



Region C Water Planning Group

March 23, 2009





Action Items

- A. Request for 3 month extension on Initially Prepared Plan and Final Plan
- B. Final Approval of Special Studies
- C. Approval of Spring 2009 Region C Newsletter
- D. Election of Members to Fill Expiring Terms
- E. Officer Elections for 2009





Request for 3 Month Extension on Initially Prepared Plan and Final Plan

Tom Gooch



Current Schedule for Plan Update

- Initially Prepared Plan (IPP) due March 1, 2010
- TWDB comments on IPP by June 29, 2010 (4 month review period)
- Hold public hearings on IPP
- Adopt Regional Water Plan and submit to TWDB by September 1, 2010 (2 months to respond to comments & adopt Plan)
- TWDB review final submittal by December 31, 2010
- State Water Plan due January 5, 2012

Background

- Very Aggressive Schedule
- Delays in Finalizing Special Studies
- Delays in getting basic data from TWDB
- Other Regions
 - Region F requested & received extension at contract signing (3 Month IPP & 6 Month Plan)
 - Other regions considering
- Proposed schedule with 3 month extension
 - IPP due June 1, 2010
 - Final Plan due September 1, 2010



Final Approval of Special Studies

Tom Gooch



Background

- TWDB provided written comments on the Parker-Wise Study and the County-Wide Meetings Memo on December 10, 2008
- Proposed responses were prepared and sent to TWDB for informal review
- Proposed responses and tracked changes report were posted on the Region C web site on February 13, 2009

Background

- Four reports & one memo submitted to TWDB on December 23, 2008 (Conservation and Reuse Study, Interregional Study of Toledo Bend, Indirect Reuse Study, Direct Reuse Study, and Four County Study)
- TWDB provided *draft* written comments on March 16, 2009
- Currently developing responses to draft comments
- Proposed responses and tracked changes reports will be posted on the Region C web site and emailed to RCWPG members.
- Deadline for submission of final reports to TWDB is April 30, 2009

Parker-Wise Study

- TWDB Comments – Include the Following:
 - Description and analysis of “Parker-Wise County Water Supply System”.
 - *Text was added to Section 6 to clarify the nature of the system.*
 - Specific implementation plan for the Parker-Wise County Water Supply System, including phasing.
 - *Implementation Plan (Section 8) was added.*
 - Analysis of alternative strategies.
 - *Discussion of alternative strategies was added to Section 9. Cost estimates added in new Appendix E*

Parker-Wise Study

- TWDB Comments - (Continued):
 - Analysis of Walnut Creek SUD's proposed Eagle Mountain Water Treatment Plant.
 - *Discussion of WCSUD WTP at Eagle Mountain Lake was added to Section 9.*
 - More detail on meetings with WUGs/WWPs and names of attendees.
 - *Added Appendix F and Table 3.1 with more detail on meetings and participants*
 - Consider additional justification for changes to population projections.
 - *Will not seek adjustments to population projections based on this study.*

Parker-Wise Study

- Seeking approval of proposed response letter.
- Seeking approval to finalize report and submit to TWDB.

County-Wide Meetings Memo

- TWDB indicated on December 10 that they have no comments on the memo.
- We will add TWDB comment letter as an attachment to the memo.
- We are seeking approval to finalize memo and submit to the TWDB.

Conservation and Reuse Study

- Major TWDB Draft Comments
 - Provide a detailed discussion about the criteria being used by different entities to implement certain strategies and identify opportunities to coordinate across the region
 - Include an appendix listing all WUGs and Providers surveyed along with which BMPs are being implemented
 - Coordination with Region H – Provide summaries of meetings with Region H regarding reuse & environmental flows and the sharing of results from instream flow modeling

Conservation and Reuse Study

- Minor TWDB Draft Comments
 - Add definitions of water conservation and reuse at the beginning of the report
 - Add map of Region C Planning Area
 - Correct inconsistent statements regarding amount of current reuse in the region
 - Use consistent naming for the BMPs throughout all text, graphs, & tables
 - Reconcile text with data in Table 4.4
 - Revise section numbering in Section 5
 - Table 8.1 – Define “RF” as Return Flow
 - Add TWDB report 362 to References in Appendix A

Interregional Study of Toledo Bend

- TWDB Comment
 - Submit written meeting reports and/or technical memoranda for each coordination meeting or issue

Indirect Reuse – Athens Pilot Project Report

- Major TWDB Draft Comments
 - Include discussion of coordination between Athens Municipal Water Authority and City of Athens regarding options and implementation plan
 - Figures 5-4 to 5-6 need clarification

Indirect Reuse – Athens Pilot Project Report

- Minor TWDB Draft Comments
 - Submit electronic copies of all appendices and figures
 - Remove blank pages throughout report
 - Included analysis of detention time in Lake Athens
 - Correct inconsistent statement regarding the amount of 2060 reuse.
 - Include clarification regarding membrane filtration
 - Appendix B, Figures B-3 and B-6 should be clarified

Direct Reuse – Fort Worth Pilot Project Report

- Major TWDB Draft Comments
 - Chapter 7 - Include analysis of cost avoidance/deferment associated with each of the benefits identified for the selected Water Reuse Projects
 - Chapter 7 - Clarify treatment capacities associated with varying treatment technologies
 - Chapter 7 – Consider adding a table summarizing the advantages and disadvantages of various treatment technologies

Direct Reuse – Fort Worth Pilot Project Report

- Minor TWDB Draft Comments
 - Submit electronic copies of all appendices and figures
 - Remove blank pages throughout report
 - Correct inconsistent statement regarding the amount of 2060 reuse.
 - Change units from “mg/L” to “mg/L as CaCO₃”
 - Clarify title of Table 7-1

Four County Report

- Major TWDB Draft Comments
 - Include summary of publication review; list publications in References section
 - Include alternatives for entities in eastern and central Ellis County not covered by the Sokoll WTP, including phasing and specific implementation plans
 - Include description of additional alternatives for Johnson County supply
 - Include phasing and implementation plans for the recommended Johnson County supply

Four County Report

- Major TWDB Draft Comments
 - Add more information in Chapter 4 for Southwest Dallas & Southeast Tarrant Counties
 - Further explain methodology for determining population/demand increases; add definitions for “low” & “high” projections
 - Chapter 5 – Include a county-level comparison for projected demand, current supply & WMS volumes.
 - Clarify statements regarding population projections and add more quantitative description
 - Appendix D – Include summary graphs for all entities
 - Appendix D – Show NCTCOG’s projections on graphs

Four County Report

- Minor TWDB Draft Comments
 - Note that TWDB's acceptance of the final report does not constitutes its acceptance of any population/demand revisions therein
 - Submit electronic copies of all appendices and figures
 - Add appendix listing names of utilities/cities/personnel that attended each meeting or included meeting memo
 - Figure ES.1 – Add county names & planning group names to map
 - Correct reference to Figure 1.2

Four County Report

- Minor TWDB Draft Comments
 - Clarify the differences between city and non-city projections
 - Appendix C, Table 1 – Annotate the table with the source of the recommended projections
 - Appendix D – Note the source of recommended projections
 - Appendix F – Add introduction

Final Approval of Special Studies

- Seeking input from RCWPG. Alternatives:
 - Approve submittal of final reports after TWDB comments are addressed:
 - Consultant will provide final reports to RCWPG by e-mail for review.
 - Consultant will make changes suggested by RCWPG.
 - Reports due to TWDB by April 30.
 - Set another meeting to approve final reports before April 30.
 - Other



Approval of Spring 2009 Region C Newsletter

Colby Walton
Cooksey Communications



April 2009 Newsletter

- *Feature Article:* Planning Group Concludes 2007-2008 Special Studies
- *Article:* Planning Group Monitors Drought, Legislative Proposals
- *Conservation Corner:* Springtime Water Conservation Tips
- Roster of Planning Group members (to be updated after today's meeting)
- RCWPG meeting info (to be added after today's meeting)

Action Item: April 2009 Newsletter

- Once revised and approved, 7-10 business days for printing and mailout
- Distribution list = more than 1,300 recipients
 - Various water entities, elected officials, regional media and members of the public
- Posted to www.regioncwater.org
- Extra copies of newsletter available to Planning Group members for presentations



Election of Members to Fill Expiring Terms

Jim Parks



Membership Terms Expiring

Name	Interest	Seeking Re-Election?
Howard Martin	Municipalities	Yes
Robert Scott	Environment	Yes
Jack Stevens	Water Districts	Yes
Connie Standridge	Water Utilities	Yes
Danny Vance	River Authorities	Yes
Jerry Johnson	Electric Generating Utilities	No
Irvin (Marsh) Rice	Public	No
G.K. Maenius	Counties	Yes
Russell Laughlin	Industries	Yes

Election

- 7 members seeking re-election; 2 members not seeking re-election
- Each position is 5-year commitment
- All interested parties were asked to submit resumes to Russell Laughlin
- Interested parties:
 - Gary Spicer – Electric Generating Utilities
 - Bill Cerverha - Public
 - Thomas La Point - Public

- RCWPG Election



Officer Elections for 2009

Jim Parks



Officer Elections for 2009

- Current Officers
 - Chair, Jim Parks
 - Vice Chair, Jody Puckett
 - Secretary, Russell Laughlin
- Recommendation from Nominating Committee
 - Chair
 - Vice Chair
 - Secretary



Discussion Items

- A. Overall Project Schedule
- B. Water Management Strategies Implemented Since the end of 2005
- C. Progress Report
- D. New Water User Groups for Planning
- E. Survey of Water Suppliers
- F. TWDB Policy on Population Revisions





Discussion Items

- G. Steam Electric Power Demands
- H. Written Authorization from TWDB Regarding Water Supply Calculations
- I. Ecologically Unique Stream Segments
- J. Public Participation Update
- K. Water Management Strategies
- L. Update on Overall Status and Next Steps





Overall Project Schedule

Tom Gooch



By Planning Group Meeting

2009 Meetings

June – Chapters 2 and 3

Fall & End of year– Progress reports: Water Management Strategies (Ch 4), Saline Study (Ch 4), & 5 County Studies (Ch 4)

2010 Meetings

Early year –Chapters 1 & 4

Spring – Ch 5, 6, 7, 8, 9, 10; Approve/Submit IPP

Fall – Response to TWDB Comments

End of year - Adopt Final Plan



Water Management Strategies Implemented Since the End of 2005

Tom Gooch



Partial List of WMSs Implemented Since the End of 2005

- NTMWD
 - Major Conservation/Drought Plan implementation
 - Additional Wilson Creek WWTP reuse
 - Purchase from GTUA
 - East Fork Water Supply Project
 - Upper Sabine Water Supply Project
 - Additional Yield from Lake Lavon
 - Treatment & distribution system improvements

- Upper Trinity Regional WD
 - Conservation
 - Lake Chapman reuse permit
 - Treatment & distribution system improvements

- Greater Texoma Utility Authority
 - Collin-Grayson Municipal Alliance pipeline
 - Multiple use Lake Texoma Permit

Partial List of WMSs Implemented Since the End of 2005

■ DWU

- On-going Conservation
- Contract for Lake Hubbard return flows
- Temporary water right from Lake Hubbard
- Treatment expansions

■ TRWD

- Major Conservation initiative
- Richland-Chambers Wetlands/Trinity River Diversions (Phase 1)
- Eagle Mountain Connection

■ TRA

- Conservation initiative
- Reuse permit
- Ellis County supplies (purchased from TRWD)

Partial List of WMSs Implemented Since the End of 2005

■ Others

- Conservation by multiple WUGs
- Additional/supplemental groundwater wells
- Treatment expansions
- Kennedale connection to Fort Worth
- Ennis connection to TRWD
- Ennis power plant reuse
- Terrell connection NTMWD
- Bonham customer of NTMWD
- Muenster Lake
- Red Oak connection to Dallas
- Grand Prairie connection to Midlothian
- Ovilla direct connection to Dallas
- Supplies for new steam electric plants (Freestone, Wise Jack)

Partial List of WMSs Currently in Progress

■ DWU

- Lake Ray Hubbard & Lake Lewisville reuse permit
- Lake Fork Pipeline (under construction)
- Application for Additional Lake Ray Hubbard supply
- Treatment plant expansion
- Main Stem pump station – Joint project with TRWD

■ TRWD

- Cedar Creek Wetlands/Trinity River Diversion permit
- Richland-Chambers Wetlands/Trinity River Diversions subsequent phases
- Application for Oklahoma water
- Main Stem pump station – Joint project with DWU

Partial List of WMSs Currently in Progress

■ NTMWD

- Permit for additional Lake Texoma water
- Lower Bois d'Arc Creek Reservoir – application and land acquisition
- Applications for Oklahoma water

■ TRA

- Mountain Creek WWTP reuse permit

■ Upper Trinity Regional WD

- Application for Lake Ralph Hall
- Applications for Oklahoma water

Partial List of WMSs Currently in Progress

■ Other

- Design of Midlothian connection to TRWD
- Construction of Waxahachie/Rockett SUD connection to TRWD
- Permit for Irving reuse
- Construction of Corsicana connection to Richland-Chambers Reservoir
- Irving (Paris & Hugo initiatives)



Progress Report

Tom Gooch



Tasks Completed or in Progress

- Executed all contracts (TWDB, NTMWD, FNI, subs)
- Project start-up
- Overall project planning/scheduling
- Partial update of Planning Area Description (Task 1)
- Review of water use projections (Task 2)
- Initial meetings held with large Wholesale Water Providers (Task 3)
- Sent survey to most Water User Groups (Task 4)
- Respond to comments from Special Studies



New Water User Groups for Planning

Tom Gooch



New Water User Groups

- TWDB provided data on cities reaching populations of 500 (by July 2005).

City	Region C County	Estimated Population			
		7/2004	1/2005	7/2005	1/2006
Cresson	Parker	689	691	525	443
Fate	Rockwall	1,491	1,648	2,492	3,000
Paradise	Wise	484	493	501	512
Post Oak Bend City	Kaufman	548	549	569	580
Sanctuary	Parker	591	588	590	589
Scurry	Kaufman	619	623	625	629
Marshall Creek*	Denton	483	473	514	530

* Marshall Creek was annexed by City of Roanoke & will not be a new WUG.

Non-City Water Providers

- 17 new non-city Water Providers now providing over 0.25 MGD
- TWDB currently has no population or demand projections for these providers
- We propose that these providers not be added as WUGs for this planning cycle (2011 Plan); will be WUGs for the next planning cycle



Survey of Water Suppliers

Tom Gooch

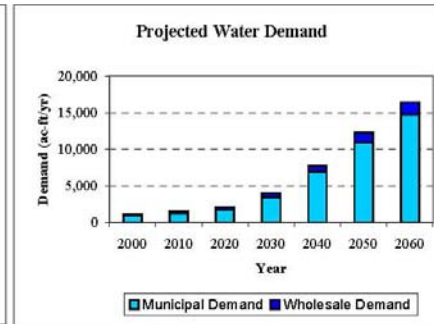
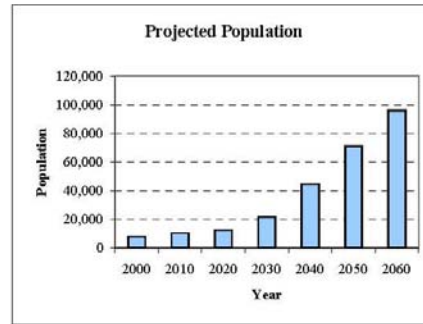


Survey of Water Suppliers (Task 4c)

- Survey included a data sheet showing data from 2006 Plan
 - population & demand projections
 - current supply
 - potential water management strategies

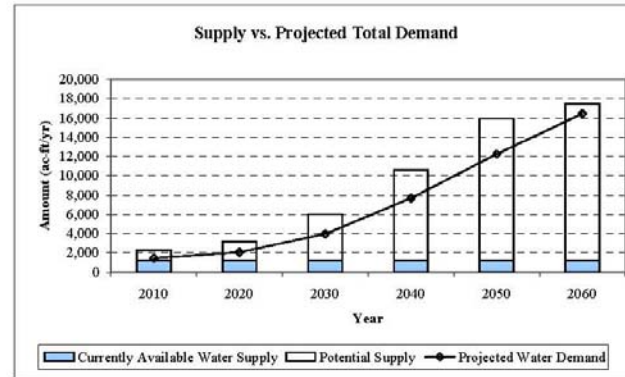
Bolivar WSC

	2000	2010	2020	2030	2040	2050	2060
Projected Population	8,175	10,386	12,465	21,806	44,726	70,848	95,836
Projected Municipal Water Demand (ac-ft/yr)	934	1,279	1,703	3,371	6,863	10,872	14,707
Projected Wholesale Water Demand (ac-ft/yr)							
Valley View	84	187	363	594	808	1,371	1,714
Manufacturing	0	0	0	0	0	0	0
Steam Electric Power	0	0	0	0	0	0	0
Total Projected Water Demand (ac-ft/yr)	1,018	1,466	2,066	3,965	7,671	12,243	16,421



Currently Available Water Supplies (Acre-Feet/Year)

Currently Available Water Supplies (af/y)	2010	2020	2030	2040	2050	2060
Trinity Aquifer	1,074	1,074	1,074	1,074	1,074	1,074
Trinity Aquifer - To Valley View	78	78	78	78	78	78
TOTAL	1,152	1,152	1,152	1,152	1,152	1,152



Potential Water Management Strategies for 2011 Region C Water Plan (Acre-Feet/Year)

	2010	2020	2030	2040	2050	2060
Water Conservation - Basic Package	21	85	163	356	600	861
Cooke County Water Supply Project	0	118	228	1,028	1,028	1,028
Purchase water from UTRWD	250	850	2,700	4,600	7,500	8,300
Additional Trinity Aquifer (Existing Wells)	50	100	400	650	850	1,050
Overdraft Trinity Aquifer (Existing Wells)	180	0	0	0	0	0
Additional Trinity Aquifer (New Wells)	460	460	800	2,100	3,600	3,600
Supplemental wells in Trinity aquifer	0	0	0	0	0	0
Purchase water from UTRWD - to be sold to Valley View	135	410	575	698	1,180	1,467
TOTAL	1,096	2,023	4,866	9,432	14,758	16,306

Survey of Water Suppliers (Task 4c)

Survey asked:

- If they agree with projections
- If they agree with current supply
- Contract amounts
- Well Capacities
- How they operate their system (ex, groundwater for peaking, etc)
- If they agree with water management strategies
- If they supply water for mining in Barnett Shale
- What conservation measure they have implemented

Survey of Water Suppliers (Task 4c)

- Surveys sent to 221 WUGs so far
- Surveys for remaining 22 WUGS and all WWPs will be sent soon.



TWDB Policy on Population Revisions

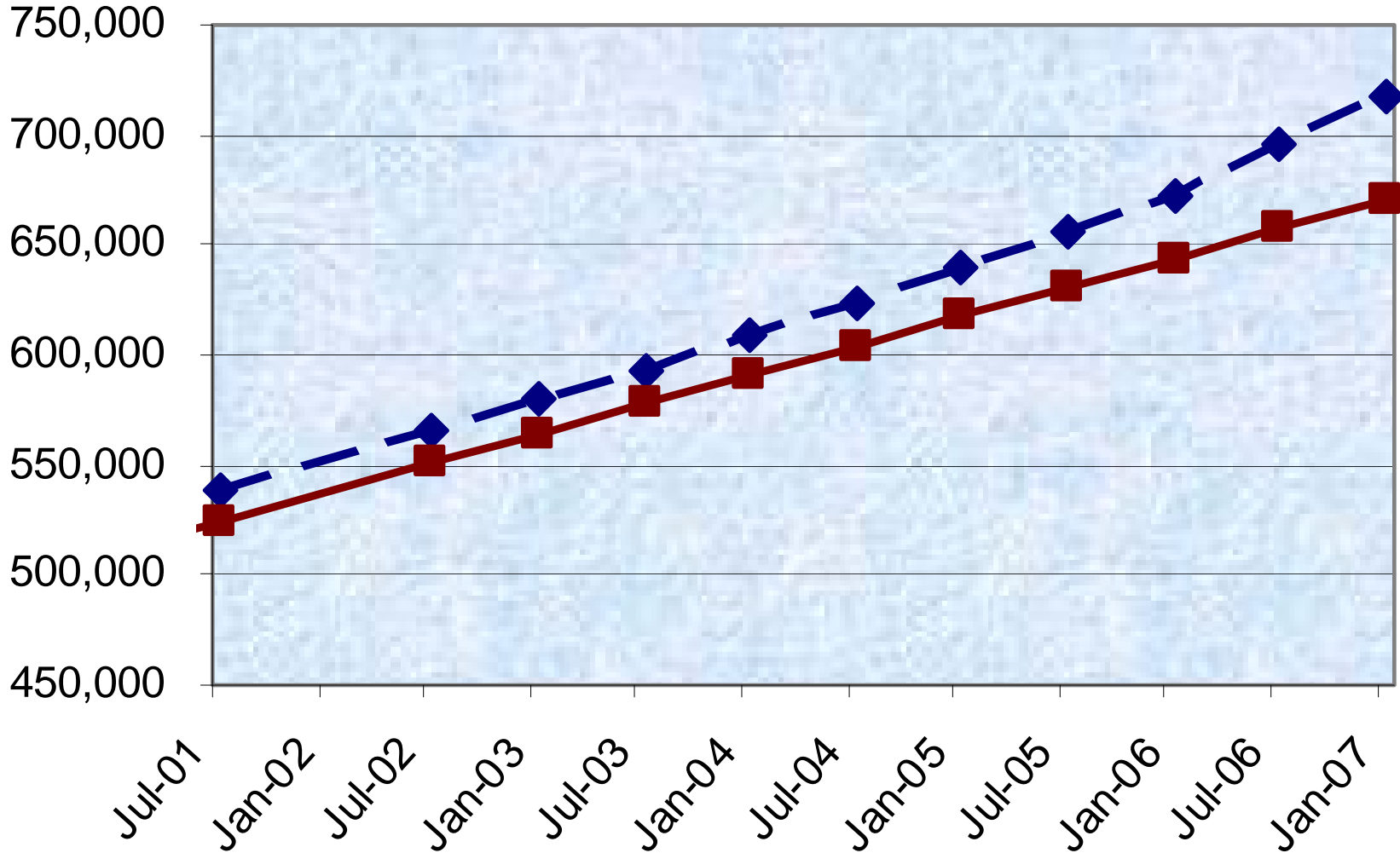
Tom Gooch



TWDB Policy on Projections

- Policy Letter from TWDB
- Use projections from last Plan, except Steam Electric
- TWDB will consider revisions, if justified
- TWDB provided candidates for revisions (increases only)
- Individual revisions may be made, however Region C total population should remain nearly the same (increases in some WUGs should be offset by decreases in other WUGs)
- Requesting input from RCWPG on how to proceed

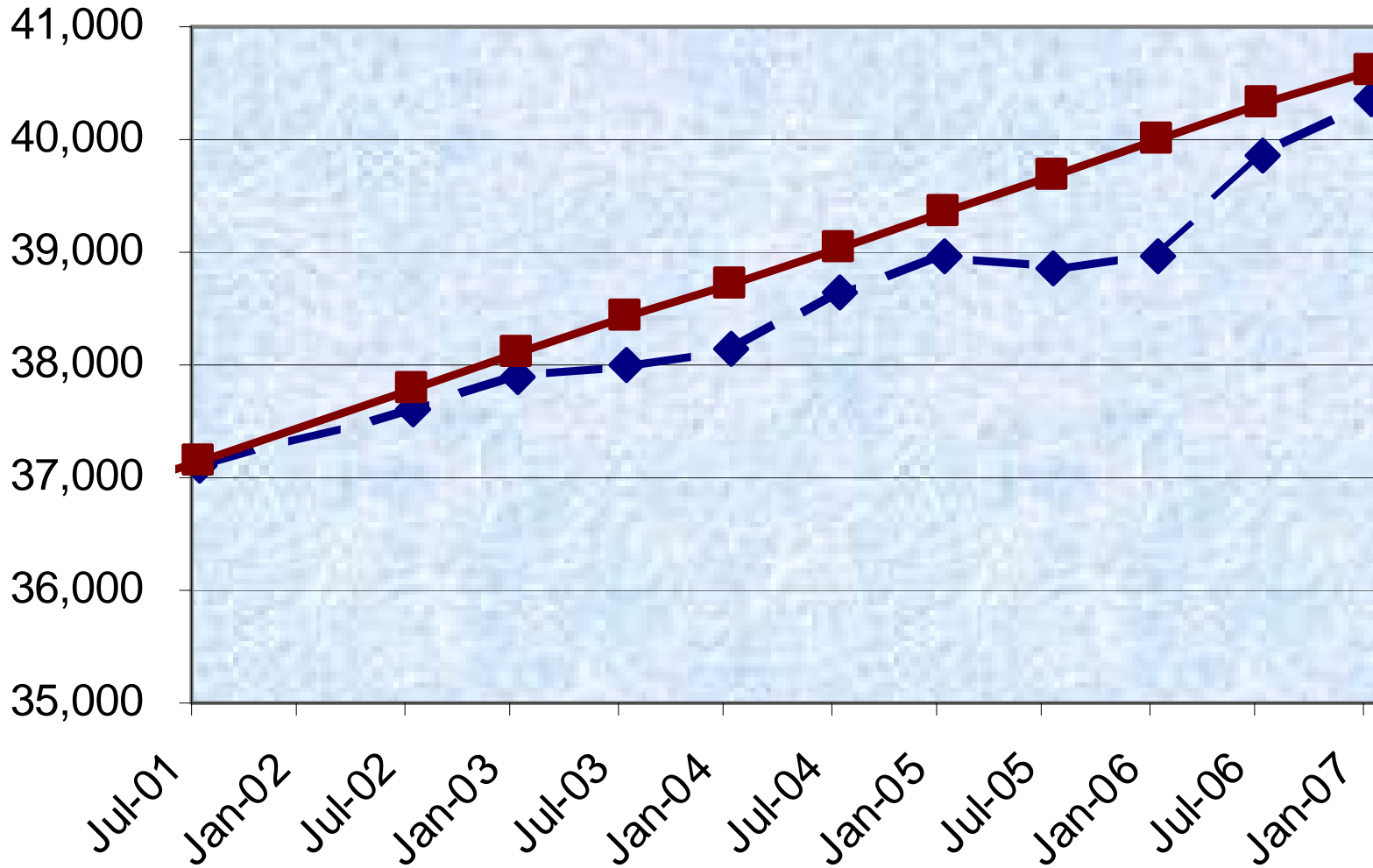
Collin County



—◆— State Data Center Estimates —■— TWDB Projection

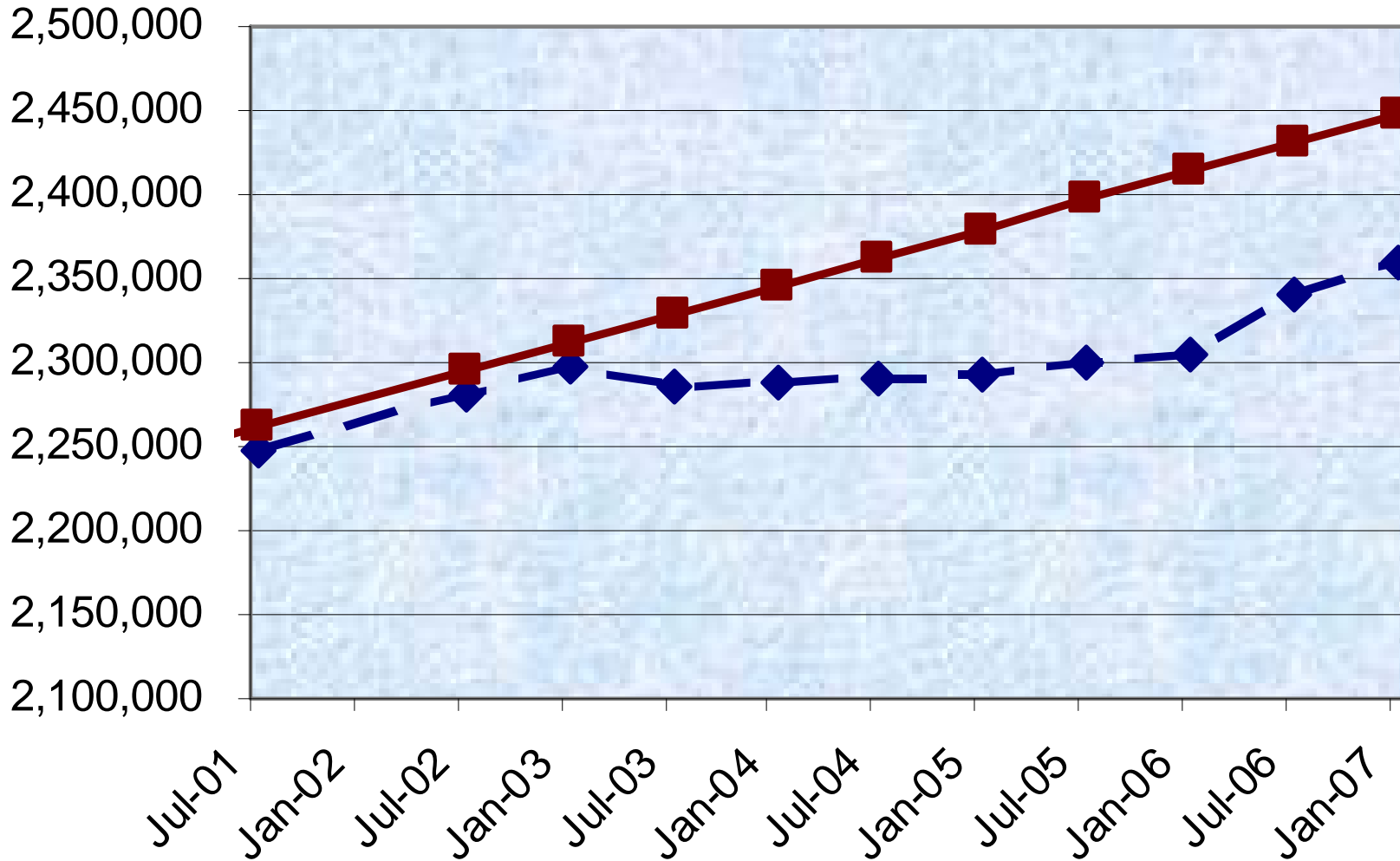


Cooke County



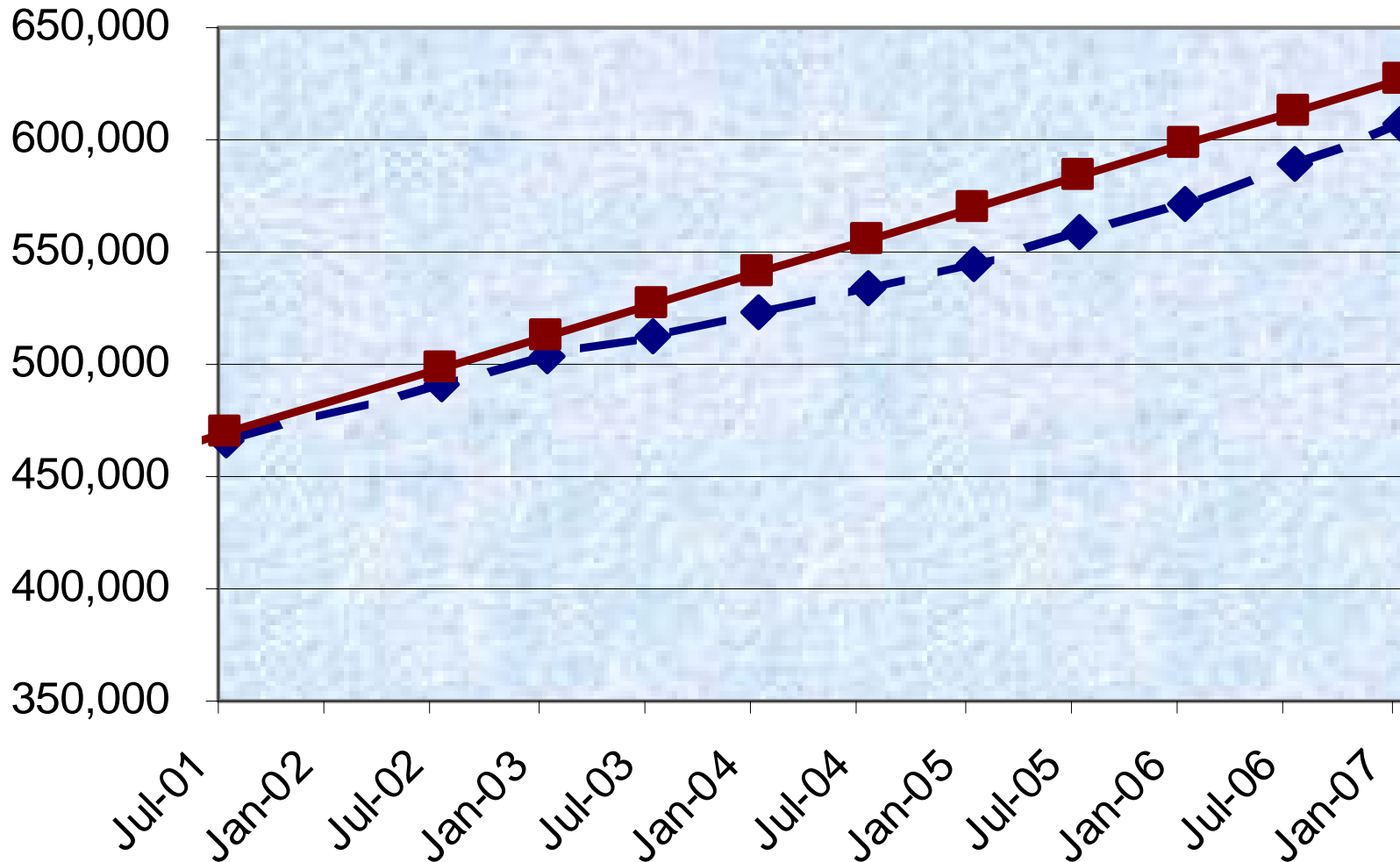
—◆— State Data Center Estimates —■— TWDB Projection

Dallas County



—◆— State Data Center Estimates —■— TWDB Projection

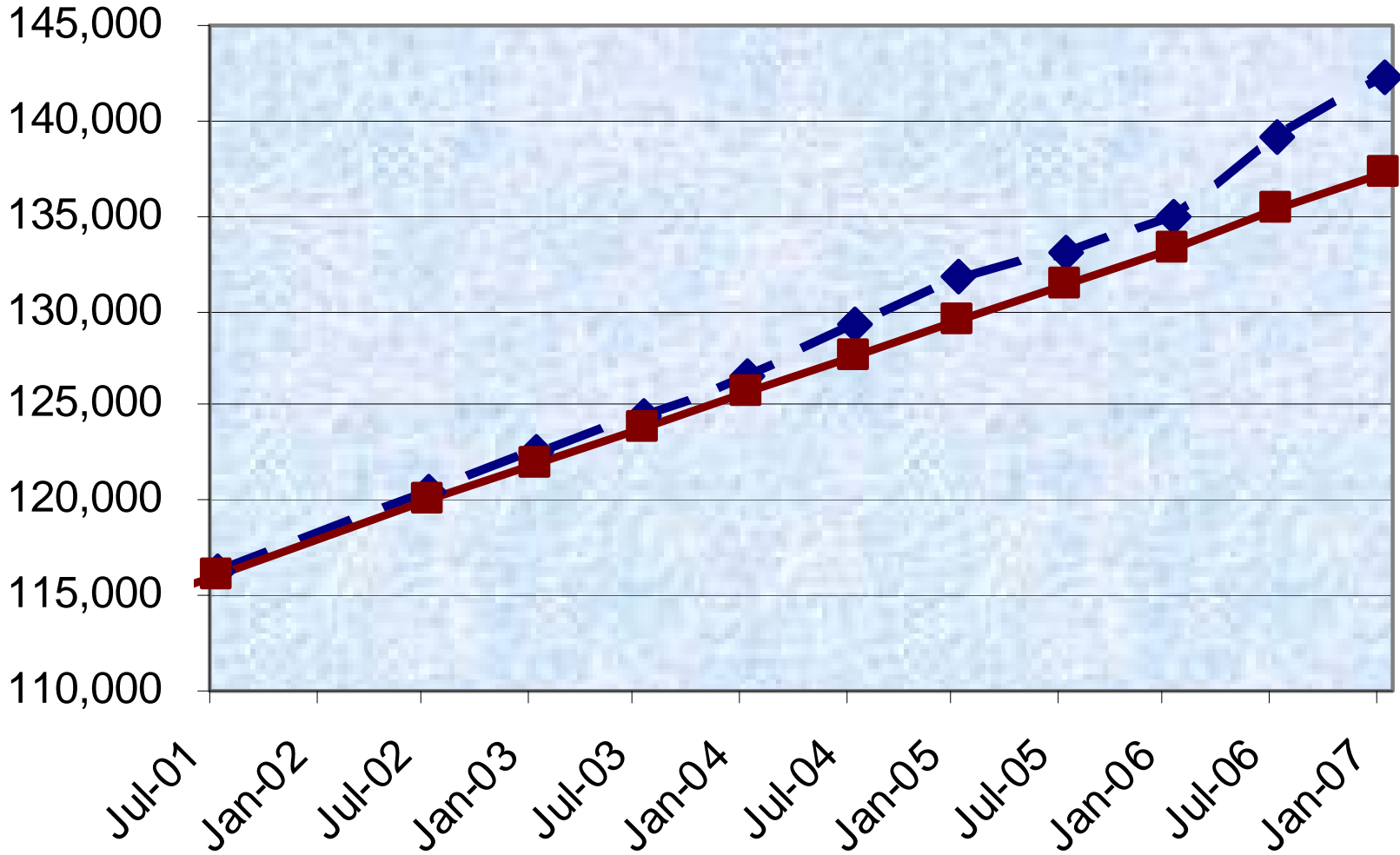
Denton County



—◆— State Data Center Estimates —■— TWDB Projection

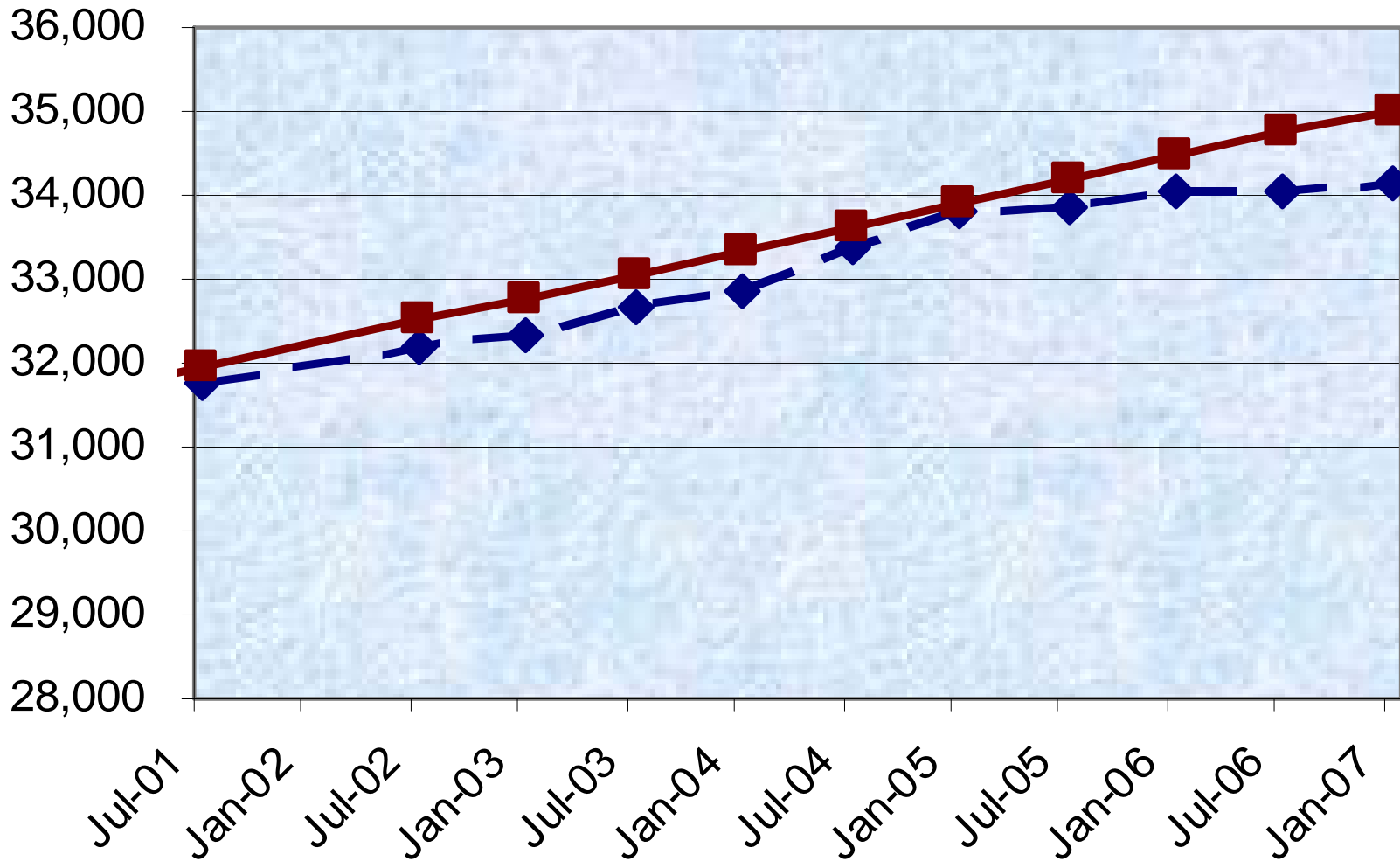


Elis County



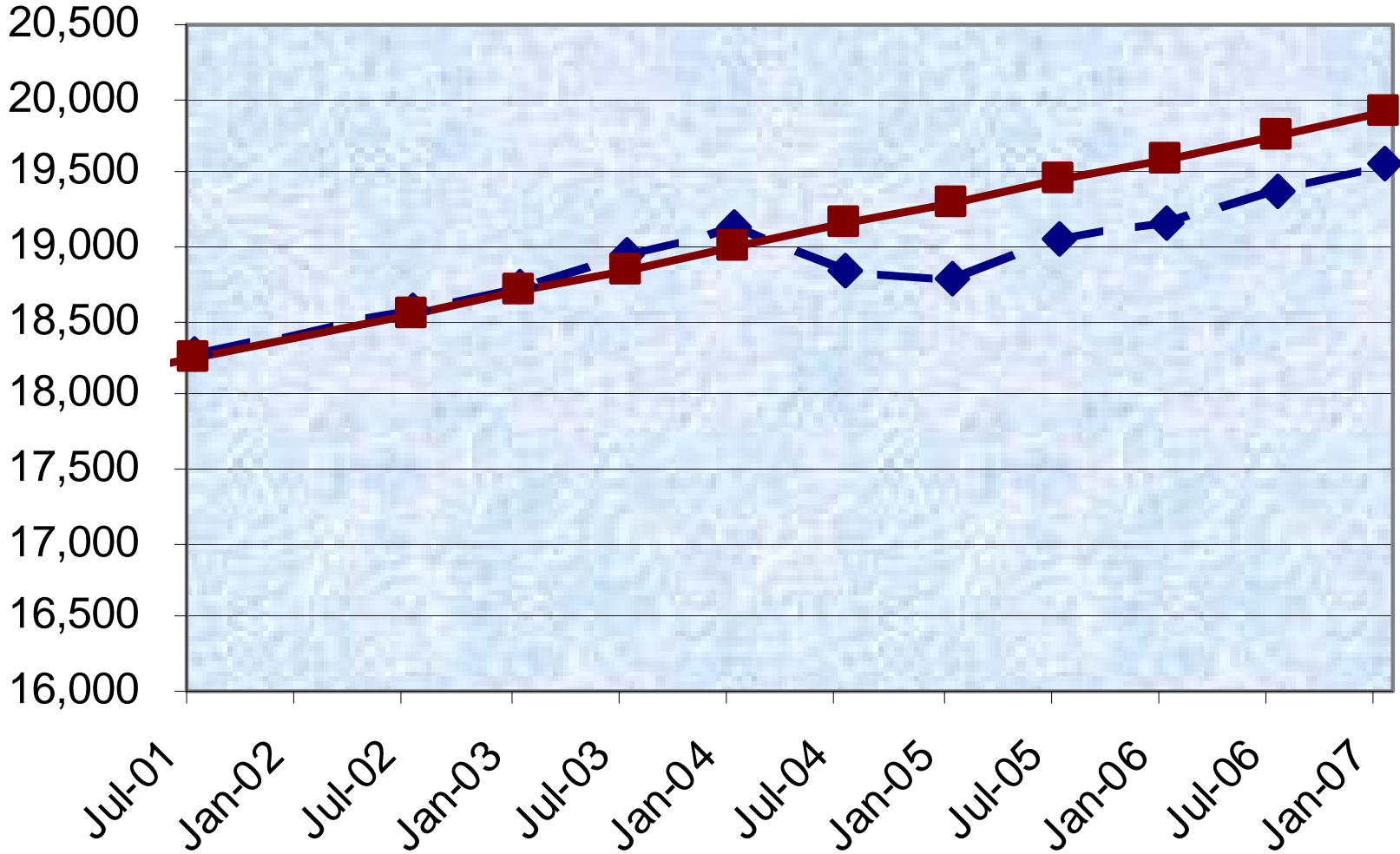
—◆— State Data Center Estimates —■— TWDB Projection

Fannin County



—◆— State Data Center Estimates —■— TWDB Projection

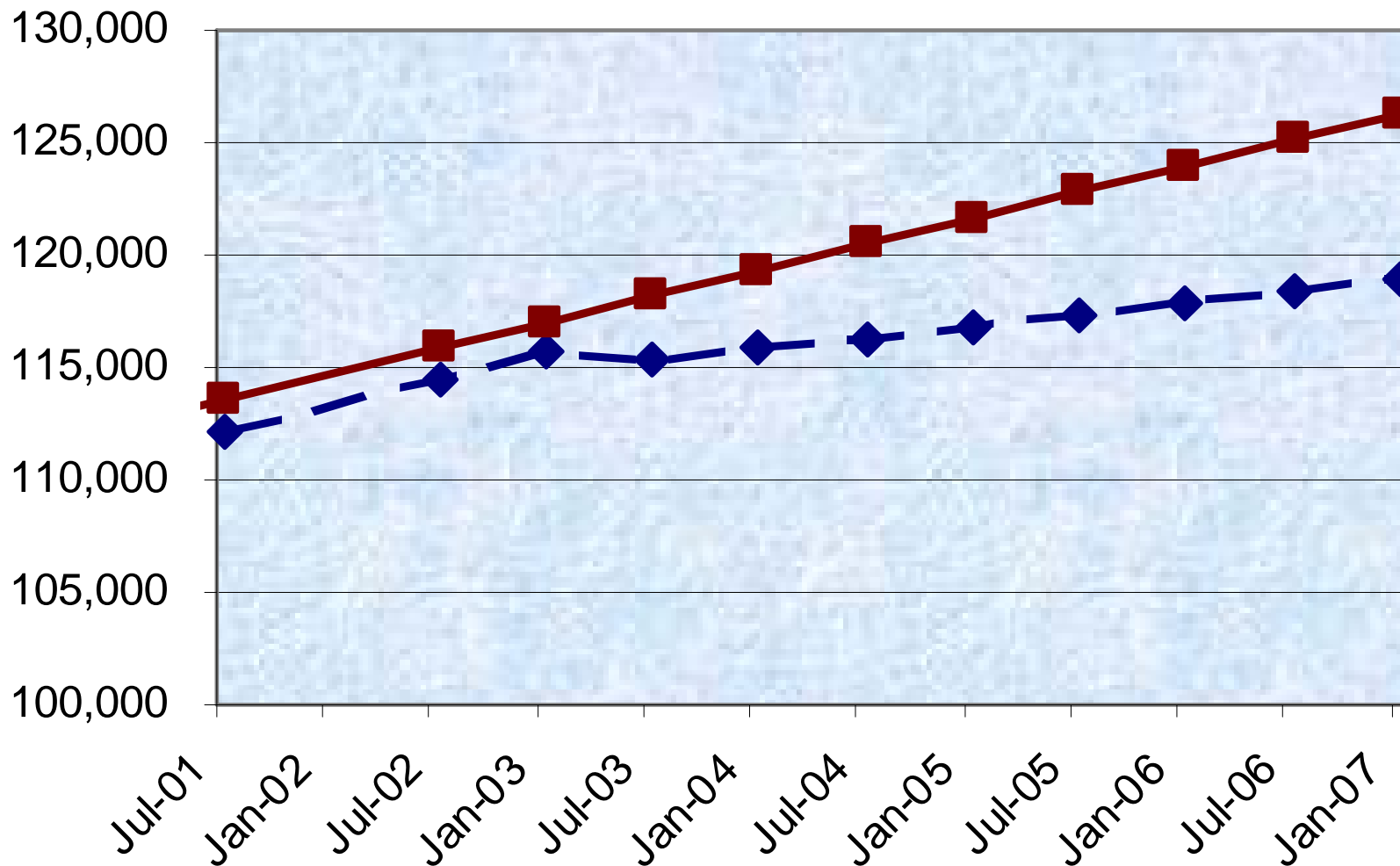
Freestone County



—◆— State Data Center Estimates —■— TWDB Projection



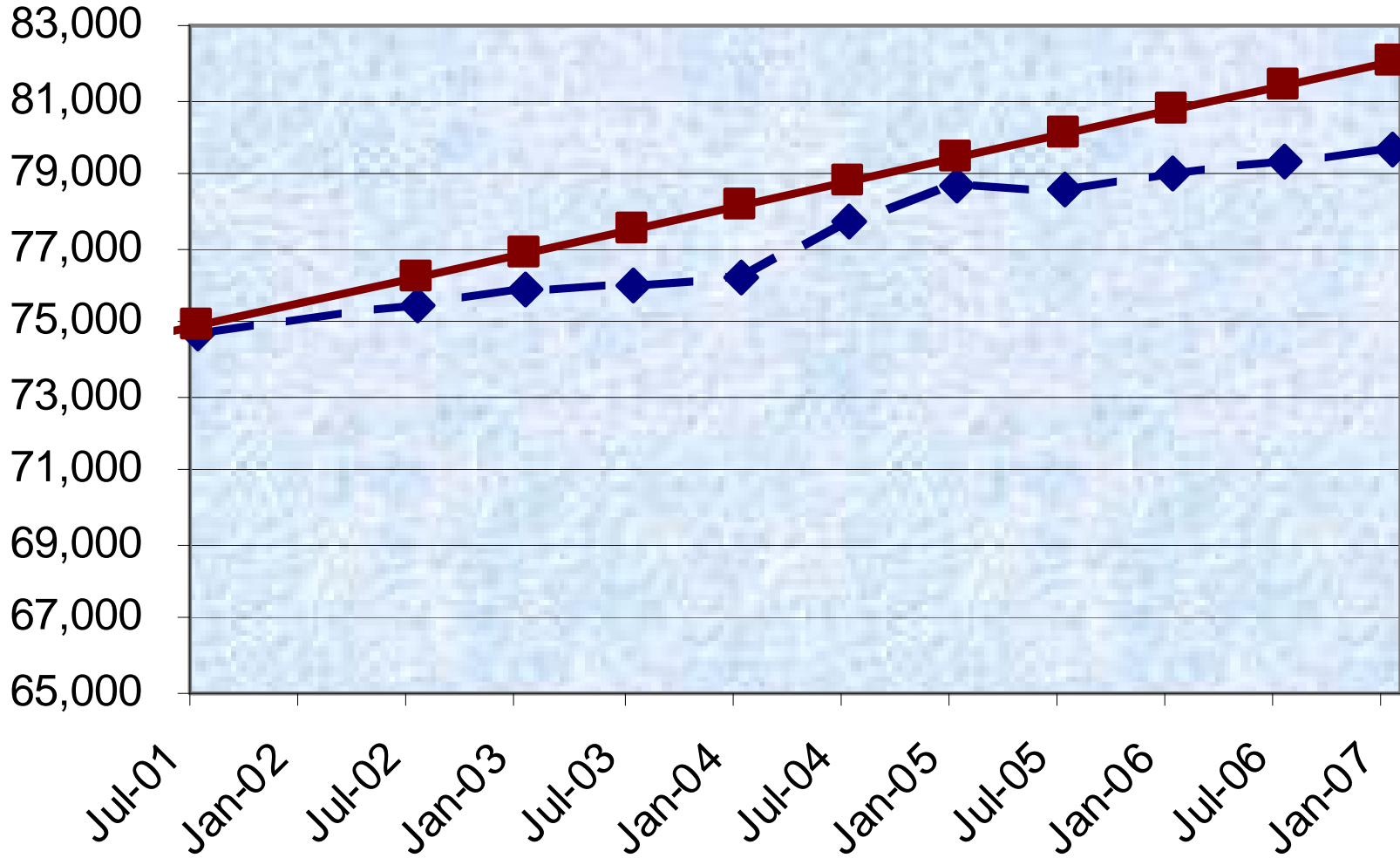
Grayson County



—◆— State Data Center Estimates —■— TWDB Projection

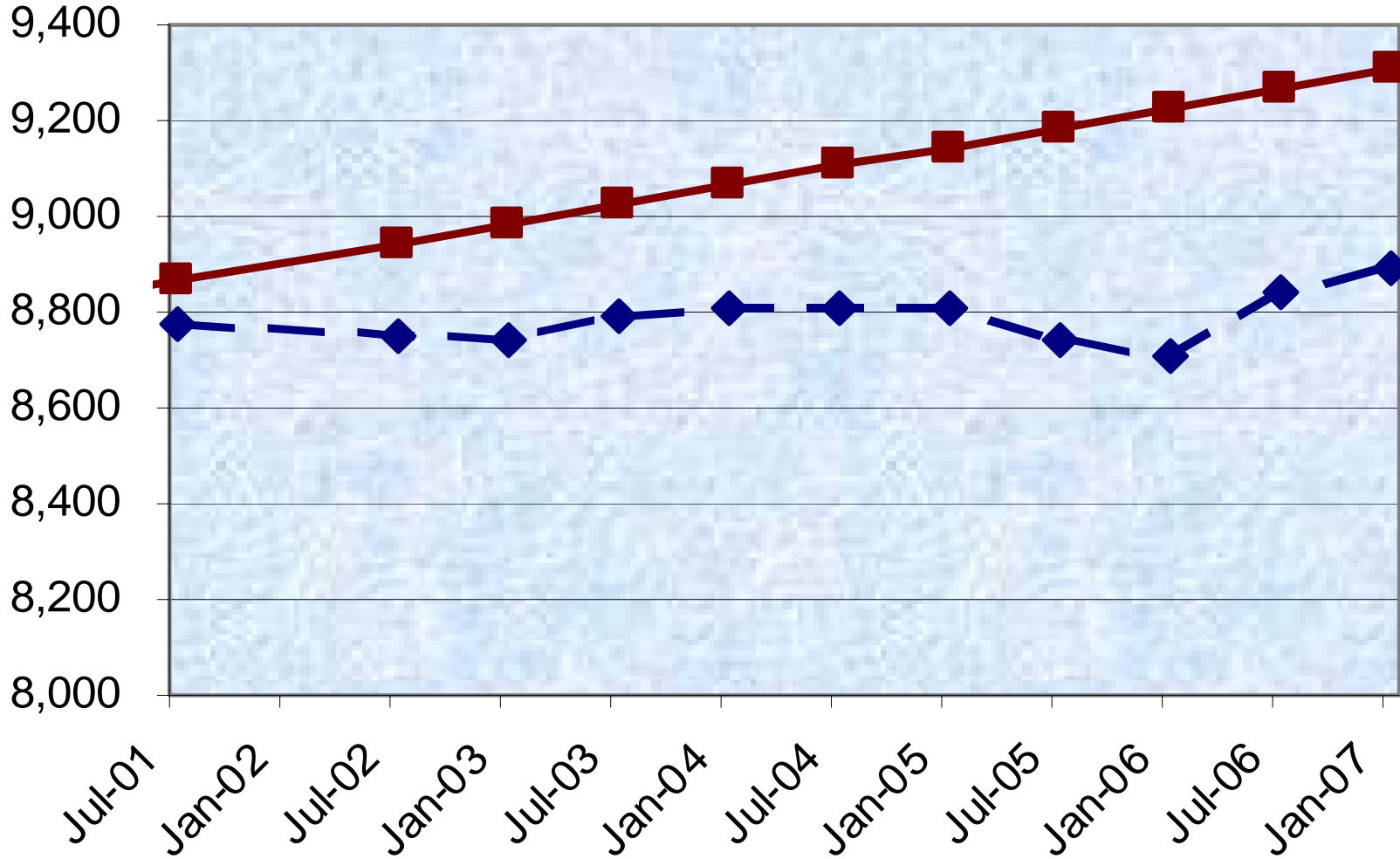


Henderson County



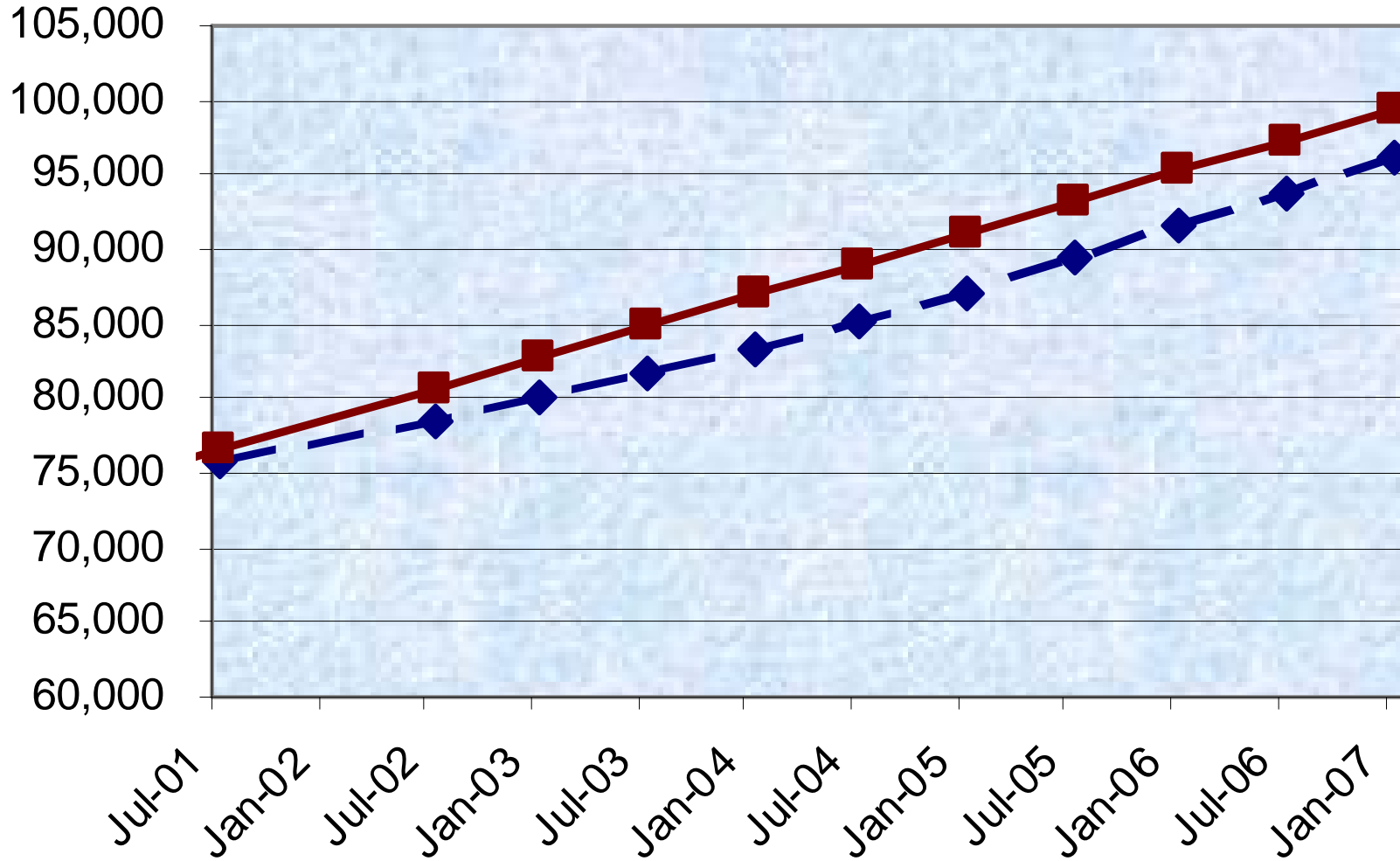
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Jack County



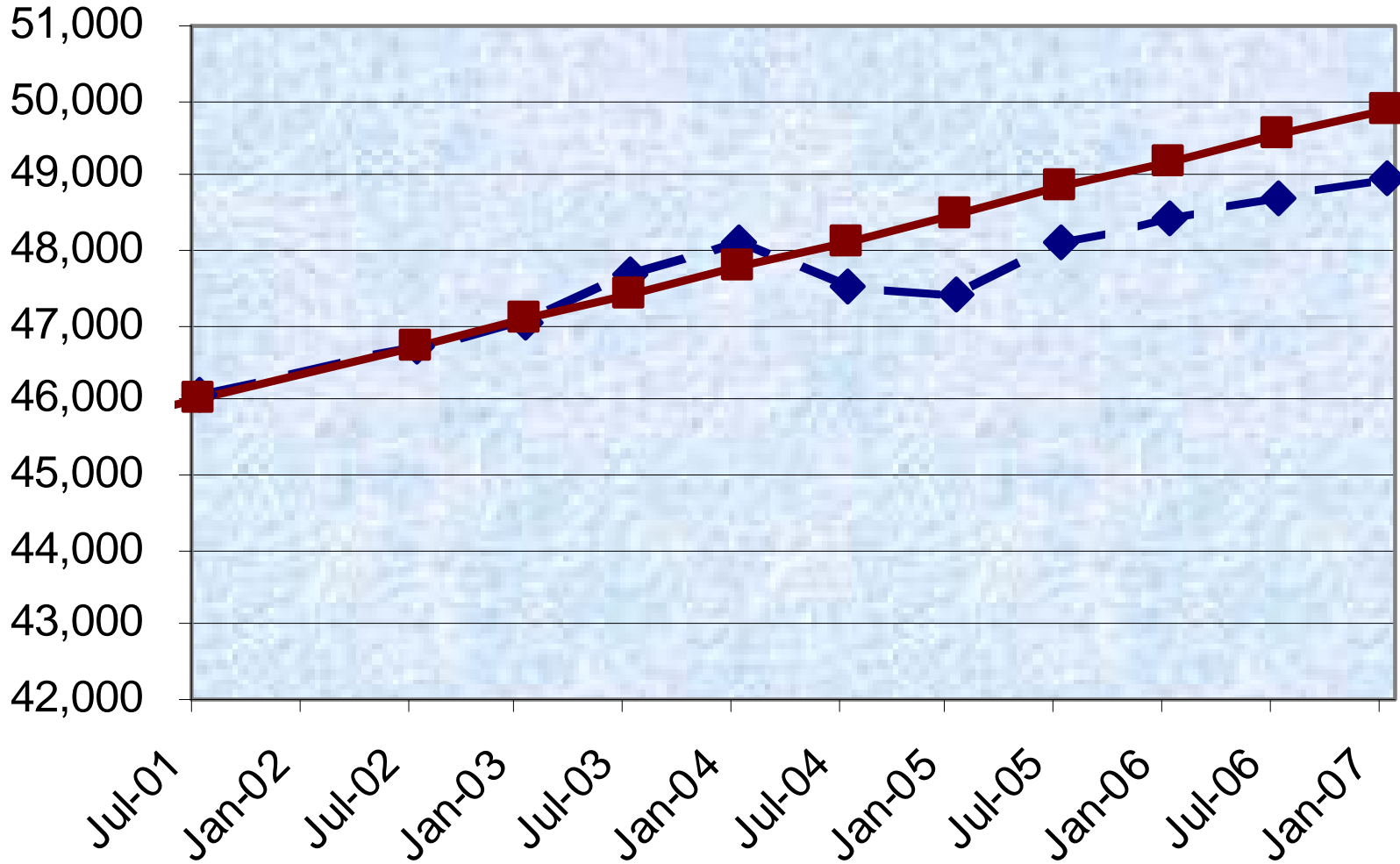
—◆— State Data Center Estimates —■— TWDB Projection

Kaufman County



—◆— State Data Center Estimates —■— TWDB Projection

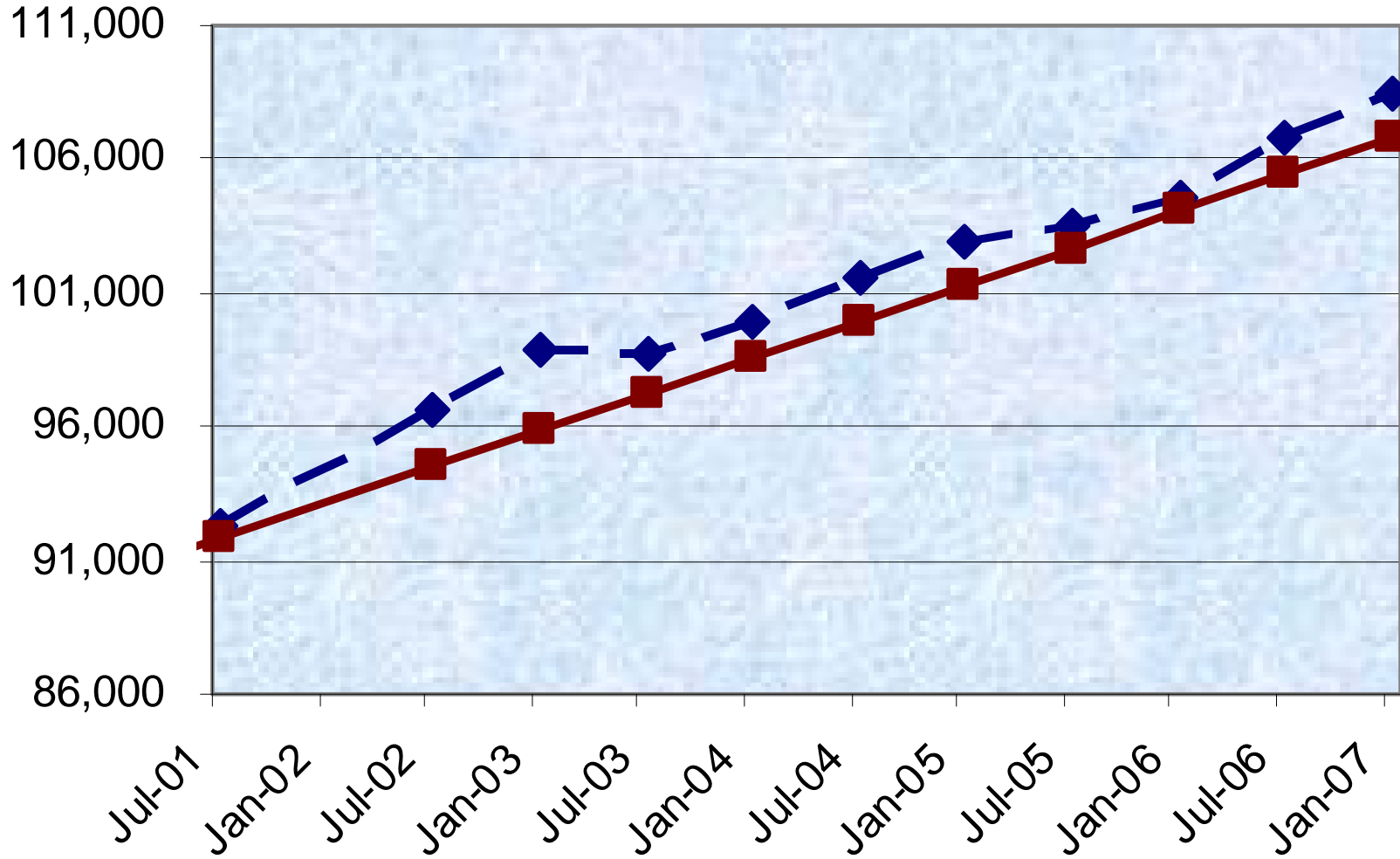
Navarro County



—◆— State Data Center Estimates —■— TWDB Projection



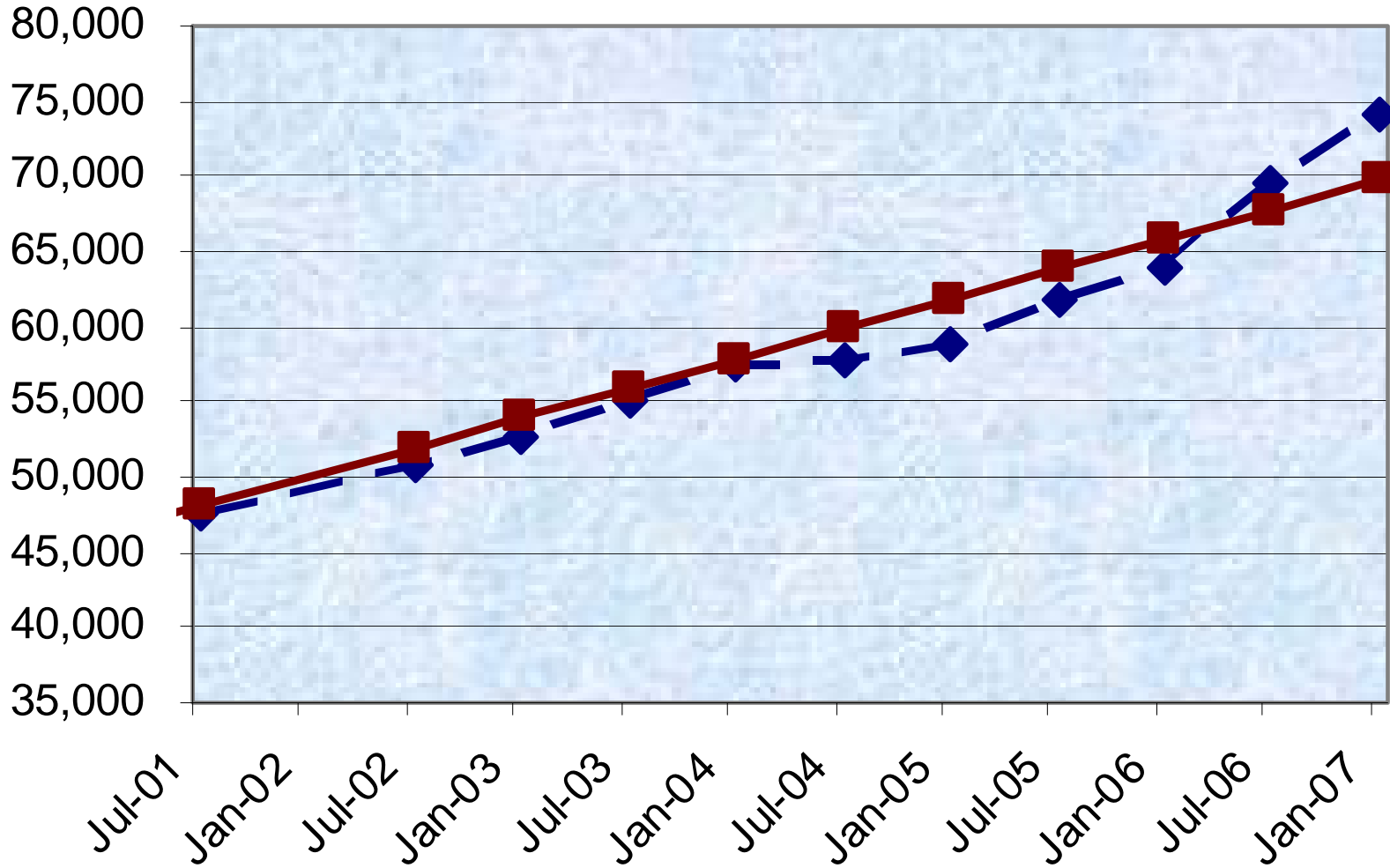
Parker County



—◆— State Data Center Estimates —■— TWDB Projection

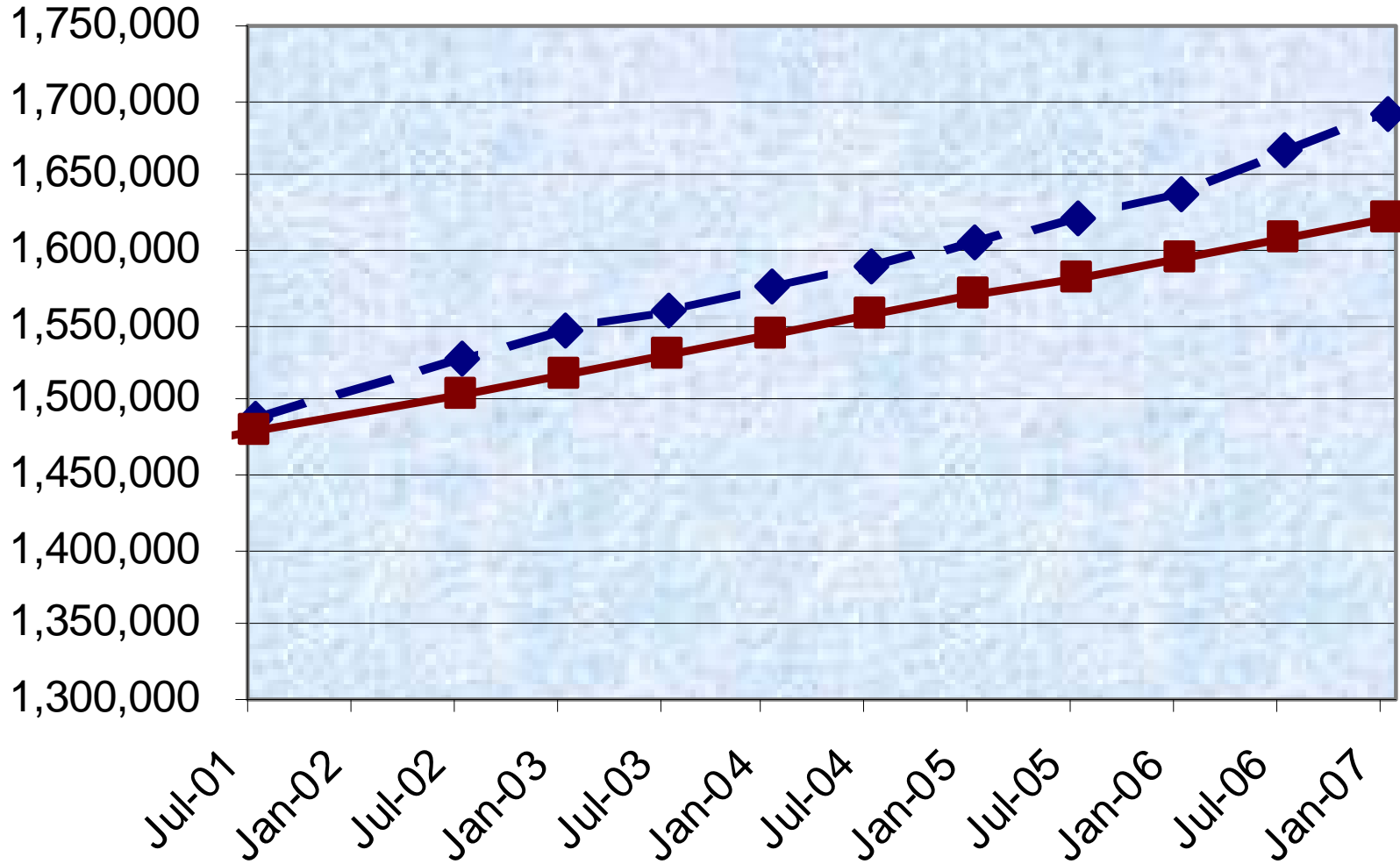


Rockwall County



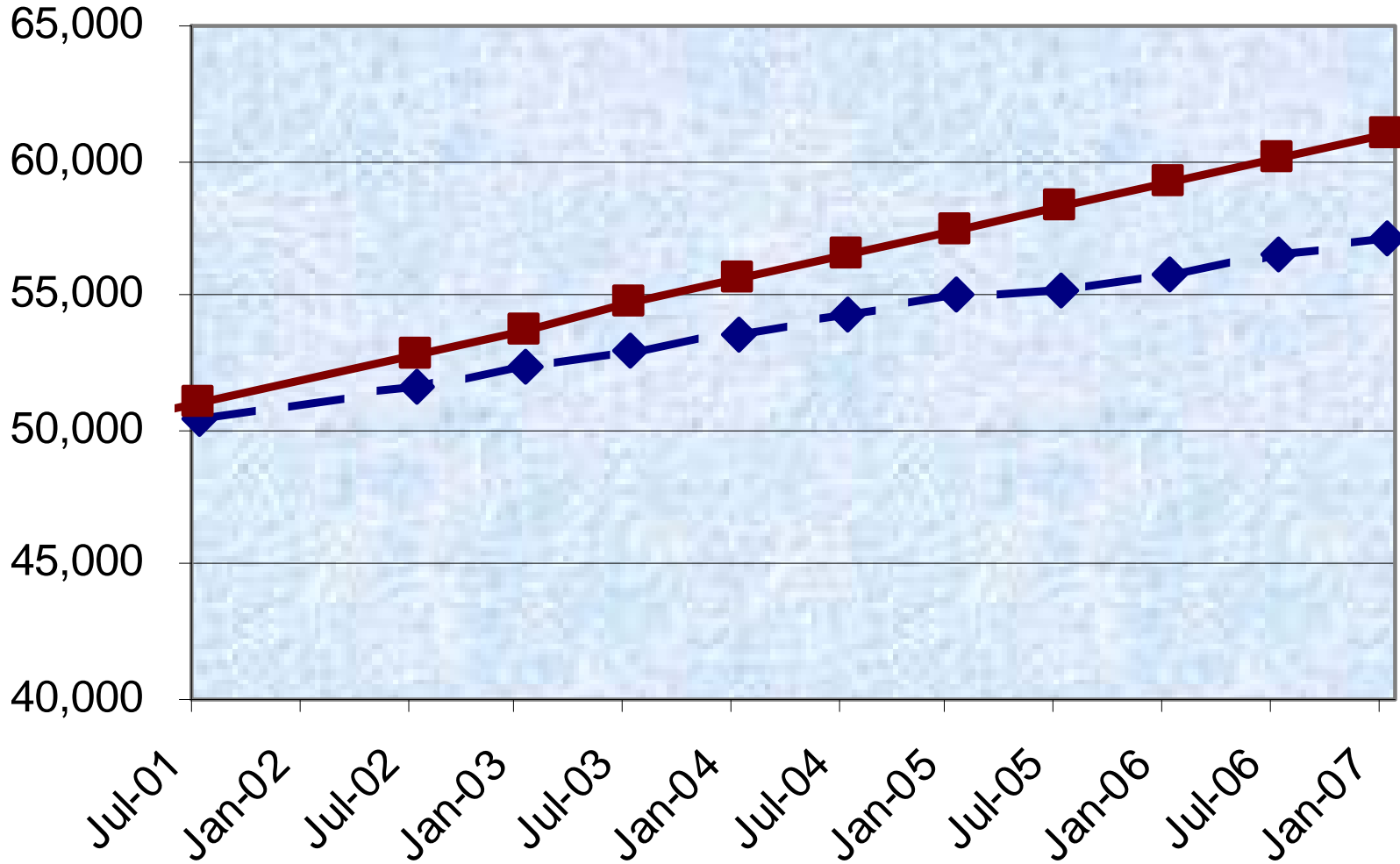
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Tarrant County



—◆— State Data Center Estimates —■— TWDB Projection

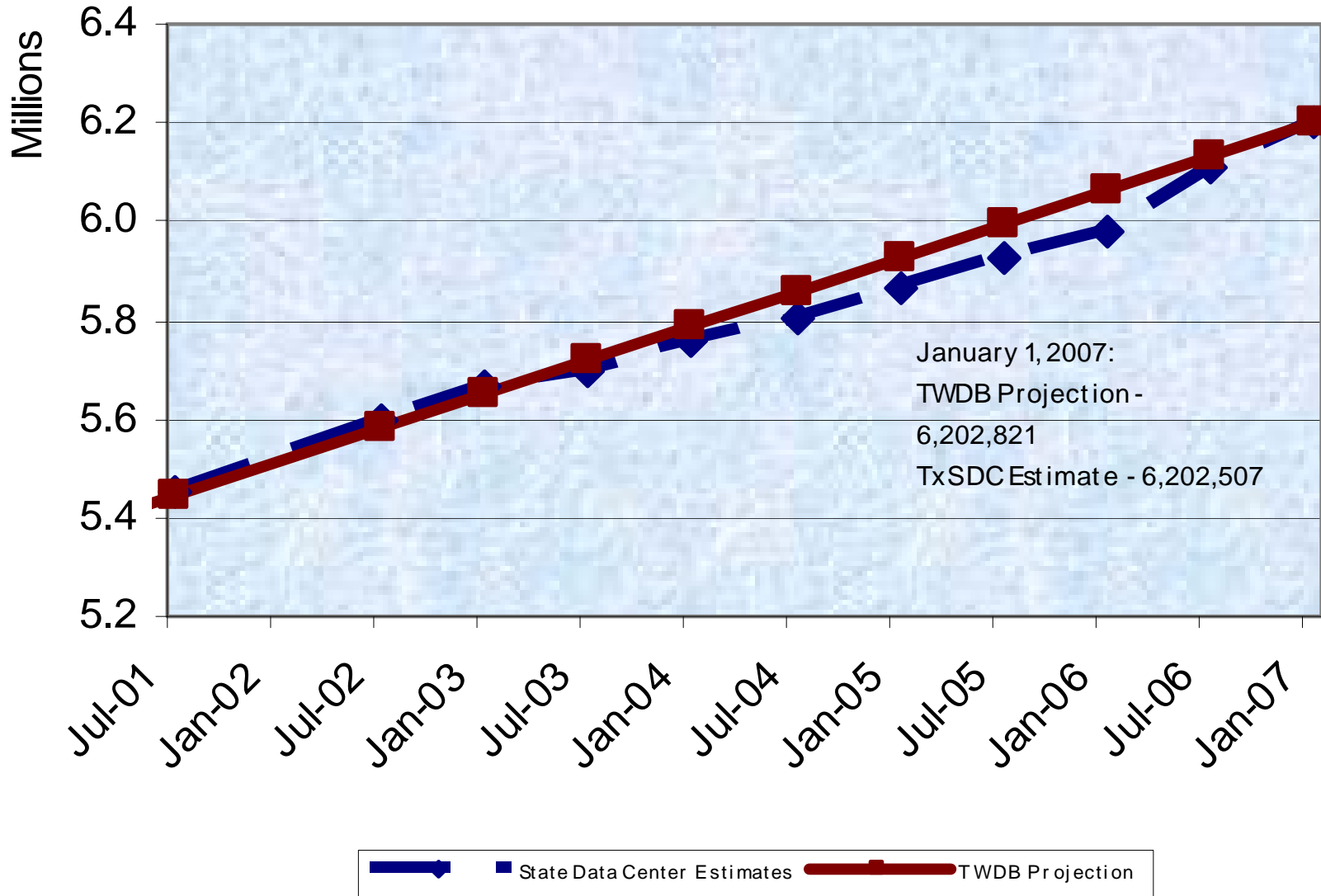
Wise County



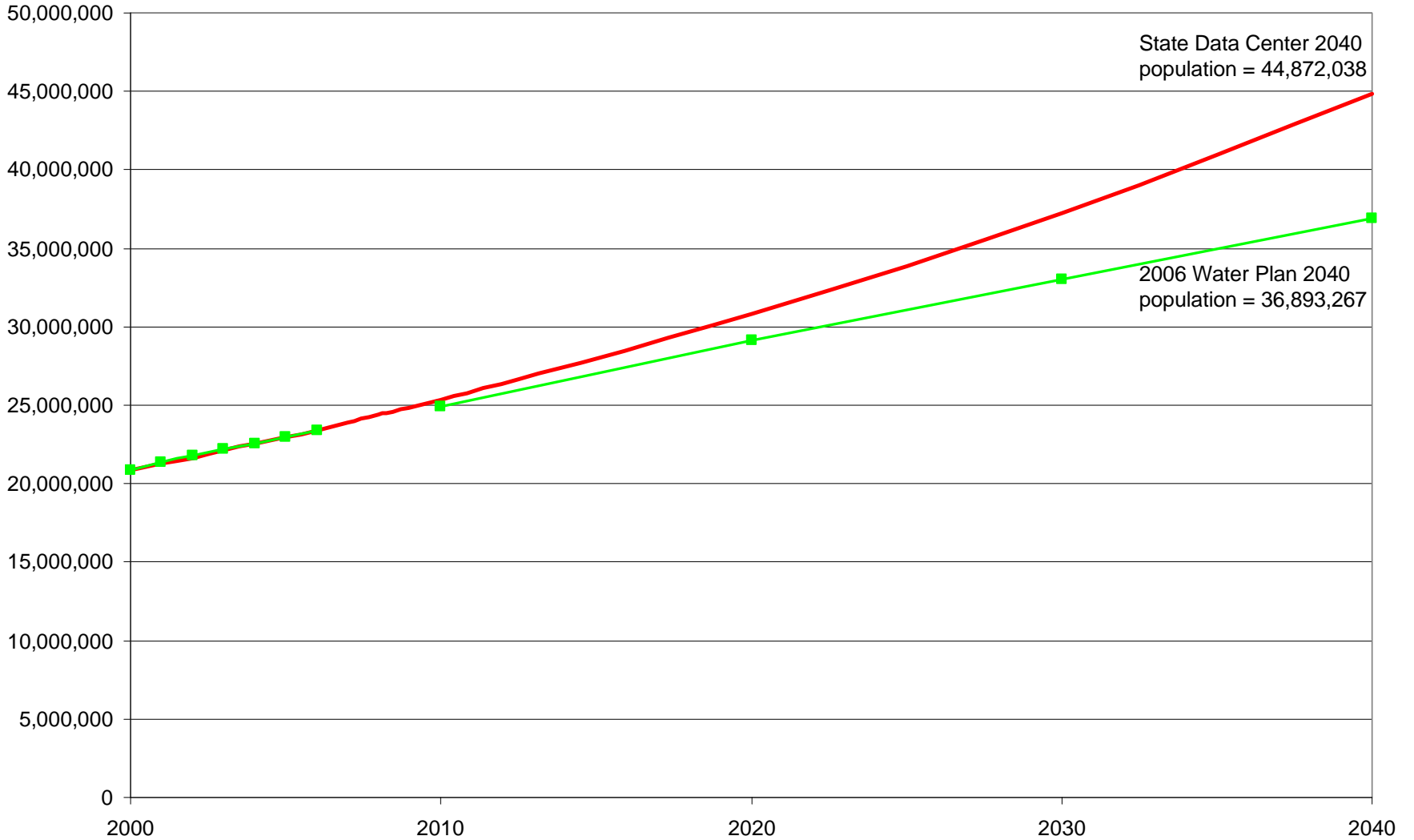
—◆— State Data Center Estimates —■— TWDB Projection



Comparison of Population Change Estimated by Texas State Data Center with Population Change Projected by Texas Water Development Board, Region C



Population Projections for State of Texas



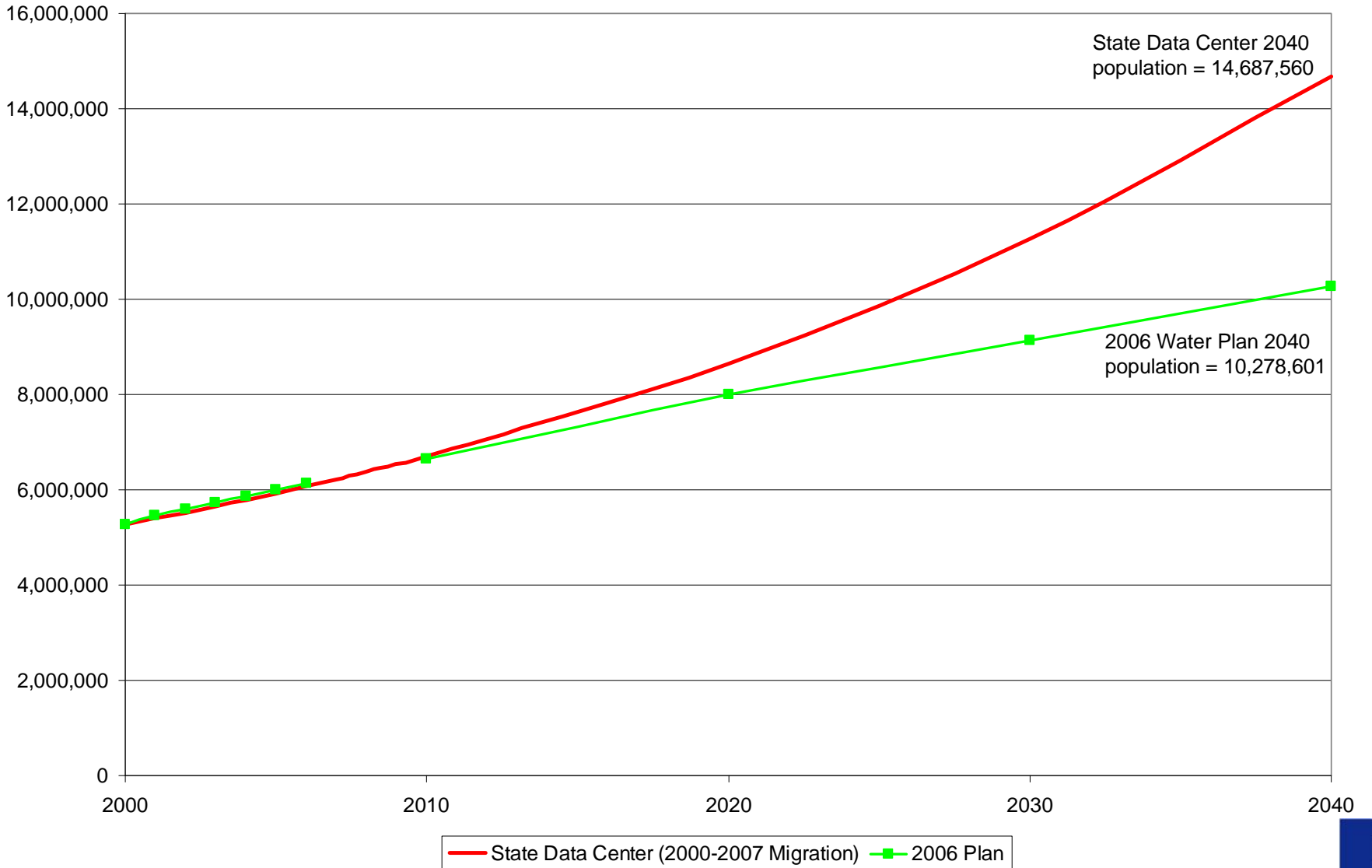
— State Data Center (2000-2007 Migration) —■ 2006 Plan

State Data Center 2040
population = 44,872,038

2006 Water Plan 2040
population = 36,893,267



Population Projections for Region C





Steam Electric Power Demands

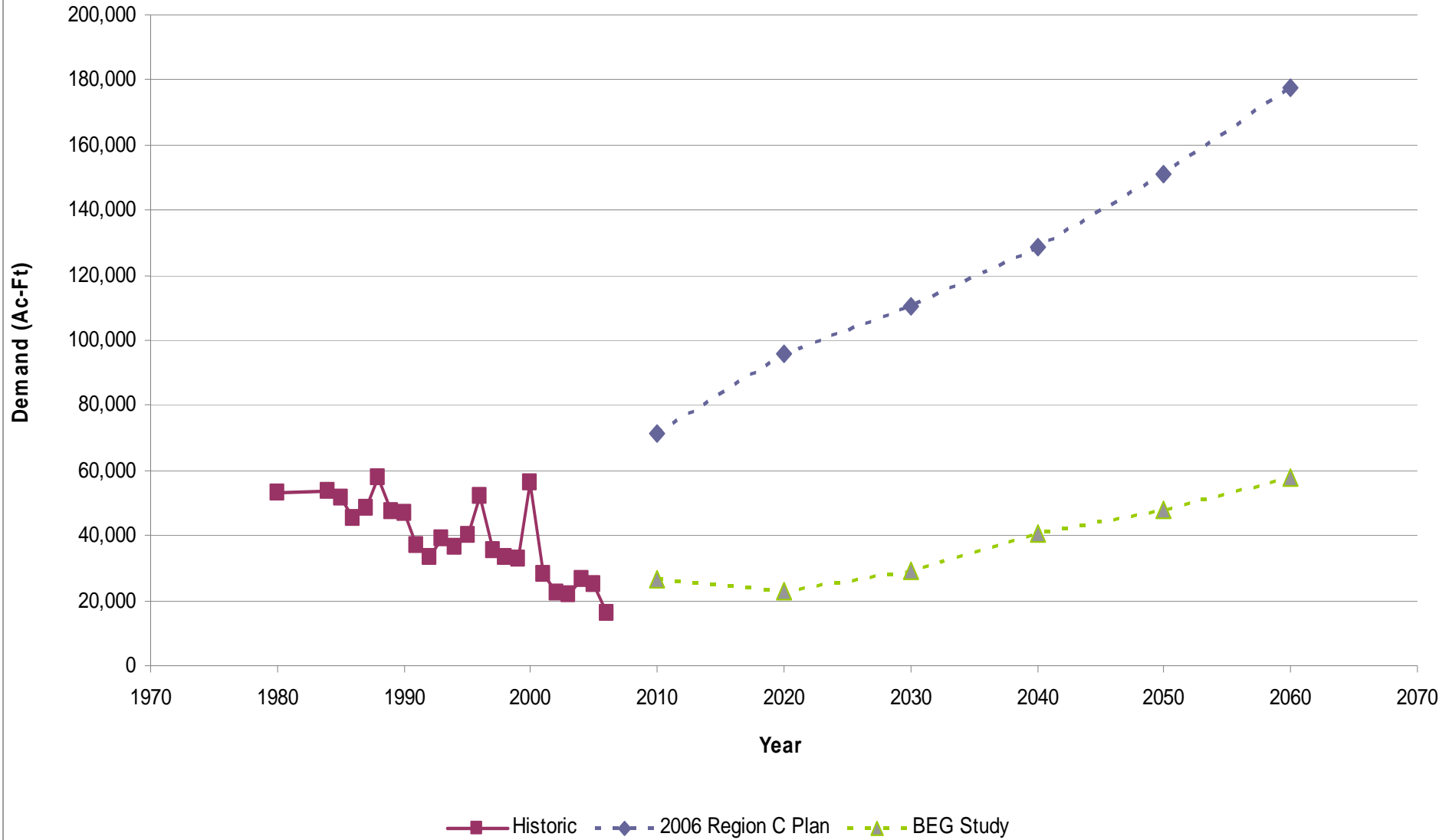
Tom Gooch



Steam Electric Power Demands

- Policy Letter from TWDB
- Options:
 - Use projections from last Plan, or
 - Use projections from recent report (Bureau of Economic Geology)
 - Other numbers (with justification)
- Comparison of these two projections
 - 2010 – BEG is 45,000 af/y lower than TWDB
 - 2060 – BEG is 120,000 af/y lower than TWDB

Region C Steam Electric Power Demands



Steam Electric Power Demands

- FNI submitted questions to TWDB and received the following responses:
 - Projections can be revised county-by-county
 - Total demand for the Region should fall between the two sets of projections



Written Authorization from TWDB Regarding Water Supply Calculations

Tom Gooch



Changes to Water Availability Models

- Submitted a letter to TWDB requesting the following:
 - Use similar approach as used for 2006 Plan
 - Use Neches and Sabine River WAMs as modified by Region I (with TWDB approval)
 - Use Brazos River WAM as modified by Brazos G Planning Group (with TWDB approval)
 - For Sulphur River Basin, use same approach as for 2006 Plan

Changes to Water Availability Models

- Update Trinity and Red River WAMs (TCEQ, Run 3) as follows:
 - Current and future (2060) area-capacity conditions using most recent volumetric surveys
 - System operations, where appropriate
 - New water rights issued after latest WAM update
 - Other changes needed as we move forward (will seek permission for specific changes)

Use of Safe Yield and Operational Yield in Lieu of Firm Yield

- TWDB responded via email requesting clarification
- Provided a follow-up e-mail response to TWDB with the following information:
 - Tarrant Regional Water District System
 - TRWD Management Plan is based on Safe Yield
 - Safe Yield is based on keeping a reserve supply during the critical period of record
 - Lake Athens
 - Lake Athens is located in Region I
 - Provides water for Athens in Regions C and I
 - Intake structure for fish hatchery sets minimum water level. Therefore, operational yield is calculated based on this constraint.



Ecologically Unique Stream Segments

Tom Gooch/Adam Whisenant
Texas Parks & Wildlife Department



2006 Plan

■ Background

- No Designation of Unique Stream Segments in *2001 Region C Water Plan*
- Unique Stream Segment Committee studied the issue and presented a memo in April 2005
- 7 segments considered

2006 Plan

- Uncertain of the impacts associated with designating unique stream segments
 - How would adjacent private properties be affected?
 - How will future water rights be affected? (Instream flow requirements for upstream rights?)
 - How will designation affect regulatory programs to protect water quality?
 - What area is affected by designation (stream, surrounding area, entire watershed?)
 - Can the designation be reversed?

- In October 2005, RCWPG voted not to recommend any segments in the *2006 Region C Water Plan*



Public Participation Update

Colby Walton
Cooksey Communications



Newsletters

■ Timing of Next Issue

- Present draft to Planning Group at June 2009 public meeting
- Publish and mail July 2009

■ Focus

- Overview of 2009-2010 Planning Group efforts and opportunities for public participation

Media Outreach

- Developing a **bylined op-ed** for local media, providing information on the Regional Water Planning process and public involvement opportunities
- Planning an **informational session for regional media** to provide an overview of the 2006 Region C Water Plan and the process now underway to revise the existing plan
- Continue to send **notices of Planning Group meetings** to regional media



Water Management Strategies

Tom Gooch





General Types of Water Management Strategies

Tom Gooch



Types of Water Management Strategies

- Water Conservation (Basic and Expanded)
- Drought Management Measures
- Existing Source or Expanded Use of Existing Source
- Reuse of Wastewater (Direct & Indirect)
- New Surface Water or New Groundwater
- Others

Conservation – Basic (2006 Plan)

Recommended for all WUGs

- Measures already included in demand projections:
 - Low flow plumbing fixtures rule
 - New efficient residential clothes washer standards
- Public and school education
- Water use reduction due to increased water prices
- Water system audit, leak detection and repair, and pressure control

Conservation – Expanded (2006 Plan)

Recommended for selected WUGs

- Water conservation pricing structure
- Water waste prohibition
- Coin-operated clothes washer rebate
- Residential customer water audit
- Industrial, commercial, and institutional (ICI) general rebate
- Industrial, commercial, and institutional (ICI) water audit, water waste reduction, and site-specific conservation program
- Reuse of treated wastewater effluent

Drought Management

- Drought Contingency Plans required by TCEQ
- Drought Measures not included as a supply in 2006 Plan
 - Definition: *Temporary measures that are implemented when certain criteria are met and are terminated when those criteria are no longer met*
 - Protection in the event of water supply shortages (drought related or emergency related), but are not a reliable source of additional supply to meet growing demands
 - Extra safety factor for drought worse than drought of record, or if a WMS is not fully implemented when needed

Existing Sources or Expanded Use of Existing Sources

- Increased Groundwater Use
 - New wells, Supplemental Wells, Overdrafting Aquifers
- New Pipelines to connect existing water sources to water users (examples below)
 - Lake Fork to City of Dallas
 - Lake Palestine to City of Dallas
 - Toledo Bend to NTWMD and TRWD
 - Oklahoma water to various water users

Existing Sources or Expanded Use of Existing Sources

- Increased pipeline capacity from water sources to water users
 - TRWD pipelines from Richland-Chambers & Cedar Creek to Metroplex
- Reallocation of Reservoir Storage
 - Lake Texoma, Wright Patman
- Voluntary redistribution of water resources
- Voluntary Subordination of existing Water Rights
- Yield enhancement
- System Operation (Operating multiple lakes as a system to increase the yield)

Reuse of Wastewater - Direct

- Effluent directly from WWTP (not released into lake or stream)
- Examples
 - DWU – Irrigation, Manufacturing, Steam Electric
 - Fort Worth – Irrigation, Manufacturing
 - TRA – Denton Creek WWTP, Ellis County Reuse Project, 10-mile Creek Reuse Project
 - Forney – Steam Electric
 - Garland – Steam Electric

Reuse of Wastewater - Indirect

- WWTP effluent released into lake or stream and used later
- Examples
 - NTMWD – East Fork Reuse Project
 - TRWD – Cedar Creek/Richland-Chambers Wetlands
 - DWU – Lake Ray Hubbard & Lake Lewisville
 - TRA – Joe Pool Lake, Lake Grapevine
 - UTRWD – Lake Chapman

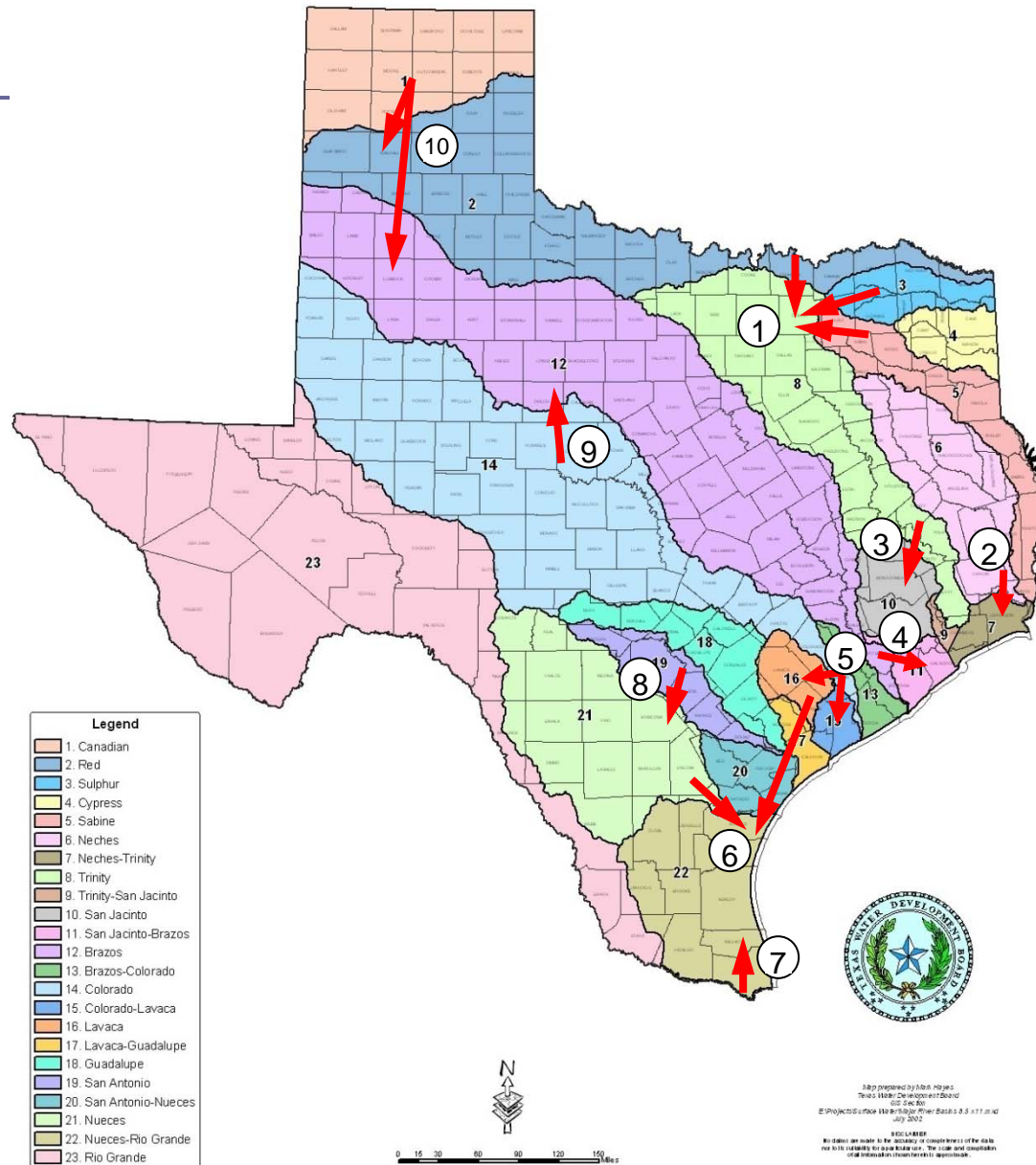
New Surface Water or New Groundwater

- New Groundwater in Multiple Counties (Fannin, Cooke, Ellis, Grayson, Denton, Wise, Henderson, Freestone, Jack)
- Lower Bois d'Arc Creek Reservoir
- Lake Ralph Hall
- Marvin Nichols Reservoir
- Lake Fastrill
- Lake Tehuacana
- Lake George Parkhouse North
- Lake George Parkhouse South
- Lake Columbia
- Gulf of Mexico Desalination
- Ogallala Groundwater (Roberts County)

Other Water Management Strategies

- Aquifer Storage and Recovery
- Brush Control
 - Mainly in West Texas Regions
- Precipitation Enhancement
 - Mainly in West Texas Regions
- Water right cancellation
 - Not used in previous plans
- Interbasin transfer
 - Requires permit
 - Basin of origin must not be negatively impacted
 - Many already existing in Region C
 - Many more proposed in Region C

Major Existing Interbasin Transfers in Texas

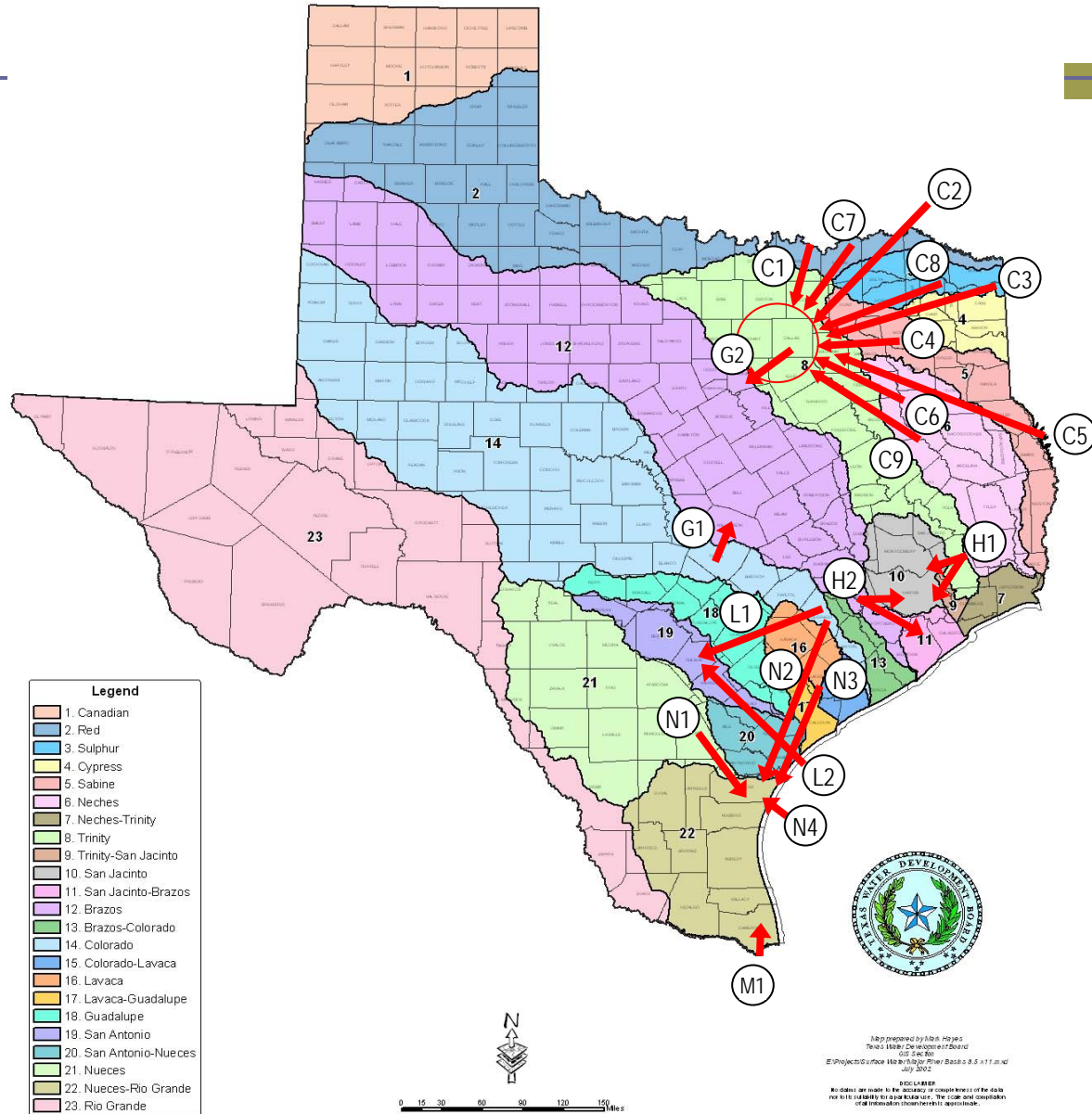


Map prepared by Alan Hayes
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 July 2002

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Major Proposed Interbasin Transfers in Texas





Policies for Development & Assessment of Water Management Strategies

Tom Gooch



Policies for WMSs

- WMSs are intended to meet “needs” (when demand is more than current supply)
- Water conservation must be considered for every identified need
- Each RWPG may determine its own screening criteria for WMSs
- TWDB has specified certain WMSs that each RWPG must address
- Develop a list of “potentially feasible strategies” to meet each need and then evaluate to determine which is best

Evaluation Criteria

- In general, a potentially feasible strategy
 - must have an identified sponsor or authority
 - must consider the end use (water quality, distance to end use)
 - should provide a reasonable percentage of the projected need (except conservation, which will be evaluated for all needs)

Evaluation Criteria

- In general, a potentially feasible strategy
 - must meet existing federal and state regulations
 - must be based on proven technology
 - must be politically and culturally acceptable
 - must be appropriate for regional water planning



Update on Overall Status and Next Steps

Tom Gooch



Next Steps

- Finalize population and demand projections
- Continue Evaluation of Existing Supplies (include all updated projects, etc)
- Compare supply and demand
- Develop strategies to meet needs
- Begin Saline Study & Five County Studies
- Continue public participation through media



Other Discussion

Jim Parks



Other Discussion

- Updates from the Chair
- Report from Regional Liaisons
- Report from GMA 8 Liaisons
- Report on Trinity-San Jacinto-Galveston Bay Stakeholders Committee
- Report on Sabine-Neches-Sabine Lake Bay and Bay Area Stakeholders Committee

Other Discussion

- Report from Texas Water Development Board
- Report from Texas Department of Agriculture
- Report from Texas Parks and Wildlife Department
- Confirmation Date and Location of Next Meeting
- Public Comments



Thank you for attending.

Materials are available at
www.regioncwater.org

