

AUSTIN'S RECLAIMED WATER PROGRAM

April 10, 2009



Dan Pedersen

972-0074

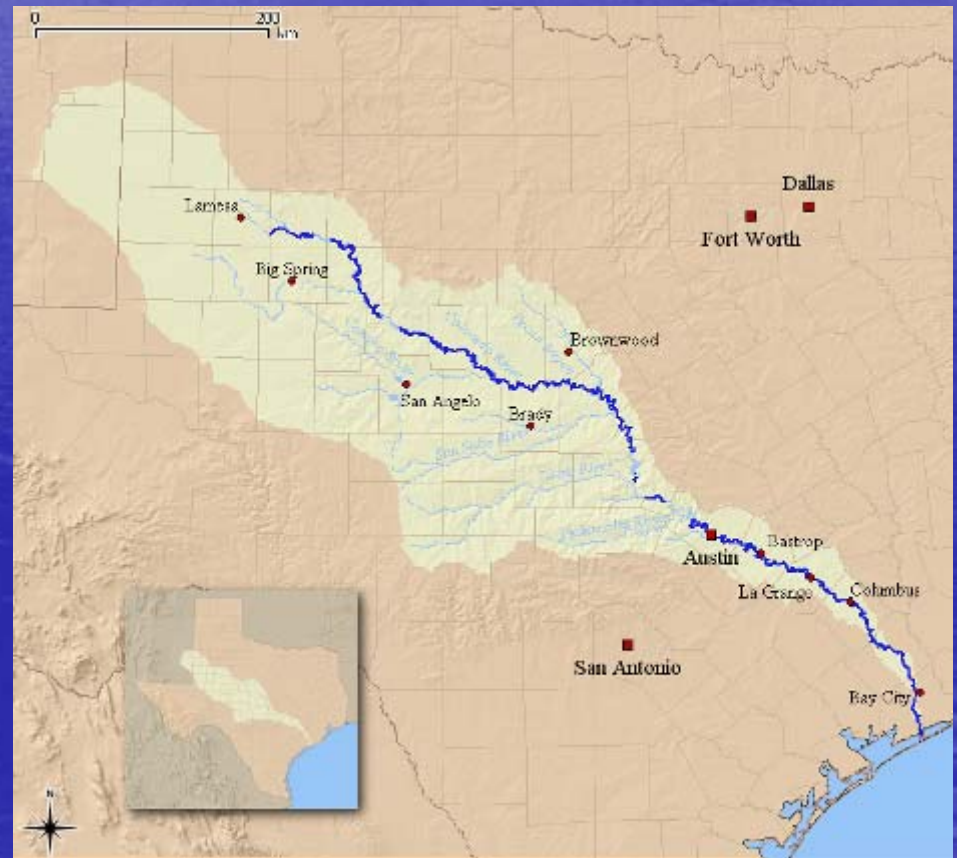
Lets Get Started

- Austin
 - Central Texas
 - State Capital
 - Growing
- Water
 - Annual precipitation – 32"
 - Water use – 51 billion gallons/yr
 - Wastewater treated – 32 billion gallons/yr

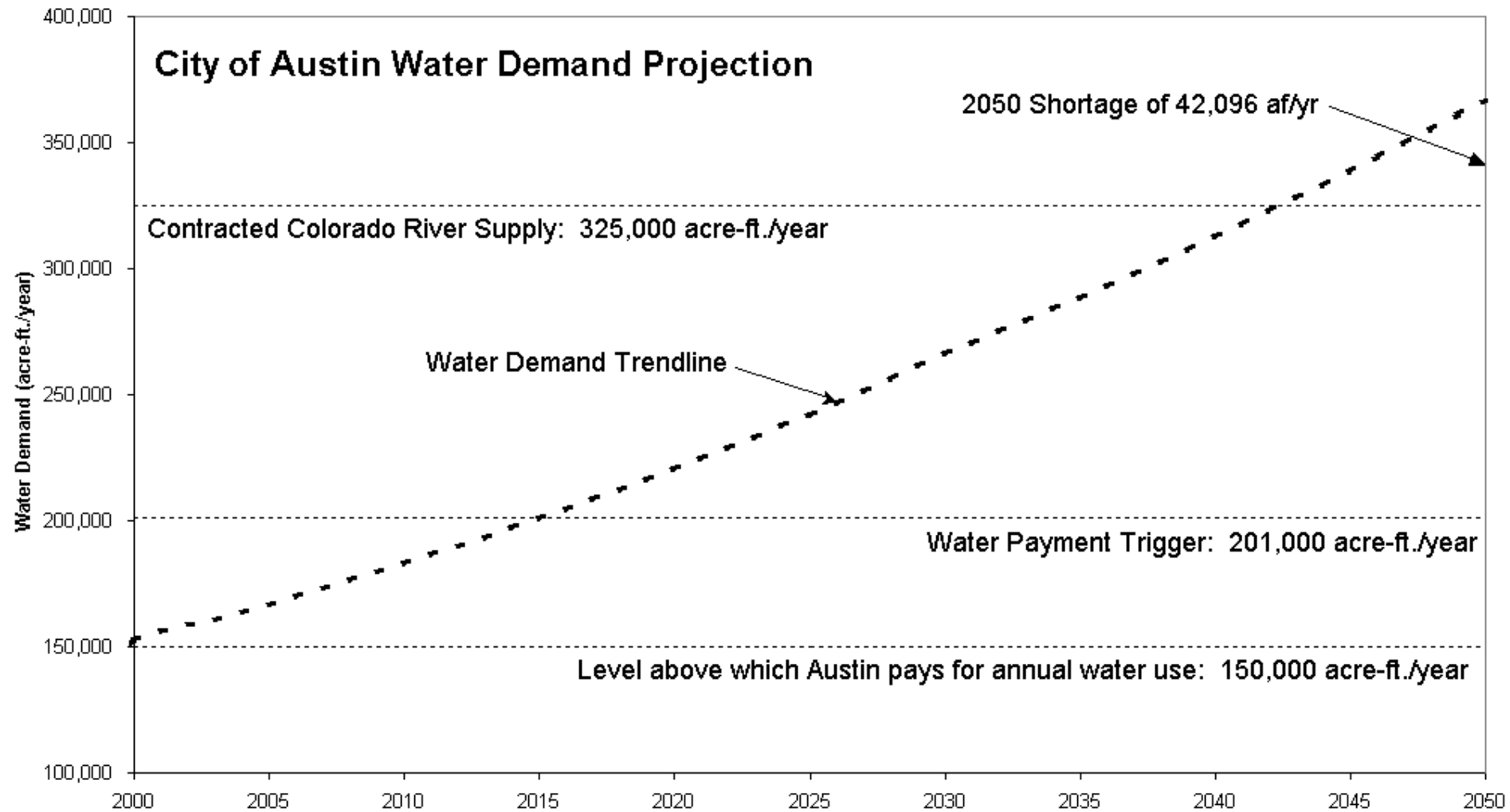


Where Austin Gets Its Water

- Colorado River
- 39,900 sq miles
- 2 water treatment plants
- 2 large wastewater treatment plants
- High → exceptional water quality



Dire Straits



What is Reclaimed Water ?

- Highly treated wastewater effluent
- Quality – akin to river water
- Demand management tool
- Major uses
 - Irrigation
 - Cooling
 - Manufacturing
 - Toilet flushing



How it Works



Why Reclaimed Water ?

- Conserves water
- More natural stream flow
- Conserves energy
- Reduces CO₂ emissions
- Considers future generations
- Defers water treatment plants

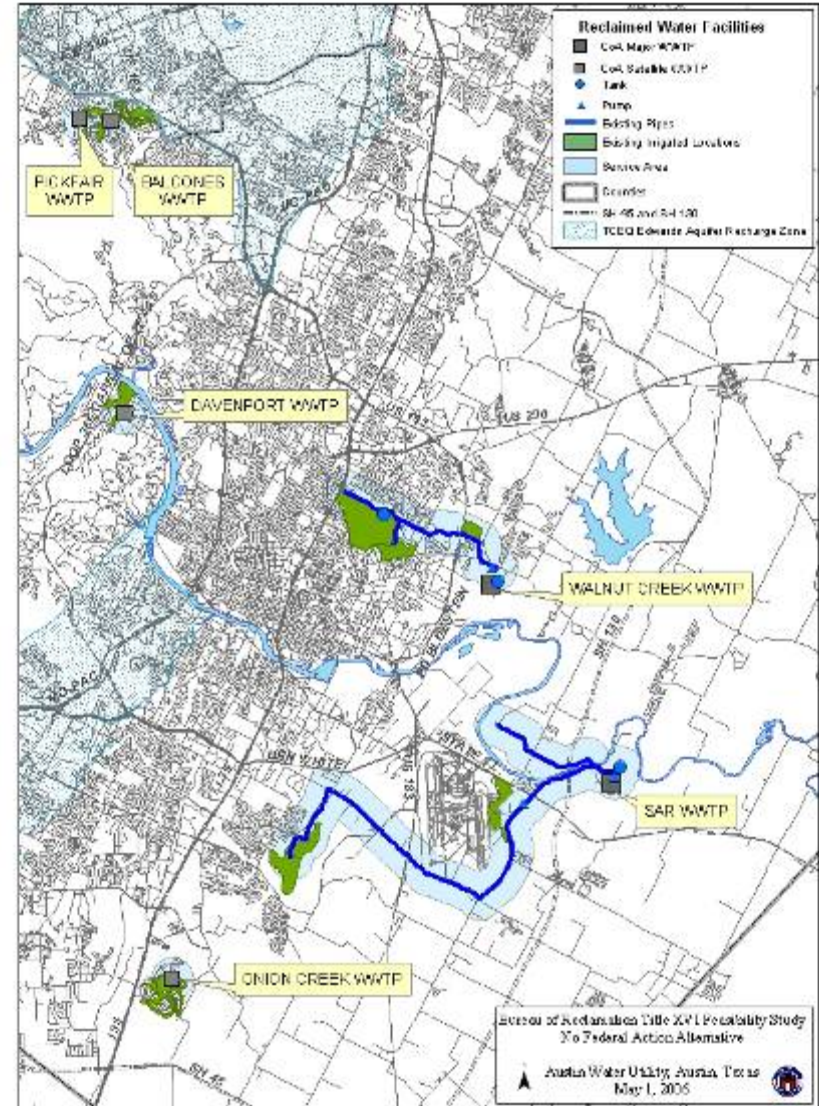


The Current System

Miles of trans. main – 19
Annual use – 1.63 billion
gallons

How much water is that?

2,425 olympic-sized
swimming pools
32 million car washes
1,020 million toilet flushes



Recent Projects

- Jimmy Clay Booster Pump Station By-Pass
- 51st Street Tank
- 51st Street Main



Upcoming Projects

- 12" & 24" Rehabilitations
- ABIA Main
- Guerrero Park Main
- Montopolis Main
- UT Main
- Senate Hills Subdivision



Image courtesy of Austin Bergstrom airport



Downtown -- Inside Buildings

- Growing buildings → growing water use
- 60-80% of office building use is for toilet flushing
- New potable mains or new reclaimed mains ???



System Expansion Funding

- User improvements
- Capital Improvement Program
- Pay as you go
- Economic Stimulus Package
- Mandatory commercial connection
- User rates



Customers

Existing

Hornsby Bend

Clay/Kizer GC

First Tee

Balcones CC

Morris Williams GC

Mueller Visitors Center

Sand Hill Energy Center

Seton Hospital

Mueller retail areas

Planned

Mueller Energy Center

UT Research Facility

UT Main Campus

ABIA

Interport

Capital Complex

Downtown

Balcones subdivision

Many more



Risks and Public Acceptance

- Reclaimed water:
 - Meets State's highest quality standards
 - Is disinfected
 - Does contain microbes
 - Precautions
 - Do not drink
 - Do not swim
 - Warning signs
 - Backflow prevention
 - Wash hands



Reclaimed Design – Cross Connections

- RPZ on water service line
- Double check valve on fire lines
- Single check valve on reclaimed service line
- Initial inspection
- Annual inspection



Reclaimed Design – Marking

- Purple meter
- Purple pipe/fittings
- Valve box lids
- Sprinkler heads
- Signs



Success Story – SHEC

- Cooling Tower
- Adjacent the SAR WWTP
- Paid for infrastructure to get a reduced rate
- Use 370 MG/yr
- Inspection Issues



Success Story – Mueller Redevelopment

- High profile project
- Desired LEEDs points
- Uses
 - Irrigation
 - Toilet flushing
 - Cooling
- Signs
- Sprinkler heads
- Controller boxes
- Mains in streets



Success Story – Morris Williams

- Golf Course
- Irrigation
- Ornamental Pond
- Marking and ID
 - Sprinkler heads
 - Controllers
 - Signs
 - Backflow prevention
- Use 50 MG/yr



Obtaining Reclaimed Service

- Contact the Utility for information
- Apply for permits
- Pay review and inspection fees
- Make improvements
- Pass inspections
- Apply for service/pay tap fee
- Schedule plumbing and backflow inspections



?? QUESTIONS ??

