

<div> <div>A U S T I N C I T Y C O U N C I L</div> <div>AGENDA</div> <div> </div> </div>	
<b>Recommendation for Council Action</b> <b>Water &amp; Wastewater Commission</b>	
<b>Council Meeting Date:</b>	April 17, 2014
<b>Department:</b>	Austin Water
<b>SUBJECT</b>	
Approve a resolution to repeal Resolution Nos. 20090924-007 and 20120802-010, and adopt the Utility Profile & Water Conservation Plan for Municipal and Wholesale Water Use. This plan is a requirement of the Texas Commission on Environmental Quality (TCEQ).	
<b>AMOUNT AND SOURCE OF FUNDING</b>	
There is no unanticipated fiscal impact.	
<b>FISCAL NOTE</b>	
A fiscal note is not required.	
<b>Purchasing Language:</b>	
<b>Prior Council Action:</b>	<p>August 2, 2012: Adopted Utility Profile &amp; Water Conservation Plan for Wholesale Water Suppliers (Resolution No. 20120802-010)</p> <p>September 24, 2009: Adopted 2009 Utility Profile and Five Year Water Conservation Plan (Resolution No. 20090924-007).</p> <p>April 28, 2005: Adopted 2005 Water Conversation Plan (Resolution No. 20050428-11).</p> <p>August 26, 1999: Adopted 1999 Water Conservation Plan, (Resolution No. 990826-65).</p>
<b>For More Information</b>	Drema Gross, 512-974-2787; Denise Avery, 512-972-0104
<b>Boards and Commission Action:</b>	<p>To be reviewed by the Water &amp; Wastewater Commission on April 9, 2014.</p> <p>To be reviewed by the Resource Management Commission on April 15, 2014.</p>
<b>MBE/WBE:</b>	

Texas Commission on Environmental Quality rules, found in Title 30 Texas Administrative Code, Chapter 288, require retail and wholesale water providers to develop water conservation plans and also to update these plans at least every five years. The Utility Profile & Water Conservation Plan provides an overview of current water conservation initiatives and includes goals for reducing peak day and total average demand, and promoting the use of conservation and reuse measures to extend the City's water supply. This Utility Profile & Water Conservation Plan for Municipal and Wholesale Water Use updates the previously adopted 2009 Water Conservation Plan and 2012 Water Conservation Plan for Wholesale Water Suppliers and also fulfills TCEQ requirements under 30 TAC §288.2 and §288.5.

Changes from the 2009 Utility Profile and Water Conservation Plan and the 2012 Water Conservation Plan for Wholesale Water Suppliers:

- Streamlines reporting by combining retail and wholesale conservation plans into one document.
- Updates 5-and 10-year conservation and water loss goals, data on treatment capacity, service area population, and municipal and wholesale water usage to reflect current conditions.
- Incorporates new state requirements to break residential customer information out by single-family and multi-family categories, and develop conservation goals for residential water use.



*Developed to Meet Requirements  
Outlined in 30 TAC § 288.2 and § 288.5*

**City of Austin**

**Utility Profile &  
Water  
Conservation Plan  
for Municipal and  
Wholesale Water  
Use**

May 2014

**Austin Water Utility  
Water Conservation Division  
City of Austin, Texas  
PWS # 227000**

**Texas Commission on Environmental Quality**



**UTILITY PROFILE & WATER CONSERVATION PLAN  
FOR  
MUNICIPAL & WHOLESALE WATER USE  
BY  
PUBLIC WATER SUPPLIERS**

**Name of Entity:** City of Austin Water Utility

**Address:** 625 East 10<sup>th</sup> Street Austin, Texas 78701

**Telephone Number:** (512) 974-2199 **Fax:** (512) 974-3504

**Water Right No(s):** 14-5471

**Regional Water Planning Group:** Region K

**Name and Phone Number of Person/Department responsible for implementing water conservation program:** Drema Gross (512) 974-2787

**Form Completed by:** Drema Gross

**Title:** Water Conservation Division Manager

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

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# UTILITY PROFILE & WATER CONSERVATION PLAN FOR MUNICIPAL AND WHOLESALE WATER USE

Austin Water prepared this Utility Profile & Water Conservation Plan for Municipal and Wholesale Water Use to comply with Title 30 Texas Administrative Code §288.2 and 288.5. The utility profile is used to convey information about the City of Austin's (the City's) water and wastewater system to the Texas Commission on Environmental Quality (TCEQ). The water conservation plan provides an overview of Austin's current water conservation initiatives and future plans within the framework recommended by form TCEQ-10218 and 20162.

## UTILITY PROFILE

### Population and Service Area Data

The City's service area includes City retail customers and wholesale customers. Several wholesale customers' service area extends outside the City's service area because of the wholesale customer's infrastructure design and layout, operational limitations, or water supply demands.

Population is based on the City Demographer's estimate of the City's population (within the City's corporate limits and extraterritorial jurisdiction) and the population of the surrounding counties. Every ten years, Austin Water obtains updated Census data and refines the City's population projections based on that information. In addition, Austin Water uses information from the City's Demographer and GIS information, including information about the City's water service areas, to roughly estimate the population of surrounding areas. Austin Water validates the City's projected population once the projection year has passed. Austin Water does not project wholesale service area population past the year 2040 because of the greater uncertainty of reliable projections.

	Retail	Wholesale	Total
<b>Service Area (square miles)</b>	280.33 (By pressure zone boundaries)	Wholesale Water Service Area: 84.98 Emergency Water Service Only: 49.87 Total: 132.86*	554.45
<b>Current Population</b>			
<b>Service Area</b>	891,895	54,692	946,587
<b>Water Service</b>	891,895	54,692	946,587
<b>Wastewater Service</b>	864,675	48,168	912,843
<b>Population Served for Previous Five Years</b>			
<b>FY 2009</b>	828,628	44,000	872,628

<b>FY 2010</b>	825,763	50,610	875,936
<b>FY 2011</b>	840,459	51,538	891,997
<b>FY 2012</b>	854,747	52,414	907,161
<b>FY 2013</b>	874,406	53,620	928,026
<b>Projected Service Area Population</b>			
<b>FY 2020</b>	990,267	60,724	1,050,991
<b>FY 2030</b>	1,190,265	72,989	1,263,254
<b>FY 2040</b>	1,391,457	85,326	1,476,783
<b>FY 2050</b>	N/A	N/A	1,726,405
<b>FY 2060</b>	N/A	N/A	2,018,221

\*Total is smaller than the sum of the two parts due to overlap in the service areas.

A copy of the City's service-area map and system layout is included in Appendix A, a copy of the wholesale service-area map is included in Appendix B and a copy of the Certificate of Convenience and Necessity (CCN) Map is included in Appendix C.

## Customer Information

### Customer Connections

#### Current Active Connections

<b>Customer Type</b>	<b>Metered</b>	<b>Not-Metered</b>	<b>Total</b>
Residential*	198,970	0	198,970
<i>Single-Family</i>	193,278	0	193,278
<i>Multi-Family</i>	5,692	0	5,692
Commercial	16,906	0	16,906
Industrial (Large Volume)	28	0	28
Other (Wholesale)	51	0	51

\*Includes multi-family use

#### Number of New Connections per Year for Treated Water Users for Most Recent Three Years

<b>Year</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Residential*	1,363	837	2,382
Single-Family	1,309	878	2,555
Multi-Family	54	-41	-173
Commercial	218	367	537
Industrial (Large Volume)	-6	-1	8
Other (Wholesale)	0	2	0

\*Includes multi-family use

### High Volume Customers

The table on the following page shows annual treated water use for FY 2013 for the five highest volume customers of Austin Water.



### Usage by High Volume Customers

	Customer	Use (1,000 gal/year)	Treated/Raw Water
1	Samsung Austin	1,436,772	Treated
2	Water District 10	850,565	Treated
3	University of Texas	849,204	Treated
4	Freescale, Inc.	648,085	Treated
5	Wells Branch MUD	469,564	Treated

### Wholesale Customers

All water delivered to wholesale contracts is treated water. Wholesale water usage represents approximately seven percent of total water delivered to all City retail and wholesale customers. Following is a list of City wholesale customers, the contracted amount of potable water, and their annual use for FY 2013.

Wholesale Customer	Contracted Amount (acre-feet)	FY 2013 Water Delivered (acre-feet)
<b>Water/Wastewater</b>		
Lost Creek MUD	no maximum	713.81
Mid-Tex Utilities	2,532.42 Phase 1 4,032.52 Phase 2	n/a (not connected at this time)
North Austin MUD #1	no maximum	1,239.50
Northtown MUD	no maximum	900.44
Shady Hollow MUD	no maximum	583.58
Wells Branch MUD	no maximum	1,496.45
City of Manor	1,680.75	(meter testing only- water not initiated to date)
City of Rollingwood	1,119.43	420.66
City of Sunset Valley	715.77	350.35
<b>Water Only</b>		
Creedmoor-Maha WSC	838.76	171.81
High Valley WSC	68.33	22.53
Marsha WSC	26.89	37.65
Manville WSC	4,480.93 (contract ended January 1, 2014)	62.18
Night Hawk WSC	42.70	40.20
Aqua Texas-Morningside	52.42	10.31
Aqua Texas-Rivercrest Water Systems	1,119.43	392.72
Travis County WCID #10	11,200.72	2,597.69
Village of San Leanna	325.83	15.91
Windermere Utility	2,240.47	20.50

<b>Water Emergency</b>		
<b>Travis County MUD #4</b>	no maximum	n/a
<b>Travis County WCID 17</b>	no maximum	n/a
<b>Riverplace MUD</b>	no maximum	n/a

## Water Use Data for Service Area

In the following two tables, the first shows the total amount of water delivered at point of diversion(s) for the previous five years for all water uses and the second shows the total amount of water diverted for municipal use. The data was determined from a master meter located at the point of diversion.

### Monthly Diversions for All Water Uses (in acre-feet)

<b>Year</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
January	11,899.99	9,976.12	9,895.75	10,314.36	10,419.87
February	10,977.96	8,469.47	9,592.67	9,233.69	9,735.43
March	11,993.55	9,836.66	11,899.88	10,257.84	11,616.63
April	12,108.80	11,020.98	14,141.72	12,484.96	11,036.58
May	13,791.66	13,506.95	14,810.51	12,664.83	12,131.31
June	16,462.53	13,558.41	16,950.97	15,240.85	13,321.06
July	18,652.19	13,179.72	19,155.41	14,438.09	13,884.32
August	18,124.10	16,623.93	20,278.29	16,465.64	15,268.83
September	12,053.23	12,639.22	15,892.97	14,149.76	13,259.13
October	10,535.46	13,534.55	14,246.34	12,520.04	11,436.46
November	10,016.62	11,620.04	11,640.63	12,168.71	9,884.67
December	9,647.38	11,005.24	9,835.62	11,188.14	9,648.46
<b>TOTAL</b>	<b>156,263.46</b>	<b>144,971.30</b>	<b>168,341.00</b>	<b>151,126.90</b>	<b>141,642.74</b>

### Total Amount of Water Diverted for Municipal Use (in 1,000 gallons)

<b>Year</b>	<b>Total Water Pumpage</b>
FY 2009	54,418,000
FY 2010	45,298,000
FY 2011	54,997,000
FY 2012	49,195,000
FY 2013	47,753,000

The table below shows the historical water sales for the past five years by customer category.

### Historical Water Sales (in 1,000 gallons) for the past five years

<b>Year</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
<b>Residential</b>	28,976,749	24,017,839	29,558,377	26,337,158	25,057,301
<i>Single-Family</i>	19,697,750	15,290,505	20,080,364	17,437,863	16,056,805
<i>Multi-Family</i>	9,278,999	8,727,335	9,478,012	8,899,295	9,000,495

<b>Commercial</b>	12,587,725	10,020,054	12,552,682	11,197,484	10,746,517
<b>Industrial</b>	2,888,537	2,541,883	3,022,839	3,264,409	3,083,198
<b>Wholesale</b>	3,624,703	2,755,884	3,514,443	3,160,967	2,954,276
<b>Other</b>	176,857	119,627	69,262	55,685	56,242
<b>TOTAL</b>	<b>48,254,571</b>	<b>39,455,287</b>	<b>48,717,603</b>	<b>44,015,703</b>	<b>41,897,534</b>

## **Water Supply System Data**

### **Water Supply Sources**

Austin Water receives 100 percent surface water through a combination of water rights and a firm water back-up contract with Lower Colorado River Authority (LCRA). The current authorized supply is 325,000 AF/year based on a 1999 water supply contract with LCRA. In 2007, the City entered into an agreement with LCRA for an additional 250,000 AF/year (total of 575,000 AF/year) to be planned and purchased at a future time, likely incrementally, for future use.

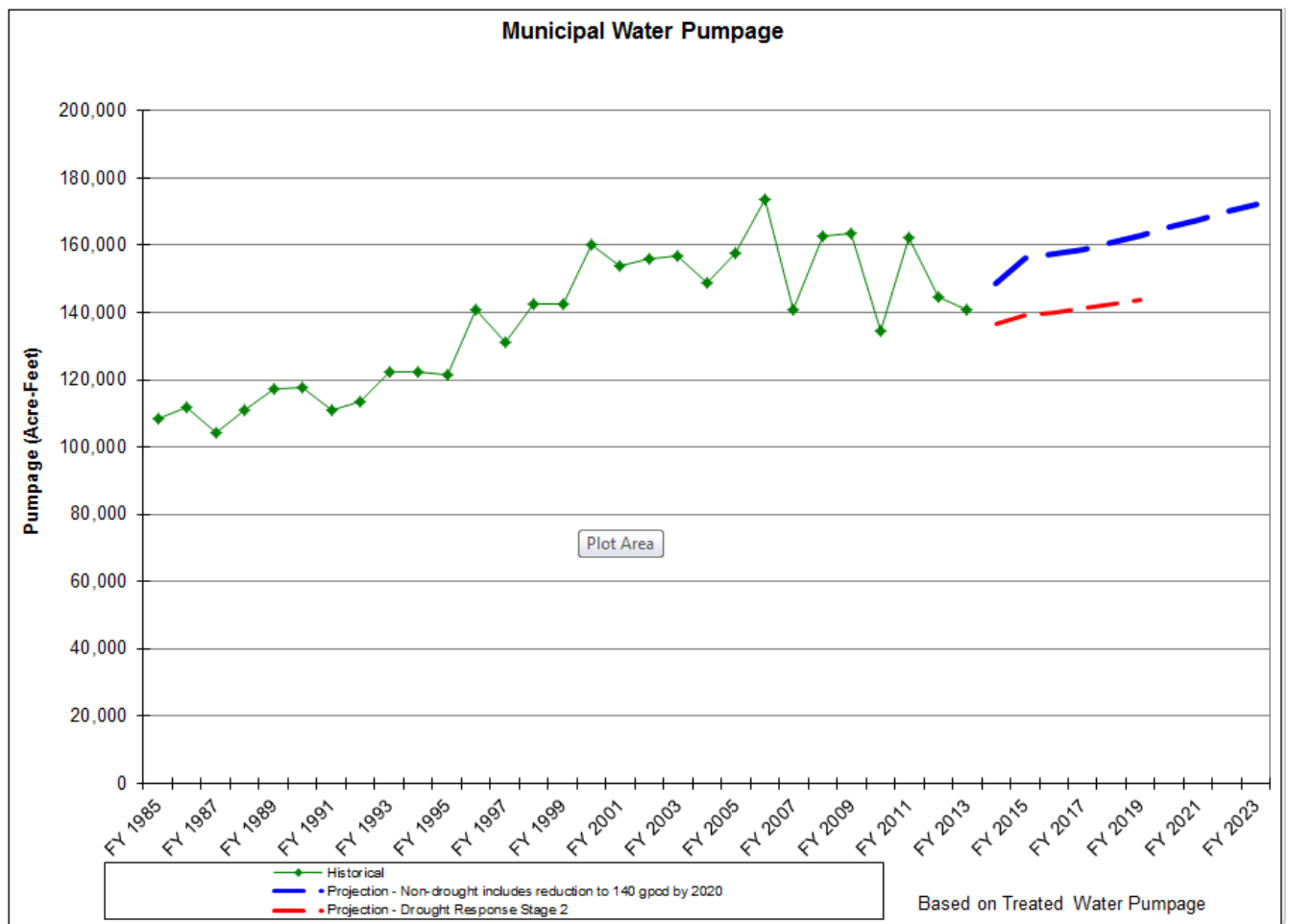
### **Treatment and Distribution System**

Austin Water's current water treatment and distribution system has a design daily capacity of 285 MGD including 14 MG of elevated and 158 MG of ground storage capacity. Less than 3 percent of filter backwash is recycled to the head of the plants.

Austin Water operates two water treatment plants with a third currently under construction and scheduled to be operational by 2014. The system comprises 3,708 miles of water mains, nine major pressure zones, 36 water pumping stations and local boosters and 35 city-maintained reservoirs with 172 million gallons of effective storage capacity.

### **Projected Water Demands**

Projected water supply demands for the City's service area are shown in the chart on the following page and are based on population trends, historical water use, and expected conservation savings.



## Wastewater System Data

The design capacity of the Austin Water wastewater treatment plants is currently 135 MGD. The City has two major wastewater treatment plants that provide wastewater treatment for almost 95 percent of City customers: Walnut Creek (Walnut Creek) Wastewater Treatment Plant (WWTP) and South Austin Regional (SAR) WWTP. Both Walnut Creek and SAR discharge most of their treated effluent to the Colorado River. Some of the treated effluent from these plants is used as reclaimed water for golf course irrigation, cooling tower, and other non-potable uses. The City also has a major wastewater treatment facility that handles biosolids (Hornsby Bend WWTP).

In addition to the major plants, the City has nine small wastewater treatment plants that serve small areas in their vicinity and has an ownership interest in the Brushy Creek Regional Wastewater System. Together they serve the remaining five percent of City customers. Most of these plants discharge their treated effluent to the Colorado River. The Brushy Creek Regional Wastewater System, however, discharges to the San Gabriel River, a tributary of the Brazos River. Others irrigate golf courses and do not discharge to the surface waters.

The City is the owner or has an ownership interest of all these wastewater plants. Austin Water operates and maintains all the plants except for:

- a. the Lost Creek MUD plant, which is operated and maintained by the Lost Creek MUD until December 31, 2015 (after that date, the City will assume operation and maintenance responsibilities and the Lost Creek MUD customers will become City retail customers);
- b. the River Place MUD plant, which is operated and maintained by the River Place MUD until October 1, 2014 (after that date, the City will assume operation and maintenance responsibilities and the River Place MUD customers will become City retail customers); and
- c. the Brushy Creek Regional Wastewater Treatment Plant, which is operated by the Brazos River Authority (the Brushy Creek Regional Wastewater Treatment Plant only provides wastewater treatment for a very small portion of City retail customers).

Appendix D shows the wastewater treatment plant permits. Appendix E shows a map of the large wastewater treatment plants, and Appendix F shows a map of the small wastewater treatment plants.

### **Use of Treated Effluent**

Walnut Creek Wastewater Treatment Plant uses approximately 1.5 million gallons per day (MGD) of treated effluent for plant washdown and chlorination/dechlorination.

South Austin Regional (SAR) Wastewater Treatment Plant uses approximately 1.5 MGD of treated effluent for plant washdown and chlorination/dechlorination.

Hornsby Bend uses an additional 0.5 MGD of treated effluent from SAR. Also, Hornsby Bend does on-site irrigation from an on-site pond system (not treated effluent from the plants).

### **Wastewater Data for Service Area**

Austin Water's wastewater system serves approximately 80 percent of the City's water system service area. The treated volume includes those wholesale wastewater customers that receive wastewater service by the City.

#### **Monthly Volume Treated (in million gallons)**

<b>Year</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
January	2,594.01	3,339.52	2,737.83	3,192.97	3,005.28
February	2,450.64	3,227.40	2,593.82	3,182.155	2,603.51
March	2,767.26	3,360.61	2,859.47	3,639.88	2,947.94
April	2,697.20	2,945.99	2,731.45	3,073.68	3,023.13
May	2,829.79	2,806.37	2,845.53	3,410.44	3,171.07
June	2,727.28	2,813.31	2,795.27	2,979.66	2,848.07

July	2,754.11	3,054.46	2,896.89	3,314.41	2,903.08
August	2,803.49	2,845.80	2,935.06	3,113.73	2,850.84
September	2,928.78	3,287.05	2,743.75	2,743.75	2,891.32
October	3,457.01	2,697.17	2,853.61	3,065.72	3,660.49
November	3,017.43	2,506.09	2,814.31	2,722.64	3,647.03
December	3,099.03	2,603.86	3,195.99	2,780.66	3,173.98
<b>TOTAL</b>	<b>34,126.03</b>	<b>35,487.64</b>	<b>34,002.98</b>	<b>37,219.69</b>	<b>36,725.75</b>

## WATER CONSERVATION PLAN FOR MUNICIPAL & WHOLESALE WATER USE

Austin Water has three primary goals for its conservation programs: to reduce average per capita demand, to reduce peak demand, and to delay the point at which total water diversions trigger additional payments to LCRA. Because peak demand and total use goals are long-range, only the per capita goal is addressed here.

### Water Conservation Goals

On May 13, 2010, Austin's City Council adopted a goal of reducing total water use to 140 gallons per capita per day (GPCD) by the year 2020. Austin Water is currently working with the advisory Resource Management Commission to construct a plan to reduce average water use that balances anticipated population growth and cost with conservation. The goals in this Conservation Plan reflect reaching the City Council set goal of reducing water use to 140 GPCD by 2020. Progress will be evaluated annually to determine what additional measures may be necessary to further reduce water use in pursuit of the Council-set goal.

#### Five- & Ten-Year Goals for Water Savings from Conservation

	Historic 5-year Average	Baseline	FY 2019 Goal		FY 2024 Goal
Total GPCD	149	162	Non-Drought Conditions:	141	138
			Drought Response Stage 2:	124	
Residential GPCD	87	96	85		83

Water demand can fluctuate greatly depending on weather conditions. Hot and dry years typically raise demand while colder and wetter years lower it. Currently, Central Texas is in the midst of a prolonged drought of a severity approaching historic proportions. As a result of reaching the trigger established by its Drought Contingency Plan, the City has been in Drought Response Stage 2 watering restrictions since September 2012. Because of the strong response from City water customers to the Stage 2 once-a-week watering schedule, water use has dropped significantly.

The water savings goals in the Conservation Plan typically reflect reductions in water use resulting from year-round Conservation Stage measures and conservation programming rather than drought response efforts. For this Water Conservation Plan, the City chose to use FY 2011, instead of FY 2013, as the baseline year for developing the non-drought GPCD goals for FY 2019 and FY 2024. This allows the impacts of drought restrictions on water use, which are typically short-term, to be largely separated out from the longer-term impacts of conservation efforts. The historic five-year GPCD average encompasses water usage from FY 2009 through FY 2013.

Since weather forecasts suggest that the drought conditions gripping the region could persist for at least the next five years, Austin Water has also included an additional GPCD projection from the Utility's five-

year financial forecast, which assumes continued Stage 2 drought conditions and thus Stage 2 Drought Response watering restrictions and other Stage 2 measures. Once the drought is over, consumption is likely to increase beyond drought levels, but is not anticipated to reach previous consumption levels. Austin Water is currently analyzing these dynamics, including looking at similar situations which have occurred around the country, and will later change forecasts based on the outcome of that analysis. Also, total GPCD could go below even the five-year forecast if drought conditions should worsen and require Austin to implement Drought Response Stages 3 or 4.

## Water Loss Goals

Austin Water is undertaking a comprehensive effort to reduce unaccounted-for water and to improve the quality of data in water loss estimates. It is expected that water loss percentages will fluctuate annually with weather and demand conditions, and that some fluctuation will occur as a result of improved data collection. Austin Water conducts annual Water Loss Audits according to Texas Water Development Board methodology and has made significant progress in reducing unaccounted-for water. An internal Water Accountability Committee monitors progress and makes recommendations for reducing lost water. Austin Water has dedicated one FTE specifically for addressing water loss.

### Historical Water Loss

Fiscal Year	Amount (gal)	Percentage
2009	5,882,655,456	10.81
2010	4,719,352,698	10.56
2011	5,394,581,008	10.01
2012	4,069,307,067	8.45
2013	5,041,056,069	10.74

### Five & Ten Year Goals for Reducing Water Loss

	Historic 5-year Average	Baseline	FY 2019 Goal	FY 2024 Goal
<b>Water Loss (GPCD)</b>	16.18	17.27	14.26	13.97
<b>Water Loss (Percentage)</b>	12.13	11.98	10.11	10.05

The five-year averages for Water Loss GPCD and Water Loss Percentage used the water loss audits from FY 2009 through FY 2013. They were calculated using the retail population and with all sales to wholesale customers subtracted out of water produced and water billed.

The projected water loss GPCD and water loss percentages were calculated using an Infrastructure Leakage Index (ILI) of 2.5. The increase in number of miles of mains and number of connections was based on the annual rate of increase since 2008. The total GPCD was multiplied by projected population to yield Total Water Production. The Unaccounted for Annual Real Loss was then calculated, and with the ILI of 2.5, was used to derive the Total Real Loss. Apparent Losses were calculated by multiplying Total Water Production by .0214 and added to Real Losses to yield Total Losses. Total Losses divided by



the projected population to gives the Water Loss GPCD. The Total Losses divided by Total Water Production yielded Water Loss Percentage.

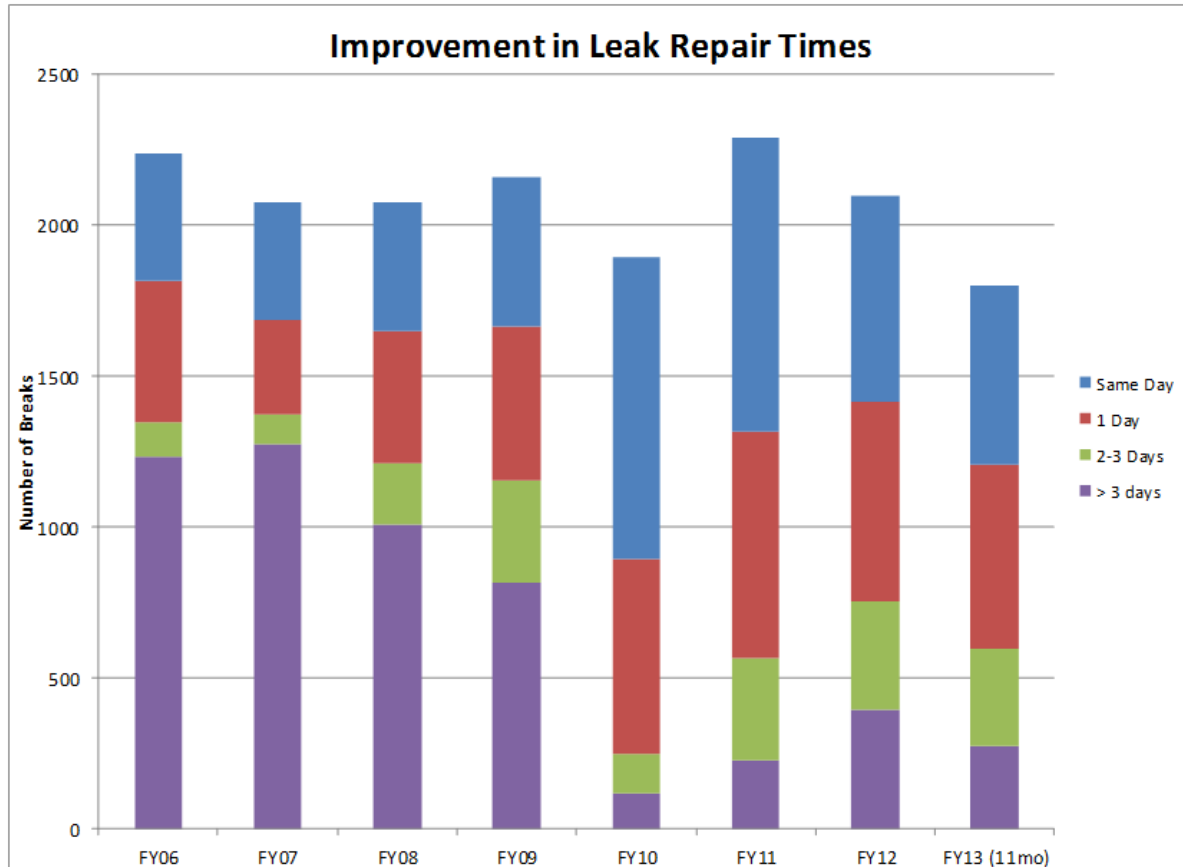
## **Unaccounted-For Water Uses**

Austin Water has a comprehensive plan to reduce unaccounted-for retail water use, including contracts for subsurface leak detection of the entire distribution system on a five-year schedule. Austin Water routinely analyzes consumption data for zero-reads and suspicious patterns for City retail customers and wholesale master meters. Austin Water has two full-time employees dedicated to meter tampering and theft investigations. Additionally, theft from City hydrants can be reported to 3-1-1, as advertised on numerous water hydrants in areas with high construction traffic. Austin Water has also added staff to reduce response times for reported leaks, and is undergoing an extensive capital project to replace piping with a history of leaks and breaks. “Renewing Austin”, launched in April 2012, is a five-year program to upgrade aging water lines and ensure the reliability of Austin’s water distribution system.

## **Leak Detection**

Austin Water has staff that performs leak detection, and also contracts for leak detection services to locate subsurface leaks in the water distribution system. By the close of FY 2012, Austin Water completed a five-year project to perform leak detection on all distribution mains. Another cycle of leak detection efforts is currently in progress.

In FY 2009, Austin Water added a second shift to its leak response teams to reduce the amount of time a reported leak continues before repair. A graph indicating improvement in repair times is shown on the following page.



## Record Management System for City Retail Customers and Wholesale Master Meters

Daily water pumping records are maintained at the treatment facilities. The City maintains records of water distribution and sales through a central billing system which segregates water sales into Single-family Residential, Multi-family, Commercial, Wholesale, and Large Volume Industrial user classes which are then charged different rates for water and wastewater services. The Customer Care and Billing database (CC&B) provides a central location for water billing information. Austin Water also maintains a wholesale database that allows for monitoring compliance with wholesale customer contract provisions. A separate database, Hansen, serves as the database of record asset management and tracking work orders and service requests. Hansen interfaces with GIS information to allow mapping of utility distribution lines, hydrants and meters, and to geographically track service requests.

## Metering Devices

The meters that Austin Water installs for its retail customers are tested to measure the flow within a  $\pm 5$  percent accuracy range. Each meter of 1½ inches or larger is tested before installation, and 10 percent of the smaller meters are tested. Three inch or larger meters are tested routinely through a contract with a private firm. Small meters are replaced when a problem is suspected as replacement is more cost effective than repair for 1" and smaller meters.

For wholesale customers, Austin Water staff annually tests wholesale master meters that are three inches and above. The accuracy range considered acceptable for these meters varies according to the specifics of each wholesale customer's contract, but are generally required to be within a  $\pm 5$  percent accuracy range. Wholesale customer master meters of less than three inches are periodically replaced by Austin Water staff.

## **Universal Metering**

Austin Water universally meters all of its customers. Wholesale customers have one or more master meters. All master meters are routinely tested as part of their contract with the City.

## **Continuing Public Education & Information**

Austin Water uses public education and community outreach as a means of encouraging participation in water conservation programs and incentives, as well as to build awareness about permanent and seasonal water use restrictions.

### **School Education Programs**

Austin Water offers the *Dowser Dan* musical program for elementary school students in areas served by Austin Water. Students in grades 1-4 learn about the water cycle, water conservation and water systems through a 45-minute presentation and accompanying worksheets and materials. Austin Water also is a partner with Campfire Kids and the Colorado River Foundation to develop water conservation and stewardship curriculum modules and support activities for afterschool programs and special events.

### **Advertisements / Program Marketing**

Advertising provides citizens information about water conservation and programs available to encourage water conservation. Advertisements are regularly placed in the *Austin American-Statesman* as well as in neighborhood newspapers and local radio and television stations. Local celebrities have appeared in several television and radio commercials in the past promoting the watering schedule and discouraging the waste of water. Additionally, information is provided directly to customers in utility bills and through direct mail outs to high water users.

### **Electronic Newsletters**

In March 2004, Austin Water's Water Conservation Division began the "WaterWise Newsletter" as part of an effort to communicate more regularly with customers and increase participation in water conservation initiatives. The newsletter is distributed electronically to a database of approximately 30,000 customers. Customer email addresses are collected from program applications and information requests, and visitors to the Water Conservation website are encouraged to self-subscribe by providing an email address. In 2013, Austin Water launched the "WaterWise Commercial Newsletter" with conservation information related to commercial, industrial and institutional customers.

## **Workshops, Presentations and Outreach Programs**

Austin Water offers presentations on water conservation techniques and available programs to a variety of interest groups including homeowners associations, garden clubs, professional organizations and other community groups. Austin Water also participates in festivals, school events and informational fairs by providing staff and materials to promote water conservation. In 2009, it developed a Water Conservation Speakers Bureau, allowing area groups to schedule speakers on topics of interest. Staff members are available to speak on topics that include conservation measures, irrigation, leak detection, and water waste. Each year, Austin Water typically participates in more than 100 events and programs. Austin Water also provides continuing education credits toward license renewal for licensed irrigators through its annual *Water Wise Irrigation Professionals Seminar*.

## **Web Page/Social Networking**

Austin Water provides a wide range of water conservation information on its website, [www.WaterWiseAustin.org](http://www.WaterWiseAustin.org). All water conservation programs offered by the City, including the various rebate and free water use audit programs, are described on the website. For customer convenience, program applications are also available on-line. Tips on strategies for reducing indoor and outdoor water use are provided for businesses as well as the general public. In order to enhance the amount and quality of information provided to the public, the City's web page also provides links to other websites providing water conservation information. Austin Water incorporates social media into its communication efforts by providing updates on conservation-related topics via Facebook, Twitter, and YouTube.

## **Peak Day Management Campaign**

In 2012, the City revised its Water Conservation Code (Chapter 6-4 of City Code) to include mandatory watering days for all City water customers, limiting outdoor water use to no more than twice per week, with limited exceptions for efficient irrigation technologies. Education efforts are increased during the summer months when water use is highest. Messages urge citizens and businesses to comply with the watering schedule. Austin Water produces magnets and stickers with the watering guidelines to assist citizens in following the recommended schedule.

Austin Water enforces its water use ordinance through routine patrols and by following up on water waste reports made through the City's 3-1-1 hotline. It is unlawful in the City of Austin to operate an irrigation system with excessive pressure that creates misting, to allow water to spray onto or over a paved surface, and for irrigation water to run off into the street or pond in parking lots or paved areas. Customers found to be in violation of these conditions or of the mandatory watering schedule may be penalized by a fine on their water bill which can escalate for repeated offenses.

## Non-Promotional Water Rate Structure

Austin Water has a five-tiered water rate structure for residential customers to discourage excessive water use. Commercial and multifamily customers are encouraged to conserve water during the irrigation season through peak and off-peak rates, as illustrated below.

<b>Single Family Residential (effective 11/1/2013)</b>	
<b>Amount</b>	<b>Volume Unit Charge (per 1,000 gallons)</b>
2-2,000 gallons	\$ 1.84
2,001-6,000 gallons	\$ 3.39
6,001-11,000 gallons	\$ 6.20
11,001-20,000 gallons	\$ 9.95
Over 20,000 gallons	\$ 12.84
<b>Multifamily</b>	
Off Peak (Nov-June)	\$ 4.38
Peak (July-October)	\$ 4.82
<b>Commercial</b>	
Off Peak (Nov-June)	\$ 5.38
Peak (July-October)	\$ 5.91

Wholesale customers and several large volume/industrial customers have individual rates established through negotiated contracts.

## Reservoir Systems Operations Plan

LCRA owns and operates the key water supply reservoirs in the region, Lakes Travis and Buchanan. LCRA operates these reservoirs in accordance with its state-approved Water Management Plan. The plan governs operation of Lakes Travis and Buchanan and is reviewed periodically to keep pace with growing water demands and improved information. The link to LCRA's *Water Management Plan for the Lower Colorado River Basin (Effective September 20, 1989 Including Amendments Approved by TCEQ through January 27, 2010)* is: [http://www.lcra.org/library/media/public/docs/water/wmp/lcra\\_wmp\\_june2010.pdf](http://www.lcra.org/library/media/public/docs/water/wmp/lcra_wmp_june2010.pdf)

Both Lake Austin and Lady Bird Lake, also on the lower Colorado River, are owned by the City of Austin and are operated as pass-through pools.

## Contract Requirements for Successive Customer Conservation

Wholesale water supply contracts entered into, amended, extended, or renewed after official adoption of the City's 2009 Utility Profile and Water Conservation Plan are required to include language stating that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of 30 TAC Chapter 288. However, all City wholesale customers only resell City wholesale water to their retail customers. The City's wholesale customers do not sell City wholesale water to another utility that then resells the water to its retail

customers (i.e. successive wholesale customers). Therefore; the requirement related to successive wholesale customers does not apply to the City.

Wholesale water supply contracts entered into, amended, extended, or renewed after official adoption of the City's 2009 Utility Profile & Water Conservation Plan include language stating that the wholesale customer will adhere to the City's water management ordinance and establish a water conservation program similar to the one enforced by the City. Enforcement of these ordinances is the responsibility of the entities receiving City wholesale water. The City is willing to assist as requested by the wholesale entity.

### **Enforcement Procedure & Plan Adoption**

The 2014 Utility Profile & Water Conservation Plan for Municipal and Wholesale Water Use is expected to be reviewed by Austin City Council on April 17, 2014. Once reviewed and approved the following statement will be included in the Plan:

"Authority to implement this plan is granted by the Austin City Council. Austin City Council approved the 2014 Utility Profile & Water Conservation Plan for Municipal and Wholesale Water Use on April 17, 2014."

### **Coordination with the Regional Water Planning Group(s)**

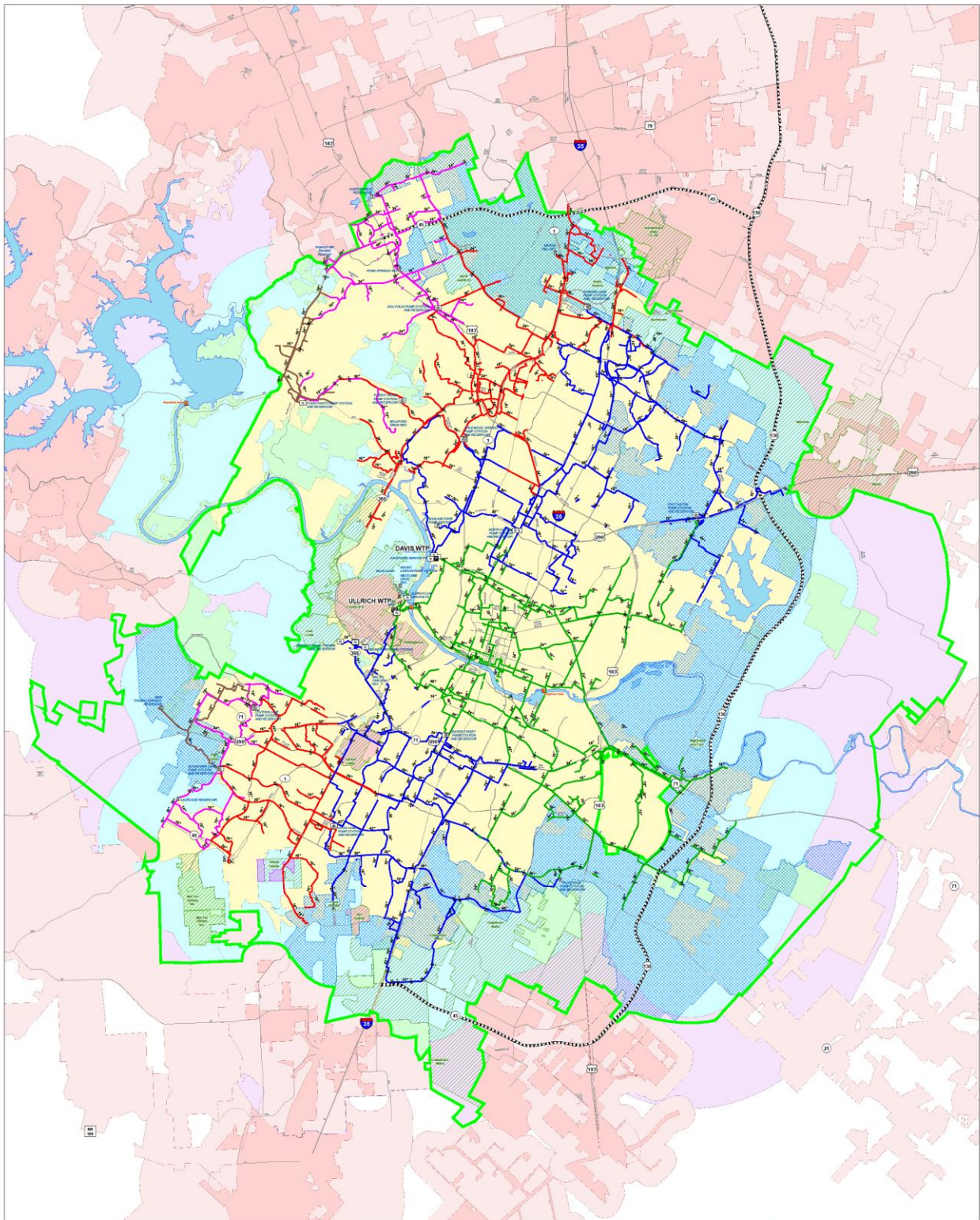
The Austin Water service area is located within the Region K Planning Group. Austin Water has provided a copy of this water conservation plan to the Region K Planning Group.

### **Plan Review and Update**

Austin Water staff review conservation programs and targets annually. The Utility Profile and Water Conservation Plan for Municipal and Wholesale Water Use is reviewed and updated every five years according to TCEQ requirements under Title 30 Texas Administrative Code §288.30 or more frequently as needed to reflect changes in water conservation policy. Wholesale customers are provided any updates of the City's water conservation ordinance(s). The next revision of the plan is expected not later than May 1, 2019.

**Appendix A**  
**Service Area Map**

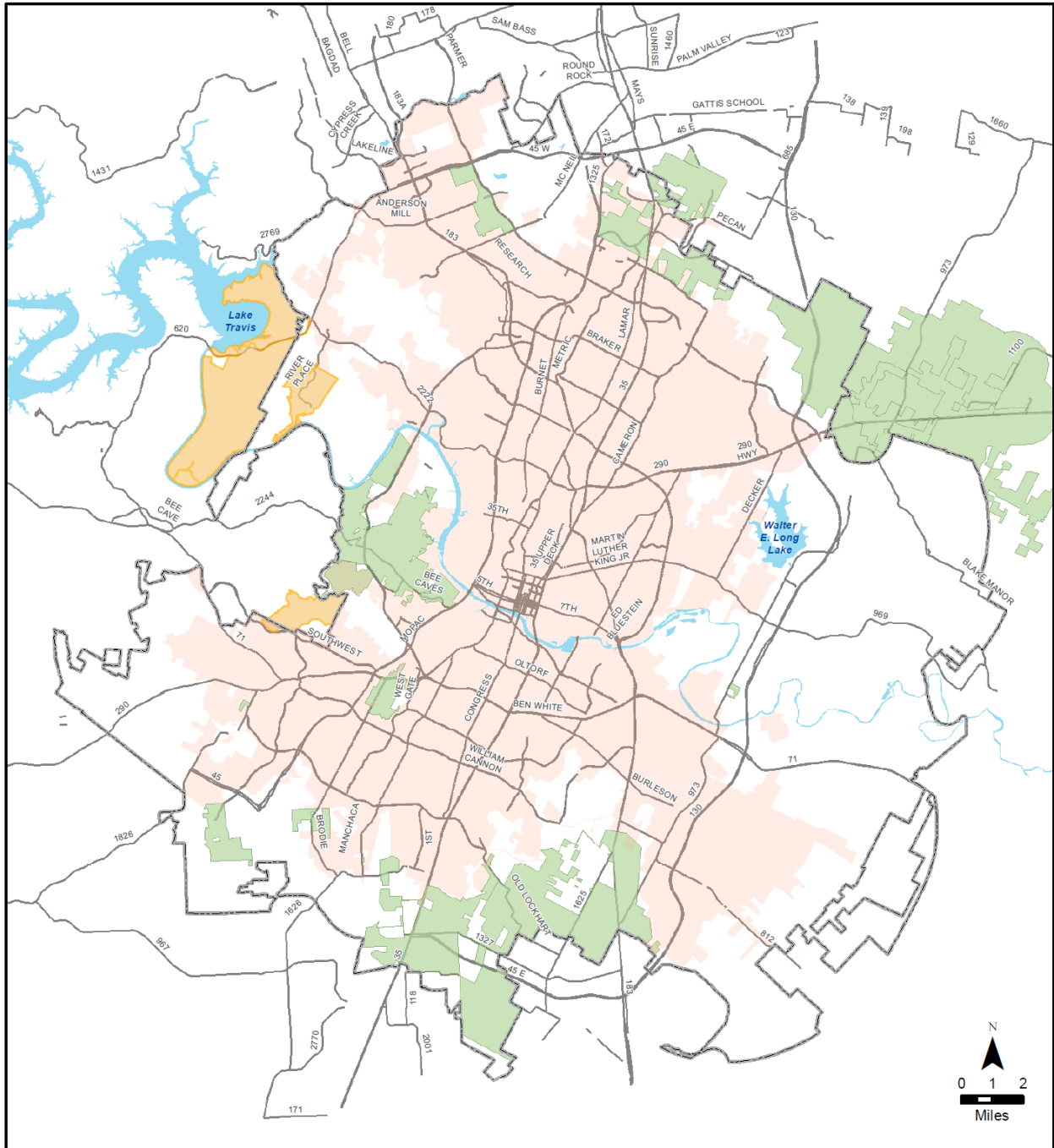






**Appendix B**

**Wholesale Service Area Map**



- AWU Wholesale Water Customers
- AWU Wholesale Water Customers - Emergency Only
- AWU Retail Water Service as of May 2013
- Impact Fee - Service Area Boundary 2014

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. This product has been produced by the Austin Water Utility for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness.



City of Austin  
Austin Water Utility  
February 2014

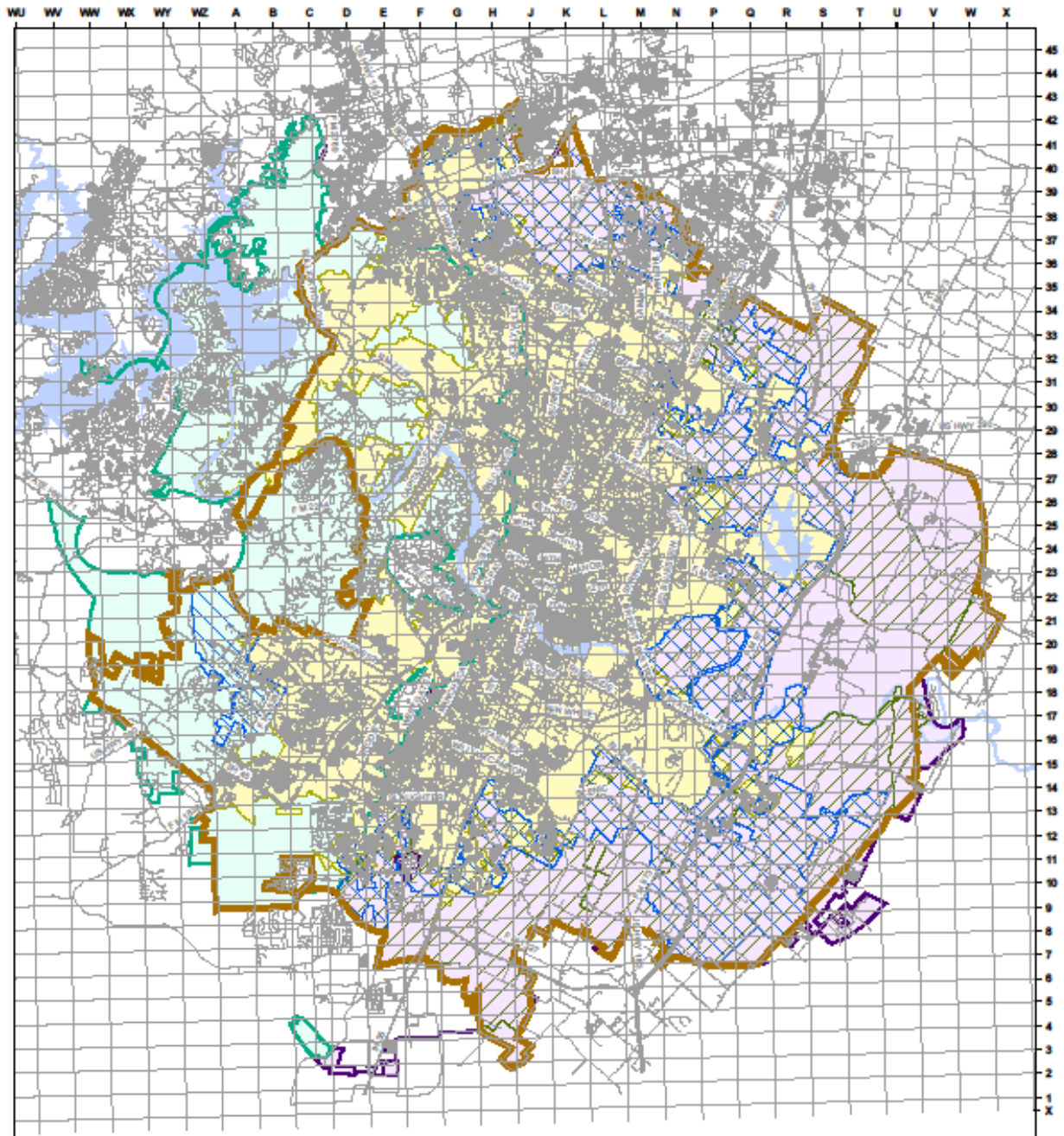









## Wholesale Customers

Produced by GIS Services

## **Appendix C**

### **Certificate of Convenience and Necessity Area Map**



-  Austin Water CCN
-  Austin Wastewater CCN
-  Desired Development Zone
-  Drinking Water Protection Zone
-  Impact Fee & Service Area Boundary
-  Full-purpose City Limit
-  Austin Water & Wastewater CCNs

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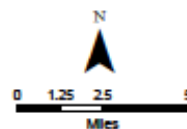


City of Austin  
Austin Water Utility



September 2011

## City of Austin Water & Wastewater CCN



Produced by GIS Services

## **Appendix D**

### **Wastewater Treatment Plants and Permits**

**City of Austin (CN600135198)**  
**Austin Water**  
**Wastewater Treatment Plants and Permits**

1. Walnut Creek Wastewater Treatment Plant, TPDES Permit No. WQ0010543011, EPA ID No. TX0046981, RN101607901, 75 MGD (annual average), 10/15/2 (monthly average) and 5/5/2 (annual average) to the Colorado River
2. South Austin Regional Wastewater Treatment Plant, TPDES Permit No. WQ0010543012, EPA ID No. TX0071889, RN101607794, 75 MGD (annual average), 10/15/2 (monthly average) and 5/5/2 (annual average) to the Colorado River
3. Wild Horse Ranch Wastewater Treatment Plant, TPDES Permit No. WQ0010543013, EPA ID No. TX0124800, RN103014577, 0.75 MGD, 5/5/2/1 to a tributary of Gilleland Creek
4. Whisper Valley Wastewater Treatment Plant, TPDES permit No. WQ0010543014, EPA ID No. TX0129950, RN105331755, (inactive, plant not constructed yet), contemplated discharge of 3 MGD (annual average), 5/5/2/1 to Gilleland Creek
5. Pearce Lane Wastewater Treatment Plant, TPDES Permit No. WQ0010543015, EPA ID No. TX0132934, RN106066715, (inactive, plant not constructed yet), contemplated discharge of 0.3 MGD 5/5/2/1 to a tributary of Dry Creek
6. Harris Branch Wastewater Treatment Plant, TPDES Permit No. WQ0013318001, EPA ID No. TX0101532, RN102806635, 0.4 MGD, 5/5/2/1 to Harris Branch
7. Thoroughbred Farms Wastewater Treatment Plant, TPDES Permit No. WQ0014459001, EPA ID No. TX0067466, RN101265254, 0.065 MGD, 20/20 to Dry Creek
8. Dessau Wastewater Treatment Plant, TPDES Permit No. WQ0012971001, EPA ID No. TX0097870, RN102077328, 0.5 MGD, 10/15/3 to a tributary of Harris Branch
9. Anderson Mill Wastewater Treatment Plant, TPDES Permit No. WQ0011459001, EPA ID No. TX0034207, RN101612737, 0.99 MGD, 7/15/3 to Lake Creek
10. Brushy Creek Regional Wastewater Treatment Plant (Co-permittee with City of Round Rock, City of Cedar Park, and Brazos River Authority), TPDES Permit No. WQ010264002, EPA ID No. TX0101940, RN10082260, 21.5 MGD (annual average), 10/15/2, to Brushy Creek
11. Balcones Water Reclamation Plant, TCEQ Permit No. WQ0011363001, RN102095114, no discharge, irrigation of golf course, 0.292 MGD/10
12. Lost Creek Water Reclamation Plant, TCEQ Permit No. WQ0011319001, RN100641653, no discharge, irrigation of golf course, 0.42 MGD, 10/15
13. River Place Water Reclamation Plant, TCEQ Permit No. WQ0011514001, RN100843283, no discharge, irrigation of golf course, 0.207 MGD, 5/5

14. Hornsby Bend Biosolids Management Plant, TCEQ Permit No. WQ0003823000, EPA ID No. TXL0050005, RN101607679, biosolids treatment plant, no discharge

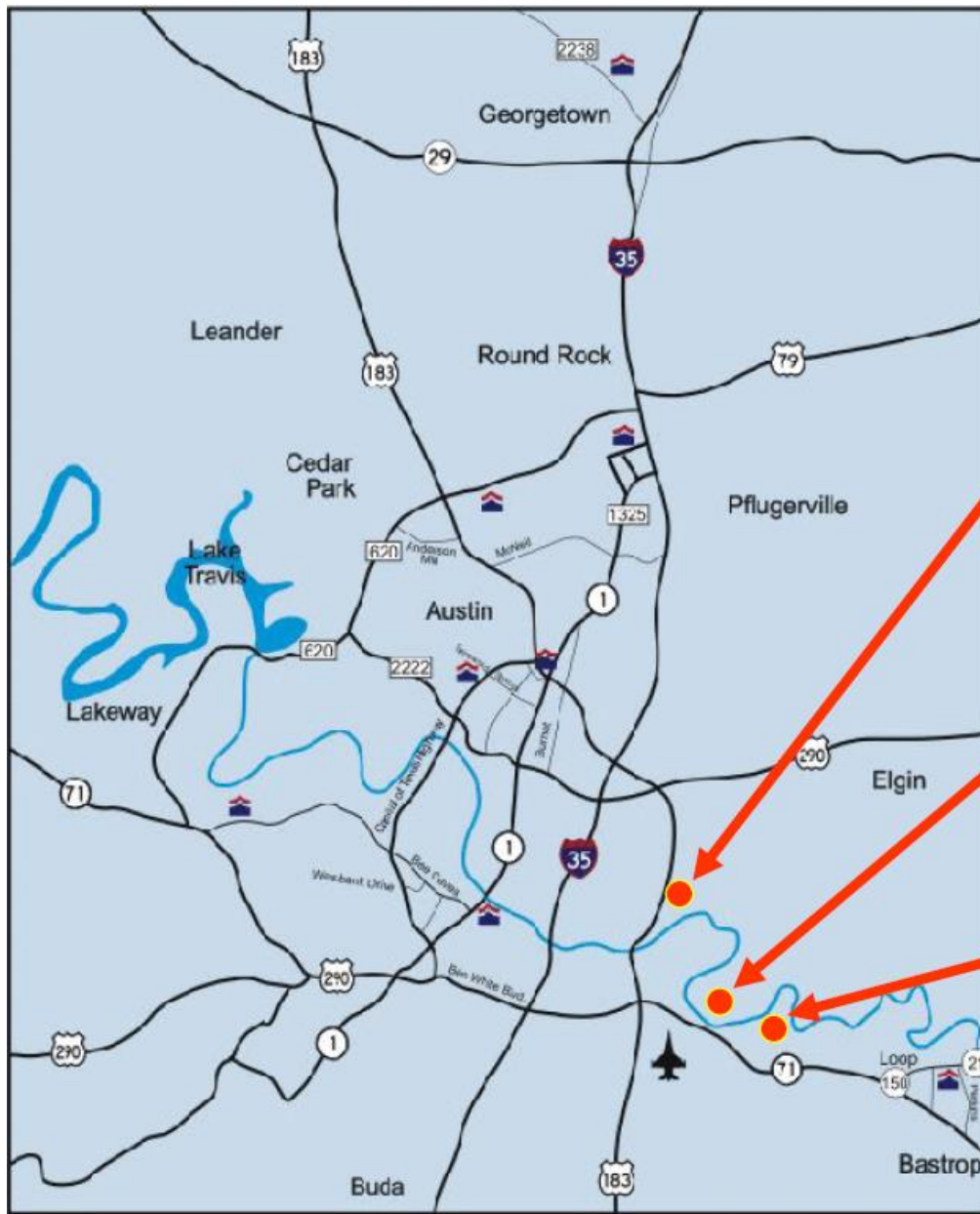
Plants 1 through 10 are permitted to discharge to a stream. Plants 11 through 14 are not permitted to discharge to the waters of the state.

Permitted flows are expressed as monthly averages unless specified otherwise. Effluent quality is expressed as monthly average (unless specified otherwise) and written after the permitted average flow in the following order: 5-day Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>)/Total Suspended Solids (TSS)/Ammonia-Nitrogen (NH<sub>3</sub>-N)/Total Phosphorus (TP), when applicable. For Balcones, Onion Creek, Lost Creek, River Place and Thoroughbred Farms, the effluent limit is on 5-Day Biochemical Oxygen Demand (BOD<sub>5</sub>), and not on CBOD<sub>5</sub>.

## **Appendix E**

### **Map of Large Wastewater Treatment Plants**





Walnut Creek  
Wastewater  
Plant  
(1977)

Hornsby Bend  
Biosolids  
Plant  
(1956)

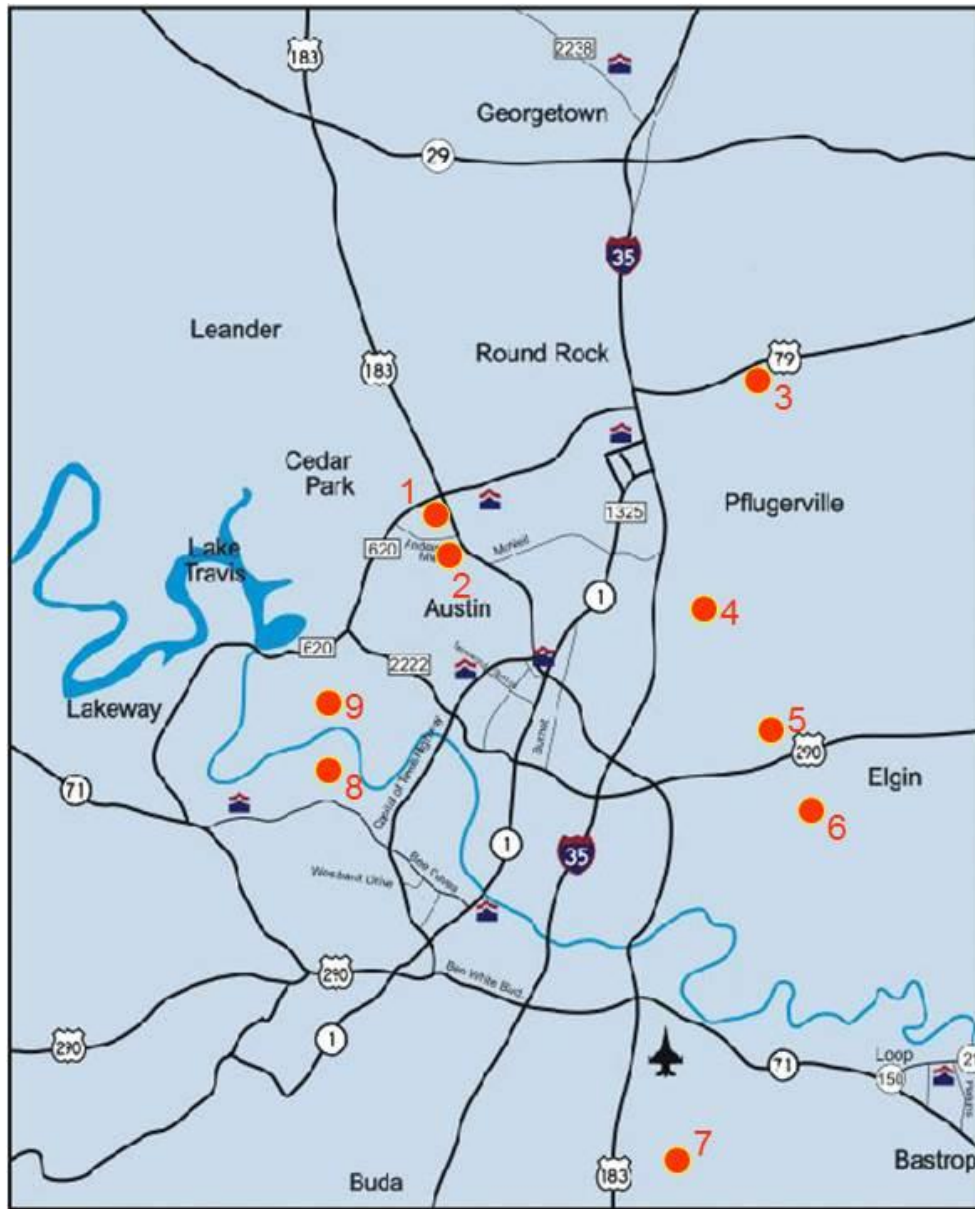
South Austin  
Regional  
Wastewater  
Plant  
(1986)

## **Appendix F**

### **Map of Small Wastewater Treatment Plants**

# Austin's Small Wastewater Plants

1. Anderson Mill
2. Balcones
3. Brushy Creek Regional
4. Dessau
5. Harris Branch
6. Wild Horse Ranch
7. Thoroughbred Farms
8. Lost Creek
9. River Place



**RESOLUTION NO. \_\_\_\_\_**

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:**

Council repeals Resolution Nos. 20090924-007 and 20120802-010, and adopts the City of Austin Utility Profile & Water Conservation Plan for Municipal and Wholesale Water Use as shown in Exhibit A. This plan is a requirement of the Texas Commission on Environmental Quality.

**ADOPTED: \_\_\_\_\_ ATTEST: \_\_\_\_\_**