TRANS-TEXAS WATER PROGRAM

SOUTHEAST AREA

Planning Memorandum

Enhanced Public Participation

August 14, 1995

Sabine River Authority of Texas
Lower Neches Valley Authority
San Jacinto River Authority
City of Houston
Brazos River Authority
Texas Water Development Board

Preface

This document is a product of the Trans-Texas Water Program: Southeast Area. The program's mission is to propose the best economically and environmentally beneficial methods to meet water needs in Texas for the long term. The program's four planning areas are the Southeast Area, which includes the Houston-Galveston metropolitan area, the North-Central Area (including Austin), the South-Central Area (including Corpus Christi) and the West-Central Area (including San Antonio).

The Southeast Area of the Trans-Texas Water Program draws perspectives from many organizations and citizens. The Policy Management Committee and its Southeast Area subcommittee guide the program; the Southeast Area Technical Advisory Committee serves as program advisor. Local sponsors are the Sabine River Authority of Texas, the Lower Neches Valley Authority, the San Jacinto River Authority, the City of Houston and the Brazos River Authority.

The Texas Water Development Board is the lead Texas agency for the Trans-Texas Water Program. The Board, along with the Texas Natural Resource Conservation Commission, the Texas Parks & Wildlife Department and the Texas General Land Office, set goals and policies for the program pertaining to water resources management and are members of the Policy Management Committee.

This is the final version of this document.

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1.

Introduction

The sponsors of the Southeast Area of the Trans-Texas Water Program (TTWP) recognized that directly involving members of the public in the water planning process was a necessity, if the program were going to be successful. The first step was taken by forming a Technical Advisory Committee (TAC) consisting of representatives of agencies, organizations and the private sector to assist the planning team. Additionally, the firm of Blackburn and Carter, with the assistance of Ekistics Corporation, was engaged to broaden the initial public participation effort on two fronts: by identifying individuals and groups who may not have been included in the Technical Advisory Committee process, and by conducting one-on-one interviews with TAC members and others to ensure that issues were identified in time to be addressed within the study and planning process.

The basic idea was that a meaningful public participation program brings citizens into the planning process and provides for program response to citizen concern. Early and meaningful citizen involvement may resolve major disputes and avoid future litigation. To the extent that disputes cannot be resolved during the planning process, it is the intention of the planning team to initiate additional dispute resolution approaches.

This technical memorandum summarizes the results of the first phase of the enhanced public participation effort. It describes the methods used for interviews, briefly discusses comments made during the interviews and identifies the issues that were raised. An analysis of the issues to be addressed and the applicability of dispute resolution concepts to those issues is presented. Finally, specific recommendations are made for responding to many of the issues.

2.
Interviews

Over the period from October 1994 to March 1995, a series of 70 personal interviews were scheduled and conducted by the Blackburn and Carter team. The interviews were conducted using an interview protocol (see attachment A) that provided structure, but that allowed for open-ended discussion. This was not an opinion poll; not all questions were asked of all respondents. Interview participants were encouraged to discuss additional topics as they deemed appropriate. The purpose of the interviews was to identify individual or group concerns that might affect aspects of the Trans-Texas Water Program in the Southeast Area and ways of addressing those concerns.

To provide an information base for those who may not have received or read Phase I documents for the Southeast Area, a three-page report summary was given to each participant. Figure 6.1 from the Phase I report, which illustrated possible transfer pathways, also was provided. Additionally, participants were provided with two tables of projected water requirements and existing supply estimates excerpted from Phase I reports. These tables presented forecasts in terms of two types of flow, million gallons per day and acre-feet per year. It was noted that these projections would be updated upon completion of the state's consensus water planning process. Participants were assured that remarks would not be attributed to specific individuals in this report. In a very few instances, participants did not wish to be identified at all.

Interview participants included representatives of a number of groups, companies and agencies, including:

Angelina and Neches River Authority
Association of Water Board Directors
Audubon Society - Houston, National
Big Thicket Conservation Association
Brazos River Authority
City of Houston
Clean Air and Water Inc.
Coalition Advocating a Safe Environment
Dupont - Sabine River Works
Environmental Defense Fund of Texas
Galveston Bay Foundation
Greater Houston Partnership
Gulf Coast Conservation Association
Harris-Galveston Coastal Subsidence District
Houston Lighting and Power Company
Jefferson County
League of Women Voters of Texas
Louisiana Department of Natural Resources
Louisiana State University
Lower Neches Valley Authority

National Marine Fisheries Service
National Park Service, Big Thicket National Preserve
Orange County
Sabine County
Sabine Lake Foundation
Sabine River Authority
San Jacinto River Authority
Shelby County
Sierra Club - Golden Triangle, Houston, Lone Star
South East Texas Inc./Beaumont Chamber of Commerce
South East Texas Regional Planning Commission
Sportsmen Conservationists of Texas
Temple-Inland Forest Products
Texas Chemical Council
Texas Committee on Natural Resources
Texas Farm Bureau
Texas General Land Office
Texas Natural Resource Conservation Commission
Texas Parks and Wildlife Department
Texas Water Development Board
Toledo Lake Association
Trinity River Authority
U. S. Corps of Engineers, Fort Worth and Galveston Districts
U. S. Environmental Protection Agency
U. S. Fish and Wildlife Service (Texas and Louisiana)
U. S. Forest Service

Early in the interview process, interviewers met with a subcommittee of the Southeast Policy Management Committee to report on initial findings and determine if any changes in interview procedure were required. No substantive changes resulted; however, the time period over which the interviews were scheduled was lengthened.

In December, the project team met with the Southeast PMC to discuss findings based on completion of about 80% of the interviews. At that time, recommendations, discussed below, were made for changes in the Phase II scope of work to address some of the concerns identified.

3.
Interview Comments and Issues Raised

This chapter summarizes the comments made and the issues raised during the interviews. The sections which follow are intended to be primarily descriptive, although the brief statements of issues related to each comment area reflect the judgment of the interviewers. Sections are presented in the order of the questions on the interview protocol.

3.1. Understanding of TTWP

Knowledge about the TTWP is not widespread. Among those who are familiar with the effort, the defining characteristic of the program is the movement of water, principally from the Sabine River westward. Very few of those who are not directly involved with the TTWP considered the investigation of other water management alternatives to be a very serious effort. Comments such as "Its just a rehash of the old water plans that were tried throughout the years", "We need to take people to where the water is, as opposed to taking water to where the people are" and "The Edwards Aquifer situation in San Antonio is pushing TTWP" were made. Concern was expressed that paying off river authority bonds is a driving force to transfer water from the Sabine basin.

Issues to be addressed related to the general level of understanding of TTWP: credibility of the study and planning program; need for concerted public education and awareness; support for program implementation. There is also a substantial issue of trust for program sponsors and credibility of commitment to alternatives that do not include transfer of water.

3.2. Consensus Water Plan and the TTWP

Some participants were confused about the two major water planning efforts going on simultaneously in the state. Because they see the Consensus Water Plan as a general planning program, they interpreted TTWP as a project (interbasin transfer) development effort and discounted the importance of more general water management alternatives being studied in the Southeast Area. There was concern on the part of some that TTWP would drive the Consensus Water Plan rather than vice versa -- "TTWP is being driven by water hustlers". There was fear that premature action would be taken on the TTWP rather than waiting for the "right" policy answers from the Consensus Water Plan.

The issues to be addressed here include trust and credibility of project sponsors and the agencies and also a need for greater public information

and awareness -- an explanation of the two programs and their interconnection is needed.

3.3. Water Use and Availability Projections

Projected water use and available amounts of water to meet demands were with few exceptions thought to be inaccurate. Environmentalists and others opined that the projections are self-serving for the water supply industry. Many of them are not familiar with the Consensus Water Planning effort and the projections resulting from that program, or the relation between the Trans-Texas Water Plan and Consensus Water Planning. Economic development and local government interests voiced concerns about the differential regional effects of the projections. One participant unequivocally stated that "a fifty-year projection is silly." Because water use and availability projections are the basis from which water management programs are developed, a reasonable level of consensus on "the numbers" is a requisite to a successful TTWP.

The issues to be addressed here are: to prepare reliable projections and inform the public across the southeast region about them; to make certain that the relation between the Consensus Water Plan and the TTWP is clear by presenting Consensus Water Planning projections from a statewide perspective that reconciles regional differences, explaining who produces the numbers and how they are generated.

3.4. Full Cost Approach to Water Pricing

Environmentalists and fiscal conservatives have found common ground in calling for full cost pricing of water projects. Nearly everyone said that full cost pricing, to the extent it can be applied while meeting other social goals such as water supply for the very young or very old, will lower the probability that "bad" development projects will be pursued. Full cost pricing was linked to the concept of "user pays," so that the beneficiaries of a project should bear the entire cost of the project. For environmentalists, the entire cost of the project includes full environmental costs; it is not clear that water industry respondents were using the same calculus.

The issue here is to make certain that costs related to Trans-Texas Water Program alternatives are clearly laid out and that the beneficiaries are identified and the costs assigned appropriately.

3.5. Conservation

Conservation is almost unanimously seen as a necessary first step in meeting long term water needs. Reasons for supporting conservation varied from the idea that conservation would be less expensive than major water transfers to the idea that residents of potential "exporting basins" don't want to export water unless residents of the receiving basin have maximized the use of

resources within their own watershed. Many participants perceived that the City of Houston has done nothing in terms of conservation, noting that the City has very high rainfall and shouldn't need a transfer of water. Some pointed out that the public thinks of water as "free", and called for rates more obviously linked to usage to promote conservation. Environmentalists and others view conservation as a means of delaying or obviating the need for new reservoirs or other water improvement projects.

There was a need expressed for a heirarchy of increasingly stringent conservation measures to be taken before water transfers are effected. Interviewees suggested various methods of conservation, such as recycling "gray" water, dual systems of water delivery--one for drinking water and one for other uses such as watering yards, plumbing fixture changes, zero-maintenance landscaping, and rate structures that promote conservation. This raised the question of how much conservation is enough -- if the City of Houston's water rates were five times those of other areas, would that be enough?

Issues related to conservation include: how much water can be saved by conserving; from what starting point should any requirements for conservation begin; how can conservation savings be verified; what impact will conservation have on water utility revenues dedicated to retiring bond issues and can that impact be mitigated by timing; can conservation provide more flexibility with regard to timing of capital improvements programs.

3.6. Interbasin Transfer of Water

No topic that was discussed during the interviews elicited as much concern as the interbasin transfer of Sabine River water. There was concern that decisions being made today relating to transfers will have a negative effect on meeting water needs in the future. A philosophical concern was expressed about the need for one area to live on its own resources rather than encouraging overdevelopment in that area by transferring water from another area. Many interviewees considered the decision to transfer water to be a political one, and they are especially concerned because the Golden Triangle area lost long-time influential office holders in the last election and is viewed as politically weak at this time. Interview respondents in the Sabine-Neches river basins considered political reality to be "if you have 18 million people who are thirsty, they are going to get the water regardless of what the people in the basin of origin think or want."

There is not widespread knowledge of current interbasin water transfers. Quite a few interviewees thought that a transfer of Sabine River water within the Southeast Area was feasible, although they voiced concerns. Very few thought that a transfer from the Sabine out of the Southeast Area was doable.

Issues related to moving water from the Southeast to areas in central or south-central Texas included ecological problems from dissimilar areas, questions of physical and chemical compatibility of the waters, and the high costs associated with long distance transfers. Any interbasin transfer will be faced with issues related to ecological changes in the basins of origin and receipt (from the conveyance and from the changes in return flows) and any economic consequences from those changes; the potential transport of exotic species; questions about conveyance facility development and its ecological and economic impact on intervening areas, both urban and rural; public acceptability, particularly in the basin of origin; and reversibility of a current decision to transfer water once the infrastructure is in place. The issue of assimilative capacity of a stream in the basin of origin for receipt of waste discharges was brought up as another concern. Within the Sabine-Neches basin, the issues of increased saltwater intrusion from the reduction of fresh water flows and the impact of reduced fresh water inflow to Sabine Lake were important.

For the basin receiving transferred water, the issue of return flows resulting from transfer was raised. For transfers from the Sabine River, the issue of the interstate nature of the watershed and the interests of the State of Louisiana also must be recognized.

3.7. Water Rights Transfers

There was almost unanimous confusion or skepticism among the participants about the contribution water rights transfers could make to the solution of long-term water needs across the state. The question frequently arose as to how rights transfers could help if no water were physically moved. However, nearly everyone recognized that currently unused water rights could be applied to future water demand if those rights were transferred -- they just didn't see how this differed from the current situation.

The major issue is to further develop this concept and better explain how water rights transfers might be used as part of a water management program.

3.8. New Reservoirs

New reservoir development was opposed by almost everyone outside the water supply industry. Participants representing the water supply industry recognized the difficulty (near impossibility) of getting a new major reservoir developed.

The issue raised here is that even a small reservoir development project, such as Allen's Creek, is likely to face concerted opposition from some statewide environmental groups unless the development is coupled with well documented justification, exemplary environmental impact

assessment and appropriate environmental mitigation.

3.9. Toledo Bend Reservoir

The effects on Toledo Bend Reservoir of water withdrawal associated with a large interbasin transfer are unknown at this time. The principal concern voiced was that lake levels should not be greatly altered or allowed to fluctuate widely. This was a concern to recreational fishing interests, local governments and homeowners along the lake shore, and to environmentalists. Environmentalists were also interested in the point of withdrawal relative to impingement and entrainment of acquatic organisms; they pointed out that withdrawals from areas of deeper water would be less damaging on those grounds.

The major issue here is impacts to recreational and homeowner interests around Toledo Bend Reservoir. As soon as practicable, information on the potential size and effects of withdrawals on Toledo Bend Reservoir should be communicated to the interested parties.

3.10. Sabine River

Concerns about the Sabine River centered on historic and current flows and cycles of flow. Most participants recognized that historic patterns had been altered with hydropower generation. As a result, potential for mitigation of future projects exists in restoration of natural bottomland flood patterns. Concern about any reduction in the assimilative capacity of the Sabine River for wastewater discharge was voiced, as well as a concern for water quality at the point of withdrawal. Concern also was voiced about possible erosion effects from withdrawal practices. As the border between Texas and Louisiana, water within the Sabine watershed maintains habitat within and on both sides of the river. Although ownership of the water rights between the two states has been recognized by compact, the state of Louisiana has an interest in the amount of water transferred outside the basin.

The issues raised here are: to determine and minimize any environmental effects on the river of a water transfer; and to coordinate water management on the Texas side of the river with water management on the Louisiana side.

3.11. Sabine Lake

Sabine Lake is an estuary that has been heavily impacted by human activities. The construction of Toledo Bend Reservoir and modification of inflows by hydropower generation; the construction of navigation channels resulting in saltwater intrusion and changes in circulation patterns; and the discharge of wastewater into the system all have altered the natural setting. Because of these activities, some participants believe that improvements to the Sabine Lake system can be achieved by consciously

manipulating flows and circulation. Other participants question the ability to obtain substantial improvements, stating that the system has adjusted and future change risks creating new problems. In both Texas and Louisiana there is a considerable lack of information about the Sabine Lake system and a considerable lack of trust for environmental information and modeling generated by the water development agencies. System modellers pointed out the difficulty of dealing with a system when the policy goals for that system are unknown or possibly conflicting -- "the people concerned with ducks and the people concerned with fish don't agree." Additionally, the interstate nature of the Sabine Lake system was voiced as a concern.

The issues here are the potential negative impacts from water transfers on Sabine Lake; a need for environmental information; and a need to build trust among the participants.

3.12. Alternate Pathways

No clear consensus exists on a preferred water transfer pathway. A number of comments were frequently repeated: 1) There was a consensus to avoid the units of the Big Thicket National Preserve ("a living museum of vegetation and streams"), many pointing out that Congressional action would be required for the National Park Service to grant an easement; 2) There was mixed opinion about crossing U.S. Forest Service lands because some of those lands have been altered; however, the triggering of an Environmental Impact Statement process because of an endangered species, the red-cockaded woodpecker, makes the national forest lands unlikely prospects for pathways; 3) Wetlands and sensitive, valuable ecological areas should be avoided; 4) The use of existing canals might offer the least environmental damage and would minimize right-of-way acquisition, particularly through farmland; 5) The use of pipelines rather than open canals was seen as a way to minimize impacts on the environment, minimize loss of water in transfer and avoid mixing of water with river systems being crossed (although one participant opined that the corrosiveness of water would make such a long pipeline impractical); and 6) Increasing the flow of rivers being crossed might increase erosion problems. Some pathways were recognized as presenting particular opportunities, such as the opportunity to serve the north Harris County area with surface water, or the ability to connect with transfer of water beyond the southeast area.

The issue here is which, if any, of the pathways are appropriate for water transfer. Until the alternative pathways have been further narrowed in number and better defined by further study, the public will not be able to give better definition to their preferences or concerns.

3.13. Economic Development

Water is recognized to be an important natural resource affecting to some unknown degree the future economic development of regions within the Southeast Area. One of the most important questions to be addressed for the Southeast Area of the TTWP is how much water can be transferred from the Sabine River basin without negatively impacting future economic development prospects. The proposed I-69 route from Chicago to Mexico was cited as an example of factors that could greatly change the economic prospects of a given area. One of the proposed I-69 routes could alter economic expectations, particularly in the upper Sabine basin. Several participants pointed out that tourism and families in retirement are extremely important to the economy in southeast Texas and that water bodies such as Toledo Bend Reservoir must be protected.

The central issue to be dealt with related to economic development involves the determination of how much water (if any) can be transferred from East Texas without negatively impacting future economic development of the region. Additionally, appropriate information must be presented to persuade watershed residents that the analysis is credible.

3.14. Our Water

In spite of the fact that the surface water in the state's streams belongs to the State of Texas, the residents of the Sabine (and Neches) watershed tend to view its surface water as "our water". There was general agreement among participants from all areas that some quid pro quo needed to be identified, that the water-contributing basin should receive a benefit and that the water-receiving entities should pay. The "benefit" to the water-contributing basin as envisioned by several respondents was not confined to simply cash payments. Suggestions included job creation in the water-contributing basin, sharing of proceeds from out-of-basin water sales with local governments, establishment of green corridors along the Neches and/or Sabine Rivers and additions to the Big Thicket National Preserve.

The issue here is how to provide sufficient incentive to the water contributing basin to allow transfer to occur. The "our water" issue is emotional as well as rational, and must be given serious consideration. It is discussed further in Section 4.

3.15. Public Participation

Participants characterized little to no flow of information in early public participation efforts. Many participants believed that input from the public was not being sought or wanted; a few

believe that the transfer is a "done deal". Although many groups were represented on the Technical Advisory Committee, TAC members found the large group and the presentation format unconducive to the exchange of information. The brief articles in the TWDB Newsletter, on the other hand, were well received.

Interview respondents thought that the TAC should be part of generating the information for the Trans-Texas studies, not just having the information presented to them upon completion. In addition, they suggested that meetings for the public should be held at night when the public can attend and that public meetings and focus groups should include the interests of those living north of the Toledo Bend Reservoir. A suggestion was made to use the developing concept of quantitative "decision-analysis" to determine which of the alternatives should be selected and if the selected alternative is interbasin transfer, then the appropriate pathway.

Interview participants also suggested that to "spread the word," information should be given at group meetings such as the Sabine Lake Foundation or Galveston Bay Foundation, the League of Women Voters and civic associations, rather than asking the groups to come to TTWP meetings.

Nearly everyone contacted during the personal interviews expressed support for the expanded public participation effort approach and hope that future TTWP meetings could be improved.

While the public is somewhat skeptical of "agency intentions", there seemed to be a great willingness to allow the TTWP process to work its way through.

The major issues raised here are: to increase access to the Southeast Texas TTWP public participation process; to improve the flow of information to and from interested parties and the general public; to address head-on through increased interaction the mutual lack of trust among some of the program participants.

4.

Analysis and Applicability of Dispute Resolution Concepts

This section provides an analysis and interpretation of the information gained from the interviews. One of the major goals of this enhanced public participation project was to identify the types of disputes that were likely to arise in association with the Trans-Texas Water Program and to assist the project team in addressing these potential disputes. This dispute resolution focus is unique in water planning projects in Texas, if not in the United States. The basic concept is simple. If there are disputes that are likely to emerge over this project, then these areas of dispute should be seriously addressed early in the planning process. Otherwise, the dispute will merely fester and emerge later through litigation or through Congressional or Legislative battles.

There are several important aspects to the utilization of a dispute resolution format. First, sufficient investigation must be undertaken to understand the types of disputes, including the technical aspects of the dispute. Second, there must be an honest attempt to address the various issues within the dispute. If an intent to resolve the dispute is lacking, then this process will not succeed. Third, there must be an understanding that these disputes may not be settled in one meeting or discussion. Indeed, many of these disputes will take a substantial amount of time and study to resolve. And fourth, there must be equality, or at least a perception of even-handed negotiation, among disputants.

In the context of this project, dispute resolution is being utilized in a much broader context than is generally used in the legal profession, although the thinking is very similar. Due to the early stage of the Trans-Texas Water Program, there is no legal fight being waged at this time. Instead, this project is at its inception. Here, the challenge is to understand the types of disputes that are likely to arise and to integrate the solution of these disputes into the design of the project, if possible. This means, among other things, that the scope of work may need to be adjusted to consider these various issues and that the project team will have to keep the potential disputes in mind as they undertake their work. If nothing else, this process should assist the project team in better understanding the challenges that they face and the importance of the technical work's social acceptance.

There are two issues that have emerged as the most highly charged issues associated with the Southeast Area Trans-Texas Water Program. These issues arise in the context of the proposal to take water from the Sabine River and distribute this water to the west, at least as far as Houston and possibly to San Antonio. These issues are: 1) impacts to the Sabine Lake system and 2) the "our water" issue. Closely related to the "our water" issue is water conservation. Also subsumed within the "our water" issue are the population and water use projections used for planning. The Consensus Water Planning process has already addressed this issue in an effort to avoid a major dispute. The potential also exists for other disputes to arise and these will be discussed in less detail.

4.1. Impacts to Sabine Lake

The potential exists for a major dispute concerning the impacts of a transfer of water from the Sabine River on Sabine Lake and the adjacent wetlands. On the other hand, there is also ample time and opportunity to attempt to resolve the dispute.

The Sabine Lake system has been heavily impacted by human activities. The construction of the ship channel from Port Arthur to Beaumont and Orange, as well as at one time to Lake Charles, has altered salinity patterns, as has the construction of Toledo Bend Reservoir and the operation of that reservoir for power generation purposes. The potential removal of several hundred thousand acre feet per year of fresh water from Toledo Bend raises substantial concerns on the part of some southeast Texas and Louisiana stakeholders regarding the impact of the freshwater removal on the Sabine Lake ecosystem. This situation is a classic environmental impact dispute with the subscript that the impact is to an already heavily impacted system.

In discussing the impacts to this system with various stakeholders, it became clear that there is no agreement on the baseline for determining impacts. There are some stakeholders who believe that the Sabine Lake ecosystem, although heavily impacted in the past, has adjusted to those impacts and is a well-functioning ecosystem. There are others who believe that the Sabine Lake system has been heavily impacted and has never recovered from those impacts. Neither of these positions is supported with much data or scientific analysis. Indeed, there is a dearth of scientific and technical compilations regarding Sabine Lake. Therefore, an attempt needs to be made to compile information regarding Sabine Lake and to define an environmental baseline about which all parties concerned with impacts to Sabine Lake can agree.

Second, it is clear that the residents near Sabine Lake do not trust or have a high regard for experts from other portions of the state that have come and/or may come to Southeast Texas and tell the local people that the impacts to Sabine

Lake are/may not be significant. In some cases, these experts may lack interaction with local scientists and concerned individuals and may lack direct experience with the ecosystem or local points of interest or concern. Although these experts might be correct in their opinions, these outside parties generally are not trusted by the local stakeholders and are not likely to be believed. If there is no trust or belief, the chances of dispute resolution are limited. This issue of absence of trust of outside experts must be addressed by the Trans-Texas Water Program.

Third, there is a major difference between the manner in which the State of Louisiana views Sabine Lake and the manner in which the State of Texas views Sabine Lake. From the Texas perspective, Sabine Lake has a "hard edge" at the Louisiana border. From the Louisiana perspective, Sabine Lake is part of a system connected to Calcasieu Lake by the Gulf Intracoastal Waterway and a marsh system that allows fresh water to enter the western Louisiana marsh and flow eastward, offsetting salinity intruding from Calcasieu Lake. This difference of perspective is nothing less than a profound difference of conceptual environmental impact models among states. This issue must be addressed by the Trans-Texas Water Program.

Due to these multiple issues associated with Sabine Lake impacts, it is proposed that a Sabine Lake conference be convened to discuss these scientific and technical issues regarding baseline data and conceptual models of environmental impact to Sabine Lake. These problems must be addressed directly if a major dispute over Sabine Lake impacts is to be avoided. As such, the Sabine Lake conference may be seen as part of a dispute resolution process.

4.2. The "Our Water" Issue

The second major issue that must be addressed by the Trans-Texas Water Program is the "our water" issue. The "our water" issue is not an environmental impact issue per se, although environmental impact may be involved. More generally, this issue is a classic regional economic issue where the resource of concern--freshwater-- is located in one geographic area and the area of freshwater need is located in a different geographic area. The concern identified by the project team relates to a potential for the water short areas of Texas to gain a resource that they need for economic growth and development--freshwater--whereas the basin of origin obtains no benefit from the transfer of the water. Additionally, a secondary concern exists that the basin of origin may be losing the ability to have economic growth and development in the future by transferring excess water today.

This is a complicated issue. Under Texas law, all surface waters are "waters of the State" and subject to beneficial use anywhere within the State. The strictest interpretation of this concept would allow water to be transferred from "water rich" to "water poor" areas of the state without

any concern for the interests of the "water rich" basin. The thinking that led to this system would conclude that Texas should provide the infrastructure to allow growth in all areas of the State. If an area lacks sufficient freshwater, then, it is the duty of the State to provide the lacking ingredient for growth, thereby allowing economic development which is assumed to benefit the entire state.

However, there is another way of viewing this issue. If areas of Texas are "water poor" and other areas are "water rich", instead of transferring water to the "poor" areas, why not transfer the economic growth to the "water rich" areas? Or perhaps stated another way, if the water poor areas are left without water, maybe growth slated for water poor areas would relocate to water rich areas. Although this view of economic growth does not consider all aspects that are factors in economic development decisions, there is extremely strong sentiment in the Sabine and Neches basins that "our water" should not be transferred to "water poor" areas; instead, economic growth should be redirected to the "water rich" areas of the state.

At its core, the "our water" is an equity issue. The point being raised by the residents of the Sabine and Neches basins is that water poor areas are gaining economic development by the use of natural resources that were not originally within the basins. On the other hand, what are the basins of origin gaining? What benefits are flowing into the Sabine and Neches basins as freshwater flows out of these basins?

Another aspect of this equity issue concerns water conservation. On the one hand, "water poor" areas of the state are potentially asking for access to excess freshwater from "water rich" areas of the state. On the other hand, residents of "water rich" basins that are being requested to part with their natural resources are asking questions about the water use practices in the "water poor" areas. Specifically, residents within the Sabine and Neches basins are asking to what extent the residents of other areas of the State are practicing water conservation as they request excess water to be transferred from "water rich" areas. In other words, to the extent that there may be a willingness of the residents within the Sabine and Neches basins to allow "their water" to be transferred elsewhere, it should only occur if there is a demonstration by the entities wishing to obtain the water that they are taking every step possible to make efficient and wise use of the water resources that they presently have.

Yet another aspect of this issue concerns the amount of water that is necessary to service future growth and development. In this regard, population and water use projections are extremely important. During the early phase of this dispute resolution project, concerns were voiced regarding the population and water use projections that had been developed through the Texas Water Development Board's Consensus Water Planning process. These projections have

subsequently been revised with extensive local consultation, and most concerns from the Southeast Area appear to have been addressed.

An additional concern is the "reserve" water supply that has been identified as part of the planning for the Southeast Texas region. This reserve, as part of the amount of water unavailable for transfer, is extremely important as an "equity" consideration in the basin of origin if a transfer is to occur.

The full range of equity considerations associated with the "our water" issue needs to be explored. The potential for a major dispute is high as long as there is feeling within the basin of origin that an inequity exists as a result of a proposed project. Substantial effort should be directed toward understanding this "equity" issue arising in the context of "our water" and toward developing solutions. At the least, a serious water conservation program must be established in the importing basin and a long term water supply sufficient to accommodate future growth must be maintained in the basin of origin.

4.3. Other Issues of Concern From a Dispute Resolution Standpoint

Given the scope of the Trans-Texas Water Program, there is a large potential for disputes to arise. Disputes that may potentially arise are summarized in the following sections.

4.3.1. Toledo Bend Reservoir

The major issue associated with Toledo Bend Reservoir would appear to be the elevation of the lake if water were transferred out of Toledo Bend and exported to the west. Extensive recreational use occurs on Toledo Bend with both Texas and Louisiana residents having a major stake in the maintenance of this reservoir. Early assessments of the impact of the proposed transfer indicate relatively minor lake elevation impacts from the proposed transfer, with a minor fluctuation, such as six inches, being projected. As long as this projection remains defensible and believed, this dispute will probably not emerge as a major one. However, the importance of the credibility and reliability of that estimated six-inch fluctuation in lake level cannot be overstated.

4.3.2. Big Thicket

If freshwater were to be moved west from the Sabine River, the potential exists that the Big Thicket National Preserve could be impacted by the canals or pipelines used to move the water. It appears that it is possible to move water from the Sabine westward without impacting the Preserve. As long as such a route exists and is being pursued, a major dispute can be avoided. If the project proposes to cross the Big Thicket National Preserve, a tremendous dispute will erupt. There is similar but less frequently voiced concern about impacts to national forests and private lands in and around the Big Thicket National Preserve due to the fact that many

important stands of "thicket" vegetation are not within the National Preserve. Extreme care should be used by project proponents to ensure that the resource of concern as well as the park boundaries are respected and avoided in transfer pathway selection.

5.
Responses and Strategies for Responding to Issues

Specific responses to the issues encountered during the interview process range from expanding public information and awareness efforts to changing the scope of TTWP work elements to anticipating areas in which dispute resolution may ultimately be needed. There are several specific observations that can be made at the end of Phase I work.

o All program participants should be aware of the sensitivity of many individuals and groups in the Sabine and Neches basins to the notion that they are powerless to stop a transfer of water to the Houston area or beyond. Presentations by project participants should openly and honestly deal with the potential for transfer of water, emphasize the alternatives being examined and provide avenues for input to the process. The "our water" issue will likely continue since it involves some all-encompassing questions of equity, but the issue may be lessened in the intensity of its impact if dispute resolution efforts are seriously pursued.

o A "Sabine Lake Conference" should be undertaken to provide a forum for sharing of available scientific and other information among the academic community, technical staff of agencies and consultants, policy makers and the interested public and for exploring opportunities to benefit the Sabine Lake system through water management. This conference can aid in establishing a baseline of acceptable information on which Trans-Texas Water Program planning can proceed.

o The interests of the State of Louisiana in the Sabine River watershed should be explored and the concurrence of Louisiana should be sought for water management activities within the Sabine basin. The participation of interested groups and individuals from Louisiana in the Sabine Lake Conference is essential.

o Conservation efforts should be emphasized and publicized in both the Sabine/Neches and Houston areas. Conservation is seen as more than just a water management technique; it is also a part of the equity issue involved with the allocation of resources.

o The Phase II public participation effort should be expanded and reoriented. Small focus groups and task forces should be used together with the existing TAC (with additional members). Focus groups are intended to provide substantive information and input to the discussion of several topics of study. Some of

the interest areas identified in conjunction with the interview process lend themselves to the formation of focus groups.

Agricultural water users
Alternate transfer pathways and their impacts
Conservation
Reuse, reclamation, desalinization
Mitigation
Water use projections
Integration of TTWP with Consensus Water Planning
Freshwater inflows
Modelling
Decision-analysis techniques
Houston area development concerns
Galveston Bay system
Golden Triangle development concerns
Sabine Lake system
Toledo Bend Lake concerns
Upper Sabine River Basin concerns

It is suggested that as information is developed in these areas that a focus group be formed. To establish membership in individual focus groups, rather than assigning individuals or organizations to a focus group, a general announcement of the availability of the opportunity to participate in a focus group should be circulated. In addition to the general announcement, specific groups/individuals with known interests should be targeted for inclusion.

o Continue in Phase II the outreach efforts by making presentations to interested groups (such as the League of Women Voters, environmental, professional, civic or other organizations).

The emphasis of public participation efforts in a dispute resolution approach must include avenues for communication as well as information dissemination. The thrust of the enhanced public participation effort has been, and will continue to be, to assure that communication among the interested and affected parties occurs.

ATTACHMENT A: INTERVIEW CONCEPT FOR TRANS TEXAS PROGRAM

The following is a questioning sequence for the Trans-Texas program interviews. The basic approach is to divide the questioning into two general areas - program-wide and regional.

I. Program-Wide Questions

The basic idea is to determine the role/importance of the Sabine River water transfer in public attitudes about the TTWP. It is our intention to inquire into the "equity" issues and the "our water" issue that already has been expressed. The questioning will focus upon the following schematic diagram. (SEE SCHEMATIC 1.) The following is a proposed questioning sequence.

1. If there is no transfer of Sabine River water proposed as part of the Trans-Texas program, do you have any issues or concerns regarding the Trans-Texas program?

2. If there is transfer of Sabine River water proposed as part of the Trans-Texas program, but only within the southeast Texas region (e.g., to Houston area only), do you have any issues or concerns regarding the Trans-Texas program?

Follow-up questions - Try to delve into classes of concerns and methods to resolve these concerns. It is clearly anticipated that concerns will be voiced here regarding "fairness". It is extremely important to try to understand what the fairness issue really is and whether there are methods to address the issue. Further, there is a real necessity to understand conservation and other measures to achieve the most efficient use of water in light of this fairness concern. It would be excellent if we could gain information regarding the level of conservation and other measures that would be sufficient to offset fairness issues.

3. If there is transfer of Sabine River water proposed as part of the Trans-Texas program, and that transfer is proposed to serve both the Houston region and other regions of the state such as San Antonio and/or Corpus Christi, are there any issues or concerns that you have regarding the Trans-Texas program?

Follow-up questions - The important question here is whether there are unique issues or problems raised by the transfer further west that are not otherwise discussed in the answer to question 2. A likely issue here is the volume of transfer. In other words, will more water be removed from the Sabine if that water is being provided to both Houston and San Antonio, for instance. Again, the focus of the follow-up is to try to understand the class of issue and the ability of that issue to be resolved.

II. Regional Questions (to persons in the Sabine River Basin*)

The regional questions will start from the assumption that some volume of water is proposed to be transferred from the Sabine River to Houston and/or points west. The purpose of this round of questioning is to delve into some detail about the concerns and methods of resolving those concerns. A general goal of this proposed methodology is that to the extent more specific issues are identified in the program-wide section above, these specific issues would be picked up and explored in detail in this regional phase.

The regional questions are proposed to be asked utilizing the following diagram (SEE SCHEMATIC 2). The following is a sequence of questions regarding the diagram above.

1. Toledo Bend Reservoir

What concerns do you have about the transfer of water from the Sabine River as it relates to Toledo Bend reservoir?

Follow-ups as appropriate: (1) Identify yourself (and your interest) with regard to the usage of Toledo Bend Reservoir. (2) Would fluctuations in the shoreline be of concern to you? (3) Would the point of withdrawal of water be of concern to you if it were proposed to be within Toledo Bend reservoir? (4) Do you have any concern or even knowledge about hydro-electric power generation from Toledo Bend? (5) What is the magnitude of your concern? Can it be resolved by making changes? If so, what?

2. Sabine River

What concerns do you have about the transfer of water from the Sabine River as it relates to the Sabine River itself?

Follow-ups, as appropriate: (1) Identify yourself (and your interest) with regard to the usage of the Sabine River. (2) Do you have concerns about the point of withdrawal as it relates to the Sabine River? How so? (3) Are you concerned about base flow and peak flow issues? If so, why? (4) What are the magnitude of your concerns? Can they be resolved by making changes to the program? If so, what?

3. Sabine Lake

What concerns do you have about the transfer of water from the Sabine River as it relates to Sabine Lake?

Follow-ups, as appropriate: (1) Identify yourself (and your interest) with regard to the usage of Sabine Lake. (2) Probe into knowledge about freshwater inflow and salinity balance issues. (3) Is your goal the maintenance of the existing Sabine Lake ecological system or are you open to changes in the salinity regime? (4) Do you have faith in computer models associated with salinity? (5) Do you trust the modelers? (6) Would a lock on the Sabine/Neches waterway change your opinion of this program?

4. Transfer Pathways

[See alternative route map, Figure 6.1 from the Phase I report.]

What concerns do you have about the transfer of water from the Sabine River as it relates to the path and method of transfer?

Follow-ups, as appropriate: (1) Identify yourself (and your interest) with the transfer pathway. (2) What are the concerns about the habitat/Big Thicket issues? (3) What are your concerns about wetlands? (4) What are your concerns about endangered species? (5) What are your concerns about bottomland hardwood areas? (6) What other environmental concerns do you have? (7) What are your concerns about the intersection of the transfer and river systems? (8) What are your concerns about the community aspects of the transfer? (9) What are your concerns about flooding?

5. Regional Development

What are your concerns about the transfer of water from the Sabine River as it relates to regional development potential or loss thereof.

Follow-up questions: (1) Ask question regarding northern Sabine River watershed. (2) Ask question regarding lower Sabine/Neches watershed. (Clear concern is whether transfer will impede future economic growth). (3) Probe concern about water demand/water availability projections. What about the differences in water demand projections for the Southeast area?

6. Other follow-up questions.

Probe level of understanding regarding other measures to insure the most efficient use of water.
What type and amount of other measures are acceptable.
How much conservation is required.
What level of reclamation and/or reuse is acceptable.
What other measures are acceptable.

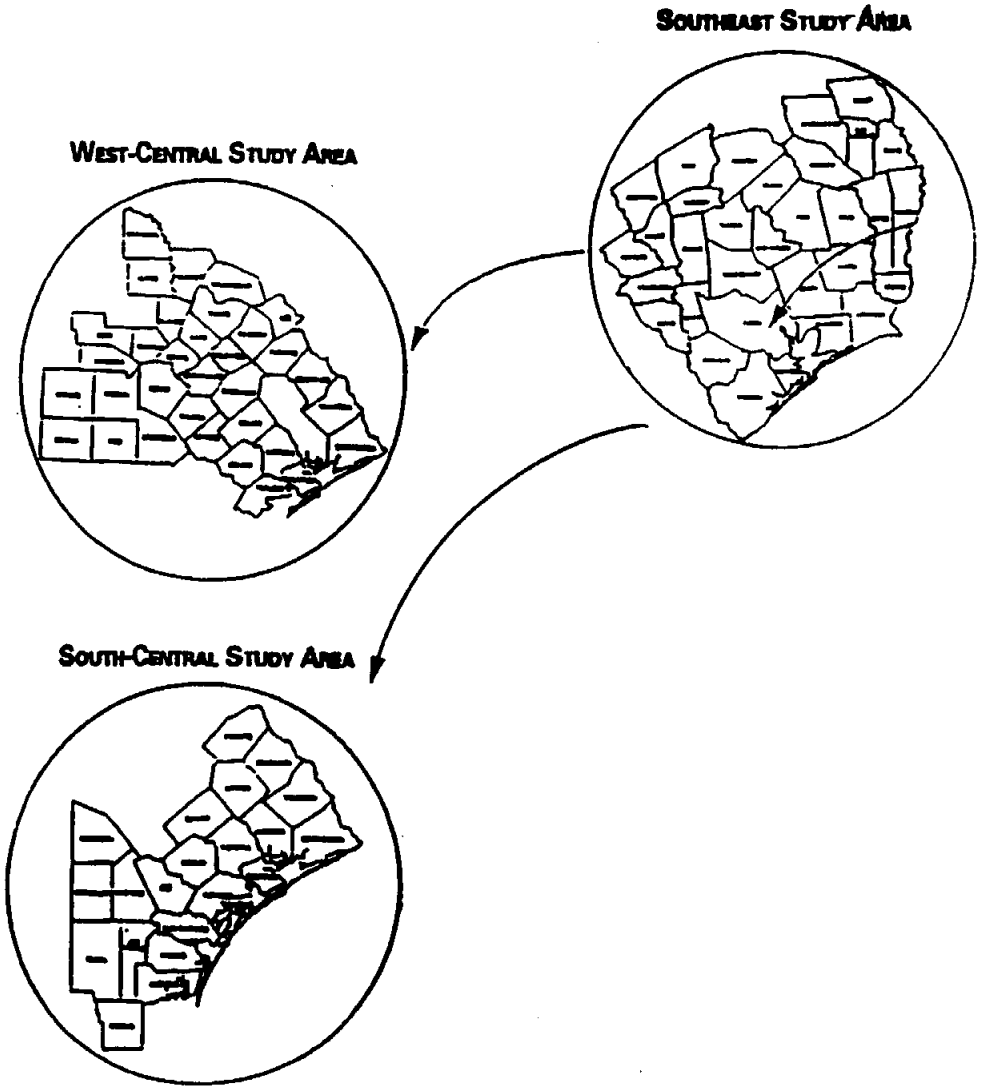
What is your understanding regarding the Neches Salt Water Barrier? Do you have concerns?
What is your understanding regarding other interbasin transfers? Do you have concerns?

III. Public Participation

1. Do you feel TTWP public involvement has been good/bad/indifferent to date?
   What changes would you suggest?
2. Do you believe the information that you get? How would you like to get information. From whom?
3. Do you have suggestions for other persons we should interview?

TRANS-TEXAS WATER PROGRAM

Schematic 1



Schematic 2