



Region C Water Planning Group

January 11, 2010





Action Items

- A. Consider Approval of Chapter 1 (Description of Region)
- B. Consider Approval of Chapter 3 (Available Water Supplies)
- C. Consider Approval of Chapter 6 (Water Conservation and Drought Management Recommendations)





Action Items

- D. Consider Addition/Removal of Entities from Wholesale Water Providers listing
- E. Consider Addition/Removal of Potentially Feasible Water Management strategies
- F. Set Date for Public Hearing
- G. Consider Adopting Resolution No. 10-01 Appointing Nominating Committee for Slate of Officers for 2010





Consider Approval of Chapter 1 (Description of Region)

Tom Gooch, P.E.
Freese and Nichols, Inc.



Chapter 1

- General Description of the Region

- Updated all tables/charts with:
 - Recent historical population
 - Recent historical water use data
 - Updated economic data
 - New water rights
 - New reuse projects
 - Threatened/Endangered Species lists

Chapter 1

- Other information updated:
 - Wholesale Water Provider info
 - Groundwater Conservation District info
 - Barnett Shale mining activities
 - Federal regulations pertaining to water supply
 - Agricultural statistics for Region C
 - Recent state Water Quality data
 - Overall recommendations from 2006 Plan



Consider Approval of Chapter 3 (Available Water Supplies)

Tom Gooch, P.E.
Freese and Nichols, Inc.



Chapter 3 – Available Supplies

- Total Water Supplies
 - Reservoir Yields
 - Managed Available Groundwater
- Connected Water Supplies
 - Limited by delivery infrastructure
 - Limited by treatment capacity
- Presented at November 9th Region C meeting
- Minor changes to reuse numbers
- Seeking Group's approval today



Consider Approval of Chapter 6 (Water Conservation and Drought Management Recommendations)

Preston Dillard, P.E.
Alan Plummer and Associates



Introduction

- Water conservation, including reuse, has been established as a major water management strategy for Region C
- Strategies have been implemented that have contributed to relative water demand reductions throughout the Region

Recent Conservation Work

- 2008 Water Conservation Advisory Council Report
 - GPCD discussion, conservation strategies
- Region C 2009 Water Conservation and Reuse Study
 - Case studies/surveys, seasonal analysis
- Legislation:
 - HB 2667- Plumbing code requirements (Ultra Low Flow Toilets)
 - HB 1656- Landscape irrigation permitting, inspection and enforcement program
 - HB 4- Additional water conservation plan reporting requirements

Region C Water Conservation Progress

- Region C Has Experienced Region-wide Implementation of Water Conservation Strategies
- Key Strategies Employed
 - Regional coordination for public awareness
 - Growing implementation of time of day irrigation restrictions
 - Water Conservation Symposium (3rd Annual)
- Basic and Additional Strategies
 - Various strategies selected for implementation by different municipalities

Region C Water Reuse Progress

Region C Reuse Represents Major Water Supply

- Greater than 200,000 acre-feet/year of existing reuse available to Region C in 2010
- Reuse (existing and planned) anticipated to grow to almost 665,000 acre-feet by 2060
- Overall reuse anticipated for 2011 Plan slightly less than overall reuse in 2006 Plan
 - Less SEP demand projected

Region C Water Reuse Progress

■ Major Reuse Advancements Since 2006 Plan

■ Implemented Reuse Projects

- *Many reuse water right permits issued*
- *TRWD'S Richland Chambers Reuse Project*
- *NTMWD'S East Fork Raw Water Supply Project*
- *Dallas return flow contracts*

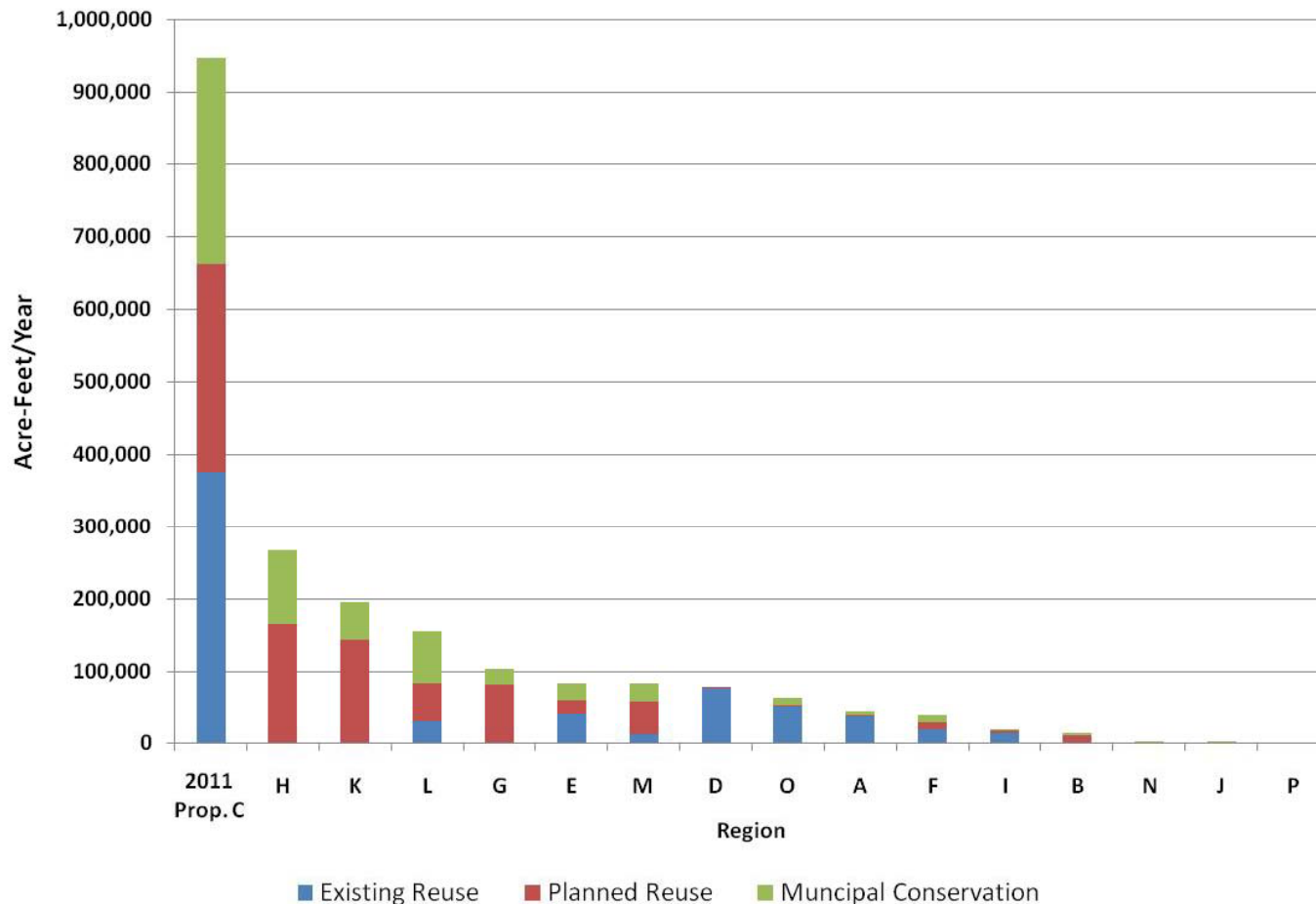
■ Projects under Construction

- *Fort Worth Village Creek Reclaimed Water Delivery System (start-up anticipated by end of 2010)*

Region C Water Conservation & Reuse Progress

■ Region C Ahead of Rest of State in Reuse

2007 State Water Plan - 2060 Projections

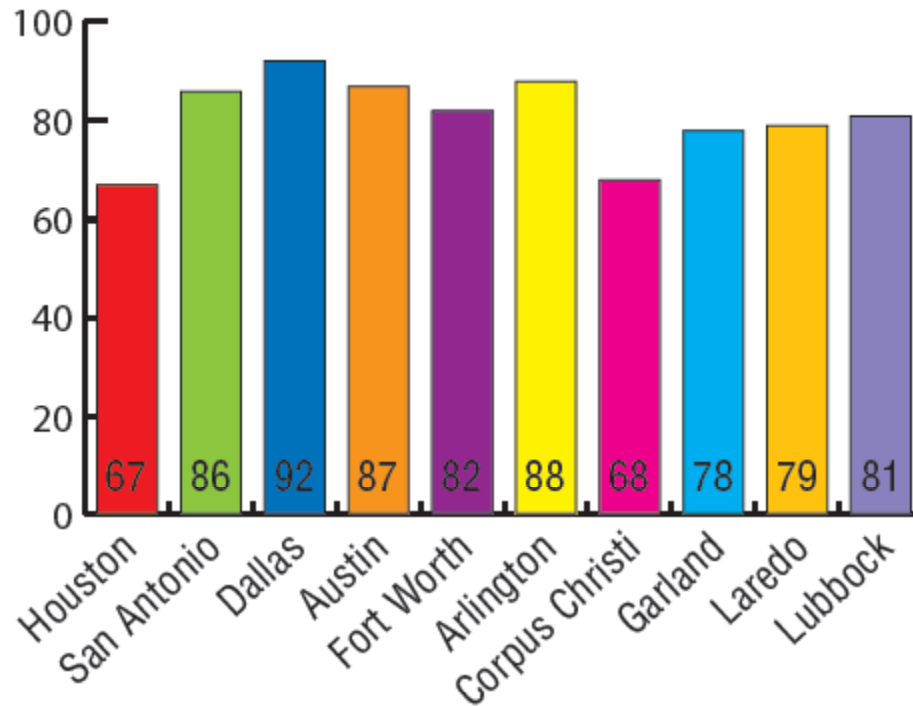


Ongoing Conservation Concerns

- Quantification of water conservation savings achieved is difficult
 - Appropriate data is not always collected and not consistently utilized
 - Long timeframes required to model water demand fluctuations not related to conservation savings
- Normalized comparisons, such as GPCD, between utilities or regions are difficult to make accurately
 - WCAC recommends that currently defined GPCD not be used to compare usage between utilities

Normalized GPCD Comparison Major Texas Cities – 2007

**Per Capita Residential Water Use
in Major Texas Cities**



Regional/Local Comparisons: GPCD Limitations

■ Factors Affecting GPCD Calculation

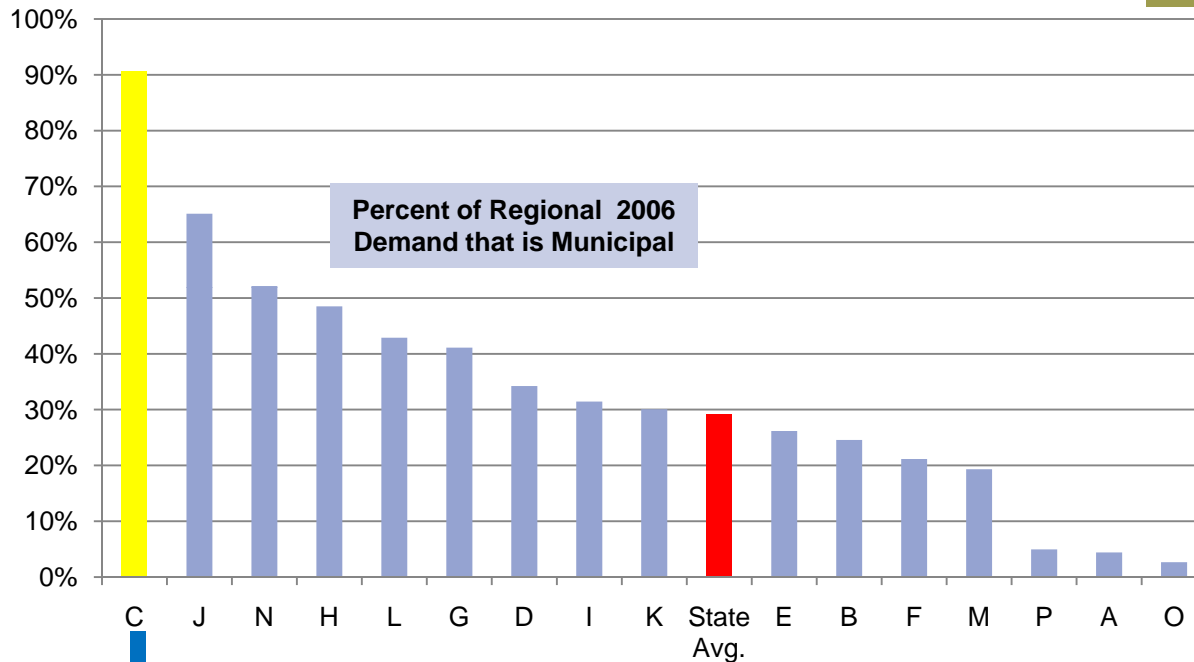
■ Water Usage Volume

Population Related Usage	Water Use Accounting
Single Family Residential	Regional Economic Condition
Multi-Family Residential	Climate
Commercial Water Usage	Availability of Water Supply
Institutional Water Usage	Self-Supplied Users
Recreational/Public Water Usage	Water Pricing
Active Conservation Programs	Amount of Reuse/Recycle

■ Population

Service Area Population	Commuter Influx
Accuracy of Population Count	Growth vs. Mature Cities
Timeliness of Data	Regional Economic Condition

2006 Percent Municipal Water Use



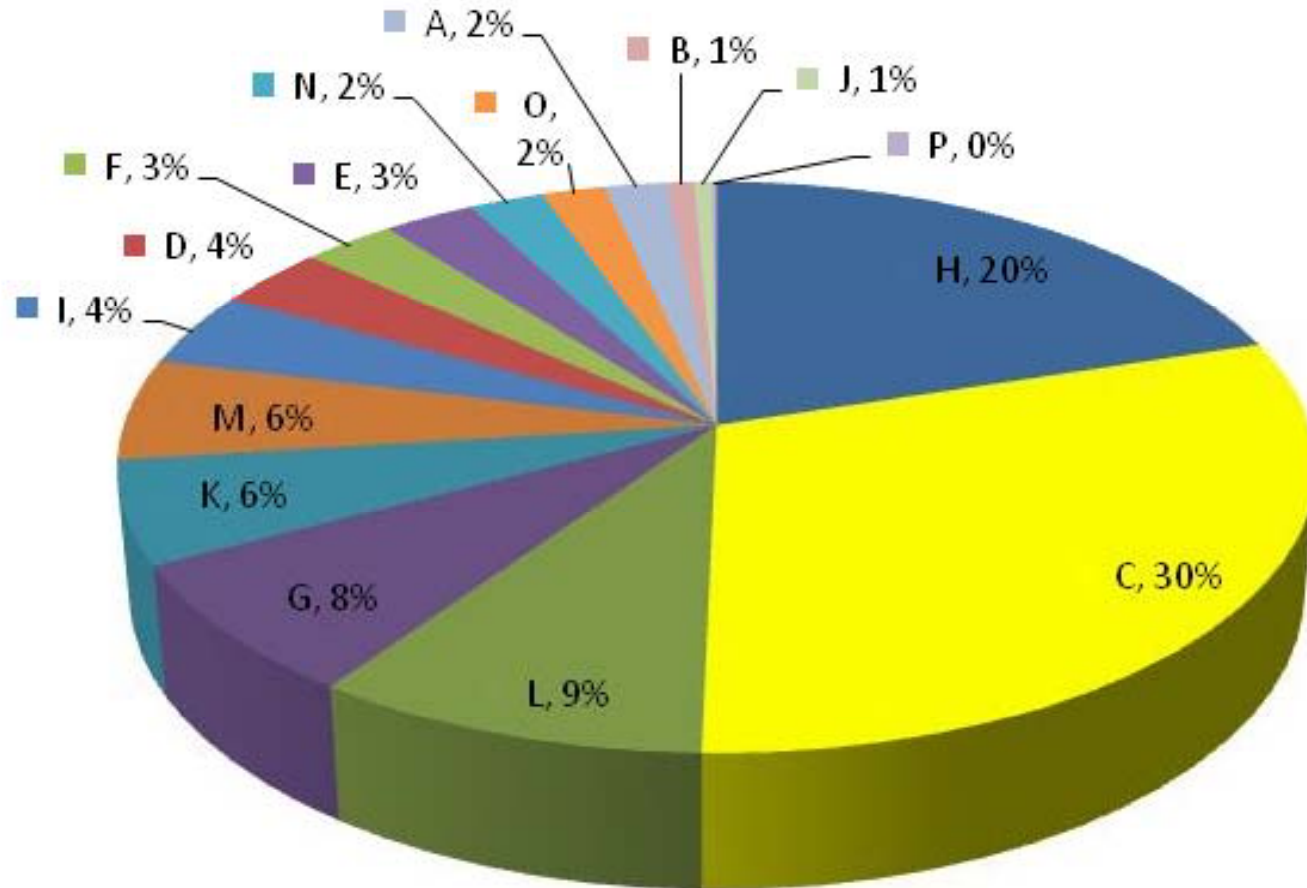
Region C
Breakdown

Category	Reported Water Use (acre-feet)	Percentage of Regional Water Use
Irrigation	31,067	2.2%
Livestock	20,063	1.4%
Manufacturing	53,027	3.8%
Mining	10,367	0.7%
Municipal	1,274,014	90.7%
Steam Electric Power	15,997	1.1%
TOTAL	1,404,535	100.0%



2006 Percent Municipal Water Use

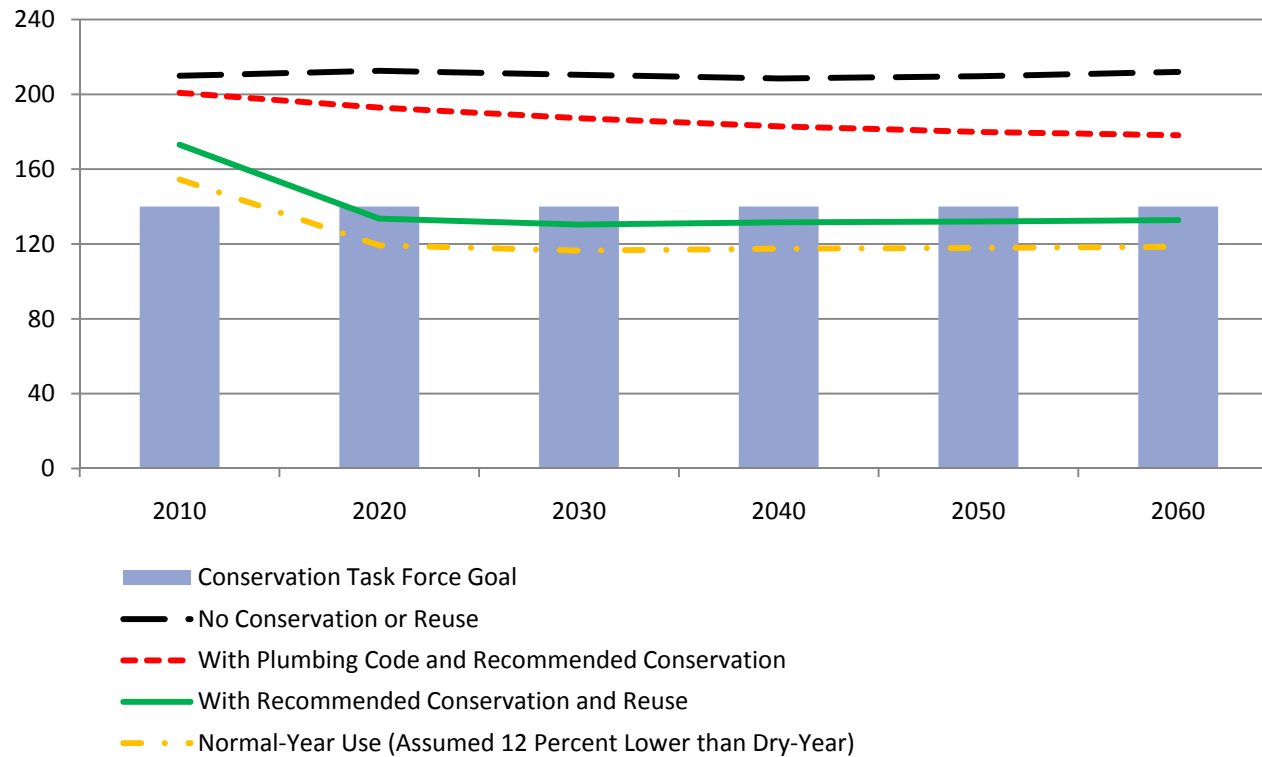
Percent of Total 2006 State Municipal Demand by Region



Region C Updated 2011 Demand and Supply Projections

Basic Data	Projections					
	2010	2020	2030	2040	2050	2060
Population	6,670,493	7,971,728	9,171,650	10,399,038	11,645,686	13,045,592
Municipal Demand with Low Flow Plumbing (Acre-feet)	1,546,970	1,829,594	2,075,578	2,323,520	2,583,251	2,887,338
Recommended Municipal Water Conservation (Acre-feet)	46,690	106,835	151,586	192,720	235,718	284,916
Current and Recommended Municipal Reuse (Acre-feet)	207,168	530,005	584,238	598,108	625,029	662,475
Per Capita Use (Gallons per Capita per Day)						
No Conservation or Reuse	210	213	210	208	210	212
With Recommended Conservation	201	193	187	183	180	178
With Recommended Conservation and Reuse	173	134	130	132	132	133
Normal-Year Use (Assumed 12 Percent Lower than Dry-Year)	155	119	116	117	118	119

Region C Municipal GPCD Projections



Summary

- Water conservation and reuse continue to play a large role in future water management strategies for Region C
- Region C continues to lead the state in water reuse projects
- Additional data and metrics needed to provide a more accurate and complete water demand comparison between utilities and regions



Consider Addition/Removal of Entities from Wholesale Water Providers listing

Tom Gooch, P.E.
Freese and Nichols, Inc.



Additions

- Definition of WWP – Provides (or will provide) at least 1,000 af/y of supply to another water user.

WUG to become a WWP	Current & Potential Customers
City of Arlington	Grand Prairie, Johnson Co. SUD
City of Grand Prairie	Johnson Co. SUD
City of Princeton	Culleoka WSC
Argyle WSC	City of Argyle
Bolivar WSC	Sanger, Valley View
Dallas Co WCID #6	Balch Springs

Removal as WWP's

- Cedar Hill
 - No longer supplies wholesale customer
- Parker County Utility District #1
 - Previous assumed customers will now be supplied by Fort Worth and/or Weatherford



Consider Addition/Removal of Potential Feasible Water Management Strategies

Tom Gooch, P.E.
Freese and Nichols, Inc.



Potentially Feasible WMSs

■ Additions

- Crandall connect to DWU
- Arlington, Euless, and DFW Airport purchase supply from Fort Worth reclaimed line
- Grand Prairie purchase from Arlington

■ Removals

- Lake Sam Rayburn/B.A. Steinhagen
 - No supply available for future per LNVA



Public Hearing Date

Colby Walton
Cooksey Communications, Inc.



Initially Prepared Plan Public Hearing

■ Milestone Dates

- March 15, 2010 – Public meeting of RCWPG to formally adopt Initially Prepared Plan (IPP)
- April 1, 2010 – Deadline to submit IPP to TWDB
 - TWDB has 120 days to provide comments on IPP (by August 1)
- April 2010 – Public notice posted and mailed 30+ days prior to the IPP public hearing
 - Public agencies have 120 days from posting of notice to provide comments on IPP (by Aug. date TBD)
 - Recommend posting April 1st so public agency comment period coincides with TWDB's

Initially Prepared Plan Public Hearing

- Milestone Dates, continued
 - May/June 2010 – IPP public hearing at which written and oral comments may be submitted
 - Public has 60 days after hearing to provide additional comments in writing (by July/Aug. date TBD)
 - August 1 – TWDB comments due to RCWPG
 - August TBD – All public agency comments and public comments due to RCWPG
 - August – Consultants to review all comments and provide recommendations on changes to RCWPG

Initially Prepared Plan Public Hearing

- Milestone Dates, continued
 - September 2010 – Public meeting of the RCWPG to formally adopt Region C Water Plan
 - October 1, 2010 – Final, adopted plan due to TWDB

Date/Time/Location for Public Hearing

- Late May or early to mid-June
- Tuesday or Thursday 7:00 p.m. optimal
- Central location: Bob Duncan Center, Vandergriff Park, Arlington (Main Hall capacity: 500)
- Primary date options:
 - Tuesday, May 25
 - Tuesday, June 15
 - Thursday, June 17
- ***Recommend selecting date now, reserving venue***



Consider Adopting Resolution 10-01 Appointing Nominating Committee for Slate of Officers for 2010

Jim Parks
RCWPG Chairman



Resolution 10-01

- Executive Committee to recommend slate of 2010 Officers
- Committee will bring recommendations to group at March 15th meeting.
- Committee will include:
 - Current Officers
 - Two At-Large Group Members
- Nominations for At-Large Members



Discussion Items

- A. Overall Project Schedule
- B. Chapter 4 – Water Management Strategies
- C. Saline Study (Task 4d)
- D. Chapter/Task 5 – Impacts of strategies on Key Parameters of Water Quality and Impacts of Moving Water from Rural and Agricultural Areas





Discussion Items

- E. Chapter/Task 7 – Description of How the Regional Water Plan is Consistent with Long-Term Protection of the State’s Water Resources, Agricultural Resources, and Natural Resources
- F. Chapter 8 – Unique Stream Segments and Unique Reservoir Sites
- G. Chapter 8 – Regulatory, Administrative & Legislative Issues





Discussion Items

- H. Chapter 9 – Infrastructure Financing Report
- I. Public Participation Updates
- J. Update on Overall Status and Next Steps





Overall Project Schedule

Tom Gooch
Freese and Nichols, Inc.



By Planning Group Meeting

2010 Meetings

Jan-March – Distribute Remaining Chapters for RCWPG review

March – Ch 4, 5, 7, 8, 10; Approve/Submit IPP (due April 1, 2010)

May-June – Public Hearing

September – Response to TWDB Comment & Adopt Final Plan (due October 1, 2010)

October – Water Summit



Chapter 4 – Water Management Strategies

Tom Gooch
Freese and Nichols, Inc.



Regional Wholesale Water Providers

- North Texas Municipal Water District
 - Conservation
 - DWU treated water (interim)
 - Renew GTUA from Texoma (interim)
 - Main Stem Trinity Pump Station (with DWU)
 - Expand connection to Chapman Lake
 - Lower Bois d' Arc Creek Reservoir
 - Additional Lake Texoma (blend)
 - Marvin Nichols
 - Toledo Bend
 - Oklahoma Water

Regional Wholesale Water Suppliers

■ Dallas Water Utilities

- Conservation (retail and wholesale customers)
- Additional pipeline from Lake Tawakoni
- Lake Ray Hubbard indirect reuse (Main Stem Trinity Pump Station)
- Additional direct reuse
- Connect to Lake Palestine (Integrated Pipeline)
- Wright Patman
- Fastrill
- Water treatment plant expansions

Regional Wholesale Water Suppliers

- Tarrant Regional Water District
 - Conservation
 - Integrated Pipeline and reuse
 - Marvin Nichols
 - Toledo Bend
 - Oklahoma Water

Regional Wholesale Water Suppliers

- Upper Trinity Regional Water District
 - Conservation
 - Lake Ralph Hall
 - Ralph Hall reuse
 - Additional direct reuse
 - Marvin Nichols
 - Oklahoma
 - Additional purchase from DWU
 - Water treatment and transmission expansions

Regional Wholesale Water Suppliers

■ Trinity River Authority

- Conservation
- Expansions to Tarrant County Water System
- Ellis County Water Supply System
- Additional Freestone County SEP supplies (raw water)
- Expansion of Las Colinas reuse
- Dallas County SEP reuse
- Ellis County SEP reuse
- Freestone County SEP reuse
- Denton/Tarrant County direct reuse
- Indirect reuse through Lake Grapevine
- Additional purchase from TRWD

Regional Wholesale Water Suppliers

- City of Fort Worth
 - Conservation
 - Direct Reuse (several projects)
 - Water treatment plant expansions
 - Additional purchase from TRWD
- Dallas County Park Cities Municipal Utility District
 - Conservation

Regional Wholesale Water Suppliers

- Greater Texoma Utility Authority
 - Conservation
 - Additional water from Lake Texoma
 - Grayson County Water Supply Project
 - Expand Collin-Grayson Municipal Alliance Project
- City of Corsicana
 - Conservation
 - Connect to Richland-Chambers
 - Water treatment plant expansion
 - Purchase from TRWD

Regional Wholesale Water Suppliers

- Located in Other Regions
 - Sabine River Authority
 - Upper Neches River Municipal Water Authority
 - Sulphur River Water District

Local Wholesale Water Suppliers

- City of Arlington
 - Conservation
 - Reuse from Fort Worth
 - Additional purchase from TRWD
 - Water treatment plant expansions
- City of Denton
 - Conservation
 - Indirect reuse
 - Purchase from DWU
 - Water treatment plant expansions

Local Wholesale Water Suppliers

- City of Ennis
 - Conservation
 - Indirect reuse
 - Purchase from TRWD
 - Water treatment plant expansions
- City of Forney
 - Conservation
 - Additional purchase from NTWMD

Local Wholesale Water Suppliers

- City of Gainesville
 - Conservation
 - Cooke County Water Supply Project
 - Water treatment plant expansions

- City of Garland
 - Conservation
 - Additional purchase from NFWMD

Local Wholesale Water Suppliers

- City of Grand Prairie
 - Conservation
 - Purchase treated water from Midlothian
 - Purchase treated water from Arlington
 - Purchase treated water from Mansfield
 - Purchase additional treated water from DWU
- City of Mansfield
 - Conservation
 - Additional purchase from TRWD
 - Water treatment plant expansions

Local Wholesale Water Suppliers

- City of Midlothian
 - Conservation
 - Additional purchase from TRWD through TRA
 - Water treatment plant expansions
- City of North Richland Hills
 - Conservation
 - Additional purchase from Fort Worth
 - Additional purchase from TRA

Local Wholesale Water Suppliers

- City of Princeton
 - Conservation
 - Additional purchase from NTMWD

- City of Rockwall
 - Conservation
 - Additional purchase from NTMWD

Local Wholesale Water Suppliers

- City of Seagoville
 - Conservation
 - Additional purchase from DWU
 - Expansion of delivery facilities to accommodate Crandall's purchase from DWU
- City of Terrell
 - Conservation
 - Additional purchase from NTMWD

Local Wholesale Water Suppliers

- City of Waxahachie
 - Conservation
 - Additional purchase from TRWD through TRA
 - Water treatment plant expansions
- City of Weatherford
 - Conservation
 - Additional purchase from TRWD
 - Water treatment plant expansions

Local Wholesale Water Suppliers

- Argyle WSC
 - Conservation
 - Additional purchase from UTRWD
- Athens WMA
 - Conservation
 - Reuse of Athens Fish Hatchery return flow
 - Additional Yield from Lake Athens
 - Forest Grove Reservoir
 - Water treatment plant expansions

Local Wholesale Water Suppliers

- Bolivar WSC
 - Conservation
 - Additional treated water purchase from UTRWD

- Dallas County WCID #6
 - Conservation
 - Additional treated water purchase from DWU

Local Wholesale Water Suppliers

- East Cedar Creek FWSD
 - Conservation
 - Additional purchase from TRWD
 - Water treatment plant expansions

- Lake Cities MUA
 - Conservation
 - Additional treated water purchase from UTRWD

Local Wholesale Water Suppliers

- Mustang SUD

- Conservation
- Additional treated water purchase from UTRWD

- Rockett SUD

- Conservation
- Additional purchase from Waxahachie (TRWD raw water through TRA)

Local Wholesale Water Suppliers

- Walnut Creek SUD
 - Conservation
 - Additional purchase from TRWD
 - Additional transmission facilities
 - Water treatment plant expansions
 - New water treatment plant
- West Cedar Creek MUD
 - Conservation
 - Additional purchase from TRWD
 - Water treatment plant expansions

Local Wholesale Water Suppliers

- Wise County Water Supply District
 - Conservation
 - Additional purchase from TRWD
 - Water treatment plant expansions

Collin County

- Most current supply is from NTWMD
 - Some from DWU (Dallas)
 - Some from UTRWD (Celina)
 - GTUA assists delivery to some (Anna, Melissa)

- Management Strategies
 - Conservation
 - Increased supplies from NTMWD, DWU, UTRWD
 - Some groundwater users turn to NTMWD (Blue Ridge, Weston, perhaps South Grayson WSC)

Cooke County

- Current supplies from
 - Groundwater
 - Moss Lake (Gainesville)
- Management strategies
 - Conservation
 - Cooke County Water Supply Project
 - Increased groundwater
 - Water right subordination (Muenster)
 - Treatment plant (Muenster)

Dallas County

- Current supplies from
 - DWU (most)
 - NTMWD (substantial)
 - Lake Chapman (Irving)
 - Groundwater
- Water Management Strategies
 - Conservation
 - Add'l purchase from DWU and NTMWD
 - Reuse (SEP)
 - Wilmer purchase from DWU

Denton County

- Current supplies from
 - UTRWD
 - DWU
 - Lake Ray Roberts and Lake Lewisville (Denton)
 - Fort Worth
 - Groundwater
- Water Management Strategies
 - Conservation
 - Additional supplies from existing sources
 - New entities hook up to UTRWD
 - Denton obtain water from DWU

Ellis County

- Existing Supplies from
 - TRWD (through TRA)
 - Ennis, Waxahachie and customers
 - DWU
 - Ellis County Lakes (Joe Pool, Bardwell, Waxahachie)
 - Groundwater
 - Reuse
 - Lake Aquilla

Ellis County (continued)

- Water Management Strategies
 - Conservation
 - Ellis County Water Supply Project
 - Additional supplies from existing sources
 - Midlothian to get TRWD water
 - New water treatment plants and expansions
 - Reuse projects

Fannin County

- Existing supplies from
 - NTMWD
 - Groundwater
 - Lake Texoma and Valley Lake
- Water Management Strategies
 - Conservation
 - Purchase from NTMWD (Bois d'Arc Creek)
 - Fannin County Water Supply Project
 - Purchase from UTRWD (Ladonia – Ralph Hall)
 - Additional groundwater.
 - Various delivery pipeline projects

Freestone County

- Existing supplies from
 - Groundwater
 - Lake Fairfield, Lake Livingston, Richland-Chambers Lake (SEP)
- Water Management Strategies
 - Conservation
 - Additional groundwater
 - Additional purchase from TRWD
 - Purchase water from Corsicana (Wortham)
 - Water treatment plant rehabilitation (Wortham)
 - Reuse (SEP)

Grayson County

- Existing supplies from
 - Groundwater
 - Lake Texoma (some through GTUA)
 - Lake Randell
 - NTMWD
- Water Management Strategies
 - Conservation
 - Additional supplies from existing sources
 - Grayson County Water Supply Project

Henderson County

- Existing supplies from
 - TRWD (Cedar Creek Lake, through wholesale suppliers)
 - Groundwater
 - Lake Trinidad and Forest Grove Reservoir (SEP)
 - Lake Athens
- Water Management Strategies
 - Conservation
 - Additional purchases from TRWD
 - Additional Groundwater

Jack County

- Existing supplies from
 - Jacksboro reservoirs
 - Groundwater
 - TRWD (SEP)
- Water management strategies
 - Conservation
 - Bryson connection to Graham
 - Additional wells
 - Additional water from TRWD (SEP)

Kaufman County

■ Existing supplies from

- NTMWD
- TRWD
- Dallas Water Utilities
- SRA
- Reuse (SEP)
- Minor groundwater

■ Water Management Strategies

- Conservation
- Add'l purchase from NTMWD, TRWD, DWU, SRA
- Connect to DWU (Crandall)
- Connect to NTMWD (Ables Springs WSC)

Navarro County

■ Existing supplies from

- Corsicana
- Groundwater
- TRWD
- Region G suppliers

■ Water Management Strategies

- Conservation
- Additional purchases from Corsicana and TRWD
- Additional groundwater

Parker County

- Existing supplies from
 - Lake Weatherford
 - TRWD
 - Groundwater
 - Lake Palo Pinto
- Water Management Strategies
 - Conservation
 - Additional purchase from TRWD
 - Purchase from Fort Worth
 - Brazos River and desalination (County Other)
 - Additional groundwater
 - Water treatment plant expansions

Rockwall County

- Existing supplies from
 - NTMWD
 - Minor DWU
 - Minor groundwater
- Water management strategies
 - Conservation
 - Additional supplies from existing sources

Tarrant County

- Existing supplies from
 - TRWD (through Fort Worth, TRA, others)
 - Tarrant County Lakes
 - Groundwater
 - Dallas Water Utilities

Tarrant County (continued)

- Water Management Strategies
 - Conservation
 - Additional purchases from TRWD
 - Additional groundwater
 - Additional reuse
 - Transmission projects
 - Water treatment plant expansions

Wise County

- Existing supplies from
 - TRWD (through Walnut Creek SUD and others)
 - Groundwater
 - Reuse
- Water Management Strategies
 - Conservation
 - Additional supplies from TRWD
 - Additional groundwater
 - Reuse



County Special Studies

Tom Gooch, P.E.
Freese & Nichols, Inc.



Current Status

- Cooke-Grayson County
 - Writing draft Cooke-Grayson County Study
- Fannin County
 - Finished draft Fannin County Special Study
 - Began scheduling County WUG meeting
- Freestone County
 - Finished draft Freestone County Special Study

Current Status

- Kaufman County
 - Writing draft Kaufman County Study
- Navarro County
 - Finished draft Navarro County Special Study

Next Steps

- Continue analysis of water management strategies for Cooke-Grayson County and Kaufman County
- Present draft recommendations to WWP's and WUGs within the individual Counties
 - Fannin, Freestone, Navarro Counties – January 2010
 - Cooke-Grayson and Kaufman Counties – February 2010
- Present recommendations to RCWPG



Saline Study (Task 4d)

Preston Dillard, P.E.
Alan Plummer and Associates



Update on Saline Study

- Memorandum will include the following sections:
 - Saline Surface Water Available to Region C
 - Saline Groundwater Available to Region C
 - Survey results from operating desalination facilities
 - Effects of Salty or Partially Treated Salty Water On Potable Infrastructure
 - Analysis of Concentrate Disposal (technical and cost evaluation)
 - Regulatory Requirements

Update on Saline Study

- Saline Surface Water Available to Region C
 - Red River, Lake Texoma, Brazos
 - Potential quality and quantity estimates
- Saline Groundwater Available to Region C
 - TWDB data on quality and potential quantity was utilized and aided in the development of two potential demand centers:
 - Fort Worth area
 - Gainesville area
 - Cost estimates to produce, treat and transport water to demand centers

Update on Saline Study

- Survey results from operating desalination facilities
 - Results included in memorandum to aid RCWPG in developing path forward
- Effects of Salty or Partially Treated Salty Water On Potable Infrastructure
 - Guidance for consideration of water quality regulations and consumer impacts developed
 - Evaluation of current treatment plant capabilities

Update on Saline Study

- Analysis of Concentrate Disposal (surface, sewer, land application, evaporation ponds, injection wells)
 - The technical evaluation includes an assessment of each technique, including general applicability to the region.
 - The cost evaluation section provides cost (capital and O&M) ranges for each of the techniques.
 - Regulatory requirements are further discussed on next exhibit.

Update on Saline Study

- Regulatory Requirements
 - Treatment requirements similar to conventional scenarios
 - Concentrate disposal and potential for DBP formation are key considerations

Update on Saline Study

- Next Steps
 - Develop recommendations
 - Finalize draft report for consultant review
 - Prepare draft report for RCWPG review
 - Action Item in March RCWPG Meeting



Chapter 5

Impacts of Strategies on Key Parameters of Water Quality and
Impacts of Moving Water from Rural and Agricultural Areas

Preston Dillard, P.E.



Scope Review and Status

- Update key water quality parameters
- Based on Recommended Water Quality Strategies, Update:
 - Potential impacts to water quality parameters
 - Agricultural Resources (impacted by water transfer from agricultural/rural to urban areas)
 - Potentially impacted areas
 - Impacts on agricultural resources
- Status
 - Currently reviewing water quality parameters



Chapter/Task 7

Tom Gooch, P.E.
Freese and Nichols, Inc.





Chapter 8 Update (Unique Stream Segments and Unique Reservoir Sites)

Preston Dillard, P.E.
Alan Plummer and Associates



Ecologically Unique River and Stream Segments

- Recommendation – Region C take a leadership role on the USS issue by calling for the formation of a working group comprised of representatives of TWDB, TPWD, TCEQ, and the sixteen regions to bring clarity, purpose, and direction to the legislative mandate to “identify river and stream segments of unique ecological value.”

Ecologically Unique River and Stream Segments (cont.)

- Expectations of the Workgroup
 - Research, verify, and publicize the intent of USS legislation
 - Research agency rules and recommend changes or clarifications where needed
 - Ensure common understanding of “reservoir”
 - Identify lateral extent of USS designation
 - Seek clarification of quantitative assessment of impacts on unique stream segments
 - Illustrate the value of USS designations

Unique Sites for Reservoir Construction

- *2006 Region C Water Plan Recommendations*
 - Muenster
 - Ralph Hall
 - Lower Bois d'Arc Creek
 - Marvin Nichols
 - Fastrill
 - Tehuacana

Unique Sites for Reservoir Construction (cont.)

- Region C recommendations were subsequently recommended in the *2007 State Water Plan* and designated by the Legislature as unique reservoir sites in Senate Bill 675.
 - Muenster Lake has been built and is in operation
 - Planning continues on the five remaining sites



Chapter 8 Update (Legislative Issues)

Tom Gooch, P.E.
Freese & Nichols, Inc.



Legislative Issues from 2006 Plan

- Include “Alternative Strategies” in regional water plans (done)
- Guidance on resolving Consistency issues
- Allow waivers for Amendments for small supplies
- State agency coordination on use of WAMs
- Support voluntary (not mandatory) conservation targets
- Exempt large projects from water rights cancellation for non-use

Legislative Issues from 2006 Plan

- Remove unnecessary barriers to interbasin transfers
- Brine disposal regulations should be same for municipal purposes as for oil/gas industry
- Reduce regulatory obstacles of indirect reuse
- Increase state funding for water supply projects
- State funding for conservation programs
- State funding for NRCS structures

Legislative Issues from 2006 Plan

- Funding assistance for desalination projects
- State agency oversight of Groundwater Conservation District Rule Making

Potential Legislative Issues

- Additional funding for water supply projects
- Planning Group vacancies filled by TWDB
- State Funding for Groundwater Conservation Districts
- Use Federal model for funding large projects
- Coordinate with TWDB on advancing reuse
- More funding for reuse projects
- State funding for NRCS structures
- State support of efforts to purchase Oklahoma water

Potential Legislative Issues

- State guidance on Invasive Species and how it will affect lake-to-lake transfers
- State response to upcoming Federal Regulations extending reach of Clean Water Act and others regulations
- Formation of Unique Stream Segments Work Group involving state agencies



Chapter 9 – Infrastructure Financing Report

Tom Gooch, P.E.
Freese & Nichols, Inc.



Infrastructure Financing Report

- After IPP is published
- TWDB will send electronic survey to all WWPS/WUGs with strategies
- Survey will inquire on methods of financing planned by WWPs/WUGS
- Consultants will follow up on surveys, tabulate results, and prepare Chapter 9
- Distribute during summer



Public Participation Discussion Items

Colby Walton
Cooksey Communications, Inc.



Newsletters

- Two more newsletters are scheduled for current planning period:
 - **April/May 2010** – Summary of Initially Prepared Plan, Details About Public Hearing
 - **September/October 2010** – Summary of Adopted Region C Water Plan

Media Updates

▶ FOCUS | Law

Fort Worth Business Press • December 7-13, 2009

TRWD working to revise suit in Oklahoma water battle

By LESLIE WAMMER
lwammer@bcpres.net

A lawsuit filed by the Tarrant Regional Water District against Oklahoma for water access issues north of the Red River is on hold as Tarrant Regional officials work to file a revised complaint to restart the suit.

The suit, which began in 2007, aims to open up access for the Tarrant Regional Water District to collect water moving through Oklahoma toward the Red River before the water reaches the Texas border in an effort to open up water supply for increasing demand expected around 2030.

Once the water moves into the Red River, it becomes difficult and expensive to treat, area water officials said. By collecting the water before it moves into the river, Texas residents will save money in the future, officials said.

The lawsuit's timeline

In January 2007, the Tarrant Regional Water District applied and was turned down for water rights permits in Oklahoma, and later filed suit in federal court in the Western District of Oklahoma. The suit claimed that Oklahoma's series of laws, rules and attorney general opinions created an unconstitutional embargo on the sale or transfer of water from Oklahoma, said Wayne Owen, the Tarrant Regional Water District's planning director.

Later in the year, the Tarrant Regional Water District had an oral argument before Federal District Judge Joe Heaton in the Western District of Oklahoma on an Oklahoma motion to dismiss the suit, Owen said.

"Judge Heaton ruled in favor of Tarrant [Regional Water District], denying to dismiss the suit at which time the Oklahoma attorney general appealed to the 10th Circuit Court of Appeals in Denver saying the judge had erred in not dismissing the lawsuit," Owen said.

Then, in October 2008, the 10th Circuit Court ruled in favor of the Tarrant Regional Water District, Owen said, adding that the court said Heaton had not erred in his decision, and returned the case to the Western District of Oklahoma. The trial was then set to begin in December.

But, in the summer of 2009, Oklahoma filed a motion to dismiss the suit, which was argued on Oct. 26 before Heaton. On Nov. 18, the judge ruled partially in favor of Oklahoma and partially in favor of the Tarrant Water District, Owen said. The judge ruled that Tarrant Regional Water District had not satisfied him with regard to the Water District's claim that Oklahoma was violating the Constitution's commerce and supremacy clauses, and asked the Water District to file an amended complaint within 30 days.

"We fully intend to proceed to trial and hope the ruling on Nov. 18 was merely a bump in the road," Owen said.

What's happening now

Oklahoma's Attorney General Drew Edmondson released a statement after the decision, saying the federal court had dismissed Tarrant Regional Water District's claim. The Tarrant Regional was seeking to force the Oklahoma Water Resources Board to allow the Tarrant Regional Water District to access Oklahoma's water, Edmondson said.

"The judge said our statute does not violate the Commerce or Supremacy Clauses of the U.S. Constitution regarding waters subject to the Red River Compact..." Edmondson said in the statement. "While we welcome this ruling, the water wars will continue for a number of

years. We will wait for Tarrant to take its next step and in the meantime we look forward to the completion of Oklahoma's comprehensive water plan."

The Red River Compact, an agreement involving Texas, Oklahoma, Arkansas and Louisiana, was adopted by the U.S. Congress in 1955, and sets guidelines to resolve water disputes between states with water access the Red River and the river's tributaries.

"In the case of the Red River Compact, Oklahoma claimed that the existence of allocating the main stem of the Red River by compact denotes scarcity," Owen said. "And, frankly, there's 6 million acre-feet [of water] that flows away from Oklahoma into the Red River on an average year, which is the direct opposite of scarcity. It's frankly amazingly abundant, which is the argument we are prepared to make when we go to trial."

Red River water issues

Once water reaches the Red River, levels of chlorides, sulfates and other materials increase exponentially and add to the cost of treating the water. That cost then trickles down to consumers, said Alan Plummer, chairman of Alan Plummer Associates Inc. Plummer's company works with the North Texas Region C water planning group on different water planning efforts in Dallas-Fort Worth.

While some organic materials in water decay naturally through bacterial processes, the materials in water from the Red River do not decay, Plummer said. The materials give the water a salty taste, and without significant treatment, the water can corrode hot water heaters and irons, he said.

"The Red River itself goes through some natural salt formations up in the headwaters area, and it picks up some of those materials and consequently the levels of those are elevated and at high concentrations, whereas the water that comes from water bodies within the state [of Oklahoma] have not gone through those salt formations so those waters are considered to be fresher waters," Plummer said.

By converting or collecting water in Oklahoma before it reaches the Red River and needs heavy treatment, Plummer said, Texas and water consumers can save money. Building a plant to treat the water - called a desalination plant - is about twice as expensive as a traditional water treatment facility, Plummer said.

And there are concerns "for the capital expenditure and also the operation and maintenance," Plummer said. "Another significant consideration is that a desalination treatment process requires quite a bit more energy than a conventional water process, so the cost of energy goes up."

Another major concern associated with desalination plants is that in the process of removing salts from the water supply, the plants produce a brine with high salt and mineral concentrates, which is difficult and expensive to dispose of, he said.

"Tarrant Regional Water District is trying to access water and provide it to its service area as cost effectively as possible," Owen said. "We do have other options, there are other services to be considered and watersheds not impacted by chlorides."

"Currently our plan calls for the development of the Marvin Nichols Reservoir in North Texas, a controversial project but one that is viewed as critical to the Metroplex," he said. "But, if we are able to secure a reliable supply from Oklahoma, it could forestall the development of the reservoir until we have a secured supply." ■



Media Updates

NORTH TEXAS

The Dallas Morning News

Wednesday, December 16, 2009 3B

www.star-telegram.com

Friday, December 18, 2009

IRVING

Water bid may unite ex-rivals

Council to consider a purchasing agreement with Tarrant district

By BRANDON FORMBY
Staff Writer
bformby@star-telegram.com

Irving officials could join forces this week with an unexpected ally in their ongoing bid to bring Oklahoma water to North Texas.

The Tarrant Regional Water District is interested in securing an agreement for some of the water the Irving City Council plans to buy from Oklahoma's Hugo Lake. The council will consider the idea at a special meeting Thursday.

But many hurdles must be crossed before any water flows across the Red River. Both Texas entities still have to prevail in their separate lawsuits challenging Oklahoma's restrictions on out-of-state water sales.

The irony of the latest idea is that the two parties were once at odds in their approach to buying Oklahoma water.

The history

Tarrant Regional began fighting Oklahoma's restrictions on out-of-state water sales almost three years ago. Irving and the Hugo Municipal Authority launched a parallel federal challenge last year.

Tarrant Regional officials initially asked Irving not to strike a water deal and to refrain from filing a court challenge. They called Irving's approach "very speculative."

But as Irving and Hugo now wait for a federal judge's ruling, Tarrant Regional officials are trying to rebuild their case.

It was dealt a major blow last month, and officials hope an agreement with Irving and Hugo bolsters their arguments.

WHAT'S NEXT Oklahoma purchase

The Irving City Council will consider negotiating with the Tarrant Regional Water District on Thursday about water it plans to buy from Hugo Lake in Oklahoma.

The Hugo City Council will also

"We believe that this cooperation between Hugo and the city of Irving and Tarrant Regional will greatly aid both of our causes," said Wayne Owen, Tarrant Regional's planning director.

North Texas planners increasingly view Oklahoma water as critical to this area.

They say our neighbor has plenty to sell, and getting that water is the best possible solution to this region's rapidly growing water needs.

Oklahoma's actions

Oklahoma officials initially put a moratorium on water sales outside of the state, saying they need to ensure their residents' current and future water supply before any is sold to Texas.

A study on Oklahoma's current supply and projected demand is expected to be complete in 2011.

Tarrant Regional's lawsuit, filed in 2007, claims among other things that Oklahoma's moratorium violates the interstate commerce provision of the U.S. Constitution.

But the water district didn't have a deal to buy water. Instead, it applied for its own water permit with the Oklahoma water board.

Irving took a different approach.

The city agreed to buy water from Hugo Lake in southeastern Oklahoma. Irving and Hugo authorities then used that

have to approve such an agreement, but it may not do so until January.

Tarrant Regional Water District plans to file an amended lawsuit in U.S. District Court by the end of this week.

agreement as the crux of their own federal lawsuit challenging Oklahoma's rules.

U.S. District Court Judge Joe Heaton dealt Tarrant Regional's case a major blow last month in dismissing the agency's arguments relating to the commerce and supremacy clauses of the Constitution.

Heaton called Tarrant Regional's argument that the moratorium hindered future deals "too speculative and uncertain."

But he also denied Oklahoma's claims that the lawsuit was moot since revisions to state law effectively repealed the moratorium.

Heaton gave Tarrant Regional until this week to amend its lawsuit to bolster its claims.

Tarrant Regional then approached Irving officials about the water their city already has agreed to buy from Hugo.

"Obviously, they are still interested in pursuing bringing

water to the area and they view our case as an opportunity to do that," said Irving Mayor Herbert Gears.

Preliminary stages

Irving City Attorney Charles Anderson said talks are still preliminary. He said he could not provide details on whether the talks could lead to some sort of water sales or piping agreement.

Possibilities include Tarrant Regional buying from the Hugo Municipal Authority some of the water Irving has previously agreed to purchase. Or it could mean Irving selling to Tarrant Regional some of what it hopes to buy from Hugo.

Irving has long been a rarity among North Texas large suburbs in that it supplies most of its own water. In recent years, city leaders have made becoming a regional supplier a top priority.

Anderson said that an agreement between Irving, Hugo and Tarrant Regional would be likely to have little effect on the city's lawsuit. But he said it could help Irving become a water provider to a regional water district.

"I think this shows the strategy we've come up with is a good one," Anderson said.

TARRANT REGIONAL WATER DISTRICT

Cities make progress on possible water sales

By BILL HANNA
bhanna@star-telegram.com

FORT WORTH — The cities of Irving and Hugo, Okla., approved going forward Thursday with memorandums of understanding with the Tarrant Regional Water District on the possible sale of water.

But Wayne Owen, the water district's planning director, said the agreement had been "substantially revised" and was still being reviewed by the water district staff. He could not say whether the water district would approve the revisions.

The water district wants the contract to demonstrate to a federal judge that it had exhausted all efforts to obtain water from Oklahoma as it

prepares to file an amended complaint Friday in its lawsuit against Oklahoma. The lawsuit was partially dismissed last month, and the water district has been forced to revise its lawsuit to meet the judge's concerns that it has legal standing to seek water from Oklahoma and that it has sought other ways to get it besides the lawsuit.

In 2008, Irving signed a contract with Hugo to obtain water. Hugo then sued the state of Oklahoma to prevent it from blocking out-of-state water sales. That lawsuit is pending before a federal district judge.

BILL HANNA, 817-390-7698

Star-Telegram
Saturday, December 19, 2009

NATURAL RESOURCES

Water district negotiating deal with Oklahoma tribe

An agreement with the Apache Tribe could bring water north to North Texas.

By BILL HANNA
bhanna@star-telegram.com

The Tarrant Regional Water District, vowing to vigorously pursue its lawsuit against Oklahoma, revealed Fri-

day that it has entered into negotiations with the Apache Tribe of Oklahoma as it continues to search for water north of the Red River that it can buy.

The water district unveiled its memorandum of understanding with the Apache Tribe in a court filing in response to last month's ruling by

U.S. District Judge Joe Heaton that dismissed part of the lawsuit.

The recent legal activities have opened up another avenue for us to pursue with Native American Tribes in Oklahoma to potentially purchase excess water controlled by these sovereign entities," Jim Oliver, general manager of the Tarrant water district,

said in a statement.

"... As we have said for years, we prefer to negotiate instead of litigate. But at this juncture, we believe our options are clear — continue our legal pursuit while at the same time seriously explore an attractive alternative with the Native American Tribes in Oklahoma."

Efforts to reach officials with the Apache Tribe for comment were unsuccessful.

The complaint is the latest turn in a legal battle that began nearly three years ago when the water district sued Oklahoma and simultaneously applied for permits with the Oklaho-

More on WATER on 108



Media Updates

The Dallas Morning News

Saturday, January 2, 2010

WATER SUPPLY

Dallas taps Lake Fork

It's city's first new source since Lake Ray Roberts went online in the 1980s

By RUDOLPH BUSH
Staff Writer
rbush@dallasnews.com

After decades of planning, years of construction and hundreds of millions of dollars in costs, water is finally beginning to flow out of Dallas taps from Lake Fork, in East Texas.

It is the first new source of water for Dallas and surrounding cities since the late 1980s, when Lake Ray Roberts was added to the Dallas Water Utilities system.

Few residents give much thought to where their water comes from, but no issue is as important as a reliable water supply to the region's future.

Thanks in part to a few wet years, Dallas hasn't had a real

See DALLAS Page 5B

The Dallas Morning News

Sunday, January 3, 2010

Our Resolve

Hey, Texas: Next year is this year, and these are the issues we'll push in 2010

Water

The goal:

■ Identify funding for the state's 50-year water strategy.

The plan:

State leaders saw the Texas' looming water crisis coming from a mile away. With a burgeoning population and scarce resources, they recognized that a plan was needed.

Local planners got to work on a 50-year strategy that includes more of everything — stepped-up conservation, increased efforts to preserve aquifers and the creation of new lakes. Unfortunately, that was the easy part.

Paying for the plan is the hard part at hand. And state leaders have been procrastinating.

Just as Texas' transportation issues can't be left to languish when the Legislature is not in session, this off-year is an important one when it comes to water planning. Texas needs a dedicated revenue stream to fund its long-term strategy.

Otherwise, these proposals will be subjected to legislative budget battles, where a host of issues duke it out for limited funds every two years. Water simply is too critical to Texas' well-being and its ability to grow to face such an uncertain future.

Just as the gas tax is supposed to pay for transportation projects, a reliable revenue stream is essential to ensuring that the water plan continues to move forward.

State Sen. Kip Averitt of Waco has been the plan's champion, but North Texas lawmakers must show leadership and lend their voices to this issue as well. During 2010, they should settle on the funding mechanism and begin building consensus.

Recent droughts, the changing climate and our growing population all suggest we will be in serious trouble if we don't act now.

While legislators often like to live dangerously when it comes to deadlines, calling emergency sessions and cobbling together compromises as the clock winds down, that's not an option when it comes to water. Foresight is essential.

The state has a strategy. This year, we must work on a payment plan.





Update on Overall Status and Next Steps

Tom Gooch
Freese and Nichols, Inc.



Next Steps

- Finalize Remaining Chapters (4, 5, 7, 8, 10)
- January-March
 - Email draft chapters as they are available
 - RCWPG review chapters & provide comments via email
- March 8th – All Draft Chapters will be posted
- March 15th – RCWPG Meeting to consider approval of all chapters & IPP



Other Discussion

Jim Parks



Other Discussion

- Updates from the Chair
 - Update on Study Commission on Region C Water Supply
 - Update on Water Conservation Advisory Council
- Report from Regional Liaisons
- Report from GMA 8 Liaisons

Other Discussion

- Report on Trinity-San Jacinto-Galveston Bay Stakeholders Committee
- Report on Sabine-Neches-Sabine Lake Bay and Bay Area Stakeholders Committee
- Report from Texas Water Development Board
- Report from Texas Department of Agriculture

Other Discussion

- Report from Texas Parks and Wildlife Department
- Confirmation of Date and Location of Next Meeting (March 15, 2010, 1:00 pm, TRA Central Wastewater Plant)
- Public Comments



Thank you for attending.

Materials are available at
www.regioncwater.org

