City of Austin Municipal Water Supply Overview

Colorado & Lavaca Rivers and Matagorda & Lavaca Bays Basin and Bay Area Stakeholder Committee Meeting
October 28, 2010
Outline

- Overview
- City of Austin
  - Water Supplies and Demand
  - Major System Components
  - Water Conservation and Reclaimed Water
- Key Water Supply Points
Colorado & Lavaca Rivers and Matagorda & Lavaca Bays Basin and Bay Area
Fayette Power Project

South Texas Project

Austin Area: includes wholesale customers and power plant needs (Decker, Sand Hill, and future)
2009 Total Lower Colorado River Water Use

- Agricultural: 58%
- Austin - Munic.: 18%
- Other Munic.: 7%
- Environment: 4%
- Industrial/Stm-Elec-Other: 11%
- Rec.& Firm Irrig.: 1%
- Austin Energy*: 1%
- Other: 0%
Austin Water Service Area

- City of Austin Water served population
  - Current: 890,000
  - 2060 Projected: 2 million
- Current City limits land area = 289 square miles
- Utility service area = 538 square miles
- Retail and wholesale, inside and outside City limits
- Wholesale service includes Municipal Utility Districts, cities, and private companies
- Major demand categories:
  - Municipal and manufacturing
  - Steam-Electric
City of Austin Water Supply

Current municipal supply:
  • Colorado River (surface water)

Supply comes from a combination of:
  • State-granted water rights (run-of-river)
  • Water supply contracts with LCRA (providing firm back-up to ROR rights)

Demand management/supply:
  • Water Conservation
  • Water reclamation program – direct reuse
Recent Water Contracts

1999 Agreement

- Firm back-up for Austin’s senior run-of-river rights and additional firm water totaling 325,000 AF/yr
- Term extends through year 2050 with option for Austin to extend to year 2100

2007 Supplemental Water Supply Agreement (SWSA)

- Provides up to 250,000 AF/yr of additional supply through the year 2100 to be jointly planned, incrementally
Austin Municipal Demands

AWU Demand for Municipal Needs

- FY 08/09: 163,668 AF/yr (146 MGD)
- Highest fiscal year: 173,707 AF/yr (FY 05/06)
- Most recent 5-year average: 159,730 AF/yr

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Demand (AF/yr)</th>
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<tbody>
<tr>
<td>04/05</td>
<td>157,661</td>
</tr>
<tr>
<td>05/06</td>
<td>173,707</td>
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<tr>
<td>06/07</td>
<td>140,763</td>
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<tr>
<td>07/08</td>
<td>162,853</td>
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<td>08/09</td>
<td>163,668</td>
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1 acre-ft is 325,851 gallons
Austin Water System at a Glance

- **Treatment:** 285 MGD
  - Ullrich: 167 MGD
  - Davis: 118 MGD

- **Peak day pumpage:**
  - Year 2009 Peaks:
    - 239.7 MGD (July 16, 2009) and 222.6 MGD (July 17, 2009) – period of operation associated with a tank inspection
    - 221.9 MGD (August 7, 2009)
  - Historic Peak:
    - 247 MGD (September 26, 2005)

- **Annual production:** 53 billion gallons
- **System Storage (Total):** 167 million gallons
- **Distribution:**
  - 9 major pressure zones
  - 35 pump stations, 34 reservoirs
  - 3,600 miles of pipe, 25,000 public hydrants
Austin Wastewater System at a Glance

Treatment: 150 MGD
- South Austin Regional: 75 MGD
- Walnut Creek WWTP: 75 MGD

Recent Combined Annual Average:
- FY 08/09: 82 MGD
- FY 07/08: 83 MGD
- FY 06/07: 98 MGD

Collection and small plants:
- 124 lift stations
- 2,600 miles of pipe, 46,700 manholes
- 7 small plants, also participant with Round Rock, Cedar Park, and Leander in Brushy Creek Regional WWTP system operated by the Brazos River Authority
Recent 5-year average combined effluent discharge: 95,386 AF/yr (85 MGD)

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<tr>
<th>Fiscal Year</th>
<th>Combined Treated Effluent (AF/yr)</th>
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<tr>
<td>04/05</td>
<td>95,701</td>
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<tr>
<td>05/06</td>
<td>87,153</td>
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<td>06/07</td>
<td>109,323</td>
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<tr>
<td>07/08</td>
<td>92,860</td>
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<tr>
<td>08/09</td>
<td>91,894</td>
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Conservation & Drought Contingency Plans

Conservation

- Implementing aggressive conservation program
- 2 day per week watering restrictions in effect:
  - Residential: May to September
  - Commercial: year-round
- In August 2009 City of Austin went into Stage 2 watering restrictions: limited to 1 day per week
  - Resulted in significant revenue loss
- Aggressive leak detection repair program and main replacement
- Evaluating potential for lowering municipal use per capita to a goal of 140 gpcd by 2020
- Stage 3 – no outdoor watering*

City of Austin Drought Contingency Plan - supply triggers for watering restrictions with implementation to be determined by the City Manager:

- Combined storage level in Highland Lakes
- 900,000 acre-feet trigger Stage 2
- 681,000 acre-feet trigger Stage 3

* Partial list
Water Conservation - Programs

- Toilet, Washing Machine, Pressure Valve and Rainwater Harvesting Rebates
- Free Irrigation Audits
- Mandatory Watering Restrictions
- Education, Outreach, Speakers Bureau
Water Reclamation

The Current System

- Highly treated wastewater effluent

- Major uses:
  - Irrigation
  - Cooling
  - Manufacturing
  - Industrial

- Recent annual use: 6,100 acre-feet/year
Water Reclamation Initiative

- **Direct reuse system - “third utility”**

- Targeting expansion of the system in high use areas (University of Texas for example).

- Long-range system plan over 130 miles of pipe, 7 tanks and 10 billion gallons of annual use (~30,000 ac-ft/yr)
Overview of Key Water Supply Points

- Firm water supplies
  - Long-term certainty and supply reliability
  - Supply availability through a wide-range of conditions including a repeat of the drought of record

- Water supply stewardship:
  - Resource use efficiency:
    - Water conservation programs
    - Leak reduction
    - Reclaimed water program

- Affordability: water supply at a reasonable cost

- Water quality protection and consistency

- Infrastructure investment – asset management:
  - Capital Improvements Program (CIP) funding for system improvements to serve growth and replace aging infrastructure
Questions?
Typical City of Austin Water Consumption Per Customer Class

Current Water Customers:
Approximately 213,000

- Residential: 38%
- Multi-Family: 19%
- Commercial: 27%
- Industrial: 7%
- Wholesale: 8%
- Other: 1%

October 2010