



Region C Water Planning Group Meeting

TRA Central
Wastewater Treatment Plant
January 13, 2005

Agenda

- Action Items
 - Proposed Amendment for NTMWD east Fork Reuse Project
 - Report of Nominating Committee and Election of 2005 Officers
 - Removal of Wholesale Provider
 - Available Water Supplies by WUG/ WWP
 - Policy Topics Subcommittee
 - Letter in Support of Funding for Regional Water Planning

Action Item

Proposed Amendment for NTMWD
East Fork Reuse Project

Comments on Amendment

- 5 speakers gave oral comments at public hearing on December 6, 2004
- Received 5 written comments

Comments on Amendment

- Comments and responses are included in Agenda books and are included as Attachments 8 through 11 to the amendment
- Changes to amendment include
 - Expanded discussion of potential impacts to existing wetlands
 - Expanded discussion of potential impacts to endangered and threatened species
 - Other minor changes in response to comments

NTMWD Proposed Amendment

- RCWPG Action

Action Item

Report of Nominating Committee
and
Election of 2005 Officers

Election of 2005 Officers

- Report of Nominating Committee
- RCWPG Action
 - Elect officers

Action Item

Removal of Wholesale Provider

Removal of Wholesale Provider

- Midlothian Water District has been dissolved
- Recommend removing Midlothian Water District as Wholesale Water Provider
- RCWPG Action
 - Remove Midlothian Water District as WWP

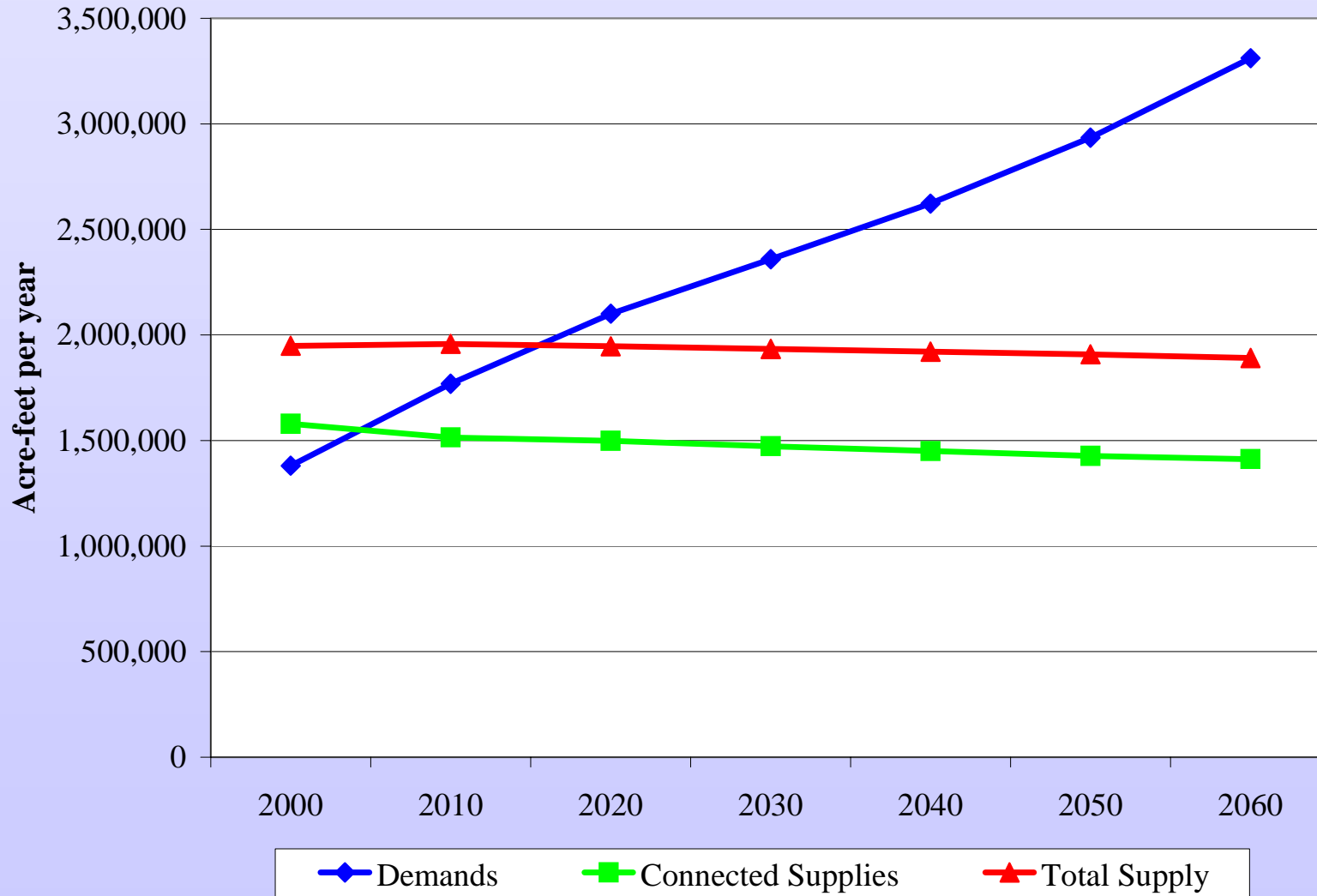
Action Item

Available Water Supplies by
WUG/WWP

Available Supplies

- Received comments from 15 WWPs
 - Changes to 7 WWP summaries
- No comments from RWPG members or WUGs
- Adjusted WWP demands and distribution of supplies in response to comments

Updated Comparison of Supply to Demand



Available Supplies

- RCWPG Action
 - Approve consultants to submit water supply data to TWDB
 - Approve consultants to make minor corrections to data as needed
 - To be submitted to RCWPG for final approval if changed

Action Item

Policy Topic Subcommittee

2001 Policy Recommendations

- Senate Bill One Planning Process
 - Alternative strategies
 - Flexibility in determination of consistency by TWDB and TCEQ
 - Allow contract renewals in planning (Adopted)
 - Clarification of unique stream segments
 - Clarification provided, but some uncertainty remains due to use by agencies for multiple purposes

2001 Policy Recommendations

- TCEQ policy and water rights
 - Exempt certain rights from cancellation
 - Reduce obstacles to indirect reuse
 - Remove barriers to IBTs
- State and Federal programs – water supply issues
 - Increase funding for TWDB programs
 - Accelerate Trinity GAM (completed)

2001 Policy Recommendations

- State and Federal programs (Cont.)
 - Increase state participation in water conservation (**Conservation Task Force**)
 - Education of board members of water supply entities
 - Watershed protection planning
 - Federal funding of NRCS structures
 - State assistance with stock ponds
 - Agricultural water supply data collection

2001 Policy Recommendations

- Unique Streams (Clarified by Legislature)
- Unique Reservoirs
 - Marvin Nichols I
 - Lower Bois d'Arc
 - Muenster (under construction and should be completed before 2006)
 - Tehuacana

Possible New Policy Topics

- SB1 Planning Process
 - Coordination between TWDB and TCEQ regarding use of the WAMs for planning (reconsider use of WAM Run 3)
 - Clear guidance on resolving consistency issues
 - Allow waivers of plan amendments for entities with small strategies
 - Allow RWPG to approve alternative strategies as an action item without going through the amendment process

Possible New Policy Topics

- TCEQ policy and water rights
 - Develop a clearly defined policy regarding permitting for reuse projects
 - Recognize established reuse technology for treating wastewater effluent to potable stds
 - Develop consistent permitting requirements for disposal of brine waste for municipal and industrial users
- State and Federal Programs
 - Funding assistance for desalination projects

Policy Topics

- TWDB Policy Papers available to date
 - Effects of Safe Drinking Water Act on small water supply systems
 - Interbasin Transfers
 - Regional or statewide environmental mitigation system
 - Inter-regional cooperation/Inter-regional water sharing
 - <http://www.twdb.state.tx.us/rwpg/discussion/default.asp>

Policy Topics

- Consider creation of subcommittee to review policy issues pertinent to Region C
- RCWPG Action

Action Item

Letter in Support of Funding for
the Regional Water Planning
Process

Letter in Support of Funding Water Planning

- Consider authorizing Chair to send letter to elected officials in support of providing adequate funding to TWDB for regional water planning
- RCWPG Action (if needed)
 - Approve Chair to send letter on behalf of Region C

Agenda

- Discussion Items
 - Non-municipal Conservation Strategies
 - Draft Chapter 3
 - Feasible Water Management Strategies
 - Infrastructure Financing Survey
 - Update on Dallas Water Plan
 - Speaker Comments at 12-6-04 meeting
 - Update on Overall Status and Next Steps

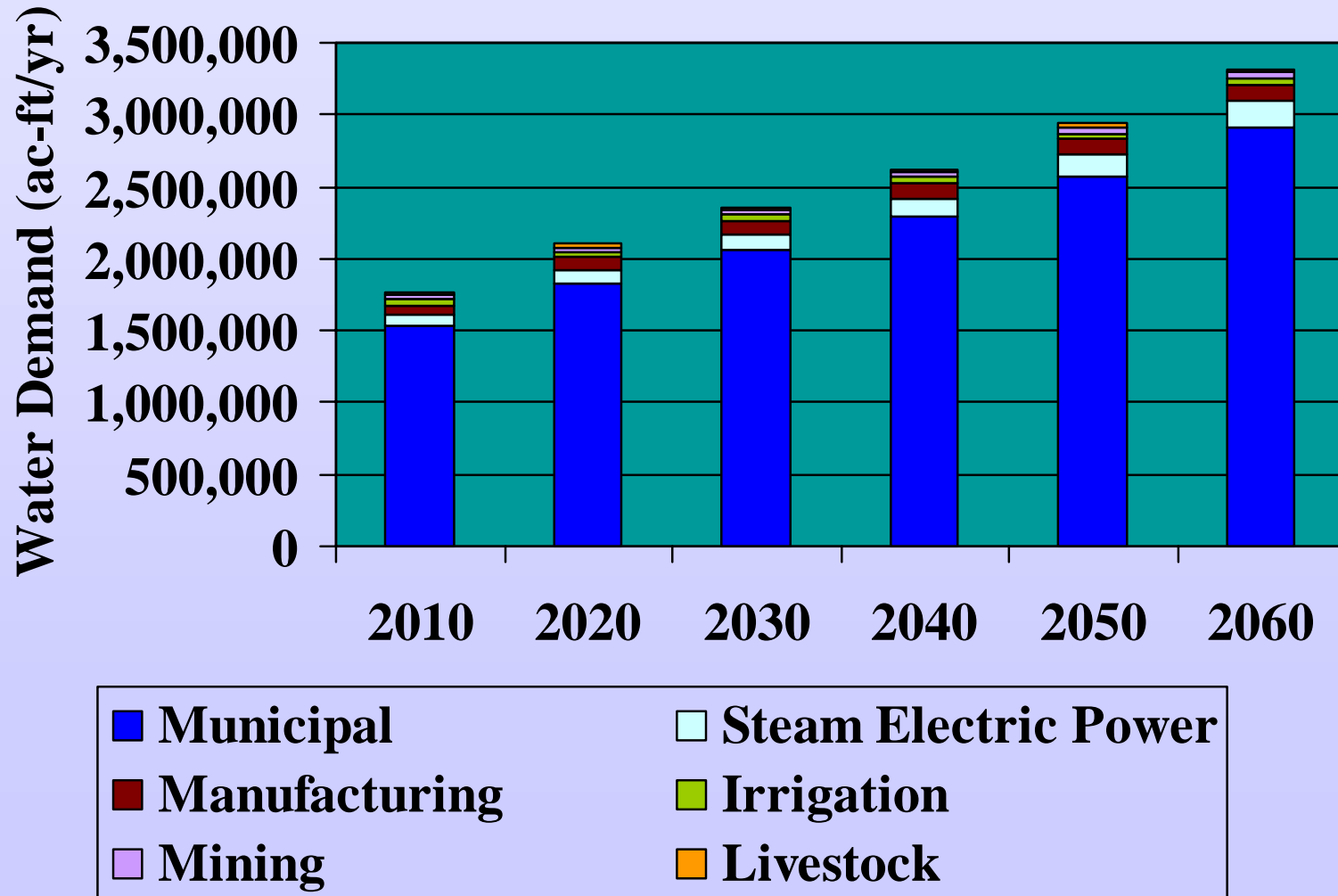
Discussion Item

Non-Municipal Conservation Strategies

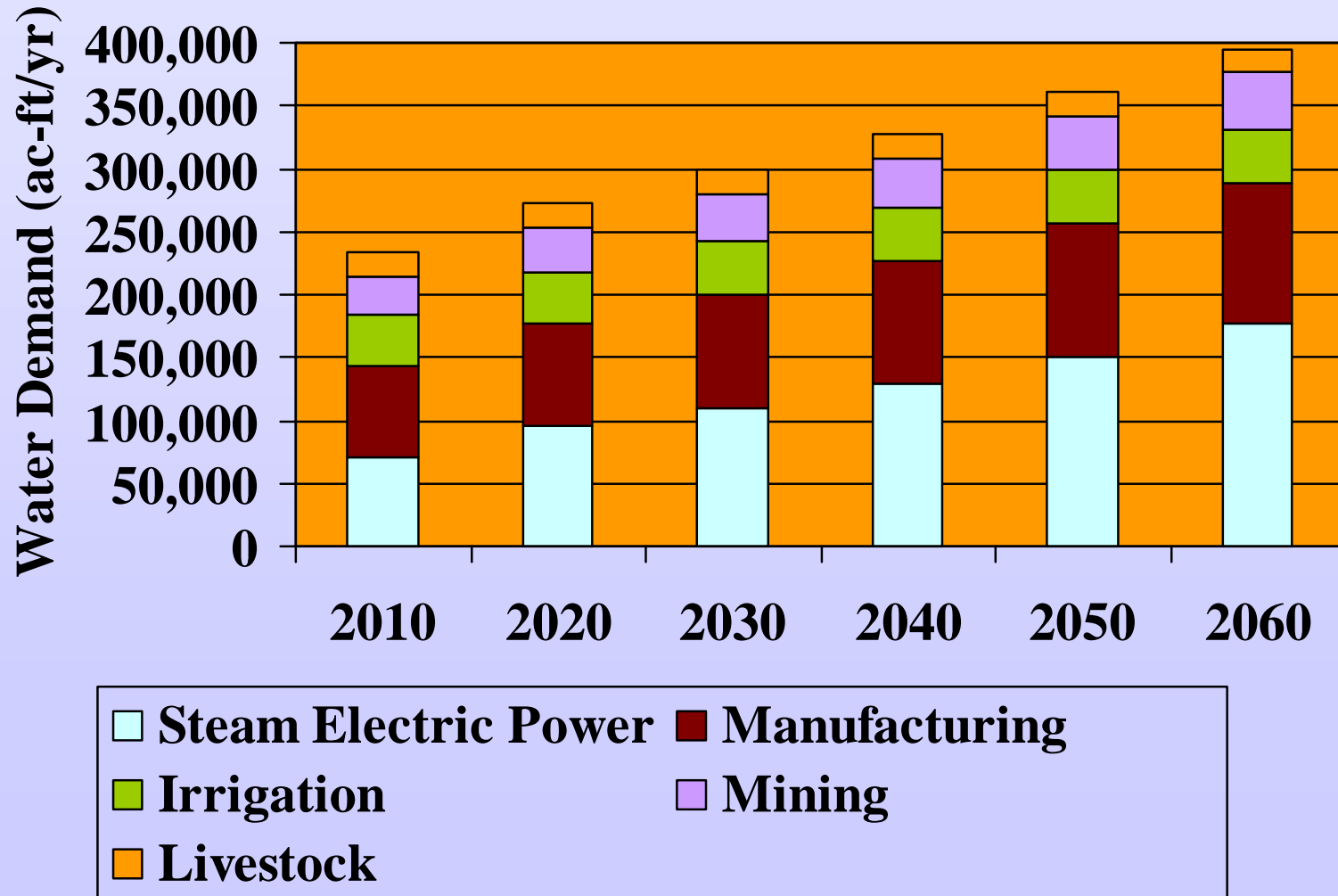
Non-Municipal Water Conservation Strategies

- Steam Electric Power
- Manufacturing
- Irrigation
- Mining
- Livestock

Region C Projected Water Demand



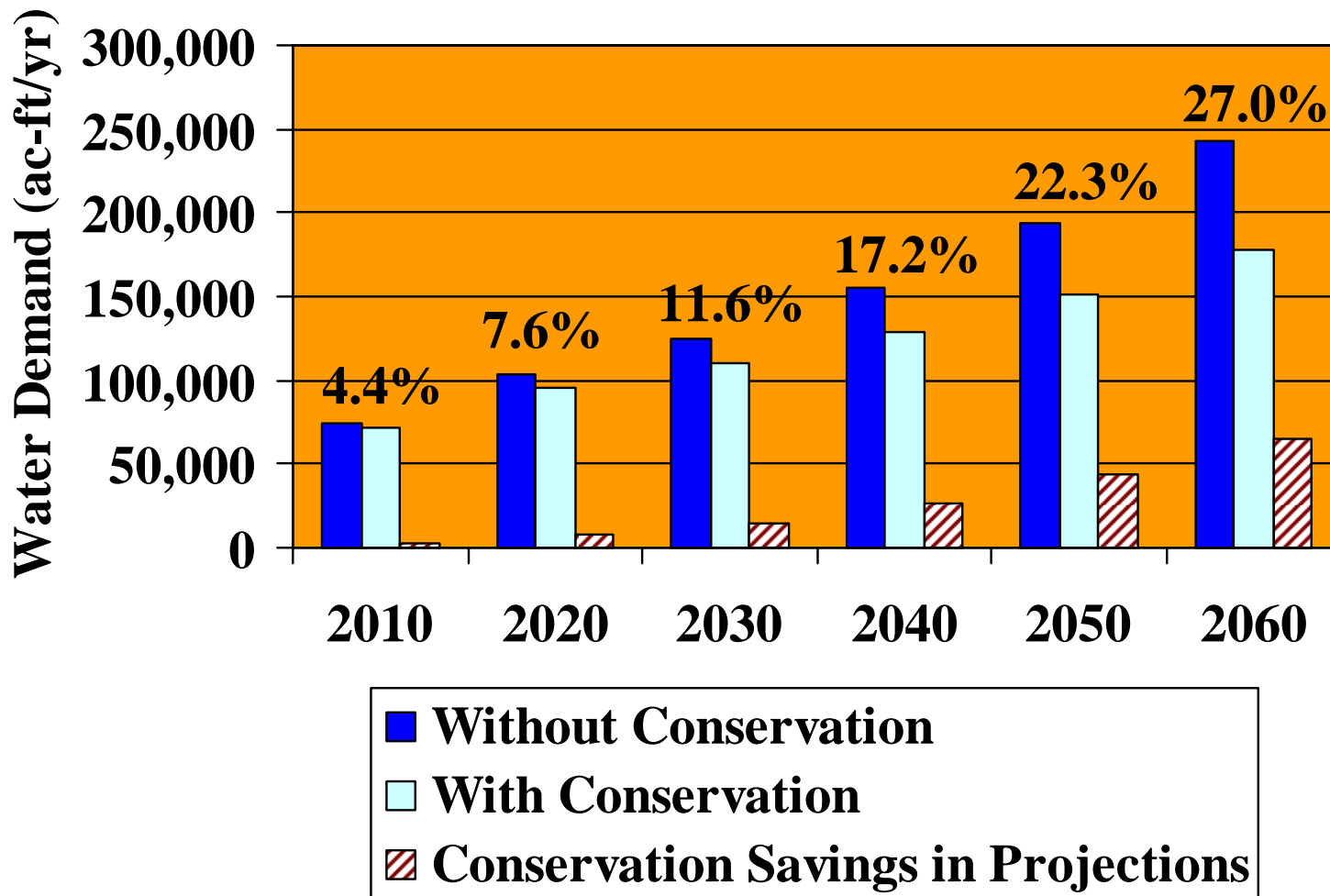
Region C Projected Non-Municipal Water Demand



Steam Electric Power

- Statewide projections during planning period
 - Projected power demand increases by 234 percent
 - Associated water demand increases by 162 percent
- Difference due to assumed use of water-efficient generation technologies
- Water conservation included in steam electric power water demand projection

Region C Steam Electric Power Conservation Savings



Steam Electric Power

- Reuse:
 - Supply steam electric power water demands with reclaimed water where it is feasible
 - Evaluate on a case-by-case basis
- 2001 plan proposed 48,455 ac-ft/yr of 2050 reclaimed water supply for steam electric power generation

Manufacturing

- Assume that no conservation included in projected water demand
- Water usage for individual manufacturers not available
- 1997 data indicate that 80 percent of manufacturing water is purchased from municipal water providers

Manufacturing General Rebate

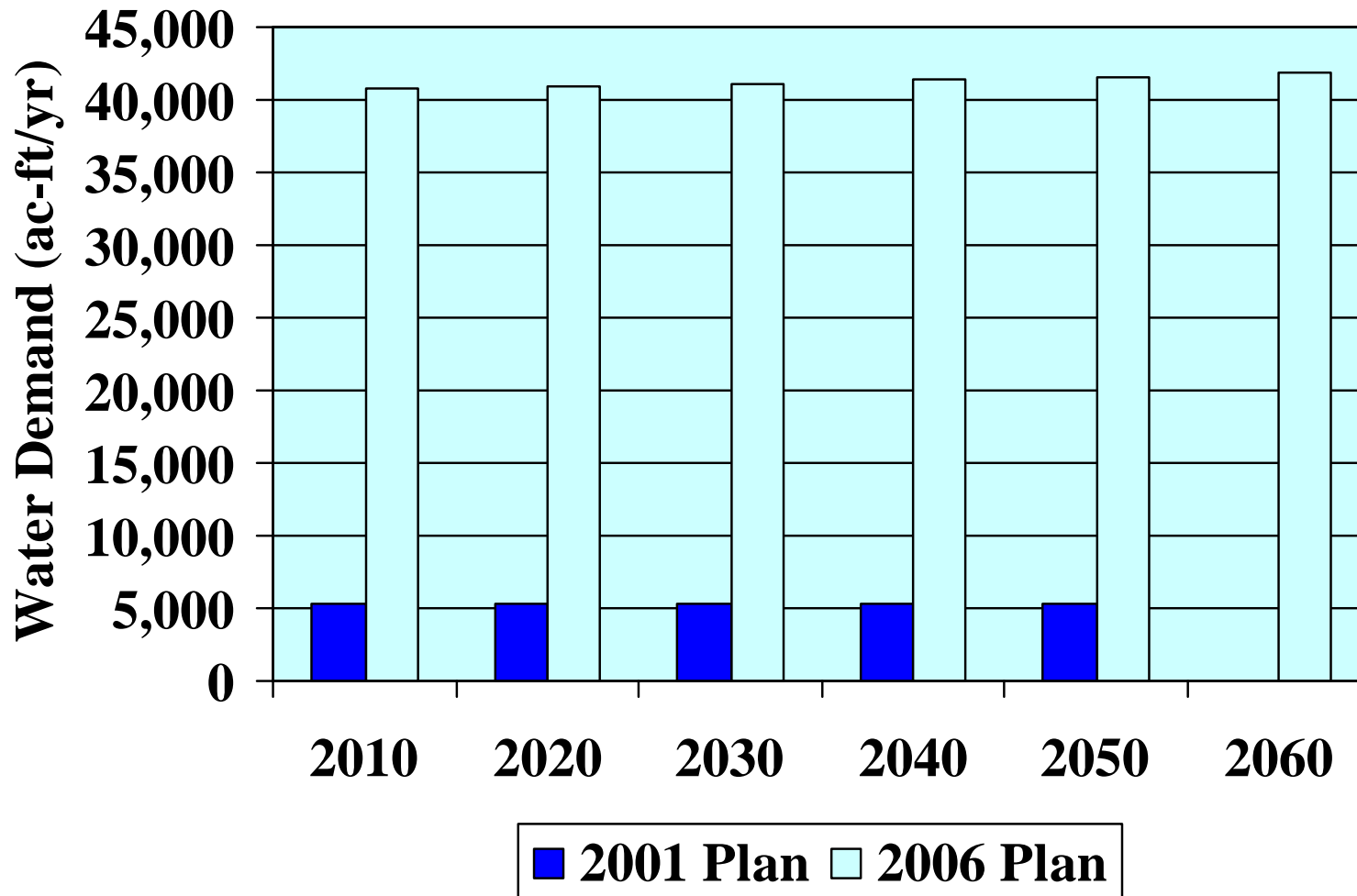
- Municipal water providers offer rebate for manufacturers to make large-scale improvements in water use efficiency
- Applicable in counties that have projected manufacturing water shortages
- Estimated Region C potential water savings and costs:
 - 3 percent of the manufacturing water supplied by municipal water providers
 - \$2.30 per gallon per day of water savings (including rebate, marketing, overhead)

Item	2010	2020	2030	2040	2050	2060
Quantity (ac-ft/yr)	0	130	1,584	2,364	2,539	2,654
Unit Cost (\$/kgal)	\$0.00	\$0.42	\$0.42	\$0.42	\$0.42	\$0.42

Irrigation

- Assume that no conservation included in projected water demand
- Irrigation water demands have increased considerably since the 2001 Region C Water Plan due to change in accounting for golf course water demands
- Water usage for individual irrigators not available
 - Self-supplied?
 - Purchased from municipal providers?

Region C Irrigation Water Demand



Golf Course Conservation

- Water Conservation Implementation Task Force BMP
- Elements:
 - Computer-controlled irrigation system
 - Soil moisture sensors
 - Weather stations
 - Irrigation scheduling
 - Efficient irrigation equipment
 - Reduced irrigation area (e.g., golf course rough)
- Applicable in counties that have projected irrigation water shortages

Golf Course Conservation

- Implementation alternatives:
 - Voluntary, if self-supplied
 - Rebate, if supplied by municipal water provider
 - Ordinance, if supplied by a city

Golf Course Conservation

- Estimated Region C potential water savings and costs:
 - 15 percent of irrigation water use for golf courses that participate
 - Assume that 80% of golf courses ultimately participate
 - Cost to utility depends on implementation method
 - Insufficient data exist to specify implementation methods
 - Assume rebate cost of \$2.30 per gallon per day of water savings (including rebate, marketing, overhead)

Item	2010	2020	2030	2040	2050	2060
Quantity (ac-ft/yr)	0	2,139	2,689	3,246	3,809	4,353
Unit Cost (\$/kgal)	\$0.00	\$0.42	\$0.42	\$0.42	\$0.42	\$0.42

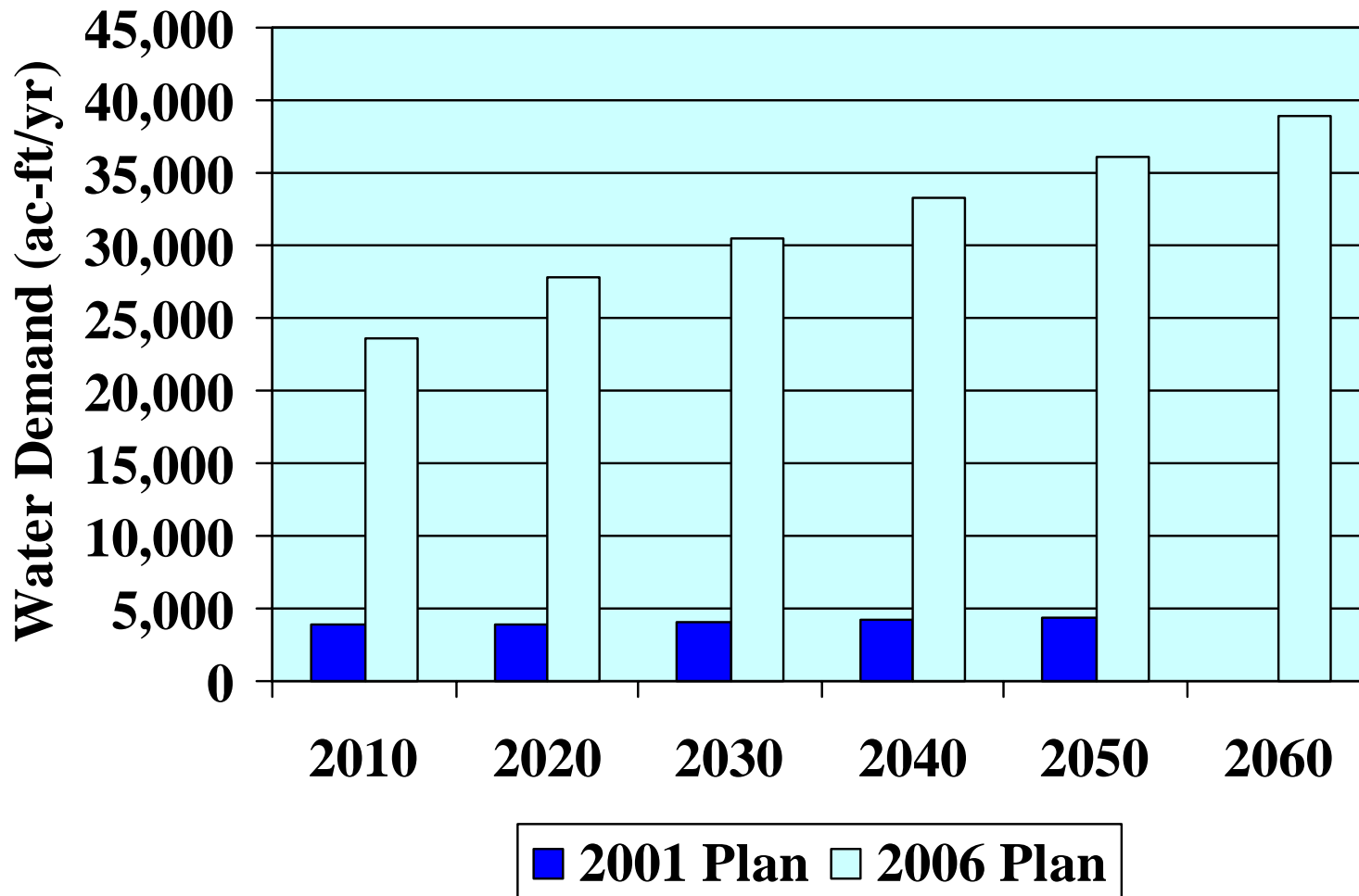
Irrigation

- Reuse:
 - Supply golf courses with reclaimed water where it is feasible
 - Evaluate on a case-by-case basis
- 2001 plan proposed more than 14,500 ac-ft/yr of 2050 reclaimed water supply for golf course and landscape irrigation

Mining

- Assume that no conservation included in projected water demand
- About 80 percent of mining water demand located in Wise County
- Wise County-Mining water demand has increased considerably since last round of planning

Wise County-Mining Water Demand



Mining

- Current water usage data for miners not released by the TWDB
- 1997 data indicate:
 - 91 percent of mining water use is for crushed and broken stone operations
 - 97 percent of mining water is self-supplied

Mining

- Verify that the projections are based on water consumption
- Potential conservation methods:
 - Recycling of water in operations
 - Reuse
- Insufficient information available to project potential savings and costs

Livestock

- Assume that no conservation included in projected water demand
- One projected shortage:
 - Tarrant County-Livestock
 - 61 ac-ft/yr out of demand of 803 ac-ft/yr
 - About 8 percent

Livestock

- Potential water conservation measures:
 - Reducing pressure in watering system if possible
 - Reducing spillage from troughs
 - Repairing leaks
- Potential drought management measures:
 - Sell livestock

Livestock

- These potential measures are implemented by ranchers on a localized basis and not by water providers
- Assume that ranchers will implement conservation and drought management measures to meet projected shortage

Discussion Item

Draft Chapter 3

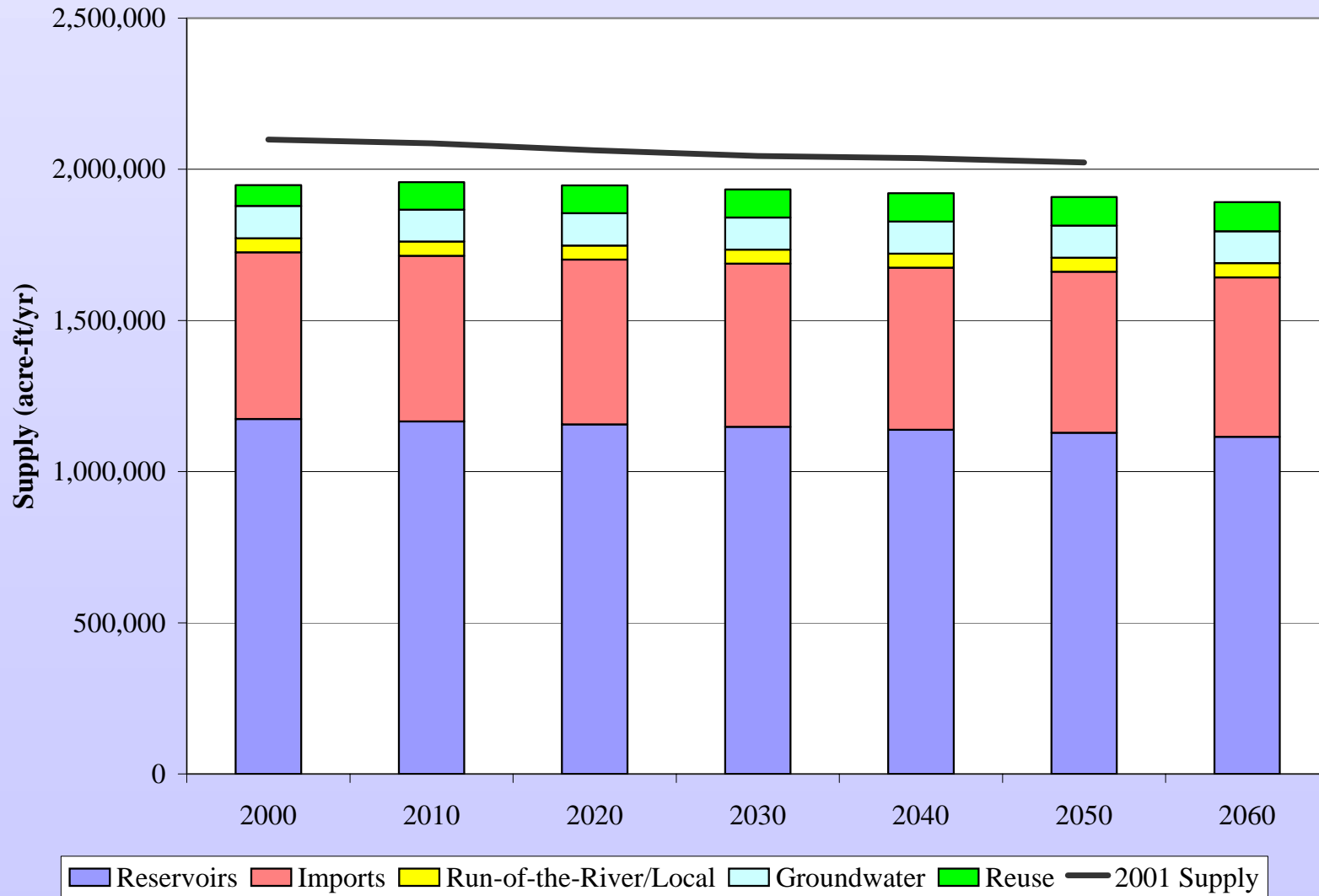
Draft Chapter 3 – Available Water Supplies

- Projected regional supply of 1.9 million ac-ft/yr
 - 60% reservoirs in Region C
 - 28% surface water imports
 - 5% groundwater
 - 7% local supplies and reuse
- Surface water supplies
 - In-region: Trinity and Red river basins (small amount from the Brazos Basin)
 - Imports: Sulphur, Sabine, Neches and Brazos
 - Run-of-the-river supplies

Draft Chapter 3 – Available Water Supplies

- Groundwater
 - 2 major aquifers: Carrizo-Wilcox, Trinity
 - 3 minor aquifers: Woodbine, Queen City, Nacatoch
 - Local “Other” aquifers
- Reuse and Other Local Supplies
 - Permitted direct and indirect reuse
 - Stock ponds
 - Local surface water supplies for mining

Draft Chapter 3



Draft Chapter 3 – Available Water Supplies

- Wholesale Water Providers (WWPs)
 - 6 regional WWPs
 - 4 of these provide water for 95% of demand in Region C
 - 19 local WWPs
 - 22 need additional water supply before 2060

Draft Chapter 3 – Available Water Supplies

- Water User Groups (WUGs)
 - Availability limited by contracts and existing facilities
 - Points of interest resulting from analysis
 - Most WUGs will need additional facilities in next 50 years.
 - Current groundwater use in several areas of Trinity Aquifer exceeds long-term reliable supply.
 - Several existing supplies can be made available by developing additional transmission facilities.

Draft Chapter 3 – Available Water Supplies

- Impacts of Recent Drought
 - Summarized impacts as they relate to supplies
 - Entire memo on recent droughts will be included as an appendix

Discussion Item

Feasible Water Management Strategies

Evaluation of Water Management Strategies

- Must evaluate all potentially feasible strategies:
 - Quantity
 - Reliability
 - Cost
 - Environmental Impacts
 - Impacts to Agricultural / Rural lands
- Other considerations:
 - Threats to natural resources
 - Impacts to other strategies
 - Regulatory requirements
 - Key water quality parameters
 - Must consider for recommended strategies (comprehensive)
 - Other factors

Evaluation of Water Management Strategies

- Factors that can be quantified
 - Quantity
 - Cost
 - Total Land Impacted
 - Some Environmental Factors (for projects that have environmental studies completed)
- Recommend that these factors be reported
 - Quantity, cost and total land impacts – all projects
 - Acres of wetlands (if known)

Evaluation of Water Management Strategies

- Relative Impacts will be assigned to other factors
 - Listed as “high”, “medium” and “low”
- Verbal Description of Strategy and Impacts
 - 1-page summary sheet
 - Identify major issues
 - Can include positive impacts
 - Can include additional quantification if available

Discussion Item

Infrastructure Financing Survey

Infrastructure Financing Survey

- Survey broken into two parts
 - Questions regarding recommended water management strategies (WUG/WWP in agreement with recommendations?)
 - Questions as to how the WUG/WWP plans to fund the recommended water management strategies (TWDB questions from last time)
- Will include an attachment explaining the State Participation Program
- Currently seeking additional input from TWDB

Infrastructure Financing Survey

- Schedule

- Send revised questions and cover letter to RCWPG prior to next meeting.
- Seek RCWPG approval to send to WUGs/WWPs.
- Mail surveys in March.
- Follow-up phone calls in April.
- Incorporate into draft Initially Prepared Plan in May.

Discussion Item

Update on Dallas Water Plan

Update on Dallas Water Plan

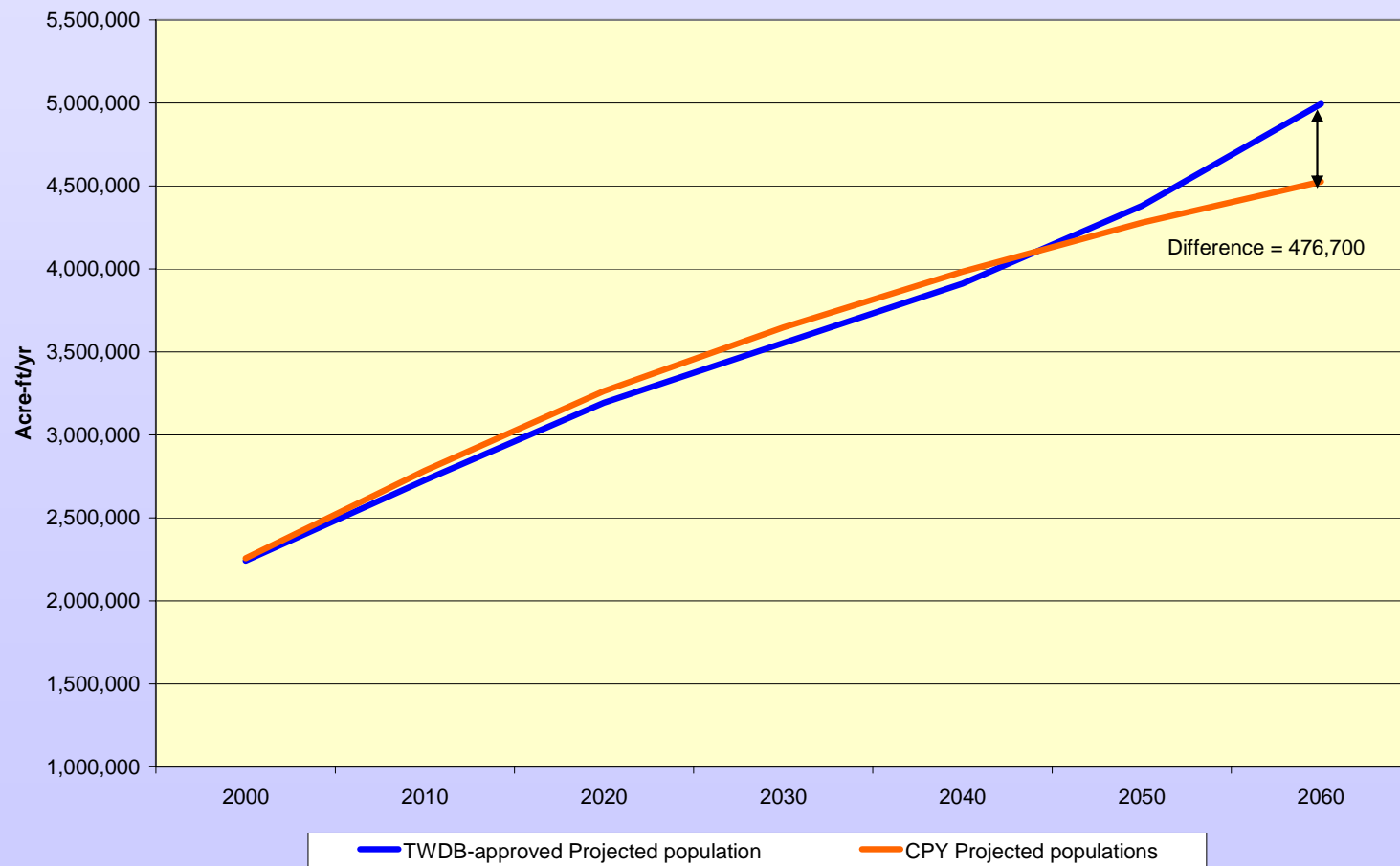
- Dallas' Draft Water Plan shows slightly different population than in Region C
 - Population is higher in Dallas' plan through 2040, then Region C plan population is higher in 2050 – 2060
 - Differences is build-out assumptions for DWU customers for 2050 and 2060

Update on Dallas Water Plan

- Region C Methodology
 - Regional total set by TWDB
 - Region could change distribution to counties and suppliers
 - Region C could not change regional totals

Update on Dallas Water Plan

Comparison of Population Projections for DWU Customers



Discussion Item

Speaker Comments from
December 6, 2004

Summary of Speaker Comments- December 6 Meeting

- Summary of speaker comments were posted on the Region C web site in advance of today's meeting
- www.regioncwater.org, see meeting data for 12-6-04

Discussion Item

Update of Overall Status &
Next Steps

Update on Overall Status and Next Steps

- TWDB socio-economic evaluation
- Strategy Evaluation for each WUG & WWP
 - Infrastructure Cost
 - Strategy Impacts
 - Recommendations
- Model Conservation Plans

Update on Overall Status and Next Steps

- Infrastructure Financing Report
- Unique reservoir sites
- Unique streams
- Policy Recommendations

Agenda

- Other Discussion
 - Update from the Chair
 - Report from Regional Liaisons
 - Report from TWDB
 - Confirm Date & Location of Next Meeting
 - Other Discussion
 - Acknowledgement of Guests/Comments

**Thank you
for coming**

**Materials are available at
www.regioncwater.org**

END OF PRESENTATION

FOLLOWING ARE RESERVE SLIDES