

University of Mississippi

eGrove

---

Honors Theses

Honors College (Sally McDonnell Barksdale  
Honors College)

---

2019

## The Water Changed Me as a Person: How Childhood Experiences With Water Affect Behavior and Attitudes Towards Water as an Adult

Victoria Heim  
*University of Mississippi*

Follow this and additional works at: [https://egrove.olemiss.edu/hon\\_thesis](https://egrove.olemiss.edu/hon_thesis)



Part of the [Sociology Commons](#)

---

### Recommended Citation

Heim, Victoria, "The Water Changed Me as a Person: How Childhood Experiences With Water Affect Behavior and Attitudes Towards Water as an Adult" (2019). *Honors Theses*. 1177.  
[https://egrove.olemiss.edu/hon\\_thesis/1177](https://egrove.olemiss.edu/hon_thesis/1177)

This Undergraduate Thesis is brought to you for free and open access by the Honors College (Sally McDonnell Barksdale Honors College) at eGrove. It has been accepted for inclusion in Honors Theses by an authorized administrator of eGrove. For more information, please contact [egrove@olemiss.edu](mailto:egrove@olemiss.edu).

“The Water Changed Me as a Person”  
How Childhood Experiences With Water Affect Behavior and Attitudes Towards  
Water as an Adult.

by  
Victoria Heim

A thesis submitted to the faculty of The University of Mississippi in partial  
fulfillment of the requirements of the Sally McDonnell Barksdale Honors College.

Oxford, MS  
May 2019

Approved by:

---

Advisor: Dr. John Sonnett

---

Reader: Dr. Amy McDowell

---

Reader: Dr. Jeffery Jackson

© 2019

Victoria Heim

ALL RIGHTS RESERVED

## ABSTRACT

This research serves to identify how childhood experiences with water impact a person's attitudes and behaviors towards water issues later in life. Current research looks at more one-dimensional studies, such as *only* attitudes and behaviors from childhood, or not exploring multiple variables such as gender *and* community type *and* childhood experiences. By interviewing two distinct groups of students in terms of typical environmental attitudes and behaviors expressed by members of each group or political party, the College Republicans and the Office of Sustainability, we can see how the individual respondents from each group may have had childhood experiences that shaped these beliefs. By exploring the connections between relation to water, community type and region, and gender all in relation to childhood experiences, we can learn how to shape a child's experiences with water to develop pro-environmental attitudes and behaviors as adults.

## TABLE OF CONTENTS

<b>LIST OF TABLES AND FIGURES.....</b>	<b>V</b>
<b>INTRODUCTION .....</b>	<b>1</b>
<b>LITERATURE REVIEW.....</b>	<b>2</b>
CHILDHOOD EXPERIENCES .....	4
RELATION TO WATER.....	5
COMMUNITY TYPE AND REGION .....	10
GENDER .....	13
RESEARCH QUESTION .....	15
<b>METHODS.....</b>	<b>16</b>
DATA COLLECTION .....	16
DATA ANALYSIS.....	17
<b>RESULTS.....</b>	<b>18</b>
COMMUNITY TYPE AND REGION .....	19
RELATION TO WATER IN CHILDHOOD .....	22
RELATION TO WATER OUTSIDE OF HOMETOWN.....	26
WATER POLLUTION.....	27
HOMETOWN WATER SOURCE .....	30
WEATHER AND WATER.....	31
WATER FEARS AND PHOBIAS.....	34
<b>CONCLUSION .....</b>	<b>35</b>
<b>REFERENCES .....</b>	<b>41</b>
<b>APPENDIX A: INTERVIEW QUESTIONS .....</b>	<b>45</b>

## LIST OF TABLES AND FIGURES

TABLE 1: PARTICIPANTS BY HOMETOWN, COMMUNITY TYPE, REGION, GENDER, AND ORGANIZATION AFFILIATION. ....	20
TABLE 2: PARTICIPANTS' KEY WATER SOURCE ANALYZED BY PROXIMITY TO HOMETOWN AND FREQUENCY OF INTERACTION. ....	23
FIGURE 1: TYPES OF BODIES OF WATER IDENTIFIED FIRST BY PARTICIPANTS. ....	21

## INTRODUCTION

As the topics of global climate change and environmentalism continue to become more and more divisive in our country, scientists continue to publish data and research proving climate change is happening. Additionally, more and more social movements to preserve and help various other aspects of the environment such as the “Save the Bees” movement and campaign to save sea turtles by banning plastic straws have been gaining momentum (Cain 2019). With the use of social media and quicker accessibility to news, these movements become widespread and become hot topics for debate (Martin 2018). Although air pollution tends to get more attention in the media water issues such as pollution and climate change are at the forefront of many of these debates and tend to be harder to relate to for everyone because not all water issues impact every environment; think about how coastal towns may experience different interactions with water than those in a landlocked, desert filled state like Arizona. Everyone experiences water differently, which plays a role in how water can shape and influence the attitudes and behaviors towards water issues.

Given these multiplying environmental issues, it is important to understand the factors shaping environmental concern. Your childhood experiences are crucial to understanding who you are as an adult because memories and influential moments and events during this time shape your initial impressions of things (Schneider 2015). Varying childhood experiences with water impact distant and unique attitudes and behaviors towards water issues later in life. By understanding what types of interactions with water have greatest impact on

attitude and behaviors, we can see how some people begin to develop their attitudes and behaviors towards water issues as adults and can use this information to educate people on water issues to allow children to have the childhood experiences necessary to want to actively make pro-environmental decisions in regards to water issues.

This research is of interest to me because it combines my academic major, sociology, with one of my minors, environmental studies. As someone wants to study environmental law, it will be helpful in my future career to understand why people think a certain way about the environment and how to help them realize connections with the environment in order to allow them to see my side. By evoking childhood experiences, it can allow them to create nostalgic and personal experiences to help them understand my case. Many studies have been done to see how variables such as childhood experience, relation to water, community type, and gender impact the lives of individuals in relation to the water, but none combine them in such a comprehensive manner and look at each variable through the scope of childhood experiences.

## LITERATURE REVIEW

Water is all around us, that's a given. Our bodies are about 60% water and over 70% of the Earth's surface is water (Dunbar 2007). Whether your first thought is bottled Dasani, snow, a shower, or the ocean, everyone knows about and can tell you something about their relationship with water. Here, we look at the current research surrounding how a person's environmental attitudes towards



water intersect with someone's community type, meaning urban vs. rural, and their gender. Suburban is another community type, but was not used to measure in this survey for two reasons: 1. The census does not measure count suburban and 2. Typically, people who would identify with suburban would usually consider themselves to be part of the major city they are a suburb of (i.e. West Chester, Pennsylvania being a suburb of Philadelphia). This research generally works to give examples of ways we can take action to improve environmental conditions by manipulating people's attitudes and behaviors. The studies discussed below almost all come to conclusions that our interactions with the water shape our attitudes, but all get there using different approaches and drawing from different types of interaction with water. I break the studies down into four general categories: relation to water, urban vs. rural, gender, and childhood experiences. Each category is multifaceted but moves towards similar conclusions.

This research often shows how someone's relation to water *or* community type *or* gender influences their environmental attitudes, not the intersections of each. My research seeks to find how someone's childhood experiences with water, including recreation, pollution, and natural disasters, and other dangers, influence their later attitudes and behaviors towards water issues as adults. In doing this I am interested if gender and community type play a role in the influences because previous research shows that different communities have different experiences and gender is an area of environmental study not yet fully developed. There is a lot of research on how socioeconomic status, race, and education level impact environmental attitudes, especially with the field of

environmental justice, but gender has not been explored much further than the way the “white male” effect influences attitudes (which happens to include socioeconomic status, race, and education level). Answering this question can be helpful in figuring out a method to help people use their experiences as a child to make a positive influence on the environment.

### *Childhood Experiences*

Childhood experiences shape our life outcomes. There is extensive psychological research on the way a child’s early life experiences influence decisions and outcomes the rest of their life, like how good quality day care can impact standardized test scores and overall academic performance (Vandell 2000). Research has shown that childhood experiences affect environmental attitudes and behaviors in the same long-term sense (Wells and Lekies 2006). There are different types of childhood experiences, such as types of activity, that can have several different impacts on adult life in both good and bad ways.

Although environmental attitudes and behaviors are somewhat mutually exclusive, sometimes childhood environmental experiences can be so strong that it can influence major life decisions such as future career choice (Bixler, Floyd, and Hammitt 2002). Those who have the strong experiences as children often continue these experiences throughout life because of their deep emotional ties/attitudes to the environmental memories. Children interacting with nature at a young age and the behaviors resulting from these experiences are more likely to stay with the child through adulthood (Wells and Lekies 2006). These experiences also make adults more ecocentric as opposed to anthropocentric

(Corbett 2006). Ecocentric means that a person's values are centered on the environment, whereas anthropocentric means that a person's values are centered on humans.

Childhood experiences in terms of the environment vary based on the specific activities. Wells and Lekies (2006) explore this by differentiating between "hard" and "soft" environmental activities. Hard activities are typically more physically demanding and, in childhood, can lead to more pro-environmental behaviors whereas soft activities like gardening can tend to just have pro-environmental attitudes, but not behaviors. This study also says these activities have their heaviest impact if done regularly before age 11. Psychologists say this is due to the developmental progression happening in the child's brain at this time that place great importance on early experiences. Hard activities typically require more mental focus and less room to think about anything else and soft are more mindless activities where you can multitask or think about other things while doing them. This relationship makes sense because only being able to do one thing in relation to the environment and having your focus solely on that can shape your behaviors, but if you're interacting with the environment and not thinking about it, it makes sense that you may just have environmental attitudes and not behaviors. Wells and Lekies (2006) measure this using a survey asking about childhood experiences, current behaviors, and frequency of behaviors.

### *Relation to Water*

Everyone experiences the environment in some way, shape, or form; however, some people interact with it more than others, whether that be by

choice or because of where they live. This can quite literally mean someone's physical proximity to water or their interactions with the water. "Relation to the environment" is a general term I am using to encompass various similar topics from the previous research and literature and refers to the ways one interacts with the environment and how often; for some people, the extent of their interaction with the water could be driving past a river to work every day, but for others it could mean swimming laps in a pool every morning. Here, we look at relation to water in recreational activities, water quality issues, and dangers surrounding water.

When discussing relation to water in terms of recreational activities, current research has a large amount of data on how recreation and frequency of interaction aligns with level of environmental concern. Regular use of the watershed was directly related to the positive environmental behaviors. For example, Chatrychan and Klocker's (2018) research on landowner decision making shows that regular use of the watershed was directly related to the positive environmental behaviors and that regular users were more likely to view the watershed as "impaired". A similar study found that those who engage in outdoor recreational activities show more concerned attitudes when asked about the environment, specifically activities such as hiking and kayaking and other "non-consumption" activities such as fishing and hunting (Gifford and Nilsson 2014). The level of concern in these studies was typically measured by surveys like the Environmental Attitude Inventory, which explores psychological patterns on people's attitudes towards the environment. Using the water for recreation

often creates pro-environmental attitudes, which Larson and Santelmann (2007) suggest is because the people see themselves as benefitting from the water. Whether occasionally using water for recreation or making a daily habit out of it, if one can benefit from the recreation then the activity is more likely to have an impact on their environmental attitudes.

Research from Dhaka City, Bangladesh, a city centralized on the Buriganga River, focuses on how usage and proximity to a major water source influenced the citizens' environmental concern for the water quality (Alam 2011). They found that those living within one kilometer of the river were less likely to find the conditions of the water as livable and that those living within 1km were more likely to be concerned about and donate money/time to restore the river than those living more than 1km away (Alam 2011). This same study also suggests that those interacting with the river every day, often as transportation but also for recreation, are more knowledgeable about the state of the river.

While this study doesn't go into how being knowledgeable about the state of the river translate to environmental attitudes, research from Larson and Santelmann (2007) concluded that those who are not within a close proximity to water and have regular interaction may not have a positive attitude toward conservation and protection because the impacts the water has on them are not viewed to be important, which the authors say could be because they are not "close enough to benefit." This relates to the level of concern one expresses because typically someone concerned about the environment has positive attitudes towards conservation and protection.

There are ways to relate with water that don't necessarily mean recreation and daily interaction, though. Some interactions and personal experiences someone has with water can be about water pollution, global warming, and weather/natural disasters. Each of these triggers a response in people, whether it be positive or negative, which can stay with them for a long period of time and influence further behaviors and attitudes. There are also causation connections between global warming in relation to water and weather/natural disasters.

Water pollution is often something that is not thought of until someone sees it in action. For example, low and working class people are more likely to have less access to clean water because the government spending in those areas is low, meaning cleanup/beautification projects are not as funded and the areas are usually neglected and run down from the middle and upper classes' usage habits (Straughan and Roberts 1999, Van Liere and Dunlap 1980). This same research suggests that water pollution often gets lumped into a whole concept of environmental problems and is often pushed to the side in favor of air quality and this that will directly impact everyone, even the middle and upper class. Seeing water pollution placed on the back burner in society makes individuals place it on the back burner in their mind, making it difficult for progress that leads to positive thoughts (Straughan and Roberts 1999, Van Liere and Dunlap 1980). The socioeconomic divide in water pollution creates a negative mind set on the working and low classes since they are being neglected, but the people that can typically make a change and help remedy the pollution, the middle and upper classes, are not seeing it in the same ways, if at

all, and therefore do not see it as a problem they need to address. Changing their minds is key to changing widespread attitude to water pollution.

Water pollution often takes on a political purpose, meaning that they often create a political division or are used as political talking points, during discourse around attitudes and how to address it, just as topic about water in relation to global climate change does. Climate change is a hot topic in today's world and politicians offer many ideas on what is causing it ranging from rising population that leads to more body heat to historical weather trends and data aligning with rising pollution-causing gas emissions. Egan and Mullin (2012) refer to global climate change as "one of the most important public policy challenges of our time, but it is a complex issue of low salience with which Americans have little direct experience." This same research finds that often weather patterns contribute to how people interpret global climate change. For example, people may ignore the signs of climate change, but when a weather pattern is unusual, such as streaks of unseasonably high or low temperatures or periods of flood or drought, people cite climate change as the cause (Egan and Mullin 2012). While these feelings towards climate changes after unusual weather patterns are typically short lived, it shows that even the less educated can form their opinions of climate change based on weather, which is the reverse causation of scientific data, but does show that weather sparks a more environmentally aware conscious in terms of climate change. Because precipitation is such a large part of climate change (i.e. melting ice caps, more active hurricane seasons, etc.), these views can be related back to water topics.

In research done by Rudman, McLean, and Bunzl (2013), we see the influence of weather, specifically rain and hurricanes, on environmental attitudes in terms of political motivations. In this study, Rudman, McLean, and Bunzl (2013) administered the Implicit Association Test to two groups of participants, one before Hurricane Sandy in 2010 and the other months after Hurricane Irene in 2011. This test is designed to measure the strength of someone's mental connections to something, such as the hurricanes in this study. Their data showed that the group who took the IAT before the hurricane showed much less motivation to stop climate change and less support for political candidates who supported environmental policy. The group from after the hurricanes, however, showed much more environmental concern in regard to climate change and were more in support of political candidates who supported environmental policy (Rudman, McLean, and Bunzl 2013). The participants' support for pro-environmental candidates after the hurricane reflect IAT scores showing that the participants themselves, even 14 months after Hurricane Irene, have long lasting effects from the severe water-related weather that created new environmental attitudes.

### *Community Type and Region*

Just as relation to water in terms of proximity and frequency impacts environmental attitudes and behaviors, differences in community type and region do, too. Urban and rural communities are distinguished by their population size with urban communities being high populations with high density and rural being communities with low populations and low densities. I will refer to these concepts



collectively as “community type.” Urban and rural communities often collectively have different approaches to the environment and environmental issues. The experience water differently due to location and infrastructure, but also live different lifestyles. The research in this field explores how people living in rural and urban communities have different experiences with water and how those experiences shape their attitudes towards water and water issues.

Those living in metropolitan regions tend to view the environment through social activities. Their interactions with the environment, even locally, depend on socialization as opposed to voluntary or habitual interactions (Cantrill and Senecah 2001). This means that people in an urban community interacting with water and their environment are more driven by social influences than personal ones; two friends will go into nature with social goals rather than environmental goals. This social aspect allows them to see the environment in a different sense because they associate their social experiences in that environment with how they feel about the whole experiences, so positive social interactions in the environment will lead to a positive memory of that environment. Voluntary or habitual interactions would be things done out of habit or at someone’s own will with no social factors driving them to do so.

Jones, Fly, and Cordell (1999) also concluded in their study of exposure to the environment and thoughts on its environmental state that those who live in rural communities are more likely to see environmental degradation because they depend on the affected resources more, for example for watering their crops in order to keep their farm profitable, instead of using them socially, meaning

they used them during events like dates, parties, meetings, etc. The authors also concluded that these opinions could be based on regional factors. By this they mean that the community types in the Southeast Appalachians, where they conducted their research, could differ from the Northern Adirondacks, another mountainous area just in a different region. This is what the authors deem “differential exposure.”

Current research also establishes a different sense of familiarity of water sources between rural and urban residents. Depending on the community type the level of familiarity may change, which shows an intersection with the concept of proximity to water. For example, urban communities along a large water source like the ocean or a major river are more familiar, meaning knowledgeable, about water topics in their area (Brody 2004). However, rural communities, such as farming towns, who rely heavily on both access to water and water related weather patterns tend to be more familiar with water topics in their community (Brody 2004). The level of familiarity is flexible depending on community location, but research has shown this crossover in proximity to water and community type is usually due to the dependency and location of the water. For example, New York City sits along the Hudson River, which is used for transportation and many people interact with the water every day, even just by crossing the bridges or driving along the parkway. However, in San Antonio, the river is not used or interacted with in the same way.

## *Gender*

The white male effect is a concept used to describe the way the views of white males, particularly in politics, overrides the views of others due to the social hierarchy and is seen in many political topics today. The white male effect is a major demonstration of gender inequality plays a huge role in justifying sexist attitudes and behaviors. In terms of the environment, gender can play a large role in influencing our environmental attitudes, therefore a gender equality and white male effect concept exists within environmentalism. Other demographics like race and socioeconomic status/class also can play a role, but this study will primarily focus on the gender effects. Gender is typically less studied than class and race when it comes to the environment, so by including it as a demographic of interest in this study is important in developing new intersections.

According to Kalof (2002), white males exhibit some of the lowest environmental concern and place less importance on environmental beliefs than white women do. The author suggests that this could be due to the historical disadvantages faced by women. The disadvantages place women in the homemaker and nurturer role, so Kalof (2002) and psychologists in his study suggest that this causes women to treat their environmental home in the same way. Women tend to prefer that resources be preserved for household and family life and often view environmental problems as more serious than their male counterparts (Mohai 1992). This same pattern of gender differences is seen in children where girls reported stronger pro-environmental beliefs than boys (Zelezny, Chua, and Aldritch 2000). In this study, elementary students were

surveyed using an adapted version of the New Ecological Paradigm questionnaire to measure the children's environmental attitudes and compare the genders. The authors suggested that females are socialized to be more concerned for the needs of others, therefore they value the status of the environment for the sake of other people (Zelezny, Chua, and Aldritch 2000). Kalof (2002) further elaborates on his reasoning to say that generally, privileged positions tend to be less environmentally concerned because they are not placed in roles of subordination. As we saw with the studies surrounding water pollution, those placed in subordinate positions, in that case lower class and in this case women, are marginalized environmentally and that shapes their environmental attitudes to be more concerned. One area I hope to research further is the connection between gender and community type to see how they can shape environmental attitudes and behaviors differently in relation to each other.

One significant distinction both studies make is that pro-environmental attitudes does not necessarily lead to pro-environmental behaviors. One can feel a particular way about the environment, but not act on those feelings (Zelezny 2000). We see this study done with children and childhood experiences, too, where just because someone's childhood experiences have led to pro-environmental attitudes doesn't mean it influences environmental behaviors (Bixler 2002). Mohai (1992) concludes that this specific pattern is equal between men and women.

Another distinction is also another area of intersection from previous sections; in terms of the familiarity we discussed previously, men tend to be more

familiar with the environment and water than women (Brody 2004). The familiarity is associated with overall level of education, which again could be connected to the historic marginalization of women. Jones, Fly, and Cordell (1999) concluded that while men may be more familiar, this could just be a regional conclusion as seen with the urban and rural community section. Urban and rural communities experience differential exposure based on their community type and the specific region of their community type, meaning not all rural communities experience water and the environmental the same due to regional factors and location. The same regional impacts can be seen with gender because men and women in different regions may show varying levels of familiarity from region to region one region based on which gender interacts with the environment more for that region's lifestyle.

### *Research Question*

This research seeks to find how someone's childhood experiences in regard to water affect their attitudes and behaviors on water issues as adults. Childhood experiences mixed with each of the other variables – relation to water, community type and region, and gender – impact a person's attitudes and behaviors towards water. This is important to understand in order for us to know how children can be better educated and influenced to make pro-environmental decisions. The literature review provided the key variables, childhood experiences, relation to water, community type, and gender, as studied individually, but this research looks to see how these variables intersect and can be multidimensional. The methods and analysis for this study were not

influenced as much by the literature review, but the conclusion section was similar to many of those in the literature review.

## METHODS

### *Data Collection*

Using two organizations on campus at the University of Mississippi, the Ole Miss College Republicans and the Office of Sustainability student members, I conducted interviews with members of these organizations and analyzed how their responses shaped their current views. Both groups are known to have specific views on environmental issues; the College Republicans have commonly expressed more conservative political approaches to environmental issues, whereas the student volunteers in the Office of Sustainability have commonly expressed more liberal political approaches to these same issues and have shown concern for our environment. By using these two groups have me initial insight into their attitudes and behaviors as young adults.

To recruit these individuals, I used two different sampling methods. Using purposeful sampling, I sent a recruitment email to each organization's leader describing what my research was about, a brief description of what kind of questions I would ask, expected time commitment for the interview, location, and my contact information. Additionally, I contacted students I had prior relationships with that I knew were in one of these two student organizations and have them the same information and asked them to help me spread the word; about half of my participants were recruited using this snowball sampling method.

The data was collected through interviews of nine undergraduate students at the University of Mississippi. The interviews consisted of seven multi-part questions, each focusing on a different section of the literature review or questions about their hometown experiences with specific water sources and issues. Question seven of the interview asked the participants how they would categorize themselves in the demographics of gender, socioeconomic status, and race. Each question was open ended with an associated set of follow up, probing questions that were asked in the event that an interviewee needed addition explanation or examples to help them both understand the question better and spark a connection to respond to the question. The full set of interview questions can be found in Appendix A. The key categories of interest as highlighted in the literature review were relation to water, childhood experiences, and community type. The interviews were conducted at a mutually agreed upon location such as over lunch or coffee in a more private seating area, the J.D. Williams Library, and the study room at their fraternity house. Each interview lasted 15-23 minutes and questions asking them to recall their childhood interactions with water were typically the bulk of the interview.

### *Data Analysis*

During the interviews, I had my laptop open with the list of interview questions and typed short notes for the responses to each question but was primarily collecting the data using the voice memo tool on my cell phone. After each interview, I would transfer the recordings from my phone to my laptop and then upload the file into two voice transcription softwares, one online called Temi

and the other a cellphone app called Transcribe. The softwares would transcribe the recording and email me a copy of the transcription in a downloadable document. To ensure there were not any mistakes or mis-transcribed words, I double checked my notes with the processed transcriptions and corrected any mistakes. From here, I used a word frequency tool found in Word to find the most used words or phrases and highlighted each word or phrase in a different color. I then categorized each person's response to every question into groups of similar responses, for example, if when multiple interviewees mentioned kayaking, those responses were highlighted the same color. This coding method allowed for me to physically see the similarities and differences between responses and helped me better understand and follow the data. Each of these categories was related to a subsection of the literature review, such as when they would mention types of water in their hometown, I place it into a "relation to water" category. I organized coding first by loose key words and phrases such as types of water or emotions felt in relation to the water, then by common words used indicated in the word frequency tool, and lastly into the subsections of the literature review.

## RESULTS

Of the nine interviews, five were female and four were male; six were involved with the Office of Sustainability, of which four were female and two were male; three were members of the College Republicans, of which one was female and two were male. This data along with the gender break down between community types can be seen in Table 1. Relation to water and childhood



experience were analyzed in each interview question and the answers were coded for keywords and similar topics. Not every interviewee had experiences that were applicable to each question, but most participants could at least say a few words on each question. Some participants also were unable to recall a lot of information about their hometown or were unwilling to share it. In these cases, I was able to use probing questions to at least draw some information about their experiences out of them, even if it was a very brief and short answer.

### *Community Type and Region*

The first question asked participants to identify their hometown, community type, region, and local forms of water. A list of hometowns identified, community type, and given region is shown in Table 1. Unlike community type where only two options were given for the participants to choose from, the region question was left open for each person to identify on. I defined region to them as the larger, more generalized area in which their hometown is located and gave the example of “New England” if they were still confused.

In San Antonio, the downtown is centered around the river and allows people to interact with the water regularly. In Gulfport, the participant described how living near the water changed her life since the ocean plays a role in her life every day; some days she walks along the water and other days she sees the sand blowing over the highway. In Lancaster, Pennsylvania, the participant must cross bridges to go anywhere due to the massive rivers and creeks nearby. However, in the rural community of Cottonwood, there was no major water source identified and the respondent said he didn’t take too many trips to a body

of water growing up. The same went for the respondent from Milton, Georgia. In Kennett, Missouri, there was a lake a short drive away, but the participant only went there for his grandfather and discontinued visiting once the grandfather died.

	Hometown	Community Type	Region	Gender	Affiliation
1	Kennett, MO	Rural	Midwest Plains	Male	Office of Sustainability
2	Brentwood, TN	Urban	South	Female	Office of Sustainability
3	San Antonio, TX	Urban	Desert	Male	College Republicans
4	Cottonwood, AL	Rural	South	Male	College Republicans
5	Lancaster, PA	Urban	Northeast	Male	Office of Sustainability
6	Fredricksburg, VA	Urban	East Coast	Female	Office of Sustainability
7	Oxford, MS	Rural	South	Female	College Republicans
8	Gulfport, MS	Urban	Gulf	Female	Office of Sustainability
9	Milton, GA	Rural	Deep South	Female	Office of Sustainability

*Table 1: Participants by hometown, community type, region, gender, and organization affiliation.*

Each participant talked about how big their high school or graduating class was, but the biggest difference between the responses for rural versus urban was the types of businesses mentioned. Those who identified their hometowns as rural discussed having small businesses usually owned by a friend's family. Those who identified their hometown as urban always brought up that while they did have some local business, they had more big, corporate stores and chain restaurants. For each interview, I followed up this question with asking about the presence of a downtown, or local headquarters similar to The Square here in Oxford. Everyone said that their hometown had something similar to this in

varying sizes except for the people from Milton, Georgia and Cottonwood, Alabama.

Number of Participants vs. Type of Water

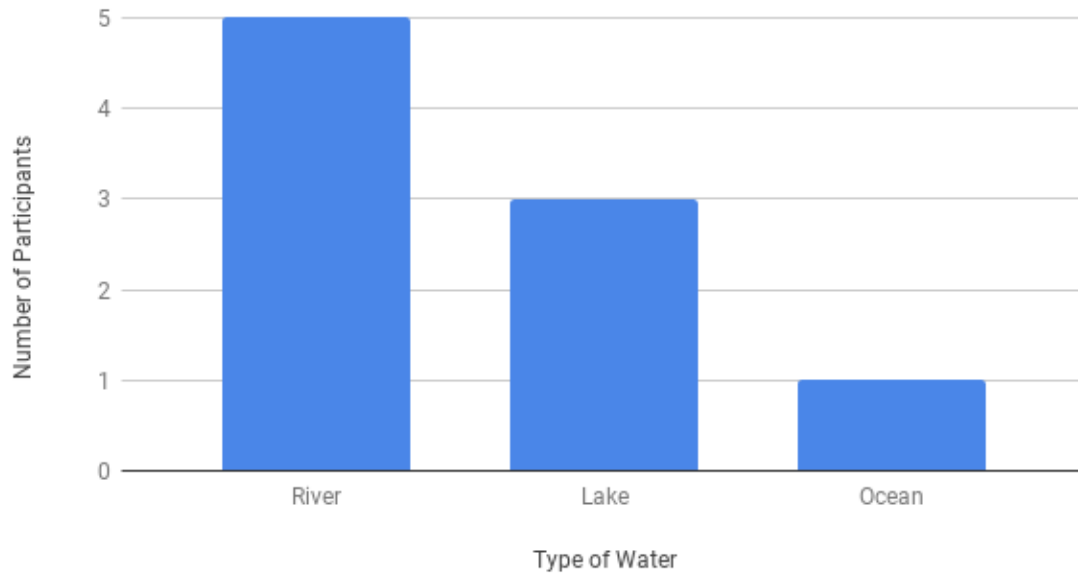


Figure 1: Types of bodies of water identified first by participants.

As seen in Table 1, the “South” was the most commonly identified region, but not everyone located in the geographically Southern part of the country said that their region was the South, as we see with Gulfport, Mississippi and Milton, Georgia. This may be due to slight cultural differences between that region and the South, or perhaps suggests that the South, which could be considered one large region, has several sub regions that make them different in some way from the greater region.

Regardless of community type and region, every participant was able to pinpoint at least one type of water that was in or around their hometown. As seen in Figure 1 five participants pinpointed a river first, three pinpointed a lake, and one lives in a coastal town and named the ocean first. The participant from

Fredericksburg, Virginia, however, specified that even though there are many rivers and creeks nearby, including the Potomac River, that there are a lot of manmade bodies of water like pools. Just as Jones, Fly, and Cordell (1999) concept of differential exposure showed, we can see just in how people describe the types of businesses there are different ways the communities are structured.

### *Relation to Water in Childhood*

The second question asked participants to talk about their interactions with both the water in their hometown and if they ever traveled to any types of water as a child and what they did during those interactions. As shown in Table 2 below, frequency of interaction with natural water sources had a greater impact on the participants' adult attitudes and behaviors as shown by their group affiliation than did proximity of their hometown to a water source. Although majority of respondents from the Office of Sustainability were both in close proximity to water and interacted with frequently, *all* of the Office of Sustainability participants reported frequently interacting with water, regardless of their hometown proximity, just as *all* of the College Republicans did not interact with the water frequently.

	Proximity	
	No	Yes
Frequency		
Yes (OS)	Fishing, Beach (n=2)	Baptism, Natural disaster, Camping at the river, Beach (n=4)
No (CR)	Swimming pool, Lake (n=2)	Scenery and tourism (n=1)

*Table 2: Participants' key water source analyzed by proximity to hometown and frequency of interaction.*

Table 2 shows the distinct relationship between the hometown proximity to each participant's key water source, the frequency of visits to the source, and their group affiliation. In the table, "OS" stands for Office of Sustainability and "CR" stands for College Republicans. In looking at the responses of participants, I discovered that not a single Office of Sustainability individual fell into the "no" category for frequency, meaning based on their overall responses, they regularly interacted with water, specifically their key water source. Similarly, not a single College Republican member fell into the "yes" category for frequency, meaning that based on their overall responses, they did not regularly interact with water, some even struggling to identify a water source. Frequency of interaction with water as a child seemed to have a direct impact on their adult attitudes and behaviors, shown through group affiliation, more so than any other variable seen in this study. When looked at in comparison to proximity, it was also interesting to note that most College Republicans also did not have a water source in their hometown.

The respondent from Kennett, Missouri told me a story about how as long as he can remember, he and his grandfather used to go fishing in the summers at the lake in their town. When his grandfather died, he stopped going because it was “too sad” to do it without the grandfather. He said he doesn’t even go to the lake anymore because there isn’t a reason to now. Gifford and Nilsson (2014) found that activities like fishing leads to people being more environmentally concerned, which can be seen in this case because this participant is an active member of the Office of Sustainability. The participant from San Antonio, Texas said that the Riverwalk is part of their major city and is a large and scenic downtown shopping area along the water, so he had many memories of going there all the time. He said that the Riverwalk is just normal now and he doesn’t even realize he’s even at the water usually since he is so used to it.

What I found to be the most intriguing part of this question was the personal connections people reflected on. For some, like participant from Kennett, Missouri who fished with his grandfather, when the connection with the water was lost, he no longer felt the need to go as he got older. The respondent from Gulfport, Mississippi had a very unique experience with her local water as a child. She was seven years old when Hurricane Katrina hit the Gulf Coast and even though New Orleans, Louisiana was the national focus of the disaster, the hurricane hit just as strong along the entire Gulf Coast, especially in Mississippi. This participant described how as a young child, her family lived on the beach and that there was sand everywhere, even on the high way. But, after the storm hit, a lot of people were forced to relocate because they had lost their homes.

Her family was lucky enough to be able to stay in Gulfport, but still lost most of their belongings and their home. Since the storm, going to the beach is still really common, but every time she is there, even for a brief period of time, she claims “the thought just kind of creeps into the back of my mind if I stare too long at the water. My stuff, my pictures, my toys are all out there at the bottom somewhere. And that is just mind blowing to me.” She also described this sense of connectivity she has to the water that she said a lot of people from the coast experience a feeling of land-lockedness when they leave and move more inland. Even in Oxford she feels weirdly trapped and says that “living by the water creates a really unique way of life. The water has changed me as a person. Not being around the water makes me feel a little trapped – like there’s nowhere for me to go. I know that sounds stupid, but it’s just strange not seeing water every day like that.”

The participant from Nashville, Tennessee was baptized in the ocean near her family’s house in Florida, so she has always felt really special when they return for vacations. Even when she goes to a different beach, she said the ocean represents the start of her religion and her connection to God, so being around the water is very freeing. She finds that she positively benefitted from the water because it brought her closer to God, corresponding to the findings of Larson and Santelmann (2007) that said those who see themselves as benefitting from the water tend to demonstrate more pro-environmental behaviors and attitudes. This spiritual connection is very influential in her love of the beach and the ocean.

### *Relation to Water Outside of Hometown*

The second part of question two asked for the participants to discuss experiences with any other types of water that they may have travelled to outside of their hometown. Just as seen above in Table 2, this question was essential in developing the connection between proximity and frequency to adult attitudes and behaviors. Visiting water source outside of a hometown, as long as this contributed to a high frequency of interaction, proved to have a direct correlation to being involved with the Office of Sustainability.

Every participant talked about the beach, just a different beach for each person. The participant from Fredericksburg, Virginia discussed her family going to Myrtle Beach, South Carolina every year. There, she would swim in the Atlantic Ocean and boogie board, but that her family didn't get into anything else really. The participant from Oxford, Mississippi said that his family usually went to the beaches in Delaware and New Jersey because his extended family lives there and it is where he was born. At those beaches, he likes to fish off of the pier and talked about how he often catches sharks, which really made his mother scared and he said she would always tell them how uncomfortable she was with him and his brother swimming in the ocean.

Another participant recalled going kayaking at their grandparents house every year. Their grandparents live on a lake and they would go to visit every summer for a few days and kayak. They still go there every summer, even as a young adult in college, and they said, "it's usually the only time every year that we see my cousins, so it's something I'm going to miss doing when we're all too



old and busy to keep going back.” Another participant described something similar with their family vacations. The individuals from Lancaster, Pennsylvania described going into the country side of the state to visit extended family and go camping. They camp along the river in the mountains and even though sometimes it’s still too cold to get in the water, they like to take out their family’s small boat with just the kids and catch up. For them, the water is a nostalgic place. Most responses to question two were students reminiscing about family vacations and describing experiences they had with those bodies of water, mostly the beach or a lake house and the activity was most commonly swimming or kayaking.

### *Water Pollution*

Question three had the participants use the bodies of water they had discussed in the first two questions to recall any times they may have interacted or had an experience with water pollution. First, I let them answer with a “yes” they have had an interaction or experience or a “no” they have not. If they answered yes, I let them tell me the example they were thinking about, but if they said they had never interacted with or experienced water pollution, I followed up by asking if they knew of anyone who had. All of the participants who had stories relating to water pollution were involved in the Office of Sustainability, whereas those from the College Republicans knew of water pollution, but didn’t have personal stories or thought some of the bigger problems, like Flint, Michigan, were resolved due to their seemingly disappearance from the media.

The respondent from Gulfport, Mississippi had one of the more significant experiences with water pollution because she described stories about the Deepwater Horizon oil spill, more commonly referred to as the BP oil spill. She told stories again about the loss her town experienced because of this event, specifically about friends and classmates who had to move or relocated because the oil spill ruined their families' businesses. One of her childhood friends moved to a different coastal town because her parents owned a seafood restaurant that had to close because they could not fish for the fish served on their menu for a long time after the oil spill. The oil spill also caused her town to change dramatically since for months they had hotels all booked up and a lot of extra people in the town because of the cleanup crews, National Guard, and researchers coming into the town to help restore the beaches and ocean; however, a vast majority of the town, especially in the summer, was used to the business of tourists. After the spill, tourists did not come for a while, so the presence of cleanup crews and other helpers made up for that. While gender may not play an obvious role here, community type and region certainly do; people living in non-coastal areas may never experience a national emergency like this because oil drilling, or other human-caused action, doesn't happen everywhere. This experience is unique to those living in select regions of the country.

The resident from Fredericksburg recalled a time as a child when her family was in Myrtle Beach when the beach was closed due to water contamination. She was young when it happened and doesn't remember details,

but she does remember her parents struggling to find something to do with her and her brother for the whole week since they couldn't go to the water. The participant from Lancaster talked mentioned that she didn't really notice how "good" her water was until she came to Oxford. In Oxford, she noticed that there are often boil water notices when pipes get contaminated or there is a lot of flooding, which she says doesn't happen at home. She told me "Maybe once or twice in my whole life, but it seems like in Oxford there is a boil water advisory at least once a month." She said she never feels like the water in Oxford is unsafe or anything, but it is weird that we so often have to take precautions like that.

The only other interviewee to experience any kind of water contamination is the individual from Milton, Georgia. She has an uncle who lives in Flint, Michigan and visited him one year for the holidays. For the four days they were there, they went through over 200 bottles of water for all of their cooking, cleaning, personal hygiene, and drinking needs. The family normally doesn't want visitors because of the water contamination, but this interviewee was very interested and wanted to see exactly what was going on with Flint. She now has helped run social media campaigns to bring more attention and awareness to Flint's water crisis.

Follow up questions to question three were if they hear a lot about water pollution whether it be on social media, the news, or from friends. All but one respondent said yes and mentioned how they have heard about Flint, Michigan, but only three of those participants knew that Flint was still experiencing lead contamination in their water. Those who did not know it was still an issue thought

it was fixed or significantly better because the news stopped talking about it. One participant said that it was huge on their Facebook timeline two summers ago (summer 2017), until around the winter holidays that year, but that they haven't heard much since. The other participant talked about the plastic bags in the ocean that sea creatures swallow and can die from. The second follow up question within question three was whether or not the participants knew of any water treatment facilities in their hometown. Six of the nine interviewees did not know of a water treatment facility, one did not know what a water treatment facility even was, and the other two could identify nearby locations of water treatment facilities. Those two individuals both described the facility as smelly, one said it smelled like a farm while the other said it smelled like rotten eggs. Both said that the facility was located kind of on the outskirts of town, but one said that there's was next to a more rural high school on the edge of the town and that that high school smells really bad in the mornings when students are arriving.

#### *Hometown Water Source*

Question four asked participants to discuss their drinking water situation at home, including where it came from, if their family used a filter, and if the tap water was typically safe to drink. Although I did not notice a difference in group affiliation here, as only one participant knew of their specific aquifer and the other two participants who had substantial responses were simply just pointing out water quality observations, the group affiliation was not strongly in favor of one or the other and I suggest that perhaps they were knowledgeable or aware of their

hometown water source because they needed to be. For example, in Texas it might be necessary to know your specific aquifer due to the need to regulate water usage so much due to drought.

The resident from San Antonio, Texas knew that the Edwards Aquifer was the main water supply for that area of Texas. The aquifer supplied his home with its water and his family usually just drank from the tap but had a Brita water filter pitcher in the refrigerator that they used, too. This respondent, who lives very close to the San Antonio River, was the most knowledgeable about his water sources, backing the findings of Alam (2011) which said that those living in close proximity to water tend to be more knowledgeable. The participant from Kennett was able to identify that their water comes from wells and is then distributed throughout the small town. Some people get their water directly from the well, but most do not. For the most part, he said that the tap water is safe to drink but most households use some kind of filter on their sink because the tap water typically has a very metallic and mineral-tasting water. The participant from Milton said something similar about their water having a that kind of taste but was unaware of where their water came from. They did say, though, that their school installed the water fountains that filtered the water because of the taste.

### *Weather and Water*

Questions five asked participants if they have experienced some kind of water related natural disaster such as flooding, draught, blizzards, tsunamis, hurricanes, etc. and in what ways did it impact their life. I used the examples of missing school, having to relocate, being told to ration supplies, and levels of

destruction in the community. The only two participants to tell extreme stories about water related weather were both close in proximity to their key water source and involved in the Office of Sustainability. Proximity was more important than frequency here due to the water related weather issues impacting their hometown water source and creating catastrophic situations.

The participant from Gulfport again brought up Hurricane Katrina. This time, however, she talked more about how her personal life was impacted. When the storm hit, her family had left the coast in order to avoid the immediate impact but struggled to return because the storm destroyed and flooded over most major roads. Her family was lucky enough to rebuild a house in the area, but still lost their original house and most of their belongings. Schools were not just closed but had to be entirely rebuilt. One thing that gets her worked up about the storm is that since most of the focus was on New Orleans and the levees failing, they did not the level of help they needed because people hardly realized the storm had hit there and that it hit as a stronger storm. She also said the living in Gulfport is weird because after big storms, not necessarily as big as Katrina, the biodiversity of the water changes. Because the Mississippi River connects to the Gulf in that town, the water in that connection point is usually a mix between fresh and salt water, so after storms when this water mixes together even more, you can see alligators on the beach or sharks up a portion of the river. Again, while gender influences may not be obvious for this participant, community type and region certainly are. Landlocked states may experience heavy rains from hurricanes, but not nearly to the level of destruction as those along coastal

areas, specifically the Gulf and East Coast in the United States. Hurricane Katrina specifically was unique to the Gulf Coast region because of its sea level and infrastructure issues not found in even other Coastal areas.

The participant from Brentwood, Tennessee told a story about the tragic flooding experienced in the Nashville area in 2010. This flood is often referred to as a 500-year flood and in Nashville it left whole neighborhoods under water. She said that the flood happened while she was in middle school, so she remembers it fairly well. She was at a friend's house when it started to get pretty bad, so her parents came to pick her up and they got stuck and couldn't get home. They had to park about half a mile from their house and walk/wade/swim through the water back to their house because the streets were too flooded. Her school was closed for a few days, but some kids had to miss much more because their homes were destroyed. She said, "some cars were straight up under water, so to think about busses getting around was crazy." She said one thing positive from this disaster was the sense of community felt during the recovering process. The flooding killed the spirits of Nashville, but during the rebuilding, everyone came together to help one another, and the community really gained back their pride because of the local support. Community type and region in this participants case can be experienced in other areas of the country, such as the flooding in Ellicott City, Maryland and recently in Nebraska, but Nashville is a large city to be impacted by this type of disaster and impacted her community both positively and negatively.

The interviewee from Cottonwood, Alabama says that his town doesn't get anything "super extreme." Occasionally, they will get heavy rain from the outer bands of a hurricane or go through a dry period for a few weeks in the summer but nothing drastic enough that the community can't easily adapt to. If anything changed their way of life, it was for farmers because when slight changes in the weather like that happened, they'd have to quickly react to ensure they did not lose their crops.

### *Water Fears and Phobias*

The final question asked whether or not the participants had any water related fears. None of the participants said they were afraid of water, but three participants discussed concerns they have that sometime make them anxious or distressed around certain aspects of water. For example, one participant said that when she goes to a new place, she doesn't like to drink the tap water and will buy bottled water because she is afraid of getting a stomach bug from drinking the water. She said she was not like this until she went to Mexico as a child and her sister got sick from drinking the water accidentally.

The second participant said that they are very conscious of swimming with cuts on his body because of infection. He doesn't know anyone personally that this has happened too, but he said he remembers reading news articles about bacteria that can kill you if you swim in water where the bacteria live and have an open cut because the bacteria will come into skin that way. The third participant was the person from Oxford who described his mom trying to push her fear of swimming in water with sea creatures like sharks onto them. He said he isn't



afraid, but he definitely doesn't go out very deep or when its dark out because of his mom's fears.

## CONCLUSION

After analyzing the responses of each participant and referencing their relation to water, community type, childhood experiences and gender, I was able to better understand how each of these factors played a role in determining current attitudes and behaviors. All variables except for gender impacted the participants in a way that shaped their attitudes and behaviors, measured by which student organization they aligned with, as young adults. Proximity and frequency seemed to play the largest role in the intersections of each variable, specifically frequency. Frequency directly impacted all variable except gender and water and weather, which was impacted by frequency but more so by proximity.

Childhood experiences seemed to impact current attitudes and behaviors based on stories told and organization affiliation. For example, the most connected stories from the individuals from Gulfport and Nashville showed that each of these individuals had very strong experiences with water in their childhood, some good and some bad, but both people had a plethora of stories to tell and both people were from the Office of Sustainability. Even after experiencing tragedies like the hurricane and flooding, both individuals had enough connectedness and positive childhood experiences with water, like the freeing feelings and baptism/spiritual connection that they continued to express

pro-environmental attitudes and behaviors by joining the Office of Sustainability while at the University of Mississippi.

According to Wells and Lekies (2006), childhood experiences with nature stay influential with people into adulthood, which we saw paralleled in the findings on childhood experiences and group affiliation. Wells and Lekies (2006) also found that certain activities have different impacts on children, which was not something I studied, but as discussed previously, can begin to be seen in Table 2. Childhood experiences with activities directly related to a *natural* water source resulted in participants being involved with the Office of Sustainability rather than the College Republicans, which typically did not have direct interaction with natural water sources and instead described experiences with man-made pools and shopping centers simply located along a river.

Relation to water impacted the participants attitudes towards the water. This data highlighted that relation to water, specifically by frequency, and type of interaction impacts one's attitudes and behaviors seen in the organizations that those individuals join as adults.

Most of the existing literature revolved around relation to water as types of interactions and frequency of interaction with water; although my data supports this, it supports more in favor of frequency of interaction as opposed to types of interaction/proximity to the water source. For example, Alam (2011) used the Buriganga River in Bangladesh to analyze the types of interactions people living in close proximity to the river have with the water. Alam found that the more interaction one has with the river and the closer in proximity an individual lives to

the river made the person more environmentally conscious and aware of the state of the water. The data coincides with this, but also adds that frequency, crossed with specific types of interactions as a child impacts the attitudes and behaviors as an adult, which can specifically be seen in Table 2. As we can see, individuals don't necessarily have to live near the water, they just need to have frequent and impactful enough interactions with it. The type of water also matters, as we can see with the people like the individual from Cottonwood, AL who typically only interacted with the water as man-made pools.

Community type impacted the level of interaction with water and the severity of negative experiences such as Hurricane Katrina, the oil spill, and the Nashville flooding and showed that those who experienced a water-related natural disaster and were from urban communities impacted adult attitudes and behaviors. This data showed the connection impacted the way people interacted with water, which was seen as a major influencer in the literature review in studies such as Jones, Fly, and Cordell (1999); in their research, these authors describe "differential exposure", or when two similar community types just in different regions experience the environment differently, just as the participant from the urban Gulfport experienced water differently than the participant from the urban Brentwood, even if both were involved in natural disasters. It also showed that community type, which may impact the way people interact, might not affect their later attitudes and behaviors or may do so in a way not explored in this research.

Lastly, gender did not play a role in current attitudes and behaviors as the distribution of males to females in each organization was relatively even among all variables, but it did seem to impact how I recruited people to interview. I noticed that the men in both organizations took longer to recruit and needed more persuading before agreeing to participate. In the College Republicans specifically, I only got two males to interview because their girlfriends were friends of mine and convinced them to participate. All of the females reached out to me first, whereas I had to individually reach out to the males. I suspect that this was due to me being female and like attracts like things, so females were more inclined to help me. Although the data in literature review stated that gender did play a role, I contradict this primarily due to the format of my study, including the interview questions and the number of interviews I conducted. The literature suggests that gender does play a role in environmental attitudes and behaviors because, as suggested by Kalof (2002) and Mohai (1992), women are historically disadvantaged and socialized to be put in a homemaker role that is designed to nurture and care about the wellbeing of others, which these researchers suggest parallels to the environment. Perhaps a reason for this is that gender and gender roles are taught, so if some of these childhood memories came from a time before one fully was exposed to their gender roles, they may not have experienced a gender effect, or at least may not be able to notice or identify it as such.

Limitations of my research primarily come in the sampling and data collection. First, it would be preferable to have more than nine interviewees and

to have multiple in each demographic in relation to campus organization. Second, only three males, but six females were interviewed. This gender imbalance way partially due to the lack of response and difficulty recruiting participants from the opposite gender but may have skewed the results because of this. A way to further test gender differences is to interview people with siblings that identify as the opposite gender of the participant and follow up the childhood memories with questions about what their siblings were doing during those same memories.

Future research could be conducted to in a few ways. The participant that had the most detailed answers and had the most experiences with water in relation to each question was the participant from Gulfport, Mississippi. She was affiliated with the Office of Sustainability and expressed a strong connectedness to the water, even after so much water-related tragedy struck her hometown.

Focusing on the female from Gulfport, Mississippi, one could interview individuals who were children during Hurricane Katrina in coastal towns and analyze how the storm has impacted their relationship with water as adults. By focusing on this one event, similar to 9/11 childhood studies, we may be able to see how childhood in various coastal towns during Hurricane Katrina shaped the attitudes of those individuals towards water as adults. Another future research opportunity to build on this study could be conducted to see how we could foster connections children have with the naturally occurring water such as lakes and rivers in a localized setting with man-made features like pools or sprinklers.

Some families may live in areas that are not close to water sources and may not have the means to get to a water source, but that should not stop their child from learning about and interacting with the water.

## REFERENCES

- Alam, K. (2011). Public attitudes toward restoration of impaired river ecosystems: Does residents' attachment to place matter? *Urban Ecosystems*, 14(4), 635-653.
- Bixler, R. D., Floyd, M. F., & Hammitt, W. E. (2002). Environmental Socialization: Quantitative Tests of the Childhood Play Hypothesis. *Environment and Behavior*, 34(6), 795-818.
- Brody, Samuel & Highfield, Wesley & Alston, Letitia. (2004). Does Location Matter? Measuring Environmental Perceptions of Creeks in Two San Antonio Watersheds. *Environment and Behavior - ENVIRON BEHAV.* 36. 229-250.
- Cain, Á. (2019, April 07). Chains are spending millions to ban plastic straws from their restaurants - and according to a survey of over 1,800 young people, it's probably worth it. Retrieved from <https://www.businessinsider.com/gen-z-plastic-straws-approval-2019-3>
- Cantrill, J. G., & Senecah, S. L. (2001). Using the 'sense of self-in-place' construct in the context of environmental policy-making and landscape planning. *Environmental Science & Policy*, 4(4-5), 185-203.
- Chatrychan, A., & Klocker, C. Social-psychological Influences of Landowner Decision-Making: Understanding Impacts on Water Quality.
- Corbett, Julia B. 2006. *Communicating Nature: How We Create and Understand Environmental Messages*. Washington, DC: Island Press.
- Dunbar, Brian. 2007. "Follow the Water: Finding a Perfect Match for Life." NASA.

Retrieved November 6, 2018

(<https://www.nasa.gov/vision/earth/everydaylife/jamestown-water-fs.html>).

Egan, P. J., & Mullin, M. (2012). Turning Personal Experience into Political Attitudes: The Effect of Local Weather on Americans' Perceptions about Global Warming. *The Journal of Politics*, 74(3), 796-809.  
doi:10.1017/s0022381612000448

Gifford, Robert & Nilsson, Andreas. (2014). Personal and social factors that influence pro-environmental concern and behaviour: A review. *International journal of psychology: Journal international de psychologie*. 49. 141-57. 10.1002/ijop.12034.

Jones, R. E., Fly, J. M., & Cordell, H. K. (1999). How Green is My Valley? Tracking Rural and Urban Environmentalism in the Southern Appalachian Ecoregion 1. *Rural sociology*, 64(3), 482-499.

Kalof, L., Dietz, T., & Guagnano, G. (2002). RACE, GENDER AND ENVIRONMENTALISM: THE ATYPICAL VALUES AND BELIEFS OF WHITE MEN. *Race, Gender & Class*, 9(2), 112.

Larson, Kelli L., and Mary V. Santelmann. "An analysis of the relationship between residents' proximity to water and attitudes about resource protection." *The Professional Geographer* 59.3 (2007): 316-333.

Martin, N. (2018, November 30). How Social Media Has Changed How We Consume News. Retrieved from <https://www.forbes.com/sites/nicolemartin1/2018/11/30/how-social-media-has-changed-how-we-consume-news/#4244d4423c3c>



Mohai, Paul. (1992). Men, Women, and the Environment: An Examination of the Gender Gap in Environmental Concern and Activism. *Society & Natural Resources* - SOC NATUR RESOUR. 5. 1-19.

10.1080/08941929209380772.

Rudman, L. A., Mclean, M. C., & Bunzl, M. (2013). When Truth Is Personally Inconvenient, Attitudes Change. *Psychological Science*, 24(11), 2290-2296. doi:10.1177/0956797613492775

Schneider, W. (2015). Memory development from early childhood through emerging adulthood. Cham, Switzerland: Springer International Publishing.

Straughan, R. D., & Roberts, J. A. (1999). Environmental segmentation alternatives: A look at green consumer behavior in the new millennium. *Journal of Consumer Marketing*, 16(6), 558-575. doi:10.1108/07363769910297506

Vandell, D.L. (2000). Child Care Quality : Does It Matter and Does It Need to be Improved ?

Van Liere, K., & Dunlap, R. (1980). The Social Bases of Environmental Concern: A Review of Hypotheses, Explanations and Empirical Evidence. *The Public Opinion Quarterly*, 44(2), 181-197. Retrieved from <http://www.jstor.org/stable/2748427>

Wells, Nancy & Lekies, Kristi. (2006). Nature and the Life Course: Pathways from Childhood Nature Experiences to Adult Environmentalism 1. Children, Youth and Environments. 16.

Zelezny, L. C., Chua, P. and Aldrich, C. (2000), New Ways of Thinking about Environmentalism: Elaborating on Gender Differences in Environmentalism. *Journal of Social Issues*, 56: 443-457.

## APPENDIX A: INTERVIEW QUESTIONS

1. Where did you grow up?
  - a. Was is more rural or urban?
    - i. Ask about how big their schools were, what kind of downtown they had, if they had a lot of businesses, a major airport maybe?
  - b. What kind of water was around there?
2. As a child, did you ever go to a lake, river, or the beach?
  - a. Which lake/river/beach?
  - b. What did you do there?
    - i. Ask about activities such as water skiing, tubing, swimming, fishing, boating, kayaking, canoeing.
  - c. Was it a family vacation?
  - d. When did you go (time of year, how often)?
  - e. Do you still go to this place or a place like it?
3. Do you have any first hand experiences with water pollution?
  - a. If yes, tell me about that.
  - b. Was the water dirty looking or smelly? Did you know the source of the pollutant?
  - c. If no, do you know others who have had problems with water pollution?
  - d. Do you hear much about water pollution?
  - e. Do you know of any water treatment facilities near where you grew up?
    - i. What were they like?
    - ii. Do you know anything about them?
4. Where did you get your drinking water from?
  - a. Did you drink bottled water, tap, filtered water?
    - i. Do you think there was something wrong with the tap water?
  - b. Do you know where you got the water from (a reservoir, spring, etc.)?
5. Have you ever experienced a water-related natural disaster like a tsunami, flood, draught, hurricane, blizzard?
  - a. How did that affect your life?
    - i. Were you out of school for a while?
    - ii. Was there a lot of destruction in your community?
    - iii. Did your family have to relocate due to the disaster?
    - iv. Are there limitations on what you can do know, such as being rationed water usage?
6. Do you have any water related fears like drowning?
  - a. What about water related diseases?
  - b. Why?
    - i. Is this because you knew someone it happened to?
    - ii. Was there an issue with this during your childhood that caused this?

1. Was this in your hometown or state? Or a place you visited?
  - c. Has this affected how you interact with the water?
    - i. i.e. did you take swimming lessons to avoid drowning?
    - ii. or do you not swim when you have cuts to avoid parasites?
7. Demographic Questions:
- a. What gender do you identify as?
  - b. What class do you identify as?
  - c. What race do you identify as?