



Lehigh County Authority

2022-2027

Strategic Plan

ADOPTED ON DECEMBER 13, 2021



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A MESSAGE FROM THE CEO & Board Chair

As a historic pandemic gripped the world's attention since early 2020, a renewed focus emerged for Lehigh County Authority (LCA). It has never been more apparent what a vital role public water and sewer services play in protecting public health. The economic, political, and public health crises brought on by the pandemic thrust water into the limelight as an essential service that communities must protect.

In this context, LCA's strategic planning initiative took on a different tone and was completed with a sense of urgency and energy. To fulfill the important responsibilities we bear, LCA must look ahead. Our plans and strategies must be designed to ensure the community's need for safe and reliable service can be sustainably met, no matter what new challenge awaits us in the future.

There were other factors driving LCA forward in this process too. Over the past decade, the organization has undergone massive transformation into a larger, regional service provider. We face new challenges today that were not previously on our near-term radar: aging infrastructure, climate change, workforce turnover, rapidly rising costs, and customer affordability, to name a few. The strategic plan we have developed tackles these tough issues and lays out our priorities for the next five years or more.

Going into the strategic planning process, a few important goals were identified:

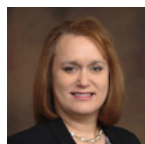
- Recognize LCA's evolution & the changing world around us
- Understand our new role in meeting the community's needs
- Clarify our mission and vision for the future
- Inspire our employees
- Help the community understand who we are
- Define the resources needed to achieve our goals

The plan outlined in the following pages will keep focus on our goals, and we are excited to see how LCA will evolve again as we implement the strategies and priorities that we have set out for ourselves. We had a lot of help along the way in developing this plan – our leadership team, employees, Board of Directors, and many external stakeholders. We truly appreciate your input!

LCA is honored to serve the community and fulfill the mission to protect public health and the environment by providing high-quality, safe, and reliable water and wastewater services.



Thanks to the Raftelis team for
facilitating our planning process.



Liesel Gross
CEO



Brian Nagle
LCA Board Chair



Introduction

Strategic Planning Process

Lehigh County Authority (LCA) initiated a strategic plan update in 2021, using a process designed to ensure:

- A shared vision of the outcomes that the utility sought to create, because organizations driven by clear purposes and shared values have a greater capacity to succeed than those that are not.
- A collective understanding of the available resources, the operating context, and the principles upon which priorities and strategies are based.
- Acceptance of the direction and urgency of the strategic plan, which will be integrated into the way the utility is operated on a day-to-day basis.

To achieve these conditions for success, LCA's strategic planning process involved input from a broad group of internal and external stakeholders. Major elements of the engagement process included:

- Interviews and work sessions with LCA's Board of Directors and the Board's strategy committee
- Interviews and work sessions with the CEO and leadership team
- Two employee focus groups and an employee survey with more than 90 respondents
- Interviews with key stakeholders, including County of Lehigh, City of Allentown, and other municipal officials; large industrial customers, developers in our region, and other economic planning partners; and other supporting agencies

This input was used to develop the utility's six priority areas, and the associated strategy and outcome measures for implementation over the next five years.

About LCA

The Lehigh County Authority is a public water and wastewater utility that provides retail and wholesale service to about 200,000 people in the Lehigh Valley. Founded in 1966 by the County of Lehigh, LCA is governed by a nine-member Board of Directors and regulated by the Pennsylvania Municipality Authorities Act.

LCA operates 14 water systems that serve 14 municipalities across two counties, including the City of Allentown. While the Allentown System is the largest of the group, serving approximately 33,000 properties, the City retains ownership of the system. LCA operates the system under a 50-year lease that began in 2013. The Central System is the largest owned and operated by LCA, serving approximately 18,500 properties in Upper and Lower Macungie townships and surrounding areas. Water is sourced from wells, springs, the Little Lehigh Creek, and the Lehigh River.

LCA's Western Lehigh Interceptor system provides wastewater transportation service for seven municipalities. Through this system, all wastewater is transported to the City of Allentown's Kline's Island Wastewater Treatment Plant, which is permitted to treat up to 40 million gallons of wastewater per day. The Kline's Island plant provides regional wastewater treatment service for 15 municipalities, including the Western Lehigh systems, and LCA operates the facility through a lease agreement with the City of Allentown. LCA also operates small wastewater treatment plants in Heidelberg, Weisenberg, Lynn and North Whitehall townships, where collection systems are too distant from the Kline's Island system to be interconnected. LCA's industrial wastewater pretreatment plant serves industrial properties in the Fogelsville area.



Environmental Scan

LCA's current operating environment was documented through the following:



Analysis of community demographics, key trends and other external influences



The organization's aspirations, strengths, critical issues, and opportunities

TREND NO. 1

Population

LCA is experiencing both residential and industrial customer growth within the service area, especially in Western Lehigh County and Upper Macungie Township, which grew at 7.1% and 31.4% over the last ten years respectively. The City of Allentown and South Whitehall have also experienced considerable growth. The population of the service area is becoming more diverse, and almost half the residents in some parts of the service area speak a language other than English according to the US Census Bureau. Residential population growth is expected to slow down in many parts of LCA's service area, and local municipalities are reaching a point where the existing infrastructure limits additional development.

From a commercial customer standpoint, the area along the I-78 corridor is known for food and beverage companies (especially bottled water, beer, juice, and other bottled beverages), which are water-intensive and require substantial wastewater capacity. Although the food and beverage industry is a major employer now, there's potential for other types of manufacturing to expand, based on the area's workforce. As growth has continued, the available land for industrial use has decreased and zoning changes may be needed to make best use of existing resources for this type of development.

Potential Responses

- Become a more significant part of the conversation in planning for growth. Currently, LCA provides service when and where needed, but has a relatively limited role as part of the long-term planning process with municipalities.
- Address issues with system capacity for water and especially wastewater. LCA has begun to address long-term capacity issues with the Act 537 Plan development process, which is scheduled for completion in 2025.
- Evaluate whether acquiring or consolidating systems would help manage growth and capacity constraints.

TREND NO. 2

Operating Environment

As LCA has grown, engagement with the Pennsylvania Department of Environmental Protection (DEP) has increased. This has encouraged collaboration with different municipalities in the County. LCA's relationships with Lehigh County and the City of Allentown are positive, but the Act 537 Plan will put pressure on intermunicipal agreements, which are complex and currently longstanding.

The region will receive funding from the American Rescue Plan Act and other potential future federal funding sources for infrastructure, and LCA will prioritize engagement with Lehigh County and municipalities to best address regional needs.

LCA expects additional regulations for drinking water and wastewater contaminants. Cost recovery related to addressing those regulations may be a challenge, as will cost recovery related to mitigating and adapting to climate change. The majority of streams within LCA's service area are considered impaired, which impacts permitting requirements for LCA.

Potential Responses

- Support a regional approach for decision-making and meeting infrastructure needs, including updating agreements with municipalities.
- Continue to plan for wet weather, inclusive of capital planning and risk and resiliency projects.
- Prepare to leverage funding from the federal government, WIFIA, or sources that want "shovel ready" projects.



TREND NO. 3

Workforce

From a recruitment standpoint, LCA struggles to find skilled workers for some operational roles. Recently, the organization has experienced higher-than-normal turnover due to retirements and a competitive job market, requiring significance resources to be spent on recruitment. Over time, the role of technology within the industry has increased and LCA has a greater need for related skillsets than it has previously. Additionally, the workforce's location is geographically limiting, because staff need to respond in emergencies and cannot be a long commute away. The workforce may also increasingly prefer flexible work arrangements, especially after the COVID-19 pandemic. Since LCA is a 24/7 operation, recruiting for staff willing to commit to the work will be a key issue.

Many employees are at or near retirement eligibility. There is a need for succession planning to capture knowledge before it leaves the organization, and LCA has union constraints related to training for replacement positions. However, LCA has younger employees who are looking to fill leadership roles as retirements occur. A dedicated and energetic workforce exists today, ready to address tomorrow's challenges.

Potential Responses

- Build the culture and regional presence of LCA so that it has a strong reputation as an employer.
- Begin engaging with community colleges and high schools to share opportunities at LCA and demonstrate the diversity of career paths available within the water industry.
- Develop and provide more training and education for employees that can be delivered by LCA staff.
- Develop a mentorship program to help with succession planning and engagement.
- Share job opportunities within the organization more widely and create a leadership program to prepare staff for internal opportunities.

TREND NO. 4

Technology

While LCA has historically invested heavily in technology and security over time, some customers have asked for more self-service options, while others are content with LCA's current offerings. LCA does not currently have the tools available to meet increased customer demands around self-service, but the organization's vision for technology upgrades includes customer convenience options.

Staff have opportunities to improve adoption and training on technology, but some technical barriers exist. LCA's staff focus on continuous improvement will help identify and implement new technology. This work can help create a culture of innovation and performance management that can build LCA's reputation in the industry and region.

Potential Responses

- Ensure leadership buy-in for the technology changes and become change agents by making more training available for staff
- Focus on defining the skillsets needed and update job descriptions and recruitment strategies to hire for those skills.

TREND NO. 5

Customer and Stakeholder Expectations

The service provided by LCA is widely acknowledged to be excellent and LCA is one of the lowest priced suppliers in the area. Engagement has also increased in the last few years, as LCA has grown and become more visible due to the Lease with the City of Allentown. Water and wastewater rates will also increase, and customers will want to understand what they receive for the additional cost.

LCA has aging infrastructure, which over time will lead to more breakdowns and increased customer impacts. Customer expectations are anticipated to increase for LCA, particularly related to options for customers to pay and communication with LCA about service issues. Customers and staff will expect improved response times for emergencies, issues, and calls or complaints.

The Lehigh Valley region will continue to grow and develop. To ensure LCA is able to provide sufficient treatment capacity for this growth, LCA will need to collaborate and engage with municipalities and stakeholders.

Potential Responses

- Share positive aspects of LCA's operation to increase customer and stakeholder understanding
- Continue upgrading the system, and as that is being done, communicate the story of and need for the work, as well as the cost of the upgrades.
- Communicate openly and consistently about services.
- Prioritize technology solutions that enhance the customer experience.



TREND NO. 6

Financial Considerations

LCA is regulated under the Pennsylvania Municipality Authorities Act and has only partial control over the rate-setting process, which requires approval and engagement with municipalities. This has led to different rate structures for different parts of the system. Affordability issues are increasing, based on demographic trends in the service area.

There is an increased pressure on capital spending programs to make up for deferred maintenance over time. LCA sees some potential related to expanding its service area. As economic development in the area continues, the demand for water will grow and LCA will need to balance capital spending to support the replacement of aging infrastructure with the need to develop capacity for future customers.

Potential Responses

- Work with local economic development agencies to align and balance development goals with LCA's capacity.
- Increase long-term sewer capacity and in the short-term ensure the pretreatment plant can accept increased loads, based on projected development
- Balance capital needs and funding and monitor the ratio of projects funded with cash and debt service.
- Look at opportunities for increased or non-rate revenue (e.g., perform maintenance or operations for neighboring municipalities on a contract basis).
- Improve forecasting and financial management tools and work to tie data/systems together to better leverage technology.



TREND NO. 7

Increased Risk Profile

Extreme weather is increasingly frequent, including severe flooding and heavy rains. In 2016-2017 the region experienced a drought and the Little Lehigh dried out in some areas. Then, in 2018-2019, the region experienced a prolonged period of wet weather that brought widespread flooding and sewer system overflows throughout the service area. LCA also has risks related to aging infrastructure, which is a maintenance challenge today and requires a long-term capital-intensive replacement program for the foreseeable future. Development has caused an increase in impervious surface area, which in turn increases the likelihood of flooding and decreased groundwater recharge.

The COVID-19 pandemic has caused a slow-down in customer payments and higher delinquency rates. Business continuity with organizational turnover may present a challenge and relationships with municipalities may change as current leaders retire.

Potential Responses

- Continue positive technology security work to mitigate cyberthreats.
- Partner with local, state and federal funding programs to develop customer assistance programs that address affordability issues.
- Implement asset management programming.
- Continue LCA's historically strong employee safety program.



Aspirations Strengths Critical Issues Opportunities



As part of the strategic planning process, LCA gathered input from Board Directors, staff, and stakeholders on the organization's aspirations, strengths, critical issues, and opportunities. This input provided valuable context for the strategic planning process by helping establish the framework of where LCA is today and the direction it should take into the future.



Aspirations focus on the expectations and hopes of stakeholders. LCA's most compelling aspirations are:

- Become a regional leader in the Lehigh Valley
- Proactively engage the community and municipalities
- Continuous improvement/agile problem-solving approach
- Develop and empower employees
- Proactive infrastructure management
- Exceptional internal communication and engagement



Strengths are the areas within the organization that it builds upon to achieve success. When prioritized, they included these strengths:

- Dedicated, skilled employees
- Quality service provided to customers
- Organizational adaptability
- Infrastructure planning and focus on meeting region's economic development needs
- Financial and operational excellence



Critical Issues help the organization identify the most significant issues that will impact operations over the next five years. Critical issues identified by LCA staff and stakeholders included:

- Wastewater capacity challenges
- Recruiting and training new employees and leaders
- Aging infrastructure
- Integration of city and suburban divisions of LCA
- Improving technology systems and adoption of modernized processes



Opportunities help the organization identify strategies and approaches to meet future needs. LCA's future opportunities include:

- Outreach and education about the work of LCA
- Managing and planning for population and industrial growth
- Developing and training employees
- Developing regional approaches for water and sewer service
- Increasing the use of technology and becoming more efficient

Strategic Framework

This strategic framework, based on an extensive strategic planning process, considers both LCA's present circumstances and its future goals, and will serve as a blueprint for decision-making moving forward. It contains a vision, mission statement, values, and priorities that address LCA's current challenges and help ensure continued success in operations and the management of resources and assets.





Vision:

To be a trusted and engaged community partner, advancing the vitality of our region through exceptional water and wastewater services.

Our Mission:

To protect public health and the environment by providing high-quality, safe, and reliable water and wastewater services.



Values:

Values articulate LCA's deeply held beliefs, norms, and qualities, which drive day-to-day activities. LCA has created a Value Statement, shown below.

Service: We take pride in our role as public servants. We focus on serving our customers and each other.

Engagement: We enjoy learning, exploring new ideas, solving problems, and embracing changes that support continuous improvement

Dedication: We give our best effort every day and seek ways to contribute to achieving LCA's goals.

Positivity: We face challenges with optimism and foster trust, teamwork, and collaboration.

Excellence: We strive to make LCA the best utility it can be.



Priorities

Priorities represent the most important issues that must be addressed to achieve LCA's desired future. LCA's priorities were driven primarily by the factors that are most critical to the organization's future success.

Measures and Strategies

Measures define accomplishment for each Priority, and Strategies are key resource allocations that should be made over the next five years. These critical elements of the strategic plan, as well as the Vision, Mission and Values, are presented in the strategic framework in this document.



Operational Excellence

To proactively ensure safe and reliable service delivery, regulatory compliance, and resilient operations through streamlined processes, best practices, and data-driven decision-making

STRATEGIES:

1. Establish and implement plans to meet or exceed all regulatory requirements.
2. Participate in the legislative and regulatory review process to prepare for new regulations and ensure LCA's interests are considered.
3. Develop approaches to enhance organizational resiliency, especially in the areas of cyber security, emergency preparedness, system redundancy, and climate change.
4. Leverage technology, industry best practices, and continuous improvement initiatives to ensure efficient and effective operations and internal practices.

MEASURES:

- Number of permit violations
- Number of boil advisories
- Average time to address service disruptions



Financial Stewardship

To cost-effectively serve our community, now and in the future, by managing funds effectively and responsibly to support debt commitments, operational needs, and asset management

STRATEGIES:

1. Sustainably support LCA's water and wastewater systems through responsible financial management.
2. Develop decision-making criteria for supporting growth opportunities.
3. Establish rates that balance affordability with achieving required revenue targets that support the financial needs of LCA.

MEASURES:

- Capital coverage ratio
- Collections program performance
- CIP program performance (on time, on budget)





System Capacity and Reliability

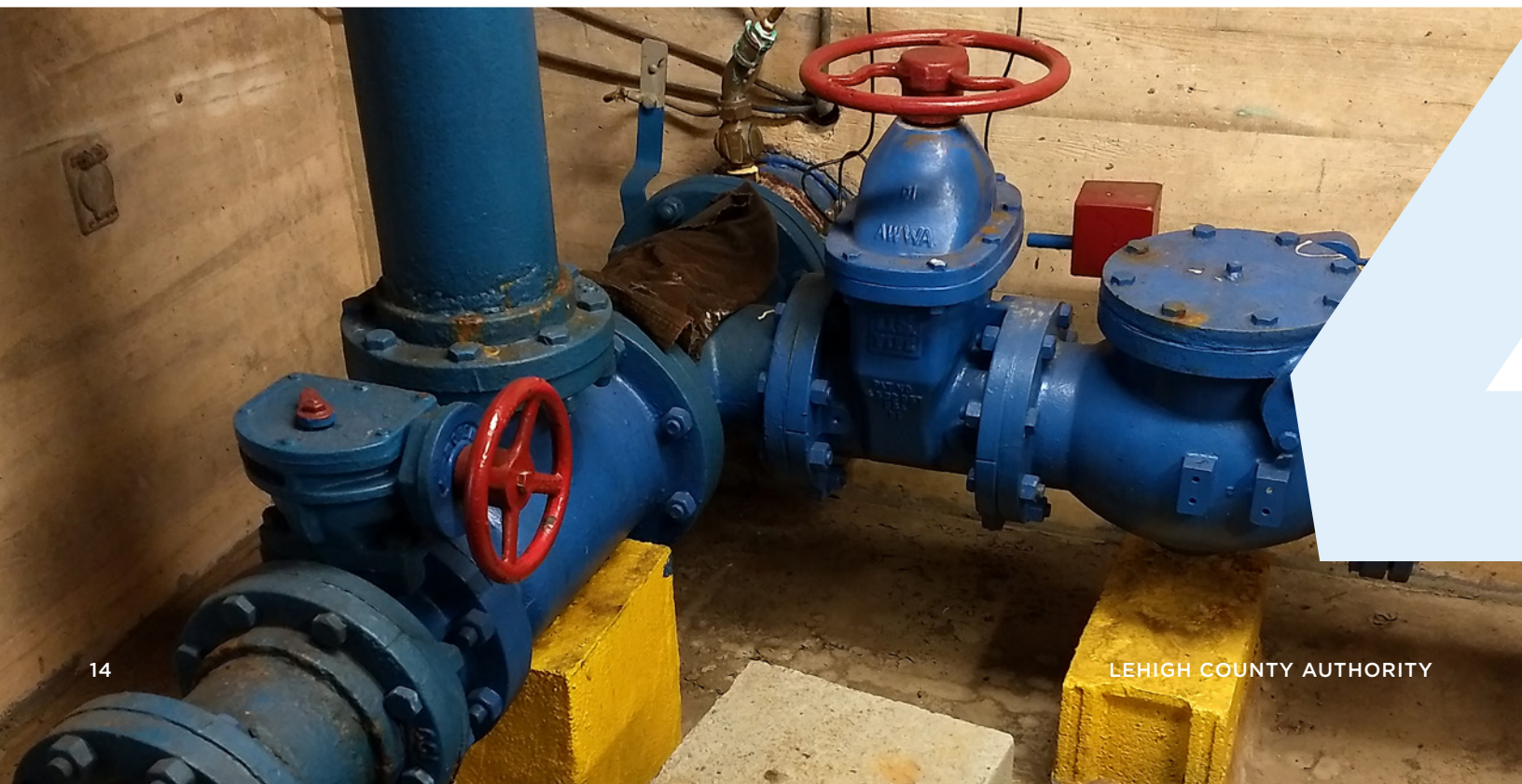
To dependably meet current and future community needs and achieve optimal levels of service by effectively managing assets and implementing projects to ensure sufficient system capacity

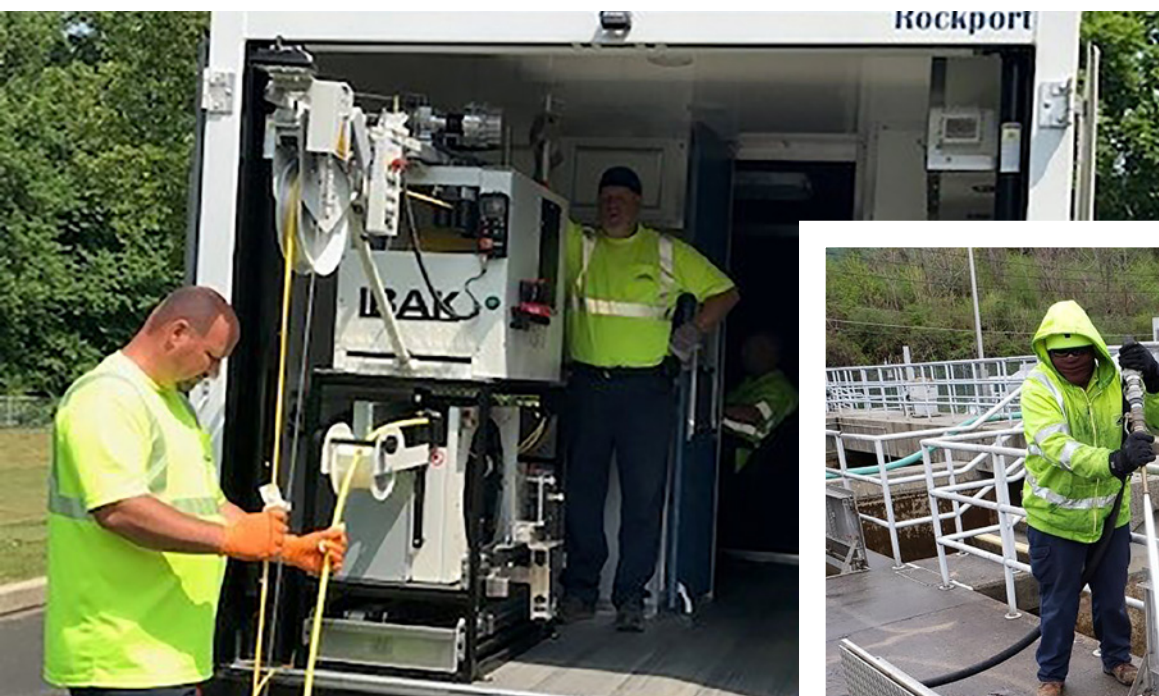
STRATEGIES:

1. Increase our systems' capacity to address economic development needs in our region.
2. Define and establish plans to meet LCA's targeted levels of service.
3. Standardize and implement a comprehensive asset management program to ensure infrastructure reliability, guide investment, and support data-driven decision-making.

MEASURES:

- Percentage completion toward developing LCA's asset management program
- Percentage completion toward developing a regional Act 537 Plan
- Planned vs. unplanned maintenance





Customer Engagement and Support

To create an exceptional customer experience and build trust and understanding of LCA's essential services

STRATEGIES:

1. Enhance customer engagement and experience through process improvements and adoption of new technology.
2. Improve our responsiveness to customers' needs.
3. Grow customer awareness and support for LCA's goals and direction.

MEASURES:

- Percentage change in call volume
- Customer service complaints per 1000 accounts



Regional Collaboration and Leadership

To help our region to thrive by growing community confidence in LCA, advancing collaborative efforts, and demonstrating operational excellence

STRATEGIES:

1. Collaborate with municipalities, stakeholders, and community groups to increase our understanding of the region's goals and strengthen the role LCA plays in supporting them.
2. Advance LCA's position in the region as the leading resource on water- and wastewater-related issues.
3. Support environmental sustainability and water equity initiatives through partnerships, education, and policy.

MEASURES:

- Progress reporting on strategies & milestones



Employee Engagement and Safety

To build a safe, cohesive, and engaging workplace in which employees feel personally connected to their work, each other, and LCA's commitment to excellence

STRATEGIES:

1. Ensure a safe working environment for all employees.
2. Standardize and enhance our approaches to succession planning, knowledge management, and performance management.
3. Expand opportunities for employee and leadership development, technical training, and certification.
4. Openly explore the diversity, equity, and inclusion issues that are important to LCA and our employees.
5. Engage employees in LCA's work through collaboration, communication, and cooperation.

MEASURES:

- Employee safety incident rate
- Full-time employee voluntary & total turnover rate



STRATEGIC FRAMEWORK

VISION

To be a trusted and engaged community partner, advancing the vitality of our region through exceptional water and wastewater services.

MISSION

To protect public health and the environment by providing high-quality, safe, and reliable water and wastewater services.

VALUES

Service
Engagement
Dedication
Positivity
Excellence

PRIORITIES



Operational Excellence

To proactively ensure safe and reliable service delivery, regulatory compliance, and resilient operations through streamlined processes, best practices, and data-driven decision-making



Financial Stewardship

To cost-effectively serve our community, now and in the future, by managing funds effectively and responsibly to support debt commitments, operational needs, and asset management



Regional Collaboration and Leadership

To help our region to thrive by growing community confidence in LCA, advancing collaborative efforts, and demonstrating operational excellence



System Capacity and Reliability

To dependably meet current and future community needs and achieve optimal levels of service by effectively managing assets and implementing projects to ensure sufficient system capacity



Customer Engagement and Support

To create an exceptional customer experience and build trust and understanding of LCA's essential services



Employee Engagement and Safety

To build a safe, cohesive, and engaging workplace in which employees feel personally connected to their work, each other, and LCA's commitment to excellence



Lehigh County Authority

STRATEGIES

MEASURES

1. Establish and implement plans to meet or exceed all regulatory requirements
2. Participate in the legislative and regulatory review process to prepare for new regulations and ensure LCA's interests are considered.
3. Develop strategies to enhance organizational resiliency, especially in the areas of cyber security, emergency preparedness, system redundancy, and climate change.
4. Leverage technology, industry best practices, and continuous improvement initiatives to ensure efficient and effective operations and internal practices.

- Number of permit violations
- Number of boil advisories
- Average time to address service disruptions

5. Sustainably support LCA's water and wastewater systems through responsible financial management.
6. Develop decision-making criteria for supporting growth opportunities.
7. Establish rates that balance affordability with achieving required revenue targets that support the financial needs of LCA.

- Capital coverage ratio
- Collections program performance
- CIP program performance (on time, on budget)

8. Collaborate with municipalities, stakeholders, and community groups to increase our understanding of the region's goals and strengthen the role LCA plays in supporting them.
9. Advance LCA's position in the region as the leading resource on water- and wastewater-related issues.
10. Support environmental sustainability and water equity initiatives through partnerships, education, and policy.

- Progress reporting on strategies & milestones

11. Increase our systems' capacity to address economic development needs in our region.
12. Define and establish plans to meet LCA's targeted levels of service.
13. Standardize and implement a comprehensive asset management program to ensure infrastructure reliability, guide investment, and support data-driven decision-making.

- Percentage completion toward developing LCA's asset management program
- Percentage completion toward developing a regional Act 537 Plan
- Planned vs. unplanned maintenance

14. Enhance customer engagement and experience through process improvements and adoption of new technology.
15. Improve our responsiveness to customers' needs.
16. Grow customer awareness and support for LCA's goals and direction.

- Percentage change in call volume
- Customer service complaints per 1000 accounts

17. Ensure a safe working environment for all employees.
18. Standardize and enhance our approaches to succession planning, knowledge management, and performance management.
19. Expand opportunities for employee and leadership development, technical training, and certification.
20. Openly explore the diversity, equity, and inclusion issues that are important to LCA and our employees.
21. Engage employees in LCA's work through collaboration, communication, and cooperation.

- Employee safety incident rate
- Full-time employee voluntary & total turnover rate



Communications

Through this strategic plan, LCA has committed to improving internal and external communication and collaboration. Effective communication is critical not only for the successful implementation of the plan, but also for LCA's overall success.

Communication, which surfaced as an opportunity area during the stakeholder engagement process, will be important to all strategic priorities. Communications could be enhanced through several efforts, including:

- Collaborating with municipalities, stakeholders, and community groups
- Increasing brand awareness
- Engaging employees in LCA's work through collaboration, communication, and cooperation
- Increasing the use of multi-disciplinary teams to manage issues and projects
- Improving LCA's responsiveness to customers' needs
- Building customer awareness and support for LCA's goals and direction

Enhanced communications will be a major initiative throughout the organization to ensure that all teams and individuals are working towards LCA's vision and mission.





Implementation

The priorities, measures, and strategies contain a series of initiatives and projects that, when implemented, will move LCA toward its desired outcomes. However, it is important to note that for the desired results to be achieved, the strategies must be effectively implemented.

Therefore, careful attention and focus on strategy implementation is essential for achieving strategic success. Elements of the implementation process for LCA include:

- Leveraging internal subject matter expertise: Continuing to use key staff members and small teams that are knowledgeable, energized and committed to the implementation of the strategies for different priorities to:
 - » Draft implementation plans for each strategy that will include:
 - Tasks necessary for implementation
 - Assigned individuals or groups
 - Due dates for key tasks
 - Resources required
 - » Monitor and share implementation progress
 - » Report on implementation progress to organizational leadership and the Board of Directors
 - » Review and update implementation tasks on at least an annual basis

Organizational Overview

 **14** Water Systems

 **8** Sewer Systems

 **20** Municipalities Served


 **25.1 Million Gallons per Day** (MGD) of Water Produced


 **32.48 MGD**
Wastewater Treated


 **168** Awesome Employees

 **200,000**
Total Population Served

 **55,000 Customer Properties Served**
Allentown: 33,400
Suburban: 21,600


 **Average Annual Water Bill (2021)**
Suburban: \$246/year
Allentown: \$447/year

 **Average Annual Sewer Bill (2021)**
Suburban: \$356/year
Allentown: \$252/year


 **2021 Budget Highlights**
Operating Revenues - \$77M
Operating Expenses - \$42M
Capital Improvements - \$17M
Debt Service Expense - \$18M


Our Infrastructure

 **8 Treatment Plants**
Water: 1 Allentown
Sewer: 1 Allentown, 6 Suburban


 **15 Storage Tanks**
Allentown: 7
Suburban: 8


 **30 Pump Stations**
Allentown: 7
Suburban: 23

 **662 Miles of Water Mains**
Allentown: 318
Suburban: 344


 **403 Miles of Sewer Mains**
Allentown = 316
Suburban = 87

 **3,709 Fire Hydrants**
Allentown: 1,907
Suburban: 1,802

 **21 Wells**
(Suburban Only)

 **15,804 Valves**
Allentown: 8,733
Suburban: 7,071

 **162 Air Release Valves**
Allentown: 81
Suburban: 81

 **8,997 Manholes**
Allentown: 7,198
Suburban: 1,799