. PROTECTING OUR ENVIRONMENT.

ere at the Department of Public Utilities, we spend our days with numbers: trend lines; chemistry analyses; flow measurements; customer surveys; quantity of water deliveries; lost calls; response times; maximum contamination levels; days of lost time worked; severity rates; benchmarks; and the list goes on.

These numbers tell a story that helps us to succeed at what is truly important: providing the highest quality of service to our customers while continuing to protect our natural and constructed resources. These two concepts—service and stewardship—are at the core of our mission here at Public Utilities. Whether it is protecting our water sources and rights in the Wasatch; ensuring the delivery of safe and high quality drinking water; reducing stormwater pollutants; collecting and treating wastewater; discharging water from the reclamation facility at standards above those set by the US-EPA; or enhancing our urban environment through the installation of efficient street lighting— Public Utilities' strives to exceed the expectations of those we serve and to honor the vision of those who built the framework of this Utility in the past. And for the men and women of this Utility that work every day to make all this happen, though we do it by the numbers, it's all about the people.









e deliver high quality drinking water through more than 90,000 connections within Salt Lake City and the surrounding area, meeting or exceeding all state and Federal regulations. Our water is supplied through one of three water treatment facilities (City Creek, Parleys, and Big Cottonwood) or purchased from wholesale water suppliers. To ensure our water quality, we monitor, sample, and analyze our source waters, our treatment processes at the facilities, and the finished drinking water at locations spread throughout the distribution system. We also provide oversight and monitor connections within the system through our cross connection program.

Service Connections

**Cross Connection Inventory** 



6,755

Square Miles of Service Area

135

7,500

**Drinking Water Samples** 

Water Treatment Plants

3

Population Served **343,226** 

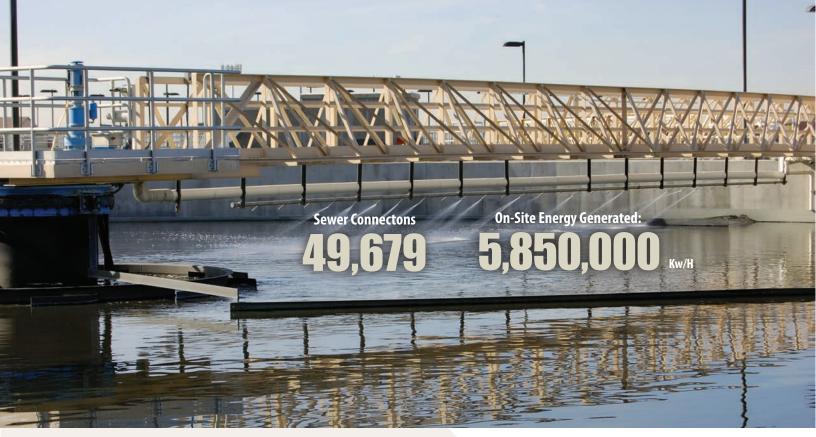
Metered Water Sales – Gallons **26,130,403,860** 

#### WATER UTILITY SOURCES

Total	\$67,737,877
Contributions	1,952,647
Interest Income	348,796
Other Income	2,736,746
Water Sales	\$62,699,688

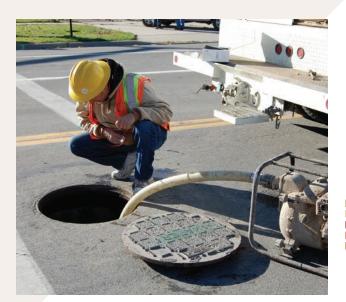
#### WATER UTILITY USES

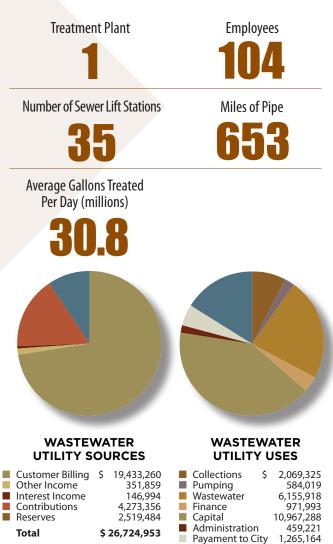
Total	\$67,737,877
Reserves	1,229,925
Debt Service	2,708,477
Payment to City	3,662,360
Administration	2,253,891
Capital	14,364,467
Trans. & Distribution	9,828,565
Finance	3,992,412
Shops & Maintenance	e 2,813,232
MWDSLS Assessmen	
Purification	16,624,496
Power & Pumping	1,990,130
Sources of Supply	1,248,030



## WASTEWATER

he Wastewater division is comprised of two functions: collection and treatment, both regulated under the Utah Pollutant Discharge Elimination System. Also supporting wastewater efforts are engineering with technical analysis, asset management, capital improvement planning, project design, and construction management services; the GIS/IT group providing mapping, work orders, system modeling, and asset management analysis; and the pretreatment group which monitors and works with industry to prevent pollutants from being discharged to the sewer.





Debt Service

Total

4,252,025

\$26,724,953



## **STORMWATER**

he Stormwater Utility is responsible for monitoring and maintaining the quality of our stormwater discharges. We work to ensure that the stormwater discharges, as well as the creeks and rivers that they drain to, are as pure as possible and that we adhere to the Federal Clean Water Act (CWA) and the Utah Pollution Discharge Elimination System (UPDES) permit for Municipal Separate Storm Sewer Systems (MS4). As part of this program we provide oversight and monitor industrial operations and construction activity throughout the City to ensure that best management practices are followed. In addition, we collect samples from the stormwater system to demonstrate compliance with our permits.

Collections

Engineering

Capital

Total

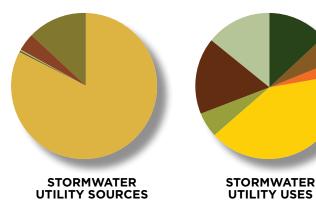
Water Quality

Administration

Payment to City

**Debt Service** 





Total	\$ 9,833,066
Reserves	1,258,743
Contributions	386,804
Interest Income	35,462
Other Income	25,621
Customer Billing	\$ 8,126,436

\$ 1,295,086

557,584

331,765

553,425

4,051,176

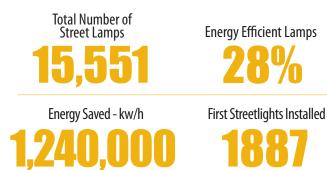
1,653,048

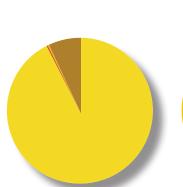
1,370,982 **\$ 9,833,066** 

## **STREET LIGHTING**

n 2012, City Council passed legislation that created a new enterprise fund and assigned responsibility to Public Utilities to oversee the program. A citizen committee helped to determine a fee structure and goals for the newly formed enterprise fund. Annual revenue is about \$3.6 million per year, which is adequate funding for a \$1 million per year power bill, on-going maintenance, and a capital improvement program. A major element of the capital improvement program is to convert the entire system to high energy efficient lamps within 10 years. As we begin our high efficiency upgrades, new fixtures will be installed or retrofitted with light-emitting diode (LED) upgrades. In addition to offering substantial energy savings LED lights have a long life,

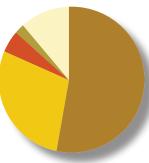
A Capital Improvement Program Framework Report has been prepared and submitted for Administration and Council review with focus on the high efficiency lighting upgrade program. Additional effort has been spent on recommendations to address requests for higher levels of service, such as special assessment areas and private lighting projects.





#### STREET LIGHTING UTILITY SOURCES

Custon	ner Billing	3,206,518
Other I	ncome	1,165
Interes	t Income	2,065
Contril	outions	232,947
Total	:	\$3,442,695



#### STREET LIGHTING UTILITY USES

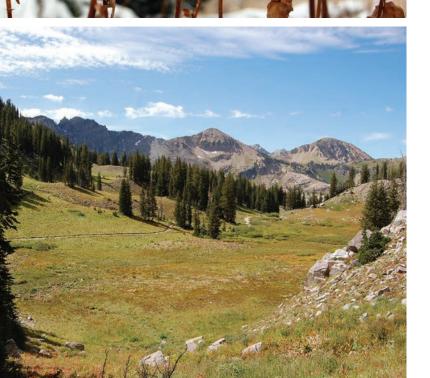
Total	\$3,442,695
Reserves	382,258
Payments to City	71,041
Administration	171,128
Capital	1,001,127
Street Lighting	1,817,141











## WATER RESOURCES

t is the role of the Water Resources Division to ensure that our sources of water are protected from pollution, our water rights are preserved, and our water is used appropriately and wisely. This protection begins in the Wasatch Mountain watersheds, where watershed rangers patrol the mountains towering over the Salt Lake Valley, an area roughly 190 square miles, monitoring for compliance with watershed regulations, educating visitors, stewarding the land, and managing recreation facilities. Water Resources staff are also responsible for documenting streamflows, maintaining water rights, implementing water conservation programs, managing water agreements and contracts, and working collaboratively with numerous federal, state, and local government agencies and private organizations.





Drinking Water Derived from the Wasatch Watershed

**57%** 

Square Miles of Watershed

189.95

First Watershed Stream Diversion

1848

First Patrols to Protect Watershed

1911

Protected Canyons in Wasatch Watershed

4

Watershed Fund Established



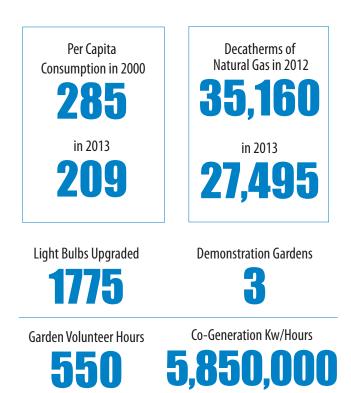
Acres Conserved



## CONSERVATION: WATER/ENERGY

t Public Utilities, we believe that not only do we serve our community, but we are an integral part of that community. Within those linked roles of community member and public servant, we have a long history of environmental stewardship, one that dates back to the establishment of this utility. Public service and environmental stewardship are so intertwined in our work and processes, that we adopted the motto, "Serving our community; protecting our environment" as a daily reminder and declaration of our intent.

One important way we both serve our community and protect our environment is through our water conservation programs and the implementation of our Water Conservation Master Plan. Another aspect of working our motto is our initiatives pertaining to energy use reduction and alternative energy supplies. Water supply, energy use, and climate change are threads woven into our planning processes. Through all of our efforts, we can achieve our goals of maintaining a resilient, sustainable water supply and reduce our carbon footprint.













## ADMINISTRATION/ FINANCE

he Administrative Division oversees and manages department policies, training, employee safety, media contact, human resource issues, and the affairs of the Department with and on behalf of the Mayor both internally and with other external political organizations. Providing coordinated direction and support to carry out the Department's goals and policies, the Administration helps to ensure that all construction contracts, water exchange agreements, ordinances, and federal regulations are met. The Administrative Division is also responsible for allocating and directing the collection of all monies collected by the Department for all four enterprise funds: Drinking Water, Stormwater, Sewer, and Street Lighting. Customer service, meter reading, billing, and accounting are also functions of this division.

Meters Read Monthly

**Radio-equipped Meters** 

28,967

Walk-in Customers **8,200** 

Bills Processed Monthly **94,400** 

Phone Calls to Customer Service

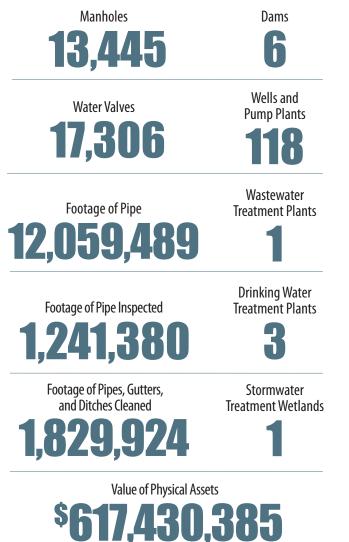
114,429

Field Investigations/ Collections



## ASSET MANAGEMENT

sset management begins with an accurate inventory of all our facilities, identifying the criticality or importance each asset plays in providing our services, and evaluating the condition of each asset to meet the level of service expectations of our customers. This plan-for-each-asset approach includes work orders for follow up inspection, cleaning and preventative maintenance, and capital improvement rehabilitation or replacement as needed. The resources, skills, and tools of each workgroup are brought together in a collaborative effort, starting with the pride and dedication of our crews that operate, maintain, and inspect our facilities; to our GIS and work order support staff who help us track and complete thousands of preventative and emergency work orders every month; and engineering team support services to implement the right project fix at the right time to meet those needs. The result of our asset management program efforts is efficient use of time and monetary resources, and a high level of service in terms of minimized surprise system failures and impacts to the public.















## **CAPITAL IMPROVEMENTS**

he Capital Improvement Program is a set of projects that are funded to repair or replace existing infrastructure that is in need of upgrade due to deteriorating structural condition, to meet changing regulatory standards for public health and safety, to improve efficiency, or to increase the capacity of our facilities to meet the demands of growth in our community. The goal of the Capital Improvement Program is to provide timely, cost efficient replacement of facilities which have exceeded their useful life, but before they fail or compromise the service and integrity of the system. When it comes time to replace or rehabilitate our facilities, we employ various cost saving and efficiency measures that take advantage of the latest construction methods, new and better materials of construction, and economies of scale afforded the size of our system.

# 2014 Capital Improvement Projects \$30,384,058

**Number of Capital Projects** 

556

Footage of Water Pipe Replaced

13,220

Footage of Sewer Pipe Replaced

50,747

#### Footage of Stormwater Pipe Replaced

26,819



## **GIS/IT**

he GIS/IT Division maintains, updates, and provides maps of the watershed, all utility infrastructure, and utility properties. Water, sewer, stormwater, and street lighting infrastructure are mapped and surveyed through GIS, where vast amounts of data is collected, managed, and merged to make possible the modeling and assessments necessary to ensure that each and every system functions at optimum standards. Additionally, GIS/IT maintains the database necessary to our asset management program including maintenance costs and utility conditions. GIS/IT works with each utility division to create customized reports and models which help in both the day-to-day functioning of that division and also the planning and design processes.

The GIS/IT division also provides information used for modeling, analysis, and other decision-support tools. Both in emergency planning and emergency response, GIS/IT provides the mapping and other information critical to ensure that we are prepared and can respond effectively and efficiently, ensuring our ability to protect our community. Every enterprise fund, division, and work group within Public Utilities is linked through the GIS/IT network: billing, customer service, maintenance, distribution, watershed, development review, water conservation, cross connection, and more. Additionally, GIS/IT provides mapping information and Blue Stakes locating to internal and external customers such as other city, county, and state agencies, and to private property owners. GIS/IT maintains the Utilities' website and social media venues.

Models Developed:

National Awards:







Salt Lake City Property

Emigration Tunnel

## **FINANCIAL REVIEW**

alt Lake City Department of Public Utilities has four enterprise funds: Water, Sewer, Stormwater, and Street Lighting. Each utility serves as a separate financial entity, providing excellent services to their respective customers. The utilities do not receive tax support or transfers from Salt Lake City's general fund. Service fees are charged to cover operating costs and debt service.

Management maintains a sound financial structure for these entities by using conservative budget assumptions, funding capital improvements through rates, sustaining adequate reserves, and maintaining strong debt coverage rather than extended financing.

The accompanying financial information covers the four utility funds and highlights our accomplishments of maintaining a strong financial structure and meeting all financial bond requirements.

**WATER UTILITY:** The water utility continued to provide an excellent level of service to our customers. This past year the customer satisfaction rating decreased slightly from the previous year for a total rating of 94.8 percent. This past year the Department partnered with City Transportation and the Utah Transit Authority to provide special discounted annual transit passes to help reduce CO2 emissions as part of the Mayor's goals to reduce pollutants within the City. The second program implemented was a home warranty program to help homeowners manage the cost of sewer lateral or water service line repairs or replacements. The City entered into a contract with HomeServe to provide the service, offering warranty coverage at low rates.

Water revenues decreased as customers responded to a cooler, wetter summer by reducing water use. This reduced revenue by \$3 million over the previous year, but overall revenue was still over the budgeted amount. Expenses trended lower as the utility purchased less water from Metropolitan Water District of Salt Lake & Sandy.

WASTEWATER UTILITY: The Water Reclamation Plant completed another year of perfect NPDES permit compliance, representing twenty years of perfect compliance. This past year the sewer utility continued construction to replace the walls and roofs of three digesters at a cost over \$11.2 million. This project was partially funded by a \$6 million no-interest bond issue sold to the State of Utah under an ARRA Federal Grant Program. The sewer utility continued work on an environmental remediation process, begun in 2003, of the Northwest Oil Drain (NWOD) Canal under a US Environmental Protection Agency administrative order and with a cost-sharing agreement between the utility, British Petroleum, and Chevron. The two oil companies are contributing two-thirds of the remediation costs, and the sewer utility is contributing one-third of the cost. As of June 30, 2014 the oil companies have contributed approximately \$13 million.

**STORMWATER UTILITY:** Salt Lake City Council established the utility on July 1, 1991, to finance and maintain the city's aging stormwater infrastructure and to comply with programs mandated through the Clean Water Act amendments. Since that date, the utility has constructed or replaced more than \$107 million in storm water facilities. Improvements to the system would not have been possible without the creation of the utility and the dedication of its employees.

**STREET LIGHTING UTILITY:** Salt Lake City Council established the utility on December 11, 2012, to finance and maintain the City's street lighting system. The new fee was set at \$3.73 per month for each residential customer and \$3.73 for each residential equivalent unit for non-residential customers, with the residential equivalent based on an average front footage of 75 feet. In the first full year of operation, \$3.2 million was generated, \$400,000 below budget estimates. The utility will still have adequate funding to finance energy efficient street lights across the City over the next ten years.

#### **MAJOR CHALLENGES**

- Financing the Department's infrastructure improvements is rated as one of the greatest challenges. National studies decry the deterioration of the nation's water and sewer infrastructure and the lack of funding to keep pace with aging facilities and new facilities needed to meet more stringent standards.
- 2. Impacts of the down turn in the economy still affect the enterprise funds, however construction has increased and businesses are starting to build and expand. Construction costs are starting to increase and major projects will need to be financed to meet new proposed federal and state standards. The Department will continue to provide a high level of services as it adjusts to these changes in the economy and new standards.

## **DRINKING WATER UTILITY**

		2011	2	012	2	013	:	2014
Operating Revenue	\$5	8,098,067	\$ 6	51,921,062	\$ 6	7,745,870	\$ 6	5,301,838
Operating Expenditures	-4	3,536,176	-4	4,069,723	-4	9,010,616	-4	9,435,008
Depreciation and Amortization	-	7,097,153		-7,406,182	-	7,686,879	-	7,893,265
Operating Income	\$	7,464,738	\$ 1	0,445,157	\$1	1,048,375		7,973,656
Interest Income and Gain on Sales		394,502		625,684		688,514		483,392
Interest Expense (less capitalized)		-370,124		-471,674		-475,122		-462,329
Contributions and Grants		2,689,948	1,980,186		3,242,874		1,952,647	
Change in Net Position	\$1	0,179,064	\$ 1	2,579,353	\$ 1 <sub>4</sub>	4,504,651	\$	9,947,275
Total Property, Plant, and Equipment	\$29	3,414,648	\$30	0,806,366	\$30	4,915,503	\$ 31	1,270,088
Total Assets	\$34	1,378,757	\$35	1,781,163	\$36	3,885,293	\$ 37	3,358,388
Additions to Property, Plant,								
and Equipment	\$ 1	3,262,892	\$ 1	5,385,548	\$ 12	2,450,600	\$ 1	4,364,467
Full-time Employees per								
Thousand Connections		2.87		2.84		2.85		2.78
Average Annual Water Charges for City Residential Customers based on 7,480 Gal. per month for 8 months and								
40,000 Gal. for 4 months	\$	479.64	\$	511.60	\$	546.24	\$	582.16
Treatment Plant Costs/Acre of Water								
City Creek Treatment Plant	\$	253.55	\$	241.19	\$	309.16	\$	311.73
Parleys Treatment Plant	\$	164.81	\$	207.23	\$	483.35	\$	480.83
Big Cottonwood Treatment Plant Metropolitan Treatment Plant	\$	91.78	\$	76.30	\$	88.39	\$	102.45
Summer Rate	\$	322.00	\$	332.00	\$	342.00	\$	232.00
Winter Rate	\$	116.00	\$	120.00	\$	123.00	\$	232.00
Total Water Supplied in Millions Gal. Ratio of Net Revenue to Aggregate		29,392.78		31,745.80	:	31,644.76		30,943.00
Debt Service (minimum ratio		4.23		4.29		3.19		3.40

## WASTEWATER UTILITY

	2011	2012	2013	2014
Operating Revenue	\$ 17,677,509	\$ 17,612,932	\$18,390,018	\$ 19,678,278
Operating Expenditure	-11,911,166	-11,134,197	-12,673,410	-11,,505,640
Depreciation and Amortization	-4,286,687	-4.796,210	-5,273,626	-5,698,790
Operating Income	\$ 1,479,656	\$ 1,682,525	\$ 442,982	\$ 2,473,848
Interest Income and Gain on Sales	222,344	307,456	309,782	253,835
Interest Expense (less capitalized)	92,732	92,732	105,316	54,244
Contributions and Grants	3,117,995	6,691,539	5,172,309	4,273,356
Change in Net Postions	\$ 4,912,727	\$ 8,774,252	\$ 6,030,389	7,055,283
Total Property, Plant, and Equipment	\$ 158,897,744	\$ 182,181,110	\$189,627,747	\$ 194,897,245
Total Assets	\$ 213,687,396	\$223,637,167	\$230,249,066	\$ 233,338,958
Additions to Property, Plant, and Equipment	\$ 13,786,052	\$ 28,122,817	\$ 12,775,420	\$ 10,967,288
Full-time Employees per Thousand Connections	2.02	2.11	2.11	2.10
Average Annual Sewer Charges for City Residential Customers	\$ 132.48	\$ 138.24	\$ 138.24	\$146.88

## **STORMWATER UTILITY**

	2011	2012	2013	2104
Operating Revenue	\$ 7,734,631	\$ 8,215,799	\$ 8,138,630	\$ 8,152,057
Operating Expenditure	-3,927,524	-3,733,834	-4,585,011	\$ -4,410,908
Depreciation and Amortization	-2,355,420	-2,454,689	-2,649,543	\$ -2,790,660
Operating Income	\$ 1,451,687	\$ 2,027,276	\$ 904,076	\$ 950,489
Interest Income and Gain on Sales	51,367	148,733	71,248	35,462
Interest Expense (less capitalized)	29,284	-11,015	-39,822	-89,370
Contributions and Grants	1,789,990	416,980	201,117	\$ 386,804
Change in Net Position	\$ 3,322,328	\$ 2,581,974	\$ 1,136,619	\$ 1,283,385
Total Property, Plant, and Equipment	\$ 97,279,378	\$ 104,510,146	\$ 106,824,709	\$108,085,225
Total Assets	\$ 110,304,601	\$ 117,788,172	\$ 116,888,051	\$117,502,821
Additions to Property, Plant, and Equipment	\$ 5,489,116	\$ 9,679,041	\$ 4,955,885	\$ 4,051,176
Full-time Employees per Thousand Connections	0.59	0.59	0.61	0.62
Average Annual Sewer Stormwater Charges for City Residential Customers	\$ 48.00	\$ 53.88	\$ 53.88	\$ 53.88

## **STREET LIGHTING UTILITY**

	2013	2014
Operating Revenue	\$1,602,537	\$ 3,207,683
Operating Expenditure	-1,062,323	-2,059,310
Depreciation and Amortization	127,256	-271,675
Operating Income	\$ 412,958	\$ 876,698
Interest Income and Gain on Sales	85	2,065
Interest Expense (less capitalized)	0	0
Contributions and Grants	2,473,099	232,947
Change in Net Positions	\$ 2,886,142	\$ 1,111,710
Total Property, Plant, and Equipment	\$2,448,375	\$ 3,177,827
Total Assets	\$3,082,680	\$ 4,266,126
Additions to Property, Plant, and Equipment	\$2,575,631	\$ 1,001,127
Full-time Employees per Thousand Connections	0.062	0.062
Average Annual Steet Light Charges For City Residential Customers	\$ 44.76	\$ 44.76

## **PUBLIC UTILITIES ADVISORY COMMITTEE**

long standing volunteer group, the Public Utilities Advisory Committee provides input into departmental operations, rate schedules, and policy decisions. Members serve four-year terms and represent customers through the department's service area, including the City of Holladay and Cottonwood Heights.

#### SALT LAKE CITY DEPARTMENT **OF PUBLIC UTILITIES ADMINISTRATION**

Jeff Niermeyer, PE Director

**Thomas Ward, PE Deputy Director** 

James M. Lewis, CPA Finance Administrator

Jesse Stewart, PG Water Quality Administrator

Charles H. Call, Jr., PE Engineering Administrator

**Mark Stanley** Maintenance Superintendent

#### SALT LAKE CITY ADMINISTRATION

**Ralph Becker** Mayor

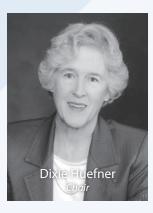
**David Everitt** Chief of Staff

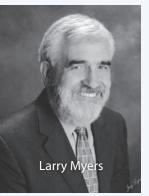
**Margaret Plane City Attorney** 

#### **Dale Christensen** Wastewater Facilities Manager

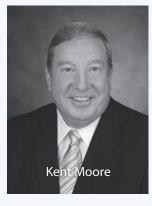
Nick Kryger GIS and IT Administrator

Laura Briefer Water Resources Manager











Jani Iwomato



#### SALT LAKE CITY COUNCIL

Lisa Adams Luke Garrott Kyle LaMalfa Charlie Luke

#### Erin Mendenhall Stan Penfold James Rogers

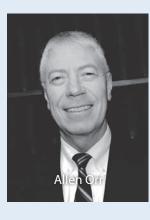
**Rusty Vetter** 

Cindi Mansell

**City Recorder** 

**Marina Scott** 

**City Treasurer** 



NOTE: Numbers provided from the Public Utilities Statistical Report 2012-2013



### SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

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