

Impacts of a Colorado River Dam

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Introduction

Rivers contribute many characteristics that make up the surrounding habitat: stream flow, salt content, soil erosion, and they aid in providing sustainability to the surrounding ecosystem. There are also a variety of political and social aspects pertaining to the creation of a river dam. The political concepts involve water, property, and environmental law, water rights, the Endangered Species Act, and specific Texas Supreme Court cases that act as precedents for future proceedings, and economics. The social ideals revolve around the individuals' relationship to the river. There are many concerned individuals that are involved in the protest against the dam, from property owners to environmentalists and others. The purpose of this project is to grasp the scale of general opinion pertaining to the Colorado River and whether or not the dam should be created.

Objectives

- Research the impacts of a dam on its surrounding ecosystem.
- Understand the laws and policies surrounding the Texas water system.
- Understand the public opinion on the creation of a Colorado River Dam.
- Distribute and analyze a survey pertaining to the general opinion.
- Understand the importance of water, as a natural resource, and its conservation.

Methodology

- Created an email list from a public database with participants involved in the proceedings of the Colorado River dam.
- Constructed a ten question survey centered on public opinion
- Distributed survey to the email list.
- Received feedback that is both confidential and anonymous from fifty participants.
- Analyzed the data provided.



Photo 1: Google Earth Image of the location of the potential Colorado River Dam

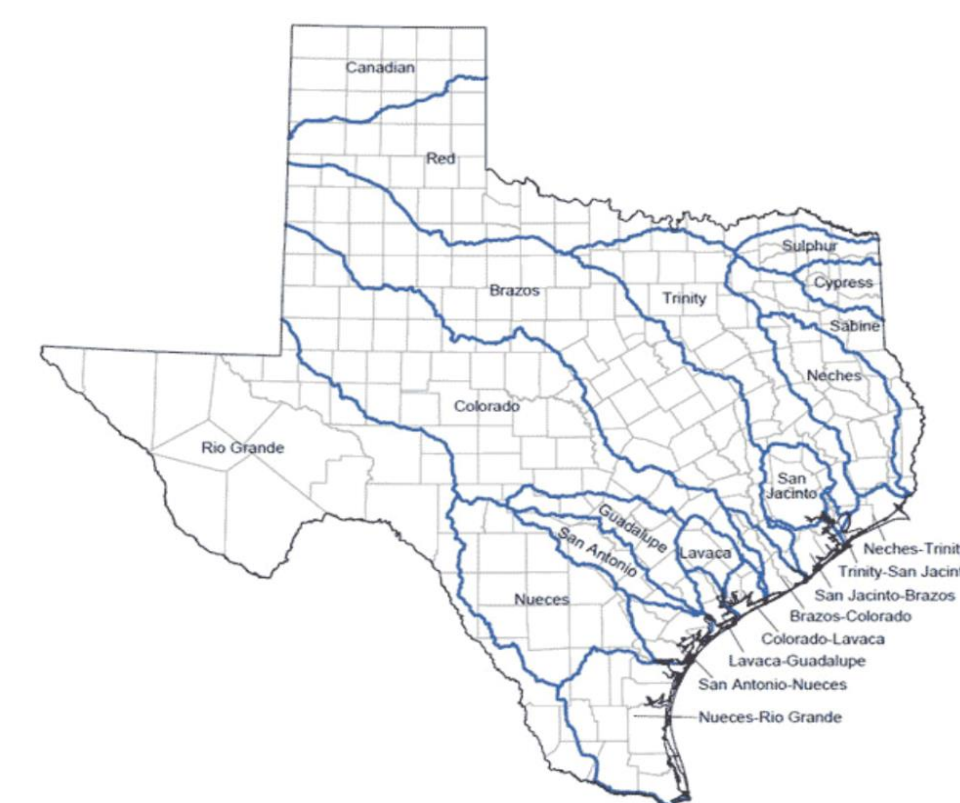


Photo 2: Water Systems in Texas
 Source: (twdb.texas.gov)

Results

Table 1: Survey outcome of fifty participants

Survey Questions	Categories				
Q 1: Position on new in-channel dam	For: 6%	Against: 94%			
Q 2: Reason for involvement	Property Owner: 82%	Concerned Individual: 12%	Advocacy Group: 0%	State Agency: 0%	Other: 6%
Q 3: Concern regarding water quality and stream flow	Extremely Concerned: 94%	Moderately Concerned: 2%	Somewhat Concerned: 0%	Not Concerned: 4%	
Q 4: Awareness of impacts of a dam on a river	Extremely Aware: 88%	Moderately Aware: 8%	Somewhat Aware: 4%	Unaware: 0%	Completely Unaware: 0%
Q 5: Concern for water rights (open access)	Extremely Concerned: 92%	Moderately Concerned: 6%	Somewhat Concerned: 2%	Not Concerned: 0%	
Q 6: Authority over local water conflicts	Federal Authority: 24%	State Authority: 58%	Local Authority: 18%		
Q 7: Concern for local businesses	Extremely Concerned: 98%	Moderately Concerned: 0%	Somewhat Concerned: 0%	Not Concerned: 2%	
Q 8: Concern for dam's effect on surrounding ecosystem	Extremely Concerned: 90%	Moderately Concerned: 2%	Somewhat Concerned: 4%	Not Concerned: 4%	
Q 9: Agreement of humans' direct impact on environment	Strongly Agree: 94%	Agree: 6%	Disagree: 0%	Strongly Disagree: 0%	
Q 10: Importance of water conservation	Extremely Important: 100%	Moderately Important: 0%	Important: 0%	Not Important: 0%	Irrelevant: 0%

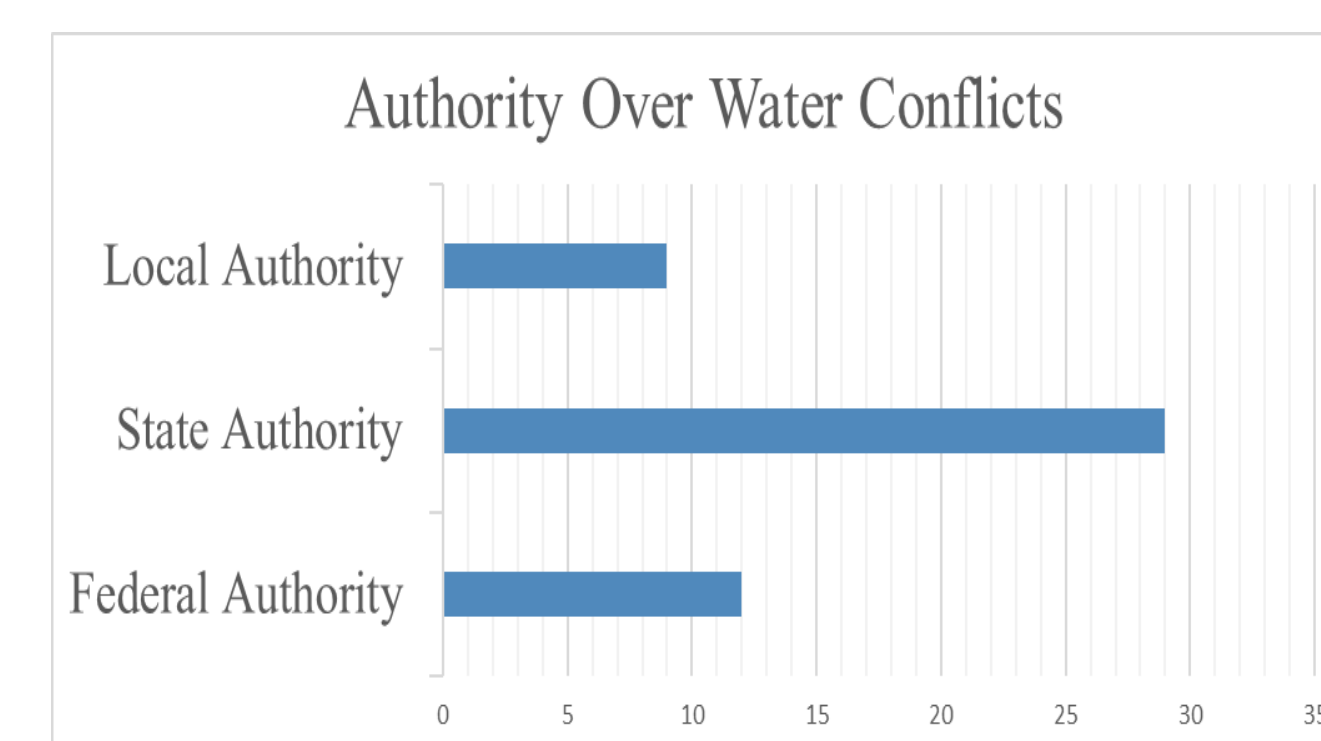


Figure 1: Participants' opinion over the governing body that should be in charge of water conflicts

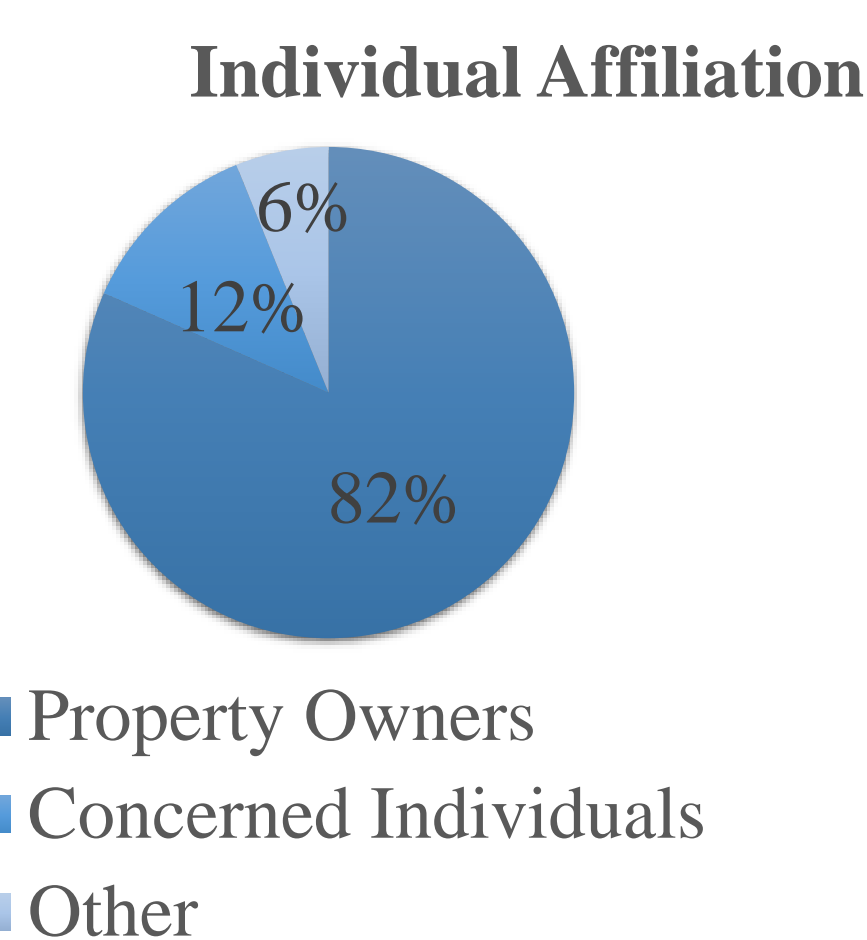


Figure 2: Participants' reason for involvement

Conclusions

- People were highly passionate and opinionated about their answers.
- Arguments against the dam were given in regard to the reputation surrounding the Leonard Pecan Plantation.
- The diversity in question six needs to be further investigated.
- The unanimity in question ten was not expected. Texas is not typically considered cautious when it comes to environmental awareness.
- The answers in question four displayed predictably.
- Nature is an uncontrollable force that can be deeply influenced through human interaction.

Limitations

- The survey had to be rescinded.
- Unable to perform personal interviews.
- This political route is no longer in pursuit to establish a Colorado River Dam.

Future Work

- Study the proceedings surrounding a dam installation in the city of Goldthwaite, Texas.
- Look into a possible scientific survey based on fact rather than opinion.
- With the use of GIS, calculate a trend in the stream flow of the Colorado River.

References

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