

Study Commission on Region C Water Supply

Final Draft Report to the 82nd Legislature

December 2010

THE STUDY COMMISSION ON REGION C WATER SUPPLY

SENATOR FLORENCE SHAPIRO, Co-Presiding Officer

REPRESENTATIVE STEPHEN FROST, Co-Presiding
Officer

REPRESENTATIVE JODIE LAUBENBERG, Secretary

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December 1, 2010

The Honorable Rick Perry, Governor of Texas
The Honorable David Dewhurst, Lieutenant Governor of Texas
The Honorable Joe Straus, Speaker of the House of Representatives of Texas
Texas State Capitol
Austin, Texas 78721

Dear Governor Perry, Lieutenant Governor Dewhurst, Speaker Straus, and Members of the Legislature:

The Study Commission on Region C Water Supply hereby submits its report including findings and recommendations for consideration by the Eighty-second Legislature.

Respectfully Submitted,

Co-Presiding Officer Senator Florence Shapiro

Co-Presiding Officer Representative Stephen Frost

Representative Jodie Laubenberg

Mr. Thomas Duckert

Mr. Jim Parks

Mr. Richard LeTourneau

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Introduction

The Study Commission on Region C Water Supply (Study Commission) was established by Senate Bill 3, Section 4.04, 80th Legislative Session (Senate Bill 3). Membership of the Study Commission was appointed by the regional water planning groups of Regions C and D. A map of the regional water planning areas of the state is included as Appendix A. The Texas Water Development Board (TWDB), on request of the Study Commission (communications from Study Commission included in Appendix B), provided staff support and technical assistance to carry out its duties. Additionally, TWDB provided funding for the Study Commission in the amount of \$596,200. The Study Commission is abolished and Section 4.04 of Senate Bill 3 expires December 31, 2011.

Background

Region C Planning Area

The Region C Regional Water Planning Area includes all or parts of 16 counties. Overlapping much of the upper portion of the Trinity River Basin, Region C also includes smaller parts of the Red, Brazos, Sulphur, and Sabine river basins (see Appendix A). The Dallas-Fort Worth metropolitan area is centrally located in the region, and its surrounding counties are among the fastest growing in the state. Major economic sectors in the region include service, trade, manufacturing, and government.

Region D Planning Area

The North East Texas Regional Water Planning Area (Region D) encompasses all or parts of 19 counties (see Appendix A). Largely rural and characterized by numerous small communities and some medium-sized municipalities, the region includes the cities of Longview, Texarkana, and Greenville. The planning area overlaps large portions of the Red, Sulphur, Cypress, and Sabine river basins and smaller parts of the Trinity and Neches river basins. The North East Texas Region's main economic base is agribusiness, including a variety of crops, as well as cattle and poultry production. Timber, oil and gas, and mining are significant industries in the eastern portion of the region. In the western portion of the region, many residents are employed in the Dallas-Fort Worth metropolitan area.

During the development and approval of the 2006 Region C Regional Water Plan, the Region D Regional Water Planning Group amended their 2001 Regional Water Plan to remove the recommendation that Marvin Nichols be designated as a unique reservoir site. The Region D Regional Water Planning Group adopted their 2006 Regional Water Plan with an objection to the inclusion of the Marvin Nichols Reservoir as a water management strategy in any regional water plan or the state water plan. It was the opinion of the Region D Regional Water Planning Group that the inclusion of Marvin Nichols in the Region C plan constituted an interregional conflict. Because there was no over-allocation of sources of supply, the governing board of the TWDB approved the 2006 Region C Regional Water Plan.

Members

As required by Senate Bill 3, membership on the Study Commission consists of three members appointed by the Region C Regional Water Planning Group and three members appointed by the Region D Regional Water Planning Group. A Study Commission member could be, but was not required to be, a voting member of the appointing regional water planning group. Study Commission members were to select a presiding officer. Region C appointed their members October 1, 2007. Region D appointed their members August 15, 2007 (see Appendix C).

Members include:

Region C	Region D
Senator Florence Shapiro, Co-Presiding Officer	Representative Stephen Frost, Co-Presiding Officer
Representative Jodie Laubenberg, Secretary	Thomas Duckert, Environmental Health & Safety Officer, International Paper
Jim Parks, Region C Chairman, Administrative Officer of Study Commission	Richard LeTourneau, Region D Chairman

Legislative Charges

The Study Commission was charged in Senate Bill 3 with the following:

- (a) The Study Commission on Region C Water Supply is established. The study commission consists of six members as follows:
 - (1) three members appointed by the Region C Regional Water Planning Group; and
 - (2) three members appointed by the Region D Regional Water Planning Group.
- (b) A member of the study commission may be, but is not required to be, a voting member of the regional water planning group that appointed the member.
- (c) The members of the study commission shall select a presiding officer from among the members.
- (d) Members of the study commission are not entitled to compensation for service on the study commission but may be reimbursed for travel expenses incurred while conducting the business of the study commission, as provided for in the General Appropriations Act.
- (e) The study commission shall:
 - (1) review the water supply alternatives available to the Region C Regional Water Planning Area, including obtaining additional water supply from Wright Patman Lake, Toledo Bend Reservoir, Lake Texoma, Lake O' the Pines, other existing and proposed reservoirs, and groundwater;
 - (2) in connection with the review under Subdivision (1) of this subsection, analyze the socioeconomic effect on the area where the water supply is located that would result from the use of the water to meet the water needs of the Region C Regional Water Planning Area, including:

- (A) the effects on landowners, agricultural and natural resources, businesses, industries, and taxing entities of different water management strategies; and
 - (B) in connection with the use by the Region C Regional Water Planning Area of water from Wright Patman Lake, the effect on water availability in that lake and the effect on industries relying on that water availability;
- (3) determine whether water demand in the Region C Regional Water Planning Area may be reduced through additional conservation and reuse measures so as to postpone the need for additional water supplies;
- (4) evaluate measures that would need to be taken to comply with the mitigation requirements of the United States Army Corps of Engineers in connection with any proposed new reservoirs, including identifying potential mitigation sites;
- (5) consider whether the mitigation burden described by Subdivision (4) of this subsection may be shared by the Regions C and D Regional Water Planning Areas in proportion to the allocation to each region of water in any proposed reservoir;
- (6) review innovative methods of compensation to affected property owners, including royalties for water stored on acquired properties and annual payments to landowners for properties acquired for the construction of a reservoir to satisfy future water management strategies;
- (7) evaluate the minimum number of surface acres required for the construction of proposed reservoirs in order to develop adequate water supply; and
- (8) identify the locations of proposed reservoir sites and proposed mitigation sites, as applicable, as selected in accordance with existing state and federal law, in the Regions C and D Regional Water Planning Areas using satellite imagery with sufficient resolution to permit land ownership to be determined.
- (f) The study commission may not be assisted by any person that is a party to or is employed by a party to a contract to perform engineering work with respect to site selection, permitting, design, or construction of the proposed Marvin Nichols reservoir.
- (g) The Texas Water Development Board, on request of the study commission, may provide staff support or other assistance necessary to enable the study commission to carry out its duties. The Texas Water Development Board shall provide funding for the study commission, including funding of any studies conducted by the study commission, from the regional planning budget of the board.
- (h) Not later than December 1, 2010, the study commission shall deliver a report to the governor, lieutenant governor, and speaker of the house of representatives that includes:
- (1) any studies completed by the study commission;
 - (2) any legislation proposed by the study commission;
 - (3) a recommendation as to whether Marvin Nichols should remain a designated reservoir site; and
 - (4) other findings and recommendations of the study commission.
- (i) The study commission is abolished and this section expires December 31, 2011.

Summary of Study Commission Activities

The Study Commission, through its administrative office North Texas Municipal Water District, contracted with Espey Consultants, Inc. to review water supply alternatives and socioeconomic impacts. This work was conducted in two phases and the scopes of work and budgets are included in Appendix D. The final results of this work are included in Appendix Q.

Technical assistance was also received from multiple entities. The TWDB provided information on the regional water planning process and a summary of the 2006 Region C Regional Water Plan at the July 29, 2008 meeting (Appendix F). The Sabine River Authority of Texas provided information on their operations at the November 20, 2009 meeting (Appendix J). Alan Plummer and Associates provided information on water conservation in Region C at the March 11, 2010 meeting (Appendix K). The TWDB also provided information on conservation and reuse in Region C at the March 11, 2010 meeting (Appendix K). The United States Army Corps of Engineers provided information on the federal permitting and mitigation determination processes and the Sulphur River Basin Feasibility Study at the March 11, 2010 meeting (Appendix K). The Texas Forestry Service provided information on the timber industry at the March 11, 2010 meeting (Appendix K). Texas A&M provided information on land use in the proposed Marvin Nichols Reservoir Site at the June 21, 2010 meeting (Appendix M). The TWDB provided information on groundwater in the study area, inundation acreage, and innovative compensation at the June 21, 2010 meeting (Appendix M).

February 13, 2008, Open Public Meeting

The first meeting of the Study Commission was held in Richardson, Texas on February 13, 2008. A copy of the agenda, minutes, and meeting materials are provided in Appendix E. Public comment was received and is included in Appendix P.

July 29, 2008, Open Public Meeting

The second meeting of the Study Commission was held in Texarkana, Texas on July 29, 2008. A copy of the agenda, minutes, presentations, and meeting materials are provided in Appendix F. Presentations were provided by Study Commission members Thomas Duckert and Jim Parks and TWDB Executive Administrator Kevin Ward. Public comment was received and is included in Appendix P.

November 12, 2008, Field Trip and Open Public Meeting

The third meeting of the Study Commission was held in Mount Pleasant, Texas on November 12, 2008. A copy of the agenda, minutes, and meeting materials are provided in Appendix G. Prior to the meeting, Study Commission members were led on a field trip by local landowners to view the site of the proposed Marvin Nichols Reservoir. Public comment was received and is included in Appendix P.

January 12, 2009, Open Public Meeting

The fourth meeting of the Study Commission was held in Austin, Texas on January 12, 2009. A copy of the agenda, minutes, and meeting materials are included in Appendix H. Public comment was received and is included in Appendix P.

September 24, 2009, Open Public Meeting

The fifth meeting of the Study Commission was held in Texarkana, Texas on September 24, 2009. A copy of the agenda, minutes, presentations, and meeting materials are included in Appendix I. A presentation was given by David Harkins with Espey on the results from the Phase 1 of contracted work. Public comment was received and is included in Appendix P.

November 20, 2009, Open Public Meeting

The sixth meeting of the Study Commission was held in Richardson, Texas on November 20, 2009. A copy of the agenda, minutes, and meeting materials are included in Appendix J. A handout and discussion was provided by Danny “Butch” Choate of the Sabine River Authority of Texas. Public comment was received and is included in Appendix P.

March 11, 2010, Open Public Meeting

The seventh meeting of the Study Commission was held in Richardson, Texas on March 11, 2010. A copy of the agenda, minutes, and meeting materials are included in Appendix K. The federal reservoir permitting process was discussed by Meg Gaffney-Smith, Stephen Brooks, and Jennifer Walker of the United States Army Corps of Engineers. Information was provided by Charlie Gee of the Texas Forestry Association. Presentations were provided by Alan Plummer of Alan Plummer and Associates and Dan Hardin of the TWDB on water conservation and by Marcia Hackett on the Sulphur River Basin Feasibility Study. Public comment was received and is included in Appendix P.

April 26, 2010, Open Public Meeting

The eighth meeting of the Study Commission was held in Texarkana, Texas on April 26, 2010. A copy of the agenda, minutes, presentations, and meeting materials are included in Appendix L. A presentation was provided by David Harkins of Espey on the status of Phase 2 work. Public comment was received and is included in Appendix P.

June 21, 2010, Open Public Meeting

The ninth meeting of the Study Commission was held in Mount Pleasant, Texas on June 21, 2010. A copy of the agenda, minutes, presentations, and meeting materials are included in Appendix M. Presentations were provided by David Harkins of Espey on the status of the Phase 2 work; Jack Stowe and Connie Cannady of Jack Stowe & Co. on socio-economic effects in the study area; Robert Mace of the TWDB on groundwater in the study area; Alan Jones of Texas A&M University on land use; and Temple McKinnon of the TWDB on innovative compensation and surface acre inundation. Public comment was received and is included in Appendix P.

October 2010, Open Public Meeting

The tenth meeting of the Study Commission was held in Richardson, Texas on October 4, 2010. A copy of the agenda and minutes are included in Appendix N. Public comment was received and is included in Appendix P.

November 2010, Open Public Meeting

Meeting materials to be included in Appendix O.

Findings

The Study Commission finds that:

- 1) The population of Region C is projected to grow from 5,254,722 in the year 2000 to 9,093,847 in 2030 and 13,087,849 in 2060.

The source for Finding No. 1 is the 2007 State Water Plan and the Texas Water Development Board's presentation to the Study Commission during a public meeting on March 11, 2010.

- 2) Existing water supplies in Region C total 1,513,839 acre-feet per year. With the projected 2060 water demand of 3,311,217 acre-feet per year, the Region has a shortage of 1,797,378 acre-feet per year by 2060.

The source for Finding No. 2 is the 2007 State Water Plan and the Texas Water Development Board's presentation to the Study Commission during a public meeting on March 11, 2010.

- 3) The future water supply needs of Region C cannot be met by conservation alone or by the development of water supply projects strictly within Region C.

The source for Finding No. 3 is Texas Water Development Board's presentation by Dr. Dan Hardin entitled "Impacts of Municipal Conservation and Reuse Strategies in Region C" as presented to the Study Commission during a public meeting on March 11, 2010.

- 4) Region C has incorporated a multiple water management strategy approach that involves a significant development of supply located within the Region D planning area, as well as possible future water supplies from Lake Texoma, Toledo Bend Reservoir, Oklahoma, and two new reservoirs located within Region C.

The source for Finding No. 4 is the 2007 State Water Plan.

- 5) Existing groundwater supplies in Region C are declining and cannot support the projected population growth over the planning period.

The source for Finding No. 5 is the Texas Water Development Board's presentation by Dr. Robert Mace entitled "Groundwater in Region C and D" as presented to the Study Commission during a public meeting on June 21, 2010.

- 6) Due to the narrow focus of previous socio-economic studies, a specific methodology needs to be developed that recommends techniques and/or guidelines for conducting future socioeconomic analysis so as to produce analyses, which are significantly broad in scope. Previously, studies

have been done on different Marvin Nichols projects. No formal socioeconomic impact analysis has been conducted on Wright Patman Lake or Lake O' the Pines as possible water supply alternatives.

The source for Finding No. 6 is the Phase I and II Report to the Study Commission as prepared by Espey Consultants and included in Appendix Q.

- 7) If all existing or developed surplus water supply in Region D is made available to meet Region C's long-term needs, sufficient water may not be available to meet unanticipated industrial and/or population and/or instream flow needs in Region D towards the end of the current planning period.

The source for Finding No. 7 is the 2007 State Water Plan.

- 8) If Region C achieves the same level of gallons per day per capita (GPCD) as Region D, additional water supplies will be needed to offset a projected 750,000 acre-feet per year deficit in Region C by 2060.

The source for Finding No. 8 is the Texas Water Development Board's presentation by Dr. Dan Hardin entitled "Impacts of Municipal Conservation and Reuse Strategies in Region C" as presented to the Study Commission during a public meeting on March 11, 2010.

- 9) As shown in the 2010 Region C Water Plan, Region C has implemented and/or will implement more conservation and reuse strategies to meet future water supply needs than any other planning region in the State of Texas.

The source for Finding No. 9 is the 2007 State Water Plan and the 2011 Initially Prepared Plan by Region C.

- 10) The intent of mitigation is to achieve the federal goal of "no net loss of wetlands." The goal of "no net loss of wetlands" is part of the purpose of the federal Clean Water Act. The determination of what exactly must be mitigated and how it must be mitigated is established during the permitting stage of a project. For planning purposes, it is possible to anticipate some of the mitigation requirements by reviewing the current law involving mitigation and making reasonable inferences about the application of those laws to possible projects. Since the application of the mitigation laws have been adjusted in the last five years and the application of the mitigation laws using the current guidance is relatively new, it is not possible to determine with certainty the exact location or type of mitigation for any project until the decisions are made for that particular project.

The source for Finding No. 10 is the U.S. Army Corp of Engineer's presentation to the Study Commission during a public meeting on March 11, 2010.

- 11) Current mitigation laws demonstrate a preference for mitigation banking and it is possible for some portion of the mitigation areas to be outside of the basin where the impacts are located. It is also possible for the mitigation areas to be out of kind in relation to the impact that is being mitigated.

The source for Finding No. 11 is the U.S. Army Corp of Engineer’s presentation to the Study Commission during a public meeting on March 11, 2010.

- 12) Innovative methods of compensation to property owners affected by a water supply project have been considered by the 80th and 81st Legislature; however, no consensus has been reached nor has any legislation passed relating to this issue. This issue will require further evaluation by future legislatures.

The source for Finding No. 12 is the Texas Water Development Board’s presentation to the Study Commission during a public meeting on June 21, 2010.

- 13) The minimum number of surface acres required for the construction of Marvin Nichols Dam Site 1A or for increasing the operating elevation of Wright Patman is shown in tables that follow:

Marvin Nichols Dam Site 1A			Wright Patman		
Elevation	Acres	Yield	Elevation	Acres	Yield
318.2	48,660 ⁽¹⁾	495,300	228.6	⁽²⁾	363,717
328	67,392 ⁽¹⁾	612,300	230.0	34,882	514,505
			235.0	⁽²⁾	669,790
			240.0	56,966 ⁽¹⁾	790,800

⁽¹⁾ Acres Inundated

No model run is available for these elevations

The source for Finding No. 13 is the Texas Water Development Board’s presentation to the Study Commission during a public meeting on June 21, 2010, and from the Phase I and Phase II Report to the Study Commission as prepared by Espey Consultants and included in Appendix Q.

- 14) In order to identify the locations of proposed reservoir sites and proposed mitigation sites, a study titled “Sulphur River Basin Feasibility Study” as developed by the U.S. Army Corps of Engineers Fort Worth Division should be completed as quickly as possible.

The source for Finding No. 14 is the Phase I and II Report to the Study Commission as prepared by Espey Consultants and included in Appendix Q.

15) The available volume out of Toledo Bend for upper basin needs and Region C needs is approximately 500,000 – 700,000 acre-feet per year.

The source for Finding No. 15 is the Phase I and Phase II Report to the Study Commission as prepared by Espey Consultants and included in Appendix Q.

Recommendations

The Study Commission recommends that:

- 1) A study titled “Sulphur River Basin Feasibility Study” as developed by the U.S. Army Corps of Engineers Fort Worth District be completed as quickly as possible.
- 2) Before a new reservoir is constructed in Region D to serve water needs in Region C, additional water supplies must first be developed to the maximum extent possible from Wright Patman Reservoir and such supply determined to be surplus shall be made available to Region C in a manner equivalent to a similar amount of water supply being made available from the Marvin Nichols project.
- 3) Sites designated as unique for the construction of a reservoir should remain so designated as long as the site is included in the State Water Plan.
- 4) To the extent possible, mitigation of any project developed in Region D to serve water needs in Region C shall be shared by both Regions based on permanency of supply and amount of water supply furnished to Region C.
- 5) The Texas Water Development Board (TWDB) should establish a methodology to be used in Texas for socioeconomic analysis of water development projects.
- 6) Further study be done on the available water volume from Toledo Bend by Region C Water Planning Group.
- 7) No new legislation is proposed.