Orange Water and Sewer Authority

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.

Agenda

Strategic Plan Work Session of the OWASA Board of Directors and Staff Leadership

Thursday, November 18, 2021, 3:00 PM

Format: Virtual Zoom Meeting (Large group and small group discussions); Attendees should register for the Zoom Meeting beforehand via the following link: https://us02web.zoom.us/meeting/register/tZIvdOygrTIiHdRhai7RiJqfoqDckYMURISB

Facilitators: Raftelis Consultants Catherine Carter and Doug Bean

Subject Matter Experts: Mary Tiger, Jennifer Hunter, and Blake Hodge

Participants: OWASA Board of Directors, Department Directors, and Executive Director

Workshop Goals:

1. Provide context for the development of OWASA's strategic plan
2. Share results from environmental and organizational scan
3. Discuss participant reactions, surprises, and other key takeaways.

Discussion Outline:

1. Introductions
   - Welcome and introductions
   - Agenda review
   - Norms and expectations

2. Process Overview
   - Participants will receive an overview of the OWASA strategic planning process, the work that has been completed to date, and the work that will be completed at subsequent workshops.

3. Environmental and Operating Scan
   - OWASA staff will share high-level themes and key takeaways from the various components of the Environmental and Operating Scan.
     a. Departmental Assessments
     b. Employee Survey
     c. Board (Past and Present) Survey
     d. Community Survey
     e. Stakeholder Sessions and Survey
     f. Literature Review

4. Scan Debrief
    - Workshop participants will be broken into groups to discuss what they learned from the staff presentations. Each participant will have the opportunity to have conversations specifically focused on themes from internal and external stakeholders. Discussion questions will include:
        - Do you have any questions about what you've learned?
        - For you, what were the key takeaways?
        - What surprised you?
        - Do you have any concerns?

5. Last Word and Adjourn
    - Share a last word to capture how they felt about the session



Departmental Assessments

OWASA Strategic Plan Scan

Fall 2021

OWASA Departmental Assessment of Strengths (S), Opportunities (O), Aspirations (A), and Results (R)

Participation

In August 2021, each OWASA Department held workshops to elicit feedback on each Department's strengths (S), opportunities (O), aspirations (A), and results (R). They also provided feedback on critical issues faced by each Department. The following report details the feedback provided by each department.

Critical Issues

Each Department was asked to identify critical issues that they felt needed to be addressed in the strategic plan. In response, the following issues were cited by more than one department, with the most commonly citied issues to be staffing adequacy and organizational structure; technology upgrades, optimization, and integration/data utilization; and succession planning.

- Employee development and training
- Staffing adequacy and organizational structure
- Workplace culture / Employee satisfaction
- Resiliency and reliability / Investment in infrastructure, equipment, and facilities
- Preparation and response
- Succession planning
- Sustainable finance and cost-efficiency
- Technology upgrades, optimization, and integration / Process optimization / Data utilization
- Record and document management and security
- Health and safety
- Community engagement

Water Supply and Treatment SOAR Results

S	Strengths	• People (Long-tenured folks, lots of in-house experience) • Feeling of team • Awesome customer service • Great facilities • We provide quality services/end products • Watershed management program • Emergency preparedness • Good budget • Safety culture • We optimize processes • Open door policy with supervisors and human resources
O	Opportunities	• Communication: between and within departments • For CIP projects, improve communication and provide sufficient level of onsite staff presence to allow operational staff to focus on running and maintaining the plant • Create an CIP project inspector (in-house position) • Be more adaptable to changes • Make data and graphs more user friendly/accessible across the organization • Equipment/Parts/Instrument standardization across departments • More training opportunities • Continue to create a more diverse workforce
A	Aspirations	• Maintaining high quality • Having standardization of part/equipment/supplies • Have operations run seamlessly • A cohesive team/family-like atmosphere • Have completely autonomous laboratory services-not send out samples for water/wastewater • Have a cross-trained team • Be prepared for any emergency • Get through COVID-19 • To have a mechanism to capture all the in-house knowledge that can disappear when long-tenured people retire (succession plan and knowledge retention)
R	Results	• Achieve lower operational costs • Reduced number of callouts for maintenance • Fewer repeat work orders • More frequent employee surveys • Increase revenue • Acres of forests managed/Under stewardship • Community outreach hours • Hours of cross-training logged • Partnership for Safe Water-keep our Excellence in Water Treatment Award every year

Distribution and Collection SOAR Results

S	Strengths	• Level of service to our customers and community. • Dedicated employees – We have some of the most dedicated employees when it comes to completing task, responding to emergency situations, and maintaining and operating our infrastructure. • Equipment • Employee recruitment
O	Opportunities	• Continue to be available/resilient – our department is willing to accomplish any situation handed to us at any time and have been able to adapt to constant changes from our employer (work schedules, emergencies, rules and requirements, etc.) • Take ownership and pride in our department – Set our department's own rules to live by, we understand organizational fairness but not everything that other departments may do is always best for our department, hold other departments accountable for their responsibilities. • Maintain a good relationship with employees. Listening to employees and integrate them into future decisions to improve our water and sewer systems will help us maintain employees with experience and give the desire to improve themselves to be motivated year after year to ensure increase in salaries or incentives and will help employee give 100% every day. • Consistency for all employees, departments, and positions for benefits
A	Aspirations	• Employee retention/morale • Cross training opportunities • An increase of long-term employees • Improve uniforms • People to stay in the department • More training on equipment • The ability to speak without being judged or looked down on without fear of having a target being put on ones back by management • Respect • Teamwork • Have better tools and work machinery, such as trucks, tractors, etc. • Preserve unity, positivity, and morale • More in-house projects • More family atmosphere with transparency
R	Results	• Updates and surveys • Another strategic planning session – to see if any of the topics brought up have been addressed • Accountability/involvement in decision making process. • Identifying and recognizing and compensating employees who are willing to bring positive change to the organization. • A system that unites employees to deliver a good job with quality and safety • Seeing growth in department, benchmarks, and employees making more money due to benchmarks • Bring back longevity pay

Wastewater Treatment and Biosolids Recycling SOAR Results

S	Strengths	• Supportive – OWASA supports employees, departments support each other, and employees support employees • Teamwork – We work extremely well together, high sense of trust, our strengthens complement our weaknesses • Knowledgeable and experienced employees with a willingness to share information across the department and organization • Culture of continuous improvement, with the resources to support improvements • Adaptability and Flexibility – specifically during the pandemic • Reliability – successful, consistent performance • Resiliency – storms events, adverse weather, pandemic. Well prepared for events and staff steps up to support each other • Communication/Inclusion – open communication of our performance and challenges. Group decision making, employees have a voice in making improvements • Uniformity (Standardization) – improves employee knowledge and support
O	Opportunities	• Improve knowledge retention through documentation, development of procedures, and leveraging technology • Develop standard operation and maintenance procedures for all job responsibilities • Develop training plan for all job categories • Specialized training -Educational facility within new warehouse, provide opportunities to bring local utility partners in to share knowledge and experience • Better understanding of alarms and system – improved through documentation • Improve our data collection by utilizing the Computerized Maintenance Management System Program (CMMS) to fullest ability • Improve communication maintenance of work order request status • Improve access to information and training (ex. SCADA or Supervisory Control and Data Acquisition system) • Getting back to preventative maintenance focused Maintenance Program • Bring Instrumentation and Controls in house – improves our knowledge, reliability, and response • Warehouse storage and inventory control • Improve emergency preparedness by running drills • Improve collaboration during project development, design, and equipment selection • Improve Data Management – utilization of new CMMS, LIMS, or other platforms • Crossing training – between wastewater work groups and between Laboratory and Maintenance staff at both plants • Leveraging new technologies across the department
A	Aspirations	• Well- trained, confident, competent, and consistent workforce • Effective succession planning and knowledge transfer • Data-driven decision-making culture • Improve reliability, efficiency, and reduce costs through planning and better management of our assets • Improve staff development and resiliency through a structured cross training program • Staff is fully certified in applicable areas • Skill-based pay – career path, career growth, and something to work towards • Develop new performance review system – current system competitive and reduces morale. • Continue to further the organization in diversity, inclusion, and belonging (ex. education on use of pronouns, quiet room for nursing mothers, meditation, etc., better space planning)

R	Results	• Maintain regulatory compliance and *Partnership* goals • Meeting Biosolids Recycling goals • Employee development creates career growth, improves employee confidence, competence and consistency • Measurements of training progress in employee performance evaluations and through skill assessments • Analysis of time and costs of preventative maintenance (PM) vs corrective maintenance; More time spent on PM will improve reliability, efficiency, and reduce costs • Improve employee retention - less turnover • To measure morale routinely survey the organization

Information Technology (IT) SOAR Results

S	Strengths	• Initiative – Our department enjoys taking on challenges • Adaptability – Ability to respond to changing circumstances • Innovative – Looking to continuously improve through new solutions • Institutional Knowledge – In-depth knowledge of operations across the organization
O	Opportunities	• Active Engagement – Leveraging our knowledge to increase efficiency and effectivity across the organization • Organizational Resilience – o Disaster Recovery and Business Continuity o Cybersecurity o Physical Security • Enable operations supervisors to understand operational and business requirements to maximize resource allocation
A	Aspirations	• Data-Driven Organization • Achieving IT operational excellence • Taking a strategic role in driving business innovation • Foster a culture of change and innovation
R	Results	• Best-in-class IT organization at a best-in-class utility • Preventative Maintenance vs Corrective Maintenance • Documented and implemented Business Continuity and Disaster Recovery plan • Achieve cybersecurity standard as defined by industry framework

Engineering and Planning SOAR Results

S	Strengths	• Skilled employees – We've hired and retained highly competent, talented employees with a diversity of experience types and levels who are able to problem-solve and add value to issues beyond minimum service levels • Internal support – We collaborate and support internal work groups well • External relationships – We are responsive, proactive, and service-oriented towards external stakeholders in a number of arenas (consultants, developers, contractors, customers, agencies) • Internal cohesion – We have great internal chemistry and cohesion within the department and have a culture of continuous improvement and knowledge sharing. • GIS – We maintain a first-class GIS that is useful and valued by operations • Planning – We plan well for the future – e.g. Geographical Information System (GIS) Utility Network migration, Lead and Copper Rule, strong Asset Mgmt program, demand projections, Strategic Trends.
O	Opportunities	• Develop functional resilience via succession planning and management, and realign department structure to best meet departmental priorities • Focus on delivering best value for capital investments via scope and change management, robust and transparent project prioritization, and optimized procurement approaches • Collaborate with local jurisdictions on funding opportunities and on overlapping project needs • Create a knowledge management system that best retains and makes available the outcomes of our studies, major projects, and other institutional knowledge
A	Aspirations	• Employees' skills are continuously expanded through professional development, and employees feel valued, feel challenged by the work and have promotional/advancement opportunities, and are rewarded for good work (including those maximized at their pay grade.) • We are able to most efficiently and effectively answer questions addressed to our department through a combination of functional resilience and knowledge management (including documentation of the years of knowledge gained by our more experienced staff.) • CIP delivers best value in project execution. • We're operating successfully with the Utility Network.
R	Results	• Retention; employee satisfaction; internal promotion/advancement stats • Time/effort, lack of duplication in addressing questions, lack of follow-up questions • Parametric trends where feasible (e.g., per foot cost for linear assets); post-project feedback from operational groups and others • Decreasing/minimal trouble calls to GIS Coordinator

Customer Service SOAR Results

S	Strengths	• Excellent relationships with customers • Teamwork – the ability to handle all team functions even when some team members are out • Experience and expertise • Ability to adapt to new processes, programs, and tools – while continuing to meet day-to-day demands • Customers get to interact with people instead of solely with technology
O	Opportunities	• Make better use of the tools we have, especially Advanced Metering Infrastructure (AMI) /WaterSmart (missing water use data, delay of water use data presented to customers, failure of field equipment) • More seamless tools for customers, especially the integration, or lack thereof, between InvoiceCloud and WaterSmart • Consolidation of programs so Customer Support Representative's can help customers more quickly and efficiently • Cross-train and institutionalize knowledge in anticipation of experienced personnel retirements • Improve tools for customers (info about service outages, integrity of water-use data, functionality of AMI field equipment)
A	Aspirations	• To have a high degree of customer satisfaction o Customers get the information they need timely o Information is accurate and easy to understand o Customers have high degree of confidence in the information received • New team members can function as well or better than their predecessors
R	Results	• Few customer complaints/many compliments • Data provided is accurate, timely, and useful

Finance SOAR Results

S	Strengths	• Solid financial condition including excellent bond/credit ratings • Good stewards of assets and rate-payer funds • Award-winning financial reporting and "clean" annual reports from independent auditors • Teamwork
O	Opportunities	• Improve performance and customer service (internal and external) through the implementation of a new finance, accounting and customer service and utility billing enterprise system (ERP) • Improve performance through automation o Requisition-to-payment process o Document management o Self-service data mining • Improve process for ensuring compliance with purchasing laws and policy
A	Aspirations	• Have a fully functioning, stable ERP system that meets our needs and requires minimal effort to operate and maintain • To be confident that requisition-to-payment process is resulting in: o All purchasing laws and policies are met o All accounts payable invoices are accounted for o All available early payment discounts are realized • To operate in a near-paperless environment
R	Results	• ERP system implemented and meeting the organization's needs • Organization staff and vendors are happy with the service they receive from the finance department • Workflow and document storage are automated and paperless

Human Resources SOAR Results

S	Strengths	• Employee Relations (competent, knowledgeable, approachable, inclusive) • Information Management (accuracy, completeness, file management) • Institutional Knowledge (HR experience level, OWASA experience level) • Adaptability (multitasking, updating policies, addressing employee needs and concerns) • Safety Program (training, workers compensation, investigations) • Ability to maintain benefit programs (Health, Dental, Vision, etc.)
O	Opportunities	• Professional Development (supervisory and policy training) • Succession Planning (long-term thinking when it comes to staffing) • Diversity and Inclusion (subject matter expert on staff) • Technology (HRIS in place, ADP, Neogov, Training tracking upgrades and enhancements) • Security (building, files) • Workload management
A	Aspirations	• Diversity and Inclusion (D&I) Coordinator • Best-in-class as a strategic partner • Staffing level for organization • Excellent compensation strategies • New training management system
R	Results	• Achieve D&I metrics • Achieve Safety metrics • Manage workloads effectively • Continuous improvement • Data collection

Administration SOAR Results

S	Strengths	• Set a good example; Set the tone for a strong culture of continuous improvement • Provide resources to get things done; Provide and support for going above and beyond • Connection to and support of staff and Board; sit in the hub of the organization • Approachable • Teamwork across the organization; show up and get it done • We have a history of innovation. • Community-minded: Care to Share contributions and moratorium on service disconnections • Strong commitment to mission and organization • Commitment to communication and information accessibility
O	Opportunities	• Providing more support to the organization (e.g. filling Admin Assistant) • Connect the entire organization and community to the strategic plan; providing resources to get it done (e.g. staffing, revenue, other) to build support • Knowledge management, transparency, and organization: Filing, document, photo, and data management • Make information/policies more streamlined and accessible – internal and external (language, information availability) • Assessment of organizational staff sufficiency • Folding the lens of justice and equity into our community engagement • Improve workforce connection / culture • Leadership development • Opportunities to think bigger about our mission and to increase partnership with the community (e.g. sub-metering, Fats/oils/grease, and inflow and infiltration) • Facilities are showing their age
A	Aspirations	• Getting OWASA the resources it needs to thrive • Make it through COVID as a stronger utility; mitigate the long-term impacts of COVID • Best in class (e.g. nutrient recovery, smarter distribution and collection systems, fully-functioning asset management program) • Considering and implementing policies to increase all team member satisfaction, not just one group; not necessarily a one-size fits all • Great record management system • Maintain high level of communication • Improve internal communications • Building in foreign language capacity in communications team • Seeking and incorporating more feedback from community, team, and Board • An organization prepared for climate change, natural disasters, infrastructure failure, pandemic, culture clashes, etc.); Nation-wide leader in adapting to climate change • Better methods for assisting low and fixed income customers with bills • Succession planning in Admin Department • Better define goals and metrics • Drive and promote innovation; embrace a willingness to take risk in daily decision making and long-term strategy; set big audacious goals • Improve communications - setting and achieving goals; increasing efforts • Maintain relationships in the community and region

R	Results	• A diverse, informed and engaged board • Satisfied employees, Board members, and community • Employee, Board, and community trust and confidence • A robust filing and document organization system • Culture refresh: focus on organization, innovation • Maintain the progress we have made over the years • Better define purpose of Admin Team • Ensure continuity in long-term strategic initiatives: Having long-term plans and have everyone rowing in the same direction (i.e. strategic plan) • Achieve best in class in the areas where it makes sense • Keep our finger on the pulse of staff and the community • Define ways to measure our impact



Employee Survey

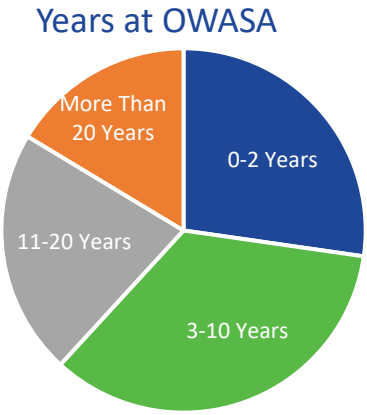
OWASA Strategic Plan Scan

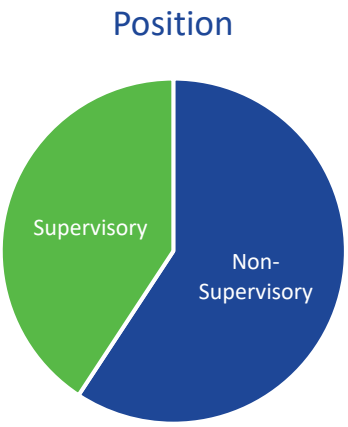
Fall 2021

Employee Survey Results

Participation

The OWASA employee survey was open for submissions from August 20 through September 3, 2021. There were a total of sixty-one (61) responses, for a response rate of about 47%. The graphs below summarize information about the respondents. For context, 25% of the current employees at OWASA are in supervisory positions, as such supervisors are over-represented in the survey responses.





Many thanks to everyone who took time to provide input. From these responses, some overall themes could be determined as being important to OWASA employees as we move forward with developing a strategic plan that will guide our policy and decision-making for the next 5-7 years.

Who is OWASA?

When asked what three words come to mind when thinking of OWASA, words that reflected our mission of public service, public health and the environment, and community were common. We also see that employees value each other and our expertise, but that there remain areas where OWASA has room for improvement. This figure summarizes the responses; the larger a word, the more often it was repeated.



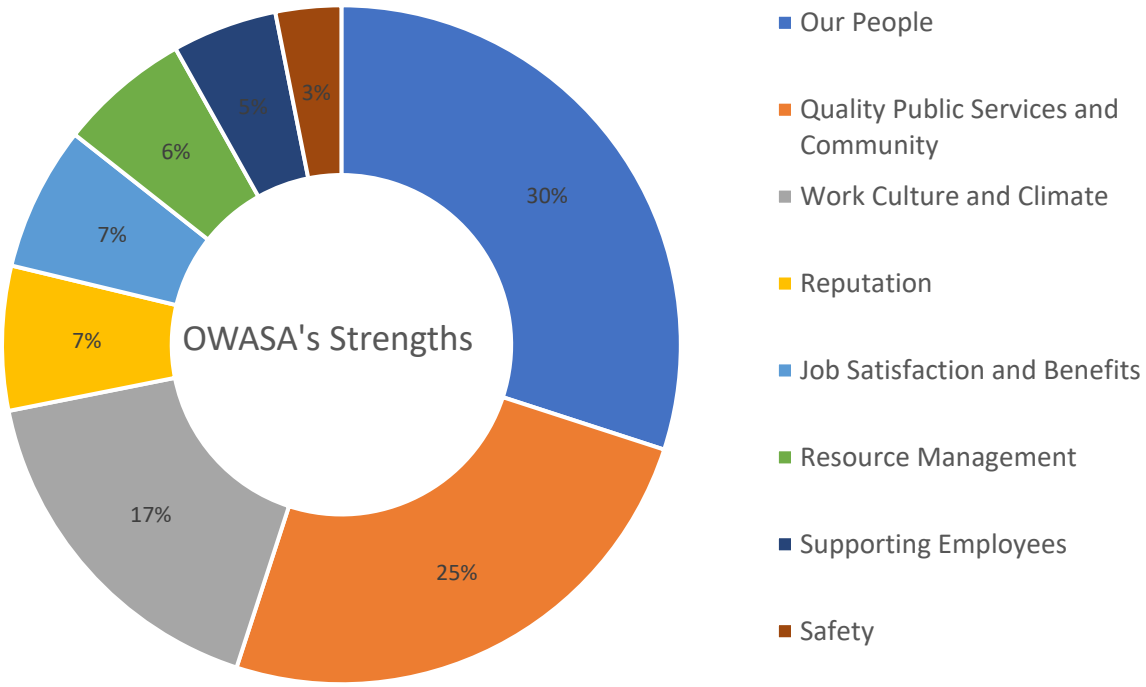
When at our best, OWASA employees most frequently identified the following attributes:

1. Community-minded
2. Dependable
3. Collaborative
4. Competent
5. Accountable
6. Teamwork
7. Continuously improving
8. Safe
9. High-quality

OWASA employees most frequently identified the following inspirations for working at OWASA:

1. Public Service/Public Health/Essential Service/Community
2. Co-workers/Our People/Teamwork
3. Job Satisfaction
4. Benefits
5. Good Pay/Salary
6. Company Culture/Work Climate
7. Mission/Purpose/OWASA's Reputation

OWASA's Strengths



Our People: Not surprisingly, we place high value on our expertise and that of our teammates, and we feel that leveraging our people is one of the things OWASA does best. Many people commented on how our employees exhibit competence, dedication, and a commitment to public service and community in their responses. “Quality,” “talented,” and “generally kind” employees were described repeatedly as our greatest strength and inspiration.

Quality Public Services and Community: Closely tied into our employees’ expertise was their commitment to working for a public service agency, which entails providing safe drinking water, protecting the environment, proactive management of infrastructure and resiliency, and being responsive to customer and community needs. As one employee noted, “OWASA regularly receives awards for exceeding standards.” Another noted that, “We have an amazing staff and the resources we need to make [things] happen.” A third employee feels that “…we do a great job with keeping community informed.” We are inspired by and take great satisfaction in doing our jobs well, and by knowing that the work we do every day is important to our community and our future.

Work Culture and Climate: OWASA’s work culture was identified by employee respondents as being both an inspiration and a strength. This broad grouping included such diverse descriptors of OWASA as an “ambitious organization,” “focused on progressive ideas,” “diversity,” “being collaborative,” and “innovation,” among many others.

Reputation: Additionally, some employees take pride in the fact that OWASA maintains a good organizational reputation with external entities, as comments relating to reputation and partnerships were noted multiple times as being an inspiration and a strength.

Job Satisfaction and Benefits: A fifth theme repeated as both inspiration and a strength revolves around job satisfaction, pay, and benefits. This theme manifests differently for each employee; some found that job stability was a strength, others liked schedule flexibility and work-life balance, and a few found the advantages of longevity and retirement benefits to be noteworthy. A few employees took inspiration from solving problems and overcoming challenges in their job, and one employee responded simply that they “liked their job.” As expected, many employees feel that OWASA’s benefits are its biggest strength and is what inspires them to come to work every day. Some employees identified professional growth and development as one of OWASA’s strengths, which can also be tied to pay and benefits as employees advance within the organization. However, it should be noted that training and development was also almost universally identified as an area of opportunity for OWASA.

Resource Management: Finally, resources, support for employees, and safety were noted as being OWASA strengths. Resources could refer to budgets, assets, training and managerial support, or any number of things that remain unspecified (or all of the above).

Supporting Employees: Employees showed appreciation for the support of leadership and the Board of Directors for approving the budgets we request to achieve our goals, and for providing COVID-19 leave during our pandemic response.

Safety: Our safety program, which is touted as OWASA’s #1 priority, was noted as one of our strengths multiple times by employees.

OWASA’s Top Three Attributes (of Effectively Managed Utilities)

When asked to evaluate OWASA's performance against the ten attributes of effectively managed utilities, employees ranked OWASA's performance in the following three areas the highest. Some employees provided feedback on their ranking; some of those justifications are listed below.

1. **Producing high-quality water and services that meet and exceed regulatory compliance.**

   "Partnership for Safe Water has shown measurable and consistent progress is possible" (Very Good)

   "Stellar record in Partnership for Safe Water" (Excellent)

   "Unlike many other water utilities, OWASA has natural water sources" (Excellent)

   "Awards" (Excellent x2)

   "Amazing staff and resources" (Excellent)

2. **Protecting the environment through wastewater treatment and services that meet and exceed regulatory compliance**

   "Partnership for Clean Water has shown measurable and consistent progress is possible" (no rating)

   "Optimization efforts at WWTP" (Excellent)

   "All the upgrades" (Excellent)

   "This system is some parts is already very old and needs to be renewed" (Fair)

   "Amazing staff and resources" (Excellent)

3. **Providing high-quality customer service**

   "Everyone is involved; all departments try hard" (Excellent)

   "I believe we respond quickly to questions and concerns and provide thorough answers. I'm afraid we over communicate at times, when it is not necessary, such as the case with overnight line breaks" (No opinion)

   "An important part of customer services is communications and we have significantly improved in this area" (Very Good)

   "Customer Service provides quality service but are not able to do it all, be sure there is enough staff to meet the need" (Very Good)

   "Throughout the pandemic, I believe we have slipped a bit on this one" (Very Good)

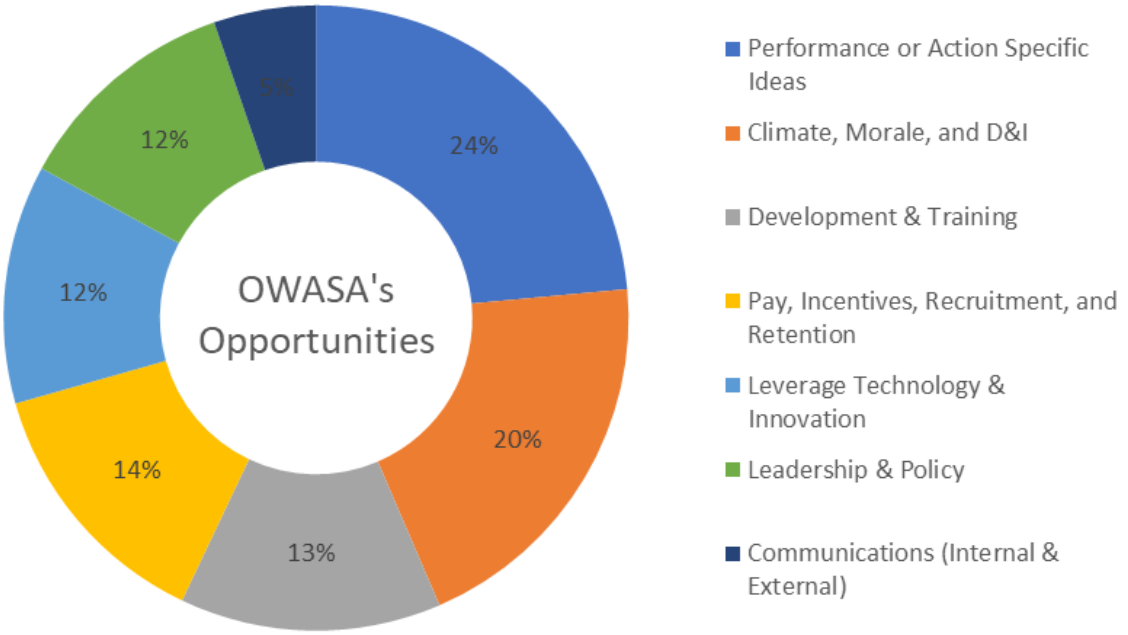
Strengths in Organizational Performance

When asked to evaluate OWASA's performance "good management" practices, employees ranked OWASA's performance in the following three areas the highest.

1. Providing resources that are necessary to complete your job
2. Measuring organizational performance
3. Communicating about organizational performance and key achievements with employees

Opportunities

When asked for input into how OWASA can improve in the future, employees provided a diversity of ideas on how we can become "best in class" going into the next 5-7 years. These were harder to categorize by response type, primarily because some responses straddled categories, and the largest category contains many unrelated suggestions. But broadly speaking, the opportunities for improvement fell into the groupings shown below.



Performance or Action-Specific Ideas / Leverage Technology and Innovation

OWASA employees know their business, and they know their jobs. The majority of suggestions for opportunities for improvement or enhancement were job-specific or task-oriented ideas. Recurring suggestions in this category include:

- Infrastructure enhancements – water and sewer line replacements, meters, many suggestions for plant upgrades
- Asset management – predictive modeling, CIP funding and investment
- Networking and collaboration – increased collaboration with partners and stakeholders, customer service enhancements, regional cooperation
- Budget and funding – break down budget barriers, access governmental funding, increase rates, affordability

- Maintenance – improve buildings and grounds, better tracking of equipment and facilities
- Sustainability – energy efficiency of fleet, clean energy, climate readiness, plant upgrades for resource recovery
- Other – enhance How2OWASA, make OWASA smoke-free, more in-house projects and less reliance on consultants/contractors, office renovations

This group and the suggestions that fall under Leverage Technology & Innovation overlap and could be combined into a single category. Collectively, the two groups constitute 36% of the total responses. There were a solid twenty-one instances where employees mentioned technology, innovation, or data management as a critical piece of the opportunity puzzle going forward. Employees also referenced technology and data management in comments and suggestions throughout the survey. An employee noted that one thing they would be most proud of in five years would be if OWASA has "implemented a document management system for the organization" and "provided more training and support on computer technology." AMI was identified as an example of how OWASA leveraged technology in the past to improve or streamline services. It is clear that to OWASA employees, a progressive utility must incorporate 21st century technology to remain relevant.

Climate, Morale, and D&I / Development and Training / Pay, Incentives, Recruitment and Retention

The responses that fell under the general umbrellas of "Climate, Morale, and D&I," "Development and Training," and "Pay, Incentives, Recruitment, and Retention" also have considerable overlap, as pay and training directly influence morale and work culture. Collectively, these responses constitute nearly half (47%) of the suggestions for opportunities for improvement or enhancement, which indicates that OWASA has a lot of work to do in this area.

While some employees cited work climate to be an asset, other respondents did not and there are clearly differences of opinion here. Two identifiable stress points in the climate and culture category are OWASA's pandemic response and its commitment to Diversity and Inclusion. With regards to the first, the ongoing experience of COVID-19 wound itself through the entirety of the employee survey as a complicating factor in just about every area, not just employee relationships. Regarding D&I initiatives, some employees are unhappy at the slow pace of progress in this area, while others feel that D&I promotes unequal treatment of employees and candidates. In all cases, employees expressed a desire for equal treatment and fairness, for rebuilding morale and trust, and for improved working relationships in the future. As one employee put it, "Covid has made this difficult but we have lost the sense of OWASA community" and another says they hope that in five years, OWASA will "recover from this pandemic, repair relationships, reconnect Leadership to employees and employees to each other" and "work to be the collaborative organization that has made us so successful over the years."

Employees universally agree that development and training, and pay and incentives for performance and retention, should be included as components of our next strategic plan. Employees wish to advance professionally and to retain institutional knowledge that may be lost to retirements. Equitable access to training opportunities was also noted as a challenge; in one employee's words, opportunities and access "depend on which department you work in." Career development, cross training, leadership training, hands-on training, CDL training, mentoring, apprenticeships, and more efficient knowledge management and retention were all specifically cited. Rewarding professional development, pay incentives, and skill-

based pay were mentioned as means of retaining good employees and incentivizing those who have limited promotional pathways or who are at the top of their pay ranges.

Staffing issues in general were particularly singled out in this broad category. Multiple respondents expressed a desire for increased staffing and better retention of employees in current positions. Examples of comments regarding staffing include:

- Take better advantage of flexible work options to expand our candidate pools.
- Hire a D&I manager.
- Create more positions to ensure that all programs are operated at a high standard.
- Decrease the time it takes to fill a position to reduce candidate loss.
- Pay better starting salaries for entry-level jobs.

Illustrative of the staffing challenges, one respondent commented that "it seems difficult to adequately staff the various teams like EHRT, ESC, etc." and suggested incentives such as an annual recognition luncheon to incentivize participation, while another respondent commented that "many departments are too understaffed to allow employees to pursue anything over their basic minimum job functions."

Leadership and Policy: Finally, adjustments to policies and improvements in communications were cited by OWASA employees as ways the organization can move forward in the future. Focusing on our mission, fostering emotional intelligence, empowering of employees, embracing autonomy, and equitable treatment among staff were specifically mentioned.

Communications (Internal & External): Internally, better communication within departments, and throughout the organization, was broadly cited as an area of opportunity. Several employees praised the work and progress that has been made in our external communication with and education of our customers over the past decade, although there is room for growth here as well. Rebuilding trust with the community was cited in a number of instances, which will necessarily include a communication component. As mentioned previously, a recurring theme throughout the survey responses was how COVID-19 has had an impact on all areas of our business. Social distancing required OWASA to develop new ways of conducting its business, including holding virtual meetings and reducing or eliminating face-to-face interactions. While formal communications were maintained throughout the pandemic response via email and Teams, informal interactions were restricted. The survey responses that pertain to improvements in communications reflect this disruption. Information regarding employee achievements, KPIs, communicating OWASA's vision, and connecting employees' work to the overall mission of our organization were all identified as places where the organization has room for improvement.

OWASA's EUM Attributes with the Greatest Opportunity for Improvement

When asked to evaluate OWASA's performance against the ten attributes of effectively managed utilities, employees ranked OWASA's performance in the following three areas the lowest. Some employees provided feedback on their ranking, some of those justifications are listed below.

1. **Recruiting, retaining, and developing high quality employees**

> "I believe this is going to be a challenge for everyone in the future." (Fair)

"Many candidates are probably lost during the long hiring process. I'm concerned that some staff are given opportunities to grow and advance, while other jobs do not lead to any sort of advancement." (Fair)

"I think we should pay better starting salaries for entry-level jobs." (Good)

"Turnover is high and many long time employees are staying now only to hold on to their benefits. Turnover of new employees is especially high because they don't have the investment in the benefits and retirement yet, and their high turnover speaks to culture and wages." (Poor)

"If skill, experience, and qualifications were used as the basis for hiring all positions, the overall workforce would be more reliable, capable, and have higher potential. There is also more work and stress put on the team when it takes over three months to fill open positions." (Fair)

"There is room for improvement regarding employee development. Additional staff positions are needed." (Very Good)

"Benefits are excellent and pay are fair but we are long overdue for a pay and class study. Also, as a small organization, many positions have little opportunity for career advancement. Unfortunately, there is not a great answer to this problem." (Good)

"Sometimes supervisors have trouble with understanding how to help develop their staff." (Good)

"No training program for heavy equipment operators we don't have time train if its go go all the time." (Poor)

"We need to work on creating career growth opportunities and employee development. I'd like to see training plans for everyone position and a structured training program." (Good)

2. Improving workforce diversity and inclusion

"We have a program and it is a start but it has no funding, so it's impossible to provide the necessary professional training and company support to change the culture. Diversity in positions of power is still low." (Fair)

"Diversity is one thing, inclusion is another. We need to focus on the latter." (Good)

"We are moving in the right direction." (Good)

"I think we have made some good diversity hires, but still few minority people in Director positions and I don't think there are any minority managers being trained to step into those positions when they open up. I also question the inclusion portion -

great steps with welcome team, but what being done for employees who have been here for a while?" (Fair)

"We should care more about skill diversity than skin color diversity." (Poor)

"This is a journey that never ends. The pandemic has strained our ability to be inclusive across the organization. More recently, decisions are being made using a top down approach. We can't keep making decisions this way - it is not the OWASA way." (Very Good)

3. **Utilizing new technology and innovative approaches to reduce costs and/or improve service delivery.**

"We appear to be willing to spend money on labor and overtime when other avenues have not been explored for projects that do not improve our water infrastructure. Should money be spent on projects that do not provide or help maintain water and sewer?" (Poor)

"I think we strike a good balance between researching technology with care not to be on the bleeding edge - try to learn lessons from others and make sure technology good fit for OWASA." (Good)

"Have started with AMI. Need to upgrade asset/inventory systems at WTP and WWTP." (Fair)

"IT dept could do more classes to help guys learn computers." (Good)

"One of the things that concerns me, is I worry our organization is understaff[ed]. At times, it can be hard to look ahead we are consumed with day to day operations and responsibilities." (Very Good)

Difference among staff: Interestingly, the employees that have worked with OWASA for 2 years or less, were more likely to identify the use of technology and innovative approaches to reduce costs and/or improve service delivery as an opportunity for improvement. Additionally, supervisors were more likely to identify diversity and inclusion as an area of growth for the organization, while non-supervisors thought we could be doing better to prepare for emergencies and cyber-security threats.

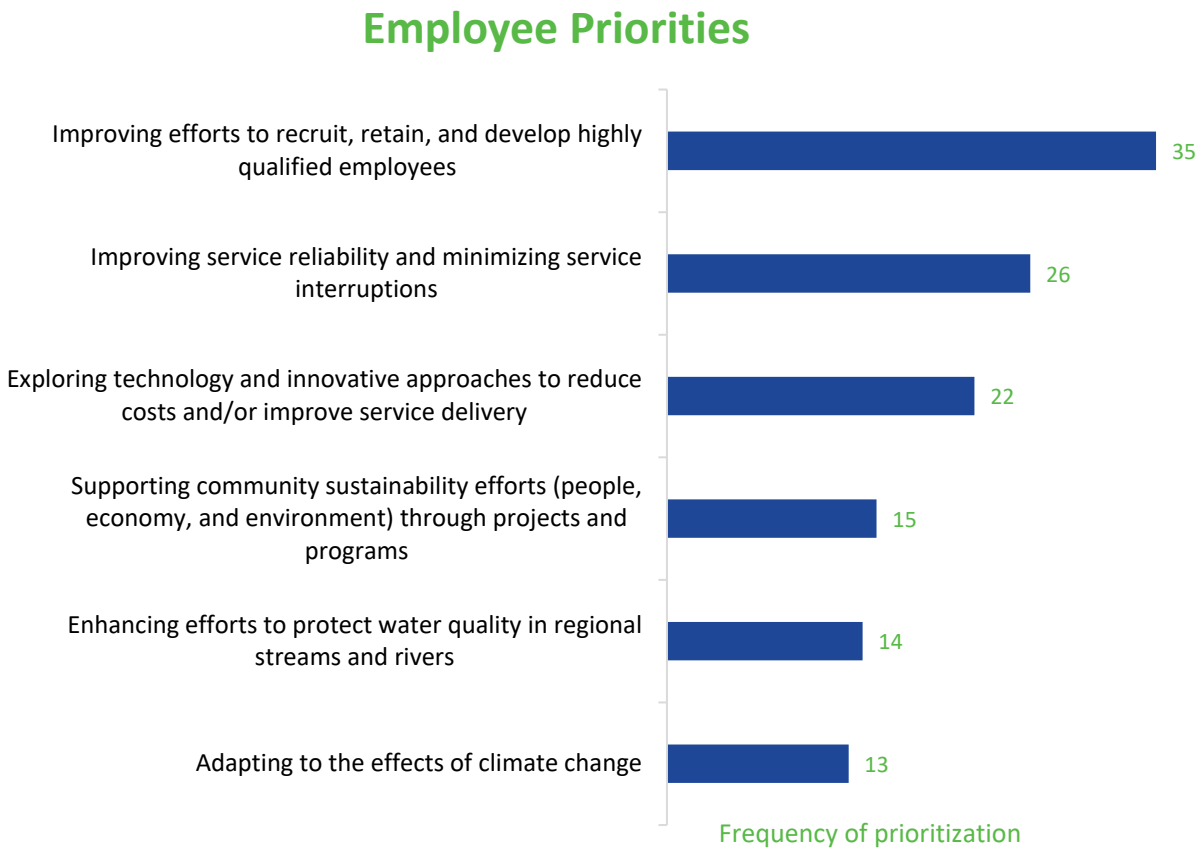
Opportunities in Organizational Performance

When asked to evaluate OWASA's performance "good management" practices, employees ranked OWASA's performance in the following three areas the highest.

1. Supporting individual growth and success
2. Communicating about departmental performance with others in the organization
3. Communicating with employees a vision that describes what kind of organization OWASA hopes to become in the future

Priorities

Employees were asked to identify the top three issues that they felt were the most important to OWASA completing our mission in the next five to six years, assuming that we will remain committed to providing safe drinking water, protecting the environment through wastewater treatment, and meeting state and federal rules and regulations. The following shows the top six priorities.





Board (Past and Present) Survey

OWASA Strategic Plan Scan

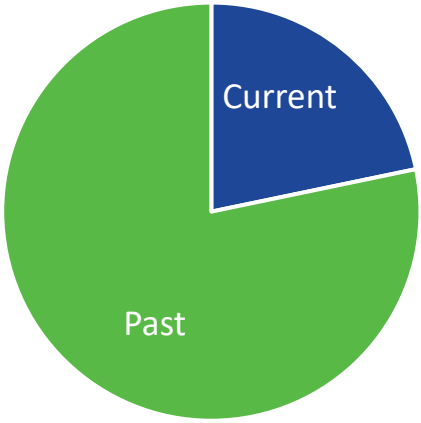
Fall 2021

OWASA Board Survey Results

Participation

The OWASA Board of Directors (BOD) survey was open from August 18 to September 8, 2021. Current and past Board members were invited via email to participate. We received a total of twenty-three responses: 5 from current Board members and 18 from past Board members. Many thanks to those who took time to provide input.

Board Member Participation in Survey





Who is OWASA?

When asked what three words come to mind when thinking of OWASA, Board members past and present demonstrate that they care deeply about OWASA's mission and are committed to their role in providing direction and oversight to our utility. This figure summarizes the responses; the larger a word, the more often it was repeated. Aside from water, the predominant words that came to mind were quality, planning, service, and staff/team.

Board members were asked to identify the attributes that OWASA demonstrated when we are at our best, the most frequently identified attributes were:

1. Professional
2. Community-minded
3. Dependable
4. Accountable
5. Competent
6. Continuously improving
7. Clear and consistent communication
8. Stewards

Board members feel a deep sense of connection with the community and a strong drive toward public service. When asked what inspired them to serve as Board members, the word "community" was repeated most often in their thoughtful responses. Broadly speaking, members of this group were inspired to serve on our Board for one or more of the following reasons:

1. ***They are invested in the community*** – "Give back to the community" and ensuring that "OWASA is responsive to the needs of EVERYONE in the community," and "ensure access to clean drinking water for my community" were typical responses for these Board members.

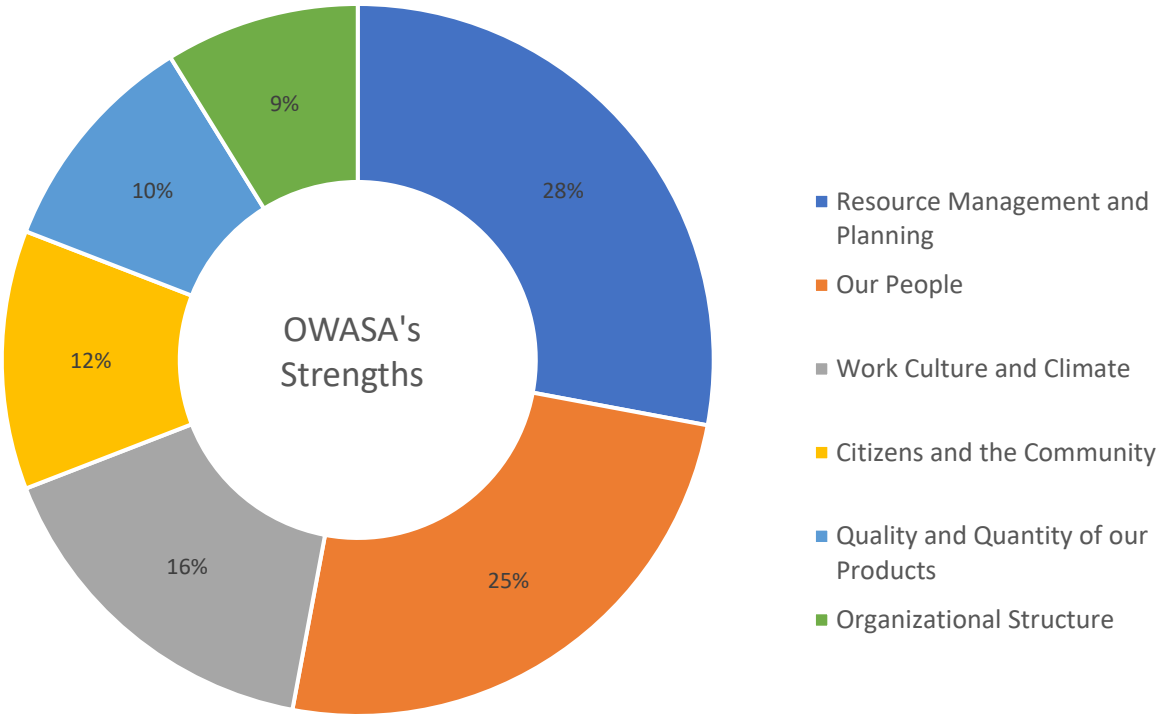
2. ***They are invested in public service*** – Many current and former Board members have served in a public capacity in other areas of their professional careers; some have served on other Boards. One member said they have a "desire to continue public service after retirement" and another noted that they have a "long time relationship with OWASA and interest in service to the community."

3. ***They felt they could contribute technical knowledge or useful skills*** – Some members bring a wealth of expertise to the BOD from their professional backgrounds and felt this would be useful in a policy-guidance capacity, or they wished to learn more about our utility business. One member "was an academic involved in water and wastewater treatment," another felt that their "background in geology and hydrogeology" would be useful in future needs planning, and a third "wanted to learn about the utility, bring an environmental perspective to the Board, and learn about governing."

4. ***They joined following a specific cause or concern they wanted addressed*** – Members of OWASA's Board of Directors are also customers and stakeholders, as they live and work in the community we serve. One respondent noted that prior to locating in Chapel Hill, they lived in a different city where "the water quality was awful" and they wanted to ensure the opposite when they moved here. Another cited that they were "concerned about a proposed sewer line for my neighborhood."

OWASA's Strengths

Board members were asked to identify OWASA's three biggest strengths. The following provides more details on the responses given.



Resource Management and Planning: Day-to-day operations and long-range planning were cited the most frequently. These comments were collectively identified as Resource Management and Planning and constituted 28% of the overall comments submitted in the figure below. Members praised OWASA's "well-run" and "reliable" operations, our "excellent budgeting for capital projects," our "push to really conserve water," and our "fiscal responsibility" and "fiduciary skills." Operational excellence is what past and present Board members consider to be our primary strength.

Our People/Work Culture and Climate: Board members also recognize that OWASA is great because of its people. Nearly half (41%) of the strengths noted by Board members related to our employees, our technical expertise, our dedication, our professionalism, and our leadership. These comments were split into recognition of our staff expertise (Leveraging Our People at 25%) and recognition of our professionalism and work culture (Work Culture and Climate at 16%). One member noted that our "people are smart, capable, and committed," and another praised our "quick response to problems." Just as OWASA employees acknowledge the BOD for being supportive of our initiatives, BOD members in return acknowledge that OWASA staff and OWASA culture are foundational to making the organization "best in class."

Citizens and Community: As noted previously, Board members are people who live and work in the community we serve. Unsurprisingly, they cite our Chapel Hill – Carrboro community as a noteworthy strength to our organization. They acknowledge that these are citizens who live in a "community dedicated to environmental health," that OWASA "serves a progressive community that's got sufficient resources" to fund our initiatives, and that we benefit from leveraging "UNC scientific and engineering expertise." The University is both a customer and a community partner and the Board recognizes that having a world-class research university next door is an OWASA asset.

Quality and Quantity of Products: The quality and quantity of our products was considered a strength. Our water supply sources are clean, plentiful, and dependable; we benefit from having no major upstream polluters as well.

Organizational Structure: OWASA's structural and organizational design were also considered strengths. Being an Authority gives OWASA the dual benefit of being a public entity that enjoys a measure of political independence other municipal utilities may not experience. Board members recognize that OWASA is well positioned to carry out our mission given the existing quality and quantity of our products and our organizational structure.

OWASA's Top Three Attributes (of Effectively Managed Utilities)

When asked to evaluate OWASA's performance against the ten attributes of effectively managed utilities, Board members ranked OWASA's performance in the following three areas the highest. Some Board members provided feedback on their ranking; some of those justifications are listed below.

1. **Producing high-quality water and services that meet and exceed regulatory compliance.**

   "Excellent compliance record with robust CIP to renew, replace, and upgrade essential systems. Talented staff." (Excellent)

   "The water quality reports consistently show fantastic water quality metrics. I believe OWASA could improve addressing emerging contaminants, such as PFAS." (Very Good)

   "Because that is what we do!" (Excellent)

   "If only OWASA sought to test for more than EPA regs require!" (Very Good)

2. **Protecting the environment through wastewater treatment and services that meet and exceed regulatory compliance.**

   "Monica Dodson and her staff." (Excellent)

   "The fact that the treatment plant removes regulated contaminants to very low levels is great, but Morgan Creek is still not anything like a natural stream. It is basically a natural trench for conveying treated wastewater to Jordan Lake." (Very Good)

"OWASA staff take a lot of pride in protecting the environment through wastewater treatment and services that meet and exceed regulatory compliance." (Excellent)

"We need to expand water reuse opportunities." (Very Good)

3. **Providing reliable service and minimizing service interruptions.**

"Requires continued attention and funding" (Very Good)

"I believe the recently revised risk reduction program, improved SOPs, and similar measures have improved service reliability to excellent standards." (Excellent)

"OWASA does a good job of keeping its facilities in good shape, spending capital funds as necessary to extend and replace these facilities, and its excellent crews and crew managers understand and keep at the hard work necessary to keep everything working." (Excellent)

"I have been very pleased with the success of the valve location/testing efforts." (Excellent)

"Service interruptions in 2017 and 2018 will be remembered for years as exposing weaknesses in the aging system." (Good)

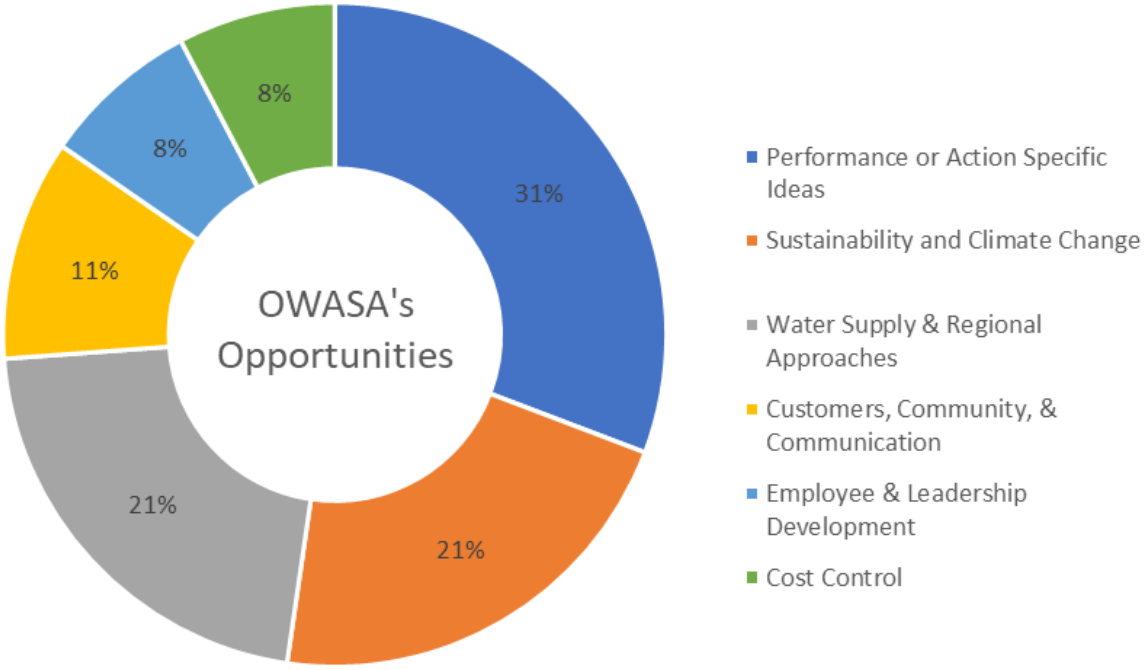
Strengths in Organizational Performance

When asked to evaluate OWASA's performance "good management" practices, Board members ranked OWASA's performance in the following three areas the highest.

1. Connecting annual budgets to OWASA's mission and strategic priorities
2. Communicating with the Board about OWASA's financial, political, environmental, system capacity, and other key constraints
3. Communicating with the Board about organizational performance and key achievements

Opportunities

When asked what opportunities OWASA should work toward in the future and what they would be most proud of OWASA achieving in the next five years, Board members offered big picture ideas. For the most part, they cited action-specific goals, ideas centered around sustainability and climate change, and ideas on future water supply and regional cooperation. These suggestions comprised 73% of the submitted ideas from the Board. The remaining 27% of suggestions referenced customer interactions, community support, good communication, employees, or controlling costs. The following provides more details on the responses provided.



Performance or Action Specific Ideas: For action-specific goals, Board members cited "monitoring and control of emerging contaminants," "drinking water research," "to begin to employ big data analysis in its operations," "system revitalization," and "maintain cyber security" as areas of opportunity going forward. In a broader sense, they also emphasized watershed reliability, infrastructure, and the desire to "maintain best in class/leadership position" as a utility.

Sustainability and Climate Change: Conservation and climate change were also common themes in Board responses. There were multiple suggestions for climate, conservation, environment, reliability, and resiliency to be part of our future planning. One Board member hopes that in five years, OWASA will have "achieved greater energy efficiency," and another that we continue "… to invest in the future through sustainable practices and infrastructure replacement." One suggestion was to "utilize [our] methane for energy generation." Offering more recycled/reuse water was specifically mentioned at least six times by Board members, as either an opportunity or where they'd like to see us in five years.

One Board member said that they would be most proud of OWASA in five years if we "still sold the same number of gallons a day."

Water Supply and Regional Approaches: With regard to water supply issues, Board members are divided on how they feel about Jordan Lake; some would like us to see Jordan Lake utilized for future water supply in a responsible manner and others are firmly against the idea. "Securing access to Jordan Lake" and "Leading the region in treatment at Jordan Lake" were representative comments of Board members who support the lake for future supply. Respondents who feel differently offer that they hope we were "not drawing water from Jordan Reservoir" in five years or offered alternatives such as "utiliz[ing] the quarry for water supply."

On balance, there were more comments in favor of responsible growth using Jordan Lake than against, and that "The western water intake and treatment plant on Lake Jordan was planned to the satisfaction of all stakeholders." Past and present Board members also cite hopes for greater regional participation and cooperation when it comes to future water supply. Some examples:

- Better sharing of resources with community stakeholders and regional partners
- Regionalized water resource protection planning
- Link-up more with Chatham County
- COG participation

Customers, Community, and Communications: Board members wish for OWASA to work on "Keeping people informed about upcoming changes," to "Put the needs of the least in the community first," and to "Improve community relations" in the future. Some responses indicated a desire for OWASA to "stay out of the headlines by providing quality service and staying ahead of possibilities for disruptions in service." Other responses indicated a desire for greater transparency from OWASA to the Board. And at least one member thinks we should "do more PR about [our] good work!"

Employee and Leadership Development: Board members cite a desire for OWASA to remain an "Employer of Choice" through a focus on diversity and inclusion. Two comments made specific mention of a desire for increased diversity at the management level and increased metrics for D&I. One Board member also hoped to minimize difficulty in recruiting Board members, especially minorities.

Cost Control and Financial Sustainability: Finally, there were five responses from Board members that directly stated cost control, keeping rates competitive, and affordability were important for future opportunities. Another Board member stated that they would be proud if OWASA maintained its high ratings from the bond rating agencies.

OWASA's Effectively Managed Utilities (EUM) Attributes with the Greatest Opportunity for Improvement

When asked to evaluate OWASA's performance against the ten attributes of effectively managed utilities, employees ranked OWASA's performance in the following three areas the lowest. Some employees provided feedback on their ranking, some of those justifications are listed below.

1. **Maintaining affordable services**

   "This is a hard one because our community has such high standards for water quality, which comes at a price. I believe OWASA does a good job at rate setting and taking these factors into account, but our rates are among the highest in the state." (Good)

   "We need to think about how to serve our lower income families." (Very Good)

   "If OWASA did less than it does to keep the water running to and then from our customers' homes and businesses, we would not be worried about "affordability," as sooner or later the costs deferred to maintain rates upon the basis of any other calculation, would leave our customers without adequate service, or without any service at all, not to mention the costs to the environment." (Excellent)

   "Water and sewer service is one of the highest in the region." (Poor)

   "This is a tough one since the easy way to reduce rate increases is to cut CIP spending but that risks increasing rates dramatically in the future." (Good)

2. **Improving workforce diversity and inclusion**

   "Important progress made, still have opportunities." (Good)

   "I don't fault OWASA for what they are doing. I would be happy to see OWASA take a leadership position in North Carolina to create opportunities for under-represented groups even though it might not have direct results on the makeup of OWASA's staff." (Fair)

   "Dramatic improvements in this area, though more work is still needed. I'd love to see the apprenticeship program take off." (Very Good)

   "I disagree with separate[ing] this question and the one on [recruitment]. OWASA has always been fortunate to have highly qualified staff, but more diversity is needed and I *hope* that is occurring through the diversity efforts. I'm very pleased that there are more women in leadership position but still need to work on racial diversity from what I can tell. There may have been more achievements than I am aware of." (Good)

   "Senior management continues to be white and male in the 21st century. OWASA is one hour away from the university that produces the most minority engineers in the country. I remain highly skeptical of any indication that it is trying to change." (Poor)

   "OWASA values a diverse and inclusive staff, but has trouble finding and recruiting minority professionals. I am excited that OWASA will be participating in the NC Rural Water Association

apprenticeship program, which may have the effect of bringing minority students to work at OWASA to gain valuable early-career opportunities." (Very Good)

"Excellent efforts have not shown results yet. I have confidence that results will follow with continued effort. It is noted that OWASA's D&I programs have received national attention." (Very Good)

3. **Communicating and providing outreach with residents, businesses and other community members**

   "In my experience OWASA did not tell enough people in the community enough of what they needed to know and was satisfied with only engaging with the community when problems occurred". (Poor)

   "It is harder to get in front of the community in the new age of social media, but it remains very important. I wish I had an answer!" (Good)

   "Intergovernmental communications are good. Involvement in the community activities could stand some enrichment." (Good)

   "This used to be OWASA's second greatest strength (next to quality of drinking water)." (Poor)

   "OWASA does a good job communicating with the public using a variety of media and in a variety of settings." (Excellent)

   "Even in the biggest emergencies, OWASA has received complements about its communications." (Excellent)

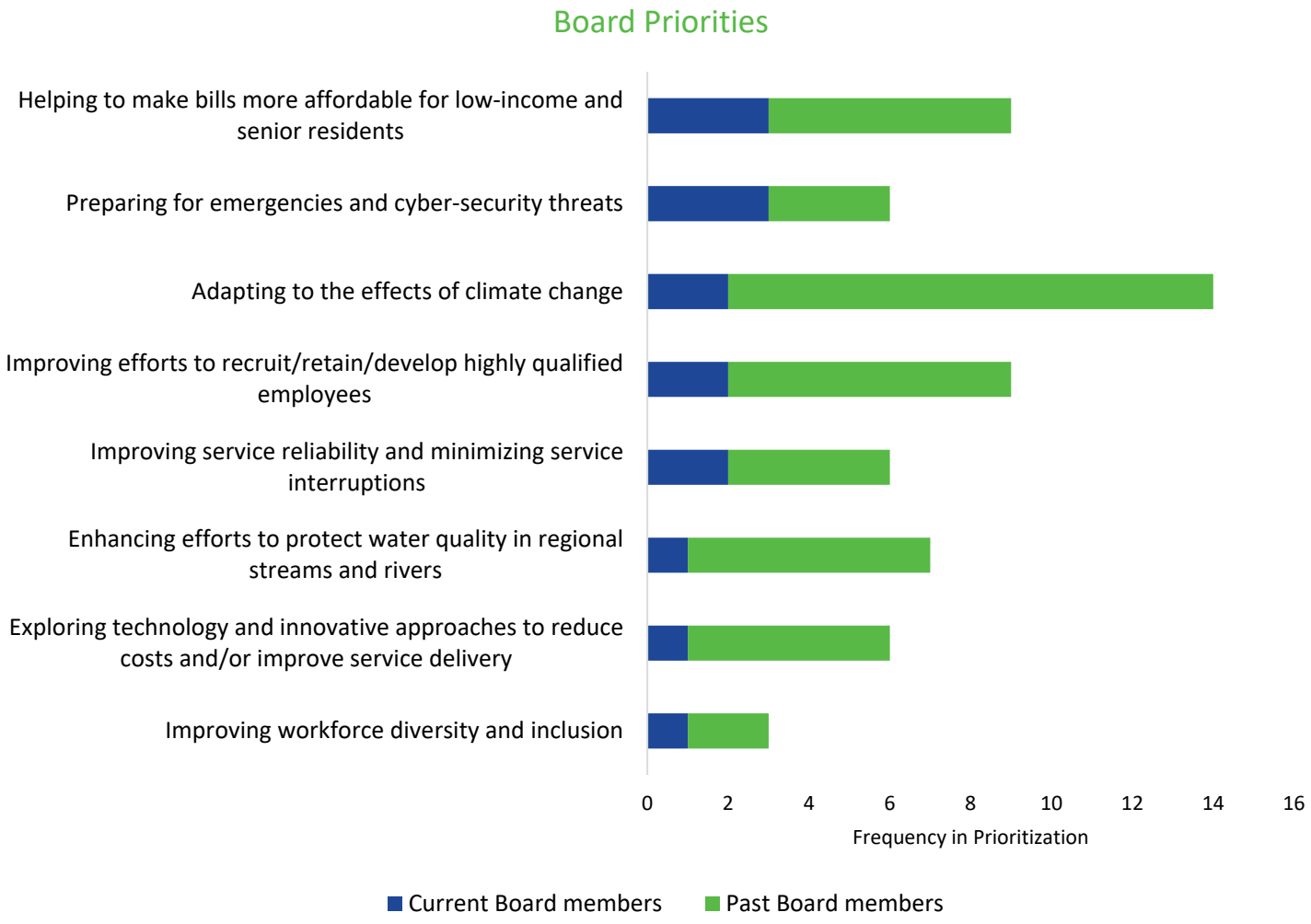
Differences in Service: Current Board members were more likely to rank all attributes higher than former Board members. Much of the differences between the top and bottom attributes are attributable to the feedback received from former Board members.

Opportunities in Organizational Performance

When asked to evaluate OWASA's performance "good management" practices, current Board members generally ranked all aspects as excellent to good, with one person rating "Communicating a vision that describes what kind of organization OWASA hopes to be in the future" as Fair.

Priorities

Board members were asked to identify the top three issues that they felt were the most important to OWASA completing our mission in the next five to six years, assuming that we will remain committed to providing safe drinking water, protecting the environment through wastewater treatment, and meeting state and federal rules and regulations. The follow priorities are the listed in order of current Board member favor.





Community Survey

OWASA Strategic Plan Scan

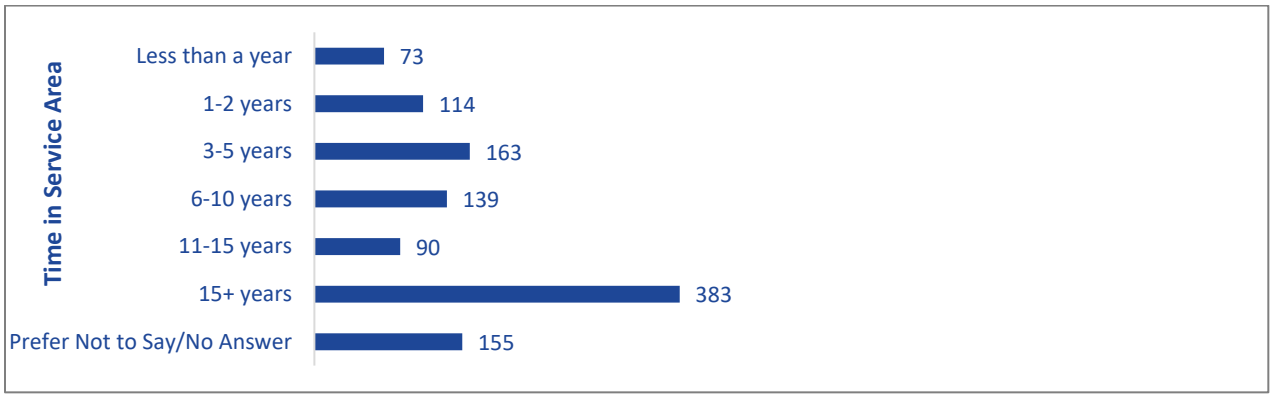
Fall 2021

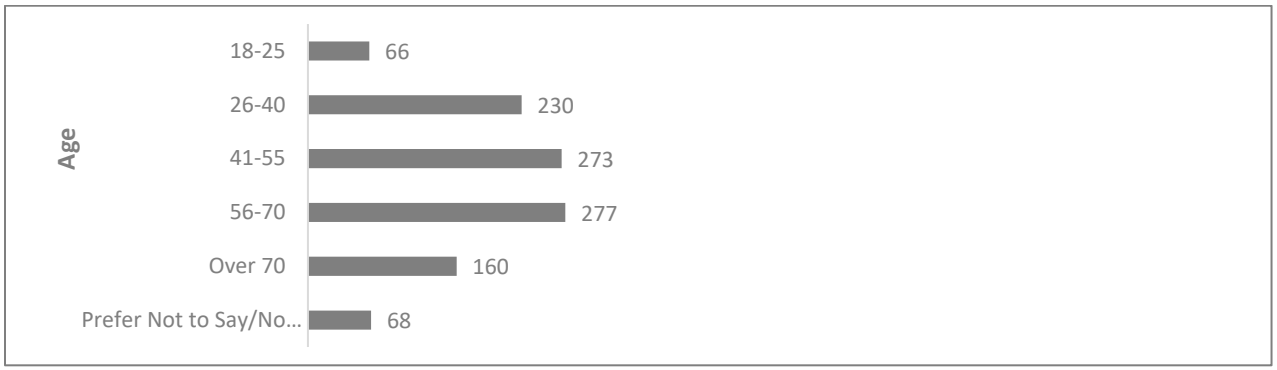
Community Survey Results

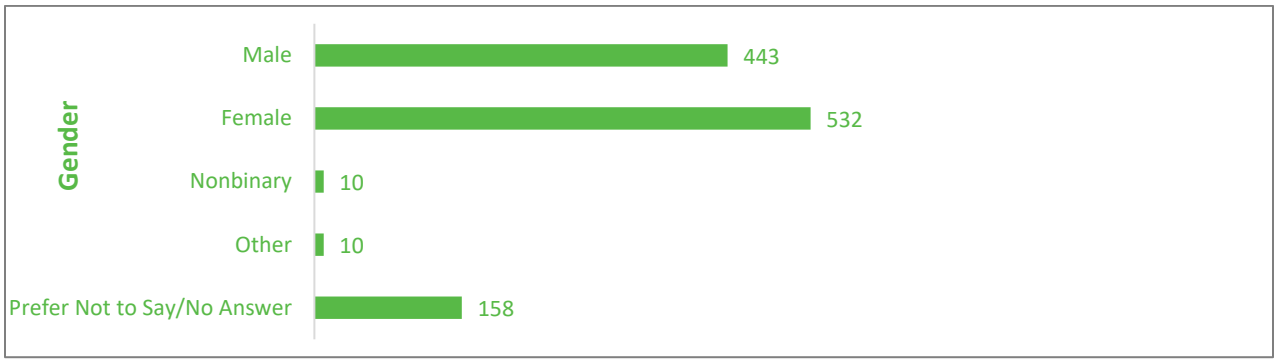
Participation

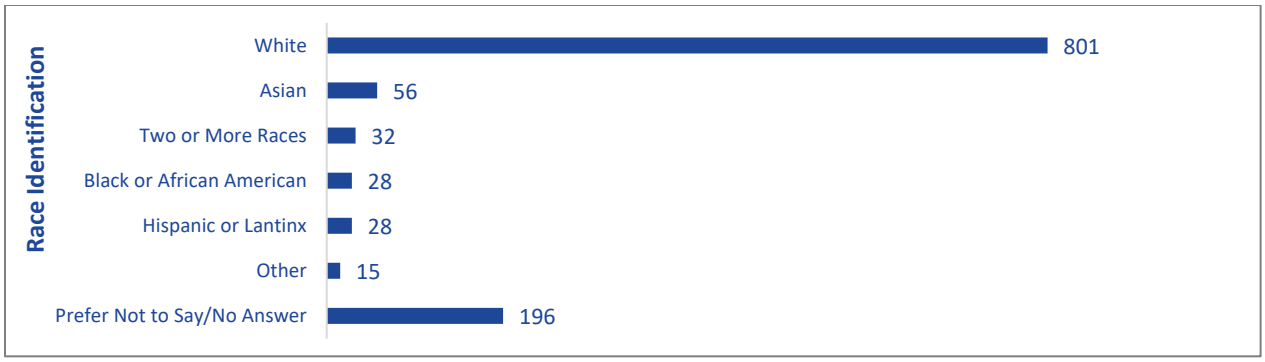
The Community Survey was open for submissions from August 9 through September 7, 2021. There were a total of 1153 responses; five of the survey responses were submitted in Spanish. Survey distribution was not designed to collect statistically significant results but rather to collect the greatest number of responses. Respondents who completed the survey were offered a free lake voucher and boat rental at either University Lake or Cane Creek Reservoir. Throughout the month of August, the survey was distributed to customers via email, posted on our website, shared via numerous social media posts, and promoted at a tabling event at the Chapel Hill Public Library and on our Wonderful Water WCHL radio series.

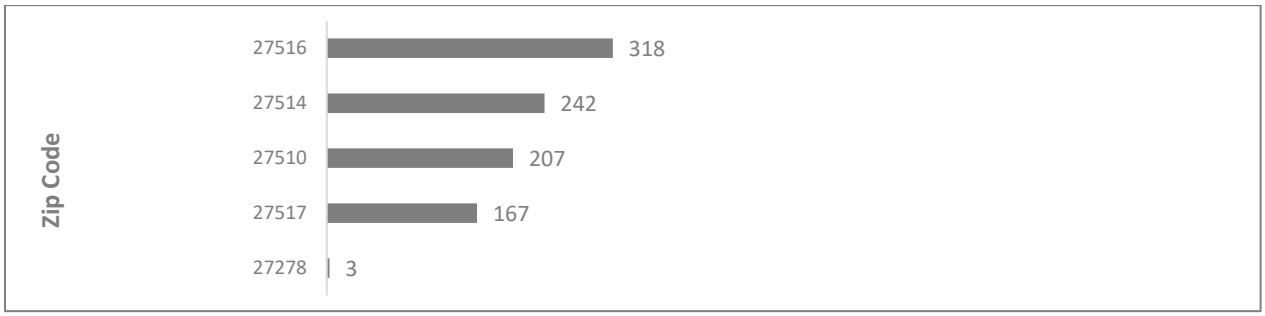
The following graphs summarize how the respondents to our Community Survey identified.

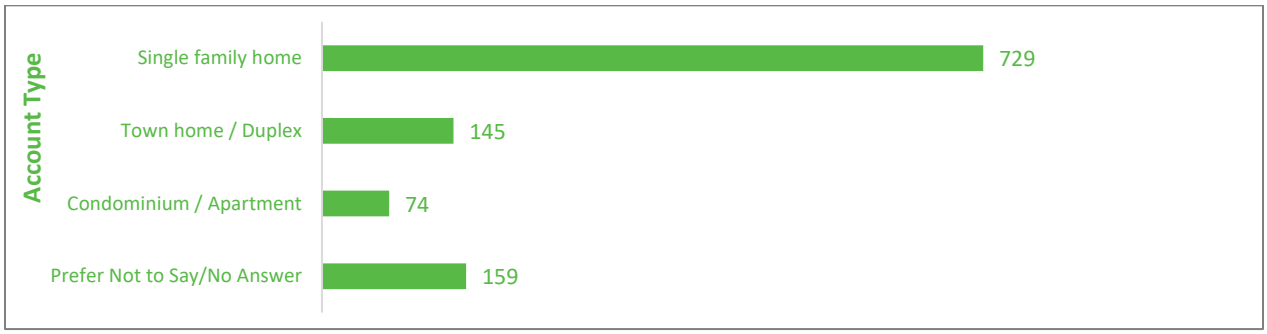


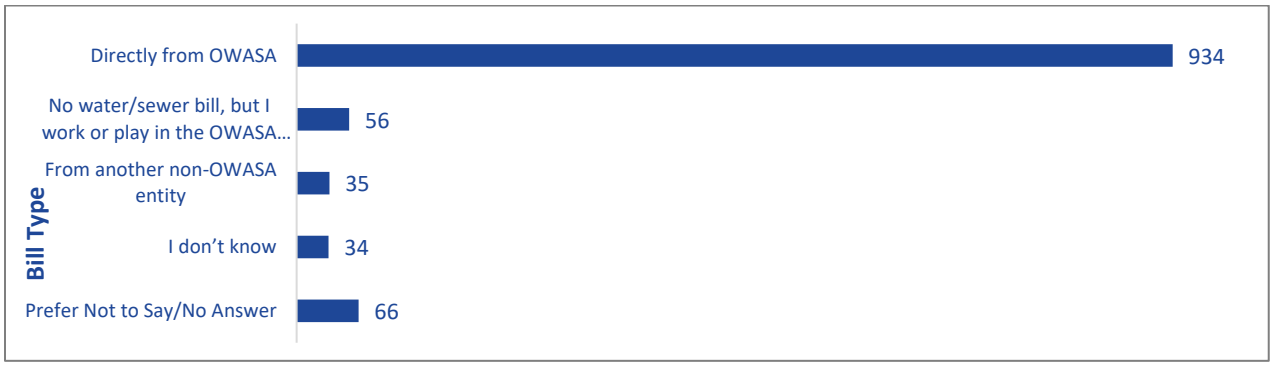












We offer our thanks to those members of the community who took the time to provide input. Not only is their feedback valuable input for the development of our strategic plan, but also for evaluating customer satisfaction and the effectiveness of our communication strategy.

Who is OWASA?

When asked what three words come to mind when thinking of OWASA, respondents overwhelmingly identified water and to a slightly lesser degree sewer. The word cloud below, which makes a word larger based on how frequently it was repeated in responses shows, the extent to which "water" and "sewer" were repeated more than other terms. Even still, there were a number of other words frequently repeated, including: reliable, expensive, community, clean, and bill.

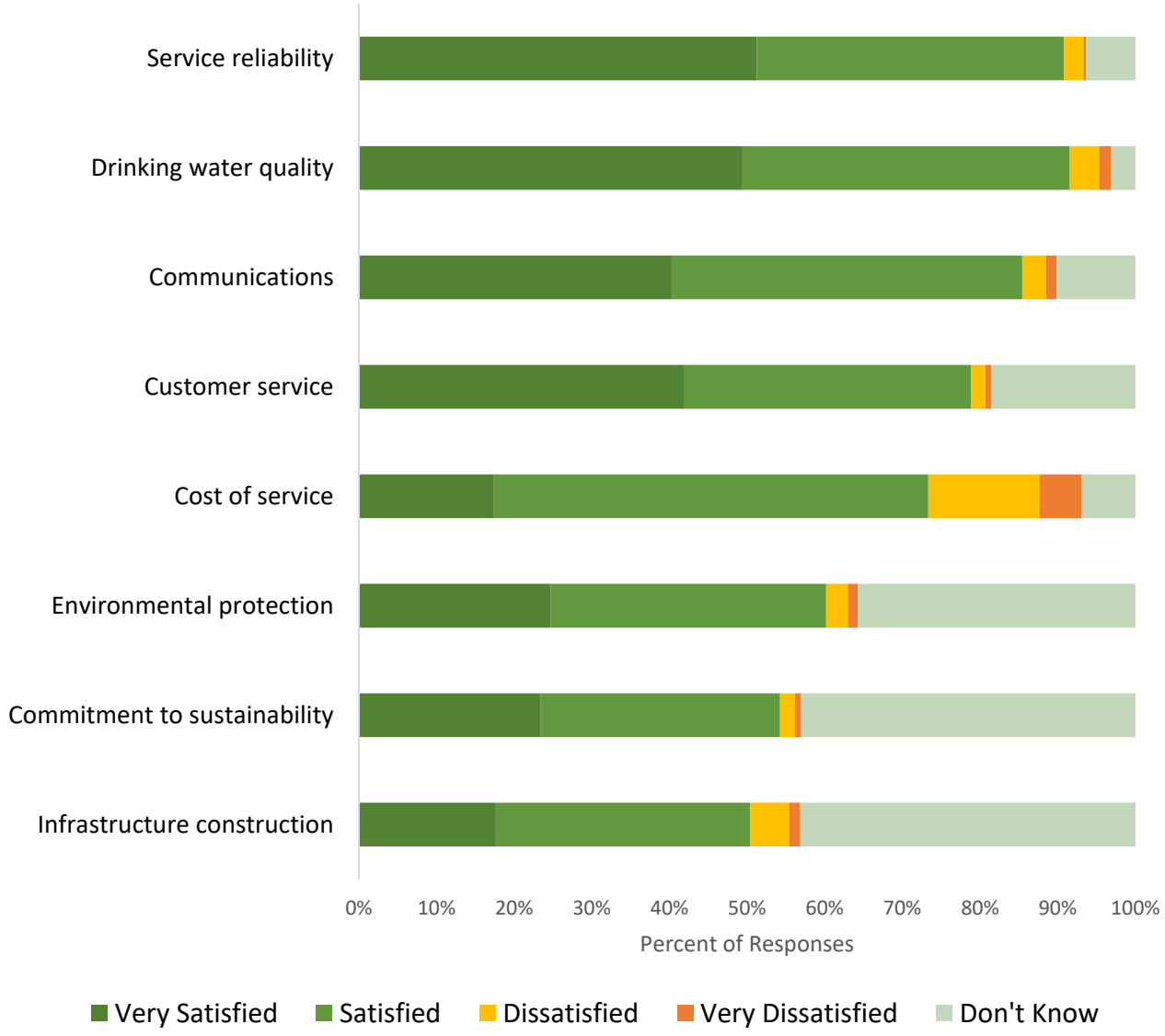


When we remove the words "Water" and "Sewer" from the selection, we can start to see other responses rise to recognition, including lake, reservoir, quality, and local.



Community Satisfaction

Community members were asked to rank their satisfaction with various aspects of our service to the community. The following factors are listed in rank order based on customer satisfaction.



The respondents were generally very satisfied or satisfied with our services across the board. The factors with the highest number of survey participants reporting satisfaction were: Drinking water quality and service reliability. Cost of service received the largest number of dissatisfied and very dissatisfied responses. Highest levels of “very dissatisfied” about cost of services tended to be people of color, males, those respondents older than 70 years old, and those who have lived in the service area for more than 15 years.

It is also interesting to note that many participants selected “Don’t Know” for commitment to sustainability, infrastructure construction, and environmental protection. Respondents ages 26-40 were more likely to “not know” than other respondents.

Strengths

When asked to identify OWASA's strengths, the following themes were prominent in these responses:

Drinking Water Quality: Many respondents recognized the high-quality drinking water as a key strength and as something that is not readily available in all parts of the country. A few illustrative quotes provided were:

> "Good tasting water. Wherever we go we always compare the local water to OWASA and generally, there is no comparison!"
>
> "Our water quality is excellent--really delicious water. I also like that you let us know when you're doing testing and the water might taste different. Communications are good overall."
>
> "I think our drinking water tastes great! And I know a little about what goes into making sure that happens."
>
> "Quality of water. Caring for the community."

Community Service: Representing the community OWASA serves is something that respondents said they valued when they think of OWASA.

> "The ethos of conservative water usage is extremely valuable and OWASA does a good job of water and wastewater management to that end."
>
> "I value the fact that our water is a not-for-profit public service agency."
>
> "Community interaction and involvement, acts consistently with the community's vision"
>
> "Community service. I love how easy it is to include a monthly contribution with my water bill and help out others."
>
> "Works well with community organizations and programs. Communicates actively as situations arise and change. Communication in general at every level is pretty exception, organizationally, and on the interpersonal level, customer service, etc. Care to Share Fund is so vital to community health. Keeping shut offs from happening during COVID has been huge!"
>
> "Methodically embraces and executes plans to improve W/WW treatment efficiency and sustainability."

Customer Service: Respondents valued that they could call OWASA and speak with a helpful representative:

> "OWASA has people who work for them who are friendly, yet professional."
>
> "Customer service and responsiveness. This feels like a local company. Every time I call, a real person answers the phone. It's amazing. Please don't change this. Last time I called it was because my outdoor faucet by the water main had sprung a small leak. The OWASA person on the phone helped me understand what was going on, put it in perspective, and helped me understand what my options were to solve the problem - what OWASA could do, what a plumber would do, and how to find one. Other times, I have just called to change my account

details when moving - again, having a real person answer the phone and take my details made the process smooth and pleasant."

"Has some excellent people doing customer service"

"I once had a leak in my yard and the people at OWASA were really helpful in both alerting me and also checking on the water use levels each time I called as we tried to locate the source of the leak! I really appreciated their patience and service. I also appreciate the bill reminders and summaries."

Communication and Community Outreach: OWASA's commitment to communication was called out repeatedly as a positive. However, as indicated in graph above, it also appeared there was an opportunity to share more information related to our role in environmental protection and sustainability.

"OWASA makes an effort to educate the community about how our water is treated. OWASA wants people to read and understand the annual water quality report, which benefits the community greatly. One great way to reduce plastic waste is for people to trust the safety of their drinking water. Because the water quality report is accessible and easy to understand, I know that it is safe to drink my tap water. Thank you OWASA!"

"I don't know much but the outreach has been amazing, they met with my high school class :) Keep reaching out, especially to younger people because it really does make a difference."

"Print communications are always clear *and* engaging--which seems rare for public utilities"

"Would like to know more about your environmental, sustainability efforts, and how you calculate your costs"

Technology: Recent investments in technology have also given customers new tools to make it easier to pay their bill and to track their water use; some customers would like to leverage that technology even further.

"AMI is great - love the dashboard and alerts."

"The one-click online bill pay from email is so fast and smooth. It is my favorite way to pay a bill among any service!"

"Updates on water usage are great"

"The upgraded technology and being able to see water usage in real time is pretty cool."

"Show my water use in comparison to others and my past. I have never seen this with other companies."

"The billing system is much better than for most of my other utilities!"

Opportunities

When asked for input into how OWASA can improve in the future, several new ideas were put forward by survey respondents.

Water Supply Resiliency and Sustainability: Using non-potable water for non-drinking purposes was brought up by multiple respondents to the survey, as well as taking on ambitious sustainability projects and incentivizing water conservation.

> "Continue to improve service with emphasis on conservation and sustainability; think outside the box to keep our water resources clean."
>
> "I would like to see OWASA to continue to devote itself to environmental safety and protection."
>
> "As a single person who is extremely environmentally conscious and who does not waste water and who saves bath water to flush toilets and water plants, while my water usage is extremely low, my costs for service are still way too high. Those who conserve should receive some reprieve for doing so."
>
> "Develop ways for the public to utilize reclaimed water"
>
> "Help homeowners install water saving devices, such as rainwater barrels and rain gardens, help community members get more involved in stream cleanup, help make the connections in people's minds between solid waste use and disposal and long-term water quality."

Infrastructure Investment: A few respondents expressed concern regarding OWASA's investment infrastructure investment.

> "More aggressively renew major piping infrastructure"
>
> "Seems like a there are a lot of breaks and that the infrastructure is very old in many places"

Water Quality: Some respondents would like to see OWASA taking a more proactive role addressing contaminants of emerging concern.

> "Broader legislative advocacy for clean drinking water across NC and the country. Consolidation with smaller water utilities to achieve economies of scale around larger infrastructure improvement projects."
>
> "Be more aggressive in driving down PFOA levels"
>
> "Try to do even more beyond the national standards to remove harmful chemicals from the water even if they meet official standards"

Service Area: There were a couple of responses that addressed OWASA's service outside the service boundary.

> "1. Improve diversity among Board and Staff leadership. 2. Increase utilization of Reuse Water among community. 3. Consider regional approaches to W/WW as the development within the region continues to explode."
>
> "I think it's time for OWASA to work with stakeholders to extend their services. I also think that OWASA can proactively share resources with the towns/counties."

Rates and Fees: There were a few suggestions regarding rates, fees, and costs.

> "Work to lower costs. Our water bill more than doubled when we moved from Durham"

"Not boost prices when we have done such a good job using less water."

"There are gaps in OWASA's infrastructure inside its service boundary. The costs to connect to OWASA's service presume that a developer will be shouldering the upfront cost and distributing it across several houses. These costs are prohibitively high for an individual homeowner, unless there is a water emergency. Even then the costs is very high. This creates a situation where homeowners must wait for an environmental hazard to occur before they can hope to afford to interconnect. As septic systems from the 60s and 70s continue to age, these hazards will become more frequent. A proactive program should be created to make connection to OWASA accessible within the service boundary."

Public Space: A few comments suggested ways to improve/increase OWASA's role in public recreation and of public spaces.

"Support for local recreation: more open hours/days at the lakes, public maps for pedestrian easements already in place along OWASA rights of way and on OWASA lands, active development of pedestrian access to OWASA rights of way"

"The Bolin Creek sewer easement in Carrboro should be considered a public recreation facility like the two reservoirs. People use the easement in this way already, but because of its poor condition it is inaccessible to many people. OWASA should work with the Town of Carrboro to maintain an equitable recreation facility along this corridor."

Communication: Communication was cited as both a strength by some and an opportunity for improvement by others, with specific topics suggested.

"I rated several of the above categories as "don't know" because I honestly don't know your plans. That said, I'm not sure how much communication I need from you. This may actually be the right amount."

"Provide more frequent communications with the basics: where does the water come from, how often do you test it and how, etc."

"I have a great sense of my individual water usage but less of a sense of OWASA's general community plans around sustainability, etc."

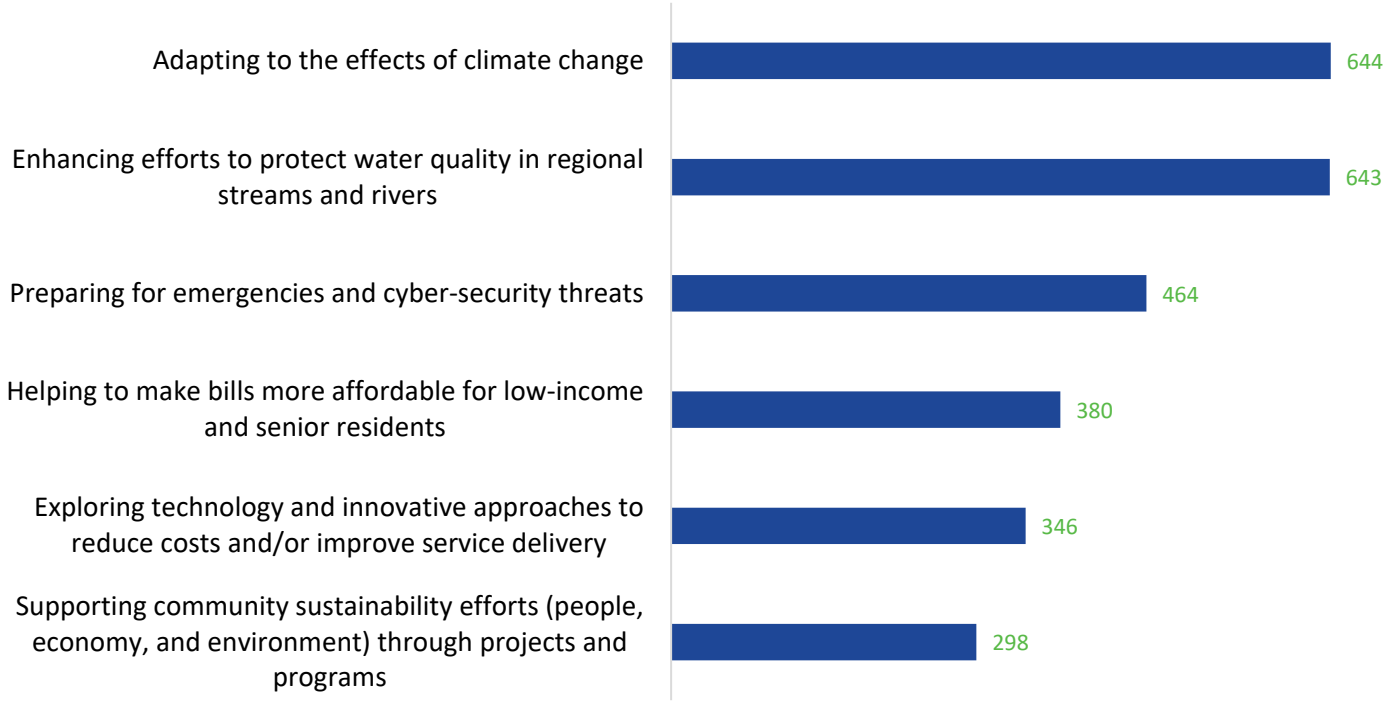
"I would like to receive more communications about testing for PFAS and other chemicals that may influence water quality and have a detrimental impact on human health. It would also be useful to learn more about your how you process wastewater at the treatment plant. Maybe some informational fliers in general to draw in interest to the public. Do you by chance offer tours?"

"Educate people about grey water systems and encourage people to use their tap water multiple times before they're finished with it."

Priorities

Community members were asked to identify the top three issues that they felt were most important to OWASA completing our mission in the next five to six years, assuming that we will remain committed to providing safe drinking water, protecting the environment through wastewater treatment, and meeting state and federal rules and regulations. The following shows the top six priorities.

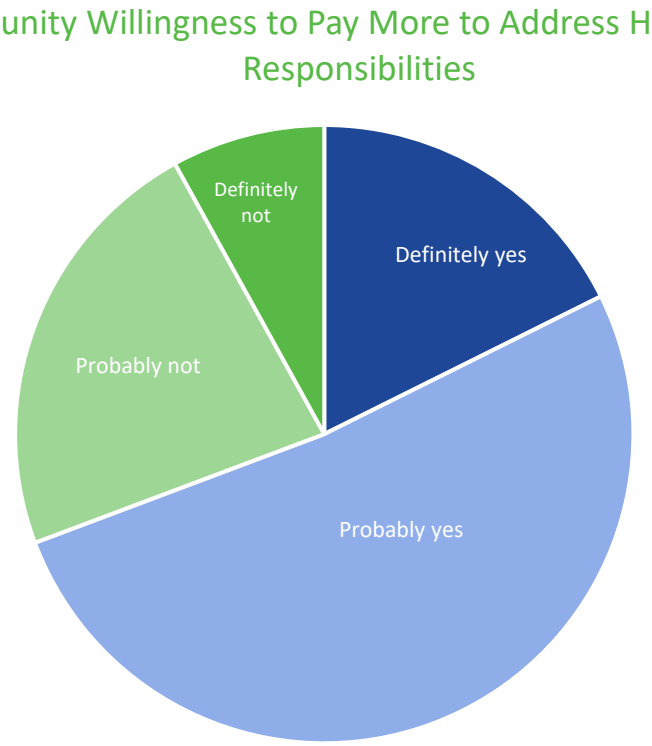
Community Priorities for OWASA



When evaluated against demographics, there were not significant differences in priorities based on race identification or service area longevity. The top priority for the youngest and oldest respondents (those younger than 40 and older than 70) was adapting to the effects of climate change. The top priority for those between the ages of 41 and 70 was enhancing efforts to protect water quality in regional streams and rivers.

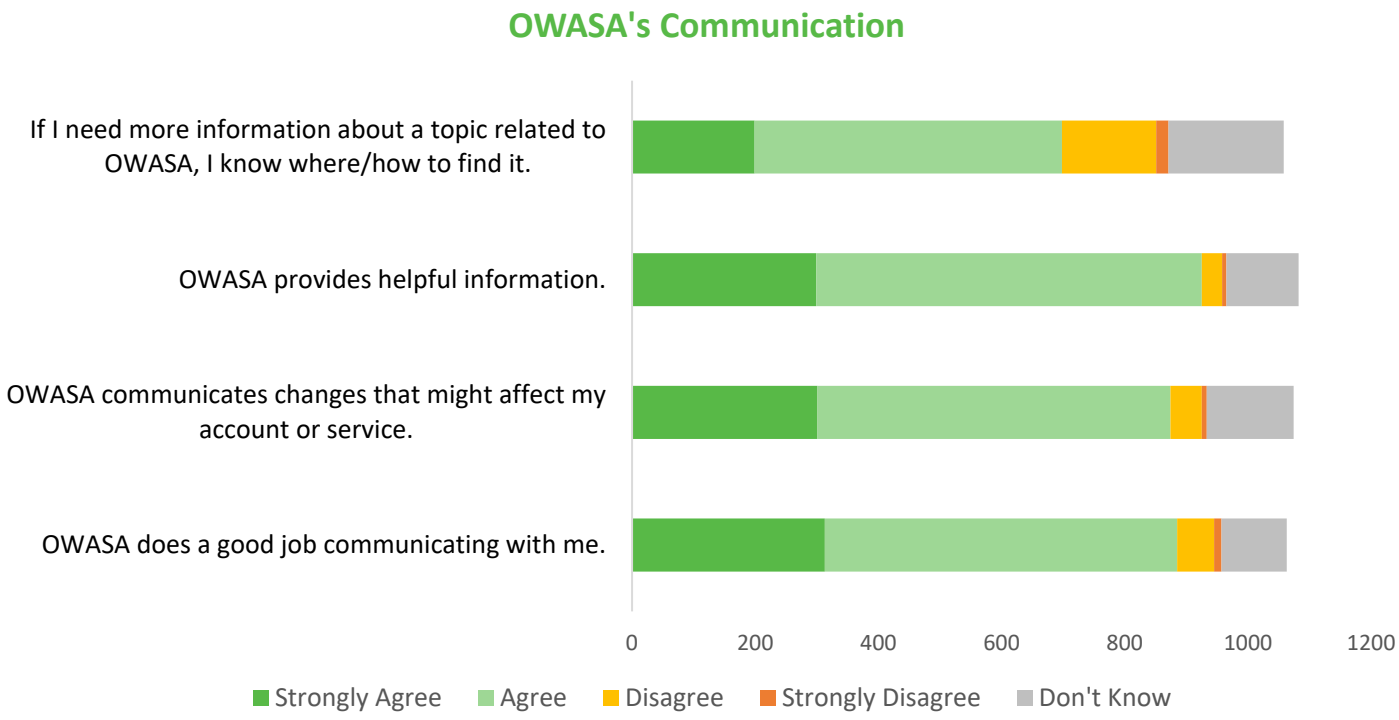
Black/African American as well as Non-binary customers ranked affordability and diversity and inclusion higher than other races and genders.

Community members were also asked if they would be willing to pay more on their OWASA bill if the money was used to address the top three responsibilities that they prioritized. The majority (nearly 70%) answered definitely or probably yes. Respondents that identified as white were more likely to answer yes to this question than respondents that identified as Black or African American, Asian, or Other. People over 70 were more likely to answer yes to this question, while those under 18 were less likely to.



Communication

Respondents were asked to comment on OWASA's communication with them. Overall, OWASA received high marks for communications with 85% of respondents agreeing with the statement, "OWASA does a good job communicating with me."



Respondents who have lived in the service area for 3-5 years had the highest level of dissatisfaction with our communications, as did people who identified as Black/African American or Two or More Races.



Stakeholder Sessions and Survey

OWASA Strategic Plan Scan

Fall 2021

Stakeholder Session and Survey Summary

Participation

OWASA invited 46 stakeholders (defined as a person that works with OWASA in their professional capacity in one or more ways) to participate in sessions to discuss water utility priority setting and to provide input for OWASA's consideration in setting strategic priorities. In an effort to expand our reach, those invitees were also invited to extend invitations to a "plus one". Two identically structured sessions were held on August 23 and September 7, 2021; invitees had the choice of which session to attend.

Ultimately, 34 stakeholders (identified at the end of this report) participated in one of the two two-hour virtual sessions during which they provided feedback summarized in the following report. In addition, participants provided follow-up responses via survey.

Who is OWASA?

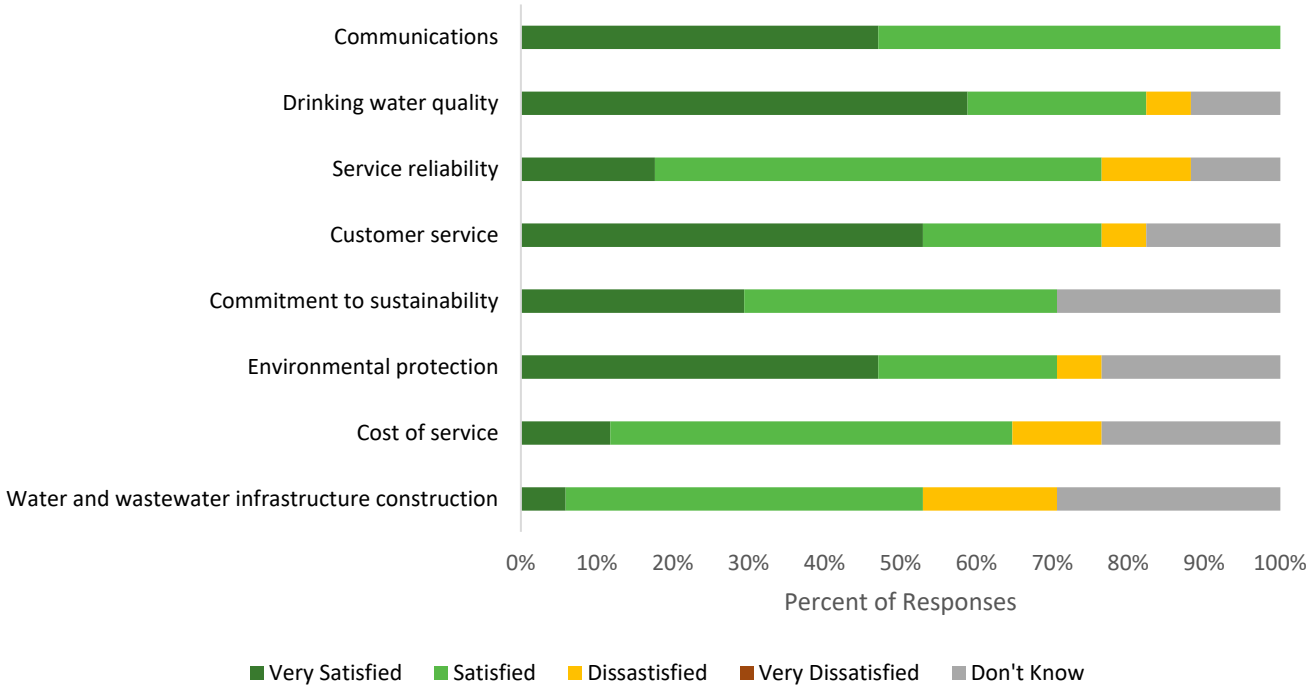
When asked to identify the first three words that came to mind when stakeholders thought of OWASA, the following responses were provided.



As with other surveys, "water" and "sewer" were top of mind for many stakeholders. Other prominent reactions included: essential, sustainability, quality, partner, professional, and community.

Stakeholder Satisfaction

Stakeholders were asked to rank their satisfaction with various aspects of our service to the community. The following factors are listed in rank order based on customer satisfaction.



Most of our stakeholder respondents were very satisfied or satisfied with our services across the board. In fact, not a single stakeholder reported being "very dissatisfied" with any of these aspects of our service. The factors with the most reported dissatisfaction were water and wastewater construction infrastructure and service reliability.

Strengths

The participating stakeholders identified overall provision of essential water and sewer services as well as how OWASA works with community partners, providing customer service, and planning for the future as strengths of OWASA's. The following quotes capture some of the strengths identified by participating stakeholders.

> "Provides high-quality drinking water and protects the environment through high-quality wastewater management."
>
> "I think that OWASA is a well-run utility that is continually striving to provide the highest quality service to their customers, while being excellent stewards of environmental and financial resources."
>
> "Collaboration with stakeholders"
>
> "Provide reliable source of water and way for customer to be aware of usage"

"Water quality and long-range water supply planning"

Opportunities

The following summarizes areas stakeholders believed OWASA could work on in the future. In many of these cases, the areas were recognized as strengths by OWASA; however, the stakeholders had ideas about opportunities for continued improvement.

Collaboration: While collaboration was recognized as a strength by some stakeholders, it was also identified as an area that could use continued attention from OWASA. Stakeholders encouraged OWASA to find areas of overlapping projects or interest to capitalize on opportunities. One of these overlapping areas included affordability where can we partner with local non-profits and governments to install more efficient fixtures in low-income homes.

Stakeholders wanted to see OWASA continuing to partner with stakeholders to amplify messages and communicate with one another during events. One stakeholder wrote, "Other events will happen--continually to work to improve relationships and communication channels to use when it happens again."

There were areas where stakeholders identified opportunities to partner in their own plans including: UNC's expanded use of reclaimed water in chiller plants and climate action plans. There was also an interest expressed in OWASA collaborating with neighboring municipalities on the management of regional water resources.

Water Quality: Water quality was discussed as both an area that OWASA does well and an area to make sure we are delivering the same quality water to people across the distribution system. The issue of stagnant water in pipes was brought up by two stakeholders.

Water quality was also seen as a strength and something that OWASA should publicize more often as an effort to gain/regain trust from the community. Making sure that historically marginalized communities are not facing water quality issues and that opportunities are open for underserved neighborhoods to connect to the OWASA infrastructure in an affordable way were identified as areas for attention by OWASA.

Managing Aging Infrastructure: In discussion, many stakeholders were aware of the national issues regarding aging infrastructure and expressed concern about these trends being a factor locally. One stakeholder encouraged OWASA to "invest in greater infrastructure monitoring, reliability and resiliency." Flexibility was also a word commonly used throughout stakeholder discussions. One stakeholder brought up the importance of financial flexibility in infrastructure planning by right-sizing infrastructure. Flexibility was also a term used when discussing infrastructure and climate change. Stakeholders referenced specific strategies, like asset management, as important tools for better managing aging infrastructure.

Service Area: The overall OWASA service area – and, in particular, expanding that service area to the south – was a topic brought up in multiple breakout groups during this session. Multiple stakeholders brought up the importance of OWASA working with regional water/sewer providers for long-term planning.

There was also concern raised that there were customers that are inside the service area that are not connected to OWASA's distribution and/or collection system. One stakeholder wanted OWASA to "adopt a more proactive stance towards partnering with residents inside the service boundary to extend connections and replace the need for failing wells and septic systems."

Communication: Stakeholders encouraged OWASA to do more to demonstrate and reinforce the things that OWASA is doing well (e.g. water quality) to help rebuild trust in the community. Another stakeholder wanted to see more information about what goes into rates, while another thought we could provide more information on water usage, particularly to UNC students.

Other: Stakeholders identified specific strategies like "on-bill financing" as a method for assisting with affordability and water conservation. Another wanted to see OWASA take on a "expanded water conservation programming"

Priorities

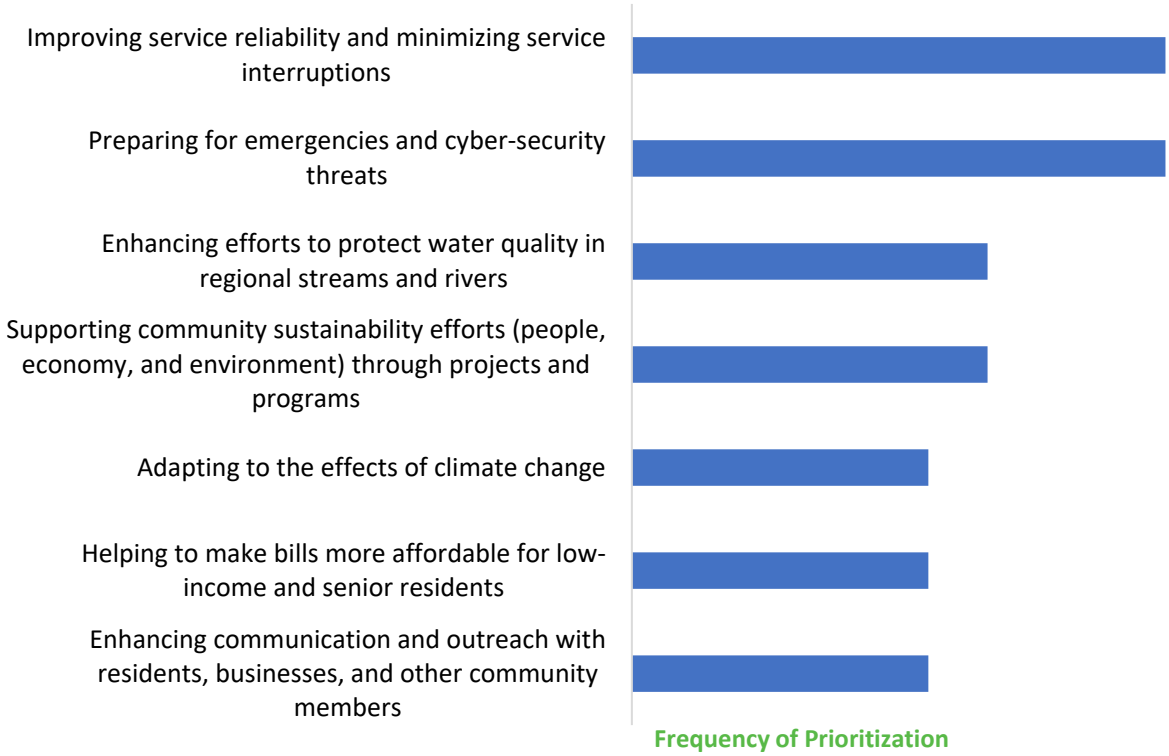
Much of the focus of each session was on high-level, ongoing priority setting for water utilities. Consistently, participating stakeholders ranked product quality as the number one priority for water and wastewater utilities like OWASA. Product quality was followed by a need for operational resiliency, water resource adequacy, and infrastructure strategy and performance. Participating stakeholders also recognized the need for financial viability and operational optimization to control costs.

Interestingly, stakeholders involved in sustainability did not rank sustainability as a high-level, ongoing priority for utilities. Although they did not prioritize sustainability in-and-of-itself, they did encourage mainstreaming sustainability throughout the organization.

As it related to infrastructure, operations, and finances, the words reliability and resiliency were repeated often in the stakeholder sessions.

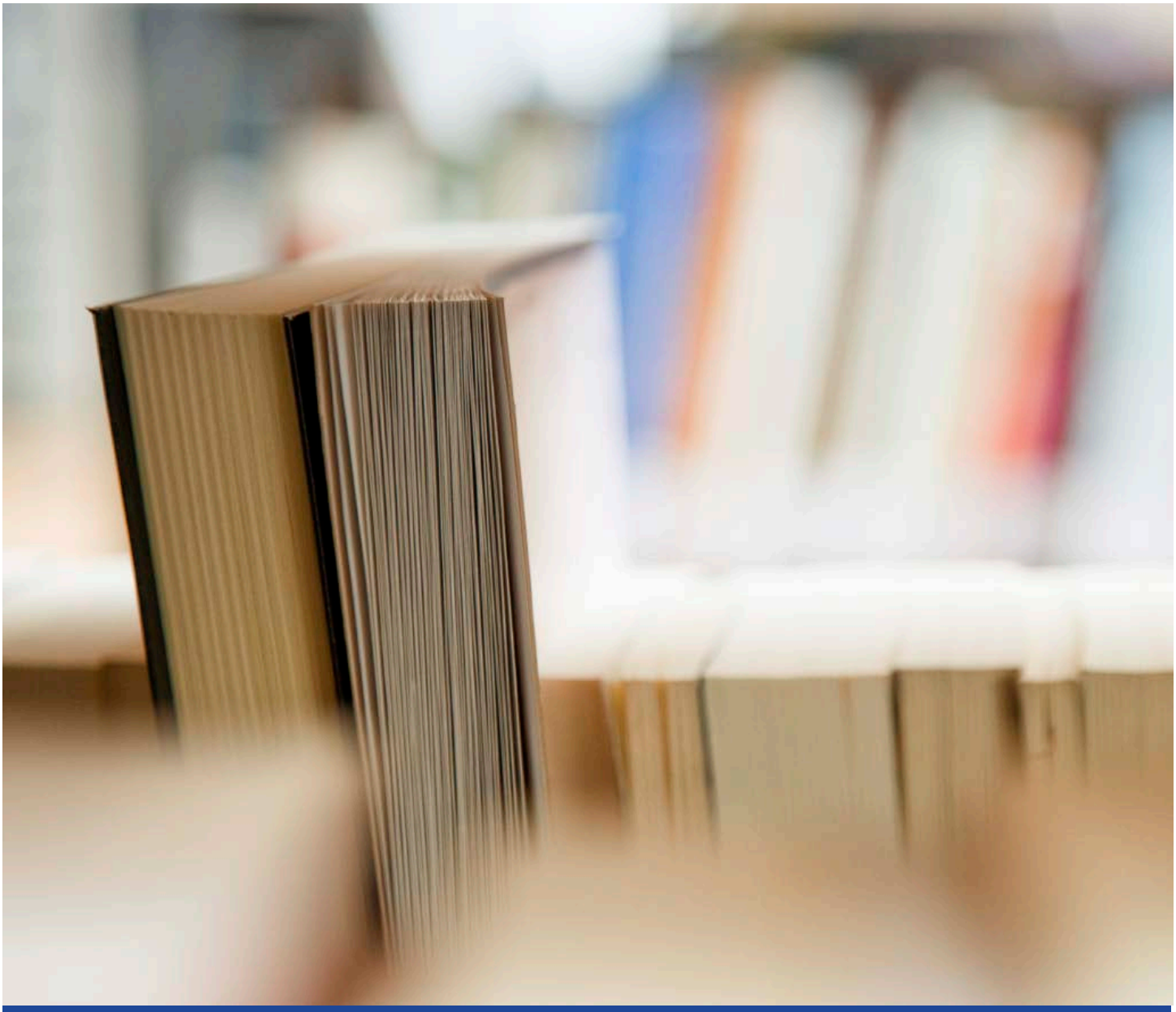
Just as was done in the community, employee, and board survey, stakeholders were asked to identify the top three issues that they felt were the most important to OWASA completing our mission in the next five to six years, assuming that we will remain committed to providing safe drinking water, protecting the environment through wastewater treatment, and meeting state and federal rules and regulations. The following shows the top seven priorities.

Stakeholder Priorities



Stakeholder Session Attendees

Name	Title	Organization
Aaron Nelson	President	Chamber of Commerce
Darrell Jeter	Emergency Management and Planning Director	UNC
Cathy Brennan	Environmental Health and Safety Director	UNC
Rebecca Buzzard	HCS Director	Town of Carrboro
Randy Voller	Wastewater Solutions	15-501 Corridor
Chick Turner	Chilled Water Operations Supervisor	UNC
Matt Gladdek	Executive Director	Chapel Hill Downtown Partnership
Chris Hirni	Land Conservation Manager	Orange County
Joe Guckavan	Public Works Director	Town of Carrboro
David Gorelick	Post Doc	UNC Researcher
Tim Devine	Senior Associate	Hazen and Sawyer
Aaron Bachenheimer	Director, Off-Campus Student Life	UNC
Elizabeth Schroeder	Emergency Preparedness Coordinator	UNC Hospitals
Minister Robert Campbell	President	RENA
Melanie Elliot	Sustainability Analyst	UNC
Lee Baker	Chilled Water Systems Manager	UNC
Faith Brodie	Housing Director, Public Housing	Town of Chapel Hill
Greg Characklis	Professor	UNC Researcher
John Richardson	Community Resilience Officer	Town of Chapel Hill
Sharon Myers	Environmental and Stormwater Compliance Officer	UNC Environmental Health and Safety
Sarah Pickhardt	Emergency Management Coordinator	Orange County Emergency Services
Kristen Young	Community Relations Director	UNC
Brennan Bouma	Sustainability Coordinator	Orange County
Tom Tant	Vice President	Hazen and Sawyer
Chad Nottingham	Director of Operations	East West Partners
Chris Ehrenfeld	Bold Development Group	Housing Developer
Mike Piehler	Chief Sustainability Officer	UNC
Angela Sowers	Environmental Health Program Specialist	Orange County
Dawn Wedig	Emergency Management Planner	UNC
Stacey Todd	Management Analyst	Town of Chapel Hill, Public Housing
Tina Moon	Planning Administrator	Town of Carrboro
Meg Holton	Water Resources Manager, UNC Energy Services	UNC
Tye Hunter	Member	Chapel Hill - Carrboro NAACP
Marty Roupe	Planner	Town of Carrboro



Literature Review

OWASA Strategic Plan Scan

Fall 2021

OWASA Strategic Planning Literature Review

Introduction

In an effort to inform the development of OWASA's new strategic plan, a group of OWASA's SPARC (Strategic Planning Advisory and Resource Council) conducted a review of documents that was considered relevant to our own strategic planning efforts. When embarking on such a task as developing a strategic plan, a common question is asked: what are others doing that we can learn from? This literature review was conducted to help answer that question.

Methodology

The literature reviewed focused on four categories of literature:



Water and Wastewater Industry Organizations: OWASA is a member of multiple national and state industry organizations focused on supporting and advancing the water and wastewater industry. Because there is little competition in our industry, there is a great deal of collective research, collaboration, and information sharing. Moreover, the consulting firms that work in our field regularly contribute to research and reports. The following document summarizes key takeaways from the strategic plans, guidance documents, and research agendas of our industry organizations.



Water and Wastewater Utility Peers: The phrase "best in class" is utilized a lot by the OWASA Board of Directors and employees. The SPARC brainstormed a list of water and wastewater utilities that our staff look to in various aspects as "best in class." Where available, we compiled the current strategic plans of those organizations to assess and compare strategic priorities. The following document summarizes key themes and individual strategies identified in water and wastewater utility strategic plans from the United States.



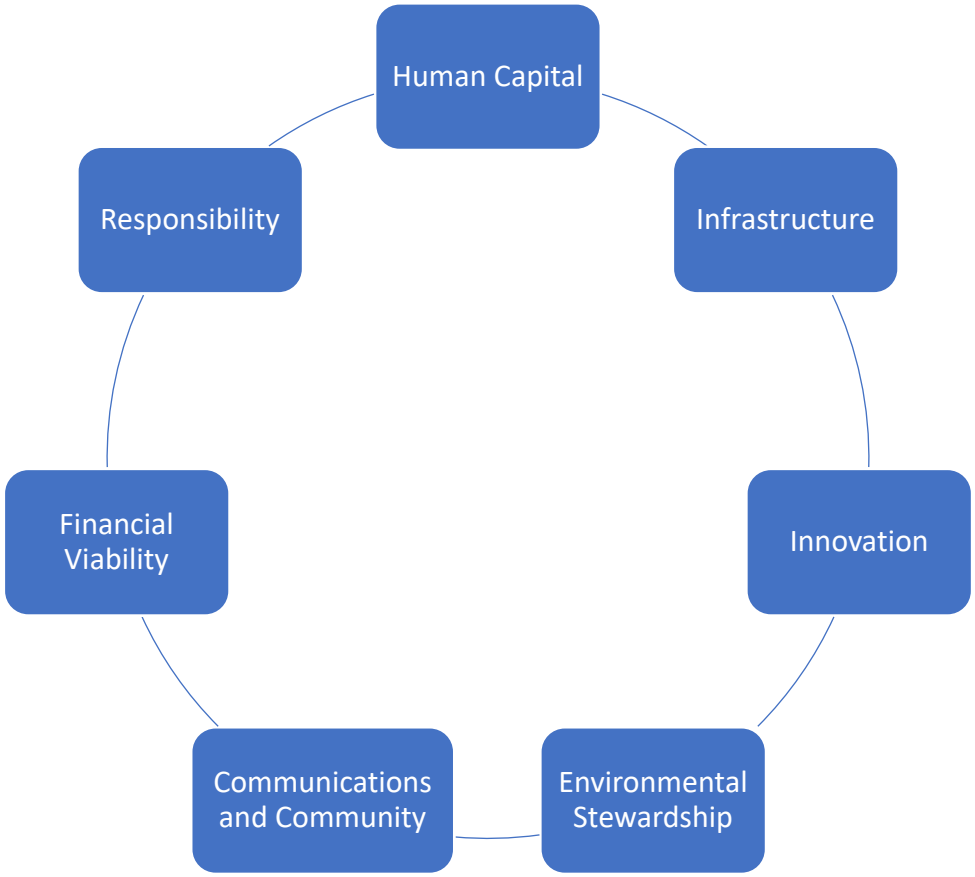
Outside Organizations: Simply focusing on the water and wastewater industry has the potential to miss an opportunity to review and consider innovative ideas by leading organizations outside the industry. In this category of the literature review, the team tried to identify private companies and other organizations that are considered "leaders" for each of the ten attributes of effectively managed utilities. The following documents summarizes key takeaways from the strategic plans, ESG (environmental, social, and corporate governance) reports, and company updates of these companies.



Regional Partners: As an integral service provider to our community, it is important for OWASA to look for ways to support the strategic priorities of our local government partners, as well as key stakeholders like the University of North Carolina and the Chapel Hill Carrboro City School District. The following document summarizes relevant findings from a review of the strategic plans of our regional partners. The team was unable to identify a strategic plan for Orange County, and as such, was not included in this review. Further, the Town of Carrboro's Comprehensive Plan was still in draft form at the time of this review.

Strategic Themes and Strategies

After reading through the various plans and reports within each category, the literature review team discussed themes that were common across all groups, regardless of industry or location. Those themes are summarized in the following graphic. They are explained in further detail in the text below, along with a discussion and associated strategy examples from each category of literature.



These themes and associated strategies are inter-related, not mutually exclusive. For example, while one utility considered an asset management program to be a strategy for achieving financial viability, another may have identified this strategy under the theme of infrastructure resiliency. The literature review team found these general categories to be inclusive of the major themes across the group and a useful way to highlight individual, associated strategies.

Human Capital looks at areas of employee and leadership development, organizational staffing, as well as the increased focus on Diversity and Inclusion.

Takeaways from Industry Organizations: Human capital was identified as important in a variety of the different plans and reports from water and wastewater industry organizations. **The American Water Works Association (AWWA) has identified aging workforce and anticipated retirements as one of the top 10 issues facing the water sector as of 2021 (AWWA State of the Industry Report, 2021).** Additionally, that same report indicated that one of the biggest concerns for the water industry is how to recruit, retain and pay the water and wastewater workers of today and tomorrow. This aspect of human capital is essential due to the importance of retention of institutional knowledge. Diversity and inclusion within membership was also a goal identified in AWWA's strategic plan. **In fact, the goal of diversity and inclusion was a common theme among all of the water and wastewater membership organizations.**

Some strategies that were identified to improve the human capital aspects of an organization included mentorship, improving the pay scale to recruit and retain employees, and making licensing requirements easier between states for operations and maintenance staff.

Takeaways from Other Water and Wastewater Utilities: Employee leadership and development was one of two of the most commonly identified themes identified in the strategic plans of other water and wastewater utilities. Organizational aspirations for human capital included exemplary, high-performing, dedicated, and inspired workforces. Multiple utilities had a goal of being an employer of choice for existing and future staff. Others set the goal of investing in employees and ensuring workforce continuity.

Strategies associated with human capital included safety strategies as well as diversity and inclusion initiatives. **Utilities identified strategies to recruit and retain the workforce of tomorrow with apprenticeships, career tables at industry conferences, effective and utilized training and development programs, and relevant job descriptions and pay.** In addition, some utilities are working on improving workplace culture with internal communication plans, supervisor training programs, and facility investment. Along this line, other strategies included a biennial employee satisfaction survey.

Takeaways from Outside Organizations: For many companies, the development and retention of competent, reliable talent featured prominently in their strategic goals and ESG reports**. Companies like SAS and Warby Parker documented the importance of investing in one's workforce to ensure that high performers and innovative ideas were richly rewarded, and there was heavy emphasis on providing competitive, if not exemplary benefits packages that would be coupled with a respected and comfortable work environment.** These companies focused on diversifying their workforces and often worked to define the culture of the organization by their employees, rather than the organization imposing a work culture of their own. Many companies offered leadership programs, mentoring opportunities, and encouraged workers to attend training classes and courses on company time to build a better educated and qualified employee base that values the company that helped them succeed.

Additionally, employees of these companies were being evaluated biannually or quarterly by upper management, serving both as a means of guiding employee development, but also

providing an avenue to hear ideas in a more intimate setting that gives more credence to the employee's thoughts and ideas. Surveys were distributed to identify organizational weaknesses and leadership needs, with many of the organizations developing rigorous assessment models to ensure the mission, vision and values were being reflected around the organization. Safety was featured predominantly and a key emphasis to ensure employee retention by showing compassion and care towards employees.



Takeaways from Regional Partners: The Towns of Chapel Hill and Carrboro, UNC Chapel Hill, and Chapel Hill Carrboro City Schools, all recognized human capital as one of the most important resources in their strategic plan. Hiring and maintaining a knowledgeable workforce with great emphasis on diversity and inclusion that represents the general population of families and students in the community was important for most. Compensation strategies were used to remain competitive and retain employees. For Chapel Hill Carrboro City Schools, continuous education and learning opportunities offered to employees to provide advancement in their careers was very important. **Continuously assessing and measuring results of initiatives through employee communications and surveys was seen to be effective and regularly identified as a strategy for advancing goals related to human capital.**

Infrastructure strategic themes focused on an organization's physical assets, but also included organizational resiliency, operational efficiency and supply chain logistics, something that has generated intense scrutiny since the onset of Covid-19.



Takeaways from Industry Organizations: Infrastructure was a common theme among the industry organizations. AWWA along with the Water Research Foundation (WRF) expressed concern with the challenges facing the renewal and replacement of water and wastewater infrastructure. Infrastructure is aging and needs replacement at rates often faster than what service providers can accommodate financially. **AWWA has identified infrastructure renewal and replacement as the top issue facing the water sector.** WRF has also recognized this challenge and has several current projects focusing on understanding the effects of stresses on pipes, water system resilience, and smart networks that look at pressure and flow within pipes to provide early warning to failures.

Additionally, the recent impacts from the COVID-19 pandemic were documented in the industry organization documents in noting the importance of supply chains for the continued support of infrastructure renewal and replacement. Resiliency for water and wastewater supplies will be an important item to consider in the future, and lessons learned from the COVID-19 pandemic will be invaluable. AWWA noted pandemics and supply chain issues as some of the top concerns for the future of the water industry.

Strategies that were identified to advance infrastructure goals included employing asset management principles, increased use of technology to assist with condition assessment of physical assets, increased use of new technologies, increased use of trenchless technology for infrastructure replacement, and shifting pipe materials from metallic pipe to plastic pipe. The WRF is also looking at risk mitigation strategies for dealing with deteriorating infrastructure which highlights the importance of understanding the condition of water and wastewater piping.

Takeaways from Other Water and Wastewater Utilities: Infrastructure stability, integrity, and reliability was a common theme of water and wastewater utility strategic plans. **Many utilities identified robust asset management programs and proactive maintenance programs as critical strategies to achieving this strategic goal.** Moreover, many utilities are working on creating and updating long-term master plans for their plants and pipes that address infrastructure resiliency in the face of climate change, cybersecurity threats, and other risks. A few utilities referenced the importance of making the "appropriate" amount of investment in infrastructure (i.e. not too little, but not too much). To do this, **they are working on better collecting and using data through formal data management plans and generating and updating integrated models (i.e. water main prioritization models) to use this data.**

Few strategic plans identified supply chain disruptions in their strategic plans. It could be due to the fact that many of the reviewed strategic plans were developed prior to the current disruption faced by the COVID-19 pandemic.

Takeaways from Outside Organizations: Many reports and strategic plans touched on the topic of physical infrastructure and the critical need for upkeep and improvement, but most all organizations also defined infrastructure to incorporate their supply chains and business processes. Especially with the onset of Covid-19, **most companies emphasized the need to source locally, create community partners, and oftentimes invest back into the local community to ensure stable business operations.** The diversification of supply chains was repeatedly addressed to reduce the possibility of bottlenecks and ensure that the material or equipment sourced was being done so in a sustainable, ethical way. Most companies, like Burberry, recognized the need to find ways to benefit the local economy to fortify stability during economically turbulent times.

In addition to that, companies like AECOM addressed issues of security (both physical and cyber) that impact business operations. Many companies focused on building and developing safer and more secure assets that were also easily upgradable and replaceable. Plans included strategies to actively develop business processes and ways to minimize interactions with potential hazards while allowing the maximum amount of flexibility to resolve problems. Furthermore, many organizations like Microsoft are utilizing regular assessments to oversee the functionality of all business aspects, identify weaknesses, and prioritize projects.

Takeaways from Regional Partners: Most of the regional partner's addressed their infrastructure in their strategic plans, some with somewhat different lens than how the water and wastewater industry consider infrastructure. **The major infrastructure of concern for both the Towns of Chapel Hill and Carrboro was "green" and transportation infrastructure.** In their Climate Action Plan, Chapel Hill defined green infrastructure as things like green space, stormwater control measures, urban forest, and green buildings. The Town of Carrboro's draft Comprehensive Plan placed a large focus on green infrastructure as an alternative to grey infrastructure and defined it as nature-based stormwater management methods that mitigate flooding, improve the ecosystem's health, and provide additional benefits to the community. Both plans looked to combined goals for green and transportation infrastructure, as well as strategies to ensure that both were developed to advance equity throughout the community.

UNC has set goals to create and maintain world-class physical facilities and infrastructure in support of their institutional mission, as well as to invest in infrastructure that promotes belonging, community, and benefits of diversity, equity, and inclusion. Interestingly, **UNC identified infrastructure development as a strategy for growing partnerships to translate and implement research-based ideas and discoveries into practical applications and public use. In addition, UNC noted that they are planning on creating a working Master Plan from the existing 2019 Campus Master Plan, identifying and prioritizing facilities to be renovated or replaced, and securing funding to do this.**

The Chapel Hill-Carrboro City School district has developed a plan to address their current infrastructure in an effort to provide safe school environments for students and staff. The Capital Investment Plan is a ten-year project aimed to handle many of the school district's facility issues and includes new school construction.

Innovation touches on an organization's ability to adopt new processes to find better ways and means of operating more effectively. It also emphasizes making investments into digital infrastructure, a networking backbone that needs to be constantly safeguarded and improved, especially with the rapid increase in cybersecurity threats.

Takeaways from Industry Organizations: The Water World 2021 Forecast Report indicated that the water and wastewater industry will be utilizing more technology and digital solutions in the future. With increased technology, there is also the possibility that there will be increased reliance on third party contractors who are technology experts. **"Intelligent Water Systems" are an area of innovation that will utilize technology that the WRF is also focusing on with some studies.**

In addition to using technology to assist with water and wastewater treatment and disposal, technology will play an important role in cybersecurity for utilities. Both AWWA and the Water World reports noted cybersecurity as a major theme and challenge that the water and wastewater industry will face in the future.

Takeaways from Other Water and Wastewater Utilities: Innovation was a regularly repeated phrase in water and wastewater utility strategic plans, but innovation was rarely cited for innovation's sake alone. Rather, **innovation was identified as a strategy for decreasing costs, increasing revenue, improving business processes, increasing energy efficiency, reducing water consumption, and/or better serving the public.** References to innovation were regularly associated with the optimized use of technology. Many utilities set goals to develop information management and enterprise technology plans. There were also some that identified that they may have good technology, just not using it to its maximum ability; and therefore, identified training on existing technology as a strategy in pursuit of innovation.

However, references to innovation were not always associated with technology. The theme of innovation was applied to processes, records management, ideas, and community collaboration. Moreover, there were utilities that set goals for creating and maintaining a culture of innovation, where employees were encouraged and rewarded for innovation.

Takeaways from Outside Organizations: Constant improvement and identifying new areas of expansions and development were addressed prominently by private sector companies. The prevailing idea was that companies that don't actively improve or develop novel ways of approaching problems are often left to languish in mediocrity. Companies, like Mercedes-Benz, described continuous efforts to improve their business practices, minimize costs, address key markets through innovative approaches, and improve and build upon each idea over and over again with consistent review and refinement while bringing in new perspectives. Most companies emphasized diversifying input and research to source better ideas and to find new tools that can better business operations, most of which exist digitally.

Most companies, like Tesla, noted heavy investment into the creation and development of digital toolsets that can leverage and maximize employee output and automate processes that are time-consuming and tedious. They focused on building a strong, resilient digital infrastructure in order to provide a better platform to adopt new tools that can optimize operations and provide a better experience for the organization, employee and customer. **Companies emphasized the need to build an organization that is agile and can shift with the adoption of new technology.**

Takeaways from Regional Partners: Innovation showed up in different ways across the strategic plans of our regional partners. For the Town of Chapel Hill building a Town workforce that leads with collaboration and innovation to build a community where people thrive is one of seven strategic goals. In support of this goal, Chapel Hill identified a strategic initiative to build a performance management program to increase data-driven management and decision-making, as well as to increase the level of cyber security inside the Town's information system.

The word "innovative" shows up a few times in Carrboro's Draft Comprehensive Plan. **One reference was that residents expressed the need for OWASA to explore innovative approaches to make sure that water is not turned off due to households for not being able to pay their water bills.** Carrboro also mentioned innovation, as it related to financing certain projects.

The entire theme of UNC's Strategic Plan was innovation, with its mission quoted as "to ensure that Carolina is a place where innovators thrive". Similarly, the Town of Chapel Hill's Goals and Objectives FY 2020 – 2022, emphasizes the need for innovation.

Data-driven organization was a repeated theme in UNC and CHCCS's strategic plans. UNC identified a goal to implement a robust data governance structure and process to inform decision-making and drive change. CHCCS wanted to build a data-driven culture to inform instruction.

Environmental Stewardship themes focused on an organization's adoption of sustainable, environmentally friendly business practices that seek to mitigate and build against the effects of climate change, while protecting watersheds and valuable resources from pollution.



Takeaways from Industry Organizations: Industry reports touched on the common theme of environmental stewardship in various ways. The majority of the reports mentioned the importance of adapting to climate change and changing weather patterns, long term availability of water, watershed and source water protection and general reduction of pollution. One of the core principles of AWWA was to protect the environment and this is carried out in the state of the water industry report which has 2 of the top 10 issues facing the water sector related to environmental stewardship. WRF was also highly invested in environmental stewardship since one of their strategic goals is to be the trusted source of information for "One Water" concepts. WRF had several projects focusing on potable reuse, agricultural reuse, and resource recovery, which highlight the importance of environmental stewardship for that industry organization. Another WRF topic of interest was proactive flood management from climate change and extreme weather events.

> "One Water" is an integrated planning and implementation approach to managing finite water resources for long-term resiliency and reliability, meeting both community and ecosystem needs.



Takeaways from Other Water and Wastewater Utilities: Most water and wastewater utilities recognized their connection to and responsibility for environmental protection in their basic operations. By simply meeting regulations, most utilities recognized their role in protecting the environment. However, in their strategic plans, the utilities reviewed set higher aspirations to go beyond the regulatory baseline. Environmental and sustainability initiatives included strategies to protect and ensure the water supply through land conservation and management and active promotion of water conservation and efficiency. Climate change was repeated as the need and context for updating watershed protection strategies. And in turn, many utilities planned to take an active role in mitigating the impacts of climate change through the development and pursuit of energy management programs and the development of renewable energy projects. **Some utilities set goals to reduce their waste through purchasing policies and increased internal environmental engagement; with at least two utilities setting a goal of a zero-waste circular economy. Zero-waste economy was defined by one utility as eliminating waste, preventing pollution, encouraging product durability and reusability, conserve natural resources, and ultimately build a circular and inclusive economy.**

Additionally, there were many utilities that set goals for promoting environmental stewardship with employees and their community at-large.

Takeaways from Outside Organizations: In the review, the private sector was keenly aware of the negative impact many business processes have the environment. Most companies, including the likes of Amyris, have taken strides in documenting their entire supply chain and end-of-life cycle of products once they've outlived their resourcefulness. Starting from production, companies look for resources that are more sustainable, cheaper to harvest, and are ethically sourced from the environment and local communities. **Most all companies identified potable, safe water as a critical need for their business, and many were aligning themselves to meet UN set standards to reduce carbon emissions and eliminate waste that have the potential to contaminate ground water or watersheds.**

Climate change was also featured heavily, so most companies are identifying new sources of renewable energy and have made major business and philanthropic investments toward organizations that protect biodiversity and critical environments that mitigate or stymie impactful natural events. Most, including Coca-Cola, talked about the circular economy, a regenerative approach to business that focuses on reuse, recycling, and maximizing the benefit generated by a single resource to stop the widespread destruction of ecosystems.

Takeaways from Regional Partners: Environmental stewardship was a major concern for the Towns of Carrboro and Chapel Hill. Both sets of plans were heavily laden with goals and strategies to improve the community's impact on the environment. Both the Town of Chapel Hill and Town of Carrboro have a climate action plan, which include OWASA as both a member of the community and a partner in promoting environmental protection, particularly water conservation. The Town of Chapel Hill has set a goal to produce zero net greenhouse gas emissions by 2050. The Town of Carrboro has set a goal to reduce per capital greenhouse gas emissions by 80% by 2030. Strategies to achieve these goals are wide-ranging and ambitious, employing everything from reducing food waste to advancing renewable energy.

Both the Towns have identified OWASA as a critical partner in promoting water conservation and identified the need to promote and support water efficiency in new development, as well as low-income households.

Part of the goals of all our regional partners included protecting our water quality, enhancing green infrastructure and maintaining of the ecosystem, with the common of equal benefit for every member of the community. Other additional programs for enhancing a mutually areas such as constructing environmentally responsible buildings and using effective strategies to encourage reduction of energy and water use, encourage water reuse and stormwater reduction.

The strategic plans of CHCCS and UNC addressed environmental protection minimally, if at all.

Communications and Community themes emphasizes the need to build community partnerships with local organizations, as well as focus on providing affordability to our more economically vulnerable populations, educate the communities on the value of our services, and build a definable, easily recognizable brand identity.



Takeaways from Industry Organizations: The importance of the public understanding the value of water systems, water services, water resources was common among all industry reports and strategic plans but specifically called out in the AWWA Strategic Plan and the WRF Strategic Plan. In addition to the public understanding of the value of water, AWWA also notes the importance of clear and honest communication with customers. Effective communication was also a common these for the industry membership organizations. Open and clear communication has been identified as a tool to strengthen public trust and specifically for the membership organizations, member trust and inclusion.



Takeaways from Other Water and Wastewater Utilities: For many utilities, enhanced communications and community engagement were identified as a means for strengthening customer value and satisfaction, as well as stakeholder understanding and support. Utilities have set goals to meet or exceed customers' expectations build partnerships to enhance effectiveness and build and maintain a trusted reputation.

Strategies ranged from digital strategies (e.g. consistent use of social media, updated websites, videos) to in-person strategies (e.g. use of water wagons, school programs, etc.). **Many utilities recognized that communications did not come from just one department and committed to empowering their employees with information and resources, so that they could serve as ambassadors of the utility in their day-to-day work and even on social media.** More frequently, however, utilities steered clear of the details and simply acknowledged the need for a comprehensive and strategic communications and outreach plan. Utilities were most frequently measuring the success of their communications strategies by counting participation and engagement with outreach, as well as conducting regular surveys on customer satisfaction and trust.

Some utilities were quite explicit in the information that they wanted to share in their communications, with water conservation and stewardship being the most commonly referenced message. Others were more interested in raising awareness of their role in the community, the value of their services, and their overall brand.

In some plans, utilities distinguished between general community communications and strategic outreach to stakeholders and partners, with some citing a goal of improved communication and coordination with partners, regulators, industry organizations and regional forums.

It is important to note that for quite a few utilities communication goals did not stop with external customers and stakeholders. **Many utilities set communication goals and strategies for internal communication, as well, with one utility committing to setting up an organization calendar, newsfeed, and dashboard.**

Takeaways from Outside Organizations: The inclusion of communication and community is touched on by most private sector companies. These organizations, like Southwest Airlines, emphasize the necessity to offer clear channels of communication for customers, and to simplify any interaction that is held with customers. **Customer confusion is often the biggest problem when it comes to negative commentary on an organization.** Most of the private sector companies also note that transparent organizations are seen as more trustworthy, so many of them try to offer as much insight into the organization as possible to demonstrate a level of honesty and educate customers on the value they bring.

Many companies, like General Mills, also looked to create stable, long-lasting partnerships with community members and their customer base. They develop connections with areas impacted by their operations to generate the necessary feedback to make any changes to processes that could be harmful or misunderstood. They also seek to make their products economically accessible to people at all levels of the socioeconomic ladder while pushing a very strong brand identity to differentiate them from other competitors.

Takeaways from Regional Partners: **Communications and Community was an area that is widely referenced in the strategic plans and goals of our Regional Partners for the purposes of transparency, connectivity, and action.**

The Towns identified the need to communicate with community members through a wide range of methods, from social media to in-person events. For example, staff from the Town of Chapel Hill's stormwater department have set up informative booths at fairs and festivals and provide presentations to local schools and local organizations. Chapel Hill stormwater management team encourages volunteers to join their storm drain and stream monitoring campaigns and cleaning initiatives. Their stormwater team also works with local businesses and homeowners to further advance good management practices and bring recognition to flood problems and water quality. The Town of Carrboro's Communication and Engagement Department's goal is to promote community engagement initiatives to the public with hopes of generating resident participation within the local government and for handling emergency communication as well.

Additionally, the Towns are both concerned with creating and nurturing community and advancing racial equity in their programs and services.

Like the Town of Carrboro's Communication and Engagement Department, the Office of Communications for the University of North Carolina System's objective is to promote the University System's Strategic Plan to the public and across members from the UNC system. The University of North Carolina's Office of Communications is also responsible for promoting awareness of the UNC system's impact and connections with state legislators, policy makers and journalists. The Public Information Office for Chapel Hill-Carrboro City Schools provides a bridge between the school district and families whose kids are enrolled in their schools.

Financial Viability is an obvious one, but it is not just about funding operations and maintaining infrastructure, it is also focused on investigating what needs to be done to save money and defines strategies that look at investments made to maximize return on investment.



Takeaways from Industry Organizations: Financing for capital improvements (for infrastructure) was noted as one of the top 10 issues facing the water sector in the State of the Water Industry Report (2021). As more and more infrastructure requires replacement, it was identified that utilities need to find ways to finance those efforts to keep water and sewer service going. A variety of additional funding mechanisms have been identified for the water and wastewater sector as a result of the COVID-19 pandemic. Finding ways to best utilize those grants and loans moving forward will be a valuable tool for all water and wastewater providers. However, industry organizations caution individual utilities about becoming overly reliant on grants and subsidized loans.



Takeaways from Other Water and Wastewater Utilities: Across the board, most water and wastewater utilities identified the need for consistency, stability, and predictability in their budgets and rates. Many utilities identified the need to develop and maintain a long-term financial plan in order to achieve this goal. In addition, a few utilities set strategies to use data analytics to better predict costs and revenues.

Another key component associated with financial viability were strategies to reduce costs. **Standardized business case evaluations, systematic process evaluations, and the evaluation of "innovative" cost cutting measures were also identified as specific strategies to achieve cost-effective operations. Risk mitigation, asset management, and technology were identified as strategies to keep costs low and finances sound in the long run.** Other utilities expressly identified high bond ratings as both a goal and a way to keep costs down in the long run. On the other side of that, some utilities are actively pursuing opportunities to increase revenue through regionalization and other "innovative" revenue streams.

The ends to the means for most all utilities are affordable, competitive, and, in one case, simple rates. Some utilities recognized that customer communication on what rates pay for could, in the long run, ensure financial viability, with one utility specifically identifying the development of fact sheets on what rates pay for.



Takeaways from Outside Organizations: At the top of the priority list for all private sector companies was the need for financial viability and economic resilience. All companies, like Sumitomo Corp. and Home Depot, touched on the need to build a reserve to battle against potential external shocks that may dry out revenue sources that were once reliable. They emphasize the need to regularly examine how resources are allocated and identify cultural shifts that may offer new sources of revenue or opportunity. Some companies also look at integrating the most up-to-date point-of-sale (POS) technologies to easily facilitate financial transactions and all of them look to establish any new cost cutting measure.

Many organizations, like the Federal Housing Finance Agency, also focused on the need to proactively identify potential sources of risk and develop management practices that provide effective guidance for future decision making. **They identified the need to conduct constant data analysis on future hazards and determine the most optimal means of spending money with the outcome of longevity and sustainability.**

Takeaways from Regional Partners: Financial viability was not a strong theme across the strategic plans of our regional partners. This is not to say that these organizations are not concerned with financial viability, but that it is not a strategic goal or priority in and of itself to be financially viable. Instead, financial viability may be considered more of a means to the ends outlined in the strategic plans. In fact, UNC identified a suite of financial strategic opportunities under the objective of "design, implement, execute, assess, and continuously improve the administrative operations that support the University's mission of teaching, research, and public service". Instead, financial goals for the University were set in an ancillary document, UNC Board of Governors 2021-2023 Budget Priorities.

The exception was the Town of Chapel Hill, that identified economic and financial sustainability as one of its seven goals, with an objective of adopting a budget strategy that aligns Town revenues and expenses and initiatives to implement a facility maintenance plan and capital improvement plan.

Responsibility touches on organizational and social governance, as well as compliance with local, state, and federal regulations, alongside organizational emergency preparedness.

Takeaways from Industry Organizations: Some of the major concerns facing the water and wastewater industry center around new regulations. Perfluroalkyl substances (PFASs), lead and copper, microbes and pathogens, and cyanotoxins are just a few of topics that water and wastewater providers need to be aware of. While not all of these items have active regulations, there are many pending regulations coming in the future that could impact water supple, treatment and wastewater treatment and disposal. **Industry reports indicated compliance with current regulations as one of the top 10 issues facing the water industry.** A portion of the compliance with regulations also coincided directly with the theme of financial viability as many of the current and future regulations have monetary impacts on a utility. In addition to regulations, another common theme was emergency preparedness. With the recent America's Water Infrastructure Act (AWIA) requirements, all utilities have had to place additional effort into emergency preparedness and having plans in place. These plans are not only to protect the infrastructure that the utility is responsible for but it is also for the general protection of public health and the maintenance of water and sewer services.

Takeaways from Other Water and Wastewater Utilities: For most all utilities, meeting current regulations is the baseline of performance, with some setting goals of 100% compliance. Achieving this is related to product quality and customer satisfaction. Some utilities addressed preparations for future regulations in their strategic plans and identified specific strategies for funding and participating in research or developing and maintaining strong relationships with regulators.

Goals and related strategies for emergency preparation were regularly repeated in utility strategic plans, addressing everything from the development source water protection to cyber and physical security plans.

Many utilities also recognized the responsibility to promote water stewardship and conservation, even when not in their immediate financial interest. Moreover, it seemed that water conservation was an underlying theme in many strategic plans because it was "the right thing to do".

Takeaways from Outside Organizations: For most private sector company reports, effective corporate governance was a dominant feature. Many companies, like 3M, operate under strict regulatory guidelines, and some even look to outperform government mandates to ensure their business processes and operations remain in compliance in the event of any major regulatory change. They solicit community feedback to understand important trends that benefit the social, economic, and physical environment and seek to align with said trend.

The increased volatility of the physical environment has also been noted, and most companies recognize the need for emergency preparedness to ready themselves against potential natural disasters or malicious actors.

Takeaways from Regional Partners: As a group, it is difficult to define the "responsibilities" of our regional partners. Certainly, our municipal partners shared common responsibilities that they hoped to advance through pursuit of their strategic plans**. A major theme of the strategic goals of both Towns is affordability and affordable housing.** The Town of Chapel Hill's plan was focused on the creating and preserving the existence of affordable housing in Chapel Hill, while Carrboro's plan began to touch on cost-of-living, including the cost of water. **The draft Comprehensive Plan for Carrboro identified working with OWASA to create more affordable water pricing strategies and to provide grants for fixture replacement to income-eligible households.** The Town of Chapel Hill includes community safety as a key goal of its strategic plan.

In addition to providing a high caliber educational program, student safety is a major responsibility identified in CHCCS strategic plan. One strategic program focused on reviewing and revising their emergency operations plans.

Conclusion

Whether or not OWASA adopts some, all, or none of these strategic themes in our own strategic plan, it is valuable context to consider the strategic priorities and actions of other organizations. These plans help us identify opportunities to collaborate, learn, and grow.

Resources

Water and Wastewater Industry Reports and Strategic Plans



State of the water Industry Report (2021)

Water World Forecast For 2021

American Water Works Association (AWWA) Strategic Plan 2025

North Carolina American Water Works Association – Water Environment Association Strategic Plan 2020-2022

Texas Water Development Board Strategic Plan 2021-2025

Water Environment Federation Strategic Plan (revised 2018)

Water Research Foundation (WRF) Strategic Plan (2019)

Water Research Foundation (WRF) Current Projects (2021)

Water and Wastewater Strategic Plans (with links, where available)



Anchorage (AK) Water and Wastewater Utility Strategic Plan 2016-2021

Austin (TX) Water Strategic Plan 2023

Brownsville (TX) Public Utilities Board 2021 Strategic Plan

Charlotte (NC) Water Strategic Plan

Chesterfield County (VA) Department of Utilities NACWA 2019 Excellence in Management Recognition Application

Denver (CO) Water Strategic Plan

East Bay (CA) Municipal Utility District Strategic Plan 2020

Fairfax (VA) Water Strategic Plan 2020

Grand Strand (SC) Water and Sewer Utility 2040 Strategic Plan

Hampton Roads (VA) Sanitation District 2020 Vision: A Strategic Plan

Loudon (VA) Water Strategic Plan 2020-2024

Metropolitan Water Reclamation District of Greater Chicago (IL) Strategic Plan 2021-2025

Rivanna (VA) Water and Sewer Authority Strategic Plan 2018

Seattle (WA) Public Utilities Strategic Business Plan 2021-2026

Tampa Bay (FL) Water Strategic Plan 2019-2024

Winston-Salem/Forsyth County (NC) Utilities Strategic Plan 2020-2024

WSSC (MD) Water Strategic Plan 2021

Outside Organizational Strategic Plans and ESG Reports



ABInBev 2020 Annual Report

AECOM 2021 ESG Investor Presentation

Amyris Inaugural ESG Report 2020

Burberry 2020-2021 Annual Report

CEO Water Mandate Report

Coca-Cola Strategic Priorities Report 2020

Deltares Strategic Agenda 2022-2025

Federal Housing Finance Agency Strategic Plan FY 2021-2024

General Mills Global Responsibility Report 2021

Home Depot ESG Report 2021

IBM Strategic Update 2020

Mercedes-Benz Strategy Update Presentation 2020

Microsoft Annual Report 2020

RDU Airport Master Plan Study – Vision 2040

SAS Corporate Overview 2020-2021

Southwest Airlines 2020 One Report

Sumitomo Corporation Integrated Report 2020

Tesla 2021 Company Update

Warby Parker Impact Report 2020

3M Sustainability Report 2021

Regional Partner Strategic Plans



Town of Chapel Hill 2020-2022 Strategic Plan

Town of Chapel Hill Climate Action Plan

Town of Carrboro 2022-2042 Draft Comprehensive Plan

UNC Chapel Hill's Carolina Next: Innovations for Public Good (2020)

UNC Board of Governors 2021-2023 Budget Priorities (2021)

Chapel Hill – Carrboro City Schools 2018-2021 Strategic Plan