2022

WATER QUALITY TESTING REPORT OF THE MISSISSIPPI RIVER

THE WATER COLLABORATIVE

L I V E . T H R I V E . L O V E . W A T E R .

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FROM THE EXECUTIVE DIRECTOR:

Jessica Dandridge, Executive Director of The Water Collaborative

Just as water is the foundation for all life, education is the foundation of all revolutionary work. Water justice and literacy are inextricably linked and are tools to move from a resilient community to a thriving one. The purpose of pursuing research into water quality is to expand our understanding of what is in our water, so we can cultivate systems that improve water quality, thus improving our public health, quality of life, and the viability of all communities in Louisiana.

In our current post-Katrina reality, locals and transplants have redefined the concept of achieving resilience. We praise tools, systems, environments, and people who bounce back from traumatic events with limited resources. It is the American way and the capitalist dream to expect communities and the environments they depend on to move forward with limited interruption, mainly when it includes cost savings. While there is an understanding that this was not the original intention of our resilience, it has been distorted to fulfill supply chain demands at best. At its worst, resilience only ensures that workforces can quickly return to the market, despite the challenges they overcome on any given day. It is important to note that our water quality and the contaminants we tested for are directly linked to profits over people. Looming corporate profiteering and the control of our waterways effectively utilize the earth's most important resource for some individual's gain. Cancer Alley is a microcosm and visual representation of corporate power. Moreover, even while cancer alley is the most prominent example of multibillion-dollar corporations towering over disadvantaged communities, that same dynamic can also be witnessed in every backyard in Louisiana.

Resilience today seems to ask that we move forward without looking back and without introspection into systems that made us vulnerable in the first place. Just as we are children of conceptually resilient systems that perpetuate undue harm, we never reflect, learn, and innovate ourselves out of resilience and into thriving. We take systems and reproduce similar ideas, regurgitating values and philosophies that consistently make us hostages to the structures that put us here. As a result, we are no more resilient than our last natural and man-made disaster, just as we are no more prepared for the next event.

Learning about our water systems, institutions, agencies, and quality not only supports the livelihood of environments, but said water literacy is also the most holistic gateway toward communal autonomy and self-governance. We are pushed toward radical change when we learn more about how water moves, and the levers that control it. When we better understand how corporate power and profiteering contaminate our waterways, which in-turn leads to ecological and human destruction, we are more prepared to seek out the correct answers and demand change. We then learn not to lean on the systems and individuals that keep our water contaminated, privatized, and used as a tool against our social, physical, and environmental health. In turn, we need to understand that water itself does not bear man's goals in mind. When we understand water, we learn that we are servants of the water, and that its health is directly linked to our survival. And for Louisianians, the water's health is more than our financial success; it is vital to our ancestral knowledge, cultural experiences, and grounding traditions.

The long-term goal for our Cancer Alley Water Quality Report and future reports is to help illuminate the power structures and systems that control our waterways, so residents can make more informed decisions about their public health and make informed demands of their elected leadership. We know that water systems are complicated; thus, we seek to use this research to democratize this information to help inform future policy recommendations for local and state leadership so they can better advocate for their constituents. Our vision is to create spaces that share academic and communal knowledge to move us forward and ensure that our health is prioritized by all who utilize water.

We ask that readers not only take away the qualitative data, but also reflect on how water profiteering impacts our water quality and our long-term resilience as a state. When we began this journey, we drove through small and often impoverished towns, hoping to cross the Mississippi River levee whenever possible. In most cases, we often stood in awe of the river's beauty, even when it was interrupted by industry. However, after 30 site visits in one day, it was hard to ignore that our communities and ways of life are under threat, and that water is the most abused and under-protected resource in a state dependent on it's abundance and health. Through the work of the Water Collaborative, we hope to move our state agencies and elected leadership toward the end goal of prioritizing the water for communities first. We seek to create accountability and transparency in local government to create continuity in understanding and planning. We seek to advocate for more funding for the protection of waterways. Most importantly, we seek to build bridges of knowledge between those most impacted and those elected to lead us towards consistent invulnerability. For if there is no water to drink, there is no state to govern.

The Water Collaborative of Greater New Orleans would like to thank Aqualateral LLC The Center for Applied Environmental Science, and Climate Reality Project for funding our first water quality study and seeing the importance of water justice in Louisiana. Similarly, we want to thank our partners and all the in-kind support we have received over the past year in helping to formulate a scientifically and socially relevant study. Lastly, thank you to our Board of Directors and our amazing and dedicated staff, fellows, and volunteers for believing in the vision and mission of this organization and supporting its growth and impact across Southeast Louisiana.

Executive Director,
Jessica A. Dandridge

FROM THE DIRECTOR OF POLICY AND RESEARCH

Rebecca Malpass, Director of Policy and Research

As the Director of Policy and Research and project lead, the Water Collaborative's first water quality study was near and dear to my heart. Thanks to our wonderful funders and supporters, we were given a blank canvas to develop a study however we saw fit. This was both daunting and exciting. It was imperative for us to create a study that was not only significant in its research but impactful to our communities in southeastern Louisiana. The River Parishes between Baton Rouge and New Orleans, known as Cancer Alley, have been devastated by industry and contamination; and currently unregulated forever chemicals, such as per- and polyfluoroalkyl substances, PFAS for short, have been of great interest in recent years. This seemed like a wise place to start. In planning this study, we gratefully and openly utilized the expertise of many folks--some from the communities themselves, others from federal environmental agencies--who guided us in the right direction. We sought a team of eager and knowledgeable fellows to help us conduct this study, worked with a nationally-certified laboratory to analyze our samples, and presented our results to impacted community members. Our goals have been straightforward: to understand and address the potential contamination of water, including drinking water, through community-driven advocacy and vital policy changes. This project paves the way for further investigation into water quality issues in our region, empowers communities by putting the data in their hands, and sets an example for future water quality studies by others. I hope our report amplifies your commitment to clean water for all and inspires you to be the change we need to live and thrive with water.

Director of Policy and Research,
Rebecca Malpass

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01

ABOUT US

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The Water Collaborative of Greater New Orleans is a 501(c)(3) nonprofit dedicated to helping all live and thrive with water. We are the regional leader in rights-based water management, and we focus on urban water management through three main pillars: policy, education, and equity. The Water Collaborative's work encompasses four main advocacy sectors: water quality, water affordability, water accessibility, and water data transparency. We engage with government agencies, nongovernmental organizations, partners, members, frontline communities, and other stakeholders at the federal, regional, state, and local levels to build a network of informed, engaged, and connected groups and individuals.

New Orleans residents are no strangers to water problems, and water management has been recognized as a growing issue in the city. The Water Collaborative grew out of the development of the Greater New Orleans Urban Water Plan. This project was funded by the State of Louisiana and overseen by a large Steering Committee. The Urban Water Plan was released in October 2013, and after the release of the plan, two separate groups of people in local organizations started to have more conversations regarding water management in the New Orleans area. Committee for a Better New Orleans led to the merging of these two groups together, which led to the creation of the Interim Steering Committee. The Interim Steering Committee proposed a tentative structure of Working Groups and a permanent Steering Committee, along with a preliminary vision statement for the nascent Greater New Orleans Water Collaborative in May 2014. Two follow up meetings were held in June, and final launch of The Collaborative took place in September 2014.

Since its launch, The Water Collaborative members have several accomplishments including but not limited to: developing and adopting an amendment to the City of New Orleans Comprehensive Zoning Ordinance eliminating possible exemptions from stormwater management requirements, and successfully advocated for the removal of a proposed appendix to the CZO that discouraged home elevations; spearheading the analysis of the proposed Federal Flood Risk Management Standard, established by Executive Order 13690; piloted a flood mapping initiative in the Claiborne Corridor; petitioned and moved Sewerage and Water Board to enact a Water Shut-off Moratorium in response to the Covid-19 global pandemic; and supported the creation of Sewerage and Water Board's first ever water affordability and payment program pilot which has not existed prior to 2020.

Cancer Alley has been of public health interest for some time due to multiple studies on the air quality, however, water quality has not been studied in as much depth. With this in mind, The Water Collaborative decided to collect water samples from the Mississippi River, as many of the river parishes use the Mississippi River to provide drinking water to residents.

02

HISTORY OF CANCER ALLEY

HISTORY OF CANCER ALLEY

Louisiana is known to have extremely toxic air in an area known as Cancer Alley.[14] Cancer Alley is an 85-mile stretch of land between Baton Rouge and New Orleans, and it is called Cancer Alley because of the many petrochemical and industrial facilities located in the area.[22] The Mississippi River Parishes consist of West Baton Rouge, East Baton Rouge, St. James, St. John the Baptist, Iberville, Ascension, Jefferson, Orleans, Plaquemines, and Assumption parishes. The areas near these petrochemical industries tend to be majority low-income and African American communities.[15] There are more than 150 plants and facilities located in the area and together, they release more than 129.3 million pounds of toxic chemicals every year.[30]

Cancer Alley received its nickname in the late 1980s, when residents began noticing that cancer clusters and miscarriages were happening within blocks of each other or even on the same street.[3] While some believe there is not enough evidence that cancer risks are significantly higher in the area, approximately forty-six individuals per one million are at risk of developing cancer in this area, compared to the

national average of thirty individuals per one million.[4] The Environmental Protection Agency has a mapping tool called EJScreen, which shows Environmental Justice Screening, and

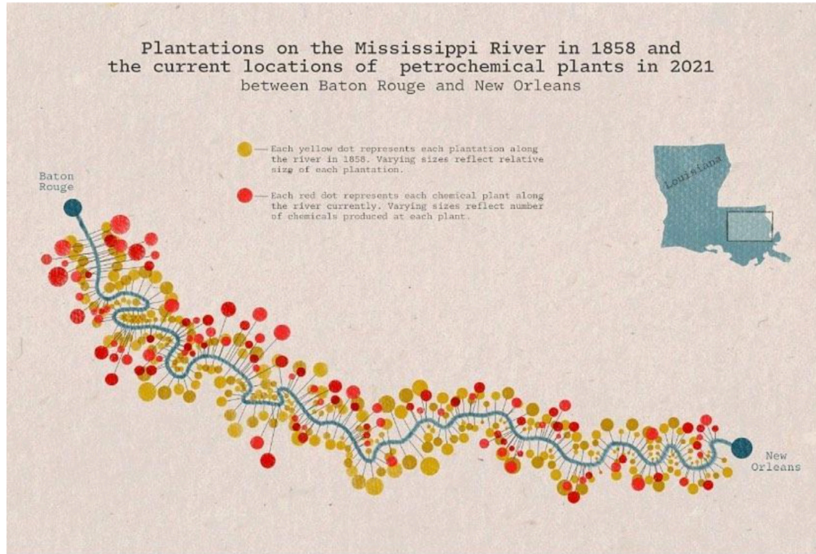

Figure 1: Plantation Locations versus Petrochemical sites, as of 2021.[12]

places the life expectancy range and cancer risk in St. John the Baptist and St. James Parishes in the 95-100th percentile.[7] Cancer Alley is also nicknamed the "Industrial Corridor," or "Chemical Corridor."

The region has a deep-rooted history of racial injustice and inequality, and it is important to discuss the strategic placement of these industrial and chemical plants. Two hundred years ago, plantations with enslaved African workers lined the Mississippi River, and sugarcane was the main source of the economy in Louisiana.[12] The rich harvests and sugarcane made Louisiana the second-richest state per capita, even though "half of its residents lacked legal ownership of their bodies."[12] Before the Civil War, 1 million people were sold into the Deep South, and the population of enslaved people quadrupled along the lower Mississippi River.[12]

Once oil was discovered, petrochemical industries began buying up former plantation sites.[14] Many people living in these areas are direct descendants of enslaved people, and studies show that those enslaved and those now living in these areas suffered and continue to suffer from diseases, such as cancer, diabetes, and respiratory illness, at higher rates than most of the country, leading to yet another form of environmental racism and injustice.[15] "Environmental racism refers to how minority group neighborhoods–populated primarily by people of color and members of low-socioeconomic backgrounds–are burdened with disproportionate numbers of hazards including toxic waste facilitates, garbage dumps, and other sources of environmental pollutions and foul odors that lower the quality of life."[22] The petrochemical industry is thriving off the lands of once enslaved people and is harming the health of their descendants in the process.[12]

Some question why residents do not move. For many, this is not an option. Residents are unable to sell their homes or relocate, nor is this a reasonable solution. "The conversion of plantation farms to industrial facilities has created a pattern in which poor black communities–which used to sit on the edge of plantations–now sit beside chemical plants."[17] Some residents have even asked some of these petrochemical and industrial facilities to potentially buy their land, but the companies refuse.

LOUISIANA IS RICH AND POOR

Louisiana has been an abundant state in resources for over two hundred years, yet ranks low in many areas. There is a reason corporations choose to operate in Louisiana. Louisiana is extremely wealthy in natural resources.

The state ranks #2 in the nation in crude oil refining, #4 in natural gas production, #3 in chemical production, is a top 10 oil producing state, is the "heart" of the nation's pipeline system, at the center of the nation's inland waterway system, #1 in port tonnage, #1 in salt production, #2 in sugar production, and #3 in rice production.[29] Louisiana has also ranked #1 or #2 in foreign direct investment every year since 2008.[29]

With the abundance of natural resources, Louisiana should thrive, however, we are still a very poor state. We also rank #46 in the nation for infant mortality, #49 for poverty, #47 for household income, #47 for food insecurity, #50 for income gap by gender, #47 for property crime, #46 for violent crime, #48 for reading scores, #49 for math scores, and #48 for life expectancy.[29] Among all 50 states, Louisiana ranks dead last for social and economic outcomes.[29] Why is it that Louisiana is so abundant in resources, but is still such a poor state?

Much of the answer comes down to industrial tax breaks and corporate subsidies received by companies. Subsidy Tracker, under Good Jobs First, provides data on over a thousand government subsidy programs.[13] As of August 2022, Louisiana has given over $25 billion dollars in disclosed subsidies.[27] The nation's largest corporate subsidy program is Louisiana's Industrial Tax Exemption Program (ITEP), which allows a state-level board–the Board of Commerce–to grant exemptions from local property taxes.[29] Most applications are approved. Recently, ITEP allowed Exxon Mobil to receive almost $700 million over 20 years, even though 2,000 jobs would be lost over time.[13] Between 2008 and 2015, ITEP resulted in approximately $10 billion of foregone property tax revenue that should have gone to local governments.[20] This begs the question: Do Louisiana officials favor industry over community and environmental health?

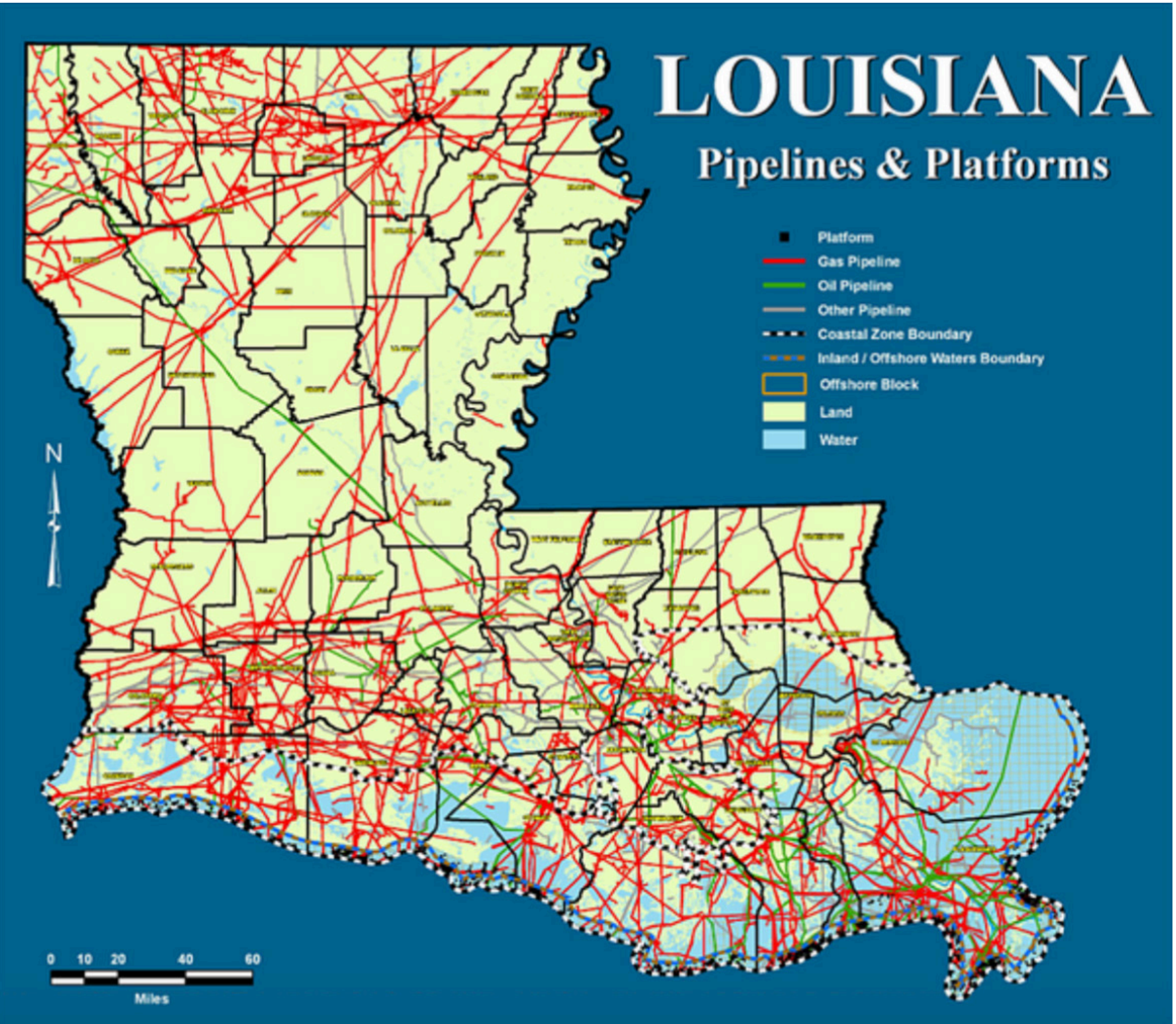

Figure 2
Map showing Louisiana as the "heart" of the nations pipeline system.[29]

STATE	DISCLOSED SUBSIDY VALUE	NUMBER OF AWARDS
New York	$42,826,190,209	139,303
Louisiana	$25,665,219,015	9,522
Washington	$16,411,807,831	29,349
Michigan	$16,398,074,259	18,281
Indiana	$13,643,025,252	12,591
New Jersey	$11,325,364,668	14,850
Texas	$9,633,365,344	6,298
Kentucky	$9,171,703,886	7,632
North Carolina	$8,298,264,669	15,573
Illinois	$8,122,715,040	9,825

Figure 3:
Disclosed Subsidy Value per Subsidy Tracker, as of August 2022. While New York has given more money, Louisiana has given away more than half of New York's with way less awards. Companies are getting larger tax breaks in our state.[27]

LINKS BETWEEN CANCER ALLEY & HEALTH PROBLEMS

Many have studied the links between industrial facilities and the residents living, working, and attending school near them. A person's risk of developing cancer or a respiratory illness in areas such as Ascension Parish is 50 times higher than the average American; residents in Reserve in St. John the Baptist Parish are also 50 times more likely to develop cancer due to the Dupont/Denka production of chloroprene; in Baton Rouge, ExxonMobil is suspected of releasing benzene and 1,3-butadiene, which are known carcinogenic chemicals; and St. Gabriel, where two-thirds of residents are Black, contains the state's worst air quality.[14] Public health data also shows the rate of all types of cancer is significantly higher in Iberville and St. James parishes than the rate in all the United States and the state of Louisiana. Overall, cancer rates are higher in the River Parishes than in the United States.

DISEASE	PARISH / LOCATION	2014-2018 Rate (per 100,000 people)
All Types of Cancer Combined	Ascension	487.3
All Types of Cancer Combined	Iberville	538
All Types of Cancer Combined	St. Charles	456.6
All Types of Cancer Combined	St. James	511
All Types of Cancer Combined	St. John the Baptist	465.9
All Types of Cancer Combined	Jefferson	475
All Types of Cancer Combined	Pointe Coupee	481.9
All Types of Cancer Combined	West Feliciana	479.1
All Types of Cancer Combined	USA	448.6
All Types of Cancer Combined	State	482.4

Table 1 (left)
All Types of Cancer Rates Combined Collected from the Louisiana Department of Health.

Figure 3 (below)
Location of Fifth Ward Elementary and the Denka Chemical Plant.[25]

What happens to be the most disturbing fact is the location of these plants. Fifth Ward Elementary School in Reserve, LA is located about 1,000 feet from the Dupont/Denka industrial facility. In November 2017, "chloroprene was recorded at a staggering 755 times above the EPA's guidance. Nearly 400 young children attend the school, breathing the air each day.[16] Environmentalists have suggested that St. John the Baptist school board relocate the students attending Fifth Ward Elementary for years, but to no avail.[25] In 2015, the EPA found that Reserve is the "bullseye" of Cancer Alley, with a population of about 10,000.[16] Pictured below, the Marathon Garyville Refinery built around a graveyard (circled in red) with ancestors from some of the community members still living in the parish. These people are not able to visit the graves of their loved ones because it is on private property. An attached appendix shows all data collected on public health and outcomes.

Figure 4:
Location of Marathon Garyville Refinery with the Cemetery of Robert Taylor's relatives and ancestors circled in red, courtesy of Google Maps.

Figure 5:
A drone view of the cemetery located on plant property - Robert Taylor cannot visit his relatives or ancestors, courtesy of AJ+.[1]

03

THE CHEMICALS AND THE STUDY PROCESS

THE CHEMICALS & THE STUDY PROCESS

This summer, the Water Collaborative designed a study to test the water quality of the Mississippi River in southeastern Louisiana. Water and riverbank soil samples were collected and tested for PFAS, BTEX, and 1,4-dioxane at 31 sites between Pointe Coupee Parish and Orleans Parish.

PFAS:

PFAS, short for per- and poly-fluoroalkyl substances, are a group of over 9,000 man made chemicals used to make various products in different industries, such as aerospace, construction, electronics, and the military.[9] They do not break down easily and persist in the environment and in your body for decades–hence, they are deemed "forever chemicals."[9] They are most popularly known for being found in non-stick cookware and waterproof gear.[6] PFAS have been a popular subject in the news lately; most notably at the center of a recent class action lawsuit against DuPont for using PFOA, a possible human carcinogen, for over 50 years.[9]

Exposure to PFAS can occur through contaminated air, drinking water, or food.[6] PFAS chemicals have been detected in the blood of 97% of Americans.[21] Health effects studies are still in their infancy, but PFAS have been linked to reproductive effects, developmental effects, increased risk of certain cancers, reduced ability of the immune system to fight infections, increased cholesterol levels, and interference with the body's natural hormones.[6]

Currently, and alarmingly, these pervasive and widespread chemicals are not regulated by the EPA, and therefore, they are not required to be filtered from public water systems. In June 2022, the EPA set drinking water health advisory values for four PFAS compounds.[6] A health advisory level "shows how much of a chemical or contaminant is not expected to have negative health effects over a certain period of exposure."[6] While this is a good start, these health advisory levels are nonregulatory and unenforceable, meaning public water systems do not have to prevent contamination of drinking water.

BTEX:

BTEX, an acronym for the chemicals benzene, toluene, ethylbenzene, and xylene, are a group of volatile organic chemicals. These chemicals are used in products like gasoline, paints, insecticides, and cosmetics.[24] Benzene is a known human carcinogen, and it is known to increase the occurrence of leukemia in workers exposed to high levels.[8] Exposure to these chemicals can happen through drinking contaminated water or inhaling contaminated air.[24] Absorption can also occur through the skin, which may be more of a hazard for those working with these chemicals in their occupation.[24]

Of the chemicals that The Water Collaborative chose to test for, these are the only chemicals that are currently regulated by the EPA, meaning an industry may be fined for releasing too much of a chemical and public water systems must be able to detect these chemicals and filter them out.[8] Potential health effects from exposure to these chemicals include anemia, increased risk of cancer, liver or kidney problems, nervous system problems or damage, and central nervous system depression.[24] Given Louisiana has many oil refineries, exposure to these chemicals is a possibility.

CHEMICAL	HEALTH ADVISORY VALUE (PPT)	MINIMUM REPORTING LEVEL (PPT)
PFOA	0.004 (Interim)	4
PFOS	0.02 (Interim)	4
GenX Chemicals	10 (Final)	5
PFBS	2,000 (Final)	3

Table 2: EPA's health advisory value for certain PFAS chemicals, as of 2022. The minimum reporting value shows the lowest amount that can be detected from a sample.[4]

CONTAMINANT	MAXIMUM CONTAMINANT LEVEL (MG/L)	PUBLIC HEALTH GOAL (MG/L)
Benzene	0.005	0
Ethylbenzene	0.7	0.7
Toluene	1	1
Xylenes (total)	10	10

Table 3: Table 3: National Primary Drinking Water Regulations for BTEX. A public health goal is the level of a contaminant in drinking water that does not pose a significant risk to health. The maximum contaminant level is legally enforceable and the permissable level of a contaminant in drinking water supplied by a public water

1,4-DIOXANE:
1,4-dioxane is used as a solvent in commercial and industrial applications, and exposure usually occurs because of unintended contamination in consumer products.[11] It can be found as an unintended contaminant in soaps, detergents, bubble bath, skin cleansers, lotions, hand creams, and antifreeze.[11] Exposure can occur from drinking contaminated water, eating contaminated food, breathing contaminated air, and using contaminated products.[11] Exposure to 1,4-dioxane may cause cancer, kidney damage, liver damage, or respiratory system damage.[10] Exposure to 1,4-dioxane can be reduced by avoiding products that contain PEG, polyethylene, polyethylene glycol, polyoxyethyelene, polyoxynolethylene, and chemicals ending in –eth and -oxynol.[19]

WHY THESE CHEMICALS:
PFAS and 1,4-dioxane were chosen because they are unregulated, can be found in water systems, and are potentially carcinogenic, which means they may increase the risk of cancer. The Environmental Protection Agency is particularly interested in regulating PFAS chemicals. PFAS, in particular, are of national concern because they do not break down in the environment – they will be around for our grandchildren's children. While BTEX are regulated, their use in Louisiana manufacturing is widespread and can open many communities to exposure.

SAMPLING METHOD:
To ensure that everyone has equal access to safe and clean drinking water, The Water Collaborative began to plan research in this area. The study consisted of three phases: background research on parishes, sample collection of water, and community outreach.

Before background research began, fellows underwent training with The Water Collaborative staff to ensure proper collection of samples, in addition to education about environmental justice.

Background research consisted of collecting public health, demographic, utility, and industrial data. Water and soil samples were collected from June 22 to July 2, 2022 and sent to Pace Analytical Laboratories in St. Rose and Baton Rouge, Louisiana. Fellows of The Water Collaborative worked in pairs and traveled to 31 sites from Pointe Coupee Parish to Orleans Parish to collect samples. At each site, the fellows brought two coolers (pictured below) – one for PFAS samples and the other for BTEX and 1,4-dioxane samples. With PFAS collection, avoiding cross-contamination is of the utmost importance, as PFAS is very widespread and found in many everyday items, such as pen ink, sunscreen, bug spray, and makeup products. Extra caution was taken while sampling so as to not cross-contaminate samples.

At each site, informational data was logged, such as the type of soil (sand, clay, gravel, etc) at the site, rainfall in the last 24 hours, water temperature, water pH, weather conditions, and site conditions. In total, 8 samples were collected: a field blank test to ensure there was no cross-contamination in our samples; one PFAS soil sample; two PFAS water samples; one BTEX and 1,4-dioxane soil sample; and three BTEX and 1,4-dioxane water samples. Soil samples were taken from just below the water's edge and PFAS samples were taken about one foot below the water's surface. Each bottle was labeled, placed in a cooler, and packed in ice. Samples were dropped off to the lab for analysis on the same day they were collected.

Figure 6: (previous page) Sampling site #9 where levels of toluene were detected in the soil. These levels were not alarming or above the regulatory standard.

Figure 7: A picture of the cooler provided by Pace Analytics.

Figure 8: (bottom left) The containers used to collect PFAS samples.

Figure 9: (bottom right) The containers used to collect BTEX 1,4 dioxane samples.

04

RESULTS AND DISCUSSION

Figure 10: A photo of a fellow sampling at site 31 in Norco, LA.

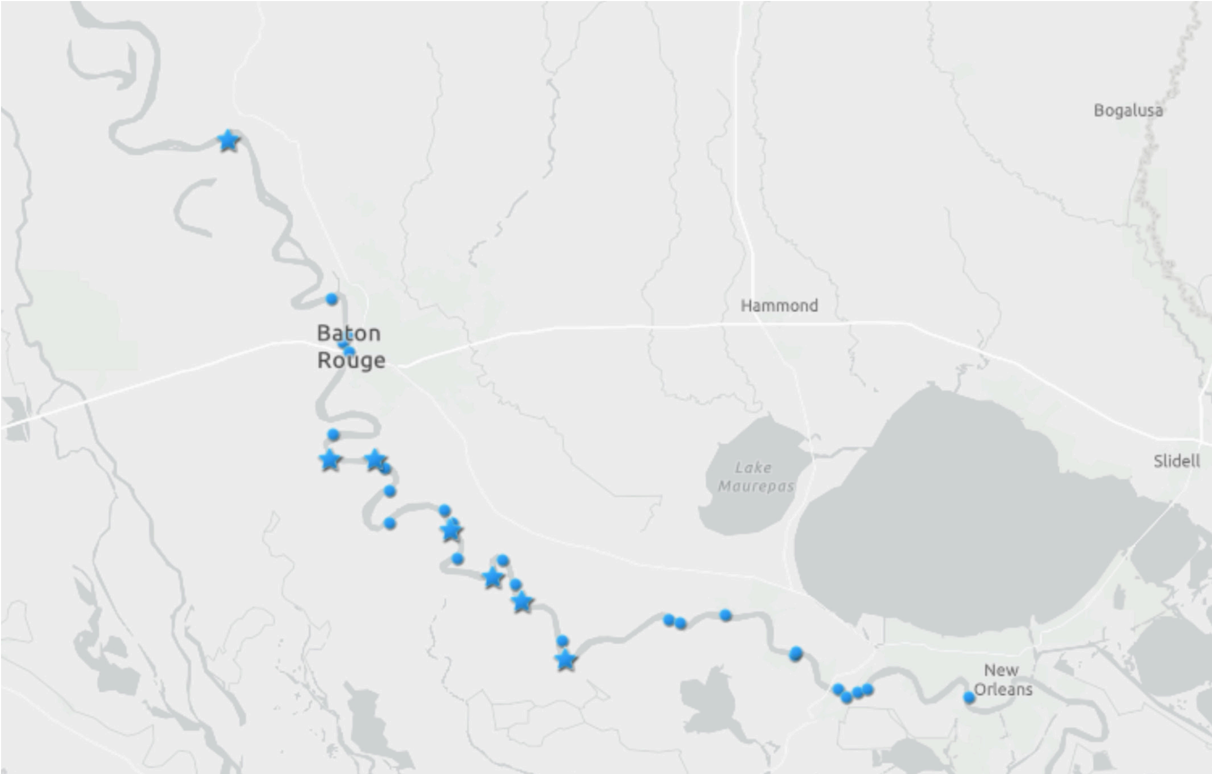

Figure 11:
Results map; a dot indicates a site where sampling was taken; Stars indicate that a contaminant was detected at the site sampled.

RESULTS AND DISCUSSION

Of the 31 sites that were sampled, PFAS chemicals were found in the water at 5 sites, and toluene was detected in the soil at 2 sites. Perfluorobutanoic acid, also known as PFBA, and perfluorooctanesulfonic acid, also known as PFOS, are two different types of PFAS chemicals that were detected in the water samples.

As noted earlier, Table 2 shows the health advisories for PFAS chemicals. The EPA has not currently set a health advisory for PFBA, but the state of Minnesota does have a health advisory of 7 ppb.[15] It is worth noting that the Mississippi River is a large body of water and a lack of detection in our samples does not indicate that these chemicals are absent from certain areas of the river. While the industrial corridor between Baton Rouge and New Orleans was our main focus, PFAS chemicals were detected at a site in Pointe Coupee Parish, north of Baton Rouge. This area is highly agricultural with no industrial sites nearby, indicating that PFAS chemicals are flowing from farther north in the country and making their way south. Since PFAS does not break down and multiple industries are releasing these chemicals into the river, residents could potentially be exposed to large amounts of PFAS chemicals.

PARISH	NUMBER OF SITES TESTED IN PARISH	NUMBER OF SITES THAT HAD CONTAMINANTS	PERCENT OF SITES IN PARISH TESTED WITH CONTAMINANTS	NUMBER OF CONTAMINANTS FOUND IN PARISH	CHEMICAL(S) FOUND
Point Coupee	1	1	100%	1	PFBA
West Baton Rouge	2	0	0%	0	n/a
East Baton Rouge	2	0	0%	0	n/a
Iberville	6	2	33.33%	1	Toluene
Ascension	6	2	33.33%	2	PFBA and PFOS
St. James	4	2	50%	1	PFBA
St. John the Baptist	3	0	0%	0	n/a
St. Charles	6	0	0%	0	n/a
Orleans	1	0	0%	0	n/a

Table 4: Results by Parish.

PFBA is a breakdown product of other PFAS used in stain-resistant fabrics, paper food packaging, and carpets, and it was also used in the production of photographic film.[18] Because it is a breakdown product, it would explain why it was found more and the levels are considered "acceptable," according to the Minnesota health advisory level.[18] PFBA has declined in recent years in industrial production; however, it can still be formed as a breakdown product from other PFAS chemicals still in use.[18] It does dissolve more easily in water and does not stick to soil. However, it can move faster in the environment and contaminate groundwater.[18] PFOS was used for decades before it garnered attention as a pervasive, potentially carcinogenic chemical. It has since been banned, but new PFAS chemicals, such as GenX and PFBS, were created to replace PFOS and others.[10]

Table 5 displays the detection of chemical contaminants in the soil and in water samples. The detection of PFOS in Ascension Parish at site #17 reflects an alarmingly high number. The lab detected 5.37 ng/L, or parts per trillion (ppt), of PFOS in the river; 26,850% over the EPA's recommended health advisory level of 0.02 ppt. Site #20 also reflects an alarming number. The lab detected 4.81 ng/L, or ppt, of PFOS; 24,050% over the EPA's recommended health advisory level

While toluene was detected in two of our samples, the levels detected are relatively low and unalarming. The maximum contaminant level (MCL) - which refers to the highest acceptable amount allowed in drinking water–for toluene is 1 mg/L, or 1 part per million (ppm). The amount found in our soil samples converts to, 0.0117 ppm and 0.0074 ppm.

SITE #	PARISH	AREA	DETECTION
1	Pointe Coupee	New Roads	Perfluorobutanoic acid (PFBA): - 4.34 ng/L detected in water - 4.00 ng/L LOQ
3	West Baton Rouge	Allendale	No analytes detected in samples.
4	East Baton Rouge	Baton Rouge	No analytes detected in samples.
5	West Baton Rouge	Port Allen	No analytes detected in samples.
6	East Baton Rouge	Baton Rouge	No analytes detected in samples.
8	Iberville	Morrisonville	No analytes detected in samples.
9	Iberville	Plaquemine	Toluene: - 11.7 ug/Kg detected in soil - 4.94 ug/Kg LOQ
10	Iberville	Sunshine	Toluene: - 7.44 ug/Kg detected in soil - 4.95 ug/Kg LOQ
11	Iberville	Iberville	No analytes detected in samples.
12	Iberville	St. Gabriel	No analytes detected in samples.
14	Iberville	Alhambra	No analytes detected in samples.
15	Ascension	Geismar	No analytes detected in samples.
16	Ascension	Geismar	No analytes detected in samples.
17	Ascension	Modeste	Perfluorobutanoic acid (PFBA): - 3.97 ng/L detected in water - 3.94 ng/L LOQ Perfluorooctanesulfonic acid (PFOS): - 5.37 ng/L detected in water - 3.94 ng/L LOQ

SITE #	PARISH	AREA	DETECTION
18	Ascension	Darrow	No analytes detected in samples.
20	Ascension	Donaldsonville	Perfluorooctanesulfonic acid (PFOS): - 4.81 ng/L detected in water - 4.17 ng/L LOQ
19	Ascension	Point Houmas	No analytes detected in samples.
21	St. James	Union	No analytes detected in samples.
23	St. James	White Hall	Perfluorobutanoic acid (PFBA): - 4.14 ng/L detected in water - 3.76 ng/L LOQ
24	St. James	Convent	No analytes detected in samples.
25	St. James	Convent	Perfluorobutanoic acid (PFBA): - 2.00 ng/L detected in water - 1.99 ng/L LOQ
26	St. John the Baptist	Wallace	No analytes detected in samples.
27	St. John the Baptist	Garyville	No analytes detected in samples.
28	St. John the Baptist	Reserve	No analytes detected in samples.
30	St. Charles	Taft	No analytes detected in samples.
31	St. Charles	Norco	No analytes detected in samples.
32	St. Charles	Destrehan	No analytes detected in samples.
33	St. Charles	Luling	No analytes detected in samples.
34	St. Charles	St. Rose	No analytes detected in samples.
35	St. Charles	Ama	No analytes detected in samples.
36	Orleans	New Orleans	No analytes detected in samples.

Table 5: Results of contaminants detected and their area.

05

MOVING FORWARD

MOVING FORWARD

The Water Collaborative encourages everyone to get involved and learn more about what is potentially in your water. We want to help inform you and empower you to take action. Knowledge is power. You can get involved by signing up with our organization to receive updates, sharing this report with your family, friends, and community, and by voting and engaging with your local and state representatives.
.
We encourage residents to get involved with local environmental groups and form coalitions to fight for clean water and healthy communities and urge current legislative leaders to crack down on pollution.

In addition to getting involved, you can personally reduce your exposure to PFAS immediately by purchasing an activated carbon filter for your drinking water. They come in many forms: pitcher filters, under-sink filters, individual water bottles with filters, and refrigerator add-ins. Activated carbon filtering removes 73% of PFAS from water, but if proper filter hygiene is utilized, that number can be even higher. Practicing filter hygiene means being well informed about when to change a filter, including refrigerator filters. Using an old water filter is no different than using no filter at all.

This study was preliminary. We know that not every parish uses the Mississippi River as a source of drinking water, as noted in Appendix A, and hope to expand future studies to include groundwater, rainwater, and residential taps. Testing residential taps will be important to see exactly what residents are being exposed to in their drinking water. PFAS chemicals are even found in some bottled water!

Everyone has a right to know what is in their drinking water. We have included some resources in Appendix D that you can access to learn more about how to reduce your exposure to these chemicals and to learn more about where your drinking water comes from. This study brings us one step closer to getting these dangerous chemicals regulated to protect the health of the public and the environment.

Figure 12: A closer look at site 28 in Reserve, LA where a benzene warning sign is clearly visible. Benzene is a known human carcinogen. There is a community located right on the other side of the levee where this photo was taken.

06

APPENDIX A

Drinking Water Systems in Each Parish Along the Lower Mississippi River and Source Waters for Each Drinking Water System

Information from the Louisiana Drinking Water Watch and Consumer Confidence Reports

Pointe Coupee Parish

Town of Fordoche – Ground Water

Innis Water Corp., Inc. – Ground Water

Village of Livonia – Ground Water

Town of Morganza – Ground Water

City of New Roads – Ground Water

Tarbert – Fresco Waterworks – Ground Water
False River Water Co. – Ground Water

Pointe Coupee Waterworks District 1 – Ground Water

Pointe Coupee Waterworks District 2, Batchelor – Ground Water

Detention Center – Ground Water

Waterworks District 2, Hwy 10 – Ground Water

Alma Plantation, LTD – Ground Water

West Baton Rouge Parish

Well 4 Sunrise – Ground Water

Ourso Well – Hwy 1 North – Ground Water

WBR Public Utility Hunter Run, Well – Ground Water

Public Utility Well 1 – Lafiton – Ground Water

City of Port Allen

New Avenue D Well – Ground Water

WBR WWKS District #2, Northline Road Well – Ground Water

WBR WWKS District #2, Westgate Well – Ground Water

Arena Water Well – Ground Water

West Baton Rouge District 4-Section Road

Winterville – Ground Water

West Baton Rouge District #4 Well #1-9960 Section Rd – Ground Water

West Baton Rouge District #4 Well #2–12450 Sec. Rd – Ground Water

West Baton Rouge District #4 Winterville Well – Ground Water

East Baton Rouge Parish

City of Baker

Lavey Well #4 – Ground Water

Mississippi Street Well #2 – Ground Water

Grooms Road Well #1 – Ground Water

Debra Street Well #3 – Ground Water

Baton Rouge Water Company – 94 Ground Water Wells

City of Zachary

Avenue A Well – Ground Water

Carpenter Road Well – Ground Water

Flonacher Road Well – Ground Water

Youth Park Well – Ground Water

Fennwood Dr. Well – Ground Water

JESTC

JESTC Well 002 – Ground Water

JESTC Well 003 – Ground Water

Audubon Park Apartments Water System

Well #1 – Ground Water

Well #2 – Ground Water

Iberville Parish

City of Plaquemine Water System – Ground Water

Dow USA, LA Division – Surface Water

Gillis Long Center – Ground Water

Hwy 1148 Water System – Ground Water

Iberville Waterworks District #2 – Ground Water

Intracoastal Water System East – Ground Water

Intracoastal Water System West – Surface Water

North Iberville Water System – Ground Water

TESI Plantation gardens – Ground Water

Town of Maringouin – Ground Water

Town of White Castle Water System – Ground Water

Village of Grosse Tete Water System – Ground Water

Village of Rosedale Water System – Ground Water

Ascension Parish

Air Liquide Geismar Utility Services - Ground Water

Ascension Christian School – Grown Water

Ascension Consolidated Utility District 1 – Ground Water

Ascension Parish Waterworks District 2 – Ground Water

BASF Corp. – Ground Water

Bon Terre Corp Water System – Ground Water

City of Gonzales Water System – Ground Water

Countryside Mobile Home Court – Ground Water

Diversion Water – Bayou Estates – Ground Water

Diversion Water – Cypress Lakes – Ground Water

Diversion Water – River Run Estates – Ground Water

Family Court Mobile Home Park – Ground Water

Fisherman's One Stop – Ground Water

Jimmy Babin Apartments – Ground Water

Knights of Columbus - Ground Water

La Petit – Ground Water

Oak Village Mobile Home Park Water System – Ground Water

Occidental Chemical Corp. – Ground Water

Orleans Room – Ground Water

Parish Utilities of Ascension – Ground Water

Pine Trailer Park – Ground Water

Plantation Mobile Home Village - Ground Water

Riverland Apartments – Ground Water

Roddy Road Village Ascension, LLC – Ground Water

Ryan's Family Grocery – Ground Water

Safe Harbor – Ground Water

Shady Oaks Mobile Home Park Water System – Ground Water

Shell Chemical Company – Surface Water

Sprout Learning Center, LLC – Ground Water

St. Amant Trailer Park– Ground Water

Treyville Courts Trailer Park – Ground Water

White Road Mobile Home Park – Ground Water

St. James Parish

Gramercy Waterworks – Mississippi River Intake – Surface Water

Lutcher Waterworks – Mississippi River Intake – Surface Water

St. James Water District #1 – Mississippi River Intake – Surface Water

St. James Water District #2 – Mississippi River Intake – Surface Water

St. John the Baptist Parish

St. John Water District 2 – Mississippi River Intake – Surface Water

St. John Water District 1 – Mississippi River Intake – Surface Water

Pleasure Bend Water Supply – Pleasure Bend Well – Ground Water

St. John Water District 3

Ruddock Well #1 – Ground Water

Ruddock Well #2 – Ground Water

St. Charles Parish

St. Charles Parish, Dept. of Water Works – Mississippi River Intake – Surface Water

Jefferson Parish

Jefferson Parish Department of Water – Mississippi River Intake – Surface Water

Jefferson Parish Water Department – Mississippi River Intake – Surface Water

Orleans Parish
Irish Bend Travel Center - Ground Water

New Orleans Carrollton Water Works – Mississippi

River Intake – Surface Water

New Orleans Algiers Water Works – Mississippi River Intake – Surface Water

PNO 3401 Jordan Rd. – Surface Water

PNO Alabo Street Wharf – Surface Water

PNO Cruise Terminals – Surface Water

PNO Elaine Street Wharf – Surface Water

PNO Harmony St. Wharf – Surface Water

PNO Louisiana Cotton Warehouse – Surface Water

PNO Uptown Facilities – Surface Water

***Note - Surface Water refers to the Mississippi River.**

07

APPENDIX B

CANCERS

DISEASE	PARISH	RATE (PER 100,000 PEOPLE)
Acute Lymphocytic Cancer	Ascension	1.8
Acute Lymphocytic Cancer	St. Charles	suppressed
Acute Lymphocytic Cancer	St. James	suppressed
Acute Lymphocytic Cancer	St. John the Baptist	suppressed
Acute Lymphocytic Cancer	State	1.3
Acute Myelocytic Leukemia	Ascension	4.2
Acute Myelocytic Leukemia	St. Charles	5.2
Acute Myelocytic Leukemia	St. JAMES	suppressed
Acute Myelocytic Leukemia	St. John the Baptist	4.2
Acute Myelocytic Leukemia	State	4.1
Brain & CNS Cancer	Ascension	5.8
Brain & CNS Cancer	St. Charles	6.6
Brain & CNS Cancer	St. James	suppressed
Brain & CNS Cancer	St. John the Baptist	5.7
Brain & CNS Cancer	State	6
Chronic Lymphocytic Leukemia	Ascension	3.4
Chronic Lymphocytic Leukemia	St. Charles	5.1
Chronic Lymphocytic Leukemia	St. James	suppressed
Chronic Lymphocytic Leukemia	St. John the Baptist	4.5
Chronic Lymphocytic Leukemia	State	4.8
Colon & Rectal Cancer	Ascension	37.8
Colon & Rectal Cancer	St. Charles	41.4
Colon & Rectal Cancer	St. James	57.1
Colon & Rectal Cancer	St. John the Baptist	46.2
Colon & Rectal Cancer	State	46.7

DISEASE	PARISH	RATE (PER 100,000 PEOPLE)
Esophagus Cancer	Ascension	4.5
Esophagus Cancer	St. Charles	3.8
Esophagus Cancer	St. James	6.5
Esophagus Cancer	St. John the Baptist	4.5
Esophagus Cancer	State	4.6
Female Breast Cancer	Ascension	124.2
Female Breast Cancer	St. Charles	131.6
Female Breast Cancer	St. James	139.2
Female Breast Cancer	St. John the Baptist	124.1
Female Breast Cancer	State	125.7
Kidney & Renal Pelvis Cancer	Ascension	23.8
Kidney & Renal Pelvis Cancer	St. Charles	18.8
Kidney & Renal Pelvis Cancer	St. James	23.7
Kidney & Renal Pelvis Cancer	St. John the Baptist	24.2
Kidney & Renal Pelvis Cancer	State	21.8
Larynx Cancer	Ascension	4.3
Larynx Cancer	St. Charles	3.8
Larynx Cancer	St. James	7.5
Larynx Cancer	St. John the Baptist	5.3
Larynx Cancer	State	5.1
Leukemia	Ascension	11.6
Leukemia	St. Charles	14.2
Leukemia	St. James	10.7
Leukemia	St. John the Baptist	12.6
Leukemia	State	13.8
Liver & Intrahepatic Bile Duct Cancer	Ascension	7.1
Liver & Intrahepatic Bile Duct Cancer	St. Charles	8.9

DISEASE	PARISH	RATE (PER 100,000 PEOPLE)
Liver & Intrahepatic Bile Duct Cancer	St. James	suppressed
Liver & Intrahepatic Bile Duct Cancer	St. John the Baptist	8.5
Liver & Intrahepatic Bile Duct Cancer	State	9.5
Lung Cancer	Ascension	73.3
Lung Cancer	St. Charles	61.3
Lung Cancer	St. James	60.1
Lung Cancer	St. John the Baptist	59.9
Lung Cancer	State	68
Male Breast Cancer	Ascension	supressed
Male Breast Cancer	St. Charles	supressed
Male Breast Cancer	St. James	supressed
Male Breast Cancer	St. John the Baptist	supressed
Male Breast Cancer	State	1.3
Melanoma of the Skin	Ascension	23
Melanoma of the Skin	St. Charles	18.6
Melanoma of the Skin	St. James	11.4
Melanoma of the Skin	St. John the Baptist	8.6
Melanoma of the Skin	State	17.2
Mesothelioma	Ascension	2.1
Mesothelioma	St. Charles	suppressed
Mesothelioma	St. James	suppressed
Mesothelioma	St. John the Baptis	suppressed
Mesothelioma	State	1.3
Non-Hodgkin Lymphoma	Ascension	18.1
Non-Hodgkin Lymphoma	St. Charles	19.3
Non-Hodgkin Lymphoma	St. James	18.5
Non-Hodgkin Lymphoma	St. John the Baptist	21.9

DISEASE	PARISH	RATE (PER 100,000 PEOPLE)
Non-Hodgkin Lymphoma	State	19.5
Oral Cavity & Pharynx Cancer	Ascension	13.8
Oral Cavity & Pharynx Cancer	St. Charles	13.1
Oral Cavity & Pharynx Cancer	St. James	13.3
Oral Cavity & Pharynx Cancer	St. John the Baptist	12
Oral Cavity & Pharynx Cancer	State	13.1
Pancreatic Cancer	Ascension	12.1
Pancreatic Cancer	St. Charles	14.8
Pancreatic Cancer	St. James	11.6
Pancreatic Cancer	St. John the Baptist	15.1
Pancreatic Cancer	State	14
Prostate Cancer	Ascension	161.5
Prostate Cancer	St. Charles	71.5
Prostate Cancer	St. James	suppressed
Prostate Cancer	St. John the Baptist	74
Prostate Cancer	State	146.2
Stomach Cancer	Ascension	0.9
Stomach Cancer	St. Charles	suppressed
Stomach Cancer	St. James	suppressed
Stomach Cancer	St. John the Baptist	suppressed
Stomach Cancer	State	7.5
Thyroid Cancer	Ascension	14.9
Thyroid Cancer	St. Charles	13.7
Thyroid Cancer	St. James	11.6
Thyroid Cancer	St. John the Baptist	11.7
Thyroid Cancer	State	13.6
Urinary Bladder Cancer	Ascension	19.6

DISEASE	PARISH	RATE (PER 100,000 PEOPLE)
Urinary Bladder Cancer	St. Charles	22.3
Urinary Bladder Cancer	St. James	19.6
Urinary Bladder Cancer	St. John the Baptist	20.4
Urinary Bladder Cancer	State	18.6
All Type of Cancer Combined	Ascension	466.6
All Type of Cancer Combined	St. Charles	356.6
All Type of Cancer Combined	St. James	483.4
All Type of Cancer Combined	St. John the Baptist	473.6
All Type of Cancer Combined	State	481.7

BIRTH DEFECTS

BIRTH DEFECTS	REGION	RATE (PER 10,000 LIVE BIRTHS)
Anencephaly	Greater New Orleans	suppressed
Anencephaly	Capital Area	suppressed
Anencephaly	South Central	0
Cleft Lip with Cleft Palate	Greater New Orleans	4
Cleft Lip with Cleft Palate	Capital Area	4.75
Cleft Lip with Cleft Palate	South Central	4.99
Cleft Lip without Cleft Palate	Greater New Orleans	2.57
Cleft Lip without Cleft Palate	Capital Area	2.19
Cleft Lip without Cleft Palate	South Central	suppressed
Cleft Palate without Cleft Lip	Greater New Orleans	8.58
Cleft Palate without Cleft Lip	Capital Area	6.22
Cleft Palate without Cleft Lip	South Central	11.22
Gastroschisis	Greater New Orleans	2.86

BIRTH DEFECTS	REGION	RATE (PER 10,000 LIVE BIRTHS)
Gastroschisis	Capital Area	3.29
Gastroschisis	South Central	suppressed
Hypoplastic Left Heart Syndrome	Greater New Orlean	2.57
Hypoplastic Left Heart Syndrome	Capital Area	suppressed
Hypoplastic Left Heart Syndrome	South Central	suppressed
Hypospadias (Male Infants Only)	Greater New Orleans	81.24
Hypospadias (Male Infants Only)	Capital Area	71.47
Hypospadias (Male Infants Only)	South Central	85.99
Limb Deficiencies Combined	Greater New Orleans	2.29
Limb Deficencies Combined	Capital Area	3.29
Limb Deficencies Combined	South Central	3.74
Spina Bifida (without Anencephaly)	Greater New Orleans	3.43
Spina Bifida (without Anencephaly)	Capital Area	3.29
Spina Bifida (without Anencephaly)	South Central	3.74
Tetralogy of Fallot	Greater New Orleans	3.72
Tetralogy of Fallot	Capital Area	5.85
Tetralogy of Fallot	South Central	6.23
Transposition of the Great Arteries	Greater New Orleans	2.29
Transposition of the Great Arteries	Capital Area	1.83
Transposition of the Great Arteries	South Central	3.12
Trisomy 21 (Down Syndrome)	Greater New Orleans	6.86
Trisomy 21 (Down Syndrome)	Capital Area	8.77
Trisomy 21 (Down Syndrome)	South Central	13.09

HOSPITALIZATIONS

HOSPITALIZATIONS	PARISH	RATE (PER 10,000 PEOPLE)
Asthma	Ascension	3.52
Asthma	St. Charles	4.56
Asthma	St. James	3.18
Asthma	St. John the Baptist	3.93
COPD	Ascension	15.11
COPD	St. Charles	26.25
COPD	St. James	21.3
COPD	St. John the Baptist	24.67
Heart Attack	Ascension	28.17
Heart Attack	St. Charles	35.87
Heart Attack	St. James	32.24
Heart Attack	St. John the Baptist	34.78

BIRTH OUTCOMES

BIRTH OUTCOMES	PARISH		RATE
Fertility	Ascension	1994.26	per 1,000 women
Fertility	St. Charles	1699.57	per 1,000 women
Fertility	St. James	1776.32	per 1,000 women
Fertility	St. John the Baptist	1807.56	per 1,000 women
Infant Mortality	Ascension	6.33	per 1,000 live births
Infant Mortality	St. Charles	5.37	per 1,000 live births
Infant Mortality	St. James	12.23	per 1,000 live births
Infant Mortality	St. John the Baptist	8.63	per 1,000 live births
Low Birth Weight	Ascension	1.24%	single births

BIRTH OUTCOMES	PARISH		RATE
Low Birth Weight	St. Charles	1.32%	single births
Low Birth Weight	St. James	2.59%	single births
Low Birth Weight	St. John the Baptist	1.69%	single births
Preterm Birth	Ascension	1.28%	single births
Preterm Birth	St. Charles	1.36%	single births
Preterm Birth	St. James	2.70%	single births
Preterm Birth	St. John the Baptist	1.99%	single births

OTHER OUTCOMES

ILLNESS	REGION / PARISH		RATE
Diabetes	Ascension	11%	
Diabetes	St. Charles	11.30%	
Diabetes	St. James	14.60%	
Diabetes	St. John the Baptist	14.40%	
Heat-Stress Illness	East Central	3.73	per 100,000 people
Heat-Stress Illness	Southeast	3.29	per 100,000 people
High Blood Pressure	Ascension	35.90%	
High Blood Pressure	St. Charles	37.60%	
High Blood Pressure	St. James	44.40%	
High Blood Pressure	St. John the Baptist	43.70%	

*All data provided by the Louisiana Department of Health

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APPENDIX C - RESULTS FROM STUDY

SITE #	PARISH	AREA	DETECTION
1	Pointe Coupee	New Roads	Perfluorobutanoic acid (PFBA): - 4.34 ng/L detected in water - 4.00 ng/L LOQ
3	West Baton Rouge	Allendale	No analytes detected in samples.
4	East Baton Rouge	Baton Rouge	No analytes detected in samples.
5	West Baton Rouge	Port Allen	No analytes detected in samples.
6	East Baton Rouge	Baton Rouge	No analytes detected in samples.
8	Iberville	Morrisonville	No analytes detected in samples.
9	Iberville	Plaquemine	Toluene: - 11.7 ug/Kg detected in soil - 4.94 ug/Kg LOQ
10	Iberville	Sunshine	Toluene: - 7.44 ug/Kg detected in soil - 4.95 ug/Kg LOQ
11	Iberville	Iberville	No analytes detected in samples.
12	Iberville	St. Gabriel	No analytes detected in samples.
14	Iberville	Alhambra	No analytes detected in samples.
15	Ascension	Geismar	No analytes detected in samples.
16	Ascension	Geismar	No analytes detected in samples.
17	Ascension	Modeste	Perfluorobutanoic acid (PFBA): - 3.97 ng/L detected in water - 3.94 ng/L LOQ Perfluorooctanesulfonic acid (PFOS): - 5.37 ng/L detected in water - 3.94 ng/L LOQ
18	Ascension	Darrow	No analytes detected in samples.
20	Ascension	Donaldsonville	Perfluorooctanesulfonic acid (PFOS): - 4.81 ng/L detected in water - 4.17 ng/L LOQ

SITE #	PARISH	AREA	DETECTION
19	Ascension	Point Houmas	No analytes detected in samples.
21	St. James	Union	No analytes detected in samples.
23	St. James	White Hall	Perfluorobutanoic acid (PFBA): - 4.14 ng/L detected in water - 3.76 ng/L LOQ
24	St. James	Convent	No analytes detected in samples.
25	St. James	Convent	Perfluorobutanoic acid (PFBA): - 2.00 ng/L detected in water - 1.99 ng/L LOQ
26	St. John the Baptist	Wallace	No analytes detected in samples.
27	St. John the Baptist	Garyville	No analytes detected in samples.
28	St. John the Baptist	Reserve	No analytes detected in samples.
30	St. Charles	Taft	No analytes detected in samples.
31	St. Charles	Norco	No analytes detected in samples.
32	St. Charles	Destrehan	No analytes detected in samples.
33	St. Charles	Luling	No analytes detected in samples.
34	St. Charles	St. Rose	No analytes detected in samples.
35	St. Charles	Ama	No analytes detected in samples.
36	Orleans	New Orleans	No analytes detected in samples.

Table 5: Results of contaminants detected and their area.

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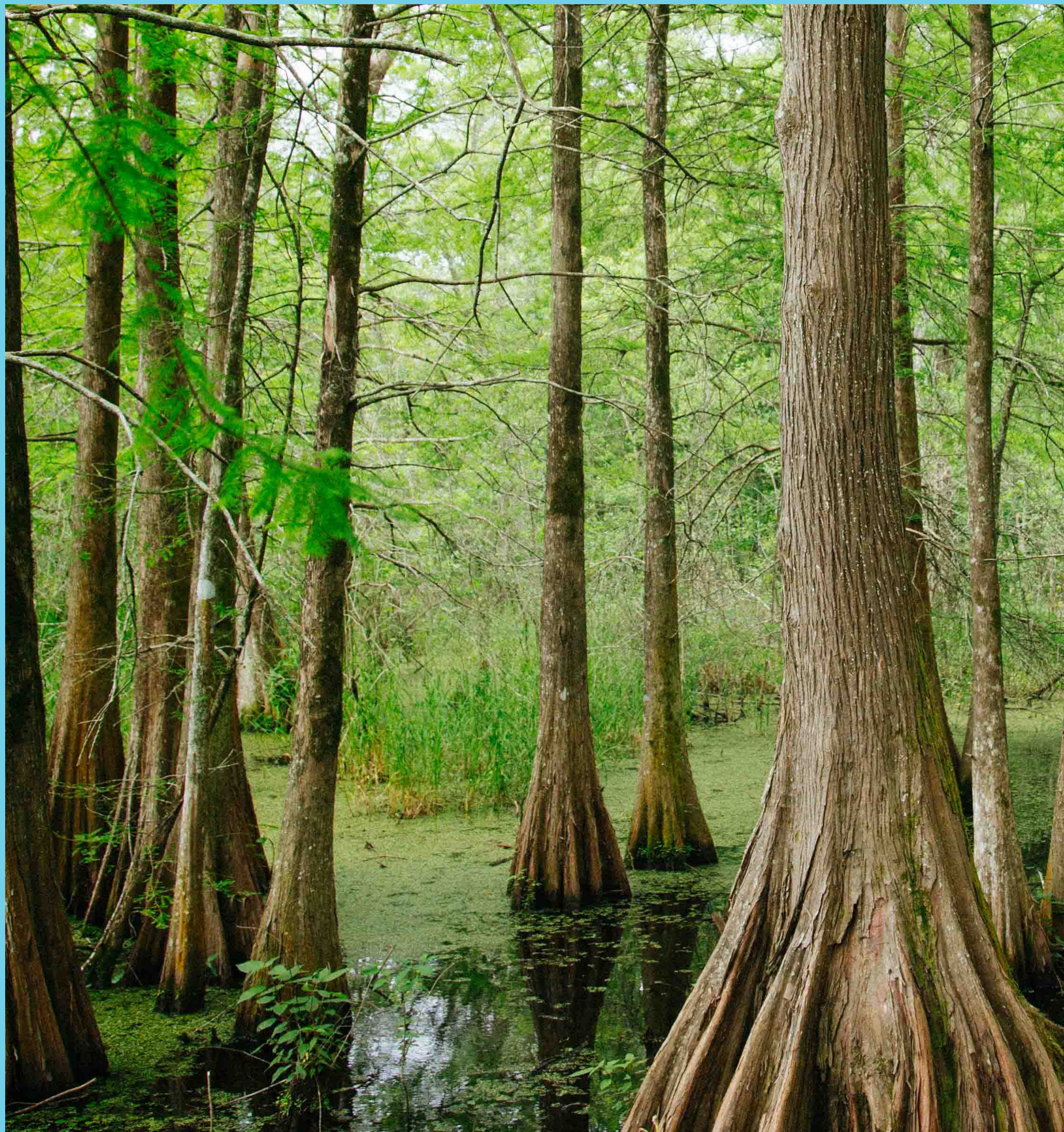
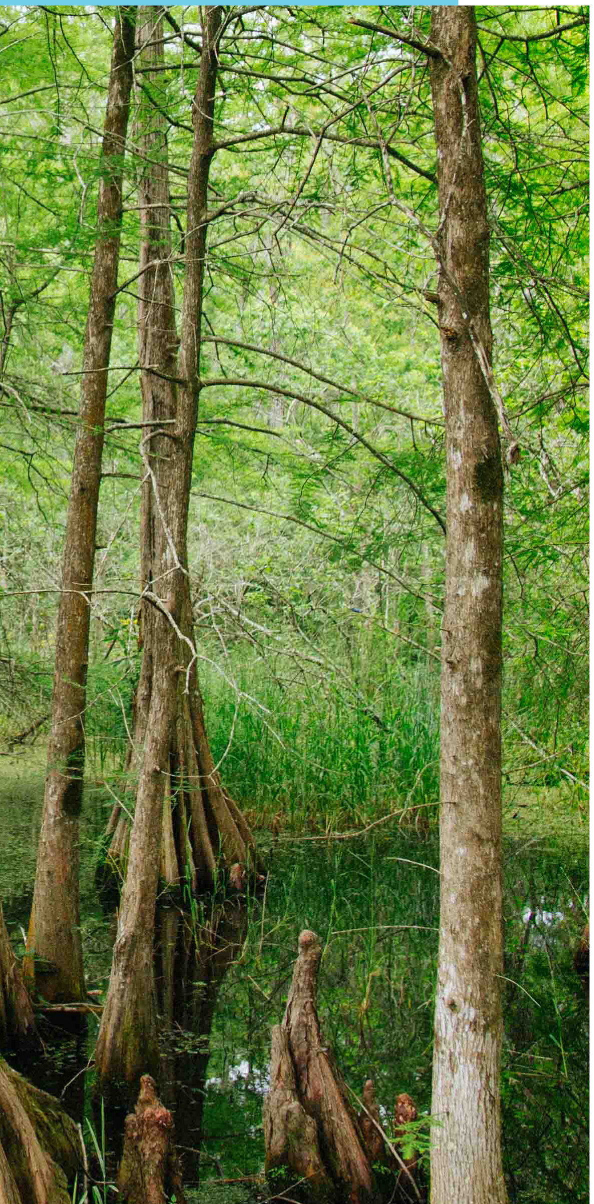
APPENDIX D - RESOURCES





• The Water Collaborative website: nolawater.org

• To learn more about where your drinking water/tap water comes from, you can visit the Louisiana Department of Health Drinking Water Watch Database: https://sdw.ldh.la.gov/DWW/

• Website to find PEG free consumer products: https://www.skinsafeproducts.com/search/products?products_by_ingredient=1530&includes_ingredient=false

• PFAS in the News:

  • https://www.cbsnews.com/video/forever-chemicals-the-threat-of-pfas-in-our-water/

  • https://www.nytimes.com/2022/04/12/us/pfas-chemicals-fast-food.html#:~:text=Virtually%20indestructible%2C%20these%20artificial%20compounds,far%20away%20as%20virgin%20forests.

  • https://www.usatoday.com/story/news/world/2022/08/13/rainwater-unsafe-drink-pfas-chemicals-study/10317424002/

  • https://abcnews.go.com/Health/school-uniforms-found-high-levels-potentially-harmful-pfas/story?id=90324240

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  • https://upnorthlive.com/news/local/michigan-property-owners-settle-pfas-case-for-54-million

  • https://cnycentral.com/news/local/nys-lawmakers-introduce-legislation-to-crack-down-on-forever-chemicals-in-water-sources

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