



Prepared For

JXN Water

Presented By

THRIVE at the
University of Oklahoma

BUILDING TRUST

A LONGITUDINAL SURVEY OF
JXN WATER'S CUSTOMER BASE
SURVEY III

June 28, 2024

EXECUTIVE SUMMARY

Background

Water system failures have harmful social, economic, and health effects on communities that can result in public distrust and a lack of confidence in local public services. The city of Jackson, Mississippi has grappled with an ongoing water crisis for nearly three decades, culminating with unprecedented flooding during the summer of 2022 that led to the collapse of the city's main water plant and left residents without clean water for several weeks. Following this event, the US Department of Justice appointed JXN Water, a third-party manager, to operate Jackson's water system in late fall of 2022. Under the leadership of Ted Henifin, JXN Water has launched a series of short- and long-term projects to repair structural problems with the water system. Although JXN Water is working to strengthen the city's water infrastructure, there is a pressing need to restore trust and build confidence among customers that JXN Water serves.

Previous Survey Waves (Waves I and II)

The THRIVE Center conducts a representative survey of JXN Water customers semi-annually to monitor customers' perceptions of the water system as JXN Water moves to improve water services. In the spring of 2023, the THRIVE Center conducted its first survey. For this baseline survey ($n = 2,970$), results indicated considerably low trust and high distrust in JXN Water among JXN Water's customers. Confidence in the water system was also very low. Only 13% of residents reported that the water was safe to drink in this first survey while most customers expressed great concern with water costs and the accuracy of billing.

In the second survey ($n = 2,146$), customers of JXN Water reported a substantial increase in their trust and a large decrease in their distrust of JXN Water. Customers also showed an increase in their confidence in the water system and a sizable reduction in negative effects of the water crisis on individual wellbeing. Concerns with water costs and billing remained but did improve between Survey Wave I and II.

Current Survey Wave (Wave III): Design and Objectives

In this third report, we examine whether customers' perceptions have continued to improve. Data are from 2,462 customers of JXN Water who were surveyed in late spring of 2024. Among these 2,462 respondents, 893 of them completed a survey during Survey Wave I, allowing us to see how these respondents' views have changed over the course of one year. Survey questions inquire about perceived trust and distrust in JXN Water; confidence in the water system; how the water crisis has affected individual wellbeing; satisfaction with JXN Water's performance; JXN Water's communication with customers, and perceptions of the new water rate plan. For this third wave, JXN Water provided an updated database that improved greatly the THRIVE Center's ability to contact customers and led to an increase in the number of respondents to this survey when compared with the second survey wave.

Summary of Main Results from Survey Wave III

- **Steady improvements for JXN Water on major measures.** Results showed steady improvements (4% to 9%) on measures of distrust, trust, confidence in the water system, and individual wellbeing in the six-month period between Survey Wave II and Survey Wave III. In the one-year period between Survey Wave I and Wave III, findings indicate that distrust, trust, confidence in the water system, and individual wellbeing have improved significantly.
- **Rising confidence in JXN Water and the water system.** For the first time, most residents (53%) now say that the water is safe for cooking and personal hygiene. Fifty-nine percent of residents also report that JXN Water is making good progress toward solving the water situation, and only 38% now say that JXN Water does not know what it is doing, compared with 65% of residents reporting in this way in the first survey wave.
- **Improvements among key demographics.** Approximately, 82% of Jackson's residents are Black. In initial surveys, Black residents had much lower perceptions of JXN Water than White residents did. However, based on results from Survey Wave III, Black residents' perceptions of JXN Water have risen so that a majority Black residents now report having trust in JXN Water, whereas nearly a quarter of Black residents reported having trust in JXN Water in Survey Wave I.
- **Water costs remain a major concern.** Water costs were one area that did not show an improvement between Survey Wave II and III. Customers reported a 2% decrease in the fairness of the cost of using the water in Jackson. This decline appears to be largely driven by a decrease among White residents (47% to 41%). Customers are least satisfied with JXN Water in its management of water costs with 49% reporting that they are not at all satisfied with JXN Water in this area.
- **Views on the new water rate plan depend on familiarity.** Among residents who are at least somewhat familiar with JXN Water's new rate plan, 53% have a positive view of it. Only 35% have a positive view of the plan among those who reported being unfamiliar with the plan.

Conclusion and Future Work

Survey Wave III provides strong evidence that customers' perceptions of JXN Water are improving. There was steady improvement between Survey Wave II and III and an overall large improvement over the past year between Survey Wave I and III. Water costs and billing remain challenges. It is not entirely clear how the new water rate plan that went into effect in February of 2024 will influence customers' views of water costs and billing over the long term. Nevertheless, knowledge of the new water rate plan is associated with enhanced customers' perceptions of it. For the fourth survey wave in Fall of 2024, the THRIVE Center will investigate the new water rate plan in greater detail as well as potential messaging strategies.

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BACKGROUND

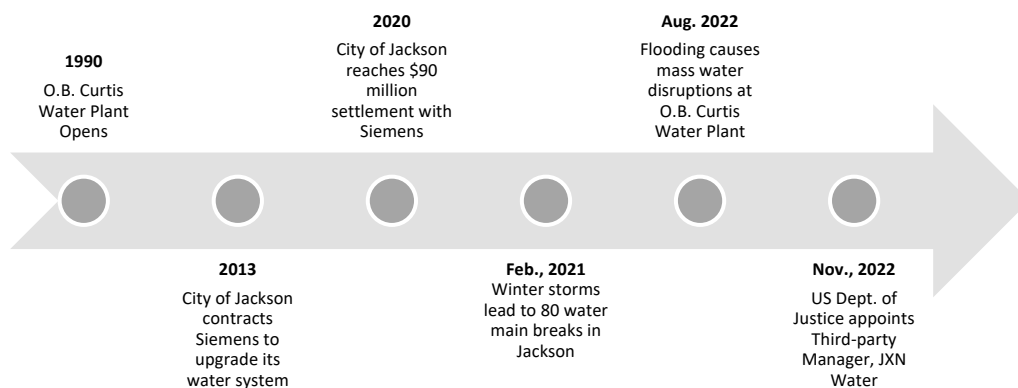
Clean and affordable water are fundamental to community prosperity. However, a growing number of aging water systems across the country are struggling to provide water that meets state and federal standards.¹ The water system in the Jackson, Mississippi has experienced among the greatest difficulties in the nation over the past several decades.²

During this time, Jackson's residents have endured water contamination, low water pressure, billing irregularities, and discontinued service for prolonged periods. Problems with the city's water service reached a tipping point in 2021 when winter storms led to 96 water main breaks in Jackson and disrupted service for residents for several weeks.³ Most of the city's residents were under a water boil alert, and many were without water service for an entire month after the winter storm.⁴

In the summer of 2022, the situation worsened. Unprecedented flooding resulted in the collapse of the city's main water treatment facility (i.e., the O.B. Curtis Plant), leaving many residents without water service for several weeks while water-boil alerts were initiated once again for residents who had running water. The summer floods also damaged the O.B. Curtis Plant, which provides water to most Jackson residents.⁵

When reflecting on ongoing challenges with Jackson's water system, officials have underscored weak physical infrastructure, underinvestment in the system, and poor decision-making as reasons for the water crisis in Jackson.⁶ Following the collapse of the city's O.B. Curtis Plant in the summer of 2022, the US Department of Justice on behalf of the Environmental Protection Agency filed in a federal court case to have a third-party manager operate Jackson's water system.⁷ With court approval, the US Department of Justice designated a third-party manager to operate, maintain, and control the city's water system. JXN Water was subsequently formed under the direction of Ted Henifin. The city was also granted \$600 million in federal funding to repair its flagging water system.⁸

Figure 1. Timeline of Major Events



Since taking control of the water system, JXN Water has moved to address core structural problems. The system is currently undergoing numerous upgrades, including water line replacements, water line cleaning, a systems audit, and treatment facility upgrades. The OB Curtis Water Treatment Plant has seen improved water production along with key repairs to pumps and chemical treatment equipment.

Although physical infrastructure improvements are of vital importance, there is work to be done to repair trust and confidence in the water system and its management. In the media, residents and community leaders routinely express little trust in the water system, as well as public services, and local and state representatives.⁹ Along with these challenges, residents and businesses have been leaving the city at alarming rates. According to recent US Census data, Jackson has one of the fastest declining populations in the nation.¹⁰ While many factors are conceivably driving social and economic declines in Jackson, the ongoing water crisis appears to be among the challenges Jackson is facing.

City leaders have set forth a “dignity economy” vision in which housing, safety, health, and residents’ overall quality of life are priorities. To work toward these goals, trust and confidence in the city’s water system and its management are essential. Trust is considered critical to local governance and public service provision.¹¹ It may enable cooperation as citizens allow providers to act on their behalf, believing they will do what is in their best interests. Without a degree of trust between service providers and customers, transaction costs rise.¹² It can become difficult for service providers to perform core functions needed for a community to thrive.

In this report, the research team measures trust, distrust, confidence in the water system, individual well-being in relation to the water system, water preferences, JXN Water’s communication, and perceptions of the new water rate plan. We briefly describe these concepts below to facilitate interpretation of the results in this report.

Distrust. Distrust is a confident negative expectation of the behavior of another party.¹³ Distrust may increase or decrease based on discernments that the other party is incompetent, corrupt, and malevolent. This expectation is rooted in intense, negative experiences producing “fear of loss and intense negative emotions of worry, suspicion, and fear.”¹⁴

Trust. Trust is a positive expectation of the conduct and future behavior of another party.¹⁵ This confident expectation underscores a willingness to act cooperatively with a trustee. Trust is thought to increase or decrease based on discernments of another party’s benevolence, competence, and integrity.

Confidence in the Water System. Related to trust, confidence is a positive expectation that the water system produces safe water, is reliable, and operates in a fair manner.

Individual Well-Being. Individual well-being is a subjective appraisal of oneself or others.¹⁶ High subjective well-being consists of having positive feelings (e.g., gratitude and feeling good) that are associated with adaptive behavior, whereas low well-being consists of negative feelings (e.g., anger and worry) that are linked to maladaptive behavior.

Satisfaction with JXN Water's Performance. This measure reflects customer satisfaction with JXN Water's overall performance, its management of the water infrastructure, water quality, and water costs.

JXN Water's Communication. This measure reflects customer awareness of information about JXN Water that is communicated through the news media and the water quality report.

JXN Water New Rate Plan. Survey items on the new rate plan capture customers' familiarity with the new water rate plan and beliefs about its potential effectiveness. Survey items also query knowledge of financial support, perceptions of affordability, and views on bill payment options.

The items constituting each of these measures are available in Appendix Table 1A. Cronbach's alpha coefficients indicate strong reliability for each composite measure.

EXPERIMENTAL RESEARCH ON TRUST AND CONFIDENCE IN PUBLIC SERVICES AND GOVERNMENT

A large body of research links trust and confidence in public services to social and economic progress^{17 18}. In this section, we present experimental research examining interventions related to trust and confidence in public services. Within this literature, interventions tend to focus on overall performance, reliability, responsiveness, transparency, perceived integrity, branding and symbols, and co-production as mechanisms for increasing trust and confidence among customers. The evidence from this work suggests that organizational performance is one of the most important factors influencing trust and confidence in public services. While the significance of performance is obvious in many respects, it is worth highlighting given previous research findings emphasizing its importance.

Scholars have found that public service providers struggle to raise trust and confidence if they are underperforming in their core mission¹⁹ For example, in a randomized survey experiment, Argentinian researchers found that providing quality information to customers/citizens shapes perceptions of transparency. Yet, customers/citizens who received information that the government was over-performing on its promises had higher trust than those who received information that the government was under-performing relative to its promises. Performance appears to mediate the relationship between trust and transparency.

In a series of eight large experiments in Europe, researchers found that data accessibility raises trust in performance information and that citizens have greater trust in government sources as opposed to data generated by other citizens.²⁰ However, the nature of the data may matter. Grimmelikhuijsen et al. (2013) found that transparency has mixed effects on citizen trust and that negative experiences with public institutions have more substantial effects on lowering trust than positive experiences do in raising trust. These findings came from a series of experiments conducted in South Korea and the Netherlands.²¹

In other studies, experimental evidence from Europe suggests that applying brand images to policies can increase citizen trust and that exposure to well-known symbols increases favorable

attitudes toward an organization.²² Alon-Barkat and Gilad (2017) demonstrated that familiar promotional symbols shape trust perceptions of public service and partly compensate for the effects of poor performance.²³ Co-production refers to the delivery of public services whereby citizens and other stakeholders and concepts are involved in the process of service provision. The research evidence on co-production is mixed, however, with some studies finding that coproduction activities might have negative effects on customer satisfaction and trust.²⁴

JXN WATER'S RATE PLAN

At a fundamental level, a water rate plan refers to structured pricing systems that are typically set by a municipal water utility to charge customers for their water usage. Among different pricing systems, uniform rate pricing plans require customers to pay a fixed rate per unit of water that they consume. Many cities use tiered rate plans where customers pay at varying rates according to their water usage (e.g., inclining and declining block pricing). Municipalities also use seasonal and drought pricing depending on local conditions and water availability.

Lifeline rate pricing represents a rate structure designed to extend affordable water access to meet the basic needs of all customers, particularly customers from low-income households. This pricing model seeks to ensure that essential water usage is affordable while also encouraging conservation for non-essential use. Lifeline rate plans tend to incorporate a tiered structure with the first tier (the lifeline block) being priced very low and subsequent tiers having progressively higher rates.

Effective in February of 2024, JXN Water adopted a new rate plan with the following features. The plan includes an availability charge that is based on the meter size of each customer. There is also a consumption charge for each gallon of water a customer consumes. The availability charge varies based on meter size for commercial, industrial, and multi-family customers, but for most residents amounts to \$40 per month. In addition, the plan aims to lower costs for low-income customers. As such, the availability charge for households receiving Supplemental Nutrition Assistance Program (SNAP) benefits from the State of Mississippi is \$10 per month. This component of the rate plan is a short-term measure until national policy changes allow customers receiving SNAP benefits to them to pay their water bills.

SURVEY OBJECTIVES AND DESIGN

This report is the third report on perceptions of JXN Water and its management of Jackson's water system. The results present analyses on perceived trust and distrust in JXN Water; confidence in the water system; how the water crisis is affecting individual wellbeing; satisfaction with JXN Water's performance; JXN Water's communication strategies; and perceptions of JXN Water's new rate plan. In this third report, we present results from a large survey of 2,462 residents who are customers of JXN Water. Within this sample, 893 residents are repeat respondents from survey wave one, enabling us to monitor responses over the course of a little over one year.

Resident Survey

The THRIVE research team administered the third wave of the Resident Survey by text message between May 20, 2024 – June 16, 2024. Please see Tables 1A and 2A in the Appendix for more details on the survey design and for descriptions of each of the survey items. The Customer Survey takes approximately five to seven minutes to complete. It contains Likert scale items (e.g., strongly disagree-strongly agree) and six demographic questions. Items measure trust in JXN Water, distrust in JXN Water, confidence in the water system, effects of the water crisis on individual wellbeing, drinking water habits, JXN Water communication, and perceptions of the new rate planⁱ. On this survey, respondents noted their age, sex, race/ethnicity, highest level of education, and how many years they have lived in Jackson. These demographic questions offer information on how representative the survey is across key subgroups of customers in Jackson, Mississippi.

Data Collection and Analysis

To determine the representativeness of the survey sample, population data were obtained from the US Census Bureau's American Community Survey on household and individual sociodemographic characteristics in Jackson, MS.²⁵ Following this step, JXN Water provided an updated version of its customer database in May, 2024. After cleaning the updated JXN Water database, we identified 50,363 active resident customer accounts as well as 40,816 inactive resident customer accounts. We also identified 6,084 active commercial accounts and 3,039 inactive commercial accounts. Inactive customers were not surveyed for this third wave.

By using the updated database from JXN Water, 3,203 respondents from Survey Wave I were contacted by text message to participate in Survey Wave III (Response rate: 52%; Survey completion rate: 30%). An additional 34,684 active resident customers who did not participate in Survey Wave I were contacted by text message to participate in the survey (Response rate: 17%; Completion rate: 4%). We received responses from 893 repeat respondents from Survey Wave I and 2,462 total responses from customers overall. On the third wave, we were able to obtain full

ⁱ The items constituting these broader measures show Cronbach's alpha of scores between 0.73 and 0.91, providing strong support for the reliability of these survey items when estimating trust, distrust, confidence in the water, individual wellbeing, and satisfaction with JXN Water's performance.

information on respondents by requiring responses to each survey item. Respondents could not skip items as was the case in survey waves one and two.

We used data from the American Community Survey to evaluate survey representativeness for residents over 20 years of age who are customers of JXN Water.²⁶ In Table 1, we compare population and sample characteristics (Note. Percentages reported in figures and online tables do not always sum to 100% because of rounding to the nearest percentage point). Prior to the release of the survey, the research team set a target sample of 1,051 residents (+/-3 margin of error with 95% confidence). With 2,462 responses, response rates were higher than this target, providing (+/-2 margin of error with 95% confidence). We received responses for every subcategory from the original sample frame, excepting customers of JXN Water with a high school education or less and those ages 20-29.

Table 1. Population and Sample Characteristics in Jackson ($n = 2,462$): Survey Wave III

	Population (#)	Population (%)	Sample (#)	Sample (%)	Target Achieved (#)
Gender					
Male	69,597	46	861	35	Yes
Female	80,216	54	1,601	66	Yes
Race					
Black	122,509	82	1,609	65	Yes
White	21,225	14	717	29	Yes
Other Race	6,079	4	136	6	Yes
Educational Attainment					
High school or less	36,609	38	281	11	No
Some college	32,110	33	741	30	Yes
4-yr. degree/ higher	28,102	29	1,440	59	Yes
Age					
20-29	24,988	23	116	4	No
30-44	29,427	27	572	22	Yes
45-64	33,785	31	964	48	Yes
65+	22,154	20	494	27	Yes

Note. In the sample, 8% of JXN Water customers ($n = 201$) reside outside of Jackson, MS.

There is overrepresentation in the sample from female residents, White residents, residents who hold a 4-year degree or higher and residents who are ages 45-64. To address this issue, we present results for the overall sample and also disaggregate results by sex, race/ethnicity, and education level. In the Appendix, we show results disaggregated by subgroup for each survey item. Because 8% of respondents reside outside of Jackson in the sample for Survey Wave III, we also compare results for JXN Water customers residing outside the city to those within it for each survey item in the Appendix. Within Jackson, respondents to Survey Wave III are from the East (30%), North (25%), South (28%), and West (10%) sections of the city.

RESULTS OF THE CUSTOMER SURVEY

In Table 2, we compare survey responses between Survey Wave I (spring, 2023), Survey Wave II (fall, 2023), and Survey Wave III (spring, 2024) for the full sample of customers represented in each of these waves. Between Survey Wave I and Wave II, respondents reported substantial improvements on measures of distrust in JXN Water, trust in JXN water, confidence in the water system, and individual wellbeing. For this third survey wave, customers also showed enhanced perceptions on each of these measures, but the extent of improvement was not as large as that observed between Wave II and Wave III. Across individual survey items, findings demonstrated consistent gains for JXN Water, excepting perceived fairness of the cost of water.

Table 2. Trends from Survey Wave I to Wave III (% strongly agree/agree)

	Survey Wave I (%)	Survey Wave II (%)	Survey Wave III (%)	Change from Wave I (%)	Change from Wave II (%)
Distrust in JXN Water	66	48	44	-22	-4
Trust in JXN Water	29	50	56	+27	+6
Confidence in Water System	20	35	38	+18	+3
Individual Well-Being (neg. effects)	76	66	57	-19	-9
Full Sample	2,970	2,146	2,462		

Note. Confidence in the water system refers to the four survey items listed in Figure 4 below. Individual wellbeing was generated from three survey items inquiring about the negative effects of the water crisis on individual wellbeing, so a decrease on this measure indicates an improvement.

In Table 3 below, we compare results for a longitudinal sample of 893 repeat respondents on individual survey items from Survey Wave I and III. We also present previous changes between Survey Wave I and II. Trends are consistent with the positive trends in the full samples. Respondents exhibited the largest gains on items eliciting information on JXN Water's progress with enhancing the water system, its competence as a public service entity, and its provision of services.

Table 3. Repeat Sample: Trends from Survey Wave I and Wave III (% Strongly Agree/Agree)

Survey Items	Survey Wave I	Survey Wave II	Survey Wave III	Change from Wave I (%)	Change from Wave II (%)
Distrust in JXN Water					
JXN Water withholds important information from the public about the water situation.	66	52	49	-17	-3
JXN Water places its own interests above interests of the public.	55	47	44	-11	-3
JXN Water does not know what it is doing.	59	41	37	-22	-4
Trust in JXN Water					
JXN Water tells us truthfully what is going on with the water situation.	36	50	57	+21	+7
JXN Water is doing everything it can to solve the water situation.	33	53	58	+25	+5
JXN Water is making good progress toward solving the water situation.	32	56	59	+27	+3
Confidence in the Water System					
The water is safe to drink.	17	27	30	+13	+3
The water is safe for cooking and personal hygiene	38	49	53	+15	+4
If there is a disruption to the water, it will be fixed in a timely manner.	13	36	48	+35	+12
The monthly billing is accurate.	14	32	36	+22	+4
The cost of using the water is fair	22	33	31	+9	-2
The water system will never get fixed.	58	45	41	-17	-4
Individual Wellbeing					
I worry about the water situation a lot.	79	69	65	-14	-4
I spend a lot more time on household tasks because of the water situation.	59	48	42	-17	-6
I feel angry about the water situation.	83	69	64	-19	-5
I do not think about the water situation that much anymore.	21	32	37	+16	+5
I am grateful for the people working to fix the water situation.	84	89	87	+3	-2
I feel good about progress with the water situation.	35	55	58	+23	+3

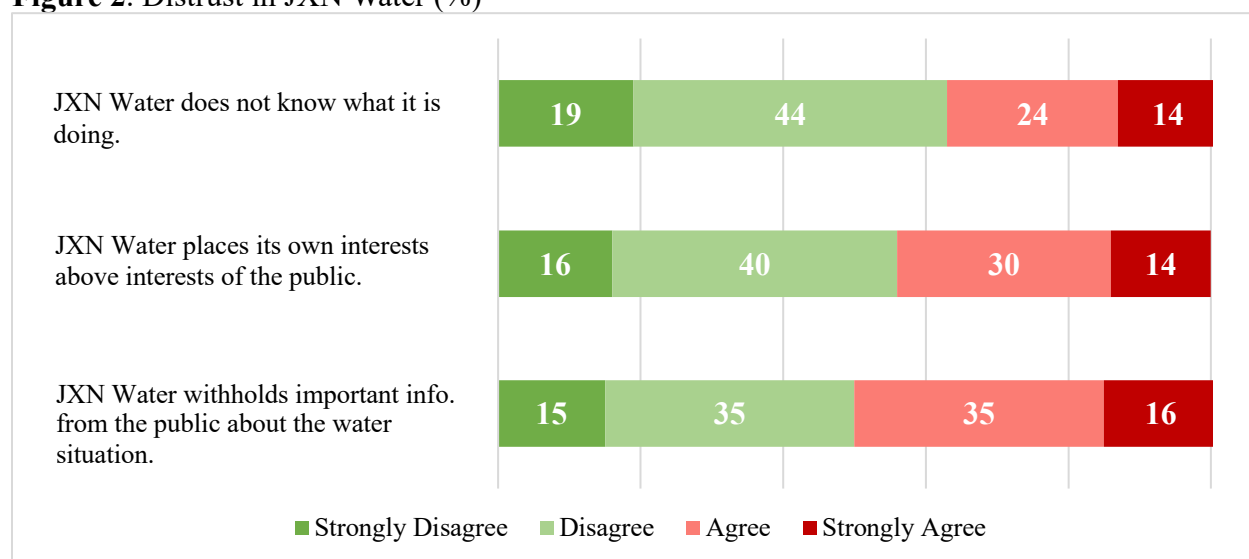
Note. There were 893 respondents who participated in both Survey Wave I and Wave III and 1,038 who participated in both Survey Wave I and II.

Distrust and Trust in JXN Water

In Figure 2, we present three survey items measuring components of distrust in JXN Water in the full sample of 2,462 customers. Approximately half of residents (51%) in the sample feel that JXN Water withholds important information from the public about the water situation. Forty-four

percent strongly agree/agree that JXN Water places its own interests above the public's interests while only 38% of residents strongly agree/agree that JXN Water does not know what it is doing. Based on the average of these three items, 44% of residents report that they distrust JXN Water. It is important that this percentage is a marked improvement from Survey Wave I when 66% residents reported distrust in JXN Water on these same survey items. The results indicate that JXN Water has built on gains observed in Survey Wave II when 48% of residents expressed having distrust in JXN Water on these same three survey items.

Figure 2. Distrust in JXN Water (%)



Note. Responses are from 2,462 resident customers.

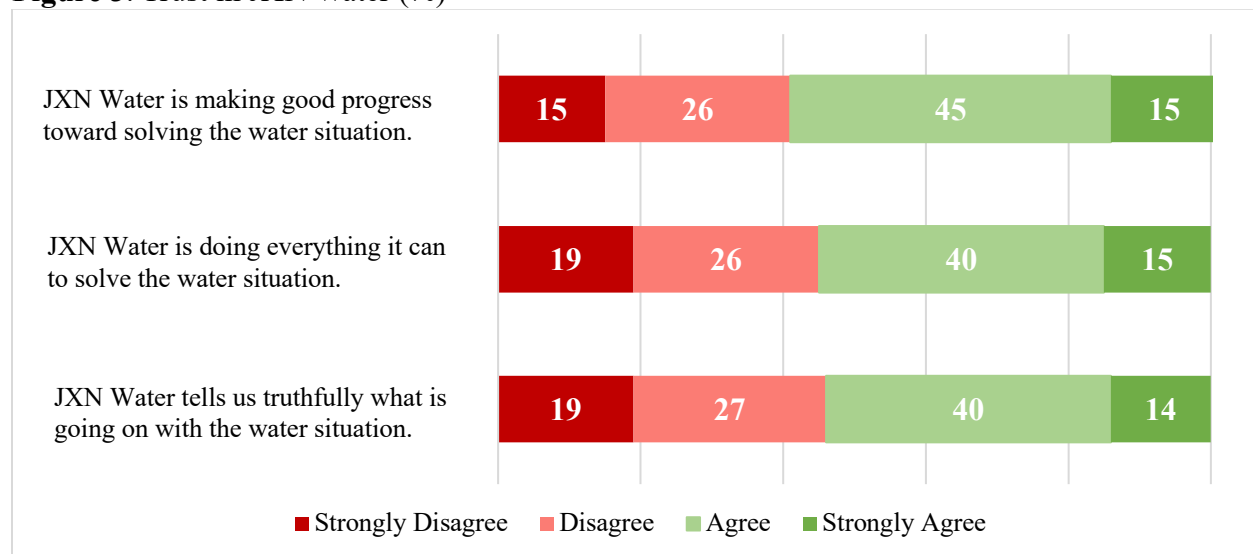
In Table 4, each measure of distrust is disaggregated by sex, racial background, and education level. The most significant development is the change on the item “JXN Water does not know what it is doing.” Only 38% of residents strongly agree/agree with this statement. Approximately 12 months ago in Survey Wave I, a striking 65% of residents strongly agreed/agreed with this same statement. Forty-four percent of residents felt this way in Survey Wave II nearly six months ago. In this current survey wave, only 40% of Black residents strongly agree/agree with this same statement, which is a noteworthy gain from Survey Wave I when it was 66% among Black residents. On these three measures overall, females report greater distrust in JXN Water than male residents do while Black residents still have greater distrust in JXN Water compared to White residents. Less educated residents also report greater distrust than more educated residents.

Table 4. Distrust in JXN Water (% of respondents who strongly agree/agree)

	Full Sample (%)	Female (%)	Male (%)	Black (%)	White (%)	High School Ed. (%)	Univ. Ed. (%)
JXN Water withholds important information from the public about the water situation.	51	56	40	57	35	63	47
JXN Water places its own interests above the interests of the public.	44	47	39	47	36	51	42
JXN Water does not know what it is doing	38	43	28	40	30	50	34

Note. Responses are from 2,462 resident customers.

In Figure 3, we present three measures of trust in JXN Water. Trust is clearly on the rise with a growing majority of residents indicating trust in JXN Water on all three survey items. Approximately, 60% of residents strongly agree/agree that JXN Water is making good progress toward solving the water situation – a substantial advance from 54% saying so in Survey Wave II and a large gain from only 28% saying reporting in this way in Survey Wave I nearly one year ago. Fifty-five percent of residents strongly agree/agree that JXN Water is doing everything it can to solve the water situation while 54% percent of residents strongly agree/agree that JXN Water is being truthful about the water situation. Based on the average of these three survey items, 56% of residents now indicate having trust in JXN Water, compared with only 29% on Survey I.

Figure 3. Trust in JXN Water (%)

Note. Responses are from 2,462 resident customers.

In Table 5, most residents (59%) strongly agree/agree that JXN Water is making good progress toward solving the water situation. By contrast, in Survey Wave I, only 28% reported feeling this way. White residents and customers with more education report greater trust in JXN Water but the gap is closing with majorities of Black residents and those with a high school education or less indicating growing trust in JXN Water on three items (excepting the 49% for Black residents on the first trust item).

Table 5. Trust in JXN Water (% of respondents who strongly agree/agree)

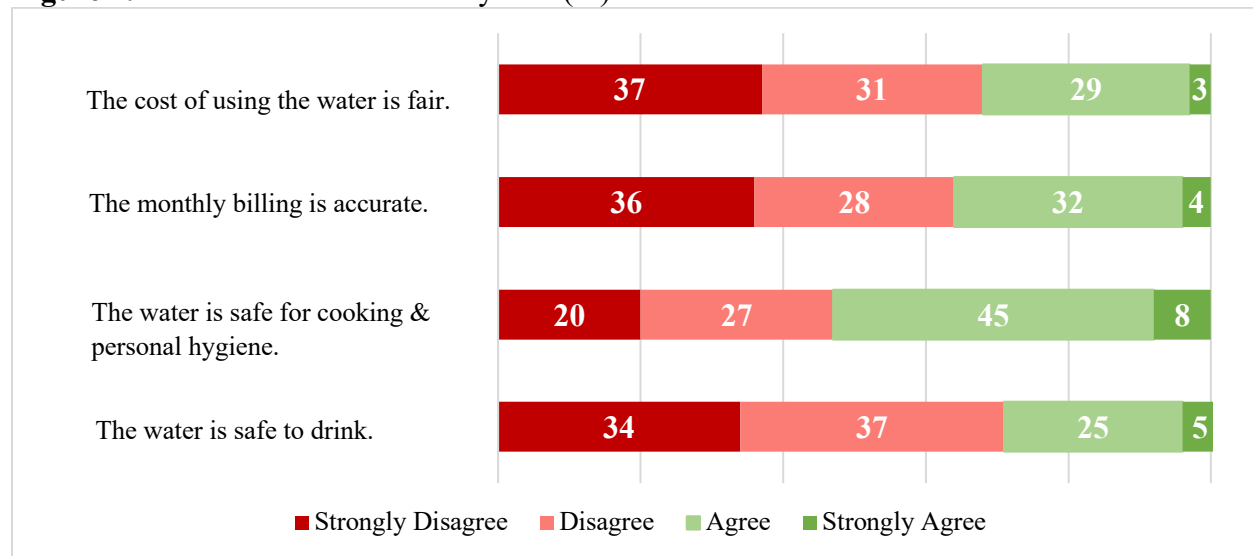
	Full Sample (%)	Female (%)	Male (%)	Black (%)	White (%)	High School Ed. (%)	Univ. Ed. (%)
JXN Water tells us truthfully what is going on with the water situation.	54	48	66	49	67	54	57
JXN Water is doing everything it can to solve the water situation.	55	52	62	53	63	54	57
JXN Water is making good progress toward solving the water situation.	59	56	66	57	68	57	61

Note. Responses are from 2,462 resident customers.

Confidence in Jackson's Water System

In Figure 4, 32% of residents strongly agree/agree that the cost of using water is fair, which is down from 34% in Survey Wave II. In this survey, 35% strongly agree/agree that monthly billing is accurate, whereas only 13% of respondents reported this way in Survey Wave I and 33% did so in Survey Wave II. Fifty-three percent of residents strongly agree/agree that the water is safe for cooking and personal hygiene, and 30% strongly agree/agree that the water is safe to drink. These are improvements of 5% and 6% between Survey Wave II and III. Based on the average in these four measures 38% of residents express confidence in the water system, contrasted with 15% (strongly agree/agree) who reported this way in Survey Wave I.

Figure 4. Confidence in the Water System (%)



Note. Responses are from 2,462 resident customers.

In Table 6, residents who are Black, female, and have a high school education or less have stronger negative views about the safety of the water for drinking, cooking, and personal hygiene. However, these three subgroups of respondents showed slight improvements in their perceptions of the water system between Survey Wave II and III. Among residents with a university degree or higher, only 33% feel that the cost of using water is fair. This result is notable because this group of respondents generally holds more positive views of JXN Water and its management of the water system.

Table 6. Confidence in Water System (% of respondents who strongly agree/agree)

	Full Sample (%)	Female (%)	Male (%)	Black (%)	White (%)	High School Ed. (%)	Univ. Ed. (%)
The water is safe to drink.	30	22	43	24	44	21	33
The water is safe for cooking and personal hygiene.	53	44	69	45	74	43	57
If there is a disruption to the water, it will be fixed in a timely manner.	47	42	56	43	60	43	49
The monthly billing is accurate.	36	32	44	30	52	34	40
The cost of using the water is fair.	32	29	37	29	41	31	33
The water system will never get fixed.	42	45	36	43	39	50	39

Individual Wellbeing and the Water Crisis

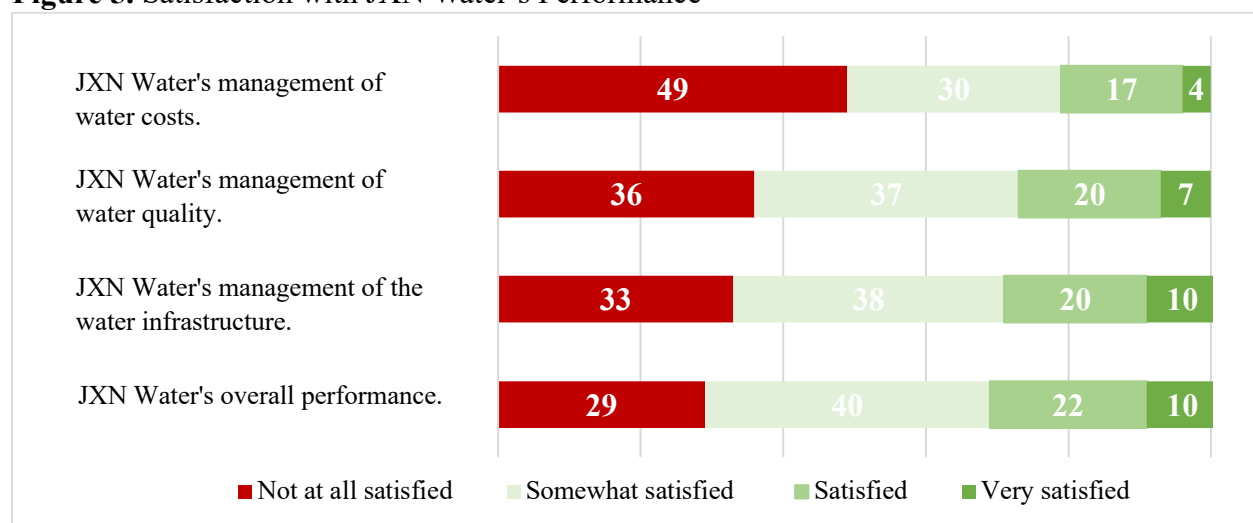
In Table 7, most residents (62%) report that they strongly agree/agree that they feel angry about the water situation while 66% of residents strongly agree/agree that they worry about the water situation a lot. These are improvements from Survey Wave II. Forty-one percent of residents strongly agree/agree that they spend a lot more time on household tasks because of the water situation. The average for these three questions is 66%, but the average was 76% in Survey Wave I. In Table 7, Black, female, and less educated customers express more negative perceptions on these survey items.

Table 7. Individual wellbeing (% of respondents who strongly agree/agree)

	Full Sample (%)	Female (%)	Male (%)	Black (%)	White (%)	High School Ed. (%)	Univ. Ed. (%)
I worry about the water situation a lot.	66	70	59	70	57	74	65
I spend a lot more time on household tasks because of the water situation.	41	45	33	45	29	53	37
I feel angry about the water situation.	62	65	58	63	57	67	61

For the first time, we asked customers to rate their level of satisfaction with JXN Water in Survey Wave III. Fifty-one percent of customers expressed a degree of satisfaction with JXN Water's overall performance. Consistent with results on other survey items, customers are least satisfied with JXN Water's management of water costs with 49% reporting that they are not all satisfied with JXN Water in this area.

Figure 5. Satisfaction with JXN Water's Performance



Note. Responses are from 2,462 resident customers.

Geographic Differences

For this third survey wave, we examined potential geographic differences within Jackson. Table 8 indicates that residents living in the eastern section of the city exhibit more positive perceptions on measures of distrust, trust, confidence in the water system, and individual wellbeing. Residents in the southern section of Jackson report the most negative perceptions while residents living in the northern and western sections of the city tend to have slightly higher perceptions than those in the southern section of Jackson (excepting the measure of distrust).

Table 8. Results by Geographic Area (% of respondents who strongly agree/agree)

	East	North	South	West
Distrust in JXN Water	35	45	52	50
Trust in JXN Water	64	55	49	53
Confidence in Water System	46	34	30	32
Individual Well-Being (negative effects)	50	59	64	61

Note. Responses are from 2,261 customers residing in Jackson.

RESULTS:

JXN WATER'S NEW RATE PLAN AND COMMUNICATION STRATEGIES

Perceptions of JXN Water's New Rate Plan

In Survey Wave III, residents were asked how familiar they were with JXN Water's new rate plan. Only 22% indicated that they were very familiar/familiar with the plan, whereas 35% said that they were somewhat familiar with it, and 43% said that they were not familiar with the new plan at all.

We also asked about perceptions of the new rate plan (effective February 2024). In Table 8, we present results for residents who indicated that they were either "somewhat familiar", "familiar", or "very familiar" with the new water rate plan. Results for residents who said that they were "not at all familiar" with the new plan are in the parentheses in Table 8. Importantly, customers have expressed a degree of familiarity with the new rate plan have much more positive views of it than customers who are unfamiliar with the rate plan.

Table 9. Perceptions of JXN Water's Rate Plan (% of respondents who strongly agree/agree)

	Full Sample (%)	Female (%)	Male (%)	Black (%)	White (%)	High School Ed. (%)	Univ. Ed. (%)
The new rate plan will ensure that Jackson residents have safe and reliable water into the future.	53 (35)	48 (32)	60 (40)	51 (32)	57 (46)	59 (34)	52 (35)
I am able to afford monthly payments under the new rate plan.	56 (35)	50 (31)	65 (45)	49 (31)	68 (55)	48 (36)	59 (39)
I am aware that JXN Water has assistance programs if I fall behind on my monthly bills.	66 (40)	62 (38)	72 (43)	62 (37)	73 (50)	61 (49)	68 (41)
JXN Water makes it easy to pay my monthly bill.	73 (55)	71 (52)	77 (60)	71 (54)	77 (58)	78 (51)	73 (57)

Note. Results for residents who said that they were "not at all familiar" with the plan are in the parentheses in Table 8.

JXN Water's Communication

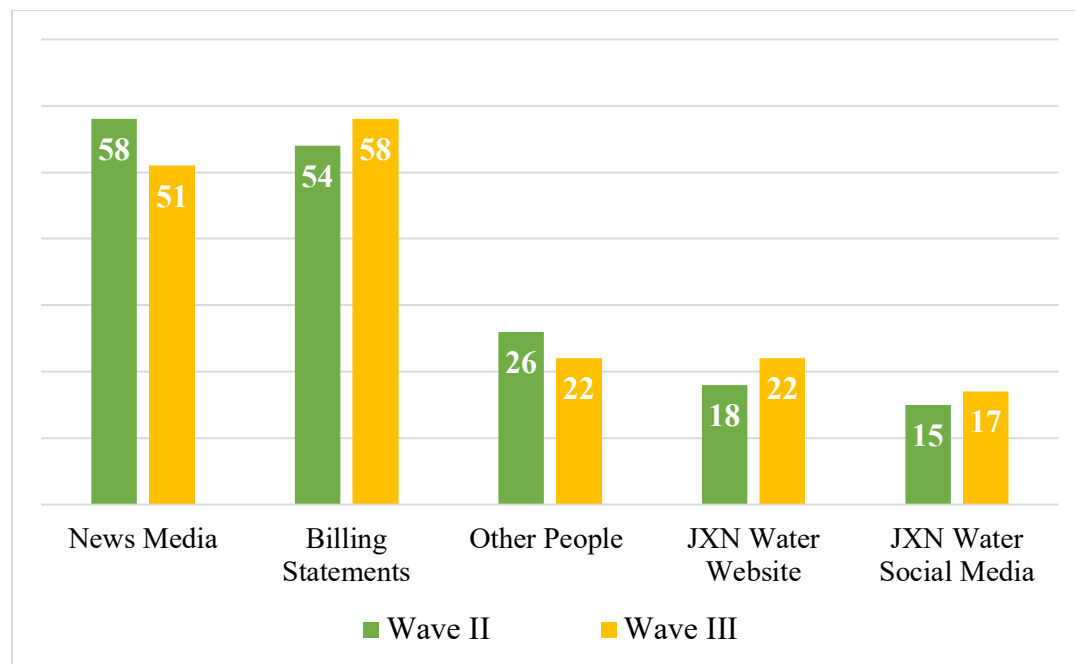
In Table 9, most residents (62%) can recall information from the news media about JXN Water in the past three months. Most residents (70%) can also recall communication from JXN Water itself in the past three months, including its annual water quality report (70%). Between Wave II and III, a greater percentage of residents were able to recall communications from JXN Water but a smaller percentage were able to recall information from the news media.

Table 10. Recollection of information about/from JXN Water.

	Yes (%) Survey Wave II	Yes (%) Survey Wave III
I can recall information from news media about JXN Water in the past three months	69	62
I can recall information from JXN Water's communication in the past three months	66	70
I am aware of JXN Water's annual water quality report.	61	70

In Figure 6, respondents' main sources of information about JXN Water come from the news media and billing statements. This finding was consistent between Survey Wave II (Fall, 2023) and Wave III (Spring, 2024).

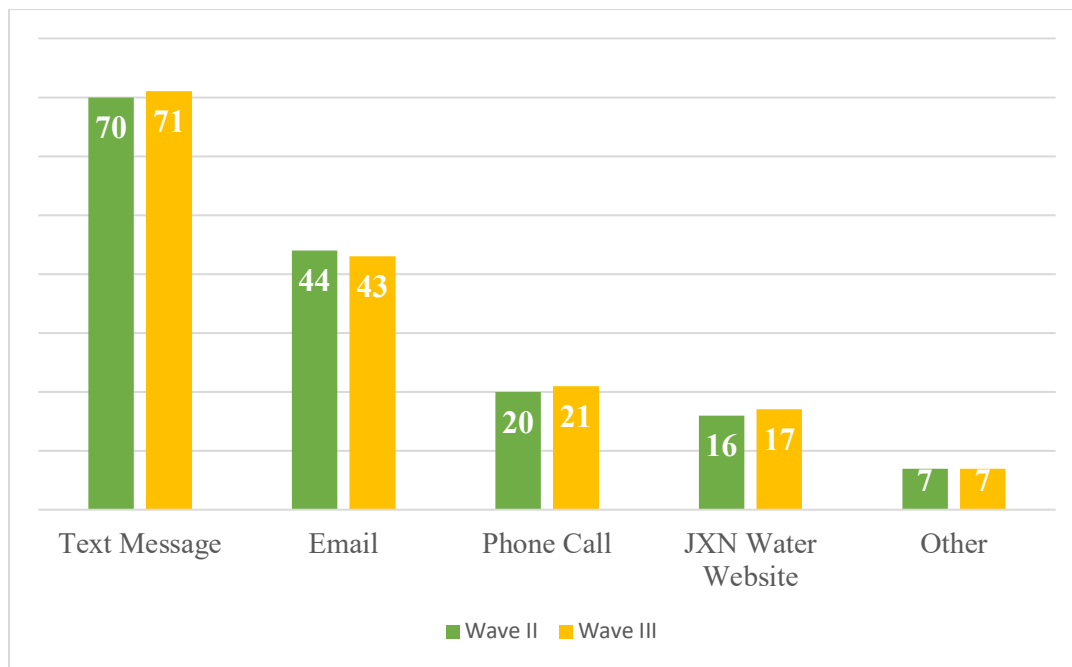
Figure 6. Sources of information about JXN Water (%)



Note. Wave III results come from 2,451 customers.

In Figure 7, 71% of customers prefer to be contacted by text message for non-emergencies while 43% prefer email. These findings are consistent for both Survey Waves II and III. This information is worth highlighting because JXN Water's updated database contains improved information (including cell phone numbers) for its customer base.

Figure 7. Preferred mode of contact for non-emergencies



Note. Wave III results come from 2,450 customers.

CONCLUSION

The THRIVE Center began monitoring perceptions of JXN Water and the water system approximately one year ago. During the first six months (Survey Wave I to II) of this work, customers reported dramatic improvements in their perceptions of JXN Water and its management of the water system. During the latter six months (Survey Wave II and III), residents reported steady improvements on nearly every survey item although these changes are more subdued than those observed during the second survey wave.

The overall evidence suggests the trust and distrust in JXN Water have risen significantly. Most customers believe that progress is being made and that Jackson Water is competent. JXN Water continues to enhance perceptions of water safety although the percentage of residents who feel that the water is safe to drink remains low at 30%.

Perceptions of billing exhibit only minor gains while beliefs about the fairness of water costs actually declined slightly between Survey Wave II and III. Residents also continue to express frustration with billing and water usage (e.g., inaccurate billing, high costs) in the comments section of the survey (see the Appendix for customer comments).

Summary of Main Results

- **Steady improvements for JXN Water on major measures.** Results showed steady improvements (4% to 9%) on measures of distrust, trust, confidence in the water system, and individual wellbeing from Survey Wave II to Wave III. The overall evidence suggests that trust and distrust in JXN Water have improved significantly from one year ago in Survey Wave I. Every facet of trust and distrust and individual well-being has seen substantial improvements while most customers now believe that progress is being made and that JXN Water is competent.
- **Rising confidence in JXN Water and the water system.** For the first time since our survey of JXN Water's customers, most residents (53%) now say that the water is safe for cooking and personal hygiene. Fifty-nine percent of residents report that JXN Water is making good progress toward solving the water situation, and only 38% now say that JXN Water does not know what it is doing, compared with 65% of residents reporting in this way on the first survey over one year ago.
- **Improvements among key demographics.** Approximately 82% of Jackson's residents are Black. On initial surveys, Black residents had much lower perceptions of JXN Water than White residents did. Based on results from Survey Wave III, Black residents' perceptions of JXN Water have risen so that a majority Black residents now report having trust in JXN Water, whereas nearly a quarter of Black residents reported feeling this way on Survey Wave I.

- **Water costs remain a major concern.** Water costs were the one area that did not show an improvement between Survey Wave II and III. Residents reported a 2% decrease in perceived fairness of the cost of using the water in Jackson. This decline is largely driven by a decrease from 47% to 41% of White and more educated customers. JXN Water's management of water costs is an area where customers are least satisfied with JXN Water's performance.
- **Views on the new water rate plan depend on familiarity.** Among residents who are at least somewhat familiar with JXN Water's new rate plan, 53% have a positive view of the new plan. Only 35% have a positive view of the plan among those who are unfamiliar with the plan.

Discussion of Results

Most customers now express having trust in JXN Water. Customers also feel that JXN Water is competent. JXN Water's efforts to restore public trust in the leadership of the water system appear to be resonating with customers. Because perceptions at baseline were so low, there was substantial room for growth between Survey Waves I and II. In Survey Wave III, it appears that JXN Water has established a higher level of support within its customer base. As a result, progress is likely to be steady rather than punctuated by sharp spikes (or declines) in future work.

Gains in customer trust and distrust in JXN Water as presented in this report appear consistent with existing experimental evidence. Large increases in each facet of trust and large decreases in each facet of distrust parallel the reported increased confidence in JXN Water's leadership and management of the water system. Approximately 72 percent of customers express satisfaction with JXN Water's performance.

Despite these laudable gains, continued improvements seem to be necessary. Most customers still do not feel that the water is safe to drink, which can become a considerable financial loss for low-income households in Jackson. It will likely take time, continued improvements, and consistent effort working with the community for the public to gain confidence in the water as a source of drinking water.

For the new rate plan, customer perceptions were more favorable for customers who reported some familiarity with the plan. For these customers, approximately 53 percent believed the rate plan can achieve its goal of ensuring safe and reliable water into the future. Additionally, customers with some familiarity with the plan were more likely to report that they can afford monthly bills, that they were more aware of financial assistance, and that they held positive views of bill payment options. Educating the public on the new plan may help to cultivate much more positive views of it. JXN Water's messaging strategy may be critical.

Overall, the results support JXN Water's focus on restoring customer trust in the water system and its management and leadership. In moving forward, JXN Water's leaders might keep in mind research evidence indicating that trust in public services forms according to the following conditions:

- Credible and Clear Information
- Candid progress monitoring and reporting relative to standards
- Transparency and honesty
- Presence and visibility of leaders

Trust tends to decrease based on the following behaviors:

- Elusive Language
- Defensive strategies and statements designed to hide what may be unpopular
- Overly optimistic projections

Future Surveys (Survey Wave IV and beyond)

For the fourth survey wave, we intend to monitor major measures that we have assessed in the previous three survey waves. Furthermore, our team plans to introduce new areas of inquiry that may assist with how JXN Water communicates with customers. We see usefulness in adding new survey items that query specific initiatives that JXN Water is undertaking in the community, such as those related to the new rate plan.

It may be helpful for our research team to work with JXN Water personnel to identify additional areas of inquiry that can inform decisions and actions related to the current management of the water system. Our team hopes to work with JXN Water to test different strategies for educating customers about the new rate plan. Such efforts may prove beneficial since customers who are more knowledgeable about the new water rate plan also have more positive perceptions of it. We also hope to explore billing in greater detail. Billing has remained a major challenge – most customers still raise billing and water costs concerns in the comments section of the survey.

JXN Water's leadership may be considering the eventual transition from the third-party manager to city management. In future reports, we can begin to collect data to inform this transition process as it may take several years to ensure a smooth transition. JXN Water may wish to inquire about local leaders' views on returning the water system to local officials. We can also conduct confidential and in-depth interviews with JXN Water's employees to identify areas of possible focus once the transition process begins. One pathway to achieving this objective may be to ensure that what has been learned from JXN Water under third-party management (technical and managerial expertise) is then embedded in the institutional memory of the governing body that succeeds it. Our team can assist with identifying organizational expertise that can be translated into formal policies and procedures.

These are potential areas of inquiry for future survey administrations. We would welcome the opportunity to learn more about JXN Water's areas of interest for future survey waves.

APPENDIX

SURVEY DESIGN – WAVE III

Table 1A. Survey Items and Measures

Survey Measure	Survey Items Comprising Measures	Cronbach's Alpha
Trust in JXN Water (n = 2,462)	-JXN Water tells us truthfully what is going on with the water situation. -JXN Water is doing everything it can to solve the water situation. -JXN Water is making good progress toward solving the water situation.	0.87
Distrust in JXN Water (n = 2,462)	- JXN Water withholds important information from the public about the water situation. -JXN Water places its own interests above interests of the public. -JXN Water does not know what it is doing.	0.73
Confidence in Water System (n = 2,462)	-The water is safe to drink. -The water is safe for cooking and personal hygiene. -If there is a disruption to the water, it will be fixed in a timely manner. -The monthly billing is accurate. -The cost of using the water is fair. -There are resources to make clean water available to everyone. -The water system will never get fixed.	0.87
Individual Well-Being (n = 2,462)	-I worry about the water situation a lot. -I spend a lot more time on household tasks because of the water situation. -I feel angry about the water situation. -I do not think about the water situation that much anymore. -I am grateful for the people working to fix the water situation. -I feel good about progress with the water situation.	0.83
Satisfaction with JXN Water Performance (n = 2,462)	-JXN Water's overall performance. -JXN Water's management of the water infrastructure. -JXN Water's management of water quality. -JXN Water's management of water costs.	0.91
New Rate Plan Familiarity	-Not Familiar at All -Somewhat Familiar -Familiar -Very Familiar	N/A
New Rate Plan Perceptions (n = 2,462)	-The new rate plan will ensure that Jackson residents have safe and reliable water into the future. -I am able to afford monthly payments under the new rate plan. -I am aware that JXN Water has assistance programs if I fall behind on my monthly bills. -JXN Water makes it easy to pay my monthly bill.	
JXN Water's Communication	-I am aware of JXN Water's annual water quality report. -I can recall information from JXN Water's communication in the past three months (website, mail, water bill, social media, commercials). -I can recall information from news media about JXN Water in the past three months.	N/A
JXN Water's Communication	-How do you receive most of your information about the water system in Jackson? -For non-emergency issues, how would you like JXN Water to communicate with you?	N/A

Note. The sample (n = 2,462) contains respondents who completed the following demographic information: sex, age, race/ethnicity, and highest level of education.

Table 2A. Survey Protocols

Data Collection	
Survey	<div> <div> Resident Survey 4 waves in 6-month intervals (May, 2023 – Jan., 2025) </div> <div> Community Leader Survey 4 waves in 6-month intervals (May, 2023 – Jan., 2025) </div> </div>
Purpose	<div> <div> The main objectives of the Jackson Water System Trust Survey are as follows: <ol style="list-style-type: none"> To collect data from a representative sample of resident customers who use JXN Water; To understand perceived trust and distrust in JXN Water, city government, overall functioning of the water system; household effects of the water crisis; and hope in the community to resolve the water crisis; and, To identify trends on these measures over time. </div> <div> The main objectives of the Jackson Water System Trust Survey are as follows: <ol style="list-style-type: none"> To collect data from a criterion sample of business and community leaders whose organizations are customers of JXN Water; To understand perceived trust and distrust in JXN Water, city government, overall functioning of the water system; household effects of the water crisis; and hope in the community to resolve the water crisis; and, To identify trends on these measures over time. </div> </div>
Target Population	<div> <div>Jackson City Residents (62,140 households)</div> <div>Jackson City Business Owners (3,326 Employer Firms and Community Organizations)</div> </div>
Sampling Design	<div> <div>Four cross-sectional survey waves repeated every six months for the Resident Survey. The Resident Survey aims to be representative of resident customers of JXN Water. JXN Water’s customer database was used to contact all resident customers. For survey waves 2-4, the research will identify repeat respondents to ascertain longitudinal trends across the four survey waves.</div> <div>Four cross-sectional survey waves repeated every six months for the Business and Community Leader Survey. This survey is derived from a non-representative criterion sample. JXN Water’s customer database was used to contact business and community customers. Two additional databases were also used. For survey waves 2-4, the research will identify repeat respondents to ascertain longitudinal trends across the four survey waves.</div> </div>
Mode	<div> <div>Surveys were performed electronically by contacting eligible respondents by email and text message.</div> <div>Surveys were performed electronically by contacting eligible respondents by email and text message.</div> </div>
Pre-sampling Objectives	<div> <div>Resident Sample: 1,051, +/-3 margin of error (95% confidence)</div> <div>Community Leader Sample: 345, +/-5 margin of error (95% confidence)</div> </div>

For the Resident Survey, results are representative of resident customers of JXN Water. Although these customer data are at the household level, we use recent data from the American Community Survey (2022) to calculate key population characteristics at the household and individual levels in Jackson, MS. We then compare household and individual population characteristics to determine the representativeness of the survey sample.

Table 3A. Target Population and Original Sample Frame

	Population (#)	Population (%)	Sample Targets (#)	Target Achieved (#)
Total Population	149,813		-	-
Population (20 and over)	110,354		1051	Yes
Population (20-64)	88,200		-	-
Households	62,140		1051	Yes
Gender				
Male (20-64)	40,116	45%	473	Yes
Female (20-64)	48,084	55%	578	Yes
Male (all, 149,813)	69,597	46%	483	Yes
Female (all, 149,813)	80,216	54%	568	Yes
Race				
Black (All, 149,813)	122,509	82%	862	Yes
White (All, 149,813)	21,225	14%	147	Yes
Other (All, 149,813)	6,079	4%	42	Yes
Educational Attainment (25 and over)				
High School or less (96,821)	36,609	38%	399	No
Some College	32,110	33%	347	Yes
4-year or higher	28,102	29%	305	Yes
Age				
20-29 (110,354)	24988	23%	242	No
30-44 (110,354)	29427	27%	284	Yes
45-64 (110,354)	33785	31%	326	Yes
65+ (110,354)	22154	20%	210	Yes
Median Age	34			
Household & Business Total	65,466		-	-
Household Total	62,140		-	-
Owner-occupied	28,891	46%	483	Yes
Renter-Occupied	33,249	54%	568	No

Table 4A. Timeline of major events for each survey wave

Timeline	Resident Survey	Community Leader Survey
Survey Wave 1. (May 1-June 30) <i>Report Delivered: June 30</i>	<u>Major Events</u> -May 1: Identification of sample from resident customer database - May 8: Initial email/texts to all households with email/phone information in customer database -May 12: Reminder 1. Follow up email, texts to sample -May 18: Reminder 2. Follow up email, texts -May 24: Coverage analysis -June 1: Criterion sampling with post-stratification to ensure representativeness -June 10: Data cleaning and analysis	<u>Major Events</u> -May 8: Identification of sample from business/organization customer database - May 16: Initial email/texts to all businesses/organizations with email/phone information in customer database -May 19: Reminder 1. Follow up email, texts to sample -May 25: Reminder 2. Follow up email, texts -May 28: Coverage analysis -June 1: Reminder 3. Chamber of Commerce and community organization databases -June 16: Data cleaning and analysis
Survey Wave 2. (Nov.-Dec., 2023) <i>Report Delivered: Jan 20, 2024.</i>	<u>Major Events</u> -November 1: Select random sample and update missing email and phone data in the database - November 8: Initial email/texts as part of probability sample of households with email/phone information in database -November 12: Reminder 1. Follow up email, texts to sample -May 18: Reminder 2. Follow up email, texts -November 23: Coverage analysis -December 1: Criterion sampling with post-stratification to ensure representativeness (Paper) -December 10: Data cleaning and analysis *Identify repeat sample	<u>Major Events</u> -November 1: Select random sample and update missing email and phone data in the database - November 8: Initial email/texts as part of probability sample of households with email/phone information in database -November 12: Reminder 1. Follow up email, texts to sample -May 18: Reminder 2. Follow up email, texts -November 23: Coverage analysis -December 1: Criterion sampling with post-stratification to ensure representativeness (Paper) -December 10: Data cleaning and analysis *Identify repeat sample
Survey Wave 3. (May 8-June 20, 2024)	<u>Major Events</u> -May 1: Select random sample and update missing email and phone data in the database	<u>Major Events</u> -May 1: Select random sample and update missing email and phone data in the database

<i>Report Delivered: June 30.</i>	<ul style="list-style-type: none"> - May 8: Initial email/texts as part of probability sample of households with email/phone information in database -May 12: Reminder 1. Follow up email, texts to sample -May 18: Reminder 2. Follow up email, texts -May 23: Coverage analysis -June 1: Criterion sampling with post-stratification to ensure representativeness (Paper) -June 10: Data cleaning and analysis <p>*Identify repeat sample</p>	<ul style="list-style-type: none"> - May 8: Initial email/texts as part of probability sample of households with email/phone information in database -May 12: Reminder 1. Follow up email, texts to sample -May 18: Reminder 2. Follow up email, texts -May 23: Coverage analysis -June 1: Criterion sampling with post-stratification to ensure representativeness (Paper) -June 10: Data cleaning and analysis <p>*Identify repeat sample</p>
<p>Survey Wave 4. (Nov.-Dec., 2024)</p> <p>Report Delivered: Jan. 20, 2025</p>	<p><u>Major Events</u></p> <ul style="list-style-type: none"> -November 1: Select random sample and update missing email and phone data in the database - November 8: Initial email/texts as part of probability sample of households with email/phone information in database -November 12: Reminder 1. Follow up email, texts to sample -November 18: Reminder 2. Follow up email, texts -November 23: Coverage analysis -December 1: Criterion sampling with post-stratification to ensure representativeness (Paper) -December 10: Data cleaning and analysis <p>*Identify repeat sample</p>	<p><u>Major Events</u></p> <ul style="list-style-type: none"> -November 1: Select random sample and update missing email and phone data in the database -November 8: Initial email/texts as part of probability sample of households with email/phone information in database -November 12: Reminder 1. Follow up email, texts to sample -May 18: Reminder 2. Follow up email, texts -November 23: Coverage analysis -December 1: Criterion sampling with post-stratification to ensure representativeness (Paper) -December 10: Data cleaning and analysis <p>*Identify repeat sample</p>

We performed regression analyses for each of the major measures while including gender, race, educational attainment, age, and education level in the statistical models. These models suggest that female residents give lower ratings to JXN Water after accounting for other demographic factors while older residents give more positive ratings to JXN Water. Black customers tend to have more negative views than White customers do on these measures after accounting for other factors.

Table 5A. Regression analysis predicting each measure of analysis (Wave III).

	Trust in JXN Water	Distrust in JXN Water	Confidence in Water System	Individual Wellbeing	Satisfaction with JXN Water
Female	-0.25*** (0.04)	-0.23*** (0.03)	-0.28*** (0.03)	-0.16*** (0.03)	-0.27*** (0.04)
Black	-0.28*** (0.04)	-0.26*** (0.04)	-0.27*** (0.03)	-0.22*** (0.03)	-0.41*** (0.04)
Other race	-0.41*** (0.08)	-0.44*** (0.07)	-0.33*** (0.07)	-0.42*** (0.07)	-0.53*** (0.08)
High school or less	-0.04 (0.06)	-0.21*** (0.05)	-0.11* (0.05)	-0.11* (0.05)	-0.08 (0.06)
Some college	-0.11** (0.04)	-0.08* (0.04)	-0.09** (0.03)	-0.07* (0.03)	-0.14*** (0.04)
Age	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)
Residence outside of Jackson	0.03 (0.06)	-0.04 (0.06)	0.20*** (0.05)	0.16** (0.05)	0.11 (0.06)
Constant	-0.13 (0.08)	-0.20** (0.07)	-0.24*** (0.06)	-0.17** (0.07)	-0.05 (0.08)
Observations	2,462	2,462	2,462	2,462	2,462
Adjusted R-squared	0.07	0.09	0.13	0.07	0.11

Note. The reference categories are white, 4-yr. degree or higher, and rents residents. Standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05

Table 6A. Regression analysis predicting each measure of analysis (Wave II).

Variables	Trust in JXN Water	Distrust in JXN Water	Confidence in Water System	Individual Wellbeing
Female	-0.17*** (0.04)	-0.17*** (0.04)	-0.22*** (0.03)	-0.14*** (0.03)
Black	-0.33*** (0.04)	-0.28*** (0.04)	-0.30*** (0.03)	-0.23*** (0.03)
Other race	-0.31** (0.10)	-0.27** (0.09)	-0.33*** (0.08)	-0.23** (0.08)
High school or less	-0.18** (0.06)	-0.13* (0.06)	-0.12* (0.05)	-0.13* (0.05)
Some college	-0.10* (0.04)	-0.16*** (0.04)	-0.11** (0.03)	-0.12*** (0.03)
Age	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)
Owns residence	0.13* (0.05)	0.06 (0.05)	0.08* (0.04)	0.06 (0.04)
Customer outside of Jackson	-0.11 (0.06)	-0.14* (0.06)	0.09 (0.05)	0.07 (0.05)

Constant	-0.31*** (0.08)	-0.32*** (0.08)	-0.35*** (0.07)	-0.27*** (0.07)
Observations	2,146	2,146	2,146	2,146
Adjusted R-squared	0.10	0.10	0.15	0.09

Note. The reference categories are white, 4-yr. degree or higher, and rents residents. Standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05

Table 7A. Regression analysis predicting each measure of analysis (Wave I).

	Trust in JXN Water	Distrust in JXN Water	Trust in City Leaders	Distrust in City Leaders	Confidence in Water System	Individual Wellbeing	Community Hope
Female	-0.12*** (0.03)	-0.13*** (0.03)	-0.02 (0.03)	0.01 (0.03)	-0.16*** (0.03)	-0.08** (0.03)	-0.01 (0.03)
Black	-0.04 (0.04)	-0.01 (0.03)	0.33*** (0.04)	0.27*** (0.03)	-0.13*** (0.03)	-0.04 (0.03)	0.10** (0.04)
Other race	-0.12 (0.08)	-0.21** (0.08)	0.19* (0.08)	0.15 (0.08)	-0.25*** (0.07)	-0.22** (0.07)	-0.03 (0.08)
High school or less	-0.04 (0.06)	-0.06 (0.05)	0.14* (0.05)	0.18*** (0.05)	-0.03 (0.04)	0.01 (0.04)	-0.15** (0.05)
Some College	-0.04 (0.04)	-0.01 (0.03)	0.01 (0.04)	0.10** (0.03)	-0.07** (0.03)	-0.04 (0.03)	-0.09* (0.03)
Age	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	-0.00 (0.00)
Own Residence	0.08 (0.04)	0.01 (0.04)	-0.03 (0.04)	-0.03 (0.04)	0.06 (0.03)	0.05 (0.03)	0.03 (0.04)
Residence outside of Jackson	-0.12* (0.06)	-0.07 (0.05)	0.02 (0.06)	0.05 (0.05)	0.10* (0.04)	0.10* (0.05)	-0.18** (0.06)
Constant	-0.41*** (0.07)	-0.39*** (0.07)	-0.82*** (0.07)	-0.72*** (0.07)	-0.31*** (0.06)	-0.33*** (0.06)	-0.01 (0.07)
Observations	2,970	2,970	2,970	2,970	2,970	2,970	2,970
Adjusted R- squared	0.03	0.03	0.07	0.06	0.07	0.03	0.01

Note. The reference categories are white, 4-yr. degree or higher, and rents residents. Standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05

FULL ITEM-LEVEL RESULTS FOR SURVEY WAVE III

Resident Survey

Trust in JXN Water ($n = 2,462$)

Table 1B. JXN Water tells us truthfully what is going on with the water situation.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	19	27	40	14
Male	15	19	47	19
Female	21	31	37	11
Black	21	30	40	10
White	14	19	43	24
Other race	22	35	34	9
High school or less	19	27	37	16
Some college	20	31	40	9
4-year degree or higher	18	25	41	16
Age 20-29	25	31	36	8
Age 30-44	25	30	31	14
Age 45-64	19	27	42	13
Age 65+	14	25	46	15
Outside Jackson with JXN water	17	26	48	8

Table 2B. JXN Water is doing everything it can to solve the water situation.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	19	26	40	15
Male	15	23	40	22
Female	21	27	40	12
Black	20	27	42	11
White	16	21	37	26
Other race	19	43	26	12
High school or less	20	26	39	15
Some college	20	28	40	12
4-year degree or higher	18	25	40	17
Age 20-29	28	32	32	8
Age 30-44	24	27	36	14
Age 45-64	18	27	40	15
Age 65+	14	22	44	19
Outside Jackson with JXN water	20	20	48	12

Table 3B. JXN Water is making good progress toward solving the water situation.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	15	25	45	15
Male	12	21	44	22
Female	17	28	45	10
Black	17	26	47	10
White	12	20	43	25
Other race	15	46	29	11
High school or less	19	25	45	12
Some college	17	27	45	11
4-year degree or higher	14	25	44	17
Age 20-29	26	26	42	6
Age 30-44	20	26	41	14
Age 45-64	15	27	44	14
Age 65+	11	22	49	18
Outside Jackson with JXN water	13	24	49	13

Distrust in JXN Water ($n = 2,462$)**Table 4B.** JXN Water withholds important information from the public about the water situation.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	15	35	35	16
Male	20	40	27	13
Female	12	32	39	18
Black	11	32	39	18
White	24	42	23	11
Other race	9	22	46	24
High school or less	11	26	42	22
Some college	12	34	38	16
4-year degree or higher	17	36	31	15
Age 20-29	5	28	35	32
Age 30-44	13	31	33	24
Age 45-64	15	34	36	15
Age 65+	17	39	34	10
Outside Jackson with JXN water	10	36	39	15

Table 5B. JXN Water places its own interests above interests of the public.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	16	40	30	14

Male	19	42	26	13
Female	14	39	32	15
Black	13	40	33	14
White	22	42	22	14
Other race	12	35	36	17
High school or less	16	34	34	16
Some college	14	40	33	13
4-year degree or higher	17	42	28	14
Age 20-29	13	34	28	25
Age 30-44	15	34	30	21
Age 45-64	16	42	30	13
Age 65+	17	44	30	9
Outside Jackson with JXN water	15	41	27	17

Table 6B. JXN Water does not know what it is doing.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	19	43	24	14
Male	28	44	18	10
Female	14	43	27	15
Black	13	47	26	14
White	33	37	17	13
Other race	9	38	39	15
High school or less	13	37	34	16
Some college	13	45	28	14
4-year degree or higher	23	44	20	13
Age 20-29	8	39	19	34
Age 30-44	17	37	25	20
Age 45-64	18	45	25	12
Age 65+	23	47	21	8
Outside Jackson with JXN water	14	52	19	14

Water and Water System ($n = 2,462$)

Table 7B. The water is safe to drink.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	34	37	25	5
Male	22	35	35	8
Female	40	38	19	3
Black	39	37	21	3
White	22	34	36	9
Other race	37	43	15	4

High school or less	40	38	18	3
Some college	37	37	23	4
4-year degree or higher	31	36	27	5
Age 20-29	46	34	18	2
Age 30-44	46	32	18	4
Age 45-64	34	37	25	4
Age 65+	22	41	31	6
Outside Jackson with JXN water	31	36	28	4
Full sample	34	37	25	5
Male	22	35	35	8

Table 8B. The water is safe for cooking and personal hygiene.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	20	27	45	8
Male	11	20	56	13
Female	25	30	40	5
Black	25	31	41	4
White	10	17	57	17
Other race	24	33	38	5
High school or less	30	27	40	4
Some college	22	30	43	5
4-year degree or higher	18	25	47	10
Age 20-29	26	22	45	7
Age 30-44	27	26	38	9
Age 45-64	21	27	46	6
Age 65+	14	27	49	10
Outside Jackson with JXN water	16	24	52	8

Table 9B. If there is a disruption to the water, it will be fixed in a timely manner.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	20	33	41	6
Male	14	30	46	10
Female	23	34	38	4
Black	22	35	38	5
White	15	25	50	11
Other race	23	47	24	6
High school or less	22	35	38	5
Some college	22	34	39	5
4-year degree or higher	19	32	42	8
Age 20-29	29	34	32	5

Age 30-44	29	30	34	6
Age 45-64	20	35	39	6
Age 65+	12	31	49	8
Outside Jackson with JXN water	17	33	45	4

Table 10B. The monthly billing is accurate.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	36	28	32	4
Male	30	25	37	7
Female	39	29	29	3
Black	39	30	27	3
White	26	22	44	7
Other race	42	29	24	6
High school or less	36	30	30	4
Some college	38	32	27	3
4-year degree or higher	35	25	35	5
Age 20-29	51	16	31	2
Age 30-44	45	21	29	5
Age 45-64	34	30	31	4
Age 65+	29	30	37	4
Outside Jackson with JXN water	23	22	44	10

Table 11B. The cost of using the water is fair.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	37	31	29	3
Male	31	32	33	4
Female	40	31	26	3
Black	39	32	26	3
White	30	29	37	4
Other race	46	34	17	4
High school or less	38	31	27	4
Some college	39	31	26	3
4-year degree or higher	36	31	30	3
Age 20-29	59	20	16	5
Age 30-44	47	27	23	3
Age 45-64	37	32	29	3
Age 65+	27	34	35	4
Outside Jackson with JXN water	22	19	51	8

Table 12B. There are resources to make clean water available to everyone.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	18	27	45	11
Male	12	24	50	13
Female	21	28	42	10
Black	19	27	44	10
White	14	25	49	12
Other race	22	30	35	13
High school or less	20	27	40	14
Some college	18	27	45	10
4-year degree or higher	17	26	46	11
Age 20-29	28	32	31	9
Age 30-44	26	30	32	12
Age 45-64	17	26	46	10
Age 65+	11	23	54	12
Outside Jackson with JXN water	12	29	49	9

Table 13B. The water system will never get fixed.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	12	46	25	16
Male	15	48	24	13
Female	10	45	26	19
Black	11	46	25	18
White	13	48	26	13
Other race	14	40	26	20
High school or less	11	39	27	23
Some college	9	46	26	18
4-year degree or higher	13	48	25	14
Age 20-29	7	38	29	26
Age 30-44	9	39	26	26
Age 45-64	11	48	25	16
Age 65+	16	51	25	8
Outside Jackson with JXN water	12	47	27	14

Individual Wellbeing ($n = 2,462$)

Table 14B. I worry about the water situation a lot.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	6	28	39	27
Male	7	33	40	19
Female	5	25	39	31
Black	5	25	39	31
White	7	36	39	17
Other race	4	18	46	32
High school or less	5	21	42	32
Some college	6	27	39	28
4-year degree or higher	6	30	39	26
Age 20-29	4	20	42	34
Age 30-44	5	21	39	35
Age 45-64	5	28	41	27
Age 65+	8	35	37	19
Outside Jackson with JXN water	5	37	38	20

Table 15B. I spend a lot more time on household tasks because of the water situation.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	11	48	28	13
Male	13	53	24	9
Female	9	46	30	15
Black	8	47	31	14
White	17	54	21	7
Other race	7	38	32	22
High school or less	7	40	35	18
Some college	8	48	31	12
4-year degree or higher	13	50	25	12
Age 20-29	9	46	27	18
Age 30-44	10	43	28	18
Age 45-64	10	50	28	12
Age 65+	13	51	27	8
Outside Jackson with JXN water	11	62	17	9

Table 16B. I feel angry about the water situation.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	8	30	38	25
Male	8	34	36	21
Female	7	28	39	26
Black	7	30	38	25
White	9	33	37	20
Other race	8	15	38	39
High school or less	6	26	38	30
Some college	7	30	37	26
4-year degree or higher	8	31	38	23
Age 20-29	4	22	38	36
Age 30-44	5	22	39	34
Age 45-64	7	32	37	24
Age 65+	11	34	39	16
Outside Jackson with JXN water	10	40	30	20

Table 17B. I do not think about the water situation that much anymore.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	23	39	32	5
Male	20	40	35	6
Female	26	39	31	4
Black	26	37	32	5
White	17	43	36	5
Other race	32	46	18	3
High school or less	26	33	37	5
Some college	25	37	33	5
4-year degree or higher	22	42	31	5
Age 20-29	33	42	24	1
Age 30-44	29	41	26	5
Age 45-64	24	39	32	5
Age 65+	17	37	40	6
Outside Jackson with JXN water	18	34	45	3

Table 18B. I am grateful for the people working to fix the water situation.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	5	6	56	32
Male	5	6	52	37
Female	5	7	59	30
Black	6	7	59	29
White	3	5	50	42
Other race	7	7	60	25
High school or less	6	7	59	29
Some college	7	8	57	28
4-year degree or higher	4	5	56	35
Age 20-29	6	2	64	28
Age 30-44	5	5	52	38
Age 45-64	5	7	57	31
Age 65+	5	6	59	30
Outside Jackson with JXN water	4	6	58	32
Full sample	5	6	56	32
Male	5	6	52	37

Table 19B. I feel good about progress with the water situation.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	13	28	46	13
Male	11	25	45	19
Female	14	29	46	10
Black	14	29	47	10
White	10	22	46	21
Other race	15	46	29	10
High school or less	15	27	47	11
Some college	14	30	45	11
4-year degree or higher	12	27	46	15
Age 20-29	19	35	40	6
Age 30-44	18	28	41	13
Age 45-64	13	29	46	13
Age 65+	9	25	50	16
Outside Jackson with JXN water	8	25	54	12

Satisfaction with JXN Water's Performance ($n = 2,462$)

Table 20B. How satisfied are you with JXN Water's management of the water system? Overall performance.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	29	22	39	10
Male	22	26	36	16
Female	32	19	41	7
Black	31	21	43	5
White	21	25	32	22
Other race	44	12	37	7
High school or less	30	18	46	6
Some college	31	21	42	6
4-year degree or higher	27	23	37	13
Age 20-29	40	15	40	5
Age 30-44	37	17	36	10
Age 45-64	29	21	40	9
Age 65+	19	27	41	13
Outside Jackson with JXN water	23	28	42	6

Table 21B. How satisfied are you with JXN Water's management of the water system? Management of the water infrastructure.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	33	20	38	10
Male	26	24	35	15
Female	36	17	40	7
Black	36	18	40	5
White	24	24	32	21
Other race	41	12	40	7
High school or less	33	18	43	6
Some college	36	18	41	5
4-year degree or higher	32	21	35	12
Age 20-29	45	14	34	7
Age 30-44	41	14	34	10
Age 45-64	35	20	37	8
Age 65+	21	24	43	12
Outside Jackson with JXN water	32	22	40	5

Table 22B. How satisfied are you with JXN Water's management of the water system?
Management of water quality.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	36	20	37	7
Male	28	26	34	12
Female	40	17	38	5
Black	38	18	40	4
White	28	27	29	17
Other race	44	16	36	4
High school or less	36	18	41	6
Some college	40	19	38	3
4-year degree or higher	33	21	35	10
Age 20-29	49	15	32	4
Age 30-44	43	15	34	9
Age 45-64	37	21	36	6
Age 65+	25	24	41	9
Outside Jackson with JXN water	32	20	42	5

Table 23B. How satisfied are you with JXN Water's management of the water system?
Management of water costs.

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Full sample	49	17	30	4
Male	42	21	31	6
Female	53	14	30	3
Black	53	14	31	2
White	39	24	30	8
Other race	62	11	24	3
High school or less	50	15	32	3
Some college	54	15	29	2
4-year degree or higher	47	18	30	5
Age 20-29	66	11	21	2
Age 30-44	54	15	25	5
Age 45-64	50	15	32	3
Age 65+	41	21	33	4
Outside Jackson with JXN water	32	27	36	5

About THRIVE

This report was prepared for JXN Water by the THRIVE Center. The THRIVE Center was established in 2021 in the Jeannine Rainbolt College of Education at the University of Oklahoma. THRIVE is a resource for state officials, government agencies, schools, community groups, educators, and parents. THRIVE responds to its partners' needs through engaged scholarship and rigorous research evaluation.

Leadership is central to the work of thriving schools and communities, but conventional leadership frameworks are insufficient to guide organizational leaders to cultivate conditions in which human potential is optimized. Organizations need new practices to bring forth innovative solutions to entrenched social, governmental, and educational problems. THRIVE aligns its work toward achieving this objective.



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Endnotes

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