

**Texas Commission on Environmental Quality**



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

This form is provided to assist entities in water conservation plan development for municipal water use by a retail public water supplier. Information from this form should be included within a water conservation plan for municipal use. If you need assistance in completing this form or in developing your plan, please contact the conservation staff of the Resource Protection Team in the Water Supply Division at (512) 239-4691.

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

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

**Telephone Number:** (512) 974-2199 **Fax:** (512) 974-6548

**Form Completed By:** Drema Gross

**Title:** Environmental Conservation Program Manager

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

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

**Name and Phone Number of Person/Department responsible for implementing a water conservation program:** Sonja Stefaniw, Manager, City of Austin Water Utility, Water Conservation Division (512) 974-2199

**UTILITY PROFILE**

**I. POPULATION AND CUSTOMER DATA**

**A. Population and Service Area Data**

1. Attach a copy of your service-area map and, if applicable, a copy of your Certificate of Convenience and Necessity (CCN).

The service-area map is attached in Appendix A and a copy of the CCN is attached in Appendix B.

2. Combined Water and Wastewater service area size (square miles):  
310 Square Miles
3. Current population of service area: 853,844
4. Current population served:
  - a. water 853,844
  - b. wastewater 802,613
5. Population served by water utility for the previous five years:
6. Projected population for service area in the following decades:

Year	Population	Year	Population
<u>FY 03-04</u>	<u>786,594</u>	<u>2010</u>	<u>878,670</u>
<u>FY 04-05</u>	<u>799,966</u>	<u>2020</u>	<u>1,050,991</u>
<u>FY 05-06</u>	<u>815,085</u>	<u>2030</u>	<u>1,263,254</u>
<u>FY 06-07</u>	<u>834,647</u>	<u>2040</u>	<u>1,476,783</u>
<u>FY 07-08</u>	<u>853,844</u>	<u>2050</u>	<u>1,726,405</u>

7. List source/method for the calculation of current and projected population:

The AWU service area population is based on the City Demographer's estimate of the City's population and surrounding counties' populations. Every ten years AWU obtains Census data and refines population projections. In addition, AWU studies area growth using GIS to roughly estimate the population of surrounding areas. AWU validates projected population once the projection year has passed.

## **B. Active Connections**

1. Current number of active connections. Check whether multi-family service is counted as Residential X or Commercial \_\_\_\_.

Treated water users:	Metered	Not-metered	Total
Residential	<u>191,589</u>	<u>0</u>	<u>191,589</u>
Commercial	<u>15,682</u>	<u>0</u>	<u>15,682</u>
Industrial	<u>26</u>	<u>0</u>	<u>26</u>

Note: Does not include wholesale connections.

2. List the net number of new connections per year for most recent three years:

Year	<u>2006</u>	<u>2007</u>	<u>2008</u>
Residential	<u>4,099</u>	<u>1,863</u>	<u>7,290</u>
Commercial	<u>339</u>	<u>205</u>	<u>265</u>
Industrial	<u>9</u>	<u>-2</u>	<u>-1</u>

Note: Does not include wholesale connections.

### C. High Volume Customers

List annual water use for the five highest volume customers  
(indicate if treated or raw water delivery)

	Customer	Use (1,000gal./yr.)	Treated/Raw Water
(1)	<u>Samsung Austin</u>	<u>1,943,845</u>	<u>Treated</u>
(2)	<u>Freescall</u>	<u>1,189,271</u>	<u>Treated</u>
(3)	<u>University of Texas</u>	<u>1,162,500</u>	<u>Treated</u>
(4)	<u>Spanion</u>	<u>995,085</u>	<u>Treated</u>
(5)	<u>State of Texas</u>	<u>711,162</u>	<u>Treated</u>

## II. WATER USE DATA FOR SERVICE AREA

### A. Water Accounting Data

1. Amount of water use for previous five years (in 1,000 gal.):  
Please indicate: Treated Water

Year	<u>FY 03-04</u>	<u>FY 04-05</u>	<u>FY 05-06</u>	<u>FY 06-07</u>	<u>FY 07-08</u>
October	<u>4,377,090</u>	<u>4,145,261</u>	<u>5,044,900</u>	<u>4,291,783</u>	<u>4,580,057</u>
November	<u>3,770,339</u>	<u>3,425,369</u>	<u>4,520,868</u>	<u>4,068,552</u>	<u>4,027,172</u>
December	<u>3,839,863</u>	<u>3,459,156</u>	<u>4,174,038</u>	<u>3,511,736</u>	<u>3,565,762</u>
January	<u>3,582,452</u>	<u>3,408,558</u>	<u>4,158,680</u>	<u>3,385,841</u>	<u>3,535,509</u>
February	<u>3,175,841</u>	<u>2,989,760</u>	<u>3,201,782</u>	<u>3,163,019</u>	<u>3,421,797</u>
March	<u>3,450,391</u>	<u>3,425,783</u>	<u>3,945,189</u>	<u>3,742,767</u>	<u>3,652,460</u>
April	<u>3,483,289</u>	<u>3,815,680</u>	<u>4,350,867</u>	<u>3,605,829</u>	<u>3,835,339</u>
May	<u>3,969,146</u>	<u>4,338,513</u>	<u>4,724,760</u>	<u>3,753,871</u>	<u>4,289,538</u>
June	<u>3,951,836</u>	<u>5,219,920</u>	<u>5,106,119</u>	<u>3,768,874</u>	<u>5,640,758</u>
July	<u>4,756,321</u>	<u>5,658,271</u>	<u>5,611,205</u>	<u>3,641,717</u>	<u>5,629,338</u>
August	<u>5,241,667</u>	<u>5,561,588</u>	<u>6,760,972</u>	<u>4,599,587</u>	<u>5,462,338</u>
September	<u>4,870,728</u>	<u>5,926,066</u>	<u>5,003,212</u>	<u>4,334,081</u>	<u>5,418,360</u>
<b>Total</b>	<u>48,468,963</u>	<u>51,373,925</u>	<u>56,602,592</u>	<u>45,867,657</u>	<u>53,058,948</u>

Indicate how the above figures were determined (e.g., from a master meter located at the point of a diversion from the source or located at a point where raw water enters the treatment plant, or from water sales).

Data is based on a sum of the recorded metered pumpage of treated water from the water treatment plants into the treated water distribution system.

2. Amount of water (in 1,000 gallons) delivered (sold) as recorded by the following account types for the past five years.

Year	Residential	Commercial	Industrial	Wholesale	Other	Total Sold
<u>FY 03-04</u>	<u>23,376,688</u>	<u>11,637,468</u>	<u>3,014,786</u>	<u>3,263,455</u>	<u>123,191</u>	<u>41,415,588</u>
<u>FY 04-05</u>	<u>24,976,718</u>	<u>12,273,977</u>	<u>2,846,968</u>	<u>3,369,730</u>	<u>160,288</u>	<u>43,627,681</u>
<u>FY 05-06</u>	<u>28,491,438</u>	<u>13,953,609</u>	<u>2,707,015</u>	<u>4,122,806</u>	<u>239,671</u>	<u>49,274,868</u>
<u>FY 06-07</u>	<u>23,392,280</u>	<u>11,658,956</u>	<u>2,952,465</u>	<u>3,177,452</u>	<u>178,794</u>	<u>41,359,947</u>
<u>FY 07-08</u>	<u>27,185,710</u>	<u>12,660,145</u>	<u>3,101,301</u>	<u>3,771,863</u>	<u>255,324</u>	<u>46,974,343</u>

3. List previous five years records for water loss (the difference between water diverted (or treated) and water delivered (or sold))

Year	Amount (gal.)	%
<u>FY 2005</u>	<u>6,775,948,382</u>	<u>14.2 CSIV</u>
<u>FY 2007</u>	<u>5,328,258,952</u>	<u>11.38 CSIV</u>
<u>FY 2008</u>	<u>6,617,858,663</u>	<u>12.22 CSIV</u>

Austin Water Utility conducted a water loss review and estimate for FY05 as required by Texas Water Development Board. AWU has since completed two subsequent reports, for FY07 and FY08. These water loss estimates follow current “bottom-up” methodology for a detailed and accurate picture of water loss. AWU has provided three years of water loss data for this report, because no detailed analyses were performed in FY04 or FY06. AWU is now conducting annual water loss evaluations, and will be able to report five full years of detailed water loss estimates for the next required utility profile and water conservation plan submission.

4. Municipal water use for previous five years:

Year	Service Population	Total Water Diverted or Pumped for Treatment (1,000 gal.)
<u>FY 03-04</u>	<u>786,594</u>	<u>48,468,963</u>
<u>FY 04-05</u>	<u>799,594</u>	<u>51,373,925</u>
<u>FY 05-06</u>	<u>815,085</u>	<u>56,602,592</u>
<u>FY 06-07</u>	<u>834,647</u>	<u>45,867,657</u>
<u>FY 07-08</u>	<u>853,844</u>	<u>53,058,948</u>

## **B. Projected Water Demands**

### Projected Average Day Savings from Water Conservation \*

	Projected Population		Projected Pumpage without additional Conservation (MGD)		Projected Savings	Projected Pumpage with Conservation and Reuse (MGD)		Projected Gallons Per Capita Per Day (GPCD) with Conservation and Reuse (MGD)	
Year	Total (Retail + Wholesale)	Retail	Total	Retail Non-Industrial	Conservation and Reuse (MGD)	Total	Retail Non-Industrial	Total	Retail Non-Industrial
2009	862,342	818.34	156.84	136.5	9.87	146.97	126.66	170.43	154.78
2014	943,920	899,920	171.11	149	21.99	147.14	126.96	156	141.08
2019	1,032,337	988,337	186.57	162.4	29.73	154.86	132.68	149.95	134.24

\* Note- Retail, Non-Industrial Projections do not include wholesale consumption or consumption by large industrial customers. Retail, Non-Industrial GPCD is calculated based on retail population; total pumpage includes population in wholesale districts.

Of the projected conservation and reuse savings, 3.68 MGD of the projected savings in 2009 is attributed to the expansion of AWU's reclaimed system through Capital Improvement Projects. Additional planned reclaimed expansions are expected to contribute 20.01 MGD of savings in 2014 and 27.75 in 2019. Reclaimed water projects specifically authorized through the 2007 Water Conservation Task Force recommendations are under construction, with projected savings of 1.98 MGD in 2014 and 2019.

### III. WATER SUPPLY SYSTEM DATA

#### A. Water Supply Sources

List all current water supply sources and the amounts authorized with each:

Source

Surface Water: Colorado River – combination of water rights and firm water and firm water back-up contract with the Lower Colorado River Authority (LCRA).

Amount Authorized

325,000\* AF/Yr

\* Note: The current authorized supply is 325,000 AF/Yr based on 1999 water supply contract with LCRA. In 2007, Austin entered into an agreement with LCRA for an additional 250,000 AF/Yr (total of 575,000 AF/Yr) to be planned, likely incrementally, for future use.

## **B. Treatment and Distribution System**

1. Design daily capacity of system: 285 MGD
2. Storage Capacity: 167 MGD
3. If surface water, do you recycle filter backwash to the head of the plant?  
Yes X No \_\_\_\_\_. If yes, approximately 1.85 MGD.
4. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks. If possible, include a sketch of the system layout.
  - Two water treatment plants (a third WTP – Green WTP was decommissioned in September 2008)
  - Approximately 3,600 miles of water mains
  - Nine Major Pressure Zone
  - 35 Water Pumping Stations
  - 34 Water Storage Tanks

\*See appendix C for sketch of system layout.

## **IV. WASTEWATER SYSTEM DATA**

### **A. Wastewater System Data**

1. Design capacity of wastewater treatment plant(s): 135 MGD
2. Walnut Creek Wastewater Treatment Plant  
Is treated effluent used for irrigation on-site Yes, off-site Yes, plant washdown Yes, or chlorination/dechlorination Yes?  
If yes, approximately 67,500,000 gallons per month or 2.25 MGD per day.  
  
South Austin Regional (SAR) Wastewater Treatment Plant  
Is treated effluent used for irrigation on-site Yes, off-site Yes, plant washdown Yes, or chlorination/dechlorination Yes?  
If yes, approximately 180,000,000 gallons per month or 6 MGD per day.

Note: Hornsby Bend uses an additional 500,000 gallons per day of treated effluent from SAR. Also, Hornsby Bend does on-site irrigation but it is not treated effluent from the plants. This irrigation is from the on-site pond

system at Hornsby Bend.

3. Briefly describe the wastewater system(s) of the area serviced by the water utility. Describe how treated wastewater is disposed of. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and, if wastewater is discharged, the receiving stream. If possible, attach a sketch or map which locates the plant(s) and discharge points or disposal sites.

The City of Austin has two major wastewater treatment plants that provide wastewater treatment for almost 95% of our customers:

1. Walnut Creek Wastewater Treatment Plant (WWTP)
2. 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 industrial uses.

In addition to the two major plants, The City of Austin Water Utility has twelve small wastewater treatment plants that serve small areas in their vicinity. Together they serve the remaining 5% of our customers. Some of these plants discharge their treated effluent to a tributary of the Colorado River, while others irrigate golf courses and do not discharge to the surface waters.

The City of Austin is the owner of all these plants. AWU operates all the plants, except the Lost Creek Plant, which is operated by the Lost Creek MUD.

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

## **B. Wastewater Data for Service Area**

1. Percent of water service area served by wastewater system: 77.7%
2. Monthly volume of effluent discharged for previous three years (in 1,000 gallons):

Year	<u>2006</u>	<u>2007</u>	<u>2008</u>
January	<u>2,210,278</u>	<u>3,417,231</u>	<u>2,513,730</u>
February	<u>2,051,432</u>	<u>2,665,396</u>	<u>2,368,098</u>
March	<u>2,429,857</u>	<u>3,333,736</u>	<u>2,679,504</u>
April	<u>2,425,960</u>	<u>3,021,780</u>	<u>2,648,279</u>
May	<u>2,714,569</u>	<u>3,234,747</u>	<u>2,672,450</u>
June	<u>2,287,739</u>	<u>3,164,402</u>	<u>2,390,129</u>
July	<u>2,281,349</u>	<u>3,616,521</u>	<u>2,437,453</u>
August	<u>2,211,858</u>	<u>3,109,315</u>	<u>2,556,330</u>
September	<u>2,254,000</u>	<u>2,935,155</u>	<u>2,320,753</u>
October	<u>2,396,487</u>	<u>2,633,374</u>	<u>2,309,357</u>
November	<u>2,213,656</u>	<u>2,520,722</u>	<u>2,303,042</u>
December	<u>2,514,729</u>	<u>2,524,500</u>	<u>2,322,871</u>
<b>Total</b>	<u>27,992,000</u>	<u>36,177,000</u>	<u>29,522,000</u>

\*Note – Above figures reflect effluent discharged, which is a smaller amount than effluent treated. Other treated effluent is used in plants or metered and sold as reclaimed water.

## **WATER CONSERVATION PLAN FOR MUNICIPAL WATER USE BY AUSTIN WATER UTILITY**

### **Introduction**

This utility profile and water conservation plan for municipal water use has been prepared by the Austin Water Utility to comply with Texas Administrative Code §288.1:7 regarding the development of water conservation plans. The objective of the utility profile is to convey to the Texas Commission on Environmental Quality (TCEQ) Austin Water Utility water and wastewater system information. The water conservation plan provides an overview of current water conservation initiatives and indicates areas for growth within the framework recommended by form TCEQ-10218.

In addition to this water conservation plan, the Austin Water Utility's Water Conservation Division references the Water Conservation Strategies Policy Document developed by the Water Conservation Task Force for the near-range planning of water conservation activities. A copy of the document is attached as Appendix G and a summary of the status of implementing each of the recommended solutions is attached as Appendix H.

## 1. Specific, Quantified 5 & 10-Year Targets

### Projected Average Day Savings from Water Conservation \*

	Projected Population		Projected Pumpage without additional Conservation (MGD)		Projected Savings	Projected Pumpage with Conservation and Reuse (MGD)		Projected Gallons Per Capita Per Day (GPCD) with Conservation and Reuse (MGD)	
Year	Total (Retail + Wholesale)	Retail	Total	Retail Non-Industrial	Conservation and Reuse (MGD)	Total	Retail Non-Industrial	Total	Retail Non-Industrial
2009	862,342	818.34	156.84	136.5	9.87	146.97	126.66	170.43	154.78
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\* Note- Retail, Non-Industrial Projections do not include wholesale consumption or consumption by large industrial customers. Retail, Non-Industrial GPCD is calculated based on retail population; total pumpage includes population in wholesale districts.

Of the projected conservation and reuse savings, 3.68 MGD of the projected savings in 2009 is attributed to the expansion of AWU's reclaimed system through Capital Improvement Projects. Additional planned reclaimed expansions are expected to contribute 20.01 MGD of savings in 2014 and 27.75 in 2019. Reclaimed water projects specifically authorized through the 2007 Water Conservation Task Force recommendations are under construction, with projected savings of 1.98 MGD in 2014 and 2019.

### Water Loss Goals

Austin Water Utility 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 Utility intends to reduce its percentage of lost water as follows:

<u>Year</u>	<u>% Total Loss (Real and Apparent)</u>
FY 2009	not more than 12.0%
FY 2014	not more than 11.5%
FY 2019	not more than 11.0%

## **2. Metering Devices**

The meters that the Austin Water Utility installs are tested to measure the flow within a  $\pm 5$  percent accuracy range. Each Austin Water Utility meter of 1½ inch 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.

## **3. Universal Metering**

The Austin Water Utility universally meters all customers including municipal uses. Wholesale customers are metered at one or more master meter points, which are routinely tested as part of their contract with the City.

## **4. Unaccounted-For Water Use**

According to an Audit Report on Water Loss released by the Office of the City Auditor, the Austin Water Utility has "taken a utility-wide approach to measure and manage water loss, with some positive results" and that the "City's water loss estimates for FY 07 were well within industry standards." In addition, the Utility has a Water Accountability Group which is charged with addressing the challenge of measuring water loss in the City.

## **5. Continuing Public Education & Information**

The Austin Water Utility utilizes public education and community outreach as a means of encouraging community participation in the variety of programs water conservation has to offer, such as free irrigation audits, irrigation system upgrade rebates, toilet replacement rebates, free toilets, and rainwater harvesting rebates. Specific outreach opportunities include work with the local school district, advertising, newsletters, workshops, seminars, webpage, peak day management campaign, community events and participating in a regional Water IQ campaign.

### *Outreach to the Austin Independent School District (AISD)*

The City of Austin and AISD have developed a water wise educational curriculum program. Originally designed for 5<sup>th</sup> grade students, the program was expanded to include 6<sup>th</sup> grade students beginning in 2003. The 5<sup>th</sup> grade Water in Our World curriculum includes information about water conservation, water source protection, and water treatment. Hands-on exercises and experiments allow the students to install water-conserving devices (such as water efficient showerheads, etc.) in their own homes and measure the conservation results. This teaches the students the value and impact of water-efficient devices. The 6<sup>th</sup> grade Down the Drain program introduces students to wastewater collection and treatment.

Water Conservation staff is also partnering with other City of Austin environmental programs to provide support to AISD. Currently, City of Austin staff is involved with AISD's Environmental Stewardship Envisioning Committee. This committee aims to coordinate the environmental stewardship efforts of AISD at all levels: curriculum, facilities, community, and school campuses.

### Advertisements / Program Marketing

Advertising is used regularly to provide citizens information about water conservation practices and programs. Advertisements are regularly placed in local and neighborhood newspapers, on radio and television stations, on-line, area billboards, bus wraps, and area pump-toppers. The AWU participates with LCRA via a Memo of Understanding to utilize Enviromedia for shared media buys and to promote regional messaging.

### Electronic Newsletters

In March 2004, the Water Conservation Division of Austin Water Utility began the *WaterWise Newsletter* to communicate more regularly with Utility 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. Visitors to the Austin Water Conservation website are encouraged to self-subscribe by providing an email address.

Water Conservation has increased presence in other newsletters as well. Participation has included both internal newsletters published within Austin Water Utility and the City of Austin and external publications such as homeowner's association newsletters.

### Workshops, Presentations and Outreach Programs

Throughout the year, presentations on water conservation techniques and available City programs are given to a variety of interest groups. Water Conservation will participate in approximately 60 to 80 events and programs each year for area multi-family customers, commercial customers, homeowners associations, garden clubs, professional organizations, and other community groups. In 2009 a Water Conservation Speakers Bureau was developed and area groups may call to schedule a speaker.

### WaterWise Irrigation Professionals Seminar

The City offers a one day and several evening seminars to licensed professional irrigators in the Austin area. The seminars provide continuing education credits toward license renewal along with information on water-efficient irrigation systems, City water conservation programs and regulations, and the mandatory watering schedule and watering hours. Other topics include electrical troubleshooting, irrigation auditing, and turfgrass water requirements.

### Web Page

The City of Austin 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, educational, incentive and irrigation system audit programs, are described on the web page. For customer convenience, program applications are also available on-line. Tips on how to reduce 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 web sites providing water conservation information.

### Peak Day Management Campaign

In 2007, as part of recommendations from the City's Water Conservation Task Force (Appendix C), the City revised its water use management ordinance to include mandatory watering days for all City water customers. Year round restrictions are in place for commercial customers with residential restrictions in place every summer. The watering schedule is shown in Table 2. Education efforts are increased during the summer months when water use is highest. Messages urge citizens and businesses to comply with the

watering schedule and to avoid watering between 10 a.m. and 7 p.m. when evaporation rates are at their highest. The City produces magnets and stickers with the watering guidelines to assist citizens in following the recommended schedule. The schedule is heavily promoted on television and radio, through bus wraps and in print ads.

**Table 2. City of Austin Watering Schedule**

<b>Customer Class</b>	<b>Outdoor Water Use Days</b>	<b>Effective</b>
<b>Commercial, Multifamily</b>	Tuesday and/or Friday	Year-Round
<b>Residential</b> Odd-numbered address	Wednesday and/or Saturday	May 1 - September 30
<b>Residential</b> Even-numbered address	Thursday and/or Sunday	May 1 - September 30
<b>Year-round:</b> No watering with automatic irrigation systems between 10 a.m. and 7 p.m.		
<b>May 1 - Sept 30:</b> No watering between 10 a.m. and 7 p.m. except with hand-held hose.		

#### Water Waste Program

The City of Austin has a Water Waste program to follow up on reports of water waste by customers. Customers are told about the reported problem and offered assistance in repairing or rescheduling their irrigation system. Should they fail to remedy the water waste violation, there is a system in place in which citations are issued and monetary fines may be imposed at the Court's discretion. In August 2008 the Water Conservation Division partnered with the City's 3-1-1 information hotline to take water waste reports 24/7 and provide tracking assistance to callers. This has led to increased participation year round by the general public in reporting water waste.

#### Water Theft Education Program

In an effort to curb water loss, the Water Conservation Division is partnering with the Consumer Services Division on the Utility and the City's 3-1-1 department to implement a Water Theft Education program. Citizens will be encouraged to report water theft to 3-1-1. Outreach methods include hydrant hang tags, posters, and brochures to bring awareness to the campaign. Training and informational meetings will be held for both City staff and the construction development community. There will also be increased staff presence in the field to detect occurrences of water theft.

#### Water IQ

Austin Water Conservation is partnering with the LCRA and the City of Cedar Park on the "Water IQ" awareness program developed by the Texas Water Development Board. The program provides regional and localized resources to the public including information on the source of water and water conservation tips and programs. The program educates citizens about the source of their water supply. Outreach media includes community events, billboards, radio and television ads.

## **6. Non-Promotional Water Rate Structure**

### Single-Family Residential

The City implemented an increasing block rate structure for single-family residential water billing in 1994, as seen in Table 3.

**Table 3: FY 2008-09 Single-family Residential Water Rates**

Monthly Consumption	Charge per 1,000 gallons	
	Inside City	Outside City
0 - 2,000 gallons	\$0.98	\$0.98
2,001 – 9,000 gallons	\$2.59	\$2.59
9,001-15,000 gallons	\$4.75	\$4.75
Over 15,000 gallons	\$8.50	\$8.50

### Multi-Family, Industrial/Commercial/Institutional (ICI) and Golf Courses

Water rates for Multi-family, ICI and Golf Course customers do not increase with the volume of water used. These non-residential rates account for seasonal differences in demand, setting an off-peak rate for November through June and a higher peak rate for July through October. These rates are illustrated in Table 4.

**Table 4: FY 2008-09 Multi-family, Commercial, Industrial, and Golf Course Water Rates**

Type of Customer	Charge per 1,000 gallons			
	Off Peak Rate		Peak Rate	
	<i>Inside City</i>	<i>Outside City</i>	<i>Inside City</i>	<i>Outside City</i>
Multi-family	\$3.54	\$3.58	\$3.88	\$3.92
Commercial	\$4.20	\$4.29	\$4.58	\$4.69
Large Volume / Industrial	\$3.93	N/A	\$4.28	N/A
Golf Courses	\$4.20	\$4.29	\$4.58	\$4.69

### Wholesale Customers

Each wholesale customer has a separate rate, though the average rate is \$2.90 per 1,000 gallons.

## **7. Reservoir Systems Operations Plan**

The Lower Colorado River Authority (LCRA) owns and operates the key water supply reservoirs in the region, Lakes Travis and Buchanan, which serve as the foundation to Austin's

firm water supply. LCRA operates these reservoirs in accordance with its 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 internet link to the LCRA's *Water Management Plan for the Lower Colorado River Basin (Effective September 20, 1989 Including Amendments Through March 1, 1999)* is:

[http://www.lcra.org/library/media/public/docs/1999\\_WMP.pdf](http://www.lcra.org/library/media/public/docs/1999_WMP.pdf)

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

## **8. Enforcement Procedure & Plan Adoption**

The Water Conservation Plan is expected to be reviewed by Austin City Council on September 24, 2009. 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 Utility Profile and Water Conservation Plan on September 24, 2009.

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

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

## **10. Additional Requirements:**

### **A. Program for Leak Detection, Repair, and Water Loss Accounting**

#### *Leak Detection and Repair*

The Austin Water Utility performs leak detection and contracts for leak detection services to locate subsurface leaks in the water distribution system. Reported leaks are located using sounding equipment. Once located, the required repair information is entered into the City's Hansen database for tracking through the repair phase.

#### *Water Loss Accounting*

The Austin Water Utility's Water Loss Audit Report follows the Texas Water Development Board's (TWDB) recommendation that utilities should measure water loss as an important part of their water conservation measures and activities. The audit provides a reliable baseline measurement of water loss within the Austin Water Utility distribution system for FY07. The baseline will be used to identify and track the success of efforts used to minimize water loss. The audit also offers recommendations that will improve the accuracy, quality, and availability of information for Austin Water Utility to use in its planning processes.

Austin Water Utility has made progress in implementing many of the recommendations set forth in the Water Loss Audit document. An "Action Summary" is included in the report with each of the recommendations listed separately. Several recommendations have been implemented and

proposed implementation dates and status have been listed for the remaining items. A copy of the Action Summary is included as Appendix I.

#### Water Accountability Committee

AWU has created an internal committee that is responsible for improving accountability and implementing annual water loss audits. Water loss audits are required only once every five years by the Texas Water Development Board (TWDB). Total system water loss for AWU, defined as total pumpage minus authorized consumption, was calculated to be 11.38% for FY2007. This figure represents a slight percentage increase from reported FY05 numbers due to an increase in the accuracy of the data collection and the calculation methods used; however, the TWDB cautions against using percentages as a comparative measure between cities due to differences in infrastructure and reporting methods. The Infrastructure Leakage Index, or ILI, is a measure recommended by the American Water Works Association to compare water loss against the best performance that can be expected from a particular water system. A system at optimum performance would score a 1, and the AWWA recommends an ILI of under 3 as the optimal target range. For FY07, AWU's performance was calculated as an ILI of 2.619, putting it in the optimal range for a utility its size.

### **B. Record Management System**

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, Large Volume Industrial, Public and Institutional, and Golf Course user classes which are then charged different rates for water and wastewater services. The Customer Information System (CIS) provides a central location for water billing information.

A separate database, Hansen, serves as the database for 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.

### **11. Plan Review and Update**

A plan review and update will be completed by May 30, 2014.