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Perilous Place: Personal Stories Point to Possible Solutions to Widespread Flooding in The Mississippi Delta

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PERILOUS PLACE: PERSONAL STORIES POINT TO POSSIBLE SOLUTIONS TO WIDESPREAD FLOODING IN THE MISSISSIPPI DELTA

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Dedication

This thesis is dedicated to those who have asked difficult questions, went against the grain, and spent their lives attempting to make positive changes in the world despite the possible ramifications for those actions. Change comes from those who seek to enact it. I also would like to dedicate this to all of those that we have lost during the pandemic.

"Do not get lost in a sea of despair. Be hopeful, be optimistic. Our struggle is not the struggle of a day, a week, a month, or a year, it is the struggle of a lifetime. Never, ever be afraid to make some noise and get in good trouble, necessary trouble." -Rep. John Lewis, 2018

Abstract

The purpose of this thesis is to investigate and create journalistic stories highlighting the Yazoo Backwater Pumps Projects relationship to climate change while utilizing narrative storytelling techniques. Before explaining the methodology used for conducting research and interviews, the researcher describes the influence that innovations of mass communication channels have had on the way humans form groups and persuasively advocate for their positions. The researcher describes their historical perspective of mass media innovations that were vital considerations during their discovery and investigation of this politically divisive issue. The researcher more specifically focuses on the innovations that have occurred since the digital information revolution. These innovations the researcher believes have had significant impacts on the way we communicate as a society, especially over ideological and political conflicts. The researcher then details their experiences, thoughts, and methodology utilized during the research and data collection portion of the project. They also explain why certain creative decisions were made when crafting and framing the collection of narrative stories that describe the Yazoo Backwater Pumps Project's history, conflicts, and its relationship to social media and climate change. The results of this project demonstrate the stark contrast of facts and opinions advocated for by the proponents and opponents of the project and how those positions have been affected by the rapid increase in accessibility to information and mass communication channels. It also effectively illustrates the potential risk that the climate crisis has on the Mississippi Delta and its inhabitants.

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Introduction

Humans for thousands of years have crafted and shared stories. Humans tell stories to explain things, persuade others, or to describe why the world is the way that it is.

In 1994, cave drawings were discovered in France's Chauvet Cave which pushed back the earliest known date of cave art from 17,000 years ago to 32,000 years ago. However, the origins of human art, much like written language, are quite difficult to piece together and much is still left undiscovered, (Boyd, 2009).

Stories are uniquely human. For thousands of years people have created artistic, spoken, and written narratives to convey messages, represent ideas, entertain, and share knowledge with others. Many other animals communicate with one another, but the abstract creative representation of events or ideas is something that seems to be common only among humans, (Boyd, 2009).

Humans have grown to dominate the Earth primarily due to their superior intellect and hunger for knowledge that is significantly greater than other species. "We therefore have an appetite for information," (Boyd, 2009). This hunger for information has fueled the rapid growth of human civilization and motivated humans to form families, cities, countries, and other cooperative groups.

Humans are a social species, and throughout history we have become more and more inclined to cooperate with each other. However, groups of humans often clash. Groups of people often maximize their individual gains by forming groups and alienating other groups. Groups strategically form alliances and often attempt to outwit their opposition, while avoiding being outwitted themselves. (Boyd, 2009).

In his book, *On the origin of stories,* Brian Boyd describes the social intelligence hypothesis which states, "that the greatest pressures for advanced intelligence arise from the need to track the identities, status, powers, and intentions of conspecifics…" (Boyd, 2009). In other words, information and knowledge are vital resources needed to succeed in competition among groups and thus information has become increasingly easy to access and analyze.

Human societies function through a delicate balance of competition and cooperation. They benefit from working together to accomplish task, but humans also compete over resources needed to accomplish those tasks.

When forming groups, campaigns, or societies humans use stories to persuade one another to join their cause. This is a skill we have developed over thousands of years and our ability to share our stories has grown exponentially due to advancements in technology, such as Gutenberg's printing press, radio, television, and the internet.

The availability of communication channels has transformed the way that we interact with one another. We now live in a society where one person, through the almost instant transportation of data, can communicate with other individuals around the globe. The rapid growth of communication technology and collective knowledge since the printing revolution has transformed how we interact.

Chapter 1

History of Objective Storytelling

"The first essential, the life and soul, so to speak, of a story, is the plot." — Aristotle

The plot of a story is, put simply, what the story is about. The plot dictates the emotions and experiences that the reader faces. The Ancient Greeks and many other great societies of our past used stories to describe how and why things happened. These ancient stories typically were based upon fictional characters such as heroes, gods, and monsters. They were used to represent things or events that occurred in the world that seemingly had no explanation. They were tragic, dramatic, and people craved to hear them. However, almost all of these epic stories were centered around the experiences of other people.

Stories prior to the development of written languages were shared by word of mouth. Factual objectivity was not yet conceptualized, so the truthfulness and validity of those narratives were based purely on what the recipient of the information was willing to believe.

Even after written languages began to develop, literacy rates were astronomically low. However, following Johannes Gutenberg's invention of the printing press in 1440, the Printing Revolution began.

This revolution sparked a rapid growth in literacy caused by the increased access to information, made possible by the increased capacity to produce and circulate written text. It made information leaders of the time, such as the church, much less powerful. Growth in literacy allowed for individuals to begin critically questioning text's that they had previously been unable to interpret or even access. This introduction of moveable type printing marked

the beginning of the era of mass communication that radically transformed human civilization, (Hanson, 2016).

In the American colonies prior to 1830, newspapers were often based on political ideology. These papers were not written objectively, and each political party had its own. These papers had relatively small readerships, and publications battled amongst one another to gain an audience. These papers were expensive and often required annual subscriptions, thus their total readership was quite small and mostly restricted to wealthy individuals, (Hanson, 2016).

However, in the 1830s the ability to print newspapers was dramatically increased by the invention of the steam powered rotary press. This innovation allowed for publications to print 16,000 sections in the same amount of time it took to print 350 pages with a hand-powered press, (Hanson, 2016).

Due to increased availability of contemporary reading material, literacy rates began to rise in the United States. Benjamin Day capitalized on the opportunity created by the steam powered press and began publishing the *New York Sun*, (Hanson, 2016).

The Sun was much cheaper than older papers funded by political interest. Day's paper emphasized facts over opinion and was sold to the public for as little as a penny. Funding for these papers were based on advertising and circulation rather than politically motivated donations, (Hanson, 2016).

The Sun and other penny press publications were considered independent and often ignored political issues entirely because their readers were not particularly interested in politics. Over the course of the 1830s penny papers doubled in quantity and subsequently the

United States experienced immense growth in industrial, economic, and political participation, (Hanson, 2016).

"The concept of 'news' was invented by the penny press: These papers emphasized news – the newest developments from the police, courts, and the streets. The traditional papers called the penny papers sensationalistic, not because they ran big headlines or photos – neither existed at the time – but because they were printing 'news'," (Hanson, p.27, 2016).

During the Civil War, the public's relationship with the news media changed. With their loved ones off fighting the war, people began to rely heavily on independent publications to inform them of developments regarding their loved ones and the future of the nation. This deep personal interest in the news was characterized as a "habit" that became a vital portion of their lives. The personal interest connected to the events of the war caused many to develop a reliance on news media for information, (Hanson, 2016).

The period between the Civil War and the 1920s was filled with innovations in print journalism. Many of those innovations were fueled by the competition between Joseph Pulitzer and William Randolph Hearst. Pulitzer transformed the aesthetic presentation of print news, introducing huge pictures and big headlines to front pages. He also pioneered the practice of placing the most important stories above the fold with huge headlines. The likely goal of this was to make the stories more visually accessible to individuals passing by a newsstand, (Hanson, 2016).

Pulitzer presented news through carefully crafted narratives about real people's everyday problems. These narratives people craved to consume, which to many is seen as the point where journalist also became storytellers, (Hanson, 2016).

Competition between Hearst's *New York Journal* and Pulitzer's *New York World* continued to move the journalism industry forward. However, a new communication technology invented in 1900 became the most significant competitor to newspapers. That invention was the radio, (Hanson, 2016).

Broadcast media allowed for real time dissemination of information that at the time was unachievable by print. This immediacy made broadcast journalism the most effective form of media quite rapidly, so much so that the Associated Press, a fledgling cooperative through which member newspapers shared stories, threatened to cut radio broadcasters' access to their newswire, (Hanson, 2016).

The invention of the television marked the beginning of another significant point for journalism. Television allowed for audiences to be both visually and verbally stimulated by events. Television was able to connect with an audience much more effectively than other news media because it stimulated heuristic processes of thinking more so than analytic processes, (Magee, 2014).

It was much easier for viewers to absorb content visually than it was to read it in a book or listen carefully to the same information on a radio. It allowed for individuals to see what they were witnessing and, in a sense, feel as if though they were present at the events. It also changed the way these events shaped individual opinions, (Hanson, 2016).

However, the media during this era were also heavily influenced by the developing profession of public relations. Corporations, politicians, and other influential Americans used these mass media channels to garner support for their causes and to achieve their goals, often

propagandizing to their publics with grandiose descriptions that appealed to individuals' innermost desires. (Bernays, 1928).

Public relations professionals such as Ivy Lee, Edward Bernays, and P.T. Barnum realized the influential power that the media had over the public, and they began using media channels to manipulate the masses. These individuals used media coverage to repaint the objective reality portrayed by the media to favor their interest in carefully constructed narratives that ultimately could change the public's behavior, (Bernays, 1928).

Edward Bernays, in his book *Propaganda* (1928), described the effects of public relations in a democratic society,

"The conscious and intelligent manipulation of the organized habits and opinions of the masses is an important element in a democratic society. Those who manipulate this unseen mechanism of society constitute an invisible government which is the true ruling power of our country. We are governed, our minds are molded, our tastes formed, our ideas suggested, largely by men we have never heard of… in almost every act of our daily lives, whether in the sphere of politics or business, in our social conduct or our ethical thinking, we are dominated by the relatively small number of persons… who understand the mental processes and social patterns of the masses. It is they who pull the wires which control the public mind, who harness old social forces and contrive new ways to bind and guide the world," (Bernays, 1928).

Mass communication can be used as both a tool to garner support and as a weapon to defeat opposition. For most of the 20th century, individuals who had access to media channels, which were controlled by just a few gatekeepers, were effectively able to curate

media coverage to promote their interests. During this period independent journalism seemingly went by the wayside. However, an invention lurked just around the corner that would change journalism and launch a digital information age.

The invention of the personal computer and World Wide Web marked the beginning of the digital information revolution. Before the 2000s it was more difficult to learn information from the past. Seekers of information had to scour the archives of libraries or reach out to experts to learn more about topics. However, by the mid 2000s many news publications, government institutions, and other organizations began uploading vast swaths of information on to the web. For the first time in history, information was literally in the palm of our hands. The internet allowed for individuals to access vast amounts of information with minimal effort or time spent searching, (Klein, 2020).

The early days of the internet that saw a rapid increase in the quantity of information also saw an increase in human-to-human interactions. Individuals found that it was far easier to find information, but also a lot easier to find others interested in the same topics as themselves, (Klein, 2020).

Chatrooms formed to discuss virtually any topic one could imagine. These early chatrooms often were centered around niche topics. On the internet people were able to find like-minded groups that they genuinely could be a part of and interact with, (Klein, 2020).

Humans have almost always favored being apart of groups to succeed or even just establish a personal sense of belonging. The internet rapidly facilitated the creation of such groups, faster than any other platform had in human history, (Klein, 2020)

The internet facilitated connections. It allowed for individuals to choose where they wanted to go, who they wanted to be, and who they wanted to be with. Over the course of the 2000s there were many significant historical events such as the terror attacks on the United States on Sept. 11, 2001, the war in Iraq, and arguably one of the worst financial crises in world history in 2008. Each of these monumental events had significant effects on our society. However, these events pale in comparison to the internet's overall effects on the way we live, learn, and interact with each other.

As people began to use the internet, those who ran the most popular websites found a clever way to commoditize their users to generate revenue. Google and social media platforms, such as Facebook and Twitter, began collecting vast amounts of data on their users' preferences and behaviors. This data is essentially able to identify who the users are not only by their name, but also by their interest, goals, and aspirations. Data has become one of the most valuable resources in our society and social media companies use this data to optimize their platforms while also earning money from targeted advertising, (Klein, 2020).

This data also sped up the process of group formation by suggesting to users, people they might know, groups they might want to join, or topics that they seem to be interested in. However, this algorithmic sorting of people based on data has had many unforeseen negative impacts. It not only placed users within microcosms filled with like minded individuals, but it strengthened those individuals' viewpoints by showing them mostly information that coincided with their current beliefs. Since the creation of social media American political beliefs have become more polarized, distrust in the media has become greater, and subsequently there has been a massive resurgence of independent media outlets and thought leaders, (Klein, 2020).

Many political scientists believed that with more availability of information individuals would become more engaged and knowledgeable of politics. However, this was not the case. Although access to information had greatly increased so had the choice of information. The growth of political media and news was equally met by the growth in entertainment media, (Klein, 2020).

Individuals have more choice than ever when choosing the content they want to consume. Increased choice has allowed for individuals only to listen to viewpoints like their own if they so wish. This freedom of choice has likely contributed to the large political rifts associated with topics that are deeply tied to identity such as religion, political affiliation, personal safety, or economics, (Klein, 2020).

Topics associated with ideological beliefs are much stronger than attitudes and are unlikely to be changed. When a narrative is shaped to evoke emotions related to those beliefs it reinforces the individual's belief. The same occurs when individuals are exposed to opposing beliefs that are contrary to their own. Individuals see themselves as part of a group associated with those core ideologies, and they attempt to defend their group while trying to outwit their opposition. Much like early humans we still form groups for cooperation and compete among other groups to achieve our goals, however, social media has changed the way these groups are formed, their size and how they interact with each other, (Klein, 2020).

It is important to understand the drastic effects that mass media, especially social media, has had on our society when examining issues surrounding government policy and individual livelihood in the 21st century.

It is for that reason that I explained how the effects and channels of mass media have changed over time. My methodology for researching, interviewing, and crafting stories about the politically divisive Yazoo Backwater Pumps project relied heavily on my prior knowledge of those effects. Social media, individual bias, and conflicts between two opposing groups lie at the heart of the proposed pump project and mass communication was the primary medium used by each group to fight for their position.

Chapter 2

Research and Methodology

One approach to writing for the depth reporting class I joined would be to regurgitate facts from the hundreds of government documents and scientific studies that describe the Yazoo Backwater Pumps Project, but writing in that fashion would be ineffective when attempting to appeal to the general public.

Time, interest, and freedom of choice all are important considerations when crafting a journalistic piece. It is for that reason that most of my stories are about the experiences and opinions of real people. When attempting to inform the public about complex issues, research shows nothing is more effective than reporting on people's experiences in a narrative fashion, (Boesman and Meijer, 2018).

In the digital information age narrative storytelling and journalism have become very intertwined. A journalist's primary purpose is to deliver facts to the public in an unbiased manner. However, the internet's vast selection of news stories has caused journalist's to begin reworking their strategic approach to better capture the attention of their readers who are inundated by choice.

"Scholars have described journalist storytelling function – making news meaningful for their audience – as at odds with their role as provider of facts," (Boesman and Meijer, 2018).

When writing these stories, I attempted to fairly represent the various facts and differing opinions regarding the floods and the pumps through compelling narrative stories.

These narrative's attempt to present the topic in a manner that could easily be understood and leave a meaningful impression on readers.

The first step for constructing these fact-based stories was to answer a few simple questions. What is the Yazoo Backwater Pumps Project, who is being affected by the floods, how can the floods be prevented without damaging the ecosystem, who is stopping the construction of the pumps, and how does this issue relate to climate change?

These questions were all formulated using the five W's and one H, (who, what, where, when, why and how) which are a cornerstone convention taught to journalism students. I use these questions to help get a lay of the land when investigating any new story idea.

Many newsmakers believe that real news must start with the details represented by the five w's and then be expanded upon in an inverted pyramid shape, where information decreases in importance as the reader progresses through the story. I use the five W's often when writing because I believe it is a great way to organize the lede paragraph, (Boesman and Meijer, 2018).

However, I do not strictly follow the inverted pyramid structure in my writing because sometimes stories are better framed in a linear fashion that gently pulls the reader in and reads more like a novel than a textbook. This type of gradual entry is an effective way to immerse, or transport, a reader into the setting and the events of a story, (Magee, 2014).

Each of the five W's serve as a good peg to hang stories upon. A story can focus on who, what, where, when, and how, but without knowing why the news occurred the reader will likely struggle to grasp the full scope of any issue.

One-on-one research or interviews are one of the best research methods for learning about why something occurred, in most cases, (Magee, 2014). When conducting secondary research, I was able to identify the groups involved, where the floods were occurring, how they were occurring, when they were occurring, and options as to how the floods could be prevented. It however was much harder for me to answer questions that started with why?

The interesting thing about asking why, is that to each individual the answer is likely different. Each person I interviewed about the floods had a varying range of opinions about them. Their opinions about the involved organizations, and their beliefs about those groups' intentions were equally as varied. When trying to explain why something is occurring, a journalist attempting to study an issue must practice balanced reporting of the various experiences and opinions expressed to eliminate their personal bias as much as possible.

In a perfect world, journalists would be able to eliminate all bias from their storytelling. However, allowing individuals to express their opinions and knowledge, and the journalist's choice of how to present that information will inherently have bias. It is for that reason that I attempted to interview parties on both sides of this issue. However, I found it much easier to find locals and farmers to speak with me about the issue compared to representatives of advocacy groups that opposed the pumps, and representatives from the various government organizations attempting to solve this issue.

It is the duty of any ethical reporter to paint with a broad brush and attempt to introduce the reader to a variety of perspectives related to the issue rather than focusing on one group's set of facts or opinions more so than another. It is not the job of a journalist to advocate for one position over another, it is instead a duty to present the public with the needed information to make an informed decision about an issue on their own.

I spent weeks researching various aspects of the project and absorbing content about the topic by both politicians and journalist's. I also spent time reading the history of the Mississippi River starting before the Louisiana Purchase and gradually making my way to the Flood of 2019. It was quite interesting to see how the politics around this issue changed over time. I first wrote a research draft that analyzed the pump project's history and the stats related to the floods of 2019. This research was an essential portion of the project, because without building a high level of knowledge about the topic it would have been quite difficult to formulate quality questions when conducting interviews. Much of this research is compiled within the first story in the next section titled *2019 Flooding, Threat of More, Renews Pumping Station Debate.*

While conducting secondary research I read the second draft Supplemental Environmental Impact Statement (SEIS), which was released by the US Army Corps of Engineers in October of 2020. I noticed a section of the draft SEIS that was focused on the impacts of climate change both with and without pumps. The Corps described that when the Steele Bayou Control Structure is closed, and water is left stagnate north of the control structure, the stagnate water would begin to deoxygenate resulting in hypoxic conditions. I knew instantly that this was where the pumps story could possibly be connected to climate change.

I began searching for individuals knowledgeable on the topic because I could not explain such complex scientific ideas with any authority. I contacted NOAA, and after a week of email communications they suggested that I reach out to the Mississippi State Department of Geosciences. I was put in contact with Dr. Jamie Dyer, a professor of meteorology and climatology, who studies Mississippi River floods and other hydrological

processes. During our interview, which is in the latter half of the first story, Dyer eloquently described the pros and cons of the proposed pump project. He also explained the ramifications of hypoxia and why climate change is likely increasing the probability for another more catastrophic flood event along the Mississippi.

Many individuals have lived in the backwater area their entire lives, others had just moved there. Some farmed, others enjoyed retirement. Despite their differences every local I spoke to had a common goal: they wanted the pumps finished and the floods to stop. The first interview I conducted was with Anderson Jones Sr, who had lived on the same property in Filter his entire life. During that time, he had experienced catastrophic flooding on more than one occasion.

I found Anderson Jones Sr. through social media. His daughter had started a fundraiser to raise money to repair damages to his home. I reached out to his daughter because Jones did not have a Facebook account himself. She said that he would be more than glad to speak with me about the floods and show me the damage to his home.

I also reached out to Ann Dahl through a contact form on *finishthepumps.com.* She also agreed to speak with me about the floods and the proposed pump project. I set up interview times for both Jones and Dahl and traveled alongside my advisor Charles Mitchell and my roommate Jacob Meyers, to go see their homes and speak with them about their experiences during the Floods of 2019.

I had Meyers come along because I realized that the stories would benefit greatly from quality images to help convey the emotions of the floods more vividly. Research shows that narrative stories are more effective when accompanied by visual images. Narrative

stories are crafted to transport readers into them and when accompanied by visual imagery transportation can occur more easily. Visuals assist readers in the imaginative process that occurs when reading. Readers could instead see for themselves the imagery that I described in the stories, (Magee, 2014).

We recorded audio and took hundreds of photos and videos throughout the day, most of which never were published. These images and audio recordings not only assist in transporting readers, but also helped me correctly report the information that I gathered during my one-on-one interviews while providing a large array of options for piecing together a final product. I prefer to collect data this way, rather than with pen and paper, because it allows for me to completely immerse myself into the interview with minimal distractions.

Information on Jones was quite easy to come by because he had been advocating to finish the pumps for a large portion of his life. So, when I went to speak with Jones, I was aware that he had fought off snakes with a shotgun, built a levee around his home, and that his home had flooded previously in 1973. Some news makers would criticize the predefinition of imagery and key story points that I had already honed in on before ever stepping foot in the Mississippi Delta, (Boesman and Meijer, 2018).

I saw these as essential components when attempting to craft narrative journalistic pieces. Research is an essential portion of telling effective stories because they serve as the framework for asking the right questions. I could have blindly asked questions regarding the technicalities of the pumps, but that would have been less relevant to the stories that Jones had to tell.

Although, I had some prior knowledge of Jones before our time spent together, there were many small touches that would have been missed if I did not go and experience it for myself. Jones had a large number of pictures and a story to go with each one. I spoke with him for almost two hours while touring his property. We spoke about his life, the floods, and his stance on the pumps project. Floods were something he had dealt with his entire life. He showed me a line on a wall in a back room of his home about chest high, that line was where water sat in 1973, and then he told me stories of that perilous year.

The next interview I conducted was with Ann Dahl. She moved to her home beside Eagle Lake the year prior to the floods. She made the purchase as a scenic place to retire, but said she had no notice of the flood potential. I knew that she was well connected to the finish the pumps movement due to her role on the website. She was the person who responded to my email to finishthepumps.com. Within a day she had responded agreeing to speak with me about the group and her experiences during 2019. I however knew little about Dahl prior to our interview, but I did know that she would likely be a great source to begin learning more about the community's efforts to finish the pumps project.

Before the floods, Dahl had no opinions about the pumps and little knowledge about the history of the pumps project. However, after the water began to rise Dahl started searching for answers reading every bit of material she could get her hands on. She wanted to better understand the issue and why the floods still occurred. She had not decided yet if she was for or against the pumps, but as she read information from the Corps, other community members, the EPA, and environmental advocacy groups her position became more and more clear. She was for the pumps.

In my story about Dahl, I used her description of the pump's effect on Mississippi River floods as a way to describe a complex issue in an easily consumable narrative fashion. This article requires analytical thinking and thus only includes a graph depicting the phenomena described in the article. Although a large quantity of images was gathered during my interview with Dahl, only one graph was included with the final copy of the story which enhances the reader's experience when reading the piece rather than distract them from the main purpose of the story, (Magee, 2014).

Not included in this story was another vital portion of our interview that I would consider a golden nugget. That nugget led me to investigate more deeply the group conflict at the center of this issue and how social media and community meetings influenced it.

After making the decision to support the pumps, Dahl began attending community meetings about the floods. Dahl not only became an adamant supporter she also began to express disdain toward the opposition. I asked her about other locals' opinions about the project, and she said that at these meetings almost everyone from the community supported the pumps, apart from a few individuals who were representatives of environmental advocacy organizations, such as the Audubon Society who did not speak up publicly, but were present and spoke privately with the EPA representative following the SEIS comment session conducted by the Corps. of Engineers.

She believes that those groups do not have the environment truly in mind, but are instead only advocating against the pumps as a way to solicit donations for their cause by framing the pumps as a destructive project that benefited big agriculture. She suggested I speak with two farmers who both shared a similar position to hers and had been advocating to finish the pumps.

The first farmer that I spoke with was Clay Adcock. He and his wife, Paige, had both written columns advocating for the pumps and directly criticizing the positions held by the Mississippi Audubon Society. They critiqued a letter to the editor of the Yazoo Herald that was written by the organizations policy director Jill Mastrototaro.

The weekend following my interview with Dahl and Jones, I traveled back to the Delta, this time on my own to speak with Adcock. I spent time the week prior to this interview researching Adcock and his advocacy efforts. When I arrived at his home in Holly Bluff, I sparked up a conversation about Ole Miss. I knew that Adcock had previously attended the university and figured it would be a great way to open him up to conversation while setting up my recording equipment in his home office. I then asked him about some drone pictures he had taken during the floods and he was surprised with the amount of research I had done prior to us speaking.

When it was time to begin our interview, Adcock jumped right in. He first emphasized to me that he did not believe in manmade climate change and questioned how I would be framing the article. He emphasized that he did not want to be painted as a fool.

This skepticism towards me as a student journalist did not come as a surprise. I assured him that I was simply trying to learn more about his experiences and hardships caused by the floods and to gain insight regarding the columns him and his wife had written in opposition to Mastrototaro's position. I understood the divisiveness of the topic and that Adcock held strong views that could be misconstrued by a writer who was advocating against the pumps. I felt as if though my research had paid off. As I asked him questions, he seemed to become more at ease and more open to speaking with me about his opinions and

experiences as he began to understand that I would attempt to fairly represent his position in my writing. He began unloading his opinions about Mastrototaro to me.

"She is not an environmentalist, she is an extortionist," He said.

Adcock believed whole heartedly that Mastrototaro and other environmentalist were only advocating against the pumps for monetary gain through donations form their supporters. He said that if she genuinely cared about the environment that she would be for the pumps considering the devastation he and his wife had seen inflicted upon wildlife in the area in 2019.

He was also concerned with the economic repercussions inflicted upon his community and his family's farm. He expressed to me further his opinions of Mastrototaro as a person and his difficulty in grasping her opposition to a project that directly affects the livelihoods of people that lived hours away from her.

After leaving Adcock's home. I was originally supposed to speak with the second farmer Dahl recommend, Victoria Darden, at her family's farm. She cancelled our meeting earlier that morning as I was driving to the Delta, so we rescheduled the interview for the following week.

During that time, I began to grasp at the key news pegs that these stories would hang upon. At this point I had begun to realize that the pumps were perceived by almost all of the community members as the only logical solution to prevent the floods. Through support of their neighbors, at community events, in the newspapers, and via social media these beliefs were strengthened.

The opposing groups, the EPA and environmentalists, believe that other more environmentally friendly and equitable solutions exist than the plan proposed by the Corps To many in the community the conflict is perceived as the barrier that is preventing the pumps from being completed.

The opinions I had heard thus far were similar and I knew that Darden's description of her social media efforts would help me understand why these similarities existed and how the support for the pumps had been strengthened. I conducted my interview with Darden via Zoom. The first half of the interview I asked her questions about her experience during the floods. I then began asking her questions related to her role in garnishing support for the pumps via social media. She described how she used social media, and the success that she had utilizing it to promote their position to the masses. She also expressed similar views to Adcock and Dahl regarding environmentalist and Mastrototaro.

After speaking with Darden, I felt as if I was prepared to speak with Mastrototaro. However, this portion of my research is where I felt I fell short. I had previously spoken with Mastrototaro on the phone about my project and its relationship to climate change.

After conducting interviews with community members and climatologist the frames of my stories had shifted dramatically. Mastrototaro had asked me to email her any questions I had for her when we spoke on the phone. She did not answer the questions I sent to her and did not agree to speak again on the phone. She did however, provide a statement, suggesting that I consider Adcock's position on the Delta Council, Darden's position as the County Correspondent Representative at the Mississippi Department of Agriculture and Commerce, and look into Darden's involvement in the boycott of The Mississippi Wildlife Extravaganza sponsored by the private Mississippi Wildlife Federation.

Following our email correspondence, I spent the next two months transcribing interviews and connecting them to the news pegs I felt were most relevant to the climate report and the secondary research I had conducted. I divided the interviews into five stories that each provide readers with a different set of information regarding the pumps.

The following chapter contains four stories that were published in the Mississippi Climate Report, as well as my story about Clay Adcock that was not published in the report. In the chapter following the stories I briefly reflect on the project as a whole. Links to the published stories are in the Appendix.

Chapter 3 - The Stories

Flooded land south of the mainline levee facing the International Paper Company Plant

Photo by Jared Poland

2019 FLOODING, THREAT OF MORE, RENEWS PUMPING STATION DEBATE

Pumps to remove rainwater from inside the levees that protect the Mississippi Delta from river flooding were authorized in 1941.

-U.S. Army Corps of Engineers

The loss of more wetlands due to pumps must be considered in light of the lands already lost to development.

-Environmental Protection Agency

Flooding from impounded water covered an area 38 times the size of Manhattan Island.

-U.S. Army Corps of Engineers

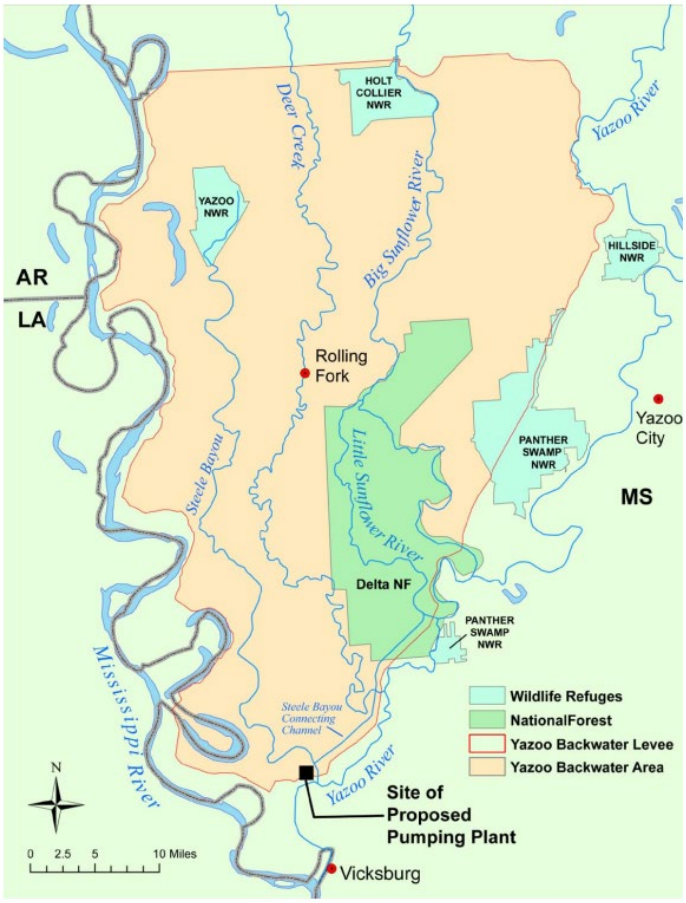
Starting in the early 1820s, Congress recognized the importance of the Mississippi River and its tributaries as major arteries of commerce and prosperity and tasked the U.S. Army Corps of Engineers to plan and carry out projects to maintain navigation.

A century later following devastating Mississippi River flooding in 1927 and two other severe floods in 1934 and 1935, Congress passed the Federal Flood Control Act of 1936. The act recognized that piecemeal work done by states and localities just wasn't enough, and again turned to Army engineers to develop comprehensive plans and to manage flood controls along waterways of the United States.

For the particularly troublesome challenge of the vast, flat Mississippi Delta, Congress commissioned the Yazoo Basin, Yazoo Backwater Project on Aug. 18, 1941. Now, 80 years later, one unconstructed component of the comprehensive plan has, in the wake of unprecedented 2019 flooding, come to the fore again. "Finish The Pumps" is the battle cry of almost all landowners and residents of the region. As they have for decades, environmental groups oppose the pumps and insist they'd do more harm than good.

Topography is key in the situation. The Mississippi Delta, some of the most fertile land in the nation, covers most of the northwest quadrant of the state. There is very little elevation change between Vicksburg, at the base of the Delta, and Memphis, Tenn.

The Mississippi River forms the western border of both the state and the Delta, and is contained by a sturdy mainline levee. During floods, that levee keeps river water off the cropland. The Yazoo River angles northeast from Vicksburg where it empties into the Mississippi, forming a rough "V." The 922,000 acres of forest and cropland, known as the Yazoo Backwater Area, are in the center of the "V" and levees along the Yazoo have been constructed to keep river water from making an end run, in essence, and flooding the Delta from the East.



Yazoo Backwater Area

Steele Bayou extends more or less through the center of the Delta and, in normal times, drains rainwater from 4,039 square miles of land to the base of the "V" and through a gated control structure into the Yazoo River.

It takes a combination of events for the Yazoo Backwater to flood. First, the Mississippi and Yazoo rivers have to rise enough to cause the Corps to close the gates in order to keep river water from backing into the Delta. Second, there has to be heavy rain in the Delta at the same time. With the gates closed, that rainwater is trapped or impounded with no place to go. It spreads out, inundating field after field.

Overall, the Yazoo Backwater project design includes plans for levees, gravity control structures, and pumps to reduce flood risk from the Mississippi River. Only the pumps — that would lift the impounded rainwater over the levee and into the river system — have not been constructed.

The absence of pumps is not a problem every year. For example, there were only minor problems in 2020. But the unprecedented Delta flooding in 2019 is seen as foreshadowing more years when farmers can't farm, workers can't work, wildlife drowns or starves, and Mississippi's agribusiness and tourism economy takes a hit worth hundreds of millions of dollars.

Mississippi, of course, was not the only place sustaining vast flood damage. Vast regions of Nebraska and other heartland states were inundated for much of the year. A pattern has been noted.

"In terms of climate change, research has shown that the snow is melting earlier which means the snowpack just melts faster," said Jamie Dyer a professor of meteorology and climatology at Mississippi State University.

That has added impetus for a push for Congress to revisit the problem.

As designed and, now, redesigned, the primary component of the project is a 14,000 cubic-feet-per-second pumping station, near the Steele Bayou flood control gates, to move rainwater out of the Yazoo Backwater Area during high water events on the Mississippi River.

Debated and litigated for decades over issues of cost, cost-sharing, cost-benefit ratio, environmental matters in more, the plan for pumps was last deemed dead on Feb. 1, 2008,

when the federal Environmental Protection Agency used its Clean Water Act authority to veto construction.

The act allows the EPA to halt specification of any defined area as a disposal site, or restrict or deny the use of any defined area for specification as a disposal site for the discharge of dredged or fill material. Actions have mostly been taken in response to unresolved Corps permit applications, and vetoes are rare. The Corps authorizes about 68,000 permits each year. In contrast, the EPA has used its Section 404 (c) power in only 13 final determinations since 1972.

In every proposal developed, including a new draft that has a hint of life in Congress, the construction and operation of pumps would reduce the extent, depth, frequency, and duration of flooding. No plan would drain all the wetlands in the Delta, which are the natural asset environmentalists insist must be protected.

According to the Corps, the Yazoo Backwater Area contains 150,000 to 229,000 acres of wetlands. It also features an extensive network of streams, creeks and other aquatic resources. Wetlands provide habitat and also provide important ecological functions, protect and improve water quality by removing and retaining pollutants, temporarily storing surface water, maintaining stream flows, and supporting aquatic food webs by processing and exporting significant amounts of organic carbon.

The Delta wetlands are some of the richest resources in the nation, and the EPA and environmentalists are opposed to the pumps because they believed it would degrade or eliminate 67,000 acres, causing unacceptable adverse impacts on wildlife and fisheries

resources. A proposed mitigation plan was also believed to not adequately compensate for the project's impact.

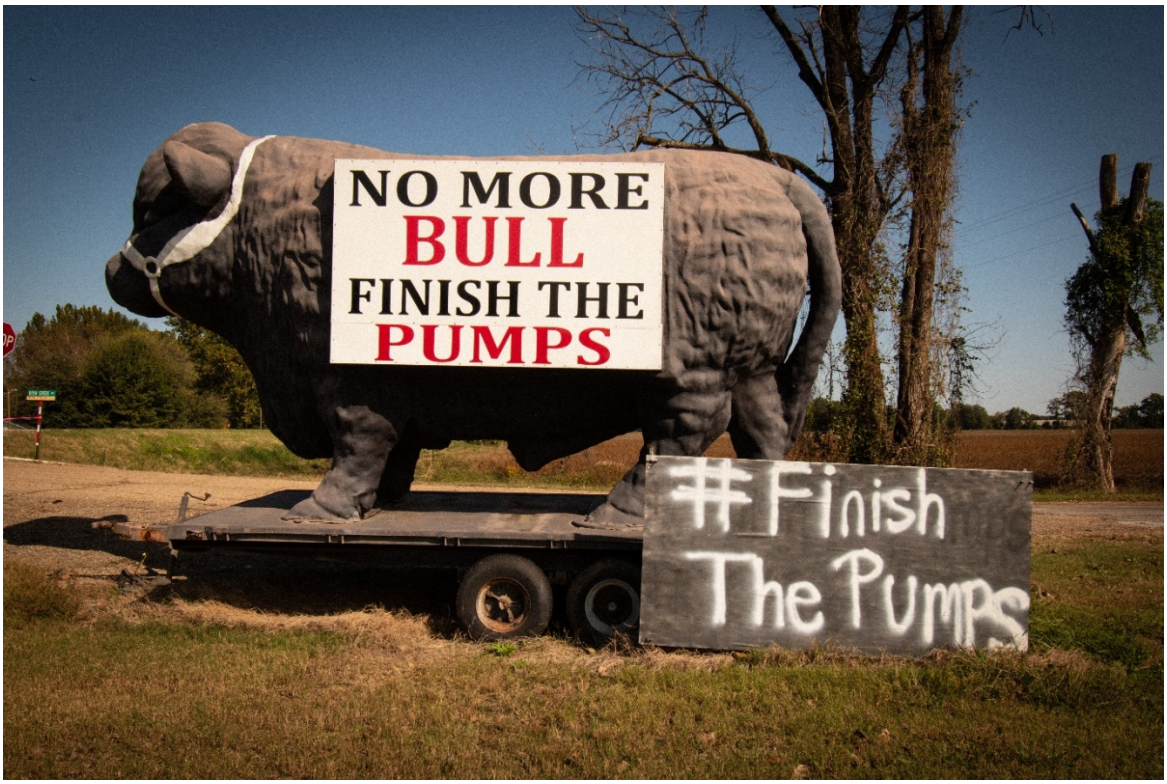
The wetlands and forests are also an asset to landowners who manage or lease rights to hunt, particularly ducks, and fish. Environmental tourism is a growth industry, and one company, Tara Wildlife, has set a standard for excellence in the area for the tens of thousands of acres it owns and operates as either a preserve or an area for hunting. Tara and other individuals and groups provided tons of supplemental food for wildlife in 2019 in an effort to fight starvation.

The EPA, which has said its 2008 veto does not apply to the revised and updated plan for pumps now own the table, points out that the projected additional wetland loss must be viewed in the context of the cumulative losses all across the Lower Mississippi River Alluvial Valley, which has already lost over 80 percent of its bottomland forested wetlands to clearing for agriculture. Specifically in the Mississippi Delta, the EPA says the project would significantly degrade important bottomland forested wetlands.

Those realities stand against the nine of the past 10 years when the Yazoo Backwater Area has experienced flooding to some extent. According to the Mississippi State University Delta Research and Extension center, the 2019 flooding damaged 680 homes, caused two deaths, large levels of ecological damage and animal deaths along with other issues related to floodwater covering so much of the area for so long.

Flooding has long plagued the Lower Mississippi Alluvial Valley, but the due to a perceived lack of media attention, the so-called "forgotten" floods of 2019 were quite possibly the worst ever. Now, many who have been indifferent to the pumps debate understand the

threat that flooding has to their homes and livelihoods. Many of those community members are fighting back against the EPA and environmentalists and lobbying to finish the pumps. Large, homemade signs and even billboard reading "Finish the Pumps" can be seen on along U.S. 61 near Rolling Fork.



Finish The Pumps sign along U.S. 61 near Rolling Fork

Photo by Jacob Meyers

In the political arena, Gov. Tate Reeves and U.S. Sen. Cindy Hyde-Smith are advocates for the pumps. In a press conference in September 2020, Reeves, Hyde-Smith estimated the value of crops not grown to be at least $800 million. The state also spent over $1 million to clean up bridges and roads. In wildlife management areas there was an estimated loss of $310,000 in revenue.

At Mississippi State University, Dyer studies, models and predicts extreme hydrologic events. He also has recently been using drones to image and assess flood conditions along the Mississippi. When there is more snow, and it melts rapidly in the north and drains into the Mississippi it causes the normal spring rise to flow much faster and rise much more sharply.

There are other facets to the challenge. When the drainage structure's gates are closed, and rain falls and accumulates in the Delta, this stagnant water can become rife with agricultural run-off containing chemicals such as nitrogen, phosphorus, and potassium.

As temperatures rise when the summer months near, plant life begins to explode, catalyzed by the agricultural chemicals in the water. “The higher the temperature the faster the plants grow,” Dyer said.

As plants grow, the water quickly becomes void of oxygen. This deoxygenation is caused by biological processes using the oxygen. The water is not able to move, mix and subsequently reoxygenate. The stagnation and agricultural run-off that fuel these hypoxic conditions that can last for months and often decimate aquatic habitats.

“If you let it sit there and it becomes hypoxic, you’re pumping for all intents and purposes, dead water into the river,” Dyer said. When the gates were finally opened, the lifeless hypoxic water drained south into the Gulf of Mexico. This water was hotter and more hypoxic then if it had been pumped out earlier in the year.

"If they are pumping it out basically what they are doing is allowing that water to move," Dyer said. According to the Corps, if the water is pumped out earlier, when it is cooler and at lower hypoxic levels, it will likely improve the dissolved oxygen levels and diminish the negative impacts on aquatic life in the area. Without the pumps, hypoxic conditions will likely appear again the next time the area experiences extended flooding.

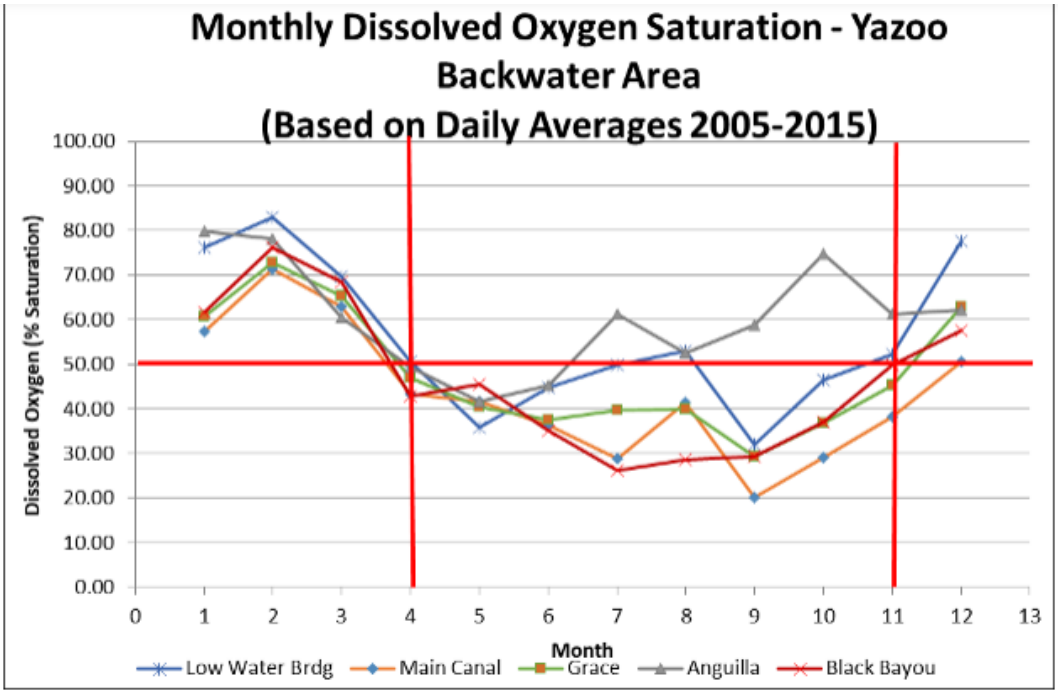


Figure 2-3. SBMP–Monthly Mean of DO Saturation Percentage Derived from Daily Means Compiled from Hourly Sonde Data (2–5 feet from bottom).

21. The values displayed in Table 2-1. Dissolved Oxygen Saturation Table for Yazoo Backwater Area show saturation potential for DO concentration for freshwater typically found in the Yazoo Basin as temperature increases. When water temperatures reach 20 degrees Celsius, the 50% DO saturation potential falls below 5.00 mg/L.

Table 2-1. Dissolved Oxygen Saturation Table for Yazoo Backwater Area

Temperature (C)	Dissolved Oxygen Concentration (mg/L)	
	100%	50%
15	10.13	5.07
20	9.14	4.57
25	8.30	4.15
30	7.60	3.80

Dissolved Oxygen Saturation in the Yazoo Backwater Area

On the other hand, pumping the water out maintains a more or less natural flow. “The closer you are to a natural environment the better,” Dyer said.

Despite efforts to tame the Mississippi, the river is constantly changing and becoming more unpredictable by the year. “These structures were built based on average conditions in the '60s and '70s, and we are not at those conditions anymore," Dyer said. "We’re going to have stronger floods, and we are going to have stronger droughts,” Dyer said.

The flood of 2019 was catastrophic, but climatologists fear that a more catastrophic event could occur in the future.

In a worst-case, if there were massive amounts of snow in the winter, followed by a warm spring that rapidly melts snow as in in 2019, combined with frequent and severe hurricanes coming from the Gulf as in 2020, it would likely be much more destructive.

“That would basically destroy every river system down the channel,” Dyer said. “We hope that doesn’t happen, but it could happen, and that potential increases every year.”

For More Information

https://www.mfc.ms.gov/

https://www.treefarmsystem.org/mississippi

Anderson Jones Sr. standing in front of a tree he planted with his mother

Photo by Jacob Meyers

HOME IS HOME, BACKWATER VETERAN SAYS

Anderson Jones Sr. has lived all his life at the base of the levee system designed by the U.S. Army Corps of Engineers to protect the Lower Mississippi Delta from high levels on the Mississippi and Yazoo rivers.

The levees have a drain plug. When the Mississippi and Yazoo rivers are below flood levels, rain falling on most of the northwest quadrant of Mississippi makes its way through that plug and into the river system. When the Mississippi and Yazoo rivers are high, gates of that drain plug - the Steele Bayou Control Structure - are closed to keep river water from

backing up onto the flat and fertile expanse that is the Mississippi Delta. But while keeping river water out, the closure of the control structure prevents rain runoff from draining. It "ponds" inside the levees - sometimes a little, and sometimes a lot.

Any bit of rainfall after the structure is closed begins to accumulate in the backwater area with no place to go. If there is little rainfall in the area there is little backwater flooding, but when precipitation is heavy, water can quickly accumulate causing catastrophic conditions.

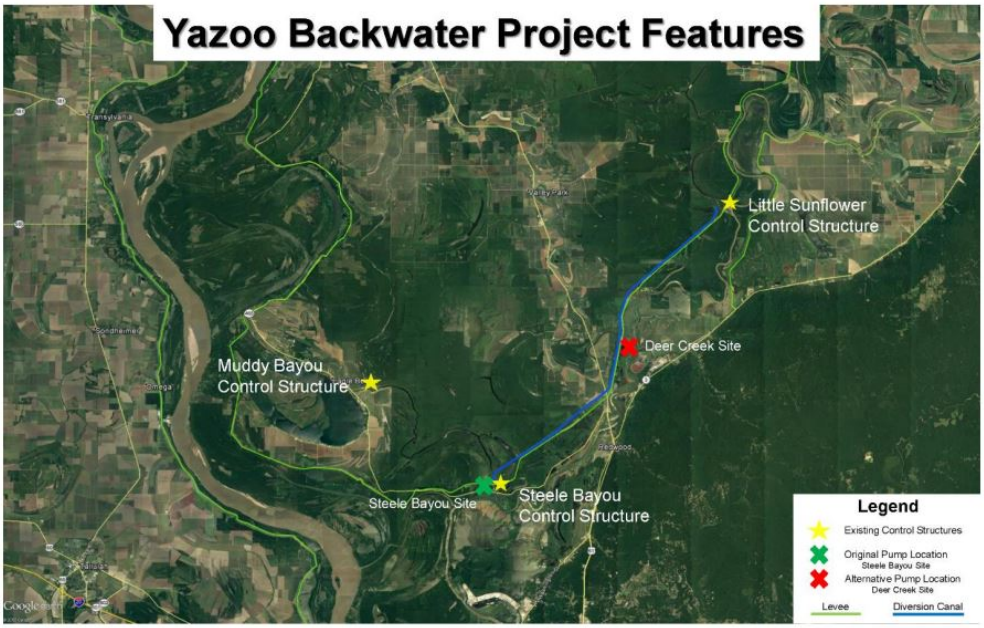


Figure 2-32. The flood control projects in the Yazoo Backwater Area.

Spring rain levels are unpredictable, and the backwater can rise very quickly, especially where Jones has lived all his life. “It’s always in the back of my mind," he said. "When it gets to raining, I say, 'Lord, please let it stop, just let it stop.'” In the first six months of 2019, precipitation in the Delta exceeded averages by only about 10 inches, but a little rain floods vast area when it can't be drained.

Jones' modest home where he and his wife live has an address in Filter, Mississippi, an unincorporated town. It is in Issaquena County, which similarly has fewer than 2,000 residents — the smallest population in the state. What the county lacks in people, it redoubles in farmland used to grow corn, cotton and soybeans in furrowed fields stretching to the horizons.

The home of Anderson Jones Sr. in Filter, MS

Photo by Jacob Meyers

His home might not be much to anyone else, he said, but to him it has served as the central point for his life. It is where the couple raised their two children, and he still pursues

his passion of training dogs. Communicating with the pups is a gift, he said. Not many have it.

Jones has lived on his property since he was a small child. When he was young, he planted a seed with his mother in their front yard. That seed is now a large tree that has grown to drape over the gravel road out front. He knows he could move, but his fondness for his property is visceral. “There is no place like home,” he said.

Designing the levee system was assigned to the Corps by Congress in the aftermath of 1927 flooding, which, until recent years, was the worst ever on the Lower Mississippi. The plan eventually included pumps at the Steele Bayou Control Structure that would lift the impounded rainwater over the levee and into the river system. For decades, actual construction of a pumping array has been an on-again, off-again proposition. Jones has been a consistent advocate. He has a soft voice, but has testified before Congress in Washington, D.C., and has spoken with U.S. Rep. Bennie Thompson, who represents the Delta in the House. He's given countless interview and, taken dozens of media representatives on tours.

For much of 2019, Jones, who moves slowly due to a brace on his leg, worked to defend his home from encroaching water. It wasn't a record year for river flooding, but the backwater rose and rose, and eventually Jones had to boat from a slightly higher road to his house to keep working on the sandbag levee he built around it and fight off snakes with his shotgun.

Despite his efforts, late one evening in 2019, Jones and his son, Anderson Jones Jr., had to evacuate the home as water began rushing in. They got out safely, but the home was effectively destroyed.

Jones standing in front of his home during the Floods of 2019

Photo by Jacob Meyers

"That water was in here 150 days," he said while walking through his home. The extended flooding allowed for inches of mud, streaks and pockets of mold and mildew spreading all the way into the attic to ravish the property.

After the water receded, Jones, with the help of neighbors and family, began working at a steady pace to restore his home to a habitable level. He had insurance, but it was nowhere close to covering the full cost of repairs. Jones and his wife lived with different family members in Jackson and Vicksburg. For almost a year, tedious work progressed on removing flooring and walls, tearing out molded ceilings, rebuilding doorways, painting and everything else. The nearest building supply store is in Rolling Fork, almost an hour away.

Many people suggested that he just move as they have after every flood year, but Jones was determined to stay where his heart and memories reside.

While 2019 was the longest and most damaging period of flooding he had experienced, it was not the deepest flood that he has seen in his lifetime. That was in 1973 when water filled his home to almost chest height. During that year he and his siblings would wade or boat a half-mile through stagnant water that covered their road to meet the school bus. He said his siblings often would try to skip school saying they were sick because they did not want to show up muddy as they often did after their morning trek through the swamp to school.

Jones remembered his father having to hold his sister, a polio patient, in the boat because she was unable to sit due to a cast on her leg. A reminder of that year can be found on a wall stud in the back corner of his home where a dark stain clearly marks how high the water was in 1973. Every time the control structure closes, Jones said he is reminded of the danger.

“You don’t know when it’s going to flood,” he said. “When they close those gates, you’re in trouble.”

‘STUDENT’ STUDIES, AND SAYS PUMPS ARE BEST OPTION

In 2018, when she purchased a home that overlooks Eagle Lake as a place to live in retirement, Ann Dahl said she was not aware that the area was vulnerable to backwater floods. Her career had culminated at the Grand Gulf Nuclear Station adjacent to the Mississippi River near Port Gibson, Mississippi, and Eagle Lake is about 50 miles north, an oxbow cut off from the river channel in 1866. Her comfortable home has a wide screen porch where she can work or relax while looking out over the water.

Settling in, Dahl started attending community meetings and where she heard complaints from her new neighbors about the complicated hydraulics in the area, and how pumps designed to deal with flooding had not been built. Curious, she said she took to her computer to scour the web for anything and everything she could find about the Yazoo Backwater.

“I’m one of the lucky ones,” Dahl said. Her house sits atop what is known as the Brunswick Levee. The levee, which was originally constructed by slaves to protect plantation land, kept her home well above water while dozens of other homes around the lake were damaged or destroyed in 2019.

She said it was one day shortly after moving into her new home that her son, an avid duck hunter who knew the region quite well, pointed to the Steele Bayou Control Structure and told her "the entire Delta drains right there."

The Delta is 4,039 square miles of some of the richest soil in America. Starting in colonial times, much of it was cleared of hardwood and pine forests, leaving fertile fields for cotton, soybeans and corn.

The control structure has massive gates that are open most of the time. As the water exits - first into the Yazoo River, then the Mississippi River, then the Gulf of Mexico - flow rates can vary between 19,000 and 48,000 cubic-feet-per-second. The gates are only closed when the river systems threaten to "back up" onto the Delta. When the gates are closed, the water can sit stagnant for months, and that's what happened for a record 150 days in 2019. The cure proposed in the 1940s but not yet constructed is a pumping project designed to lift the stagnant rainwater accumulating inside the gates out into the river system. It gave Dahl plenty of time, she said, to study the pros and cons. She has sheaths of printouts, neatly organized, to show for her hours and hours of study and analysis.

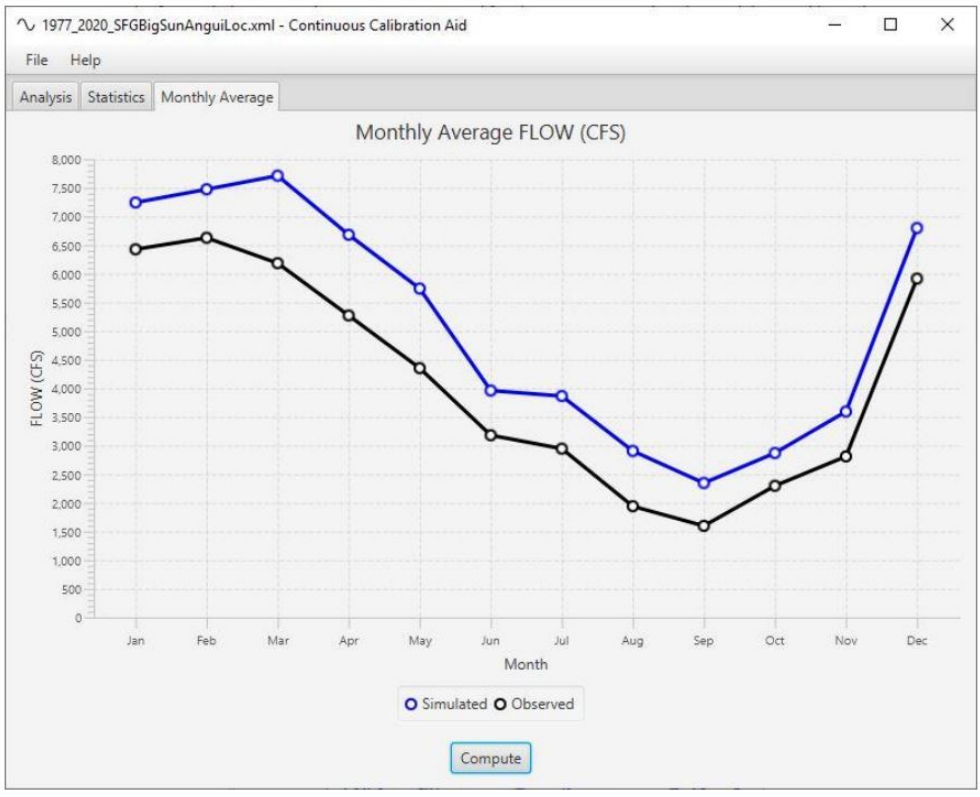
The Steele Bayou Control Structure situated at the bottom of the Yazoo Backwater Area

Photo by Jacob Meyers

“If pumps were in place, they would start discharging water at a slow rate of 14,000 cubic-feet-per-second,” Dahl said. That is fairly slow, but enough to keep some of the farms and homes dry.

A complaint or concern has been that adding water to the river system when rivers are already flooding would increase problems downstream. Dahl said that's not so. The Mississippi River at the Vicksburg gage, not far downstream, flows at an approximate rate of 1.1 million cubic-feet-per-second at flood stage. If backwater from the Delta is added into the Mississippi River at the expected rate, it would increase the total flow of the river by approximately 1 percent – essentially making no difference downstream.

Besides, Dahl said, “Absolutely no more water is going downstream than what is going to anyway,” Dahl said. “It’s going to go later toward the end of a flood. It’s going to go at a much faster rate than it would if we had the pumps. If we had the pumps and we slowly let it out in a controlled fashion over a longer period of time, earlier in a flood, it is actually better for downstream, because of the timing of the year.”



Monthly average flow rate that Dahl monitors frequently to know when a flood might occur

Dahl insists she began studying the pumps as a blank slate, with no preformed opinion. After hours and hours of research and reading, she came down on the "pro" side and became more active in the community advocating for the project both in helping answer questions and directing people to resources that can provide them facts.

Clay Adcock's family farm surrounded by water during the Floods of 2019

Photo by Clay Adcock

RIFT OVER PUMPING STATION IS REAL AND DEEP

Clay Adcock owns a large family farm in Holly Bluff, Mississippi. His family and employees rely on him to make a living. In 2019, most of that land was covered by floodwaters.

"This piece of ground you see here, was nothing but an ocean," Adcock said.

Adcock is a member of Delta Council's board of directors. Delta Council is an economic development organization that advocates for improvements in the 18 Mississippi counties that are all or partly "Delta." On his own and as part of the council, Adcock has been fighting tooth and nail to protect his farm and his community from flooding. That means he's for constructing a U.S. Army Corps of Engineers design to pump trapped rainwater over the levees at Steele Bayou and into the river channel.

Jill Mastrototaro has a Master's in Environmental Policy from the State University of New York. She has only worked for Audubon Mississippi since September 2017, but has nearly two decades of experience in environmental advocacy working on award-winning projects.

"For over 100 years, Audubon's work has been guided by the principle that what is good for birds, is good for people,"said Mastrototaro, who is Audubon Mississippi's policy director. "Audubon believes communities in Mississippi's South Delta deserve real solutions for reducing flood damages, not false hope pinned to the ineffective, environmentally destructive Yazoo Backwater Pumps."

The U.S. Army Corps of Engineers was tasked in 1941 to design works to limit flooding of the flat, fertile expanse that for generations has produced soybeans, corn and cotton. A pumping station has always been an element of that plan but was essentially killed in 2008 by a federal Environmental Protection Agency finding the unacceptable ecological risk. Flooding in 2019 was the most devastating in memory, and the Corps has submitted a revised plan for pumps in a different location.

The lines of disagreement, however, are as clear as ever.

Adcock said he was always aware of the topography and the risk, but the flooding in 2019 lasted longer and was more devastating than he ever imagined. Before 2019, he said there were three stores and a bank in the small Delta community of Holly Bluff. Today, there is only one store that is open part time. The other shop owners have packed up and left town. It was almost impossible to grow a crop and most of the roads were blocked by high waters making such routine matters as traveling for groceries, school or church arduous if possible

at all. When farmland floods, people think the farmer just sit out a year. But when the entire region's economy is tied to agriculture, everyone loses - farmworkers, merchants, fuel jobbers, bankers. The economy shuts down.

"Attorneys don't do very good without clients, dentist don't do very good without patients, and farmers don't do very good without farming," Adcock said.

Closed businesses in Holly Bluff, Mississippi

Photos by Jared Poland

When water, even in small amounts, pools across agricultural land it very quickly becomes useless. High waters cause farmers across the Delta to miss planting season in the spring.

Tallied, the direct crop loss was pegged at approximately $800 million. Approximately 680 homes were damaged or destroyed. Crop insurance exists but doesn't pay when a crop isn't even planted.

"In a small community, a business owner or store owner is not going to have a lot of outside people coming. They depend on the same people all the time," Adcock said.

In addition to farming, the region is widely known for ample wildlife — deer, turkeys, ducks and, in recent years, black bears. Elevated areas were packed with wildlife crammed into any available dry land. Starvation was epic.

Adcock said he took his wife, Paige, to the mainline levee to show her just how bad the deer situation was. He was able to drive up close to large bucks that had lost significant amounts of weight. Deer normally flee at any hint of mankind. These animals, he said, would just lie there and stare. The summer heat beating down on their bodies left the smell of death in the air. Paige left, and refused to return.

The Mainline Levee just outside of the proposed location for the new pumps project

Photo by Jared Poland

When the flood waters began to rise, Adcock and other community leaders organized meetings to tell people what was happening and how to prepare. Many of them had heard

about the pump proposal, but the flood of 2019 woke them up to the reality of the very real threat that looms over the area.

Adcock and his wife have written articles and spoken out publicly, insisting that the flooding didn't have to happen. “All the heartache, hard times, economic, and mental issues this caused could have been prevented and that’s why it is so hard to stomach,” he said.

During the flood as talk of finishing the Corps project rekindled, environmentalist groups such as the Mississippi Sierra Club and the Audubon Society rekindled their diligent position that pumps would do more harm than good. The groups prevailed in 2008 when the EPA vetoed the project due to its potential impacts on wetlands in the area. These groups believe that a structural solution such as pumps will degrade the environment and cause increased discharge from agricultural production.

Under the previous and current designs, the pumps would not alleviate all backwater flooding. The Corps of Engineers reports that under the best-case scenario 68 percent of the backwater area, or 347,000 of 512,000 acres could remain flooded, even with the pumps in place. A belief is that if more land is freed from flooding it will be cleared for farming, leaving the natural forests and wetlands in the area even smaller.

Adcock said that's not true. “We are not clearing up land. I do not want to farm anything I am not farming now, no farmer does,” Adcock said. “We are having a hard-enough time making it on productive land.”

Audubon believes that efforts to build pumps should be abandoned and instead the Corps should prioritize immediate, affordable flood risk solutions to protect communities and birds.

“Up to 200,000 acres of Mississippi Flyway wetlands that support more than 450 species of birds and wildlife would be destroyed,” Mastrototaro said.

Audubon says homes could be elevated out of harm's way, and, ideally, large tracks of cropland can be abandoned, planted with trees and converted back to wetlands and managed forests. Several tracts in the backwater area have been purchased through federal and private conservation program, and are being returned to their natural state.

In June 2020, Audubon, along with more than 100 conservation and taxpayer groups, delivered over 38,000 comments to the Corps in opposition to the project; meaning more than 70 percent of the comments the Corps received were against pumps construction. Those groups have a national audience where local "Finish the Pumps" have, for the most part, only local stakeholders.

The debate can get bitter. Many locals, including Adcock, believe that Mastrototaro and others are only invested in this issue because it is an issue that they can use to motivate donors.

“She is not an environmentalist, she is an extortionist,” Adcock said. He believes that the Audubon society is utilizing misinformation to deceive donors into funding their efforts to oppose the Pumps.

Mastrototaro emphasized that she does not want people to face hardship due to flooding, but there are better solutions to the problem that are more environmentally and economically responsible.

“Just compare the facts, our facts are undisputed,” Adcock said.

Some of those facts are in the draft Second Supplemental Environmental Impact Statement which was released by the Corps in October. A public comment period for the draft SEIS followed and the Corps is to address the comments and produce a final SEIS for review. The EPA has said its 2008 veto does not apply to the revised proposal, and the revised proposal will be reviewed in due course.

SOCIAL MEDIA AMPLIFIES PUMP CONVERSATION

Pumps to relieve flooding in the Lower Mississippi Delta were proposed more than 80 years ago, but strife over whether they're the best solution has entered the digital age.

Victoria Darden farms soybeans and other crops with her family on 2,200 acres near Goose Lake southwest of Onward, Mississippi. She also serves as the County Correspondent Representative at the Mississippi Department of Agriculture and Commerce.

Jill Mastrototaro is policy director for Audubon Mississippi, one of the environmental organizations opposed to the pumps. In this role, she has been advocating against construction since September 2017.

As designed by the U.S. Army Corps of Engineers in the 1940s, a giant pumping station near where Steele Bayou meets the Yazoo River would move rainwater that accumulates inside river levees when normal drainage is not possible. The pumps would hoist rainwater over the levees and into the river channel. Plans have been debated for decades, but no construction has taken place. The pumps would not be activated every year, only when high river stages coincide with heavy rains in the Delta.

Such was the case in 2019, when rain left hundreds of thousands of acres in the flat expanse under water. L&R Farms, Darden's family business, was one of many unable to produce any crops. Darden, in her 20s, said she had heard about floods and the potential for floods when she was growing up, but had only experienced one in 2011, and that flood did not cover her family’s farm. Although her family had crop insurance in 2019, they did not plant a crop, and thus did not receive a payout. But another, non-economic matter piqued her interest.

To get to her home Darden and her family had to park at a neighbor's house and take a boat into the property. During, these boat rides she photographed of alligator, deer and other wildlife. She described in detail the fear she noticed in deer that were stranded on islands and levees along her path to her home.

"We had several deer that would get spooked by the boat motor just because it was loud and their senses were so heightened," Darden said. "They were so stressed they didn't have food and they were starving. I mean they went through the worst imaginable situation."

Deer stranded on an island along Darden's route to her home

Photo by Victoria Darden Photography

She often would see deer separated and alone. She believed that those deer separated themselves because they thought they were going to die, and uncounted hundreds did.

“It was the worst smell you could ever imagine. I promise you I can identify it at this moment, what it is I don’t even have to look,” Darden said.

As time went on, she said her original skepticism or indifference about the proposed pump project began to fade as she began to realize the realities of the floods. She originally believed that many people in the community who pushed for the pumps were a little bit crazy. However, as time went on her views changed.

“We got the sense no one wanted to help us; we were very forgotten about. We could not get the national media to pay us attention no matter what we tried,” Darden said.

Darden saw the need for her community to figure how to get the media’s attention. Her solution was to begin working to generate a following and support the only way she knew how, on social media.

She turned to Instagram and Facebook where she began tracking, publishing and reposting content related to the floods. She created three hashtags to help drive engagement and increase the following of their cause. The South Delta may not be known for its youthful population, but Darden said she found a following. "I have grown up around an older generation my whole life. I get along with them real easy and we communicate well,” she said.

Despite the generational gap, her older neighbors lagging technological skills got up to speed and started posting on social media.

“They really wanted to help, they had the heart for it and they just did not know how. We’d teach them and then they’d be on it and they’d be hash tagging and it was pretty impressive what they could do when you just showed them a few things.”

The pump conversation and rain combined with Social media prowess during and after the floods of 2019 became a significant motivating factor getting the community and others across the state and nation involved. Darden said she understood that capturing images and streaming community meetings was essential to getting their voices heard.

After the floods receded, the community was fundamentally changed. Some packed up and left, but those who remained are now almost entirely in support of the pumps. The flooding is about more than a missed crop year. It is about jobs, homes, the entire agricultural economy - and wildlife.

Community meeting about the pumps and the Floods of 2019

Photo by Victoria Darden Photography

The initial community meetings held in early during the flooding were attended almost entirely of government representatives and members of the community, Darden said. Almost

everyone present at these meetings were in support of the pumps and were facing high levels of fear and uncertainty.

However, at larger public comment sessions held by organizations such as the Mississippi River Commission, Darden said she noticed that there were people at the meetings who were openly in opposition against the pumps. According to Darden, they did not speak publicly at those meetings, but instead would speak in private after with the Environmental Protection Agency representative present at the meeting.

An EPA veto during the administration of the George W. Bush's administration (2000-2008) had effectively killed the last pump plan design. Environmental organizations, large and small, opposed the pumps back then, and most still do.

Mastrototaro wrote an op-ed titled "Pumps Would Destroy Wetlands" that was published in the Yazoo Herald in May 2019. She emphasized that the project would only partially prevent flooding, destroy wetlands that provide natural flood protections, and make the backwater area more vulnerable, all while being 100 percent funded by taxpayers and not passing a cost-benefit analysis.

"Audubon believes communities in Mississippi's South Delta deserve real solutions for reducing flood damages, not false hope pinned to the ineffective, environmentally destructive Yazoo Backwater Pumps," Mastrototaro wrote.

Generally, environmental groups assert that the primary purpose of the pumps is to increase economic output of agribusiness in the Delta, despite the negative environmental repercussions caused by increased agricultural land use and the potential destruction of nationally treasured wetlands and wildlife that currently reside in the area.

Darden, who witnessed the harm to wildlife caused by what she sees as preventable flooding, said she believes that the environmental organizations that are opposing the pumps are only doing so because they use the issue as a motivating factor to drive donations.

“They do that because even though the data is supporting us and she is still against it," Darden said. "That is because that’s how they make money. That is how they keep their support going. … Why they do not have sympathy for the animals or for the people I just do not know, I just can’t wrap my head around it,” Darden said.

One consequence of the divide amplified by social media centered on a Jackson event usually attended by thousands who stroll among scores of vendors at the end of each summer season. The Mississippi Wildlife Extravaganza is sponsored by the private Mississippi Wildlife Federation, which opposes the pumps. Some facts are in dispute and are, in fact, in litigation. Darden says she was granted a vendor permit, later rescinded, to staff a booth to provide information in favor of the pumps. The federation says the permit was for Darden to sell photographs.

The withdrawing of the permit went viral on social media, resulting in the state Department of Wildlife, Fisheries and Parks ending its affiliation, many vendors pulling out and a low attendance. As it happened, Darden was able to be present in the booth of another vendor, but it's clear that social media is a powerful tool for moving people to action and the platform made by Darden has been widely successful at meeting its purpose.

Chapter 4

Reflection

After completing this project, I was satisfied overall with the interviews I had conducted and the stories that I had written. There were many aspects of the project I felt could have been more thoroughly evaluated and a couple of errors in my methods that I believe had a negative impact on the framing and implications of the stories.

One minor error that is evident throughout the stories was in the quality of sound and images that were collected. Although I tried my best to collect a large quantity of images and audio, so that this story could be accompanied by a variety of visual pieces I feel as if many of the images that were collected were not very impactful, because they were not centered around people, but instead objects or natural landscapes. The audio that was collected, especially during my interview with Jones was less than optimal and if I could change one thing about my collection of data it would be improving the quality of sound.

A major issue that I perceived after crafting my stories, was the lack of representatives opposing the pumps project. I naively only reached out to one individual on that side of the issue. I relied heavily on her to defend the positions of the opposition. This reliance ultimately resulted in a lackluster representation of her and other environmental groups positions. I was unable to craft compelling narrative stories surrounding those groups positions and experiences as a result. The lack of narrative stories surrounding the opposing groups positions seem to significantly lean the stories towards individuals that advocate for the pump's completion.

I believe that the key mistake that led to my difficulty balancing the position of the opposition group was that I provided Mastrototaro with a list of questions after our first

phone call before attempting to interview her. This list of questions tipped her off that I had shifted the frame of my story significantly since we had last spoken. I had adjusted my questioning to meet the issues made apparent to me by the individuals I had already interviewed, which were dramatically different then the topics we had discussed on the phone a few weeks prior.

If I were able to change anything about my methodology in conducting interviews and writing these stories it would have been to keep my questions close to my chest and instead inquire about an interview without giving her the questions up front, although she requested I do so.

Allowing her to vet and avoid certain questions by providing them to her via email, I believe is the primary reason she did not agree to a subsequent phone call and instead responded via text communication. Moving forward when conducting interviews, I will likely never send a similar list of questions to an individual again, because it seemed to have negative influences on the final product.

Overall, I felt as if this issue was a great topic to examine the influences of social media on group formation, and advocacy for group interest in the age of social media. It also allowed for me to exercise various narrative storytelling tactics to effectively convey to the public the complexities of this issue in an easily digestible manner.

Ultimately, this complex issue is divided amongst two distinct groups made up of a variety of individuals. Each of those groups has their own motivations to advocate for their position. The goal of these stories was to provide a platform for individuals within those groups to express their stories and opinions in contrast to their opposition and the publicly

available facts, and to explore how the issue relates to our changing climate. Despite my criticisms, I believe that these stories effectively accomplished those goals.

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Appendix

Stories

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