An Assessment of Public Participation in the South Central Texas Regional Water Planning Group

by

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Abstract

The purpose of this research is fourfold: (1) to establish an ideal system to involve citizens in water resources planning, (2) to use the model system to assess the citizen participation program in the South Central Texas Regional Water Planning Group, (3) to offer suggestions for improvements to the process, and (4) to make suggestions for future research that could increase the effectiveness of citizen participation in the South Central Texas Regional Water Planning Group and in the Regional Water Planning process as a whole. This research is a case study that uses the methods of document analysis and focused interviews to assess public participation in the South Central Texas Regional Water Planning Group against the ideal model. The results indicate that there are some gaps in the public participation efforts of the South Central Texas Regional Water Planning Group when compared to the ideal model. With modifications, however, a system can be designed that is both measurable and, hopefully, successful.

Chapter 1: Introduction

Citizen Participation in Government

King and Stivers (1998, 11) document United States citizens' disillusionment with public administration and the sense that they have little impact on governmental processes in their book, *Government Is Us*. They propose three ideas that citizens convey when they voice their anti-government feelings. First, government has too much power that is not being used in the best interest of most of its citizens. Second, government is inefficient and routinely wastes taxpayer dollars. Finally, government is remote and disconnected from the ordinary citizen's life (King and Stivers 1998, 12). Their suggested solution to these anti-government sentiments is to transform the governing process (King and Stivers 1998, 195). If public administrators "work to change citizen perceptions by collaborating with citizens; they can in effect, democratize public administration" (King and Stivers 1998, 195).

By democratizing government, public administrators work to create conditions under which both citizens and administrators collaborate on decisions and the implementation of programs in public agencies (King and Stivers 1998, 195). Democratizing government includes active citizenship and active administration. Active citizens do more than vote, pay taxes, or use government services. They share "authority on the basis of which administrative agencies carry out legislated mandates" (King and Stivers 1998, 196). The active administrator, on the other hand, uses his/her discretionary authority to foster collaborative work with citizens (King and Stivers 1998, 195). In other words, the administrator works to actively involve citizens in the governing process.

Since the 1950s attempts have been made to actively involve citizens in the governing process at all levels (Irvin and Stansbury 2004, 55). According to Irvin and Stansbury (2004, 55), an underlying belief is "that if citizens become actively involved as participants in their democracy, the governance that emerges from this process will be more democratic and more effective." Unfortunately, most of the current participation efforts do not work, mainly because the citizen participation is not authentic. In typical participation processes, citizens are separated from the issue by the public administrators and the administrative process (King, Feltey, and Susel 1998, 319-320). "In this context of conventional participation, the administrator controls the ability of the citizen to influence the situation or the process" (King, Feltey, and Susel 1998, 320). Authentic participation, on the other hand, places the citizens closest to the issue, where they have "deep and continuous involvement in administrative processes" and the potential "to have an effect on the situation" (King, Feltey, and Susel 1998, 321).

If typical participation efforts are ineffective and not authentic, what, then, constitutes an authentic and effective citizen participation program? Rosener, a pioneer in this field of study, first proposed a model to evaluate citizen participation activities in her 1978 article, "Citizen Participation: Can We Measure Its Effectiveness?" In it she affirms that while participation mandates are increasing, there is little knowledge about what constitutes an effective citizen participation program (Rosener 1978, 457). She proposes that this lack of knowledge is partially due to the way in which citizen participation programs are initiated. Rosener (1978, 459) illustrates her argument in the participation evaluation matrix shown in Table 1.1.

Table 1.1 Citizen Participation Evaluation Matrix

	Knowledge of a cause/effect relationship between a participation program or activity and the achievement of specified goals and objectives.		
Agreement on program goals and objectives, whose goals and objectives they are, and the criteria by which success or failure will be measured.		Complete	Incomplete
	Yes	I	II
	No	III	IV

Source: Rosener 1978, 459

Rosener (1978, 460) proposes that most participation programs are in quadrant IV. These types of programs "are not planned so that goals and objectives are articulated or agreed upon prior to the commencement of the participation activities, nor are ways for measuring cause and effect stipulated" (Rosener 1978, 460). Rosener asserts that it is not possible to measure the effectiveness of a participation program that falls into quadrant IV with any degree of reliability. Moreover, she contends that in order to evaluate the effectiveness of a citizen participation program, it should move out of quadrant IV and into quadrant I. Participation programs in quadrant I, lend themselves to evaluation because the purpose and goals are clearly communicated and understood. In all, Rosener (1978, 462) concludes that "once participation is assessed in terms of how it contributes to the achievement of predetermined, clearly articulated goals and objectives, it will then be possible to compare participation activities."

This research assesses citizen participation activities in the Regional Water Planning process in Texas. Citizen participation has become a large component of water resources planning in the state. Little research, however, has been conducted to evaluate the effectiveness of these efforts. With recent developments, questions have been brought

to light about the effectiveness of citizen participation activities in the Regional Water Planning process.

Water Planning in Texas

In 1997, the Texas Legislature passed Senate Bill 1, a piece of legislation that transformed water planning in Texas. Prior to Senate Bill 1, the Texas Water Development Board developed the State Water Plan with little input from the public. With the passage of Senate Bill 1, water planning in Texas has been converted to a bottom-up method. The intent is to bring the water planning process to the local citizens.

In 2001, after several years of work, the South Central Texas Regional Water Planning Group delivered its first Regional Water Plan to the Texas Water Development Board. This plan was approved and adopted by both the region and the Texas Water Development Board. Unfortunately, the same did not happen during the second round of Regional Water Planning.

In early 2006, the South Central Texas Regional Water Planning Group delivered its second Regional Water Plan to the Texas Water Development Board. This time, though, the planning group did not meet the deadline specified by Senate Bill 1. As a result, the Texas Water Development Board did not approve the plan and instead took over the Regional Water Planning process in the South Central Texas Regional Water Planning Group, as directed by Senate Bill 1.

The question has now become- what went wrong with the process? Being that Regional Water Planning is such a localized effort, it is fair to ask if the citizen

participation process in the South Central Texas Regional Water Planning Group is effective.

Research Purpose

As stated previously in the Rosener (1978) discussion, in order to evaluate the effectiveness of any citizen participation process, it should be determined if the process is designed in a manner that lends it to evaluation. The purpose of this research, therefore, is fourfold: (1) to establish an ideal system to involve citizens in water resources planning, (2) to use the model system to assess the citizen participation program in the South Central Texas Regional Water Planning Group, (3) to offer suggestions for any improvements to the process, and (4) to make suggestions for future research that could increase the effectiveness of citizen participation in the South Central Texas Regional Water Planning Group and in the Regional Water Planning process as a whole.

The following chapters provide a more in depth discussion of this research. In Chapter Two, the practical ideal type conceptual framework is developed using the literature as a guide. The conceptual framework suggests an ideal system to involve citizens in water resources planning that can be used to compare existing practices. Chapter Three provides information about the South Central Texas Regional Water Planning Group. The history of water planning in Texas, as well as the demographic, geographic, and political environment of the region are discussed. In Chapter Four, the methodology of this research is presented. This research uses the case study method to gather evidence to assess public participation in the South Central Texas Regional Water Planning Group. Chapter Five provides details about the results of this study. Finally, in

Chapter Six, recommendations for improvement are provided based on the results of the case study and suggestions for future research are proposed.

Chapter 2: Literature Review

Purpose

Rosener (1978, 462) concludes that in order to evaluate and compare the effectiveness of any type of citizen participation activity, it should first be determined if the activity is conducted in a manner that lends it to evaluation. With that being said, the purpose of this chapter is to develop an ideal system to involve citizens in government, specifically in governmental water resources planning. This chapter reviews the literature concerning citizen participation in water resources planning and development in the United States, including policy trends that have led to a greater demand for citizen participation in water resources planning. It develops an ideal system to involve citizens in water resources planning.

Policy Trends

Water is a natural resource. As such, it does not conform to the governmental boundaries established by humans (Engelbert 1957, 325).[1] These non-overlapping natural and political boundaries have resulted in an often confusing, poorly coordinated, intergovernmental water management system (Birkhead and Burkhead 1960, 145). Unfortunately, "hydrology dictates that river basins be managed as a whole" (Ingram 1973, 10). With the need to manage water resources on geographical and not political boundaries, the coordination of water management activities by all levels of government is desirable (Cortner and Moote 1994, 171). Cortner and Moote (1994, 169) also contend that equally important is the role that the public plays in water resources planning and

[1] Michaels (1999, 566) makes a similar statement in the article "Configuring Who Does What in Watershed Management: The Massachusetts Watershed Initiative"

development. They maintain that there is a policy paradigm shift currently occurring toward greater public involvement in water resources planning.

Recognizing the paradigm shift as early as 1981, Godschalk and Stiftel proposed a participatory planning evaluation model specifically for water resources planning. Like Rosener (1978), Godschalk and Stiftel (1981, 598) conclude that citizen participation, specifically in regard to water resources planning, rarely is designed with formally specified goals. In describing their model, they assert that "the central activity of participatory planning is the process of exchange between the planners and involved participants" (Godschalk and Stiftel 1981, 599). They break this exchange into three categories or phases- opportunities, information, and response. They also propose analytical criteria that can be utilized to evaluate each. In the opportunities phase the planners should provide the public with "access to various phases of the planning program and decision-making process" (Godschalk and Stiftel 1981, 599). This phase includes the evaluation criteria of accessibility and involvement. Planners and participants should exchange information about the problem as part of the information phase (Godschalk and Stiftel 1981, 600). Public awareness and effect on staff awareness are the criteria of evaluation for this phase. During the response phase, the planners and participants should respond to the information by altering their opinions and actions (Godschalk and Stiftel 1981, 601). The response phase includes the effect on staff and plan and the effect on public and plan support criteria of evaluation. Godschalk and Stiftel (1981, 601) assert that each phase is needed in an effective citizen participation program. If any component is missing, they conclude that the participation is probably incomplete.

Rowe and Frewer (2000, 4) also observed the growing demand for citizen participation in science and technology programs. They proposed their own criteria to be used in evaluating success. The criteria are composed of two categories- acceptance and process (Rowe and Frewer 2000, 11). The acceptance category is used to measure the "effective construction and implementation of a procedure" (Rowe and Frewer 2000, 11). It includes the evaluation criteria of representativeness, independence, early involvement, influence, and transparency. On the other hand, the process category is used to measure the "potential public acceptance of a procedure" (Rowe and Frewer 2000, 11). Included as part of the process category are the evaluation criteria of resource accessibility, task definition, structured decision making, and cost-effectiveness. While these criteria are recommendations, the authors offer that they can be used to further research in the field (Rowe and Frewer 2000, 24).

As stated previously, Rosener (1978) proposes that in order for the effectiveness of public participation activities to be measured, the activities should be designed in a manner that lends them to evaluation. Both Godschalk and Stiftel (1981) and Rowe and Frewer (2000) built on this by offering evaluation criteria that can measure the effectiveness of a public participation program. While all of their evaluation criteria span beyond the scope of this research, the first step has been taken in assessing the public participation program in the South Central Texas Regional Water Planning Group to determine if it is possible to reliably measure its effectiveness. Godschalk and Stiftel's (1981) opportunities criteria of accessibility and openness are included as part of the ideal model. Several of the evaluation criteria of Rowe and Frewer's (2000) acceptance and process categories are also included. By assessing the participation program of the South

Central Texas Regional Water Planning Group against the model system, it can be determined what, if any, measurements can be made in the future on the effectiveness of the program.

Ideal Model

Citizen participation programs in water resources planning can vary depending on the nature and scope of the planning problem. As mentioned in the discussion on Rosener's (1978) theories, in order to measure the effectiveness of any participation program, the participation activities should be designed using a method that lends them to evaluation. Using the literature, a set of ideal criteria were developed.[2] The criteria in the model also conform to the larger test- they are suited to evaluation. The criteria of the model include:

- Establishing the goals of participation
- Determining the key stakeholders
- Determining the appropriate level of participation
- Minimizing conflict

The remainder of this chapter discusses these criteria and how they can be used to develop water resources planning citizen participation activities that are suited to evaluation.

[2] The ideal model uses the practical ideal type conceptual framework. This framework serves to organize the elements into ideal categories that can be used as criteria for assessment (Shields 1998, 215).

Establishing the Goals of Participation

Public participation is typically a subcomponent of the larger planning process that has set goals of its own (Godschalk and Stiftel 1981, 598). As discussed previously Rosener (1978, 459) asserts that defining the objectives of public involvement is a key component of any successful public participation process. The first ideal criterion in a system to facilitate citizen participation in water planning is to establish the goals of participation. This section discusses the importance of defining and conveying the public participation goals, the nature of those goals, and how a public participation plan can help to establish and communicate participation objectives.

Clearly Defined Goals

As stated in the introductory chapter, the goals of citizen involvement should be conveyed to and understood by all participants (Rosener 1978, 459). Articulating the objectives can help to secure public understanding and support for plan recommendations (Penn and Jordahl 1967, 1285). The **goals and intentions of the participation should be clear** (Fiske and Dong 1995, 75). If the purpose of the participation process is not plainly communicated, the participants will define their own objectives and be dissatisfied with the process when those objectives are not met (Walters, Aydolette, and Miller 2000, 352). A concerted effort, therefore, should be given to ensure the goals are understood by all affected interests (Steele and Regan 1955, 896).

According to the American Water Works Association (from hereafter referred to as the AWWA) (2001, 287), one of the first steps in facilitating citizen participation in water resources planning is to define the problem that the participants are trying to solve

and what objectives the participants are attempting to meet. By seeking to answer these questions, the purpose of citizen involvement will typically fall into one of five categories (Walters, Aydolette, and Miller 2000, 352). Walters, Aydolette, and Miller (2000, 352) define these categories as follows:

1. "Discovery- Aid in the search for definitions, alternatives, or criteria."
2. "Education- Educate the public about an issue and proposed alternative."
3. "Measurement- Assess public opinion regarding a set of options."
4. "Persuasion- Persuade the public toward a recommended alternative."
5. "Legitimization- Comply with pubic norms or legal requirements."

The category that corresponds to any given citizen participation purpose will depend on the developmental stage of the planning process (Walters, Aydolette, and Miller 2000, 353). Walters, Aydolette, and Miller (2000, 353) identify the five developmental stages as defining the problem, identifying criteria, generating alternatives, evaluating alternatives, and recommending alternatives. During the developmental stages of defining the problem and identifying criteria, discovery is typically the purpose of public participation. When generating alternatives the purpose of public participation is usually discovery, education, or legitimization. Education, legitimization, and measurement are typically the purpose of public participation during the developmental stage of recommending alternatives. Finally, during the developmental stage of recommending alternatives, education, legitimization, and persuasion are usually the purpose of public participation.

The nature of the problem at hand will also usually impact the public participation objectives (Walters, Aydolette, and Miller 2000, 354). Walters, Aydolette, and Miller

(2000, 354) describ issues as being well-structured, moderately-structured, or ill-structured. Ill-structured issues usually have the highest degree of conflict, many different stakeholders, a low information confidence level, an unlimited number of alternatives, an unknown knowledge of the outcomes, and an incalculable probability of outcomes. In an unrelated article, Smith (1962) describes water resources planning issues as having many of the criteria that Walters, Aydolette, and Miller (2000) set out for ill-structured issues. Based on Smith's (1962) explanation of their nature, it is fair to say that water resources planning problems are typically moderate- to ill-structured issues.

Public Participation Plan

In order to effectively inform and involve the public, Fiske and Dong (1995, 75) assert that **a citizen participation plan should be part of the larger planning process.** Participation plans can aid in understanding the purpose of citizen involvement (Walters, Aydolette, and Miller 2000, 357). The AWWA (2001, 287) outlines several components of a successful citizen participation plan.[3] They define the first step in developing a participation plan as framing the problem by focusing on issues and boundaries, in addition to describing the project need. The participation plan should also identify **decision steps and project milestones by developing a schedule** that details when the public will have input during the process. These **deadlines should be realistic** and not in the distant future (AWWA 2001, 286). Finally, the **participation plan should be monitored** to ensure that "the time frame of the problem has not changed, the issues and stakeholders remain valid, and the techniques being used are effective" (AWWA 2001,

[3] The public participation plan components described by the AWWA (2001, 287) also offer suggestions on identifying key stakeholders, determining the appropriate level of public involvement, and methods to use in order to minimize conflict. These components will be discussed in the following sections.

287). Thus, by developing a public participation plan, the scope of public involvement and the steps to facilitate citizen involvement should be clearer (Walters, Aydolette, and Miller 2000, 357).

Determining the Key Stakeholders

Water resources planning encompasses a large variety of interested parties that should be included in the process (Smith 1962, 1687). Identifying these parties as key stakeholders and involving them in the planning process is the next criteria in developing a public participation program. This section discusses why including stakeholders in the planning process is important, the variety of potential stakeholders in the process, and how they should be engaged.

Smith (1962, 1689) suggests that by internalizing stakeholder interests into the planning program, the decision-making frame of reference is expanded. This internalization can lead to a fresh perspective on the water resources planning process and the alternatives selected. Moreover, deHaven-Smith and Wodraska (1996, 371) propose that involving stakeholders in the planning process can make the plans more practical. They go on to state that involving stakeholders can build public support for plan recommendations. In fact, Hanna (1999, 497) found that those without a direct role in the process are more critical of the plan results and more likely to advocate change.[4]

[4] Hanna conducted a study on stakeholder opinions of the Fraser River Estuary Management Program (FREMP). He found that the stakeholders that were not involved in the planning process were critical of the FREMP's success and proposed that changes be made (Hanna 1999, 497).

Stakeholders Represent the Broad Community

Beecher (1995, 41) asserts that there should be "opportunities for participation in water policy by all segments of society." This is because decisions about water resources usually affect the varied interests in different ways (deHaven-Smith and Wodraska 1996, 368). Planning and management of water resources should include **stakeholders that encompass the broad community** (Reed 1995, 148). The public participants should comprise a broad representative sample of the affected population (Rowe and Frewer 2000, 12). The AWWA (2001, 288) provides examples of key stakeholders in the water planning process that the planning organization should consider. Some of these include the general public, elected officials, environmental groups, economic development and business organizations, local and regional agencies, state and federal regulatory agencies, recreational interests, developers and media representatives.

Involvement of Stakeholders

The AWWA (2001, 5) recommends that stakeholders be invited to serve on an advisory committee as **active participants in the water planning process**. This committee should review key issues, identify new issues that need to be resolved, and help select the recommended plan. In a research study conducted by Jonsson (2005, 299) it was found that engaging stakeholders as active participants in the process is a key element of stakeholder involvement. In addition, Rowe and Frewer (2000, 14) recommend that **stakeholders be involved in the process as early as possible**. In brief, by not including key stakeholders as active participants as early as possible they will probably feel manipulated by the process (deHaven-Smith and Wodraska 1996, 370).

Determining the Appropriate Level of Participation

The public should be involved in the planning process in a meaningful way (AWWA 2001, 5). In describing their evaluation criteria of involvement, Godschalk and Stiftel (1981, 601) propose that the actual level of public involvement is a key component of an effective public participation program. Determining the appropriate level of public participation and involving the public in the process is the third criterion in facilitating public participation in water resources planning.

The Appropriate Level of Participation

Berry (1977, 474) proposes that the public should be involved in the planning process in the "maximum feasible amount." The AWWA (2001, 287) suggests that the **appropriate level of public involvement in the planning process is that which addresses stakeholder concerns.**[5] Consequently, those issues that have a higher degree of conflict and a variety of interests will usually require a higher level of public involvement in all developmental stages of the planning process (Walters, Aydolette, and Miller 2000, 356).[6] As part of their accessibility criteria, Godschalk and Stiftel (1981, 601) propose that a public participation program that has a higher level of accessibility to public scrutiny and input will tend to be a more successful program.

[5] The AWWA (2001, 287) recommends that this determination be made during the development of the citizen participation plan.

[6] This is drawn from the authors' discussion on the nature of planning issues. In their article, the authors provide a table that visually displays how as an issue moves from well- to ill-structured the level of public involvement increases in all developmental stages of the planning process (Walters, Aydolette, and Miller 2000, 356).

Considering Citizen Recommendations

By involving local interests, their support is more likely to be maintained during the process (Ingram 1973, 10). Involvement, however, should go beyond simply providing opportunities for public interaction. The participants should feel that their **recommendations are being considered** (AWWA 2001, 286). In fact, Syme (1991, 1793) found that if participants are given the opportunity to be heard, they are more likely to think that the process is fair. The AWWA (2001, 290) recommends that citizens are allowed "due process" when their recommendations are considered. In fact, they assert that one of many ineffective approaches to citizen involvement is to not consider participant recommendations because "you tried that idea and it didn't work" (2001, 287). In all, the level of citizen involvement should be that which incorporates the interests of all parties into the plan (Smith 1962, 1691).

Minimize Conflict

Water resources use is often subject to conflict (Hanna 1999, 490). Minimizing this conflict during the planning process is the final criteria in designing a system of public participation. Ways to minimize conflict in water resources planning public participation programs includes 1) identifying the issues that will cause conflict, 2) educating the public on those issues, and 3) selecting a participation method appropriate to the degree of conflict.

Identifying Constraints and Conflict

The AWWA (2001, 287) proposes that one of the first steps in minimizing conflict in water resources planning is to **identify the constraints on the process.**[7] Those issues that can be negotiated versus those that cannot should be determined. Issues that cannot be negotiated include regulatory or political mandates and spending limits. Once the constraints are identified, **issues that generate conflict, especially the vulnerability and "must resolve" issues, should also be determined.**[8] The AWWA (2001, 287) asserts that by identifying the issues that are most likely to generate conflict, public participation efforts can be focused specifically on them.

Educating Participants

Educating participants, especially on controversial issues, is a key component in minimizing conflict (AWWA 2001, 286). The planning process should "create access and openness" and information germane to the process should be made available to the participants.[9] Rowe and Frewer (2000, 15) assert that the planning process "should be transparent so that the public can see what is going on and how decisions are being made."[10] It has been found that education is an expectation of the public participants. In a

[7] The AWWA (2001, 287) recommends identifying constraints during the development of a citizen participation plan.

[8] The AWWA (2000, 287) recommends identifying conflict issues during the development of a citizen participation plan. Walters, Aydolette, and Miller (2000, 354) also propose identifying conflict issues during the development of the public participation plan.

[9] This is also Rowe and Frewer's (2000, 15) "criterion for resource accessibility" used to evaluate effective public participation programs. They assert that "public participants should have access to the appropriate resources to enable them to successfully fulfill their brief."

[10] Rowe and Frewer (2000, 15) propose this as their "criterion of transparency."

2005 study, Jonsson (497) found that the active dissemination of information is expected by stakeholders during all phases of the planning process and to all levels of the public.

Selecting the Appropriate Participation Method

There are many methods available to involve the public. Some of these methods include “newsletters, fact sheets, speakers’ bureaus, public forums, workshops, expert panels, standing committees, customer surveys, focus groups, and one-on-one interviews” (Fiske and Dong 1995, 75). The type of participation method used will usually vary by developmental stage in the process and the nature of the issue at hand (Walters, Aydolette, and Miller 2000, 356). In other words, **the public involvement technique selected should be tailored to the situation** (Fiske and Dong 1995, 75). The AWWA (2001, 288) explains that **certain types of participation methods are better suited than others to minimizing and resolving conflict.** For example, public meetings are typically not an appropriate method for resolving conflict because “they are too unstructured to typically achieve any consensus” (AWWA 2001, 288). Whatever process is chosen, an assessment should be made on the public environment in order to make an informed decision (AWWA 2001, 287). In short, no one technique is universal to all situations and it may take a combination of participation methods in order to effectively involve the public (Rowe and Frewer 2000, 24).

Summary of Model

The growing trend in water resources planning is to involve the public in the planning process. This research develops an ideal model that serves as a point of

reference in assessing public participation the Regional Water Planning Process in Texas.[11] The criteria of the model were developed from careful review of the literature and are linked to the literature in Table 2.1.

Table 2.1 Ideal Model of Public Participation in Water Resources Planning

Ideal Model Categories	Sources
Goals of Participation · Clearly defined · Participation plan developed · Deadlines are established · Deadlines are realistic · Participation plan is monitored	AWWA 2001, Fiske and Dong 1995, Godschalk and Stiftel 1981, Penn and Jordahl 1967, Rosener 1978, Steele and Regan 1955, Walters, Aydolette, and Miller 2000
Key Stakeholders · Stakeholders represent the broad community · Stakeholders are involved in the process as active participants · Stakeholders are involved in the process as early as possible	AWWA 2001, Beecher 1995, deHaven-Smith and Wodraska 1996, Hanna, 1999, Jonsson 1999, Reed 1995, Rowe and Frewer 2000, Smith 1962
Level of Participation · Level of participation is appropriate to addressing citizen and stakeholder concerns · Citizen and stakeholder concerns and recommendations are considered and incorporated into the plan	AWWA 2001, Berry 1977, Godschalk and Stiftel 1981, Ingram 1973, Smith 1962, Syme 1991, Walters, Aydolette, and Miller 2000
Minimize Conflict · Identify constraints on the process · Identify potential conflicts · Educate the public on conflict issues · Participation method is appropriate to the level of conflict	AWWA 2001, Fiske and Dong 1995, Hanna 1999, Jonsson 2005, Rowe and Frewer 2000, Walters, Aydolette, and Miller 2000

[11] This research uses the practical ideal type conceptual framework to develop criteria in the ideal model. The practical ideal type conceptual framework "is generally organized by category" (Shields 1998, 215). These categories "can be viewed as standards or points of reference" (Shields 1998, 215).

The first criterion in facilitating citizen participation in water resources planning is to establish the goals of the public participation. The purpose of the citizen participation should be clear and understood by all.[12] The goals will probably vary by developmental stage in the planning process and the nature of the problem at hand (Walters, Aydolette, and Miller 2000, 353). By creating and monitoring a citizen participation plan, however, the purpose of the public participation can be more easily identified and conveyed (AWWA 2001, 287).

Determining the key stakeholders and involving them in the process is the next criterion in the ideal system to encourage citizen participation in water resources planning. Involving key stakeholders can bring new ideas into the planning process (Smith 1962, 1689). In addition, it can help build public support for the final plan (deHaven-Smith and Wodraska 1996, 371). The stakeholders can vary, but they should be a representative sample of the broad community (Rowe and Frewer 2000, 12). In all, stakeholders should be included as active participants as early in the process as possible.[13]

The third criterion is to determine the appropriate level of citizen involvement in the water resources planning process. The public should be involved in the planning process at a level appropriate to addressing their concerns (AWWA 2001, 287). The more controversial the issue, consequently, the more involved the public should be (Walters, Aydolette, and Miller 2000, 356). In all, the stakeholders should feel that they are active

[12] This argument is made by Fiske and Dong (1995), Penn and Jordahl (1967), Rosener (1978), Steele and Regan (1955), and Walters, Aydolette, and Miller (2000).

[13] AWWA (2001) and Jonsson (2005) suggest that stakeholders be enrolled as active participants. Rowe and Frewer (2000) suggest that stakeholders be included as early in the process as possible.

participants in the process and that their recommendations are being considered (AWWA 2001, 286).

Minimizing conflict is the final criterion in the ideal system to facilitate public participation in water resources planning. The AWWA (2001, 287) suggests that the first step in minimizing conflict is to identify what issues are controversial. Once those issues are determined, the public should be educated on the issues by providing information and conducting the planning process in an open manner.[14] Participation methods appropriate to the level of conflict should also be taken into consideration.[15]

Conclusion

The criteria in the ideal model are used in this research to assess public participation in the South Central Texas Regional Water Planning Group. Chapters Five and Six use the model as a guide in evaluating public participation in the planning group and to offer recommendations for improvement and future research. The next chapter provides information about the South Central Texas Regional Water Planning Group and the Regional Water Planning process in Texas.

[14] AWWA (2001), Jonsson (2005), and Rowe and Frewer (2000) all propose education and providing information during the planning process.

[15] AWWA (2001), Fiske and Dong (1995), Rowe and Frewer (2000), and Walters, Aydolette, and Miller (2000) suggest that the participation method select will vary based on the nature of the issue.

Chapter 3: Setting

In 1997 the Texas Legislature passed Senate Bill 1. This piece of legislation dramatically changed water planning in the state. Prior to 1997, water planning was conducted in a top-down fashion with minimal input from the public. Senate Bill 1 brought about Regional Water Planning. It transformed the process to a bottom-up, locally driven method. The purpose of this chapter is to provide background information on water planning in Texas. The geographic, demographic, and political aspects of the South Central Texas Regional Water Planning group are also described.

History of Water Planning in Texas

In the 1950's the state of Texas suffered from a severe and devastating drought. As a result of this drought, in 1957 the Texas Legislature created the Texas Water Development Board (from hereafter referred to as the TWDB) and mandated statewide water planning (TWDB 2002, 17). Through 1997, the TWDB adopted six state water plans. Each of the plans was developed in a top-down fashion with minimal public input. By the mid 1990's Texas was again in the midst of a drought. While this drought was not as extreme as the drought of the 1950's, it was the impetus for new legislation (TWDB 2002, 19). Senate Bill 1 was passed in 1997 and created Regional Water Planning in Texas.

Developing a state water plan through Regional Water Planning was the legislature's vision for "an open and participatory process with specific decisions made at the regional level" (TWDB 2002, 1). It calls for the planning process to be moved from the TWDB to the local citizens. Senate Bill 1 directed the TWDB to designate Regional

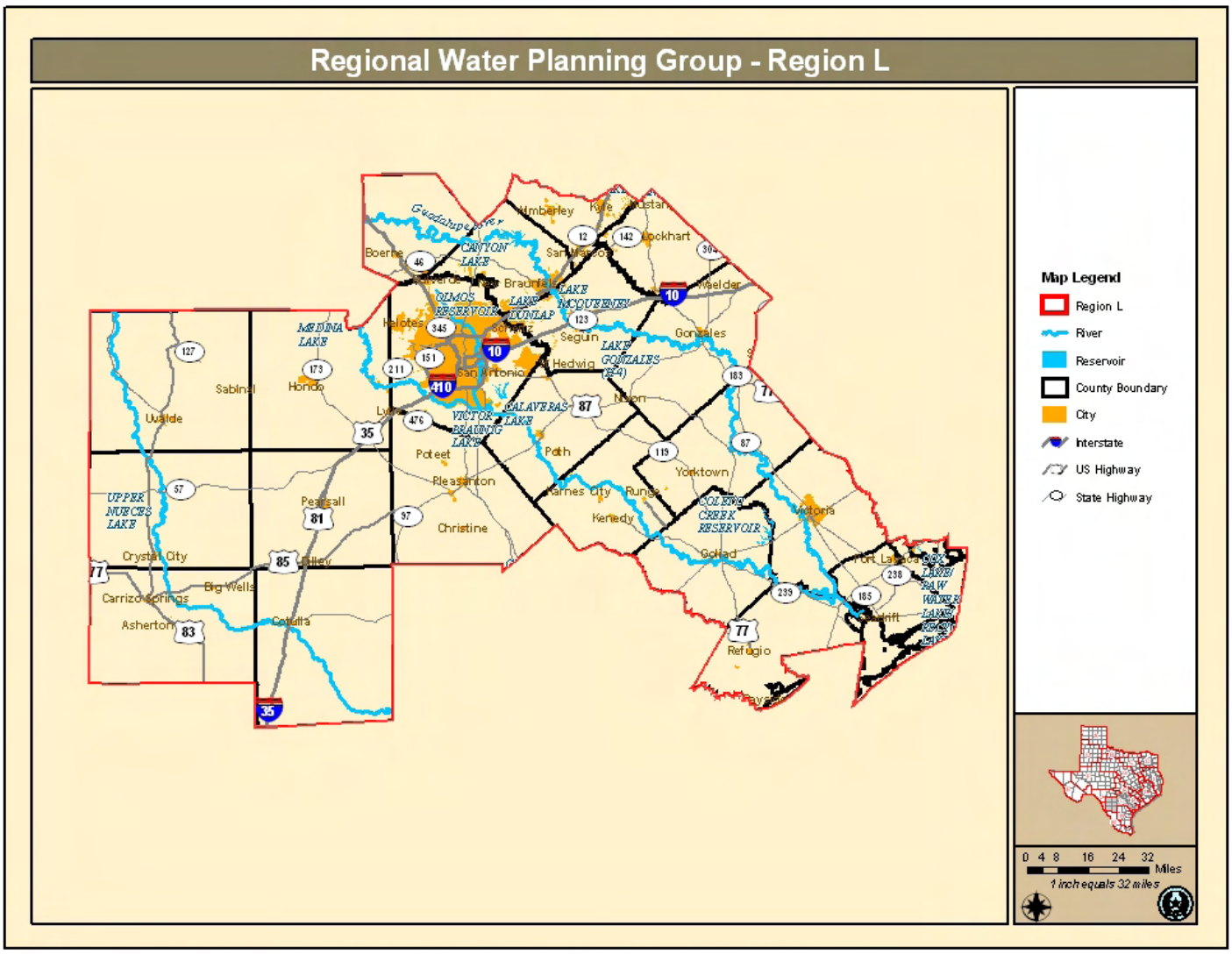
Water Planning Groups. The TWDB ultimately designated sixteen regions and selected planning group members that represented key stakeholders in each region. Each of the planning groups then adopted bylaws and took over the planning process for their area. In 2002, the first state water plan developed through Regional Water Planning was delivered to the legislature. The plan included each of the sixteen regional water plans that were published the preceding year. The significant change in the 2002 plan over previous plans was the "broad level of public involvement that occurred throughout the planning process" (TWDB 2002, 14).

In January of 2007, the second state water plan developed through Regional Water Planning will be delivered to the Texas Legislature. This plan will again include the sixteen regional water plans that were published in the preceding year. This paper assesses the public participation efforts made by one of the sixteen regions during this process- the South Central Texas Regional Water Planning Group.

The South Central Texas Regional Water Planning Group (Region L)

The South Central Texas Regional Water Planning Group (from hereafter referred to as Region L) includes all of twenty counties and the Guadalupe Basin portion of Hays County (SCTRWPA 2006, ES-1). A layout of Region L is presented in Figure 3.1. The planning group includes twenty-one voting members that represent eleven different stakeholder groups (SCTRWPA 2006, ES-1). Representation of these stakeholder groups in the planning area is required by Senate Bill 1. They include public, county, municipal, industrial, agricultural, environmental, small business, electric generating utility, river authority, water district, and water utility interests (SCTRWPA 2006, ES-1).

Figure 3.1- Region L



Map created by C. Archuleta, Texas Water Development Board, Data Resources Division, GIS Section. L:\projects\RIOTS\carchuleta\Maps_ArcGIS\MXDs

The planning group members guided the planning process and developed the regional plan. The group members held regular meetings during the planning cycle in order to develop and produce the Region L Water Plan. In addition, the planning group members held public hearings to gather input from the general public about the proposed plan.

During the 2006 planning cycle, the planning group hired an engineering firm as a technical consultant to develop the technical plan data and assist the group in writing the Regional Water Plan. The Regional Water Plan includes population and demand projects, sources and availability of water, water user groups, and water management strategies to meet future needs in the area. The planning group members of Region L reviewed and approved the work of the technical consultant during their regular planning group meetings.

In addition, the planning group selected an administrative agency for the region during the 2006 Regional Water Planning process. The San Antonio River Authority was selected by the planning group members to act as the administrative agency for the region (SCTRWPA 2006, ES-1). The job of the administrative agency includes developing the scopes of work, applying for TWDB planning grants, contracting with the TWDB for the grants, and managing the development of the Regional Water Plan, including supervising the technical and public participation consultants (SCTRWPA 2006, ES-1).

Climate of Region L

Region L has a climate that is classified as “humid subtropical” (SCTRWPA 2006, 1-2). The summers in the area are typically hot and humid, while the winters are typically mild and dry (SCTRWPA 2006, 1-2). The average rainfall in the region ranges from about 38 inches per year in the eastern portion of the region to about 23 inches per year in the western portion (SCTRWPA 2006, 1-4). The rainfall tends to decrease from the east to the west across the region and from the Gulf Coast inland. The area is subject

to periodic threats from hurricanes. From 1871, on average the area has been impacted by hurricanes once every three years (SCTRWPA 2006, 1-5).

Demographics of Region L

There are four major water demand centers in the area. These include the Interstate Highway 35 (IH-35) corridor from San Antonio to San Marcos, the Edwards Aquifer region west of San Antonio, the Winter Garden area south of the Edwards Aquifer region, and the coastal area (SCTRWPA 2006, 1-12). The IH-35 corridor, one of the fastest growing areas in the state, primarily uses water for municipal purposes. The Edwards Aquifer and Winter Garden areas primarily use water for irrigated agriculture. The coastal area primarily uses water for industrial purposes with a small amount being used for irrigated agriculture.

The majority of the population in the area (81 percent) lives in urban areas (SCTRWPA 2006, 1-14). Bexar County, the county in which San Antonio is located, has the highest county population, while La Salle County has the lowest. The population in the area is relatively young with the majority being younger than 18 or ages 34 to 44.

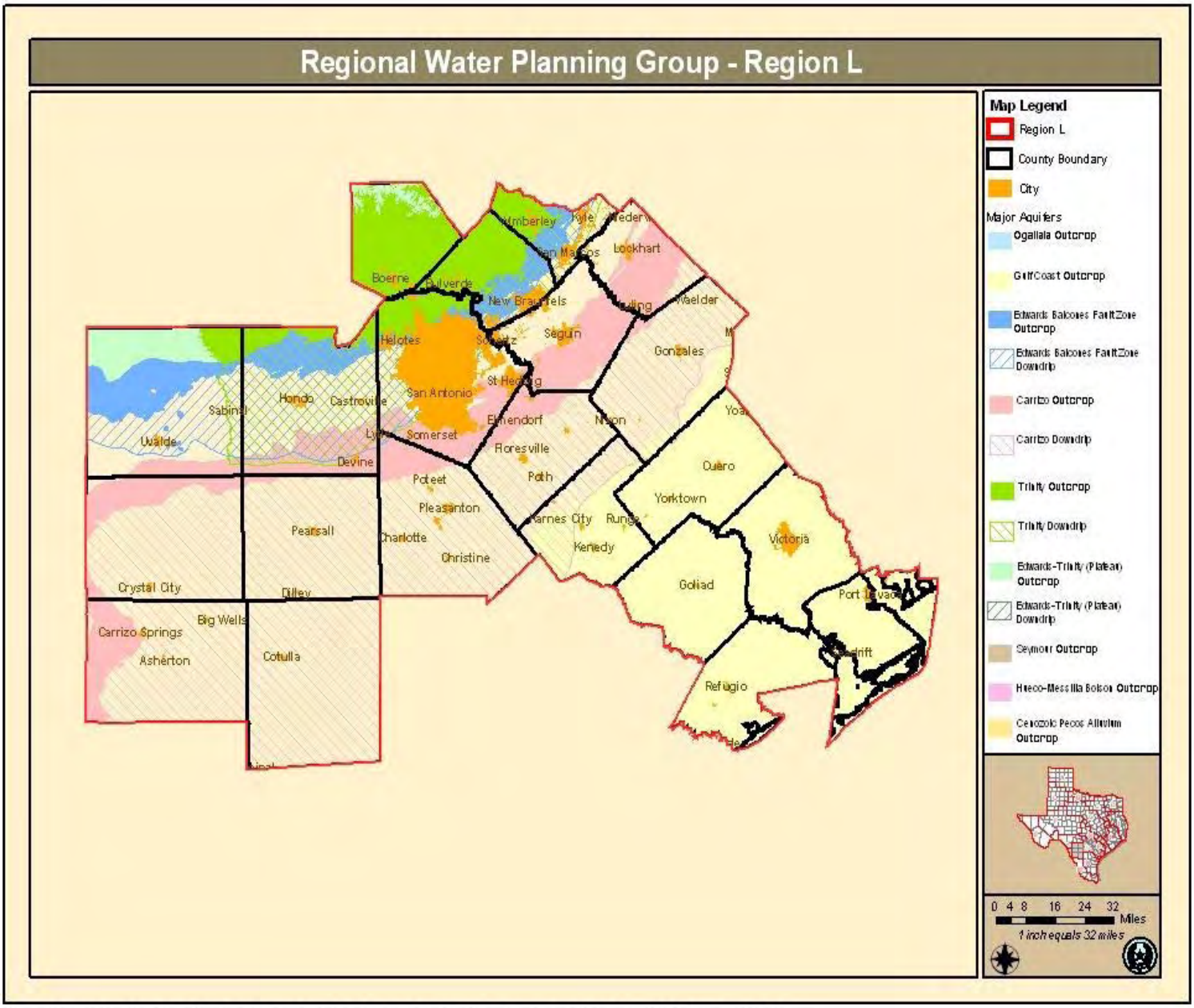
The economic base for the region includes agriculture, livestock, mining, manufacturing, and the trades and services (SCTRWPA 2006, 1-18). Each economic sector has historically had steady growth, with the exception of mining. The trades and services account for 76 percent of the value of output for the region. Manufacturing, including fabricated metal products, industrial machinery, petrochemicals, and food processing, accounts for 21 percent of the value of output for the region. Agriculture,

including beef cattle, corn, grain sorghum, and a variety of vegetables produced in the Winter Garden area, and mining account for the remaining value of output for the region.

Groundwater Supplies in Region L

Groundwater supplies the majority of water for the region. There are five major and two minor aquifers that cross Region L. The major aquifers, shown in Figure 3.2, include the Edwards-BFZ, Carrizo-Wilcox, Trinity, Gulf-Coast, and Edwards-Trinity. The minor aquifers include the Sparta and Queen City.

Figure 3.2- Major Aquifers in Region L



Map created by C. Archuleta, Texas Water Development Board, Data Resources Division, GIS Section. L:\projects\RIONT\carchuleta\Maps_ArcGIS\MXDs

Quite possibly the most significant water source in the region is the Edwards-BFZ (Balcones Fault Zone) Aquifer. This aquifer underlies parts of seven counties in the region including Uvalde, Medina, Bexar, Atascosa, Comal, Guadalupe, and Hays. It is

hydrologically separated from the Austin area Edwards Aquifer. The Edwards-BFZ Aquifer supplies about 44 percent of the water for the region. In addition, the Edwards-BFZ aquifer supplies base flows to the Comal, San Marcos, Leona, San Antonio, and San Pedro Springs. These base flows, in turn, supply water to the San Antonio and Guadalupe Rivers. These rivers are used downstream for municipal, industrial, and agricultural purposes. Canyon Reservoir is also dependent on these spring flows. Use of the aquifer has historically grown at a rate of about 1.7 percent per year. Unfortunately, this present rate of growth cannot be sustained during drought of record conditions without interruption to flow at Comal Springs (SCTRWPA 2006, 1-31).

Municipal use accounts for 65 percent of pumpage from the Edwards-BFZ Aquifer. Irrigation and industrial uses account for 22.5 percent and 8.5 percent of annual pumpage respectively. San Antonio, the largest metropolitan area in the region, is dependent on the Edwards-BFZ for its main source of water. It is the largest city in the United States and one of the largest cities in the world that relies so heavily on a single groundwater resource (SCTRWPA 2006, 1-31).

According to the Region L 2006 Regional Water Plan, “an important management issue for the Edwards Aquifer includes establishing levels of groundwater withdrawals to ensure adequate water levels and at least minimum spring flows” (1-33). This is primarily because recharge and pumpage of the Edwards-BFZ Aquifer affect stream flows and spring flows. As a result, it impacts endangered species in the springs, water rights holders downstream, instream flows for fish and wildlife, and freshwater flows for the Guadalupe Estuary (SCTRWPA 2006, 1-33).

The Carrizo-Wilcox Aquifer is also a groundwater source in the region. This aquifer extends from the Rio Grande in South Central Texas northeast into Arkansas and Louisiana. The Carrizo-Wilcox Aquifer underlies 13 counties in Region L. Municipal water use accounts for 35 percent of the pumpage from the aquifer, while irrigation accounts for 51 percent of the pumpage (SCTRWPA 2006, 1-34). Unfortunately, this aquifer has been experiencing a significant decline, especially in the Winter Garden area, due to heavy groundwater use for irrigation (SCTRWPA 2006, 1-35).

The Trinity Aquifer, the next major aquifer in the region, underlies six counties in Region L including Hays, Comal, Kendall, Bexar, Medina, and Uvalde (SCTRWPA 2006, 1-35). This aquifer is presently being stressed because of the rapid number of wells being drilled. These wells are primarily used for new homes and commercial use. As a result of this heavy demand in relation to the available supply, the Hill Country portion of the Trinity Aquifer has been included in a Priority Groundwater Management Area (SCTRWPA 2006, 1-36).

The Gulf Coast Aquifer is also a major aquifer in the region. This aquifer extends as a band along the Gulf of Mexico that stretches from Mexico to Florida. The Gulf Coast Aquifer underlies seven counties in Region L including Karnes, Gonzales, DeWitt, Goliad, Victoria, Refugio, and Calhoun (SCTRWPA 2006, 1-36). Irrigation and municipal use are the main demands on this aquifer in the region. Unfortunately, the water levels in the Gulf Coast Aquifer have been declining in localized areas of significant withdrawals, increasing the threat of subsidence and salt-water intrusion on the aquifer (SCTRWPA 2006, 1-37).

The final major aquifer in the region, the Edwards-Trinity Aquifer, is only located in northern portions of Uvalde and Kendall counties. As a result, the regional use of this aquifer is minimal (SCTRWPA 2006, 1-37).

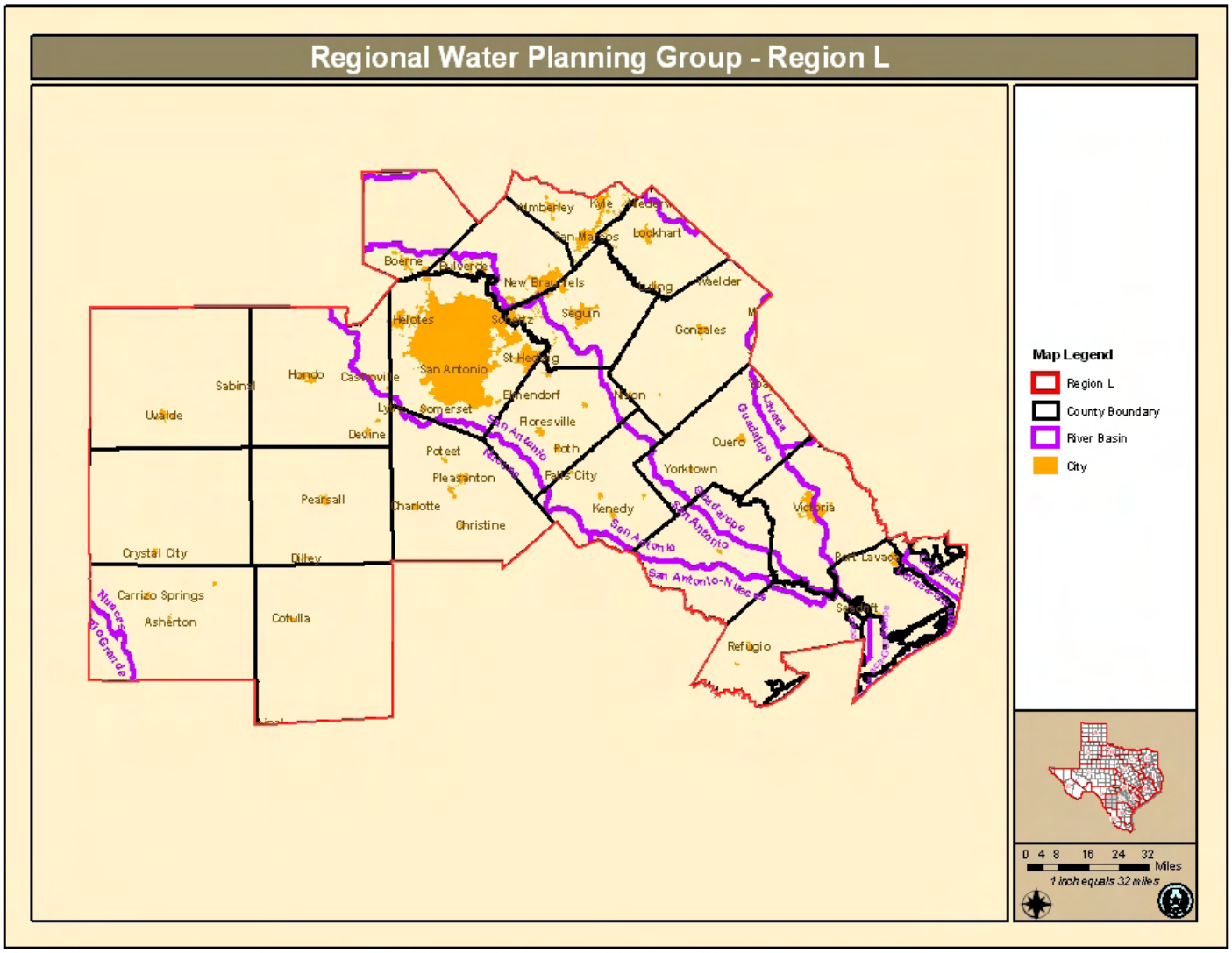
The first of two minor aquifers in the region is the Sparta Aquifer. This aquifer forms a narrow band that extends from the Frio River northeast to the Louisiana border. The Sparta Aquifer underlies five counties in the region including Frio, LaSalle, Atascosa, Wilson, and Gonzales. The primary use of Sparta Aquifer is for municipal and livestock purposes (SCTRWPA 2006, 1-38).

The second minor aquifer in the region is the Queen City Aquifer. Like the Sparta, this aquifer forms a narrow band that extends from the Frio River northeast to the Louisiana border. The Queen City Aquifer underlies six counties in the region including Frio, LaSalle, Atascosa, Wilson, Gonzales, and Caldwell counties. The primary use of this aquifer is for municipal and livestock purposes, with a small amount of irrigation in Wilson County (SCTRWPA 2006, 1-39).

Surface Water Supplies in Region L

Although groundwater is the primary source of water for Region L, surface water does significantly contribute to water supplies in the area. There are nine river basins that cross Region L as shown in Figure 3.3. These basins include the Rio Grande, Nueces, San Antonio, Guadalupe, Colorado, Lavaca, and the coastal basins of Colorado-Lavaca, Lavaca-Guadalupe, and San Antonio-Nueces.

Figure 3.3- River Basins in Region L



Map created by C. Archuleta, Texas Water Development Board, Data Resources Division, GIS Section. L:\projects\REGION L\archuleta\Maps_ArcGIS\MXDs

The first river basin, the Rio Grande, only covers the southwestern corner of Dimmit County (SCTRWPA 2006, 1-40). Surface water use in this basin is limited to livestock consumption (SCTRWPA 2006 1-25). There is no access to surface water in the region for this basin except what can be captured in stock tanks (SCTRWPA 2006, 1-40).

The Nueces River basin, on the other hand, covers a larger portion of the region. Only ten percent of water use, however, in the Nueces basin in Region L is from surface water (SCTRWPA 2006, 1-25). The Nueces River flows for 371 river miles from the gage at Laguna in Uvalde County to the Nueces Bay on the Gulf of Mexico. Major tributaries of the river include the Frio and Atascosa Rivers. Major population centers along the river include Uvalde, Crystal City, Pearsall, Pleasanton, Hondo, and Carrizo Springs. Much of the water from the Nueces River goes into recharging the Edwards Aquifer. As a result a large portion of the water downstream of the Edwards Aquifer is storm water run-off (SCTRWPA 2006, 1-41). The primary use of surface water in the Nueces Basin is for irrigation. Municipal use represents only a small percentage of surface water consumption (SCTRWPA 2006, 1-25).

The San Antonio River Basin also stretches across Region L. The San Antonio River begins as a spring near San Antonio and flows 230 river miles where it joins the Guadalupe River near the Gulf of Mexico (SCTRWPA 2006, 1-41). Major tributaries of the San Antonio River include the Medina River and Cibolo Creek. Major population areas include San Antonio, Universal City, Schertz, Live Oak, Leon Valley, Converse, Kirby, Alamo Heights, and Floresville (SCTRWPA 2006, 1-42). Groundwater accounts for 91 percent of water use in the San Antonio River Basin. Of the small amount of surface water used in the basin, 73 percent is used for municipal purposes, 13 percent is used for agricultural purposes, and the remaining is used for industrial purposes (SCTRWPA 2006, 1-25).

The Guadalupe River Basin is the most heavily surface water dependent basin in the region. The Guadalupe River rises in west-central Kerr County. It flows for 430 river

miles to the San Antonio Bay. Streamflows in the Guadalupe River are spring-fed eastward through the Hill Country until it issues from the Balcones Escarpment near New Braunfels. Major tributaries of the Guadalupe River include the San Antonio, San Marcos, and Comal Rivers, all of which are spring-fed (SCTRWPA 2006, 1-42). Major population centers along the river include Victoria, San Marcos, New Braunfels, Seguin, Lockart, Cuero, Gonzales, and Luling. Major reservoirs along the river include Canyon and Coleto Creek (SCTRWPA 2006, 1-43). Only 30 percent of water use in the Guadalupe Basin is from groundwater. Municipal use accounts for 45 percent of the surface water consumption in the basin. Manufacturing is the other major use of surface water (SCTRWPA 2006, 1-26).

Like the Rio Grande, the Colorado River Basin is only located in a small portion of the region in parts of Kendall and Caldwell Counties (SCTRWPA 2006, 1-43). The primary use of surface water in this basin is for livestock and mining purposes (SCTRWPA 2006, 1-26). The only surface water currently available in the basin is from stock tanks (SCTRWPA 2006, 1-43).

Only a small portion of the Lavaca River Basin is located in the region in DeWitt, Gonzales, and Victoria Counties (SCTRWPA 2006, 1-43). The primary use of surface water in this basin is municipal and livestock purposes (SCTRWPA 2006, 1-26).

The coastal river basins of Colorado-Lavaca, Lavaca-Guadalupe, and San Antonio-Nueces only have limited amounts of surface water use. These basins rely primarily on adjoining basins to meet their surface water needs (SCTRWPA 2006, 1-44). Industrial users account for the majority of surface water use in the Colorado-Lavaca River Basin. Manufacturing accounts for the majority of surface water use in the Lavaca-

Guadalupe River Basin. Municipal users account for the majority of surface water use in the San Antonio-Nueces River Basin (SCTRWPA 2006, 1-26).

Springs in Region L

In addition to the major river basins and aquifers in Region L, there are several major springs in the area. These springs are located in Comal, Hays, Uvalde, and Bexar Counties and contribute at least a portion of their springflows to the Edwards Aquifer. The springs include Comal, San Marcos, Hueco, Leona, San Antonio, and San Pedro Springs (SCTRWPA 2006, 1-44 – 1-45).

Political Environment of Region L

Region L has unique political circumstances that set it apart from other water planning regions in Texas. They go back almost as far as state-wide water planning in Texas. One of the unique political circumstances that define the region is that it has one of only a few special legislatively-designated groundwater conservation districts. Senate Bill 1477, also called the Edwards Aquifer Authority Act, was passed in 1993 and outlined a specific and definite plan for the preservation of the Edwards Aquifer and springflows into Comal and San Marcos Springs.

In 1959, the Texas Legislature created the Edwards Underground Water District. This district was created after the severe drought that occurred from 1950 through 1957 and caused water levels in the Edwards-BFZ Aquifer to drop so low that Comal Springs ceased to flow for several months. The water district included five counties in the region-Bexar, Comal, Hays, Medina, and Uvalde (SCTRWPA 2006, 1-33). It was charged with

"conserving, protecting, and recharging the underground water-bearing formations within the district and preventing waste and pollution of such underground water" (SCTRWPA 2006, 1-33).

Unfortunately, the Edwards Underground Water District was not doing enough to protect springflows in the eyes of the federal government. In 1993, in response to federal pressures to intervene on behalf of federally protected species that rely on springflows from the Edwards Aquifer, the Texas Legislature passed Senate Bill 1477. It abolished the Edwards Underground Water District and created the Edwards Aquifer Authority (SCTRWPA 2006, 1-33). The Edwards Aquifer Authority was directed by Senate Bill 1477 to "implement a comprehensive management plan for the aquifer that regulates pumpage, while taking into consideration the interests and needs of all the individuals and entities that rely on the aquifer as a water source, and maintain the delicate relationship between springflows and the environment" (SCTRWPA 2006, 1-33).

In order to achieve this task, Senate Bill 1477 set pumping limits on the amount of water that could be withdrawn from the Edwards Aquifer. The current pumping limit on the aquifer is 450,000 acre-feet per year. The limits are to be incrementally reduced so that by December 31, 2012 the "continuous minimum spring flows of Comal and San Marcos Springs are maintained to protect endangered and threatened species to the extent required by federal law" (SCTRWPA 2006, 1-44).

As stated previously, San Antonio relies almost exclusively on the Edwards Aquifer for its water supplies. Current pumpage on the aquifer exceeds the set limits. In order to reduce the limits even further and protect springflows, one of two changes will have to be made- pumping will have to decrease or recharge will have to increase

(SCTRWPA 2006, 1-45). This poses a difficult enigma for anyone who attempts to plan for sustainable water resources in the region, while also supporting its economic viability.

Conclusion

Region L is a unique region that depends very heavily on groundwater. Groundwater from the Edwards Aquifer provides almost all of the water supplies for San Antonio. In addition, the groundwater from the Edwards Aquifer feeds many springs and rivers in the area. One such river, the Guadalupe, is also the most heavily used surface water resource in the region. With such a great dependence on one water resource, conflicts are certain to arise when planning for its use is attempted.

Region L encountered difficulties during the second round of Regional Water Planning that led to the failure to approve their plan. It is obvious that something went wrong during the second round of Regional Water Planning. Since the Texas Legislature intended the process to be a grass-roots, bottom-up type of plan, one of the possible answers is that the public participation process in the region failed. As stated in the previous chapter, in order to fully evaluate the efficiency and success of any citizen participation program, one must first determine if the program was designed properly. By using the ideal type model, this research assesses the citizen participation program in Region L.

Chapter 4: Methodology

Purpose

The methodology used to assess the citizen participation program in Region L is described in this chapter. This research is a case study of citizen participation in Region L. “As a research strategy, the case study is used in many situations to contribute to our knowledge of individual, group, organizational, social, political, and related phenomena” (Yin 2003, 1). The case study is preferred in this research, since it will compare the Region L citizen participation program against the ideal model and contribute to the knowledge of citizen participation in water resources planning.

This study uses two different research methods. This valuable research strategy is sometimes called triangulation. By using triangulation the strengths of one research method can be used to offset the weaknesses of other methods (Babbie 2004, 113). The main sources of data for this study are document analysis and structured interviews. The operationalization of the ideal model through the research methods and sources is illustrated in Table 4.1. The document analysis is operationalized in greater detail in Table 4.2.

Table 4.1: Operationalization of the Ideal Model

Ideal Model Category	Document Analysis	Interview Question
Goals of Participation		
· Clearly defined	Meeting Minutes, Written Reports, Contracts	1. What was the purpose of the citizen involvement in the planning process in South Central Texas Regional Water Planning Group and was it clearly defined?
· Participation plan developed	Meeting Minutes, Written Reports, Contracts	2. Did the South Central Texas Regional Water Planning Group develop a public participation plan?
· Deadlines are established	Written Reports, Legal Statute	3. What deadlines were established during the planning process by the South Central Texas Regional Water Planning Group and/or by the Texas Water Development Board?
· Deadlines are realistic	Written Reports, Legal Statute	4. Were these deadlines realistic? 5. How were these deadlines communicated to the participants?
· Participation plan is monitored	Meeting Minutes	6. If the South Central Texas Regional Water Planning Group had a public participation plan, how was this plan monitored during the planning process? 7. What, if any, changes were made during the planning process to the public participation plan due to changed conditions?
Key Stakeholders		
· Stakeholders represent the broad community	Written Reports, Legal Statute, Meeting Minutes	8. Do you believe the board members of the South Central Texas Regional Water Planning Group are an accurate representation of the public, why?
· Stakeholders are involved in the process as active participants	Written Reports, Legal Statute, Meeting Minutes	9. How are you an active participant in the planning process?
· Stakeholders are involved in the process as early as possible	Written Reports, Legal Statute, Meeting Minutes	10. At what point in the planning process were the stakeholders involved? 11. Do you believe this was early enough?
Level of Participation		
· Level of participation is appropriate to addressing citizen and stakeholder concerns	Written Reports, Memorandum, Legal Statute, Meeting Minutes	12. How was the level of participation available to the stakeholders and the general public appropriate or inappropriate in addressing their concerns?
· Citizen and stakeholder concerns and recommendations are considered and incorporated into the plan	Written Reports, Memorandum, Legal Statute, Meeting Minutes	13. How have citizen and stakeholder recommendations been considered and incorporated into the South Central Texas Regional Water Planning Group Regional Water Plan?

Minimize Conflict		
· Identify constraints on the process	Meeting Minutes, Written Reports, Contracts	14. What constraints on the planning process were identified?
· Identify potential conflicts	Meeting Minutes, Written Reports	15. What potential conflicts were identified?
· Educate the public on conflict issues	Meeting Minutes, Written Reports	16. How were the stakeholders and the public educated on these controversial issues?
· Participation method selected is appropriate to the level of conflict	Meeting Minutes, Written Reports, Legal Statute	17. How were the participation methods selected to resolve these issues appropriate or inappropriate to the level of conflict involved?

Table 4.2: Operationalization of the Ideal Model using Document Analysis

Type of Document	Statute/ Rules	Written Reports	Meeting Minutes	Other Documents	Evidence
Goals of Participation					
· Clearly defined		Region L Water Plan Public Participation chapter	Region L Meeting Minutes	Scope of Work and Contract for Public Participation Consultant	Goals are clearly defined.
· Participation plan developed		Region L Water Plan Public Participation chapter, Reports Generated by Public Participation Consultant		Scope of Work and Contract for Public Participation Consultant	There is a citizen participation plan.
· Deadlines are established	TWC §16, TAC §357	Region L Water Plan Public Participation chapter	Region L Meeting Minutes		Deadlines are established throughout the process.
· Deadlines are realistic	TWC §16, TAC §357	Region L Water Plan Public Participation chapter	Region L Meeting Minutes		Deadlines allow enough time to resolve problems and achieve goals.
· Participation plan is monitored		Region L Water Plan Public Participation chapter	Region L Meeting Minutes		Planning group monitors participation plan. Changes are possibly made due to changed conditions.
Key Stakeholders					
· Stakeholders represent the broad community	TWC §16, TAC §357	Region L Water Plan Public Participation chapter and Water User Group Data	Region L Meeting Minutes		Key stakeholders are identified and represent the demographic makeup of the area.
· Stakeholders are involved in the process as active participants	TWC §16, TAC §357	Region L Water Plan Public Participation chapter	Region L Meeting Minutes		The role of stakeholders in the process is clearly defined.
· Stakeholders are involved in the process as early as possible	TWC §16, TAC §357	Region L Water Plan Public Participation chapter	Region L Meeting Minutes		Stakeholders are involved in the process at an early date, before major decisions are made.

Level of Participation					
· Level of participation is appropriate to addressing citizen and stakeholder concerns	TWC §16, TAC §357	Region L Water Plan Public Participation chapter	Region L Meeting Minutes	Region L Memo to TWDB	Level of participation is defined. Concerns are addressed and resolved prior to the end of the process.
· Citizen and stakeholder concerns and recommendations are considered and incorporated into the plan		Region L Water Plan	Region L Meeting Minutes	Region L Memo to TWDB	Concerns and recommendations are addressed and included as part of the plan.
Minimize Conflict					
· Identify constraints on the process		Region L Water Plan Public Participation chapter	Region L Meeting Minutes		Constraints on the process are identified.
· Identify potential conflicts		Region L Water Plan Public Participation chapter	Region L Meeting Minutes	Region L Memo to the TWDB	Potential conflicts are identified.
· Educate the public on conflict issues	TWC §16, TAC §357	Region L Water Plan Public Participation chapter	Region L Meeting Minutes	Region L Newsletters and Brochures	Information is provided to the public, specifically in regard to conflict issues.
· Participation method is appropriate to the level of conflict	TWC §16, TAC §357	Region L Water Plan Public Participation chapter	Region L Meeting Minutes	Region L Memo to TWDB	Participation method used is successful in resolving conflict.

Document Analysis

Document analysis is one of the methods selected to assess the public participation program in Region L. According to Yin (2003, 86), the strengths of document analysis include the fact that the documents are stable, unobtrusive, exact, and have a broad coverage. Some of the weaknesses of this method, on the other hand, include the retrievability, biased selectivity, reporting bias, and access (Yin 2003, 86). The types of documents that were used in this study include Chapter Sixteen of the Texas Water Code, Chapter 357 of the Texas Administrative Code; the Region L 2006 Regional Water Plan, including the text and database materials; Region L meeting minutes; the

scope of work and contract for the public participation consultant hired by the region; memoranda; newsletters and brochures published by Region L; and written reports.

The Texas Water Code and the Texas Administrative Code chapters were used to collect evidence that tests whether several components of the ideal model were present in the case. These documents provided evidence regarding deadlines, the role of stakeholders, and the level of participation required by law in the water planning process. Both the Texas Water Code and Texas Administrative Code Chapters are relatively short. Therefore, the document analysis included the entire contents of each.

The Region L 2006 Regional Water Plan was utilized to gather data on the planning group's role in the planning process. This document provided evidence on the goals of the participation, the key stakeholders, the level of participation, and the efforts that Region L took to minimize conflict in the area. Only select chapters from the Region L 2006 Regional Water Plan were used. These chapters included the public participation chapter and the water management strategies chapter. The Region L 2006 Regional Water Plan also includes a database component. The water user group and water management strategies part of this data was used in the research.

The Region L meetings minutes were employed to provide evidence that tests whether the key stakeholder, level of participation, and minimize conflict criteria of the ideal model were present in the case. All of the meeting minutes during the five-year planning process were not available for review. According to the calendar posted on Region L's website, there were 21 planning group meetings held during the planning process. In all, minutes were available for 14 of those meetings.

The final types of documents that were used in this research include memorandum reports, the Region L website, newsletters and brochures published by Region L, and the participation consultant scope of work and contract. These documents were utilized to gather evidence to test the presence of each of the criteria in the ideal model. Table 4.2 details each of these documents and how they were used to test for the presence of each of the ideal model criteria.

The strengths of the documents follow Yin's (2003) suggestions in that they are stable, unobtrusive, and have broad coverage. Most of the documents, including Chapter 16 of the Texas Water Code, Chapter 357 of the Texas Administrative Code, the Region L 2006 Regional Water Plan, memoranda, newsletters and brochures, and the contract and scope of work for the public participation consultant, were readily available and easy to gather with minimal effort. The documents, in addition, are available to the public so they are unobtrusive by nature. They were used to test for the presence of each of the ideal model criteria. Hence, they have broad coverage of the research topic.

The major weaknesses of the document analysis included retrievability and access. These weaknesses were most profound in trying to gather the meeting minutes for Region L. Not all of the meeting minutes were available for review. Some meeting minutes were posted on the Region L website. Others, however, had to be gathered directly from the San Antonio River Authority, the administrative agency for the region. In the end, only 14 of the 21 meetings had minutes available for this research.

Structured Interviews

Structured interviews were also used as part of this research. According to Yin (2003, 89), "one of the most important sources of case study information is the interview." The advantages of interviews include that they are targeted by focusing directly on the case study topic and insightful by providing perceived causal inferences (Yin 2003, 86). Interviews, however, also have their weaknesses. This includes bias due to poorly constructed questions, response bias, inaccuracies due to poor recall, and reflexivity (Yin 2003, 86). By using triangulation, the weaknesses of the structured interviews were offset by the strengths of the document analysis.

During the case study research, the voting members of Region L were interviewed. The planning group has twenty-one voting members that comprise eleven different stakeholder groups. Many of the members hold high-level positions in their place of employment. Therefore, due to time and scheduling constraints, only six members were able to be interviewed by telephone. An additional two members answered the interview questions through email. Hence, a total of eight Region L members were interviewed between June 15, 2006 and June 30, 2006. A copy of the interview questions is included in Appendix A.

Human Subjects Protection

This research utilized focused interviews involving human subjects. While this research is exempt from Texas State University's Human Subjects Protection requirements, potential ethical concerns still should be addressed.[16] The primary ethical concerns in social science research include ensuring that participation in the research is

[16] The reference number for exempt approval from the Institutional Review Board is #05-12226.

voluntary, that no harm comes to the participants, that the researcher guarantees anonymity and confidentiality to the participants, and ensuring that the researcher is not deceptive in their practices (Babbie 2004, 63-68).

In order to ensure voluntary participation and eliminate any chances of deception any communications with the interviewees included full disclosure of the research purpose and research method. Moreover, the interviewees were provided with a consent form that they were asked to sign. The consent form detailed to the interviewees the research purpose and method. The consent form was mailed to the study participants. A draft copy of the consent form is included in Appendix B.

In order to address confidentiality, the identities of participants and their responses are only known by the researcher and are not and will not be divulged publicly. The participants were assured of this confidentiality verbally and it is disclosed on the consent form.

By fully disclosing information to the participants and seeking their informed consent, no harm should come to the participants in the individual interviews. This research asked participants about their opinions and observations of citizen participation in Region L. The participants were provided with details about the research prior to participating in any interviews. Any interviewee that became uncomfortable with sharing their opinions on this topic was excused from participation without prejudice.[17]

[17] The Human Subjects Section and Consent Form were modeled after the Human Subjects Section and Consent Form by Ellis (2006, 21).

Conclusion

In brief, by using two different research methods in this case study, public participation in Region L was assessed against the ideal model. Through triangulation, the problems of construct validity are addressed and the findings of the study are more reliable (Yin 2003, 99). The next chapter will discuss the results of the case study of public participation in Region L assessed against the ideal model.

Chapter 5: Results

Purpose

A case study of the citizen participation efforts in Region L is used to assess the program against the ideal model developed in the literature review. Through document analysis and focused interviews, the case study revealed that some criteria of the ideal system were not met during the second round of planning in Region L. With some modifications, however, the public participation program in Region L has the potential to be a system designed in a way that is both measurable and, hopefully, successful. A summary table of the case study results is provided at the end of each criteria discussion.

Goals of Participation

Clearly defining public participation goals and objectives is proposed by Rosener (1978) as a fundamental criterion in evaluating the success of any public participation program. The literature suggests that an ideal system involves the public in water resources planning and 1) includes clearly defining the goals and objectives of the public participation, 2) developing a citizen participation plan, 3) establishing realistic deadlines, and 4) monitoring the participation plan for changed conditions. Document analysis and focused interviews showed that while the region's planning effort met some of the criteria it fell short in others.

Document Analysis

The first criterion of the ideal model that was tested in the case study was the criteria of **clearly defined goals and objectives**. Chapter 10 of the Region L 2006

Regional Water Plan, reports generated by the public participation consultant, and the scope of work and contract for the public participation consultant were analyzed for any evidence that suggested the presence of this first criteria.

The document analysis revealed that the region primarily viewed the water planning process during the second round of Regional Water Planning as a revision to the first round plan (SCTRWPA 2006, 10-1). While this research focused on the second round of water planning, two first round activities contributed to definitional clarity of Region L's goals during the second round. To begin, during the first round of planning, the public participation consultant for Region L conducted a study that involved focus groups in each county of the region to determine appropriate assessment criteria to evaluate water management strategies to meet water needs. The results of this study were compiled in a report generated by the public participation consultant titled *Phase III Public Participation Twenty-One County Focus Group Report* (1999). These assessment criteria were carried over into the second round of planning. In addition, the planning group developed a "principle of public participation" during the first round of planning. The principle states that:

> "The role of the Regional Water Planning Group is to create and implement a public participation plan that provides for meaningful participation in the development of an acceptable regional water plan. The public participation efforts should foster a relationship of mutual trust, honesty, respect, and interaction between the Planning Group and the public" (SCTRWPA 2006, 10-6).

This principle was also carried over into the second round of planning (SCTRWPA 2006, 10-5 – 10-6).

Since Region L decided to view the second round of planning as a revision of the first round, the second round of planning was primarily focused on evaluating and

recommending alternatives. According to Walters, Aydolette, and Miller (2000, 352) the developmental stages of evaluating and recommending alternatives typically include the public participation purposes of education, measurement, persuasion, and legitimization. From the analysis of the 2006 Regional Water Plan, it was determined that the purpose categories of education and measurement were the primary goals of public participation during the 2006 Regional Water Planning cycle. In the Region L 2006 Regional Water Plan, the intent to educate the public about the Regional Water Plan and to receive feedback from the public at key decision points during the 2006 Regional Water Planning process was expressed (SCTRWPA 2006, 10-9). Moreover, the goal of achieving consensus on all decisions during the process was emphasized (SCTRWPA 2006, 10-1). Chapter 10 of the 2006 Regional Water Plan showed that the planning group members were aware of the need for cooperation and open attitudes during the process.

Analysis of Chapter 10 of the Region L 2006 Regional Water Plan, meeting minutes, and the scope of work and contract for the public participation consultant revealed that the planning group did **develop a public participation plan.** The public participation plan was not an independent document developed by the region. Instead, the scope of work and contract for the public participation consultant outlines tasks promoting public participation for which the consultant was responsible during the planning process. In addition, Chapter 10 of the 2006 Regional Water Plan summarizes these activities (SCTRWPA 2006, 10-1 – 10-11).

Several documents were analyzed to gather information about the **deadlines set by Region L and how realistic those deadlines were**. Some of the deadlines for the Regional Water Planning process are established in Chapter Sixteen of the Texas Water

Code (Tex. Water Code 2005, §16). The final deadline of January 5, 2006 is in statute and was not subject to change. Based on that deadline, the planning group set up its meeting schedule and review process deadlines. This meeting schedule is posted on the Region L web page (http://www.watershedexperience.com). These deadlines were to include time to allow for public comment and review of the 2006 Regional Water Plan and for the planning group to agree on a final version of the 2006 Regional Water Plan (TWC §16). While deadlines were set by the region, the document analysis supports a conclusion that they were not realistic. There was not enough time allowed by the region for possible complications to the process that would require additional facilitation. These complications did arise at the end of the process and were not resolved.[18] In fact, it was found that several issues were yet to be resolved at the last planning group meeting on January 4, 2006, one day before the January 5, 2006 statutory deadline. As a result, the planning group did not approve its plan in time to meet the legislative deadline.

Review of the meeting minutes during the 2006 Regional Water Planning process revealed that Region L did **monitor the public participation plan.** Each of the meeting minutes reviewed revealed that the public participation consultant presented updates to the planning group members on activities with regard to public participation in Region L. In addition, it was found that there were changes made to the public participation plan due to changed conditions. A review of the public participation consultant contract and

[18] During the last few months of the 2006 Regional Water Planning cycle there were changes made to the Regional Water Plan and subsequent conflicts arose. These conflicts caused friction among the Region L members, as evidenced by the February 3, 2006 memorandum sent to the Texas Water Development Board detailing stakeholder concerns and a review of the meeting minutes that revealed detailed discussions about these issues. In addition, these conflicts were also present among the general public. At one of the October public plan review hearings, over 300 citizens were in attendance. While not all of the members of the public spoke at the hearing, many of them did provide written comments. This was documented in the meeting minutes and in Chapter 10 of the 2006 Regional Water Plan. The conflicts were divisive enough that the amount of time given to review and approve the plan was not sufficient.

scope of work revealed that a professional facilitator was hired at the end of the planning process. This facilitator was hired to help the planning group achieve consensus on a final regional water plan when conflicts arose at the end of the planning cycle (SCTRWPA 2006, 10-4).

Focused Interviews

Information gathered from the focused groups varied slightly from the document analysis. The responses from the respondents were mixed about whether the **definition of goals and objectives of public participation were clear.** The planning group members interviewed cited public participation goals similar to that found in the document analysis. The respondents agreed that the goal of the public participation was to educate the public on the Regional Water Plan and to receive feedback at key decision points in the process. Some members interviewed, however, felt that these goals were not clearly defined, especially when compared with what was done during the first round of Regional Water Planning.

All of the planning group members interviewed agreed that a **public participation plan was developed.** Some of the respondents also emphasized the planning group's commitment to the plan because they dedicated resources to hiring a public participation consultant.

All of the respondents agreed that **deadlines were established during the planning process.** The majority of the Region L members interviewed stated that the deadlines centered on the ultimate statutory deadline of January 5, 2006. There was some disagreement, on the other hand, about how realistic the deadlines were. Most of the

respondents agreed that the **deadlines were realistic.** There was one member, however, that felt that the deadlines were not realistic in that they did not allow enough time to handle last minute complications.

The Region L members interviewed agreed that the **public participation plan was monitored** during the process. Several of the respondents concluded that monitoring the public participation plan was one of the assigned tasks of the public participation consultant. In addition, the respondents interviewed emphasized the Region L member's role in monitoring the plan by receiving updates from the public participation consultant during regular planning group meetings. Evidence gathered from the focused interviews suggests that the respondents believe the public participation plan was altered due to changed conditions. Several of the respondents provided examples such as adding additional meetings or workshops to resolve conflicts and hiring a professional facilitator to resolve the complications that arose at the end of the planning process. One of the Region L members interviewed concluded that one of the goals of the public participation plan was design it so that it would be fluid and flexible enough to handle changed conditions.

Document analysis and focused interviews were used to test for the presence of the first ideal model criteria of clearly defined goals and objectives in Region L. The results are summarized in Table 5.1. As the evidence gathered through document analysis and focused interviews indicates, the goals of participation criteria was met in some areas while not in others. Evidence gathered through document analysis shows strong support for the ideal criteria of clearly defined goals. There was some concern, however, among the group members interviewed as to how clearly they were defined. As evidenced by the

document analysis and focused interviews, there is strong support that the planning group did have a public participation plan and they set deadlines. Evidence from the document analysis showed little support for the establishment of realistic deadlines, on the other hand. There was support from most of the interview respondents for this criterion. One member interviewed, however, did feel that the deadlines were not realistic. Finally, consistent with the ideal criteria, the participation plan was monitored and updated due to changed conditions.

Table 5.1: Goals of Participation Results

Ideal Type Category	Evidence	Research Methods	Evidence Supports
Goals of Participation			
· Clearly defined	Clearly defined goals and objectives	Document Analysis Focused Interviews	Strong Somewhat
· Participation plan developed	Participation plan is developed	Document Analysis Focused Interviews	Strong Strong
· Deadlines are established	Deadlines are established	Document Analysis Focused Interviews	Strong Strong
· Deadlines are realistic	Deadlines allow enough time to meet goals	Document Analysis Focused Interviews	Weak Somewhat
· Participation Plan is monitored	Participation plan is monitored for changed conditions	Document Analysis Focused Interviews	Strong Strong

Key Stakeholders

According to the literature review, meeting the criteria of key stakeholders in the ideal system of public participation in water resources planning includes 1) selecting stakeholders that represent the broad community, 2) involving stakeholders as active participants in the process, and 3) involving the stakeholders in the process as early as possible. Evidence gathered through document analysis and focused interviews shows that this criterion came very close to being met in Region L.

Document Analysis

Several documents were analyzed to gather evidence that Region L included **stakeholders that represented the broad community.** Chapter Sixteen of the Texas Water Code requires that each regional water planning group have at least one representative from eleven different interest groups (Tex. Water Code 2005, §16). These interests include the public, counties, municipal, industry, agricultural, environmental, small business, electric generating utility, river authority, water district, and water utility interests (TWC §16). From the Region L website it was determined that there is at least one representative for each of these eleven interests. By law, the planning group is free to add additional representatives as needed (TWC §16). With that being said, the planning group does have multiple representatives from the eleven interest categories. The Region L website identifies two representatives for the county interest, three representatives for the municipal interest, three representatives for the agriculture interest, three representatives for the small business interest, three representatives for the river authority interest, and two representatives for the water district interests. This brings the total number of representatives to twenty-one for the planning group.

According to the demand data from the Region L 2006 Regional Water Plan database, municipal and county demands comprise a total of about 36 percent of the water demands in the region. Agricultural demands for irrigated agriculture and livestock comprise a total of about 41 percent of the water demands in the region. Industrial, steam electric power, and water utilities comprise the remaining percentage of water demands

in the region. With that being said, the representatives for the region in each of these categories appear to be fairly balanced when compared to the water demands in the area.

According to Chapter Sixteen of the Texas Water Code, once the TWDB designated and selected the initial regional water planning groups and group members, control of the water planning process was transferred to the regional water planning groups (Tex. Water Code 2005, §16). This evidence suggests that the stakeholders or planning group members are **involved as active participants** in the water planning process. Review of the meeting minutes available from the 2006 Regional Water Planning cycle also lends support to this criterion. Members of the planning group regularly attended and participated in the meetings.[19]

Chapter Sixteen of the Texas Water Code places the stakeholders or planning group members in control of the process (Tex. Water Code 2005, §16). Meetings were scheduled regularly throughout the planning cycle, also suggesting that the planning group members were involved during all stages of the process. This evidence supports the conclusion that the stakeholders in Region L are **involved in the water resources planning process as early as possible.**

Focused Interviews

The conclusions drawn from the focused interviews with regard to **stakeholders representing the broad community** varied slightly from what was found in the document analysis. Several of the planning group members interviewed agreed that stakeholders are representative of the broad community. Other respondents, however, felt

[19] It was found that out of the 14 meetings that information was available, 18 of the 21 planning group members had an attendance rate of 70% or higher.

that the stakeholders were not an accurate representation. These respondents went on to conclude that the stakeholders should not necessarily be a representative sample of the broad community. Instead, they proposed that the stakeholders represent those interests that are most interested and most impacted by water resources planning and development. Using the "interested" and "impacted" perspective, these planning group members felt that the stakeholders were representative. In addition, one planning group member felt that there were certain interests that were underrepresented when compared to the number of stakeholders representing other interests in the group.[20]

All of the planning group members interviewed believed that the **stakeholders had an active role in the planning process.** Most of the respondents mentioned the statute that places the planning group members in charge of the process. Some of the respondents went on to emphasize the importance of being an active member in the process. These respondents believe that actively participating in the process goes beyond simply attending meetings. They emphasized the importance of also being prepared for the meetings by conducting outside independent research.

All of the respondents believed that the **stakeholders were involved in the process as early as possible.** Some of the respondents interviewed, again, cited the statute that places the planning group in charge of the water planning for their area. Some members interviewed also added that the stakeholders make all of the decisions for the region and that nothing occurs in the water planning process without their knowledge.

[20] This planning group member gave the general public and the environment as examples of stakeholder groups they felt were underrepresented in the region. With only one representative for each group, they suggested that other interests, such as small business, with multiple representatives, may have a disproportionate amount of representation in the region.

There was one part of the planning process in which several of the planning group members interviewed felt that stakeholder involvement should be altered. During the planning process the TWDB generates the population and water demand projections for the region. These numbers are then delivered to the region, which is responsible for presenting them to their area and approving them. The problem with this process is the region's virtual inability to change the numbers, while having to deal directly with citizens unhappy with the results. The planning group members that discussed this felt that the TWDB should either take all responsibility for the development *and* approval of the numbers. Or, allow the planning group more latitude to make changes where they see fit.

The results of the document analysis and focused interviews provide evidence to illustrate key stakeholders are involved (summarized in Table 5.2). For example, stakeholders do come close to representing the broad community. While some planning group members interviewed felt that the stakeholders were not representatives of the broad community, they did feel that the stakeholders accurately represented interests that should be involved in water resources planning. The evidence drawn from the document analysis and focused interviews also shows that Region L members are involved in the water planning process as active participants. For the most part, the evidence also showed that the stakeholders were involved in the planning process as early as possible. Some of the planning group members interviewed felt that there could be more involvement by the group members in the development of the populations and demand data; however, respondents agreed that the stakeholders were involved in the process at all developmental stages.

Table 5.2: Key Stakeholder Results

Ideal Type Category	Evidence	Research Methods	Evidence Supports
Key Stakeholders			
· Represent the broad community	Stakeholders are representative of the demographic characteristics of the region	Document Analysis Focused Interviews	Strong Somewhat
· Involved in the process as active participants	Stakeholders are actively involved in the process	Document Analysis Focused Interviews	Strong Strong
· Take part in the planning process as early as possible	Stakeholders are involved in the process as early as possible	Document Analysis Focused Interviews	Strong Somewhat

Level of Participation

Selecting a level of public participation appropriate in addressing citizen and stakeholder concerns and considering and incorporating citizen and stakeholder concerns and recommendations into the water plan are components of the criteria of "level of participation" in the ideal model. Evidence gathered through document analysis and focused interviews shows that this criterion fell short in several areas in Region L.

Document Analysis

There were several documents utilized to assess the criteria "**selecting a level of participation appropriate to addressing citizen concerns**". The evidence shows that while there were efforts made by the planning group to select a level of participation that would address the concerns of its citizens and stakeholders, in the end they were not enough to achieve consensus by the legislatively mandated deadline on January 5, 2006.

Chapter 16 of the Texas Water Code requires all regional meetings be public and comply with the state open meetings requirements (Tex. Water Code 2005, §16). Each of

the planning group meetings reviewed showed that there were opportunities for public comment before and after the meetings, in addition to opportunities for public comment prior to decisions made by the group. Review of the meeting schedule showed that the large majority of the planning group meetings were held in San Antonio at 10:00 in the morning on Thursdays. The fact that the meetings were only held in one location in a region with twenty-one counties suggests that opportunities were missed for the public to provide input. In addition, the meeting time was also suggestive of missed opportunities, as it was during the normal working hours for most people.

Chapter Sixteen of the Texas Water Code also requires that the planning groups hold at least one public hearing after the draft Regional Water Plan is delivered to the TWDB and before the final Regional Water Plan is adopted (Tex. Water Code 2005, §16). Review of the Region L meeting schedule showed that the planning group held four public hearings at various locations throughout the region.

Throughout the planning process the region scheduled special workshops to resolve problems that occurred. In the last year of the planning process there were several divisive conflicts that arose, as evidenced from the meeting minutes. According to the meeting minutes and schedule, the region held additional workshops to discuss these issues. In addition, the contract for the public participation consultant and Chapter Ten of the 2006 Regional Water Plan show that the region hired a professional facilitator to help the group achieve consensus.

The evidence shows that there were minimum requirements, by law, on the level of public participation in the Regional Water Planning process. Region L had additional opportunities, such as multiple public hearings, additional workshops, and hiring a

facilitator. Unfortunately, this was not enough to reach an agreement. Concerns were still being raised at the January 4, 2006 meeting, one day before the legislatively mandated deadline. The evidence shows that while attempts were made to find an appropriate level of participation, these attempts were not enough to address citizen and stakeholder concerns.

Chapter Ten of the Region L 2006 Regional Water Plan includes a section dedicated to **addressing citizen concerns and incorporating them into the plan** (SCTRWPA 2006, 10-11 – 10-87). This section includes a compilation of the citizen recommendations and concerns that were provided to the planning group during the planning process. In this section, each comment is described in detail as well as provided with a response of what action, if any, the planning group members took based on the comment.

A memo was also included in the Region L 2006 Regional Water Plan that listed concerns raised by several of the planning group members. A few of these concerns were similar to those raised by citizens in the region. Review of the meeting minutes revealed that these issues were still not resolved at the last planning group meeting prior to the January 5, 2006 deadline, suggesting that not enough time was given to consider these issues as fully as possible.

The analysis of Region L meeting minutes revealed that citizen and stakeholder concerns and recommendations were discussed and decided upon. The meeting minutes also showed that the public participation consultant compiled and tallied public comments and provided the results to planning group members for review after the public hearings. In all, it can be concluded from the document analysis that citizens' and

planning group members' concerns and recommendations were taken into consideration. Not all concerns and recommendations, however, effected a change in the final version of the plan. As evidenced by the meeting minutes, this was mainly due to decisions made by the planning group. The evidence suggests, however, that this is also possibly due to the planning group not having enough time to resolve these difficult issues.

Focused Interviews

Overall, the planning group members interviewed believed that the **level of participation was appropriate in addressing concerns.** Several of the planning group members interviewed emphasized the large amount of testimony and written comments that were received by the planning group. They discussed the fact that all of the meetings were open to the public, in addition to the planning group's efforts to solicit public comments in those meetings prior to any decision. Some of the planning group members suggested that more was done during the first round of planning to involve the public. They offered, however, that during the second round of planning budget and time constraints limited the region's ability to provide the same level of public participation during the second round. In all, the planning group members interviewed felt that level of participation was appropriate when the limitations on the process are taken into consideration. With so many conflicting issues in the region, however, several respondents felt that more should probably be done to increase the level of public participation.

Several of the planning group members interviewed discussed using Chapter Ten of the Region L 2006 Regional Water Plan to **address and incorporate citizen concerns**

and recommendations into the plan. All of the respondents felt that they took care to consider and incorporate citizen and stakeholder concerns and recommendations into the plan. Some planning group members interviewed provided examples of projects that were altered due to citizen input. Because of public comment, once such project, an Aquifer Storage and Recovery strategy, was scheduled to begin at an earlier date in the planning horizon. Most of the planning group members interviewed believed that they had to make decisions that would be best for the region. With that being said, they admitted that not all citizen or stakeholder concerns and recommendations were incorporated into the plan.

The results of the document analysis and focused interviews assessing the level of involvement are summarized in Table 5.3. The document analysis revealed that efforts were made to provide a level of involvement appropriate in addressing citizen concerns. These efforts, however, fell short. The focused interviews indicate that the level of involvement was appropriate in addressing citizen concerns, given the time and budget constraints on the process. In all, there were concerns that were ultimately not resolved, suggesting that more could have been done. The evidence drawn from the document analysis and focused interviews shows that citizen and stakeholder concerns and recommendations were considered during the planning process, although all of the recommendations did not effect a change in the final version of the plan. The document analysis revealed a number of issues that were not resolved prior to the adoption of the plan, suggesting not all concerns and recommendations were considered as fully as possible.

Table 5.3: Level of Participation Results

Ideal Type Category	Evidence	Research Methods	Evidence Supports
Level of Participation			
· Appropriate in addressing citizen and stakeholder concerns	The level of citizen and stakeholder participation provides that there is little to no conflict prior to the adoption of the Regional Water Plan	Document Analysis Focused Interviews	Weak Somewhat
· Citizen and stakeholder concerns and recommendations are considered and incorporated into the plan	Citizen and Stakeholder concerns and recommendations are considered and incorporated into the plan	Document Analysis Focused Interviews	Somewhat Somewhat

Minimize Conflict

Minimizing conflict is the final criterion in the ideal model of public participation in water resources planning. The literature suggests that this criterion includes identifying constraints and conflicts on the process, educating the public about the constraints and conflicts, and selecting a participation method appropriate to the level of conflict. Document analysis and focused interviews show that while efforts were made by the region to meet this criterion, certain efforts sometimes fell short.

Document Analysis

There are **several constraints on the Regional Water Planning process that can be identified.** The largest of these are time and budget constraints. From the calendar displayed on Region L's website it was determined that the region scheduled regular planning group meetings during the time-frame allowed to develop the plan. In addition public hearings were also scheduled to review the plan the October before the

legislatively mandated deadline of January 5, 2006. This evidence supports the conclusion that the planning group was aware of the time constraints on the process.

It was concluded from the document analysis that the planning group was also aware of the budgetary constraints on the process. The budget for the second round of planning was reduced by the legislature. Consequently, the planning group made changes to their budget. Review of the public participation consultant contract for the two water planning cycles shows that the budget allowance for the public participation program was reduced. This evidence also suggests that the planning group was aware of the budgetary constraints.

Another constraint on the process is the Edwards Aquifer Authority Act. This Act was discussed in the settings chapter. Evidence from the text of the Region L 2006 Regional Water Plan suggests that the planning group was also aware of the restrictions this Act placed on one of its largest groundwater resources (SCTRWPA 2006, 1-33 – 1-34).

The document analysis suggests that **conflicts were identified** by Region L through the public comment process. Chapter Ten of the Region L 2006 Regional Water Plan lists citizen concerns and recommendations presented during the public comment opportunities (SCTRWPA 2006 10-11 – 10-87). The meeting minutes revealed that some of these conflicts were raised during the planning group meetings. As mentioned previously, some of these concerns and recommendations are also conflict issues raised by planning group members in the memo included in the 2006 Regional Water Plan. While it can be concluded that the planning group was aware of conflicts based on the

document analysis, it cannot be determined if these conflicts were identified before they became major public issues.

The document analysis suggests that the planning group made efforts to **educate the public.** The planning group provided a website, newsletters, and a brochure as part of its education efforts. The primary purpose of these education materials, however, was to provide information about the planning group, the planning process, and the plan itself. The education materials were generally not used to educate the public about conflicting issues.

There were several **public participation methods** used during the 2006 Regional Water Planning process. Review of the meeting schedule revealed that there were planning group meetings, workshops, and public hearings throughout the planning process. A facilitator was also brought in during the latter part of the process (SCTRWPA 2006, 10-4). Unfortunately, these methods were not successful in resolving the conflicts in the region as evidenced previously in the "level of involvement" criteria results.

Focused Interviews

The planning group members interviewed overwhelmingly agreed that time and budget were the largest **constraints on the process.** The respondents were aware, sometimes painfully, that these were constraints on the process. The planning group members interviewed all agreed that the group did not have enough time to resolve the major conflicts that arose at the end of the process. It was also expressed that budget was a limiting factor. The planning group members interviewed suggested that the public participation efforts during the second round of water planning were reduced because of

the budgetary constraints. They provided examples such as, during the first round of planning, Region L had a professional facilitator during the entire process. Another example was the planning group's rotation of the meeting locations. The respondents pointed out that a professional facilitator was only utilized during the final months of the second round of planning. Evidence presented in the document analysis showed that the majority of the Region L meetings were in San Antonio.

All of the planning group members discussed numerous **conflicts that were identified** during the planning process. Some of the conflicts the respondents suggested, just to mention a few, were rural versus urban, environmental versus people, San Antonio versus everybody else, and upstream surface water use versus downstream use. One of the planning group members offered that many of these conflicts have been in existence in the area much longer than Regional Water Planning. Most of the respondents admitted that there were some conflicts that unexpectedly arose at the end of the planning process. These unexpected conflicts effectively renewed other conflicts that had been resolved.

The consensus among the respondents interviewed is that the **public educated** them about conflicts in Region L. The respondents agreed that the planning group did make efforts to educate the public about the planning process including publishing the planning group website, providing newsletters and brochures, and hiring the public participation consultant to work with the public. In addition, some members offered that many of the agencies that proposed water management strategies incorporated into the Regional Water Plan conduct their own public participation efforts, ultimately benefiting Region L.

All of the planning group members interviewed felt that they **utilized as many participation methods as possible to resolve the conflicts** in the region. They ran out of time, however. The planning group members listed several methods, including hiring a facilitator at the end of the process, holding additional meetings and workshops, and holding multiple public hearings. Some of the respondents suggested that they underestimated the level of conflict that occurred during the second round, due to the smooth operation of the first round.

The results of the document analysis and focused interviews analyzing the Region L efforts to minimize conflict are illustrated in Table 5.4. Evidence gathered through the document analysis and focused interviews indicate that constraints and conflicts were identified by the planning group during the process. Unfortunately, some of the major conflicts were unforeseen and possibly underestimated during the last part of the process. The evidence drawn from the document analysis and focused interviews also showed that Region L did work to educate the participants. Much of this, however, was not produced to educate the public about conflicts in the area. In addition, the planning group members interviewed admittedly relied more on the public to educate them on conflicts than vice versa. For the most part, the evidence showed that the participation methods selected were not effective in resolving the conflict in the area. Several respondents admitted the level of conflict was underestimated during the second round of planning. They also suggested that more could have possibly been done in the earlier stages to prevent the snowball effect in the end.

Table 5.4: Minimize Conflict Results

Ideal Type Category	Evidence	Research Methods	Evidence Supports
Minimize Conflict			
· Identify constraints on the process	Constraints on the process are identified	Document Analysis Focused Interviews	Strong Strong
· Identify potential conflicts	Potential conflicts are identified	Document Analysis Focused Interviews	Somewhat Somewhat
· Educate the public on conflict issues	Efforts are made to educate the public specifically on conflict issues	Document Analysis Focused Interviews	Weak Somewhat
· The participation method is appropriate to the level of conflict involved	The participation methods employed resolve the level of conflict	Document Analysis Focused Interviews	Weak Somewhat

Conclusion

The case study revealed, through document analysis and focused interviews, that some criteria of the ideal model were not met during the second round of planning in Region L. The public participation program in Region L does have the potential to be a system designed in a way that is both measurable and, hopefully, successful. The next chapter suggests improvements to the participation program in Region L and further research that can contribute to the knowledge of participation programs in water resources planning.

Chapter 6: Recommendations and Conclusion

The purpose of this research was: (1) to establish an ideal model system to involve citizens in water resources planning, (2) to use the model system to assess the citizen participation program in the South Central Texas Regional Water Planning Group, (3) to offer suggestions for any improvements to the process, and (4) to offer suggestions for future research that could increase the effectiveness of citizen participation in the South Central Texas Regional Water Planning Group and in the Regional Water Planning process as a whole. Chapter Two described the ideal criteria that were used to assess the Regional Water Planning process (first purpose). In Chapter Five, the results of the assessment based on document analysis and focused interviews were presented (second purpose). This chapter addresses the third purpose by presenting recommendations for improvements to the public participation process in Region L based on the assessment results. It also addresses the fourth purpose by offering suggestions for future research that could increase the effectiveness of citizen participation in the South Central Texas Regional Water Planning Group and the Regional Water Planning process as a whole.

Recommendations

The study identifies gaps in both the public participation process in Region L and the public participation component of the water resources planning model. Using the weaknesses in the system identified by the model, a set of recommendations were developed (see Table 6.1). In brief, the following recommendations are made:

1. Place more emphasis on clearly defining the public participation goals and objectives.

2. Set deadlines that allow enough time to mediate unexpected conflicts.

3. Review the stakeholder representatives and make changes if necessary to more accurately reflect the interests in the region.

4. Work with the TWDB to resolve the problems with population and demand projections.

5. Determine what level of involvement is necessary for citizens and stakeholders that will address their concerns.

6. Determine what is needed to more appropriately address citizen and stakeholder concerns and recommendations and incorporate them into the plan.

7. Be more aware of potential conflicts in the region before they become major problems.

8. Be more proactive in educating the public about conflicts in the region.

9. Select participation methods that are appropriate to the level of conflict in the region.

Table 6.1: Region L Case Study Recommendations Summary

Ideal Type Categories	Evidence Supports	Recommendation
Goals of Participation		
· Clearly Defined	DA[21]: Strong FI[22]: Somewhat	· Place more emphasis on clearly defining the public participation goals and objectives.
· Participation plan developed	DA: Strong FI: Strong	
· Deadlines are established	DA: Strong FI: Strong	
· Deadlines are realistic	DA: Weak FI: Somewhat	· Set deadlines that allow enough time to mediate unexpected conflicts
· Participation plan is monitored	DA: Strong FI: Strong	
Key Stakeholders		
· Represent the broad community	DA: Strong FI: Somewhat	· Review the stakeholder representatives and make changes if necessary to more accurately reflect the interests in the region.
· Involved in the process as active participants	DA: Strong FI: Strong	
· Take part in the planning process as early as possible	DA: Strong FI: Somewhat	· Work with the TWDB to resolve the problems with population and demand projections
Level of Participation		
· Appropriate in addressing citizen and stakeholder concerns	DA: Weak FI: Somewhat	· Determine what level of involvement is necessary for citizens and stakeholders that will address their concerns.
· Citizen and stakeholder concerns and recommendations are considered and incorporated into the plan	DA: Somewhat FI: Somewhat	· Determine what is needed to more appropriately address citizen and stakeholder concerns and recommendations and incorporate them into the plan.
Minimize Conflict		
· Identify constraints on the process	DA: Strong FI: Strong	
· Identify potential conflicts	DA: Somewhat FI: Somewhat	· Be more aware of potential conflicts in the region before they become major problems.
· Educate the public on conflict issues	DA: Weak FI: Somewhat	· Be more proactive in educating the public about conflicts in the region.
· The participation method is appropriate to the level of	DA: Weak FI: Somewhat	· Select participation methods that are appropriate to the level of conflict in the region.

[21] DA- Document Analysis

[22] FI- Focused Interviews

conflict involved		

Goals of Participation

Several of the planning group members interviewed felt that the goals and objectives of public participation in Region L were not as clearly defined and communicated as they could have been during the second round of planning. These planning group members proposed that additional focus be given to actively communicating the region's goals and objectives. By defining and clearly communicating the public participation goals and objectives, a better understanding can be achieved by all participants, stakeholders and citizens, as to what their purpose is in the water planning process.

The strongest, and perhaps most detrimental, weakness of the public participation program in Region L, was also in the goals of participation criteria. While deadlines were established by the region, they were unrealistic. The deadlines did not allow the region enough time to resolve unexpected conflicts that arose at the end of the process. Each respondent interviewed emphasized this problem- they ran out of time. The legislatively mandated deadline is inflexible. It cannot be extended under any circumstances. With that being said, the region should build enough time into its intermediate deadlines to mitigate unexpected conflicts.

Key Stakeholders

The literature review suggests that the key stakeholders in the water resources planning process should broadly represent the planning area. While the document analysis revealed that the planning group members are a reasonable representation of the demographic characteristics of Region L, one of the planning group members felt that

this was not the case. It is recommended that the planning group reevaluate the stakeholder interests represented. By opening up a dialogue, members will be able to address any concerns as to a lack of representation for certain interest groups.

Several of the planning group members interviewed discussed one area where they felt the planning group should have more input, population and demand projections. The consensus among these members is that the region has little control or power to change the numbers developed by the TWDB. These members discussed several options that could be employed to resolve this issue. It is the recommendation of this research that the planning group members work with the TWDB to address their concerns and recommendations about the development of population and demand projections for their area.

Level of Participation

There was minimal evidence supporting a level of participation in Region L appropriate to addressing citizen and stakeholder concerns. While time was one of the largest mitigating circumstances for this, more attention does need to be given to what the region can do to address both its citizen and stakeholder concerns. The budget for the region did not allow as many resources to be dedicated to public participation efforts during the second round. The region, however, needs to evaluate methods that can resolve or at least achieve consensus on the conflicts in the area if the proposed water plan is to have any likelihood of being implemented.

Efforts were made by the region to consider and incorporate citizen and stakeholder concerns and recommendations into the plan. At the end of the process, however, there were still major concerns that were raised. The planning group placed great emphasis on achieving consensus among its members. This consensus was not achieved during the 2006 Regional Water Planning process. The planning group needs to reevaluate and determine what can be done to better consider and incorporate citizen and stakeholder concerns into the process.

Minimize Conflict

Many of the planning group members interviewed listed conflicts of which they were aware. These members, however, emphasized several conflicts that were unexpected. In addition, several respondents admitted that they underestimated the level of conflict that occurred. Unexpected conflicts cannot be foreseen. In a region that has so many competing interests, however, they should never be underestimated. The planning group members should be aware that unexpected conflicts can and usually do arise.

Several of the planning group members interviewed also emphasized that they depended on the public to educate them about conflicts. It is good that the planning group members listen to the public and their concerns. This process, however, should be a two-way exchange. Once a conflict is brought to light by members of the public, the planning group should take action to provide information to the public on any decisions they make regarding the issue. Chapter Ten of the Region L 2006 Regional Water Plan, does provide for responses from the planning group on citizen concerns and recommendations.

These responses, however, should be provided to the public long before the final version of the plan is adopted.

The planning group employed workshops, regular planning group meetings, and a facilitator as participation methods used to resolve conflicts. These methods, however, were unsuccessful in their task. Time contributed to the planning group's inability to resolve the conflicts that arose during the final stages of the planning process. The legislative deadline was a known part of the process. With that being said, additional methods should have been employed to resolve the conflicts in the region or at a minimum achieve consensus among the planning group members.

Recommendations for Future Research

This research was a case study of citizen participation in the South Central Texas Regional Water Planning Group during the 2006 Regional Water Planning cycle. The final purpose of this research is to offer suggestions for future research that could increase the effectiveness of citizen participation in the South Central Texas Regional Water Planning Group and the Regional Water Planning process as a whole.

There are several future studies that should be conducted to achieve this goal. To begin, it is recommended that a comparative analysis of public participation in Region L during the first and second Regional Water Planning cycles using the ideal type model presented in this research be conducted. Region L approved and adopted their Regional Water Plan during the 2001 cycle, while they did not do the same during the 2006 cycle. This type of study has the potential to yield information on how to improve public

participation in Region L, since the 2001 Regional Water Plan was successfully completed.

This research should also be expanded to study other Regional Water Planning Groups. There are a total of sixteen regions in Texas. Each of these regions, by law, must have a minimal amount of public participation. By assessing public participation in each of the other regions, a broad knowledge base can be assembled. From this knowledge base, a more comprehensive picture can be drawn of what methods are most successful in facilitating public participation in water resources planning.

In addition to studies of the Regional Water Planning Groups, the role of the Texas Water Development Board in the Regional Water Planning process should also be assessed. This research has the potential to yield information about the resources Texas dedicates to the Regional Water Planning process. These resources include, but are not limited to, financial resources and leadership, or guidance, provided by the state to the Regional Water Planning Groups.

Conclusion

The South Central Texas Regional Water Planning Group was unsuccessful in approving and adopting a Regional Water Plan during the 2006 Water Resources Planning process. The case study revealed that there are some gaps in the public participation program in the region when compared to the ideal model. Region L did make significant efforts to involve the public in the water planning process. These efforts, however, were limited by, among others, time and budgetary constraints. By applying the process modifications recommended and conducting future studies of public participation

in water resources planning, measurable and successful programs will hopefully be developed.

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Appendix A

Focused Interview Questions

1. What was the purpose of the citizen involvement in the planning process in South Central Texas Regional Water Planning Group and was it clearly defined?

2. Did the South Central Texas Regional Water Planning Group develop a public participation plan?

3. What deadlines were established during the planning process by the South Central Texas Regional Water Planning Group and/or by the Texas Water Development Board?

4. Were these deadlines realistic?

5. How were these deadlines communicated to the participants?

6. If the South Central Texas Regional Water Planning Group had a public participation plan, how was this plan monitored during the planning process?

7. What, if any, changes were made during the planning process to the public participation plan due to changed conditions?

8. Do you believe the board members of the South Central Texas Regional Water Planning Group are an accurate representation of the public, why?

9. How are you an active participant in the planning process?

10. At what point in the planning process were the stakeholders involved?

11. Do you believe this was early enough?

12. How was the level of participation available to the stakeholders and the general public appropriate or inappropriate in addressing their concerns?

13. How have citizen and stakeholder recommendations been considered and incorporated into the South Central Texas Regional Water Planning Group Regional Water Plan?

14. What constraints on the planning process were identified?

15. What potential conflicts were identified?

16. How were the stakeholders and the public educated on these controversial issues?

17. How were the participation methods selected to resolve these issues appropriate or inappropriate to the level of conflict involved?

Appendix B

Research Participation Consent Form

"Public Participation in the South Central Texas Regional Water Planning Group"

You are invited to participate in a study of public participation in the South Central Texas Regional Planning Group. I am a graduate student in Public Administration at Texas State University in San Marcos. This study is part of my Applied Research Project, which is required for the Master of Public Administration degree. The purpose of this phase of the research is to assess the public participation program in the South Central Texas Regional Water Planning Group. Public participation is an important part of the Regional Water Planning Process in Texas. As a member of the Planning Board for the South Central Texas Regional Water Planning Group, you have been selected to participate in an individual interview as part of this study.

If you decide to participate, the study is a focused or individual interview. You will be asked to discuss your views and opinions of the Regional Water Planning Process and specifically public participation in South Central Texas Regional Water Planning Group. If you are uncomfortable discussing these matters, you may withdraw from participation without prejudice. The entire process will take from 30 to 60 minutes.

Any information that is obtained in connection with this study and can be identified with you will remain confidential and will be disclosed only with your permission.

Your decision whether or not to participate will not prejudice your future relations with Texas State University. If you decide to participate, you are free to discontinue participation at any time without prejudice.

If you have any questions, please ask me. If you have any additional questions later, you may contact me by telephone at 512-365-8855 or by email at wendybarron@ev1.net. Additionally, you may contact my research advisor, Dr. Patricia Shields, by telephone at 512-245-2143 or by email at ps07@txstate.edu.

You will be offered a copy of this form to keep.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above and have decided to participate. You may withdraw at any time without prejudice after signing this form, should you choose to discontinue participation in this study.

_____ _____

Signature of Participant Date