UNC
SCHOOL OF GOVERNMENT
North Carolina Benchmarking Project

NORTH CAROLINA BENCHMARKING PROJECT REPORT 2025

Outcomes and Strategies

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ABOUT THE REPORT

THE NORTH CAROLINA BENCHMARKING PROJECT was established in 1995 so that participating municipalities could compare service data and performance trends. In 2022, the Benchmarking Project relaunched as Benchmarking 2.0 with a new emphasis on collaboration and relationship-building. Benchmarking 2.0 offers revised framework metrics, streamlined data collection, an interactive online dashboard, and intensive in-person performance strategy sessions.

CURRENT PARTNERS: Apex, Asheville, Chapel Hill, Charlotte, Concord, Gastonia, Goldsboro, Greensboro, Hickory, Holly Springs, Raleigh, Rocky Mount, Salisbury, Wake Forest, Wilson, and Winston-Salem.

SERVICES: Asphalt Maintenance, Building Inspections, Emergency Communications, Fire Service, Fleet Maintenance, Human Resources, Parks and Recreation, Police Service, Solid Waste, Wastewater Service, and Water Service.

INTERACTIVE DASHBOARD: Every October, the School of Government receives data from its partners through the Benchmarking 2.0 Data Collection Tool. The School audits the data and then uploads it to the interactive dashboard by November 1 so that service departments from across the state can use it to analyze and compare in-depth data and performance trends. The dashboard includes an array of easy-to-use features that make it possible to apply data normalization and calculate percentages, averages, and confidence intervals across comparison units. Informative, detailed graphs can be downloaded as shareable PDFs. Visit the Benchmarking 2.0 website to access the interactive dashboard.

PERFORMANCE STRATEGY SESSIONS: In November, the School brings service department officials from participating municipalities together (one service at a time) to discuss data trends, strategies, challenges, and effective solutions. In these sessions, we analyze data, identify and address current challenges, and share promising practices and innovations. These sessions help the participating service departments understand and improve their organizational performance by engaging in peer-to-peer learning and networking.

BENCHMARKING REPORT: This report compiles and condenses the information and ideas that were exchanged during the November 2024 Performance Strategy Sessions. Its purpose is to help local governments understand performance metrics, their significance, and how to use them to enhance the efficiency and effectiveness of service departments. In addition, the report provides insights into the practical use and implications of performance management. It includes concrete examples that illustrate how performance metrics can be used to optimize the efficiency and effectiveness of various service departments.

By simplifying complex concepts into actionable strategies, we aim to equip decision-makers with the necessary tools to drive tangible improvements in service delivery.

VISIT OUR WEBSITE: benchmarking.sog.unc.edu

BENCHMARKING 2.0 PARTNERS

ACKNOWLEDGMENTS

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ABOUT THE PERFORMANCE GRAPHS

The statistical graphs in this report track service and performance trends across North Carolina municipalities and are available to the public at the **Benchmarking 2.0 website**. Performance metrics appear on the y-axis (vertical line) and time/years on the x-axis (horizontal line). The average performance of all the Benchmarking partner municipalities is represented by the blue line, and the shaded area represents a 95 percent confidence interval. Users can access all of the data in this report and generate their own specialized performance graphs on the Benchmarking Dashboard.

Sample Graph
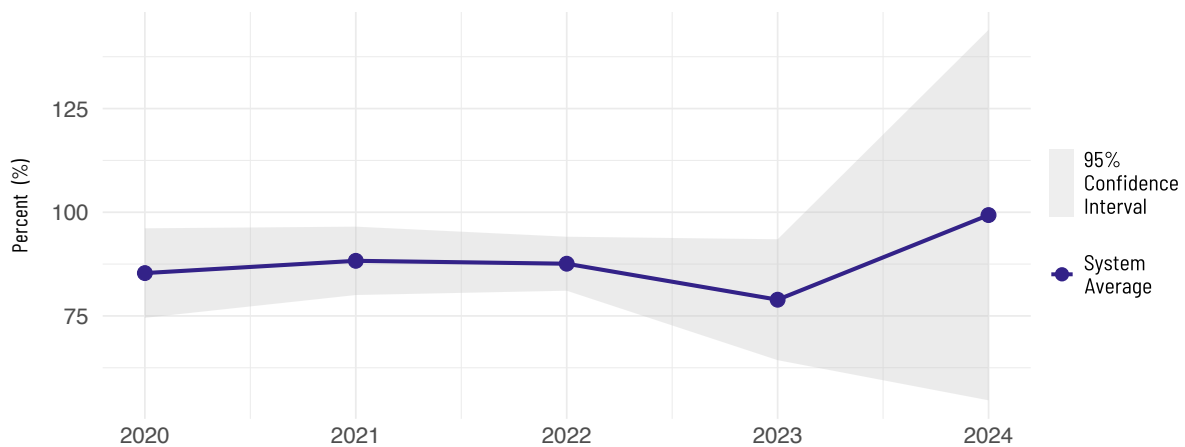
ASPHALT MAINTENANCE

IN NOVEMBER 2024, ASPHALT MAINTENANCE OFFICIALS from the Benchmarking 2.0 municipalities gathered at the School of Government for the annual Performance Strategy Session to discuss strategies and define outcomes of a high-performing asphalt maintenance department. This collaborative session focused on critical challenges, including workforce shortages, infrastructure coordination, roadway safety, response efficiency, and long-term pavement quality. Participants examined emerging trends, shared successful strategies, and explored both short-term solutions and long-term reforms to enhance department performance. They identified the following key characteristics of a high-performing asphalt maintenance service:

- rapid response times,
- durable road repairs,
- safe mobility,
- strong external coordination, and
- a skilled and resilient workforce.

Below, we explore each of these key characteristics, highlighting the strategies and promising practices that define high-performing asphalt maintenance services across the participating municipalities.

Rapid Response Times

Timely and efficient road maintenance is a key criterion of a high-performing asphalt maintenance department. Participants in the 2024 Performance Strategy Session emphasized that a rapid response to roadway issues—especially potholes and emergency repairs—reduces the likelihood of vehicle damage, enhances commuter confidence, and upholds the integrity of municipal road networks.

Strategies for Improving Response Times

Participants in the session focused on identifying both feasible and demanding strategies that asphalt maintenance departments could implement to improve response times. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Deploying Pothole Trucks That Recycle Materials for Faster Repairs.** Pothole trucks equipped with asphalt-recycling technology allow municipalities to reuse old asphalt, reducing material costs and enabling immediate, on-the-spot repairs without waiting for fresh materials. This strategy can accelerate response times, improve pavement longevity, and reduce reliance on external suppliers. During the Performance Strategy Session, participants discussed how one municipality implemented a Falcon pothole-patching truck that can recycle asphalt, allowing stockpiling of material during warmer months for reuse in winter, significantly improving repair efficiency.

- **Enhancing the Process for Routing Complaints to Asphalt Maintenance Teams.** Streamlining the routing of resident complaints and service requests can improve response times by directing reports to the correct departments. Municipalities that improve 311 systems (non-emergency services), integrate mobile reporting apps, and implement automated complaint tracking may experience quicker turnaround times and higher resolution rates.

- **Securing a Dedicated Budget to Fully Fund Road Maintenance Operations.** Establishing a dedicated, recurring budget for asphalt maintenance can help municipalities proactively manage road repairs and resurfacing without relying on fluctuating public works funds. Municipalities with a fully funded maintenance budget are more likely to keep up with demand, purchase necessary materials, and expand workforce capacity, leading to fewer delays and improved road conditions. However, securing a dedicated budget requires strong municipal support, data-driven justifications, and long-term financial planning, which can be difficult given competing funding priorities.

- **Expanding Staffing to Allow for Twenty-Four-Hour Road Maintenance Operations.** Increasing staffing levels to enable twenty-four-hour road maintenance operations allows municipalities to conduct repairs overnight or during low-traffic hours, minimizing disruptions. Overnight paving and maintenance shifts can also reduce worksite hazards, accelerate project completion, and ease congestion for commuters, leading to quicker

roadwork. Expanding to round-the-clock operations requires significant workforce growth, additional budget allocations, and policy adjustments to address labor costs and shift scheduling.

- ■ **Partnering with Asphalt Suppliers to Ensure Extended Service Hours.** Establishing agreements with asphalt suppliers to extend operating hours or provide on-demand access to materials can enable municipalities to complete emergency repairs and nighttime roadwork without delays. Some municipalities that have negotiated flexible supply arrangements have reported faster response times and reduced project delays, particularly for urgent repairs. Asphalt suppliers may be resistant to adjusting their hours due to production costs, and municipalities must justify demand to make extended service agreements viable.

Durable Road Repairs

Quality is the defining characteristic of a high-performing asphalt maintenance department. Participants in the 2024 Performance Strategy Session emphasized that roadway maintenance is only as effective as the durability of repairs that do not require reopening the site shortly after work is completed. Poorly executed roadwork can lead to repeated repairs, increased costs, and frustrated residents, whereas well-planned, high-quality maintenance extends the lifespan of roads, improves safety, and enhances overall infrastructure reliability.

Strategies for Achieving Durable Road Repairs

Participants in the session focused on identifying both feasible and demanding strategies that asphalt maintenance departments could implement to improve road repair. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create transformative improvements in the durability of road repairs.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- ● **Maintaining a Skilled Workforce.** High-quality roadwork is dependent on a workforce trained in asphalt application, compaction, and pavement preservation techniques. Some municipalities that invested in ongoing professional development for maintenance crews reported higher-quality repairs, improved worker retention, and greater efficiency in operations.

- ● **Repairing and Replacing Equipment on Time.** Well-maintained equipment is essential for producing high-quality, durable road repairs. Departments that implement preventative maintenance schedules for machinery—such as asphalt pavers, milling machines, and pothole-patching equipment—can reduce downtime and avoid costly emergency repairs. Municipalities that proactively service their paving and patching equipment may experience fewer work disruptions and extend the lifespan of their machinery.

- ● **Building Strong Relationships with Material Vendors.** The quality of asphalt materials directly impacts the longevity of roadwork, making vendor relationships critical. Municipalities that establish long-term partnerships and bulk-purchasing agreements

with reputable suppliers can secure better access to high-grade materials and maintain a consistent supply chain.

- **Conducting Rigorous Inspections of Completed Work.** Strict quality-control inspections—including post-repair assessments and random site audits—can help municipalities identify deficiencies early and ensure accountability. Some municipalities that enforce stringent quality checks report fewer structural failures, longer-lasting repairs, and increased contractor compliance. Several municipalities use third-party inspectors to conduct unbiased evaluations of completed work, which can improve adherence to quality standards.

- **Regularly Updating Pavement Condition Index Data.** Keeping the Pavement Condition Index (PCI) up to date can improve municipalities' ability to make data-driven maintenance decisions. Municipalities that assess road conditions on a consistent schedule—rather than waiting for visible deterioration—are more likely to be better equipped to prioritize repairs before roads reach critical failure. Some municipalities have implemented automated surveys to enhance RCI data accuracy, allowing for better long-term planning.

- **Implementing a Strong Asset Management Policy.** Municipalities that establish a formalized asset management policy are more likely to improve their ability to track road conditions, prioritize repairs, and allocate resources efficiently. Some municipalities that use data-driven asset management software report fewer reactive repairs and more proactive long-term maintenance planning, which can lead to cost savings and improved road conditions. One municipality emphasized how coordinating asset management with vendor relationships and utility projects allowed them to optimize materials and streamline maintenance efforts.

- **Securing Council Support for Long-Term Quality Initiatives.** Departments with consistent council backing may be better positioned to implement quality-improvement initiatives and secure stable funding. Municipalities that regularly present data-driven justifications for funding and align requests with broader infrastructure goals may find more reliable financial and policy support from council. Several participating municipalities successfully used road condition data and benchmarking metrics to demonstrate the need for sustained maintenance investments.

- **Planning Strategically with Utility and Infrastructure Partners.** Coordinating long-term roadwork schedules with utility companies, transit agencies, and other infrastructure departments can prevent unnecessary road openings and improve efficiency. Municipalities that integrate resurfacing schedules into regional infrastructure planning efforts may experience fewer project conflicts, reduced costs, and longer-lasting road quality. However, achieving full coordination requires ongoing collaboration, regular interagency meetings, and shared data systems, but municipalities often struggle with siloed operations and inconsistent communication.

- **Expanding Equipment Access for High-Quality Repairs.** Securing modern asphalt-repair technology—such as infrared repair systems and advanced milling machines—can enhance repair durability and reduce long-term costs. Municipalities with access to high-quality equipment can achieve better performance and may complete repairs more efficiently, leading to fewer repeat fixes and improved roadway conditions. Limited budgets and high equipment costs make it difficult for some municipalities to invest in newer technology, requiring creative funding solutions or shared equipment agreements.

- **Enforcing Utility Cut Regulations More Strongly.** Enforcing strict utility cut regulations ensures that roads remain structurally sound and prevents premature degradation caused by poorly restored utility work. Municipalities can reduce pavement failures and improve road longevity by implementing strict policies for unauthorized cuts and requiring full restoration. However, enforcement is difficult because utility companies often prefer to pay fines rather than adhere to proper restoration standards, and municipalities must balance enforcement with maintaining strong relationships with service providers.

- **Securing Stable, Depoliticized Funding for Road Quality Improvements.** Establishing dedicated funding sources—such as long-term infrastructure bonds or guaranteed budget allocations—can improve the likelihood that road maintenance is not impacted by shifting political priorities. By securing stable, long-term funding, municipalities may execute high-quality maintenance programs without interruptions and weather budget shortfalls. Securing dedicated funding requires strong political and public support, and municipalities often face resistance to implementing new taxes or budget protections.

- **Implementing Strict Vendor and Contractor Performance Policies.** Holding vendors and contractors to strict performance standards can improve work quality consistently and minimize the need for costly rework. Municipalities that tie payments to quality benchmarks and require contractors to fix deficiencies at their own expense may see improved workmanship and greater accountability. However, enforcing performance-based contracts requires strong legal frameworks and oversight, and some contractors may resist stricter accountability measures, leading to potential disputes.

Safe Mobility

Safety is a fundamental priority in asphalt maintenance, shaping how municipalities design, repair, and maintain roadways for all users. Participants in the 2024 Performance Strategy Session emphasized that a high-performing asphalt maintenance department not only ensures well-maintained roads for vehicles but also supports multimodal transportation by creating safe and accessible infrastructure for pedestrians, cyclists, and individuals with disabilities. Clear road markings, sidewalks that are compliant with the Americans with Disabilities Act (ADA), and proactive safety measures can significantly reduce accidents and improve mobility for all residents.

Strategies for Improving Safe Mobility

Participants in the session focused on identifying both feasible and demanding strategies that asphalt maintenance departments could implement to improve safe mobility. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create transformative improvements in safe mobility.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Holding Contractors Accountable to Safety Standards.** Implementing stricter contractor accountability policies can improve compliance with safety regulations and

may reduce the risk of poor-quality work, unsafe construction zones, and roadway hazards. Municipalities can improve worksite conditions by enforcing financial penalties for safety violations. One municipality introduced a "if you break it, you fix it" policy, requiring contractors to repair any road damage they cause, leading to better compliance and fewer long-term infrastructure issues.

- **Enhancing Communication with Residents.** Proactively informing residents about construction schedules, detours, and safety precautions can minimize disruptions and enhance public trust. Municipalities may experience fewer accidents and reduced resident frustration during road projects by using real-time website updates, social media alerts, and text notifications. One municipality implemented a reverse 311 system, allowing residents to sign up for notifications about upcoming roadwork in specific areas, leading to improved public awareness and smoother project execution.

- **Providing Safety Training and Annual Refreshers for Employees.** Regular safety training programs, including annual refreshers on worksite hazards, equipment handling, and emergency protocols, can improve compliance with state and federal safety mandates. Municipalities that invest in ongoing safety education can decrease workplace injuries, improve adherence to safety regulations, and increase worker confidence in high-risk environments. One department established structured training in ADA compliance and worksite hazard management, reinforcing industry best practices for safety and reducing accident rates among employees.

- **More Effectively Enforcing Penalties to Combat Reckless Driving in Work Zones.** Increasing measures to deter reckless driving in work zones, such as higher fines, speed cameras, and targeted enforcement, can improve safety for both workers and motorists. Municipalities can partner with law enforcement agencies to increase patrols and issue automated citations in order to reduce worksite-related accidents. One municipality introduced speed bumps and enforcement cameras in high-risk work zones, discouraging speeding and improving compliance with posted safety regulations.

- **Implementing Traffic Calming Measures.** Traffic calming strategies, such as speed humps, curb extensions, and pedestrian refuge islands, can help reduce vehicle speeds and improve roadway safety. Municipalities can lower pedestrian accidents and contribute to safer neighborhood streets by incorporating traffic calming measures into long-term infrastructure planning. One municipality implemented roundabouts and inverted diamond interchanges, significantly improving traffic flow while enhancing pedestrian and cyclist safety.

- **Establishing Dedicated Staffing for Emergency Roadway Incidents.** Creating specialized emergency response teams within asphalt maintenance departments can improve rapid resolution of hazardous road conditions such as sinkholes, large potholes, or flooding. Municipalities may see faster incident resolution, improved roadway safety, and reduced public complaints about dangerous road conditions by implementing emergency asphalt response units. However, implementing dedicated emergency teams requires additional staffing and budget allocations, which can be difficult to justify amid competing infrastructure priorities. Furthermore, maintaining on-call personnel for 24/7 coverage presents logistical and financial hurdles.

- **Expanding Proactive Resident Notification Systems.** Enhancing resident communication by leveraging automated alerts, systems driven by artificial intelligence (AI), and navigation app integrations may improve timely updates about roadwork and

safety hazards. Municipalities may experience fewer resident complaints, improved public trust, and enhanced roadway safety by implementing proactive notification systems. While text alerts and reverse 311 systems have been successfully deployed, integrating real-time GPS updates remains underdeveloped.

Strong External Coordination

Effective coordination with external entities is critical to a high-performing asphalt maintenance department. Participants in the 2024 Performance Strategy Session emphasized that strong interdepartmental cooperation, proactive scheduling, and alignment with utility work are essential for reducing disruptions, maximizing resources, and maintaining smooth roadways. When municipalities synchronize resurfacing projects with water, sewer, and utility work, they can minimize costly rework, prevent premature road cuts, and ensure efficient use of public funds.

Strategies for Strengthening External Coordination

Participants in the session focused on identifying both feasible and demanding strategies that asphalt maintenance departments could implement to improve external coordination. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create transformative improvements in coordination.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Integrating All Projects into a Centralized GIS Tracking System.** Consolidating infrastructure projects into a shared Geographic Information System (GIS) can allow municipalities to better coordinate roadwork with water, sewer, and private utility projects. By ensuring that all departments input planned work into the same system, municipalities can track overlapping projects and avoid unnecessary road disruptions. One municipality successfully implemented a real-time GIS dashboard, enabling engineers and planners to visualize upcoming work and adjust schedules accordingly, preventing resurfacing projects from conflicting with major infrastructure work such as new transit routes.

- **Coordinating Regular Meetings for Major Infrastructure Projects.** Establishing routine interdepartmental meetings can improve municipalities' ability to align road resurfacing efforts with other infrastructure work, such as utility upgrades and stormwater projects. Municipalities may see improvements in efficiency, fewer scheduling conflicts, and a reduction in public complaints about repeated road closures by meeting monthly or quarterly to discuss upcoming projects. Some municipalities have successfully coordinated efforts between stormwater and parks departments, ensuring that trailhead renovations and roadwork align to avoid redundant construction.

- **Fostering a Culture of Courtesy and Communication Between Departments.** Encouraging proactive communication between public works, engineering, and utility departments can help municipalities prevent scheduling conflicts and streamline project execution. By promoting information-sharing and requiring departments to notify one

another about planned projects in advance, municipalities can avoid unnecessary road closures. Some municipalities have implemented internal notification systems, ensuring that before finalizing project schedules, all relevant departments are aware of and aligned with planned work.

- **Implementing an Automated System That Alerts Departments About Conflicting Work Plans.** Some municipalities are exploring automated alert systems that notify departments when planned projects overlap. These systems may be integrated into existing GIS platforms, providing real-time updates when new roadwork is scheduled in areas with upcoming utility work. While this requires initial investment and system upgrades, some municipalities that have piloted such programs report reductions in project delays and costly rework.

- **Enhancing Coordination with Private Utilities and External Agencies.** Synchronizing roadwork with private utility companies, such as Duke Energy, fiber Internet providers, and water authorities, remains a persistent challenge. Some municipalities have successfully negotiated agreements requiring private companies to notify local governments about planned work well in advance. Others have established data-sharing partnerships, integrating private utility work schedules into municipal planning databases. These efforts reduce the risk of newly paved roads being cut open shortly after resurfacing.

A Skilled and Resilient Workforce

A well-trained and adequately staffed workforce is the foundation of a high-performing asphalt maintenance department. Participants in the 2024 Performance Strategy Session emphasized that staffing challenges—ranging from recruitment difficulties to retention issues—continue to impact the efficiency and effectiveness of roadway maintenance operations. Departments that maintain a stable workforce with skilled personnel are more likely to execute repairs efficiently, ensure safety on jobsites, and proactively plan for long-term infrastructure needs. Beyond merely filling positions, successful staffing strategies focus on developing talent, fostering morale, and creating career advancement opportunities that encourage employees to stay within the department.

Strategies for Building a Skilled and Resilient Workforce

Participants in the session focused on identifying both feasible and demanding strategies that asphalt maintenance departments could implement to improve recruitment, retention, and overall workforce stability. Feasible strategies are those that departments can easily imple-ment in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create transformative improvements in staffing conditions.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Recruiting in High Schools and Community Colleges.** Expanding recruitment efforts to high schools and community colleges introduces young talent to career opportunities in asphalt maintenance, providing students with alternative career paths without requiring a four-year degree. This approach can help fill entry-level positions, improving prospects

for a steady pipeline of skilled workers, and supports long-term workforce sustainability by addressing aging-workforce challenges. During the session, participants discussed how recruiting from high schools and community colleges could attract younger workers, with one department emphasizing the importance of early outreach to introduce students to public works careers.

- **Providing Training and Career Development.** Establishing structured training programs ensures that employees acquire the necessary skills for job success and long-term retention, while cross-training initiatives enhance operational flexibility by allowing workers to gain experience in multiple aspects of roadway maintenance. These programs can improve workforce competency, reduce skill gaps, and increase job satisfaction, ultimately strengthening operational efficiency.

- **Providing Progression or Promotional Opportunities.** Creating a tiered employment system with structured career advancement pathways encourages employee retention by offering clear promotion opportunities and adjusting pay scales to reflect skill development and years of service. Employees are more likely to remain in departments that provide transparent growth opportunities, fostering motivation, professional development, and long-term stability. Several municipalities adopted a tiered job classification system, such as Asphalt Worker I, II, and III, which improved retention by providing clear incentives for skill development and career progression.

- **Training Employees with In-House CDL Programs.** Offering in-house commercial driver's license (CDL) training programs allows municipalities to train employees internally rather than requiring them to seek external certification, reducing hiring barriers and increasing workforce retention. Providing CDL training within departments ensures a steady pipeline of qualified drivers while minimizing employee turnover due to workers leaving for higher-paying private-sector jobs. However, establishing in-house CDL training requires significant resources, including certified trainers, vehicles for testing, and compliance with federal and state CDL regulations, and some employees may still leave for private-sector roles after receiving their CDL.

- **Educating Employees on Total Compensation Packages.** Total compensation education programs help employees understand the full value of their benefits, including retirement contributions, healthcare coverage, and paid leave, rather than focusing solely on base salary. Employees who are aware of their full compensation package are more likely to remain in their roles, leading to increased retention and reduced turnover. However, younger employees may still prioritize immediate financial gains over long-term benefits, and ensuring that compensation education is engaging and accessible requires continuous effort from HR departments.

- **Ensuring Workforce Stability Through Succession Planning.** Implementing structured mentorship programs and leadership development pipelines can ensure that institutional knowledge is transferred from senior employees to newer staff before retirement. Succession planning helps maintain operational continuity, preventing disruptions caused by the departure of experienced workers while fostering career growth opportunities for junior staff. However, many municipalities struggle with limited staffing and resources to implement formal succession plans, and senior employees may have limited time or willingness to take on mentorship roles, hindering the effectiveness of such programs.

Summary

The 2024 Performance Strategy Session provided municipalities with a framework to refine asphalt maintenance outcomes, emphasizing workforce development, strategic coordination, safe mobility, response time, and quality assurance. Key improvements include structured training programs, enhanced interdepartmental communication, and stronger contractor accountability, while long-term goals focus on dedicated emergency response staffing, automated project tracking, and stable funding sources. Ensuring a skilled workforce remains a priority, as recruitment and retention directly impact operational efficiency. Preventing costly rework through strategic coordination and implementing safety measures, such as work zone regulations and pedestrian accessibility improvements, are critical for both employees and the public. Faster pothole-repair response times and proactive quality control help build public trust and extend infrastructure longevity. Municipalities that integrate these industry best practices are likely to be better positioned to deliver safe, efficient, and reliable road networks that meet evolving community needs.

FIGURE 1. STRATEGIES FOR A HIGH-PERFORMING ASPHALT MAINTENANCE SERVICE

● **Feasible Strategy** | ■ **Demanding Strategy**

- ● Pothole Trucks That Recycle Materials
- ● Improved Residential Complaints Process
- ■ Dedicated Budget
- ■ 24-Hour Road Maintenance Staffing
- ■ Extended Supplier Operating Hours

Rapid Response Times

- ● Long-Term Council Support
- ● Timely Repair & Replacement of Equipment
- ● Skilled Workforce
- ● Strong Asset Management Policy
- ● Strong Vendor Relationships
- ● Updated Pavement Condition Index Data
- ● Quality-Control Inspections
- ■ Planning with Infrastructure Partners
- ■ Strict Vendor Performance Policies
- ■ High-Quality Repair Tech
- ■ Enforced Utility Cut Regulations
- ■ Dedicated Funding Sources

Durable Road Repairs

- ● Traffic Calming Strategies
- ● Contractor Accountability Policies
- ● Resident Communication
- ● Penalties for Speeding in Work Zones
- ● Safety Training Programs
- ■ Staff for Emergency Incidents
- ■ Resident Notification Systems

Safe Mobility

High-Performing Asphalt Maintenance Service

- ● Centralized GIS Tracking System
- ● Proactive Interdepartmental Communication
- ● Routine Interdepartmental Meetings
- ■ Automated Alert Systems
- ■ Coordinating with Private Utilities

Strong External Coordination

- ● Training & Career Development
- ● Expanding Recruitment Efforts
- ● Tiered Employment System
- ■ In-House CDL Training Programs
- ■ Total Compensation Education Programs
- ■ Mentorship & Leadership Development Programs

A Skilled & Resilient Workforce

SELECTED ASPHALT MAINTENANCE BENCHMARKING PROJECT GRAPHS

GRAPH 1. Centerline Miles per 1,000 Residents
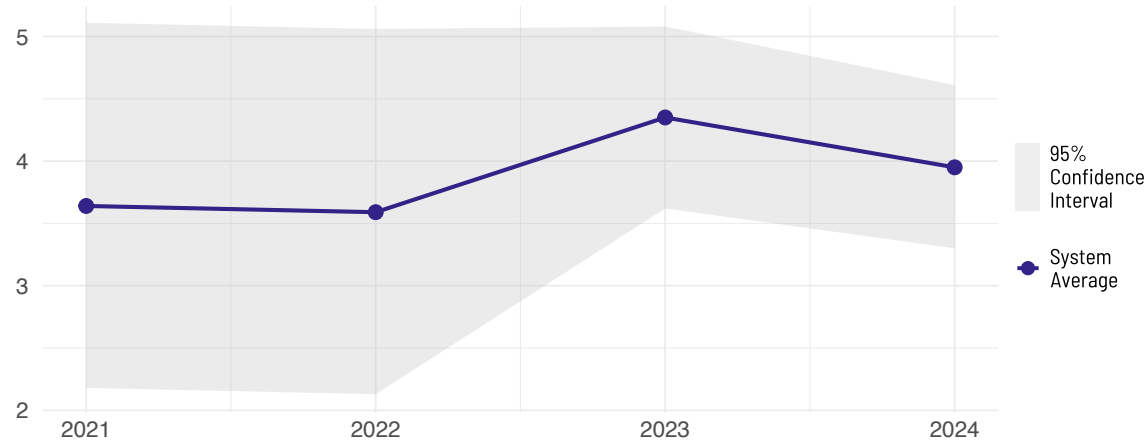
GRAPH 2. Centerline Miles per FTE
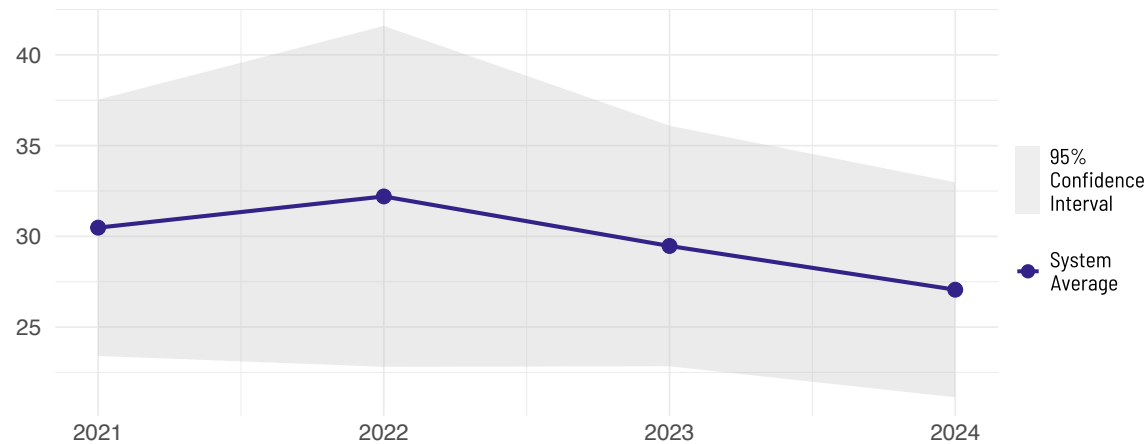
GRAPH 3. Lane Miles Rated Above 80 Pavement Condition Index (PCI) as a Percentage of Total Lane Miles
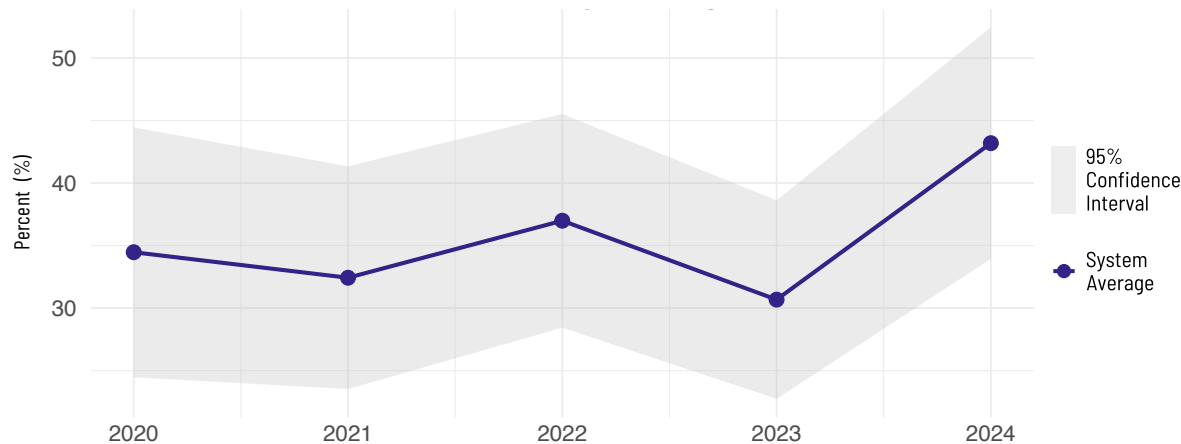
GRAPH 4. Potholes Addressed Within 3 Business Days as a Percentage of Total Potholes Reported
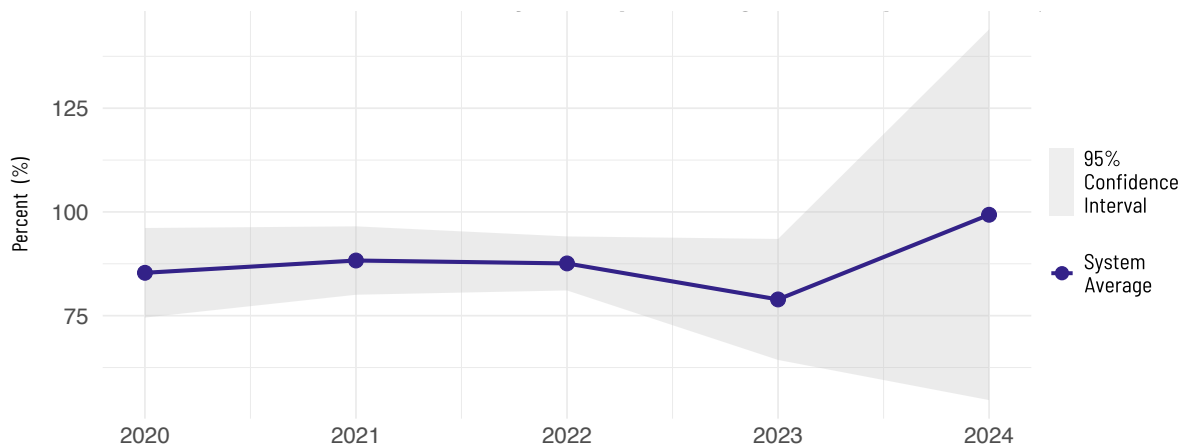
GRAPH 5. Expenses for Asphalt Maintenance per Lane Mile
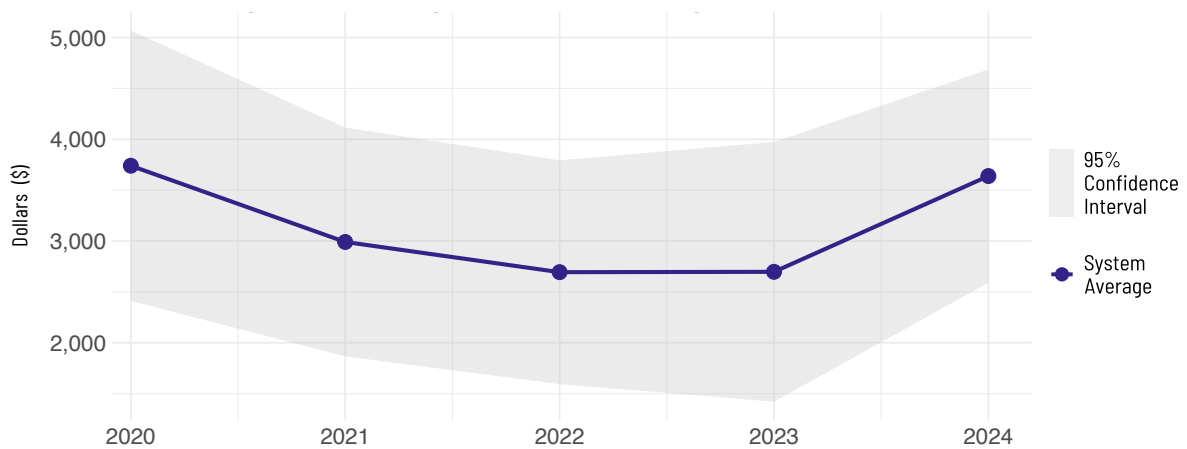
BUILDING INSPECTIONS

IN NOVEMBER 2024, MUNICIPAL REPRESENTATIVES AND BUILDING OFFICIALS from the Benchmarking 2.0 municipalities gathered at the School of Government for the annual 2024 Performance Strategy Session to discuss challenges and promising practices in building inspections. These inspections are essential for public safety, economic development, and community resilience. Participants explored ways to improve service delivery, staffing, safety enforcement, inspection efficiency, and public education on code compliance. They noted that, as municipalities grow, building inspections departments play a critical role in shaping safe, sustainable communities. The discussion highlighted strategies to enhance service effectiveness and streamline processes while maintaining the highest safety standards. Participants identified the following key characteristics of a high-performing building inspections department:

- building safety,
- excellent customer service,
- efficient service delivery,
- strong external collaborations, and
- a skilled and well-staffed workforce.

We discuss each of these characteristics below.

Building Safety

A high-performing building inspections department plays a critical role in ensuring that buildings are structurally sound, code-compliant, and safe for occupancy. Public safety is at the core of building inspections, as failures in compliance can lead to building collapses, fire hazards, and unsafe living conditions. A strong emphasis on regulatory adherence, proactive inspections, and ongoing education for inspectors, builders, and the public is essential for preventing hazards and maintaining a safe built environment. During the 2024 Performance Strategy Session, participants emphasized the need for proactive safety enforcement, continuous education, and interdepartmental collaboration to prevent structural failures and fire hazards, protect employees, and maintain public confidence in the built environment. They identified the following key indicators of a high-performing building inspections department:

- A safe built environment for all residents
- No fire-related deaths
- Zero building collapses
- A safe work environment for inspectors

Strategies for Strengthening Building Safety

Participants in the session focused on identifying both feasible and demanding strategies that building inspections departments could implement to improve building safety. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Ensuring Safe Buildings Through Code Compliance and Public Training.** Enforcing strict adherence to safety codes and educating builders, contractors, and the public on safety requirements and industry best practices helps ensure compliance and create a safer built environment. When builders, developers, and inspectors understand and follow safety regulations, municipalities often experience fewer safety violations, fewer code enforcement cases, and safer structures.

- **Staying Current with Code Changes Through Continuing Education.** Offering annual continuing education opportunities helps inspectors stay current with building code updates, safety innovations, and regulatory changes. Regular training and certification renewals can improve inspectors' ability to consistently apply the latest safety standards and regulations.

- **Training Employees in Occupational Safety and Health Administration (OSHA) Standards.** Providing fire inspectors, plan reviewers, and field inspectors with OSHA-compliant safety training, including hazard identification, first aid, and emergency response drills, ensures that they are equipped to maintain a secure environment. When inspectors understand workplace safety measures, they can better reduce workplace incidents, improve inspection site safety, and foster a culture of proactive risk management.

- **Mitigating Fire-Related Deaths Through Basic Prevention Measures.** Assisting with the installation of smoke alarms, carbon monoxide detectors, and fire extinguishers in residential and commercial properties helps reduce fire-related fatalities and injuries. Fire prevention tools can significantly increase survival rates and reduce fire-related damage.

- **Achieving 100 Percent Code Compliance in All Structures.** Implementing comprehensive inspection processes, stricter enforcement, and increased compliance education ensures that all buildings meet minimum safety requirements. One hundred percent compliance reduces building-related hazards, strengthens public confidence, and lowers risk exposure for municipalities.

- **Consistently Updating and Maintaining the Building Code System.** Establishing a dynamic, regularly updated building code system that incorporates advancements in construction safety, environmental sustainability, and technology helps ensure that buildings remain resilient. A continuously evolving building code system can improve the likelihood that structures withstand present and future challenges, including climate-related issues and emerging safety concerns.

- **Educating All Stakeholders on Safety and Regulations.** Creating community-wide education programs keeps developers, contractors, real estate professionals, and the public informed about building safety codes, compliance expectations, and risk mitigation strategies. Improved education can lead to better compliance, fewer violations, and stronger collaboration between municipalities and private-sector developers.

Excellent Customer Service

A high-performing building inspections department is defined not only by its ability to enforce building codes and conduct inspections, but also by its commitment to customer service, transparency, and accessibility. Developers, contractors, and residents rely on timely inspections, clear communication, and a streamlined permit application process to ensure that projects remain on schedule and meet compliance standards. During the 2024 Performance Strategy Session, participants emphasized the importance of minimizing permit intake errors, ensuring a customer-friendly permit application process, and creating consistent inspection experiences across all project types. Departments that prioritize customer satisfaction, efficient service delivery, and open communication foster stronger relationships with stakeholders, ultimately improving compliance rates and public trust. Participants discussed the following indicators of a high-performing building inspections department with excellent customer service:

- Accessible records
- Minimal permit intake errors
- Quick permit and inspection cycle times—efficient workflows reduce delays, ensuring that developers and contractors receive timely inspections
- Robust citizen and contractor feedback mechanisms—departments actively seek input from residents and industry professionals to refine processes
- Positive experience for stakeholders
- Customer-friendly permit application process—application requirements are clearly outlined, easy to follow, and available through multiple formats (digital, in-person, phone support)

- High resident satisfaction
- Transparency in inspection requirements—developers and homeowners clearly understand which inspections are required and when they must be scheduled
- Minimal complaints and service delays
- Consistent code enforcement across all project types
- Easy access to customer service staff

Strategies for Enhancing Customer Service

Participants in the session focused on identifying both feasible and demanding strategies that building inspections departments could implement to improve customer service. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Ensuring Error-Free Plan Review Processes.** Investing in structured training programs for plan reviewers and permit intake staff ensures that plan review processes are accurate and free from errors. Departments that prioritize quality control in plan review can improve performance and may benefit from faster approvals, fewer rework requests, and improved customer satisfaction.

- **Simplifying Language for Customers.** Simplifying technical building code language in permit applications, online resources, and inspection reports ensures that developers, contractors, and homeowners can easily understand requirements and compliance expectations. When inspection guidelines and permit instructions are written in clear, concise language, applicants can better understand the forms, which may result in fewer delays, fewer rejections, and greater confidence in navigating the process.

- **Holding Annual Development and Contractor Work Sessions.** Annual meetings with contractors, developers, and building professionals can provide updates on building code changes, process improvements, and inspection expectations. These sessions help strengthen collaboration, improve communication, and reduce friction between inspection staff and industry professionals.

- **Improving Access to Information.** Public access to digital inspection records, permit status tracking, and FAQs is expanded through online portals and mobile applications. Departments that improve transparency and access to information can empower contractors and residents to self-service their inspection needs, reducing unnecessary calls and delays.

- **Establishing a Common Language Across All Inspection Reports.** Standardizing inspection terminology, formatting, and reporting language across all municipal inspectors and jurisdictions can help contractors and developers receive clear and consistent feedback. Consistency in inspection reports helps improve compliance rates, reduces misinterpretations of building code violations, and enhances communication between inspectors and builders.

■ **Implementing Inspection Tracking and Notifications.** Developing a real-time digital inspection tracking system that provides live updates, estimated arrival times, and automatic notifications for contractors, developers, and homeowners improves efficiency and communication. By allowing permit holders to track inspection status in real time, municipalities can reduce uncertainty, improve scheduling efficiency, and minimize delays. Automated notifications also help keep contractors informed about inspection outcomes, next steps, and reinspection timelines, reducing confusion and the number of follow-up inquiries.

Efficient Service Delivery

A high-performing building inspections department can benefit from maintaining efficient, predictable, and timely inspection scheduling to support development, ensure code compliance, and minimize project delays. Timeliness in plan review, permit issuance, and inspection completion is critical for keeping construction projects on track while maintaining safety standards. During the 2024 Performance Strategy Session, participants identified key challenges related to delayed inspections, slow permit approvals, and inconsistent scheduling processes. Departments that streamline scheduling, improve interdepartmental coordination, and invest in workforce development can enhance service efficiency, improve stakeholder satisfaction, and ensure fair, balanced inspection outcomes. Participants discussed the following indicators of a high-performing building inspections department with efficient service delivery:

- Reasonable plan review processing time—plan reviews are completed within established timeframes, preventing construction delays
- Timeliness in conducting inspections
- Permits issued without delay
- Quick turnaround times for inspections—municipalities reduce wait times for inspections, allowing projects to stay on schedule
- Consistently timely inspections and review processes—departments ensure that both inspections and plan reviews are completed within expected timeframes
- Balanced inspection results (pass/fail rates)—departments maintain fair, standardized inspection criteria, ensuring consistency across all inspectors and project types
- A department that serves rather than hinders—the department is viewed as a resource for guidance and education, not just a regulatory body

Strategies for Improving Service Delivery

Participants in the session focused on identifying both feasible and demanding strategies that building inspections departments could implement to improve service delivery. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Educating Customers.** Educating developers, contractors, and residents on permit timelines, inspection scheduling processes, and common compliance issues helps ensure realistic expectations and reduce scheduling conflicts. Departments that proactively educate stakeholders may see fewer rescheduled inspections, reduced permit application errors, and improved efficiency in scheduling workflows.

- **Coordinating Scheduling Through an Interdepartmental Communications Team.** Establishing a dedicated interdepartmental communications team to improve coordination between building inspections, zoning, fire safety, and planning departments can improve scheduling and information-sharing. Improved interagency collaboration can reduce duplicate inspections, miscommunications, and delays caused by regulatory conflicts.

- **Expanding Staffing Levels to Meet Demand.** Increasing the number of available inspectors and administrative personnel helps ensure that inspection requests and permit reviews are handled in a timely manner. Departments with adequate staffing levels are likely to experience lower backlogs, improved service delivery, and reduced response times.

- **Implementing Statewide Information and Transparency Initiatives.** Creating a centralized, statewide database where municipalities share inspection timelines, permit processing data, and department performance metrics can increase accountability and transparency across jurisdictions. Statewide transparency can improve service consistency, help departments benchmark performance, and provide developers with realistic expectations on scheduling.

- **Obtaining State or Local Funding for Apprenticeship Programs.** Securing funding to develop apprenticeship programs for building inspectors can help municipalities train and recruit the next generation of qualified professionals. Apprenticeship programs may increase the number of skilled inspectors, reduce staffing shortages, and improve overall service efficiency.

- **Partnering with Colleges and Universities for Workforce Development.** Establishing academic partnerships with trade schools, community colleges, and universities to offer certificate programs in building inspections creates a pipeline of future inspectors. Academic partnerships may improve workforce sustainability, reduce training gaps, and create opportunities for entry-level inspectors to enter the profession.

Strong External Collaborations

A high-performing building inspections department fosters strong relationships with contractors, developers, and residents. Educating the community about building codes, inspection requirements, and safety measures has the potential to reduce compliance issues, minimize failed inspections, and create a collaborative approach to municipal development. During the 2024 Performance Strategy Session, municipal representatives emphasized that proactive communication, interagency collaboration, and accessible public education initiatives improve compliance rates, reduce inspection failures, and enhance trust between inspectors and the community. Departments that prioritize outreach efforts and maintain open lines of communication can help contractors, developers, and residents navigate the regulatory landscape

with greater confidence and clarity. Participants discussed the following indicators of a high-performing building inspections department with active external participation:

- Reduced failure rates—fewer failed inspections result from better-prepared contractors and developers who understand code requirements
- Interlocal agreements with surrounding departments—municipalities collaborate regionally to share industry best practices, streamline regulations, and create uniform building code interpretations
- Well-developed relationships with all stakeholders
- Strong community relationships

Strategies for Strengthening External Collaborations

Participants in the session focused on identifying both feasible and demanding strategies that building inspections departments could implement to improve external collaboration. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Developing a Directory for Other Departments and County Offices.** Establishing a clear directory of contacts for various municipal departments and county offices makes it easier for contractors and residents to get accurate information. A centralized contact resource may help ensure that stakeholders can efficiently connect with the appropriate offices, reducing miscommunication and delays in the inspection and permitting process.

- **Collaborating with Community Development.** Providing cross-training opportunities for community development and planning staff improves the likelihood that they understand building inspection processes and can relay accurate information to residents and developers. When community development personnel are well-informed, they can better serve as an additional resource for answering basic building inspection questions, reducing incorrect submissions and confusion among applicants.

- **Hosting Community Events in Partnership with Other Departments.** Organizing public outreach events, contractor training sessions, and open forums in collaboration with zoning, fire, and planning departments helps to educate the community. These events can improve stakeholder engagement, create better public awareness of building regulations, and encourage collaboration between inspectors and the development community.

- **Improving Communication Between Inspectors, Contractors, and Residents.** Creating standardized communication protocols can ensure that inspectors clearly explain issues, outline expectations, and provide constructive feedback. Improving the clarity of inspection feedback can help contractors and homeowners make necessary corrections efficiently, reducing reinspection requests and delays.

- **Expanding Social Media Education and Website Resources.** Social media, video tutorials, and website FAQs can educate the public on inspection processes, common code violations, and industry best practices for passing inspections. Such digital

education efforts can help increase public awareness, reduce miscommunication, and provide 24/7 access to valuable inspection information.

- **Using Process Infographics to Explain the Building Inspections Process.** Visual guides and infographics can explain the step-by-step process of building inspections, from permit application to project approval. Infographics provide an easy-to-understand reference for stakeholders, reducing confusion and streamlining project timelines.

- **Establishing a Dedicated Employee for Inspection-Related Inquiries.** A dedicated customer service specialist can handle inspection-related inquiries, schedule inspections, and assist contractors and residents with compliance issues. This role can help enhance public access to inspection-related information, reducing delays and miscommunication.

- **Implementing Proactive Education Programs.** Developing a structured, ongoing education program where inspectors visit jobsites, community centers, and industry events can proactively educate contractors and residents on building codes and inspection expectations. Proactive education can help to reduce violations, improve compliance, and strengthen partnerships between municipalities and developers.

- **Hosting Workshops for Contractors, Builders, and Residents.** Offering regular training sessions for contractors, homebuilders, and residents helps educate them on industry best practices for meeting inspection requirements. Workshops can improve knowledge of common issues, reduce inspection failures, and enhance community engagement.

A Skilled and Well–Staffed Workforce

A high-performing building inspections department is defined by its ability to maintain appropriate staffing levels, reduce inspector workload, and ensure a pipeline of well-trained professionals. Adequate staffing is essential for timely inspections, accurate code enforcement, and efficient service delivery. Departments that invest in hiring, training, and retaining skilled inspectors may experience higher job satisfaction, improved compliance rates, and stronger relationships with developers and the public. During the 2024 Performance Strategy Session, municipal representatives emphasized that high turnover, understaffing, and inconsistent training are among the biggest challenges in building inspections. Departments with a low work-load per inspector, high certification rates, and effective leadership report being better equipped to maintain inspection quality and service reliability. Participants discussed the following indicators of a high-performing building inspections department that prioritizes exceptional staffing:

- Reasonable workload per inspector—departments distribute inspections, reviews, and administrative duties efficiently to maintain reasonable workloads
- Balanced workload
- Low turnover rates
- High percentage of staff acquiring standard Level III certifications—inspectors receive advanced training and certifications, ensuring technical expertise and consistency in inspections
- One hundred percent continuing education compliance—all certified inspectors fulfill annual continuing education requirements to stay updated on evolving building codes and regulations
- Effective leadership and communication

Strategies for Enhancing Workforce Skills and Staffing

Participants in the session focused on identifying both feasible and demanding strategies that building inspections departments could implement to improve staffing. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

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- **Valuing and Supporting Employees.** A work environment where employees feel respected, heard, and supported is created through competitive compensation, mentorship programs, and leadership engagement. Departments that prioritize employee well-being may experience higher retention rates, improved job satisfaction, and increased productivity.

- **Hiring and Retaining Qualified Inspectors.** Recruiting highly skilled inspectors and ensuring that they receive consistent, high-quality training to maintain inspection accuracy and code compliance is crucial for departments, as those with well-trained inspectors may experience fewer inspection errors, improved service consistency, and stronger public trust.

- **Offering Internship and Apprenticeship Programs.** Establishing internship and apprenticeship pipelines helps attract new talent into the profession, providing hands-on training and supporting professional growth. Departments that develop internal talent through structured apprenticeships are more likely to develop a steady pipeline of skilled inspectors, reducing long-term staffing shortages.

- **Training Inspectors Across Multiple Trades to Improve Efficiency.** Training inspectors in multiple trade disciplines allows them to conduct broader, more efficient inspections, reducing the need for multiple site visits. Multi-trade inspectors can help improve inspection efficiency, reduce project delays, and enhance workforce flexibility.

- **Increasing Matriculation Rates from Probationary to Standard Certification.** Developing structured training and mentorship programs is important to ensure that probationary inspectors successfully transition to fully certified Level III inspectors. A high matriculation rate can help new hires receive proper training, reducing knowledge gaps and improving inspection accuracy.

- **Scheduling Regular Planning and Inspections Department Meetings for Internal Knowledge-Building.** Establishing scheduled, department-wide planning meetings allows inspectors to share case studies, discuss process improvements, and collaborate on complex inspections. Encouraging peer-to-peer learning and knowledge-sharing improves consistency in inspections, helps reduce discrepancies, and fosters a culture of continuous learning. As these meetings are time intensive, they are difficult to implement in a short-staffed industry.

- **Training Inspectors Across Multiple Trades with Level III Certification in All Disciplines.** Expanding multi-trade certification requirements so that more inspectors achieve Level III expertise across multiple disciplines allows them to conduct

comprehensive inspections independently. Multi-trade inspectors can increase departmental flexibility, reduce scheduling bottlenecks, and improve overall inspection efficiency.

Summary

The 2024 Performance Strategy Session provided a valuable opportunity for building inspection professionals, municipal leaders, and industry stakeholders to evaluate and refine strategies aimed at improving efficiency, transparency, and service effectiveness. Key focus areas included customer service, staffing, safety, inspection scheduling, and community outreach. Participants highlighted practical short-term strategies, such as streamlined communication, digital permit tracking, and enhanced training, alongside long-term initiatives like competitive hiring practices, proactive code enforcement, and technology-driven scheduling improvements. Safety remained a priority, with an emphasis on fire-related death prevention, compliance enforcement, and ongoing inspector education. Strengthening community outreach through workshops and digital engagement tools was also identified as essential for increasing compliance and reducing inspection failures. While some improvements require policy changes and funding, municipalities can implement incremental enhancements to align with industry best practices. Moving forward, sustained collaboration, data-driven decision-making, and investment in innovation will be key to maintaining effective and responsive building inspections departments that meet the needs of growing communities.

FIGURE 2. STRATEGIES FOR A HIGH-PERFORMING BUILDING INSPECTIONS SERVICE

● Feasible Strategy | ■ Demanding Strategy

- ● Code Compliance & Public Training
- ● Continuing Education for Code Changes
- ● OSHA Safety Training
- ● Increased Access to Fire Prevention Measures
- ■ 100% Code Compliance in All Structures
- ■ Updated Building Code System
- ■ Community Education Programs

Building Safety

- ● Error-Free Plan Review Process
- ● Language Simplification for Customers
- ● Better Access to Information
- ● Annual Development & Contractor Work Sessions
- ■ Standardized Inspection Language
- ■ Real-Time Inspection Tracking

Excellent Customer Service

- ● Customer Education
- ● Expanding Staffing to Meet Demand
- ● Interdepartmental Communications Team
- ■ Statewide Information & Transparency Initiatives
- ■ State or Local Funding for Apprenticeship Programs
- ■ Partnerships with Colleges & Universities

Efficient Service Delivery

High-Performing Building Inspections Service

- ● Centralized Contact Database
- ● Collaborating with Community Development Staff
- ● Hosting Community Events
- ● Standardized Communication Protocols
- ● Enhanced Social Media & Website Resources
- ● Visual Guides & Infographics
- ■ Customer Service Specialist
- ■ Proactive Education Programs
- ■ Workshops & Training Sessions

Strong External Collaborations

- ● A Supportive Work Environment
- ● Recruiting Highly Skilled Inspectors
- ● Internship & Apprenticeship Programs
- ● Training Inspectors Across Multiple Trades
- ■ Structured Training & Mentorship Programs
- ■ Regular Department Meetings for Knowledge-Building
- ■ Expanded Multi-Trade Certification Requirements

A Skilled & Well-Staffed Workforce

SELECTED BUILDING INSPECTIONS BENCHMARKING PROJECT GRAPHS

GRAPH 1. Residential Plan Reviews per 1,000 Residents
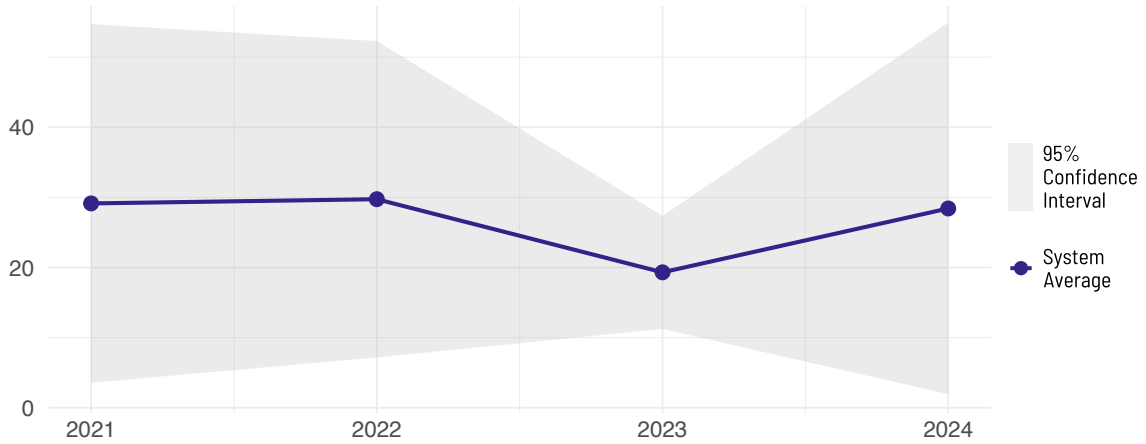
GRAPH 2. Commercial Plan Reviews per 1,000 Residents
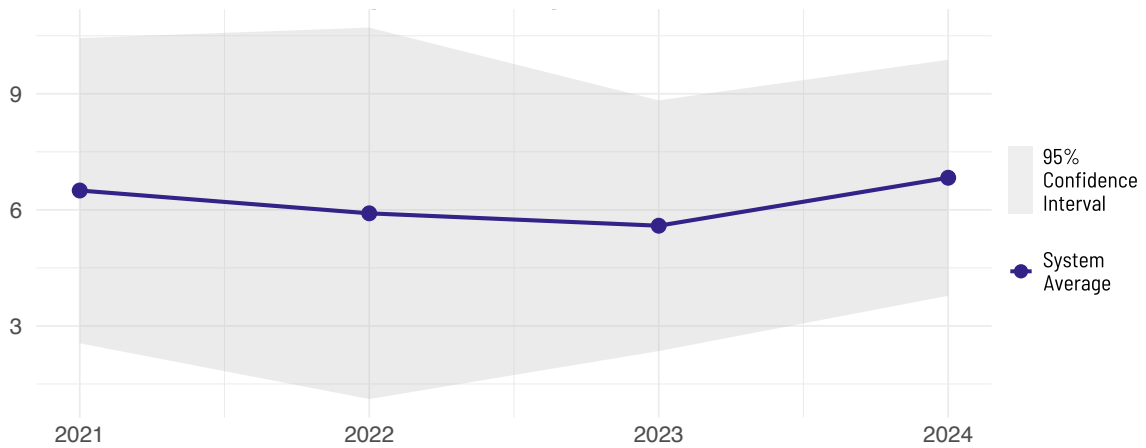
GRAPH 3. Permits Issued for New Residential Buildings per 1,000 Residents
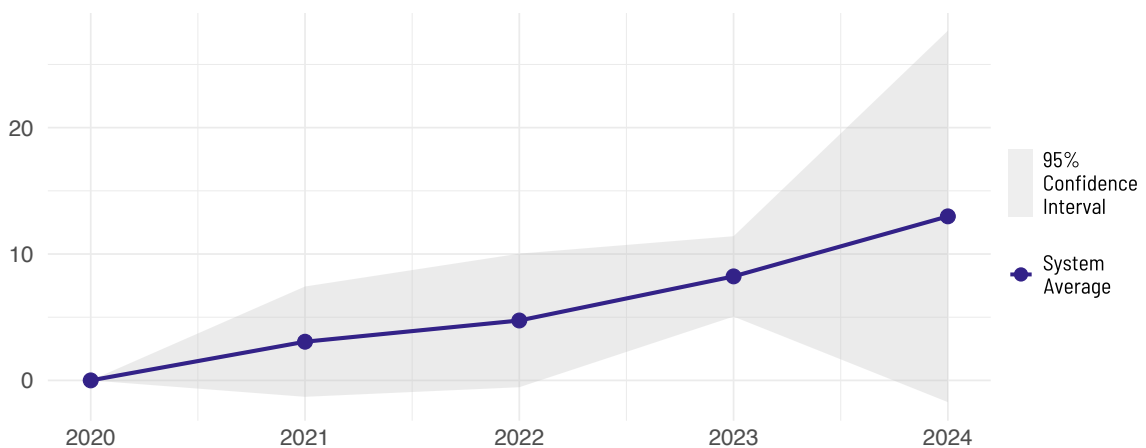
GRAPH 4. Residential Inspections Denied as a Percentage of Total Residential Inspections
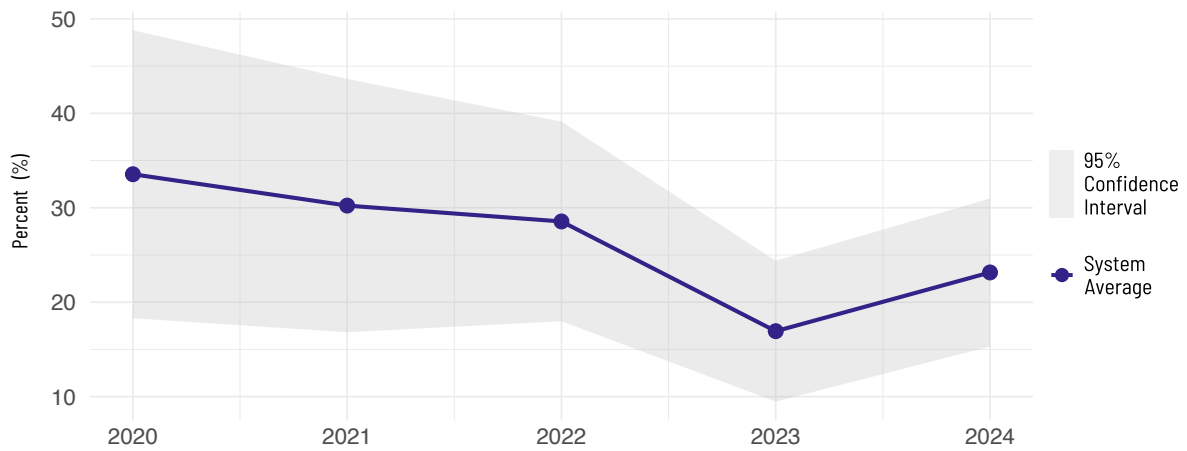
GRAPH 5. Total Building Inspections Full-Time Equivalents (FTEs) per Capita
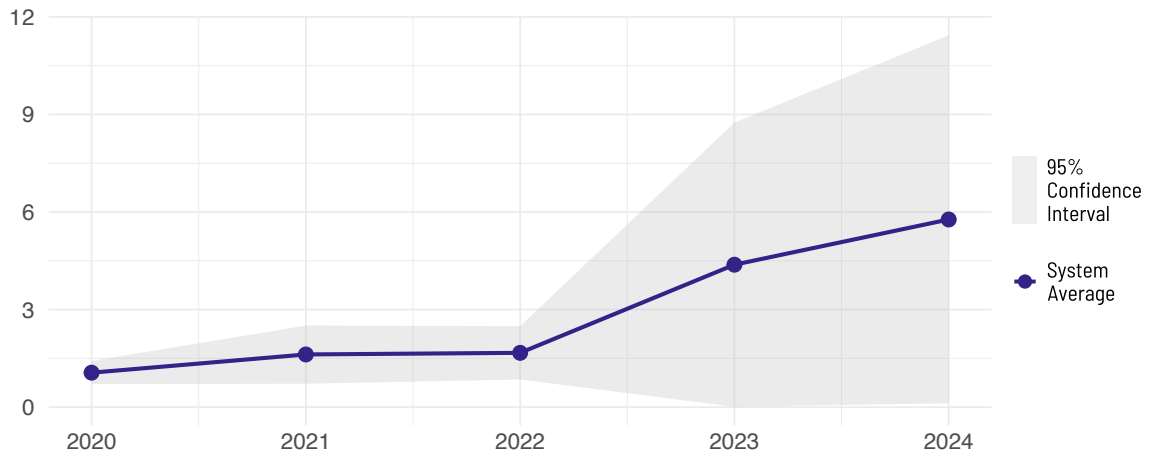
GRAPH 6. Total Expenses for Building Inspections Department per Capita
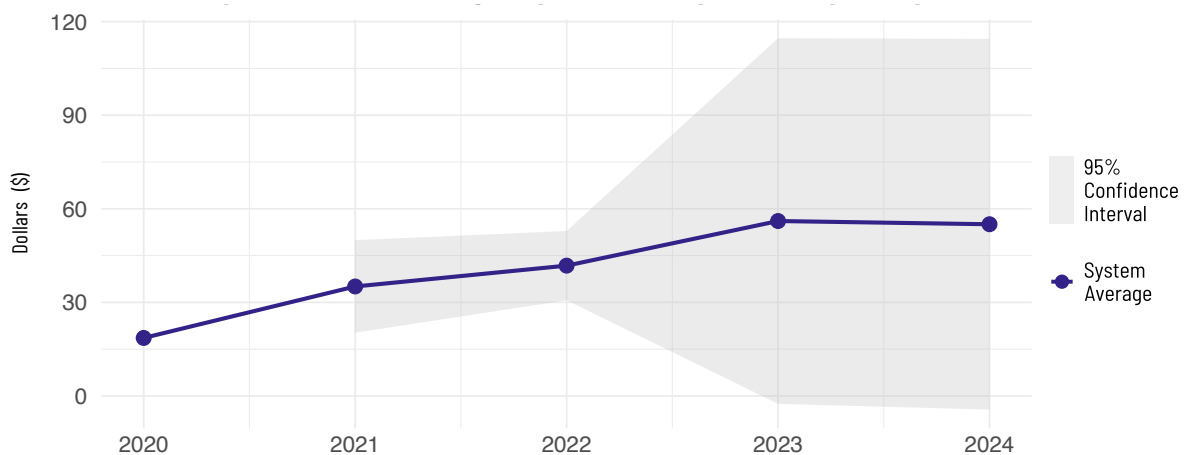
EMERGENCY COMMUNICATIONS

IN NOVEMBER 2024, EMERGENCY COMMUNICATIONS PROFESSIONALS from the Benchmarking 2.0 municipalities convened at the School of Government for the annual Performance Strategy Session to discuss strategies and define outcomes of a high-performing emergency communications system. Participants examined emerging trends, shared promising practices, and explored both short-term improvements and long-term innovations to strengthen emergency dispatch operations. The session emphasized data-driven decision-making, adaptability to evolving 911 technologies, and alignment with community expectations to ensure that emergency communication centers remain efficient, resilient, and responsive to public safety needs. The participants identified the following key characteristics of a high-performing emergency communications service:

- excellent call handling,
- quick response times,
- advanced 911 technology, and
- a resilient workforce.

Below, we discuss each of these characteristics.

Excellent Call Handling

A high-performing emergency communications department ensures that every 911 call is answered promptly, accurately processed, and effectively dispatched to the appropriate emergency services. Quality in emergency communications is measured not only by response efficiency but also by the accuracy of information provided to responders.

Strategies for Effective 911 Call Handling

Participants in the session focused on identifying both feasible and demanding strategies that emergency communications departments could implement to improve 911 call handling. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Implementing Regular Training Programs.** Continuous training can improve telecommunicator accuracy, confidence, and crisis-response skills. Departments that establish standardized onboarding programs, recurring refresher courses, and real-world scenario training may enhance call processing consistency and emergency response effectiveness.

- **Conducting Citizen-Satisfaction Surveys.** Gathering community feedback through post-call surveys and focus groups can help agencies identify service gaps and improve public perception of 911 services. Departments that analyze citizen complaints, response accuracy, and call experience ratings can proactively adjust protocols to address community concerns. During the Performance Strategy Session, some departments shared that they conduct community surveys throughout the year to gauge public satisfaction and ensure quality service, using the results to maintain accountability and address concerns.

- **Enhancing Internal Quality Audits.** Systematic call monitoring and quality assurance reviews can help agencies maintain high service standards. Supervisors can identify patterns of errors, gaps in service, and areas for improvement through structured evaluations. During the Performance Strategy Session, departments discussed how some supervisors conduct quality checks on telecommunicators' calls to ensure that service standards are met and to provide continuous improvement feedback for employees.

- **Integrating Telecommunicators into Public Safety Initiatives.** Encouraging emergency call takers to participate in police, fire, and EMS briefings can help to foster better coordination and recognition of telecommunicators as essential public safety personnel. Departments that engage telecommunicators in cross-agency training and decision-making reports can help improve call-handling and interdepartmental communication. During the Performance Strategy Session, some departments highlighted initiatives where telecommunicators participate in community events, such as National Night Out, to enhance public engagement and build trust.

- **Achieving High Employee Retention.** Retaining all telecommunicators after completing training helps ensure long-term workforce stability, reduce recruitment costs, and improve operational consistency. Departments that retain trained personnel can better

benefit from strong institutional knowledge, reduced hiring cycles, and higher morale, leading to improved response times and service quality. However, the high-stress nature of emergency communications leads to burnout, turnover, and difficulties in maintaining work-life balance. Competitive job markets and wage disparities between municipalities also make retention a persistent challenge.

- **Creating Advanced Crisis-Response Training Modules.** Expanding telecommunicator training to include simulations and real-time crisis drills can enhance decision-making skills and emergency preparedness. These advanced training methods would simulate high-stress emergency scenarios, improving call-taker confidence, speed, and accuracy in real-world crisis situations. However, advanced training requires additional capacity, dedicated training spaces, and time, making it resource-intensive and difficult to scale across all municipalities.

- **Developing Predictive Call-Handling Technologies.** Predictive analytics can anticipate call-volume surges, optimize staffing, and improve resource deployment based on historical data and real-time events. Predictive call handling may help departments allocate personnel more efficiently, reduce dispatcher fatigue, and improve emergency response times during peak call periods. However, effective predictive systems require extensive historical data and integration with computer-aided dispatch (CAD) systems. Departments also face budgetary constraints and technological compatibility issues when implementing such solutions.

Quick Response Times

Speed is vital in emergency communications, where every second impacts response outcomes. A high-performing emergency communications department ensures that 911 calls are answered immediately, processed accurately, and dispatched without delay to minimize response times. During the 2024 Performance Strategy Session, municipal representatives identified key performance outcomes for a high-functioning system, including quick call answer and dispatch times, responding to 911 calls within three telephone rings, a high ring-to-answer rate, low call-processing times, and minimal system downtime.

Strategies for Quick Response Times

Participants in the session focused on identifying both feasible and demanding strategies that emergency communications departments could implement to improve call response times. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Using RapidSOS.** RapidSOS technology enhances location accuracy by integrating real-time GPS data from mobile devices directly into the dispatch system. This tool helps telecommunicators quickly verify caller locations, reducing the time needed to confirm address details.

- **Optimizing Inbound Call Direct Routing.** It's essential that 911 calls are directed to the appropriate dispatcher without unnecessary transfers or delays, minimizing response time. Streamlined routing can reduce call congestion and ensure that emergency requests reach the correct agency as quickly as possible.

- **Reducing Non-Emergency Call Volume.** Many 911 calls involve non-emergency inquiries that could be handled through alternative channels, such as municipal helplines or non-emergency police lines. Public awareness campaigns play a crucial role in educating the community about when to call 911 versus a non-emergency number. During the Performance Strategy Session, participants highlighted municipal efforts that use social media and jurisdiction-wide communication strategies to promote non-emergency numbers and educate the public on appropriate 911 usage.

- **Incentivizing Speed and Accuracy.** Performance-based incentives may encourage call takers and dispatchers to maintain high efficiency without sacrificing accuracy or service quality. Departments that have introduced productivity bonuses tied to key performance metrics, such as low call-processing times and high accuracy rates, reported seeing improvements in overall response efficiency and staff motivation. However, implementing a performance-based pay system requires budgetary approvals and a structured evaluation process to ensure fairness and effectiveness.

- **Implementing Real-Time Crime Centers.** A real-time crime center (RTCC) integrates live surveillance feeds, crime databases, and emergency call data to assist dispatchers in providing first responders with enhanced situational awareness. By connecting emergency communications to real-time public safety data, RTCCs can help dispatchers make faster, data-informed decisions. However, setting up an RTCC requires significant investments in infrastructure, data-sharing agreements, and trained personnel, making it a long-term goal for most municipalities.

Advanced 911 Technology

A high-performing emergency communications department relies on advanced, reliable, and seamlessly integrated technology to ensure efficient call handling, accurate dispatching, and effective emergency response. Technology plays a critical role in minimizing response times, overcoming communication barriers, and supporting both internal operations and external service delivery.

Strategies for Optimizing 911 Technology

Participants in the session focused on identifying both feasible and demanding strategies that emergency communications departments could implement to improve advanced technology acquisition and use. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

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- **Implementing Proactive Protocols.** Establishing proactive technical monitoring and diagnostic protocols can help departments identify and resolve system vulnerabilities

before they cause major disruptions. Preventive maintenance can help to reduce CAD failures, communication blackouts, and software downtime, improving continuous service availability.

- **Ensuring Stable CAD Operations.** Maintaining real-time, fully functional CAD systems can help improve telecommunicators' ability to efficiently log, track, and dispatch emergency calls without technical failures. A stable CAD system improves dispatcher efficiency, reduces miscommunication risks, and enhances coordination between agencies. During the Performance Strategy Session, participants discussed CAD redundancy and concerns about system consolidation across multiple jurisdictions, emphasizing the need for reliable system access and effective vendor support.

- **Developing Backup Dispatch and Evacuation Plans.** Establishing off-site backup centers and mobile dispatch units helps to ensure that emergency communications can continue uninterrupted during system failures, cyber incidents, or facility evacuations. A well-prepared backup system can prevent service disruptions. One participant reported experiencing a cybersecurity breach that resulted in data loss, prompting a full CAD-system rebuild. Additionally, a department proposed funding for backup network infrastructure to ensure communication continuity in the event of fiber connection failures.

- **Creating Zero-Failure CAD Systems.** Building fully redundant, self-healing CAD architectures that prevent outages, slowdowns, or lost call data remains a long-term aspiration. This innovation would create a zero-downtime CAD environment, improving uninterrupted service even in cases of cyberattacks, hardware failures, or network outages. However, achieving 100 percent CAD uptime would require extensive IT infrastructure upgrades, multilayer redundancies, and significant financial investment.

- **Investing in Long-Term Technology.** Municipalities emphasized the importance of dedicated, multiyear budget allocations for continuous system upgrades, emerging technology adoption, and cybersecurity improvements. Stable funding helps agencies to upgrade software, replace outdated hardware, and invest in new emergency communication technologies. However, many municipalities face budget constraints and competing priorities, making it difficult to secure long-term technology funding without state or federal grants.

A Resilient Workforce

A high-performing emergency communications department fosters a positive work environment where telecommunicators feel valued, supported, and connected to the broader public safety system. A strong department culture is characterized by high morale, low turnover, teamwork, and mutual respect among staff and partner agencies. Given the high-stress nature of emergency dispatch, departments that prioritize employee well-being, professional development, and open communication are more likely to retain skilled personnel and sustain operational excellence. During the 2024 Performance Strategy Session, municipal representatives identified the following key indicators of a strong workplace culture in an emergency communications department:

- Camaraderie and collaboration across departments and divisions
- High employee satisfaction and retention
- Strong workplace morale and mental health support
- Positive community and leadership perception

Strategies for Building a Resilient Workforce

Participants in the session focused on identifying both feasible and demanding strategies that emergency communications departments could implement to improve workforce morale and well-being. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create more transformative improvements.

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- **Prioritizing Communication and Teamwork.** Conducting consistent, structured staff meetings can give employees the opportunity to discuss challenges, share feedback, and stay informed about departmental updates. Open communication promotes collaboration, reduces misunderstandings, and strengthens team cohesion. During the Performance Strategy Session, some participants noted that quarterly meetings are held with representatives from various levels and efforts are ongoing to include telecommunicators in decision-making discussions to ensure that their voices are heard.

- **Implementing Recognition and Inclusion Programs to Acknowledge Staff Contributions.** Ensuring that employees feel valued and appreciated through public recognition programs, performance awards, and peer acknowledgment initiatives can help workplace morale. Recognition may help telecommunicators feel like essential members of the public safety team, leading to greater engagement and motivation. During the Performance Strategy Session, multiple participants emphasized the importance of acknowledging telecommunicators by including them in department-wide communications and decision-making processes to foster a sense of inclusion and appreciation.

- **Providing Career Ladders for Professional Growth.** Creating structured pathways for advancement within emergency communications may encourage long-term retention and skill development. Career ladders provide clear promotional opportunities tied to additional training, certifications, and leadership roles, giving employees a sense of professional direction.

- **Offering Training and Professional Development.** Investing in comprehensive training programs can help employees feel more prepared, confident, and capable of handling high-pressure calls. Departments that implement ongoing professional development workshops, cross-training opportunities, and leadership courses may see improved employee competency and workplace satisfaction.

- **Using Exit Surveys to Identify Challenges.** When employees leave the department, structured exit interviews and surveys provide valuable insights into workplace conditions, morale, and areas for improvement. Agencies that systematically collect and analyze exit feedback can proactively address concerns related to scheduling, burnout, and organizational policies.

- **Expanding Mental Health Resources.** Providing comprehensive mental health support, including on-site counseling, peer support programs, and stress management training, can significantly reduce burnout and improve employee well-being. Agencies that have implemented mandatory wellness check-ins and department-wide mental health initiatives reported lower absenteeism and improved staff resilience. However, funding

constraints and staffing shortages make it difficult for many municipalities to offer dedicated mental health services on a large scale.

- **Offering Retention Pay Bonuses to Reduce Turnover.** Offering financial incentives, such as longevity pay, retention bonuses, and step-based salary increases, can help retain experienced call takers. Some jurisdictions have successfully introduced retention pay structures, rewarding employees based on years of service, leading to increased workforce stability. However, securing ongoing funding for retention-based incentives remains a challenge due to budget limitations and competing municipal priorities.

- **Securing Dedicated Funding for Career-Ladder Programs.** Long-term success in employee retention and job satisfaction requires sustainable funding for career-progression programs. While many departments recognize the benefits of structured career growth opportunities, financial constraints often limit their ability to expand training, certification incentives, and promotion pathways. Establishing dedicated municipal- or state-level funding sources could provide lasting support for workforce development.

- **Enhancing Compensation to Reflect Job Demands.** Competitive compensation is a crucial factor in retaining skilled telecommunicators. Departments that have adjusted pay scales to remain competitive with similar public safety roles have seen higher retention rates and increased job interest. However, salary adjustments often require legislative approval or extensive budget restructuring, making this a longer-term challenge.

- **Restructuring Shift Schedules to Improve Work-Life Balance.** Emergency communications operates 24/7, and demanding shift schedules contribute to fatigue, stress, and turnover. Implementing alternative shift models, flexible scheduling options, and increased paid time off could improve employee satisfaction and reduce burnout. While some agencies have successfully tested staggered shift options, full-scale adoption is often challenged by staffing shortages and operational demands.

Summary

The 2024 Performance Strategy Session underscored the critical role of emergency communications in ensuring public safety through rapid response times, workforce development, technological advancements, and a supportive work culture for telecommunicators. Key discussions focused on enhancing recruitment and retention, improving call-handling efficiency, integrating telecommunicators into broader public safety efforts, and strengthening technological resilience. While immediate strategies provide practical solutions, long-term success requires sustained investment in technology, workforce training, and interagency collaboration. As emergency communications centers face increasing demands, municipalities must balance short-term improvements with long-term innovations to maintain operational stability and public trust. By implementing these strategies, municipalities can improve their ability to build more resilient, responsive, and efficient emergency communications systems that enhance emergency response outcomes.

FIGURE 3. STRATEGIES FOR A HIGH-PERFORMING EMERGENCY COMMUNICATIONS SERVICE

● Feasible Strategy | ■ Demanding Strategy

● Regular Training Programs
● Citizen Satisfaction Surveys
● Internal Quality Audits
● Cross-Agency Training for Telecommunicators
■ Advanced Crisis-Response Training Modules
■ High Employee Retention
■ Predictive Call-Handling Technologies

Excellent Call Handling

● RapidSOS
● Inbound Call Direct Routing
● Reduced Non-Emergency Call Volume
■ Incentivized Speed & Accuracy
■ Real-Time Crime Centers

Quick Response Times

● Proactive Protocols
● Stable CAD Operations
● Backup Dispatch & Evacuation Plan
■ Zero-Failure CAD Systems
■ Long-Term Technology Investments

Advanced 911 Technology

● Communication & Teamwork
● Career Ladder for Professional Growth
● Staff Inclusion & Appreciation Programs
● Training & Professional Development
● Exit Surveys
■ Expanded Mental Health Resources
■ Retention Pay Bonuses
■ Flexible Shift Schedules
■ Funding for Career-Ladder Programs
■ Enhanced Compensation

A Resilient Workforce

High-Performing Emergency Communications Service

SELECTED EMERGENCY COMMUNICATIONS BENCHMARKING PROJECT GRAPHS

GRAPH 1. 911 Calls per Capita
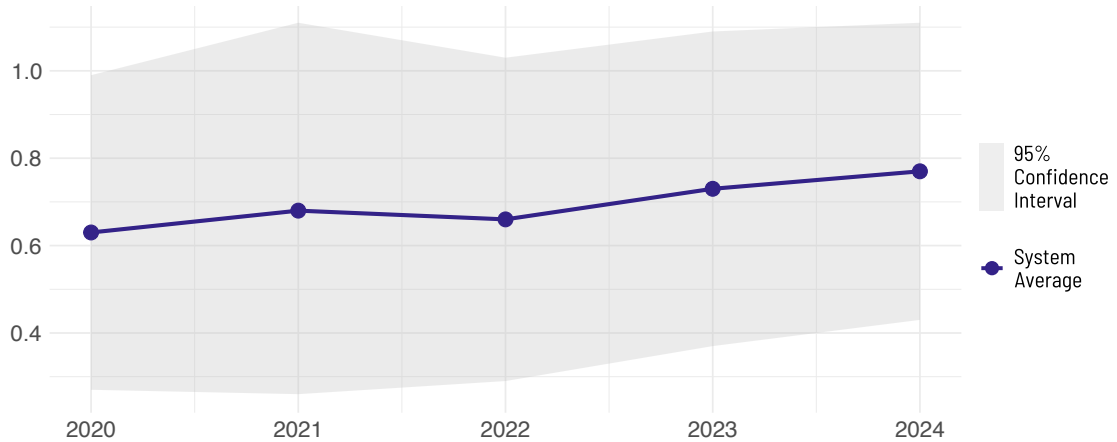
GRAPH 2. 911 Calls per Telecommunicator Full-Time Equivalent (FTE)
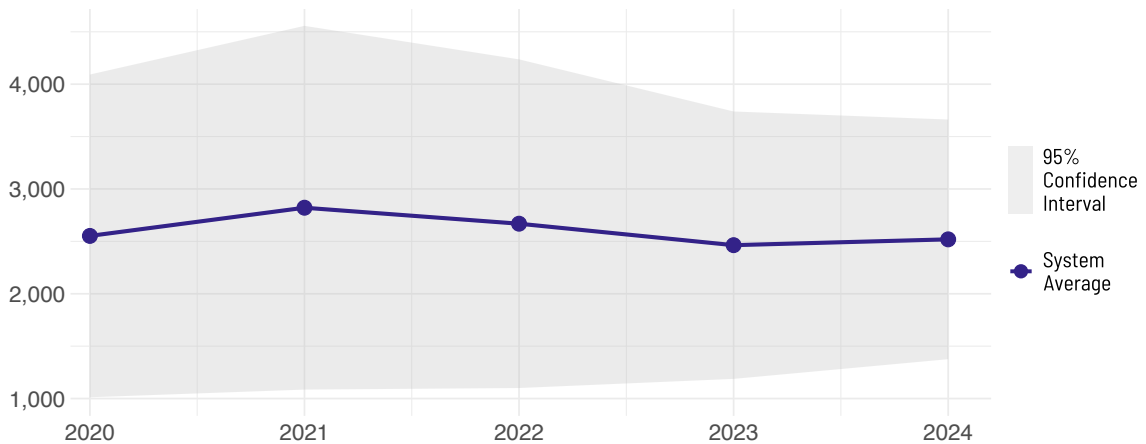
GRAPH 3. Personnel Expenses as a Percentage of Total Emergency Communications Expenses
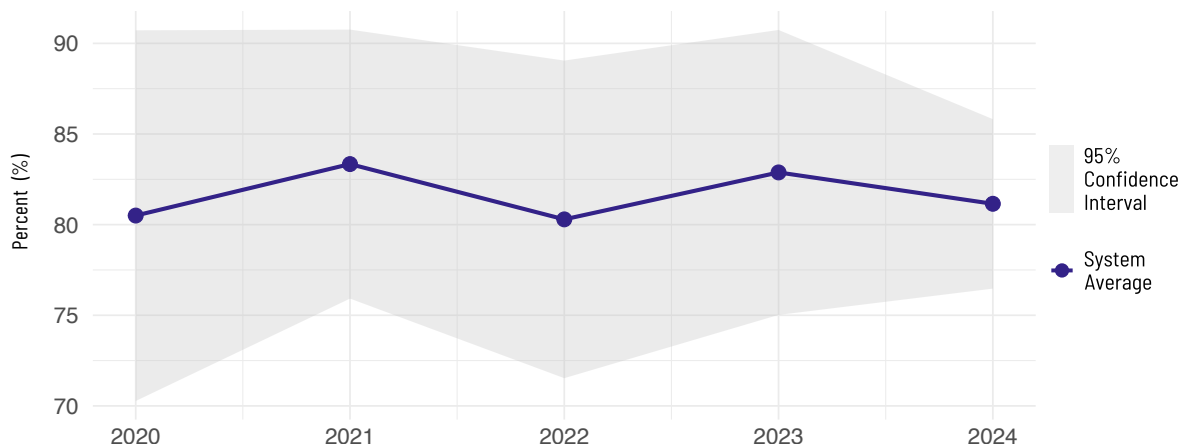
GRAPH 4. Expenses for Emergency Communications per Capita
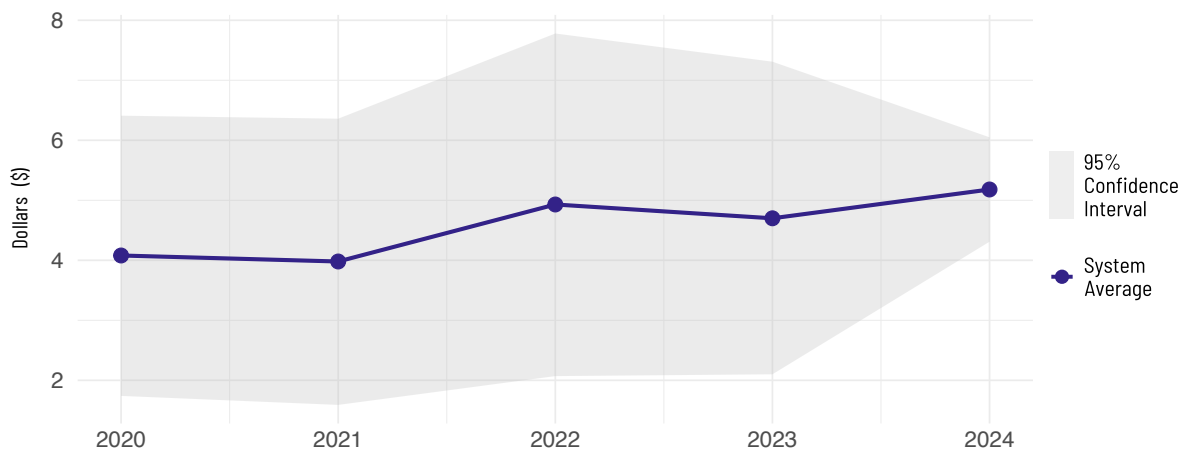
FIRE SERVICE

IN NOVEMBER 2024, FIRE SERVICE PROFESSIONALS from the Benchmarking 2.0 municipalities convened at the School of Government for the annual Performance Strategy Session to discuss strategies for improving operational efficiency, community risk reduction, and firefighter well-being. This collaborative session allowed municipal leaders, fire chiefs, and frontline responders to discuss promising practices, emerging risks, and data-driven decision-making in fire service management. The participants identified the following characteristics of a high-performing fire service:

- efficient and effective incident response,
- equipment readiness,
- community risk reduction, and
- professional standards.

We discuss each of these characteristics in detail below.

Efficient and Effective Incident Response

Incident response is the core function of a fire department, ensuring rapid, efficient, and effective emergency operations that minimize property damage, save lives, and mitigate risk. A high-performing fire department must meet strict response time benchmarks, contain fires before they spread, and successfully rescue victims in high-risk situations. During the 2024 Performance Strategy Session, fire service professionals discussed key challenges related to incident response, including turnout times, technical rescue proficiency, hazardous materials containment, and data-driven decision-making. Participants identified the following key indicators of a high-performing fire department's incident-response capabilities:

- Increased ability to contain fires to the room of origin, reducing property damage and preventing fire spread
- Higher rates of successful rescue and extrication of viable victims through rapid, life-saving interventions
- Reduced turnout and response times, ensuring quick deployment from dispatch to arrival on scene
- Improved environmental protection through effective containment of hazardous materials and fire-related pollutants
- Minimized damage spread after arrival, with departments limiting destruction to the smallest possible area
- Immediate initiation of suppression and rescue operations upon arrival, minimizing the zero impact period
- Enhanced patient outcomes through advanced life-saving techniques, such as Return of Spontaneous Circulation (ROSC) and Return of Spontaneous Respiration (ROSR)

Strategies for Strengthening Incident Response

Participants in the session focused on identifying both feasible and demanding strategies to improve incident response. Feasible strategies involve short-term, actionable improvements that can be implemented with existing resources, while demanding strategies represent long-term, transformative investments requiring policy changes or significant funding commitments.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Decreasing Water Application and Fire Time.** Reducing the time between initial water application and fire control helps ensure that suppression efforts are effective in containing fire spread and minimizing property loss. Departments that focus on water deployment efficiency, firefighter coordination, and hydrant accessibility reported experiencing faster suppression times, reduced structural damage, and improved life safety outcomes.

- **Prioritizing Specialized Technical Rescue Training to Meet IPRs.** Ensuring that firefighters receive specialized training in technical rescue operations (e.g., confined-space rescues, vehicle extrications, and high-angle rope rescues) helps enhance their ability to perform life-saving operations in complex incidents. Departments that prioritize technical rescue training and individual performance requirements (IPRs) reported improvements in their ability to execute rescues efficiently and increase survivability rates in hazardous environments.

- **Meeting or Exceeding National Fire Protection Association (NFPA) 1410 Response Time Standards.** Ensuring that fire department response teams consistently meet or exceed the NFPA 1410 guidelines (which define standards for fire-suppression crew deployment and operational readiness) improves incident-response efficiency. Departments that comply with the NFPA 1410 standard reported seeing faster response times, enhanced teamwork, and improved tactical execution during fireground operations.

- **Using Data to Advocate for Resource Allocation.** Presenting incident-response data, performance metrics, and operational needs to council and municipal leadership helps justify resource allocation, station expansions, and staffing increases. Fire departments that use data to advocate for funding and operational improvements may receive better support for new station locations, additional personnel, and modernized fleet investments.

- **Limiting Program Expansion.** It's important to ensure that fire departments only take on new programs, initiatives, and service expansions when they have the personnel and financial resources to support them. Departments that focus on core mission priorities and avoid spreading resources too thin can maintain higher response efficiency, greater firefighter readiness, and better service sustainability.

- **Updating Current Infrastructure.** Investing in modern fire stations, enhanced dispatch centers, and upgraded emergency response infrastructure ensures that fire departments can meet growing service demands and maintain operational readiness. Modernizing fire stations, dispatch technology, and fleet garages may improve firefighter response times, equipment reliability, and overall emergency preparedness.

- **Accelerating Equipment Deployment.** Improving load time efficiency by streamlining station layouts, optimizing fire truck designs, and pre-loading essential tools enhances firefighter response speed and effectiveness. Faster equipment deployment helps reduce turnout times and improve emergency-scene readiness.

Equipment Readiness

A fire department's operational effectiveness is directly tied to the quality and reliability of its equipment. A well-equipped and properly maintained fleet ensures that firefighters can respond to emergencies quickly, safely, and effectively. During the 2024 Performance Strategy Session, municipal fire service leaders highlighted the importance of modernizing fire apparatus, securing sustainable funding for long-term equipment investments, and improving fleet maintenance protocols. Participants identified the following key indicators of a high-performing fire department's equipment readiness:

- A well-equipped, modern fleet that ensures fire trucks, rescue vehicles, and support apparatus are fully operational and up to date

- Equipment and operational procedures that meets Class 1 ISO standards, supporting optimal fire-suppression capabilities, hydrant functionality, and timely response

Strategies for Improving Equipment Readiness

Participants in the session focused on identifying both feasible and demanding strategies to improve equipment readiness. Feasible strategies involve short-term, actionable improvements that can be implemented with existing resources, while demanding strategies

represent long-term, transformative investments requiring policy changes or significant funding commitments.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Recording Maintenance and Depreciation Costs.** Establishing structured maintenance logs and depreciation tracking allows fire departments to anticipate fleet-replacement needs, optimize budgets, and extend the lifespan of their apparatus. Departments that systematically track equipment wear, repair costs, and depreciation rates reported improved fleet reliability, reduced unexpected failures, and streamlined replacement planning.

- **Creating Apparatus Replacement Plans with Council Approval.** Developing pre-approved apparatus replacement schedules with council or budget office endorsement helps ensure that fire departments receive timely funding for fleet modernization and critical equipment upgrades. Pre-approved funding cycles help reduce delays in apparatus procurement, allow for bulk-purchasing discounts, and prevent unexpected budget shortfalls.

- **Developing Need-Based Equipment Plans.** Implementing data-driven fleet management strategies helps fire departments acquire and maintain apparatus suited to their specific emergency response needs rather than relying on outdated procurement models. Optimizing fleet purchases based on call volume, geographic coverage, and equipment usage trends helps prevent over-purchasing, maximize resource allocation, and improve response efficiency.

- **Securing Reserves for Equipment Investments.** Establishing dedicated financial reserves for fleet and equipment purchases helps ensure consistent investment in fire service readiness, even during economic downturns. Fire departments that maintain capital reserves for equipment investments can replace vehicles proactively, rather than waiting for emergency funding approval.

- **Maintaining the Fleet In-House.** Establishing in-house fire department mechanics trained in fire apparatus maintenance and repair helps reduce downtime and improves fleet reliability. Fire departments with dedicated mechanics often experience faster turnaround for vehicle servicing, fewer breakdowns, and improved compliance with NFPA maintenance standards.

Community Risk Reduction

Fire departments play a critical role in protecting lives and property not just through emergency response but also through proactive community risk reduction efforts. A high-performing fire department engages with residents, enforces fire codes, and implements fire prevention programs to mitigate risks before emergencies occur. During the 2024 Performance Strategy Session, fire service professionals emphasized that effective community risk reduction requires a shift from reactive firefighting to proactive prevention. Participants identified the following key indicators of a high-performing fire department's strategies for community risk reduction:

- Tailored fire prevention and response strategies that meet the specific needs of their communities, addressing local risks, demographics, and environmental factors

- Increased smoke detector coverage across residential properties, significantly reducing fire-related fatalities and property loss

- Active community outreach and education initiatives, including school programs, awareness campaigns, and public safety events

- Higher levels of citizen engagement in fire safety programs, emergency preparedness, and neighborhood risk reduction initiatives

- Consistent enforcement of fire codes and building regulations, ensuring hazards are identified and corrected through inspections and compliance efforts

Strategies for Enhancing Community Risk Reduction

Participants in the session focused on identifying both feasible and demanding strategies to improve equipment readiness. Feasible strategies involve short-term, actionable improvements that can be implemented with existing resources, while demanding strategies represent long-term, transformative investments requiring policy changes or significant funding commitments.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Educating and Inspiring.** Shifting from a penalty-based fire code enforcement model to an education-driven approach helps property owners, businesses, and residents understand fire risks and take proactive steps to mitigate them. Fire departments that prioritize education and outreach over punitive measures foster better relationships with the community, improve compliance rates, and increase overall fire safety awareness.

- **Utilizing New Technology.** Implementing advanced fire prevention tools, such as Geographic Information System (GIS) mapping, data analytics, and data-driven risk assessments, allows fire departments to identify high-risk properties and target prevention efforts more effectively. Departments that use analytics and digital tracking for fire inspections and outreach efforts reported seeing higher cost efficiency, improved risk identification, and better allocation of prevention resources.

- **Promoting Community Outreach.** Engaging in proactive fire prevention programs, public education initiatives, and community risk reduction efforts helps municipalities reduce fire hazards and improve public safety awareness. Fire departments that prioritize community outreach reported seeing a decrease in preventable fires, a higher adoption rate of residential smoke alarms, and stronger public trust in fire services.

- **Scheduling ISO Inspections.** Aligning fire inspection schedules with ISO risk evaluation criteria helps fire departments maintain high levels of service and improve their ISO ratings, which can lower insurance premiums for businesses and homeowners. Municipalities that integrate ISO standards into inspection schedules reported an improvement in their fire department effectiveness ratings, better funding opportunities, and enhanced public protection classifications.

- **Employing Dedicated Risk Reduction Educators.** Hiring fire prevention educators with expertise in public outreach, behavioral risk reduction, and emergency preparedness allows fire departments to develop specialized programs that effectively communicate fire safety messages to the community. Dedicated risk reduction educators help increase the effectiveness of public safety campaigns, enhance engagement with at-risk populations, and reduce fire incidents through behavioral change strategies.

- **Conducting Annual Inspections.** Increasing the frequency of fire inspections from biennial or triennial schedules to annual inspections helps enhance fire code compliance

and early detection of fire hazards. Fire departments that implement annual inspections can detect and correct fire risks earlier, leading to fewer structure fires, improved property safety, and higher overall compliance with fire codes.

Professional Standards

A high-performing fire department is built on clear professional standards, accountability, and continuous service improvement. During the 2024 Performance Strategy Session, fire service professionals emphasized that structured training programs, strong documentation practices, and ISO certification compliance are essential components of operational excellence. They also identified several key outcomes that define a high-performing fire department in terms of professional standards:

- Strong ISO certification ratings maintained by meeting rigorous benchmarks for training, equipment, and emergency response performance
- Consistent firefighter training and access to structured certification programs, supporting professional development and operational readiness
- Clear documentation of safety protocols, response procedures, and risk assessments, enhancing consistency, accountability, and overall department effectiveness

Strategies for Elevating Professional Standards

Participants in the session focused on identifying both feasible and demanding strategies that fire departments can implement to improve professional standards. Feasible strategies are immediate, actionable steps that departments can implement with existing resources, while demanding strategies require long-term investments and policy adjustments but have the potential to create transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Tracking Certifications.** Implementing a learning management system (LMS) or other digital tracking tools helps firefighters complete required certifications, training modules, and safety drills on time. Fire departments that use LMS platforms or structured databases for training reported improved compliance rates, reduced liability risks, and enhanced firefighter readiness. Standardized training tracking also helps municipalities maintain ISO ratings and accreditation requirements.

- **Documenting Safety Procedures.** Establishing clear, documented response protocols, equipment checklists, and safety procedures helps maintain consistency in fire suppression, rescues, and emergency operations. Fire departments that prioritize written documentation and enforce standard operating procedures (SOPs) reported improved firefighter safety, response efficiency, and liability protection. This also aids in continuous performance evaluation and accreditation compliance.

- **Establishing Minimum Standards for Equipment and Apparatus.** Maintaining a minimum standard for fire equipment and apparatus helps ensure that all personnel have functional, reliable, and up-to-date resources for emergency response. Standardizing equipment requirements across fire departments helps maintain consistent service quality, improves firefighter safety, and reduces response delays due to faulty or outdated apparatus.

■ **Expanding Fire Department Staffing.** Increasing firefighter staffing levels to align with ISO recommendations for response capacity, personnel per apparatus, and resource availability is essential. Adequate staffing helps improve response reliability, firefighter safety, and overall department effectiveness.

■ **Improving 911 Call Center Quality.** Enhancing coordination between fire departments and 911 call centers can improve emergency response accuracy, reduce call transfer delays, and optimize dispatching efficiency. Strengthening collaboration between fire departments and 911 call centers can lead to faster response times, more accurate information relay, and improved call triage for fire-related emergencies.

■ **Locating Stations Close to High-Risk Areas.** Strategically locating fire stations near high-risk zones (e.g., densely populated areas, industrial districts, wildfire-prone regions) improves emergency response coverage and minimizes travel time. Optimized station placement can reduce response times, enhance firefighter availability, and improve overall emergency outcomes.

Summary

Fire departments play a critical role in community safety, ensuring rapid emergency response, mitigating fire risks, and protecting lives and property. The 2024 Performance Strategy Session emphasized that fire service excellence is defined not only by emergency response capabilities but also by adherence to professional standards, operational efficiency, and proactive risk reduction efforts. Key discussions highlighted the importance of continuous benchmarking, strategic investments, and innovation to address evolving challenges and increasing service demands. By embracing data-driven decision-making, fostering interagency collaboration, and prioritizing firefighter well-being, municipalities can enhance operations, optimize resource allocation, and strengthen public trust. Implementing these strategies will help build more resilient fire services capable of meeting both current and future community needs.

FIGURE 4. STRATEGIES FOR A HIGH-PERFORMING FIRE SERVICE

● Feasible Strategy | ■ Demanding Strategy

- ● Decreased Water Application and Fire Time
- ● Technical Rescue Training & IPRs
- ● Improved Response Time Standards
- ■ Data for Resource Allocation
- ■ Updating Current Infrastructure
- ■ Faster Equipment Deployment
- ■ Limiting Program Expansion

Efficient & Effective Incident Response

- ● Maintenance & Depreciation Tracking
- ● Apparatus Replacement Plans
- ■ Need-Based Equipment Plans
- ■ Reserves for Equipment Investments
- ■ In-House Fleet Maintenance

Equipment Readiness

- ● Educate and Inspire
- ● Community Outreach
- ● Implementing New Technology
- ■ ISO Inspections Schedule
- ■ Dedicated Risk Reduction Educators
- ■ Annual Inspections

Community Risk Reduction

- ● Certifications Tracking
- ● Well-Documented Safety Procedures
- ● Minimum Standards for Equipment
- ■ Increased Staffing
- ■ Improved 911 Call Center Quality
- ■ Strategically Located Stations

Professional Standards

High-Performing Fire Service

SELECTED FIRE SERVICE BENCHMARKING PROJECT GRAPHS

GRAPH 1. Incidents per 1,000 Residents
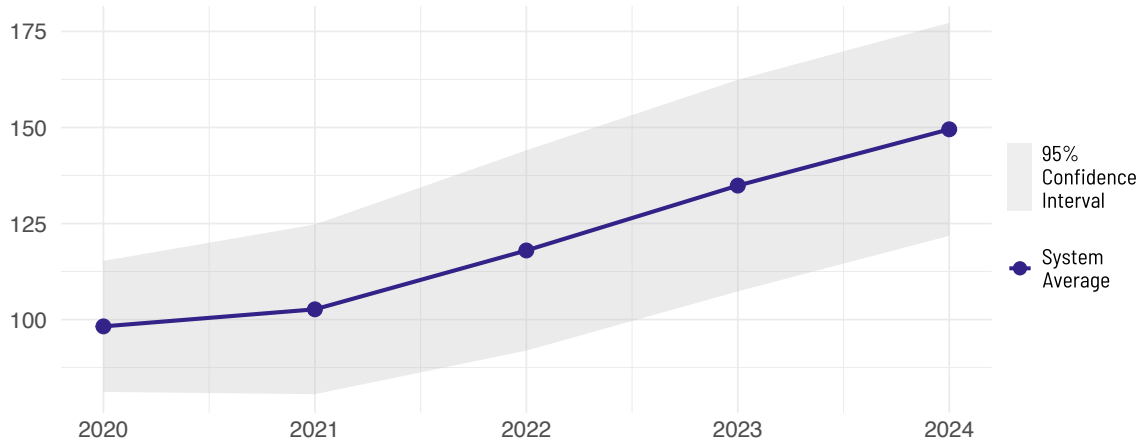
GRAPH 2. Incidents per Firefighter Full-Time Equivalent (FTE)
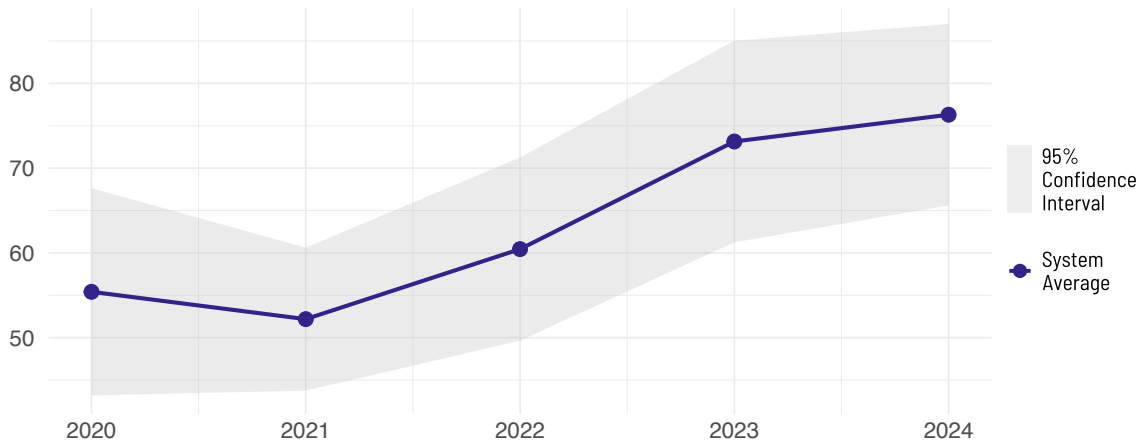
GRAPH 3. Total Expenses per Incident
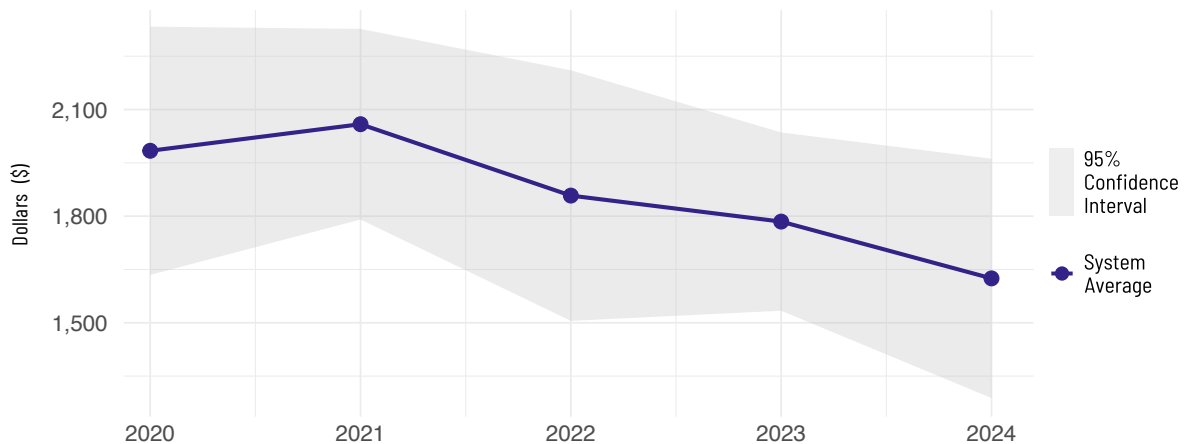
GRAPH 4. Fires per 1,000 Residents
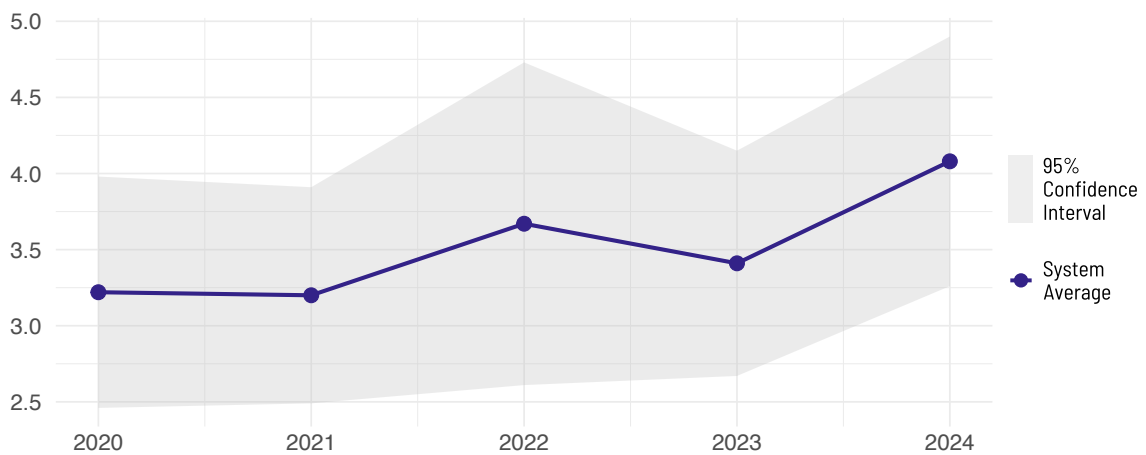
GRAPH 5. Civilian Injuries per 100 Fires
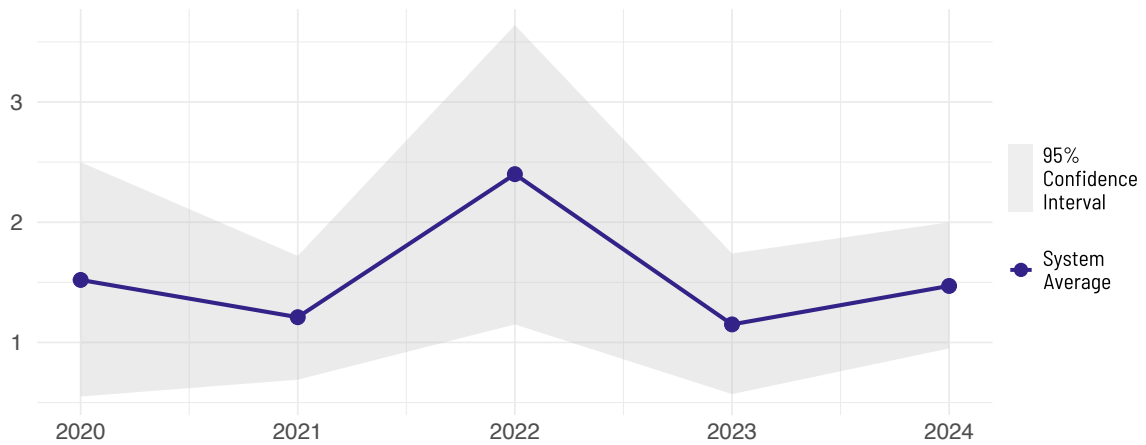
GRAPH 6. CPRs Administered per 1,000 Residents
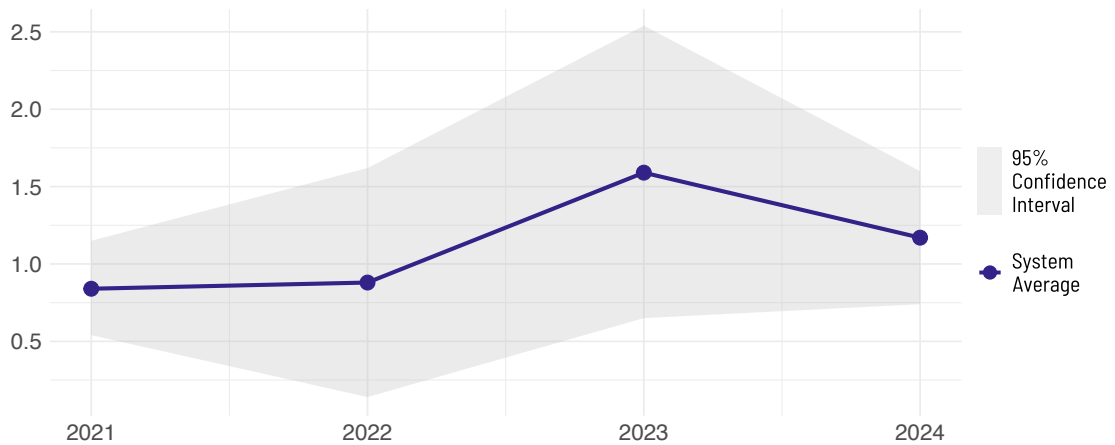
GRAPH 7. State-Mandated Inspections Completed as a Percentage of Inspections Due
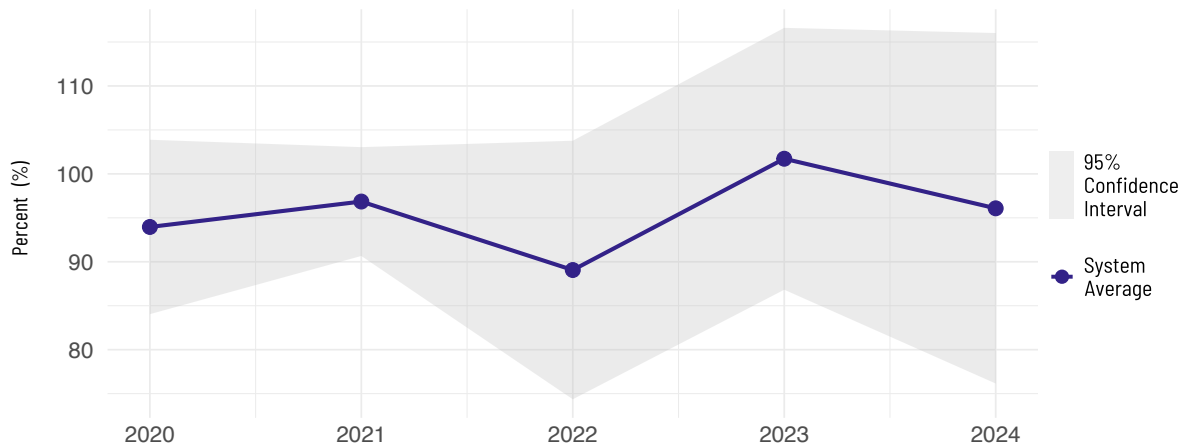
GRAPH 8. Amount Spent on Preventive Measures as a Percentage of Operational Expenses
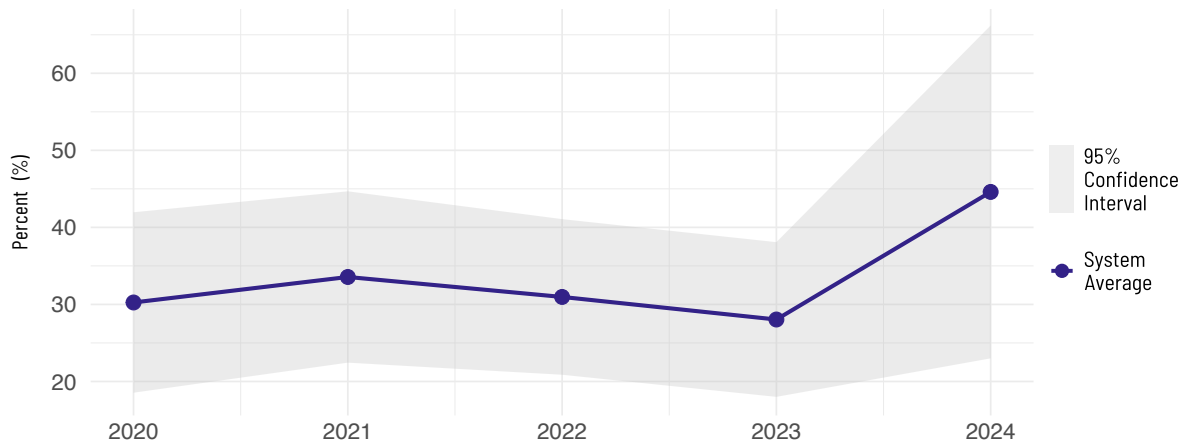
FLEET MAINTENANCE

IN NOVEMBER 2024, FLEET MAINTENANCE OFFICIALS from the Benchmarking 2.0 municipalities convened at the School of Government for the annual Performance Strategy Session to discuss strategies and define outcomes of a high-performing fleet maintenance department. This collaborative session focused on key challenges, including vehicle availability, cost management, team development, preventative maintenance, and technological advancements. Participants explored promising practices, shared successful approaches, and examined both immediate solutions and long-term strategies to optimize fleet performance. Participants identified the following key characteristics of an efficient fleet maintenance division:

- maximized vehicle availability,
- driver and passenger safety,
- cost-efficient operations,
- effective use of data, and
- a strong team.

Below, we discuss each of these characteristics.

Maximized Vehicle Availability

A high-performing fleet maintenance department ensures that municipal vehicles are readily available, reliable, and efficiently maintained to minimize downtime. Vehicle availability is essential for maintaining steady operations across public services, from emergency response teams to public works. During the 2024 Fleet Maintenance Performance Strategy Session, participants emphasized the need for proactive maintenance strategies, effective asset management, and timely vehicle replacements to sustain a dependable fleet. They identified the following indicators of a well-managed fleet department:

- Dependable fleet—vehicles remain operational and available for use, ensuring continuity in public services without unexpected delays
- Minimal downtime and quick turnaround—repairs are completed efficiently, reducing the time vehicles are out of service
- Reduced comebacks—vehicles are repaired correctly the first time, preventing repeated service visits for the same issue.

Strategies for Maximizing Vehicle Availability

The discussion of vehicle availability identified both feasible and demanding strategies that fleet maintenance departments can implement to reduce downtime, improve workflow efficiency, and ensure a dependable fleet. Feasible strategies are those that departments can adopt in the short term using existing maintenance schedules, staffing resources, and asset management tools. Demanding strategies, on the other hand, represent long-term, aspirational initiatives that require significant investment in fleet replacement, technology upgrades, and process optimization. While more challenging to implement, these demanding strategies have the potential to create transformative improvements in fleet reliability and operational readiness.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Implementing Routine Preventative Maintenance.** A structured preventative maintenance program helps reduce costly breakdowns by proactively addressing known failure points before they occur. Departments that implement predictive maintenance, where service intervals are adjusted based on historical failure patterns, reported seeing fewer breakdowns and lower long-term repair costs. However, balancing preventative maintenance with emergency repairs remains a challenge, especially for departments managing large fleets.

- **Employing Experienced, Well-Rounded Technicians.** Hiring and retaining highly skilled technicians helps ensure that vehicles receive timely and effective repairs, reducing downtime and improving fleet reliability. Tracking comeback rates—instances where vehicles return for the same issues—allows departments to evaluate repair effectiveness and adjust training accordingly. Providing structured career progression, such as tiered technician levels and merit-based performance incentives, can help retain talent and enhance overall service quality.

- **Implementing Software and Asset Management.** The use of fleet tracking software, such as Fleetio, Faster, or Manager Plus, allows departments to monitor vehicle health, schedule maintenance, and track repair history. However, outdated or incompatible systems create inefficiencies, preventing fleet managers from optimizing repair schedules

and making data-driven decisions. Upgrading to integrated systems with real-time data sharing can improve workflow and streamline repair processes.

- **Ensuring Sufficient Staffing Levels.** A well-staffed fleet department prevents service delays and backlogs, ensuring timely maintenance. Hiring shortages, particularly for technicians certified with a commercial driver's license (CDL), have led some municipalities to develop in-house training programs. Expanding apprenticeship programs and offering competitive pay can help attract and retain skilled personnel despite industry-wide labor shortages.

- **Promoting Interdepartmental Information-Sharing.** Enhancing communication between vehicle operators and maintenance teams helps reduce misdiagnosed service requests and unnecessary repairs. Standardized reporting protocols and pre-service inspections help improve service accuracy and ensure that technicians receive complete information before starting repairs.

- **Ensuring Timely Vehicle Replacement.** A structured vehicle replacement policy helps ensure that high-mileage, unreliable units are retired before they disrupt operations. Many municipalities use rolling replacement schedules, but funding constraints and supply chain delays—particularly for specialized vehicles like fire trucks—complicate planned replacements.

- **Ensuring Reliable Replacement Availability.** Ensuring that new vehicles are available when needed helps prevent operational delays. However, long lead times—especially for custom and emergency vehicles—create supply chain challenges that require departments to strategically adjust procurement timelines.

- **Bringing Work In-House.** Handling repairs in-house reduces reliance on costly third-party vendors. Many municipalities lack the staff, space, or equipment to perform all repairs internally, making external contracts a necessity for certain services. Conducting cost-benefit analyses on in-sourcing versus outsourcing can help optimize repair operations.

- **Providing Comprehensive Tools and Training.** Ensuring that advanced diagnostic tools and ongoing training are available means that technicians can handle complex repairs efficiently. Training programs require both financial investment and dedicated staff time, making it essential to balance skill development with daily operational demands.

- **Reducing Breakdowns.** While eliminating breakdowns entirely is not feasible, the strategic use of predictive maintenance and telematics (vehicle tracking) can significantly reduce unplanned failures. Establishing real-time monitoring systems allows departments to anticipate mechanical failures before they lead to costly disruptions.

Driver and Passenger Safety

Safety is a fundamental priority for high-performing fleet maintenance departments. Ensuring that municipal vehicles operate safely and reliably not only protects drivers and passengers but also minimizes liability and service disruptions. During the 2024 Fleet Maintenance Performance Strategy Session, participants emphasized the importance of driver safety education, preventative maintenance, and strategic vehicle replacement in reducing risks and improving overall fleet reliability.

Strategies for Enhancing Fleet Safety

The participants identified both feasible and demanding strategies that fleet maintenance departments can implement to improve vehicle reliability, reduce risks, and ensure driver and passenger safety. Feasible strategies are those that departments can adopt in the short term using existing resources, training programs, and maintenance protocols. Demanding strategies, on the other hand, represent long-term, aspirational initiatives that require significant investment in technology, infrastructure, or policy changes. While more challenging to implement, these demanding strategies have the potential to create transformative improvements in fleet safety and risk management.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Implementing a Capital Replacement Program.** Regularly replacing high-mileage or aging vehicles helps reduce the risk of mechanical failures. Participants emphasized that outdated vehicles often require frequent repairs, increasing costs and safety risks. The discussion highlighted that municipalities struggle to secure funding for vehicle replacements, as budgets prioritize community-facing projects over internal maintenance.

- **Providing Comprehensive Safety Training.** Ensuring that all fleet drivers and maintenance personnel receive ongoing safety training helps reinforce industry best practices in vehicle operation, emergency-situation handling, and pre-trip inspections. Departments that implement structured safety programs are likely to see a reduction in preventable accidents and improved compliance with safety regulations. In one municipality, every employee driving a municipal vehicle must complete a four-hour driver training course, followed by a refresher course every few years. This fleet department also incorporates telematics-based driver monitoring to improve compliance and reduce risky behaviors.

- **Using Preventative Maintenance Checklists.** Standardized inspection checklists for routine maintenance help fleet departments identify safety issues before they escalate. By requiring technicians and drivers to complete pre- and post-trip inspections, departments can catch early signs of wear and mechanical failure, reducing breakdowns and improving overall vehicle safety. The session confirmed that many municipalities implement detailed pre- and post-trip inspections. However, due to time constraints, technicians sometimes skip steps, leading to undetected issues.

- **Integrating Smart Technology (Telematics and Geotabs).** Implementing telematics systems provides real-time data on driver behavior, allowing departments to monitor and address unsafe practices such as harsh braking, excessive idling, and speeding. Adopting telematics comes with challenges, including high implementation costs, staff resistance to monitoring systems, and the need for data analysis expertise.

- **Establishing a CDL Training Program.** Having an in-house CDL training program helps municipalities ensure that drivers of large vehicles (e.g., dump trucks, utility vehicles) are properly trained in safety. While CDL training enhances safety and compliance, cost and logistical challenges—such as securing qualified trainers and obtaining state certification—can make implementation difficult.

Cost–Efficient Operations

A high-performing fleet maintenance department needs to effectively manage costs while ensuring that vehicles remain operational and safe. Municipal fleet budgets are often constrained, requiring careful forecasting, strategic planning, and efficient use of resources. During the 2024 Fleet Maintenance Performance Strategy Session, participants highlighted several key financial challenges, including supply chain issues, the rising costs of electric vehicle (EV) adoption, and the need for improved revenue forecasting.

Strategies for Cost–Efficient Operations

The discussion of cost optimization identified both feasible and demanding strategies that fleet maintenance departments can implement to improve budgeting, expense forecasting, and overall financial efficiency. Feasible strategies are those that departments can adopt in the short term using existing financial planning tools, policies, and operational efficiencies. Demanding strategies, on the other hand, represent long-term, aspirational initiatives that require significant investment, structural changes, or dedicated funding streams. While more challenging to implement, these demanding strategies have the potential to drive transformative improvements in cost management and financial sustainability.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Forecasting Expenses and Revenue Accurately.** Departments that analyze historical maintenance data, fuel costs, and replacement cycles can make more precise budget forecasts. Fleet managers use data from systems like Faster and PeopleSoft to track spending patterns and plan for future costs.

- **Implementing a Rolling Vehicle-Replacement Schedule.** A structured, long-term replacement schedule helps prevent sudden spikes in costs and can ensure that vehicles are retired before they become financial liabilities. Participants emphasized that aging vehicles require more frequent and costly repairs, increasing the need for proactive replacement planning.

- **Establishing Clear Policies.** Departments with clear policies on preventative maintenance, repair prioritization, and fleet utilization can better control costs and avoid unnecessary expenditures. Standardized maintenance procedures can ensure that vehicles receive timely servicing, reducing unexpected breakdowns and repair expenses.

- **Fulfilling Work Orders on Time.** Reducing work order backlogs helps prevent minor repairs from escalating into major, high-cost failures. Fleet departments that implement work order prioritization and ensure adequate staffing coverage can prevent inefficiencies and service delays.

- **Maintaining Strict Adherence to Replacement Schedules.** While many departments establish fleet-replacement plans, ensuring compliance with these schedules can be challenging due to budget constraints and shifting priorities. Municipal leaders sometimes delay vehicle replacements to reallocate funds elsewhere, increasing long-term costs as maintenance expenses rise for aging fleets.

- **Securing Dedicated Funding for Fleet Replacement.** One of the biggest financial challenges identified in the session was the lack of dedicated funding for fleet replacement, as funds are often broadly allocated across departments. Establishing a

separate, recurring budget line for vehicle replacements can help stabilize long-term costs and prevent reactive spending.

■ **Expanding Alternative Funding Mechanisms (Debt Financing and Grants).** Some municipalities explore debt financing options or state and federal grants to offset the costs of fleet replacement. However, grant funding often comes with strict usage requirements, such as mandating the retirement of diesel vehicles or restricting resale options for fleet assets.

Effective Use of Data

A modern fleet maintenance department tracks a vast array of information, from work order history and repair costs to fuel usage and lifecycle projections. However, simply collecting data is not enough; a department must analyze, interpret, and act on the insights it generates. During the 2024 Performance Strategy Session, municipal representatives identified key characteristics of effective data strategies used by high-quality fleet maintenance departments:

- Data-driven decision-making—high-performing departments actively use data to guide maintenance schedules, budget forecasting, and fleet-replacement planning, ensuring that decisions are based on analysis rather than assumptions

- Inventory confidence and asset tracking—maintaining accurate, real-time data on vehicle condition, usage, and availability allows for better resource allocation and prevents unnecessary expenditures

- Fiscal responsibility and cost management—departments that leverage data effectively can make informed financial decisions, ensuring that fleet operations remain within budget while maximizing the value of municipal funds

- Actionable data utilization—moving beyond simple data collection, successful fleet departments analyze patterns and trends to improve operational efficiency, optimize staffing, and prevent costly repairs

- Predictable and reliable performance—well-managed data enables departments to anticipate maintenance needs, minimize downtime, and achieve consistent, expected results in fleet operations

Strategies for Effective Data–Driven Management

Participants identified both feasible and demanding strategies that fleet maintenance departments can implement to enhance data collection, analysis, and utilization. Feasible strategies are those that departments can adopt in the short term using existing resources, policies, and technology. Demanding strategies, on the other hand, represent long-term, aspirational initiatives that require significant investment, system upgrades, or policy changes. While more challenging to implement, these demanding strategies have the potential to drive transformative improvements in fleet efficiency and decision-making.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- ● **Expanding Workforce Capacity.** Increasing the number of fleet maintenance personnel, including technicians and administrative staff, helps ensure that data is accurately recorded, analyzed, and utilized for decision-making. A well-staffed department can

better manage workloads, reduce backlogs, and dedicate resources to data-driven maintenance planning. One municipality with 400–500 fleet vehicles was operating with only three technicians, leading to significant workload challenges. Expanding the workforce could allow departments to manage preventative maintenance effectively, reducing unexpected vehicle downtime and improving service reliability.

- **Fostering Departmental Involvement and Accountability.** Ensuring that all team members contribute to data accuracy and utilization fosters a culture of informed decision-making. Participants emphasized that cross-departmental collaboration is critical for breaking down silos, as fleet data is often collected but not shared with finance, operations, or other departments that could benefit from it. By clearly defining data ownership and responsibilities, fleet departments can improve the accuracy and usefulness of collected data. One agency initiated cross-departmental meetings where department heads discussed key metrics and agreed on data-sharing protocols. This increased transparency ensured that critical fleet data was accessible and improved resource planning.

- **Developing Data Management Skills.** Providing ongoing training on fleet management software and data analytics equips staff with the knowledge needed to extract meaningful insights. Many municipalities rely on software like Faster, Fleetio, or PeopleSoft, but users often lack the skills to maximize these tools' potential. Encouraging staff to develop expertise in data interpretation allows departments to move beyond collection and into strategic application. One municipality implemented annual training sessions for its fleet staff on using telematics data and software for maintenance scheduling. This training helped supervisors better interpret vehicle performance metrics and optimize maintenance schedules, leading to fewer breakdowns and improved fleet efficiency.

- **Enhancing Data Sharing Between Departments.** Breaking down data silos between fleet maintenance, finance, and operations can improve scheduling, budgeting, and operational planning. One issue highlighted in the session was the lack of a standardized vehicle classification system, which prevents departments from effectively comparing data across different fleets. By creating uniform classifications and facilitating data access between departments, municipalities can enhance decision-making and fleet efficiency. Participants reported having siloed data that is independently managed by departments. One municipality found that fleet classifications were inconsistent across departments, making it difficult to compare vehicle performance and maintenance needs. To address this, they implemented a standardized classification system, which allowed fleet managers and finance teams to track vehicle costs more effectively and optimize asset utilization.

- **Implementing a Comprehensive Data-Collection System.** Investing in centralized fleet management software (e.g., Faster, Fleetio) can enhance tracking, analysis, and reporting capabilities. However, implementation is challenging due to software compatibility issues with existing systems, a lack of internal data expertise, and the high cost of new technology. Additionally, securing funding can be difficult, as many municipalities rely on grant opportunities with strict usage requirements, limiting flexibility in system selection.

- **Improving Technician Documentation Practices.** Ensuring that mechanics provide detailed, standardized notes on repairs helps departments analyze recurring issues and optimize maintenance schedules. However, many technicians lack the time for

thorough documentation due to heavy workloads, and outdated or cumbersome data-entry systems discourage consistent reporting. Without proper training and incentives, staff may resist change or revert to minimal note-taking, reducing the effectiveness of collected data.

A Strong Team

A high-performing fleet maintenance department depends on a skilled, motivated, and well-supported team to ensure the consistent upkeep of municipal vehicles. During the 2024 Fleet Maintenance Performance Strategy Session, participants emphasized the importance of career development, structured performance reviews, and aligning employee incentives with department goals. They also identified the following key aspects of a high-performing fleet maintenance department:

- Employee longevity and retention—reducing turnover by providing career growth opportunities and competitive compensation ensures a stable and experienced workforce
- Employee satisfaction and engagement—when employees feel supported through training, certification programs, and advancement opportunities, they are more engaged and productive
- Teamwork and collaboration—encouraging cross-departmental cooperation fosters a positive work environment and enhances overall efficiency
- Professional growth and development—offering structured training programs, certifications, and leadership pathways allows employees to advance in their careers

Strategies for Strengthening Fleet Maintenance Teams

The participants identified both feasible and demanding strategies that fleet maintenance departments can implement to improve workforce stability, professional development, and overall job satisfaction. Feasible strategies are those that departments can adopt in the short term using existing training programs, performance evaluations, and career advancement opportunities. Demanding strategies, on the other hand, represent long-term, aspirational initiatives that require significant investment in leadership development, structured career pathways, and staffing enhancements. While more challenging to implement, these demanding strategies have the potential to drive transformative improvements in employee retention, morale, and departmental efficiency.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Promoting Certification Opportunities.** Encouraging employees to pursue industry certifications (e.g., Automotive Service Excellence, or ASE, and Emergency Vehicle Technician, or EVT) and providing financial incentives motivates staff to enhance their skills. Some municipalities offer pay raises or bonuses for obtaining specialized certifications, which increases job satisfaction and professional expertise.
- **Establishing Technician Levels for Career Progression.** Having tiered technician levels (e.g., Apprentice, Journeyman, Master) provides clear career pathways for employees. Departments that implement structured progression models often see higher retention

rates, as technicians are more likely to stay in a role where they can advance and increase their earnings over time.

- **Offering Specialist and Supervisor Opportunities.** Creating hybrid positions where employees split time between technical work and administrative duties allows for leadership development while still maintaining hands-on involvement. Departments that provide supervisory training and mentorship programs help employees transition smoothly into leadership roles.

- **Developing a Comprehensive Career-Ladder Program.** A long-term career ladder that includes promotions, specialized roles, and leadership tracks provides employees with clear incentives to stay within the department. While some municipalities have implemented elements of this, a fully realized career pathway remains an aspirational goal due to funding and policy constraints.

- **Ensuring Full Staffing.** Maintaining sufficient staffing levels helps prevent burnout and ensures consistent coverage, which is crucial for long-term employee satisfaction. However, many departments face recruitment challenges due to budget limitations and competition from private-sector jobs.

- **Aligning Performance Reviews with Employee Motivation.** Structuring performance evaluations to focus on skill development, professional goals, and incentives rather than just productivity metrics can increase employee buy-in. However, achieving this requires a shift in department culture and leadership training.

Summary

The 2024 Fleet Maintenance Performance Strategy Session provided a collaborative forum for municipal fleet professionals to address challenges, share industry best practices, and develop strategies for optimizing fleet maintenance operations. Key discussions focused on data-driven decision-making, preventative maintenance, cost optimization, vehicle availability, and workforce development. Immediate improvements, such as enhancing preventative maintenance checklists, expanding technician training, and improving interdepartmental data sharing, can boost operational efficiency and reduce downtime. Long-term success, however, will require sustained investment in technology, policy adjustments, and leadership support to achieve aspirational goals like zero percent vehicle breakdowns and career-ladder programs for technicians. By balancing short-term improvements with strategic planning, municipalities can build more resilient, cost-effective, and high-performing fleet maintenance operations that support essential services.

FIGURE 5. STRATEGIES FOR A HIGH-PERFORMING FLEET MAINTENANCE SERVICE

● **Feasible Strategy** | ■ **Demanding Strategy**

- ● Routine Preventative Maintenance
- ● Experienced, Well-Rounded Technicians
- ● Sufficient Staffing Levels
- ● Software & Asset Management
- ■ Comprehensive Tools & Training
- ■ Real-Time Monitoring Systems
- ■ Interdepartmental Information-Sharing
- ■ Timely Vehicle Replacement
- ■ Reliable Replacement Vehicles
- ■ In-Sourcing

Maximized Vehicle Availability

- ● Capital Replacement Program
- ● Comprehensive Safety Training
- ● Preventative Maintenance Checklists
- ■ Smart Technology (Telematics & Geotabs)
- ■ CDL Training Program

Driver & Passenger Safety

- ● Clear Policies
- ● Timely Work Order Fulfillment
- ● Rolling Vehicle-Replacement Schedule
- ● Accurate Expenses & Revenue Forecasting
- ■ Strict Replacement Schedules
- ■ Funding for Fleet Replacement
- ■ Alternative Funding Mechanisms

Cost-Efficient Operations

High-Performing Fleet Maintenance Service

- ● Expanded Workforce Capacity
- ● Data Management Training
- ● Departmental Involvement & Accountability
- ● Data-Sharing Between Departments
- ■ Comprehensive Data-Collection System
- ■ Technician Documentation Practices

Effective Use of Data

- ● Certification Opportunities
- ● Technician Levels for Career Progression
- ● Specialist and Supervisor Opportunities
- ■ Comprehensive Career-Ladder Program
- ■ Staffing for Full Coverage
- ■ Performance Reviews for Employee Motivation

A Strong Team

HUMAN RESOURCES

IN NOVEMBER 2024, HUMAN RESOURCES (HR) PROFESSIONALS from the Benchmarking 2.0 municipalities gathered at the School of Government for the annual Performance Strategy Session to discuss strategies and define outcomes of high-performing HR departments. The discussion highlighted data-driven decision-making, employee engagement, and strategic workforce planning as essential components for ensuring that municipal HR departments remain competitive, inclusive, and effective. Participants shared emerging trends, promising practices, and immediate and long-term solutions to enhance HR functions, including innovative approaches to employee retention, recruitment strategies for building a diverse talent pipeline, and policy frameworks that foster a positive workplace culture.

The participants identified the following characteristics of a high-performing human resources department:

- a resilient and engaged workforce,
- healthy and happy employees,
- robust employee appraisals, and
- effective and accessible policies.

We discuss each of these characteristics in detail below.

A Resilient and Engaged Workforce

A high-performing HR department is essential to creating a stable, motivated, and productive municipal workforce. The participants emphasized that a well-managed workforce is one that attracts top talent, maintains low vacancy rates, and offers clear career growth opportunities. Beyond simply filling positions, effective workforce strategies ensure that employees feel valued, supported, and engaged in their roles.

Strategies for Boosting Employee Resilience and Engagement

Participants identified both feasible and demanding strategies that HR departments can implement to enhance recruitment, retention, and overall workforce stability. Feasible strategies are those that can be readily adopted in the short term using existing resources, policies, and funding. Demanding strategies, on the other hand, represent long-term, aspirational initiatives that require significant investment, structural adjustments, or policy changes. While more challenging to implement, these demanding strategies have the potential to create lasting, transformative improvements in workforce engagement and stability.

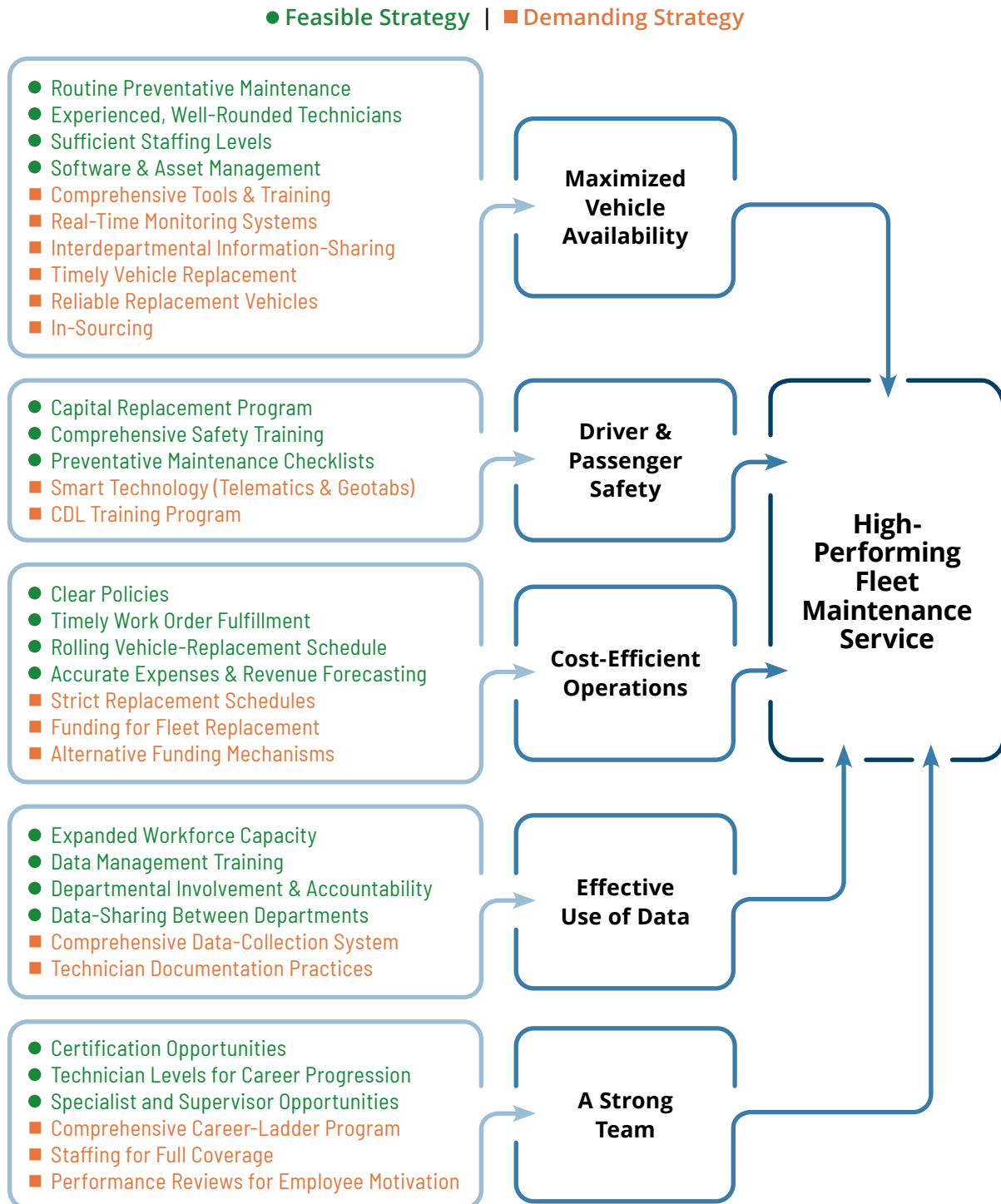Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Conducting Stay Interviews.** Regular stay interviews help HR professionals understand what keeps employees engaged and what factors may lead to turnover. By identifying concerns before they escalate, departments can proactively address workplace issues and improve retention efforts. One municipality reported implementing stay interviews to better understand employee retention and gain insights into job satisfaction within the organization.

- **Hosting Employee Appreciation Events.** Recognizing employees through appreciation events—such as team celebrations,

FIGURE 6. HUMAN RESOURCES PROCESS DIAGRAM

Human Resource Planning

Compensation & Classification

Find Talent

Recruit

Select

Onboarding

Engagement

Performance Appraisals

Learning Management

Career Planning

Evaluation

Talent Retention

Offboarding
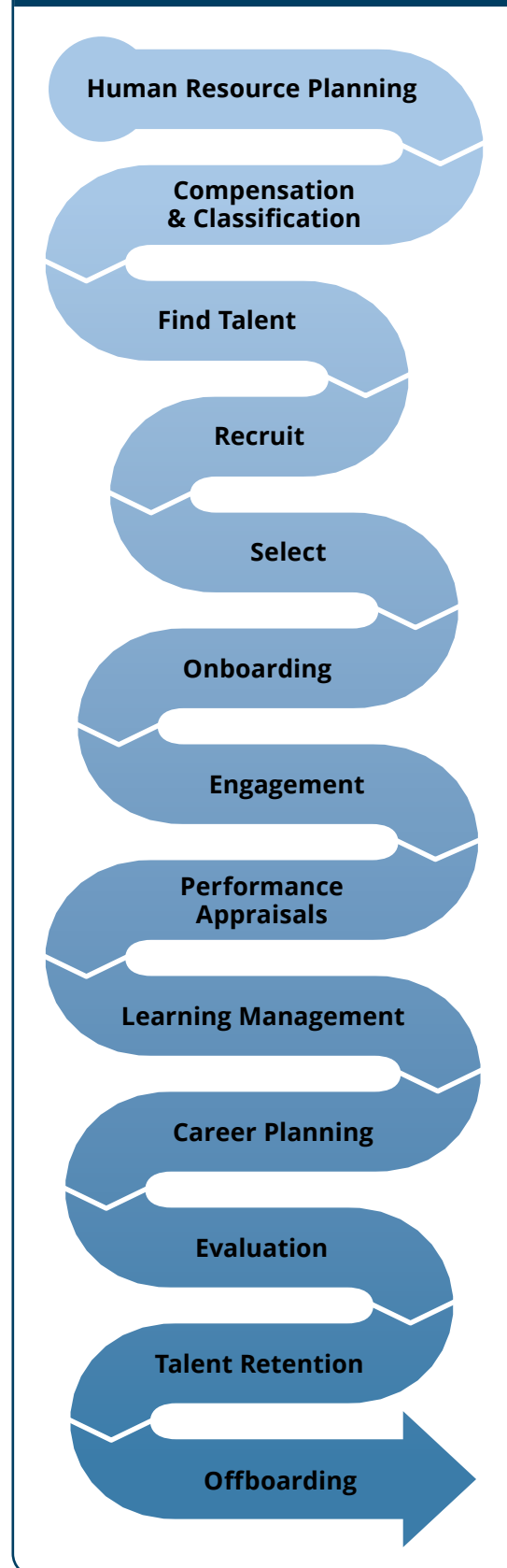
service recognition, or department-wide gatherings—fosters a sense of belonging and motivation. Organizations that host regular appreciation events report stronger employee engagement.

- **Creating Shared Interest Groups.** Establishing employee resource groups and shared interest groups provides employees with a sense of community and connection. These groups create opportunities for mentorship, peer support, and cross-departmental engagement. Participants offered success stories of shared interest groups for employees, noting that the groups provide a sense of belonging within the workplace, especially for new hires and underrepresented employees.

- **Conducting Employee Satisfaction and Engagement Surveys.** Conducting regular engagement surveys allows HR departments to gather feedback on workplace satisfaction, identify areas for improvement, and implement changes that positively impact morale and retention.

- **Offering Mentorship Programs.** Formal mentorship programs help employees navigate career development opportunities and build professional relationships. Many municipalities have successfully launched mentorship initiatives to support new hires, underrepresented employees, and those pursuing leadership roles.

- **Establishing One-on-One Employee–Supervisor Meetings.** Frequent and structured one-on-one meetings between employees and supervisors create opportunities for feedback, career guidance, and professional development discussions. When implemented effectively, these meetings can strengthen workplace relationships and support employee growth. According to participants, managers within their organizations often see more engagement from employees when one-on-one meetings are held. One HR professional said, "Employees want to be heard."

- **Offering Attractive Benefits Packages.** A competitive benefits package—including health insurance, retirement plans, paid leave, and flexible work arrangements—plays a crucial role in recruiting and retaining top talent. Organizations that tailor benefits to employee needs report higher retention rates.

- **Investing in Professional Development Training.** Continuous learning opportunities, including skills training, leadership programs, and tuition assistance, helps enhance employee engagement and career satisfaction. Departments that provide robust training opportunities reported seeing improved retention and internal mobility.

- **Performing Consistent Compensation Studies.** Conducting regular compensation studies helps ensure that salaries remain competitive with market trends. Municipalities that perform compensation benchmarking and pay equity reviews are better positioned to attract and retain skilled employees. Compensation studies require funding and expertise, which may not be feasible for smaller municipalities with limited HR resources. Additionally, salary adjustments based on study findings may not always be possible due to budget constraints and collective bargaining agreements.

- **Developing Job-Shadowing Opportunities.** Job-shadowing allows employees to gain insight into different roles within the organization. This exposure fosters career development and internal mobility, reducing turnover by offering employees new growth opportunities. Smaller municipalities with limited staffing, however, may struggle to provide job-shadowing experiences without disrupting daily operations. Additionally, creating structured job-shadowing programs requires coordination between departments, which can be challenging when workloads are already high.

- **Fostering In-Depth Organizational Understanding.** Providing employees with deeper exposure to the organization's operations—through rotational assignments, leadership briefings, and interdepartmental collaborations—helps them see long-term career possibilities within the organization. While this strategy improves retention and engagement, municipalities with rigid staffing structures may find it difficult to implement. Employees in essential service roles may not have the flexibility to rotate into different departments without impacting operational efficiency.

- **Conducting Manager Reviews.** Evaluating and gathering feedback on managerial effectiveness helps ensure that leaders are fostering a positive work environment. Departments that implement structured manager reviews report stronger employee satisfaction and retention. However, some municipalities may lack the infrastructure to conduct manager reviews consistently or may face resistance from leadership.

- **Providing Manager Training.** Equipping managers with leadership, communication, and conflict-resolution training helps enhance their ability to support employees effectively. Organizations that prioritize manager training see reduced turnover and improved team performance. However, funding and scheduling challenges can make it difficult for municipalities to implement regular training programs. Many local governments have limited professional development budgets, and pulling managers away from daily responsibilities for training sessions can disrupt operations.

- **Encouraging Employee Resource Groups.** Supporting the formation of employee resource groups (ERGs) strengthens workplace inclusivity and provides a platform for diverse employees to voice concerns, share experiences, and build professional networks. While ERGs can foster a sense of belonging, they require organizational support, including dedicated time, leadership buy-in, and sometimes funding for activities. Smaller municipalities with lean HR departments may lack the capacity to facilitate and sustain ERG initiatives effectively.

Healthy and Happy Employees

A high-performing HR department recognizes that employee well-being is a key factor in workplace satisfaction, productivity, and long-term retention. Participants in the 2024 HR Performance Strategy Session emphasized that mental, physical, and financial wellness programs play a critical role in maintaining a motivated and engaged workforce.

Strategies for Enhancing Employee Well–Being

Participants identified both feasible and demanding strategies that human resources departments can implement to support a healthy, engaged, and productive workforce. Feasible strategies are those that can be immediately adopted using existing resources and programs to enhance employee wellness, mental health support, and work-life balance. Demanding strategies require long-term investment, policy changes, or organizational restructuring to expand comprehensive well-being initiatives and benefits offerings. While more difficult to implement, these demanding strategies have the potential to significantly improve employee satisfaction, reduce burnout, and foster a workplace culture that prioritizes overall well-being.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Hosting Wellness Wednesdays and Health Fairs.** Encouraging employees to prioritize their health through weekly wellness activities and annual health fairs can improve physical and mental well-being. Programs that promote preventative care, stress reduction, and fitness challenges help employees build healthier habits. Some municipalities have implemented Wellness Wednesdays, allowing employees to take scheduled wellness breaks, which have been positively received as a way to boost employee engagement and productivity.

- **Offering Employee Assistance Programs (EAPs).** Confidential, employer-sponsored counseling and financial coaching services help ensure that employees have access to the support they need. EAPs provide assistance with stress management, personal finance planning, and mental health counseling, helping to create a supportive workplace culture. One municipality highlighted how its EAP program offers online and phone-based support, making it easy for employees to access services when needed.

- **Allowing Flexible Work Arrangements.** Implementing hybrid work options, compressed schedules, and flex-time policies helps support work-life balance while maintaining organizational efficiency. Several municipalities have piloted flexible work schedules, such as four ten-hour workdays, which have been well received by employees and have boosted morale. While not all municipal roles can accommodate remote work, providing flexibility when possible can improve morale and reduce burnout.

- **Providing On-Site Health and Wellness Clinics.** On-site health services, including preventative care, flu shots, and mental health check-ins, help employees access healthcare more easily, reducing long-term health risks. One municipality has successfully provided mobile medical services through a partnership with a local healthcare provider, offering screenings and wellness checks at employment centers.

- **Offering Childcare and Eldercare Assistance.** Childcare stipends, on-site daycare services, or eldercare resources help employees balance work and family responsibilities. However, these programs require significant investment and operational planning.

- **Creating Trauma-Informed Workplaces.** Offering mental health support programs designed to help employees cope with workplace stress, grief, or traumatic experiences helps foster a more resilient workforce. However, municipalities often lack the dedicated mental health professionals needed to run trauma support programs effectively.

- **Offering Homebuyer Assistance and Housing Stipends.** Supporting employees with financial assistance for purchasing homes within the municipality helps attract and retain talent while promoting community investment. However, funding and legal restrictions often limit a municipality's ability to offer direct housing incentives.

Robust Employee Appraisals

A high-performing HR department ensures that employees are engaged, productive, and supported by a transparent, goal-oriented employee appraisal system. Participants in the 2024 Performance Strategy Session emphasized that effective employee appraisals are built on clear policies, consistent evaluations, and data-driven decision-making. By aligning employee goals with organizational priorities and providing meaningful feedback, departments can foster accountability, professional growth, and overall workplace satisfaction.

Strategies for Building a Robust Employee Appraisal System

Participants identified both feasible and demanding strategies that human resources departments can implement to enhance organizational performance, employee accountability, and professional growth. Feasible strategies are those that can be implemented in the short term using existing resources, policies, and infrastructure. Demanding strategies represent long-term initiatives that require significant investment, policy reforms, or technological advancements. While more complex to implement, these demanding strategies have the potential to fundamentally improve performance evaluation systems, employee development, and overall workforce effectiveness.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Regularly Updating Appraisal Policies.** Regularly reviewing and updating appraisal policies helps ensure that evaluations remain relevant, fair, and aligned with organizational goals. Participants emphasized the importance of structured policy reviews every two years to incorporate evolving industry best practices, legal requirements, and employee feedback. Scheduled policy updates also help ensure that managers apply evaluations consistently and fairly, preventing outdated standards from impacting employee performance assessments. One organization implemented a biennial review cycle, which improved clarity in expectations and increased employee trust in the evaluation process.

- **Implementing a User-Friendly Performance Appraisal Tool.** A performance appraisal system should be easy to use for both employees and managers, minimizing administrative burden while improving compliance. Participants stressed the need for a tool that streamlines the evaluation process, making it less time-consuming and more intuitive. A well-designed review system should include clear rating criteria, automated reminders, and accessible digital interfaces to encourage consistent usage. One municipality implemented a simplified digital review system, leading to increased manager participation and more timely completion of performance evaluations.

- **Ensuring Bottom-Up and Top-Down Feedback.** Two-way feedback between employees and leadership helps foster a culture of transparency, accountability, and continuous improvement. Participants emphasized that appraisals should not be a one-sided process but rather an ongoing dialogue where employees feel empowered to share feedback with supervisors. Some departments have successfully implemented structured feedback loops, including anonymous reporting options, to capture employee perspectives and drive organizational improvements. One municipality integrated an anonymous feedback system alongside traditional evaluations, which improved communication between staff and leadership.

- **Connecting Performance Reviews to Career Growth.** Employees should see a clear link between their evaluations and their professional growth. Effective performance appraisals support career progression through training opportunities, promotions, and succession planning. One municipality utilizes performance evaluations in their pay and promotion decisions, providing a transparent path to growth within the organization.

- **Integrating Performance Reviews with Strategic Planning.** Aligning performance reviews with the organization's strategic plan helps ensure that employees' work contributes to broader goals. Participants emphasized that performance appraisals should not exist in isolation but should instead support long-term workforce

development and organizational priorities. By linking individual employee objectives to departmental and jurisdiction-wide strategic initiatives, organizations can create a more purpose-driven workforce. One HR team revised their evaluation process to include goal-setting aligned with the strategic plan, leading to greater employee engagement and clarity in performance expectations.

- **Strengthening Policy Adherence.** Ensuring that managers enforce policies consistently and fairly helps build trust in the evaluation process. This requires cultural shifts and additional training for supervisors. Municipalities may struggle with enforcement if leadership lacks buy-in or if there is no established mechanism for holding managers accountable. Additionally, changing organizational culture takes time, and resistance from long-standing employees can make it difficult to implement uniform policy adherence.

- **Ensuring Equitable Appraisals.** A key stretch goal is addressing bias in evaluations to ensure all employees are assessed fairly. Some organizations are exploring standardized criteria and calibration meetings to enhance fairness. However, implementing these measures requires dedicated HR resources, training, and time-intensive review processes that may not be feasible for municipalities with limited staff. Additionally, resistance from managers accustomed to more traditional evaluation methods may slow adoption.

- **Recognizing and Rewarding High Performance.** Providing tangible rewards, such as bonuses or public recognition, may encourage employees to strive for excellence. Some municipalities have introduced performance-based incentives to retain top talent. Budget and capacity constraints often make it difficult to offer structured reward systems. Without proper funding or clear performance metrics, recognition programs may be inconsistently applied, leading to employee frustration.

- **Helping Employees Find the Right Role.** Departments should actively assist employees in identifying roles that align with their strengths and aspirations. This approach can include job rotation programs and individualized development plans. However, smaller municipalities may struggle to offer meaningful career transitions due to limited job openings or rigid staffing structures.

Effective and Accessible Policies

A high-performing HR department ensures that policies are efficient, practical, and free from ambiguity. Participants in the 2024 HR Performance Strategy Session emphasized that well-structured policies help guide organizational actions, maintain compliance, and enhance the employee experience rather than create bureaucratic obstacles. Clear, enforceable, and easily accessible policies ensure consistency across departments while allowing for necessary flexibility to accommodate employees' diverse needs.

Strategies for Effective Policy Management

Participants identified both feasible and demanding strategies that HR departments can implement to create clear, effective, and accessible workplace policies. Feasible strategies are those that can be readily implemented using existing resources and governance structures to improve policy clarity, consistency, and enforcement. Demanding strategies require broader organizational buy-in, legislative adjustments, or significant financial investment to enhance policy accessibility, adaptability, and compliance monitoring. While more challenging

to execute, these demanding strategies have the potential to streamline HR policies, reduce ambiguity, and ensure consistent application across all departments.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Making Policies Accessible.** Storing all policies in a central, easily accessible digital platform helps ensure that employees can find the information they need without confusion. Participants emphasized the importance of having a designated location, such as Microsoft Teams or an internal HR portal, where employees know to look for policies. A structured system prevents employees from searching through outdated documents or relying on verbal interpretations of policies, which can lead to inconsistencies.

- **Using Consistent Naming Conventions.** Standardizing policy names helps employees and managers locate and reference policies efficiently. Participants discussed the challenge of employees struggling to find the right policies due to inconsistent or unclear naming structures. By ensuring that policies follow a logical, standardized format, HR departments can improve accessibility and reduce misunderstandings.

- **Scheduling Policy Reviews.** Regular policy reviews help keep HR guidelines current and aligned with organizational goals. Participants emphasized the importance of scheduled updates to address legislative changes, evolving workplace needs, and feedback from employees and supervisors. A structured review process, occurring every one to two years, allows HR teams to refine policies, clarify ambiguous language, and improve enforcement.

- **Having Flexible Policies.** Participants highlighted the importance of policies that allow for flexibility while maintaining fairness and consistency. Rigid, one-size-fits-all policies may fail to account for unique employee circumstances, leading to frustration and disengagement. Allowing discretion in policy enforcement—while providing clear guidelines—helps ensure that managers can address individual situations effectively without compromising organizational integrity.

- **Making Policies Clearly Enforceable.** Policies must be written in a way that makes enforcement straightforward while ensuring fairness in application. Participants noted that unclear or overly complex policies make it difficult for managers to uphold standards, leading to inconsistent enforcement. Clearly defined expectations and consequences help ensure that all employees are treated equitably. One organization found that by rewriting policies in plain, unambiguous language, managers were able to apply rules more consistently, reducing workplace disputes.

- **Scheduling Policy Training.** Providing ongoing training sessions helps ensure that employees understand HR policies and expectations. Participants stressed the importance of educating personnel on policy changes, particularly when updates are made in response to legal or organizational shifts. Regular training helps build awareness and empowers employees to make informed decisions about workplace behavior. One municipality implemented quarterly policy training sessions, improving overall understanding and reducing misinterpretations across the organization.

- **Providing How-To Guidelines.** Developing clear implementation guides helps ensure that policies are applied consistently across departments. Participants noted that while policies outline broad principles, employees and managers often require additional step-by-step instructions. How-to guides provide practical scenarios and detailed instructions, helping supervisors make informed decisions without ambiguity.

- **Offering Targeted Policy Training for Managers.** Ensuring that managers receive structured, role-specific training on policy implementation helps improve consistency across departments. Supervisors play a crucial role in enforcing policies, but without adequate preparation, interpretations can vary widely. Providing annual refresher courses helps align managers' understanding of policies, reinforces consistent application, and ensures that enforcement remains fair and uniform. One organization established a mandatory annual policy training program for managers, which resulted in fewer policy-related disputes and increased confidence in decision-making.

- **Building Organizational Buy-In for Policies.** Gaining support from leadership and employees is critical to ensuring that policies are respected, consistently followed, and integrated into workplace culture. Without buy-in, policies may be viewed as bureaucratic obstacles rather than tools for maintaining efficiency and fairness. However, achieving buy-in requires extensive communication, engagement efforts, and ongoing education, which can be resource-intensive.

- **Securing Support from Management and Elected Officials.** Gaining support from management and elected officials can help ensure that policies are well-funded, properly enforced, and integrated into broader strategic plans. However, competing priorities, political considerations, and leadership turnover often delay or derail HR policy initiatives. Additionally, policies that require financial investment—such as changes to pay structures, benefits, or remote work policies—may face resistance due to budget constraints or public scrutiny.

- **Avoiding "What About Me?" Issues.** Some policies, such as flexible work arrangements or remote work, may benefit only certain employee groups, creating a sense of inequity among those whose roles require in-person presence, such as police officers or sanitation workers. To prevent resentment, municipalities must communicate policy decisions transparently and explore alternative benefits for those ineligible for certain policies. However, finding equitable solutions can be complex, and employees may continue to perceive the policy distribution as unfair. Additionally, attempts to standardize benefits across all roles may be impractical due to operational requirements, further complicating implementation.

- **Establishing Specific Training for First-Time Managers.** Training programs for first-time managers help ensure that they understand how to enforce policies effectively, communicate expectations clearly, and support employees fairly. Without structured training, new managers may struggle with leadership responsibilities, leading to inconsistent policy enforcement and employee dissatisfaction. However, creating and sustaining such programs requires significant resources, including curriculum development, trainers, and funding.

Summary

The 2024 HR Performance Strategy Session provided municipal HR leaders with a platform to assess workforce challenges and develop strategies for improving recruitment, retention, performance management, policy development, and employee well-being. Key discussions emphasized competitive compensation, career progression pathways, and engagement initiatives to attract and retain talent, along with transparent evaluations and professional development opportunities. Participants highlighted that clear and consistently enforced HR

policies are essential for compliance, equity, and accountability. Employee well-being emerged as a priority, with mental health resources, workplace flexibility, and holistic wellness programs identified as critical to maintaining a motivated workforce. Balancing financial constraints with investments in employee incentives, training, and leadership development was also a central theme. As workforce expectations evolve, municipalities must implement both immediate improvements and long-term innovations to enhance organizational effectiveness. By fostering collaboration, leveraging data-driven decision-making, and adopting industry best practices, HR departments can build resilient, inclusive, and high-performing municipal workforces that effectively serve their communities.

FIGURE 7. STRATEGIES FOR A HIGH-PERFORMING HUMAN RESOURCES SERVICE

● Feasible Strategy | ■ Demanding Strategy

- ● One-on-One Employee Meetings
- ● Stay Interviews
- ● Employee Satisfaction & Engagement Surveys
- ● Shared Interest Groups
- ● Professional Development Training
- ● Mentorship Programs
- ● Employee Appreciation Events
- ● Attractive Benefits Packages
- ■ In-Depth Organizational Exposure
- ■ Manager Training
- ■ Consistent Compensation Studies
- ■ Job-Shadowing Opportunities
- ■ Employee Resource Groups
- ■ Manager Reviews

A Resilient & Engaged Workforce

- ● On-Site Health & Wellness Clinics
- ● Flexible Work Arrangements
- ● Employee Assistance Programs (EAPs)
- ● Wellness Wednesdays & Health Fairs
- ■ Trauma-Informed Workplaces
- ■ Childcare & Eldercare Assistance
- ■ Homebuyer Assistance & Housing Stipends

Healthy & Happy Employees

High-Performing Human Resources Service

- ● Appraisals Support Career Development
- ● User-Friendly Performance Appraisal Tool
- ● Regularly Updated Appraisal Policies
- ● Bottom-Up & Top-Down Feedback
- ● Integrate Appraisals with Strategic Planning
- ■ Equitable Appraisals
- ■ Recognize & Reward High Performance
- ■ Strengthen Policy Adherence
- ■ Help Employees Find the Right Role

Robust Employee Appraisals

- ● Accessible Policies
- ● Consistent Naming Conventions
- ● Scheduled Policy Reviews
- ● Flexible Policies
- ● Clearly Enforceable Policies
- ● Scheduled Policy Training
- ● How-To Guides
- ● Targeted Training for Managers
- ■ Organizational Buy-In for Policies
- ■ Training for First-Time Managers
- ■ Avoiding "What About Me?" Issues
- ■ Support from Management & Elected Officials

Effective & Accessible Policies

SELECTED HUMAN RESOURCES BENCHMARKING PROJECT GRAPHS

GRAPH 1. Full-Time Recruitments as a Percentage of Full-Time Positions
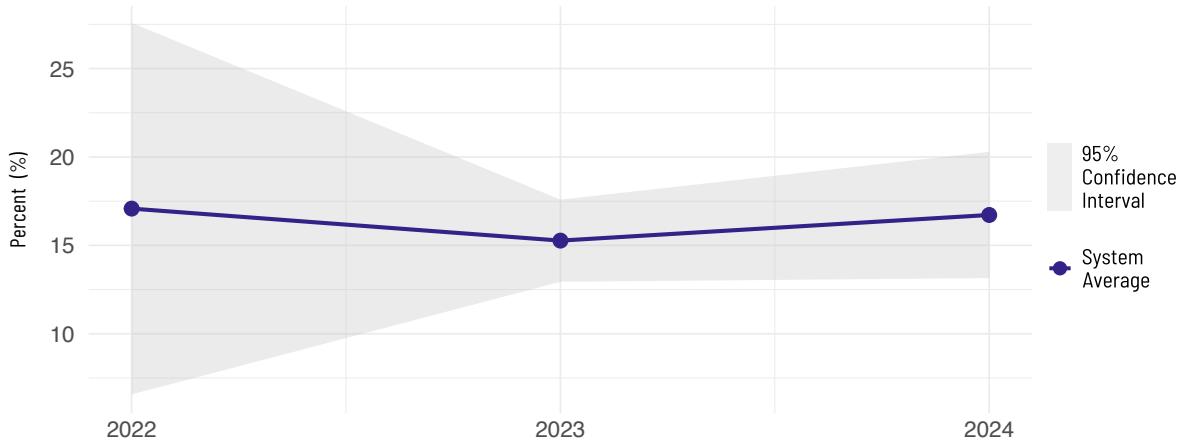
GRAPH 2. Full-Time Employee Separations as a Percentage of Full-Time Positions
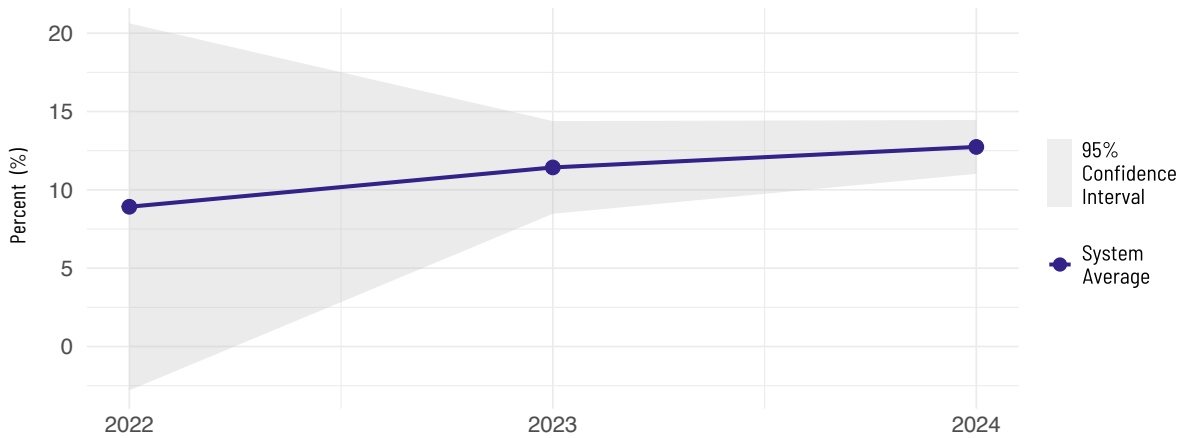
GRAPH 3. Full-Time Retirements as a Percentage of Voluntary Full-Time Separations
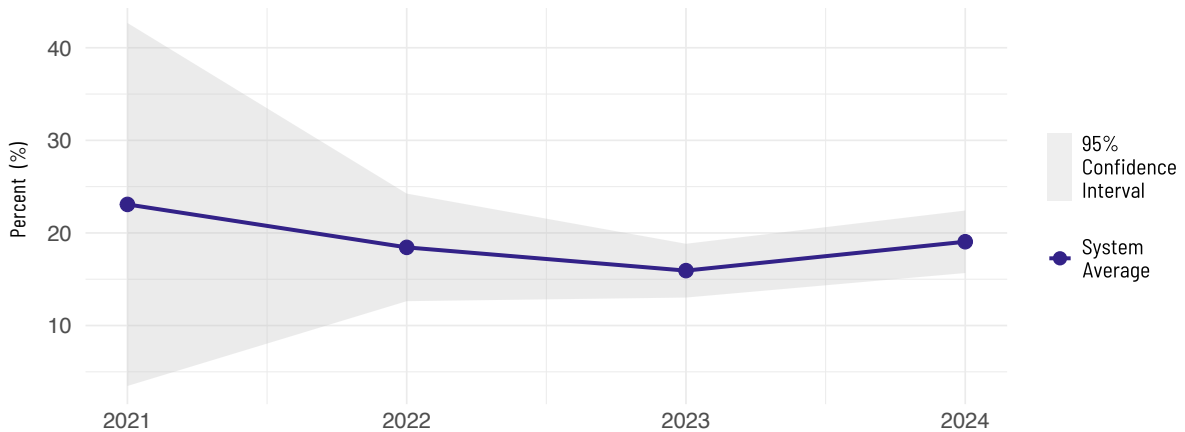
GRAPH 4. Full-Time Equivalents (FTEs) in Jurisdiction Government per 1,000 Residents
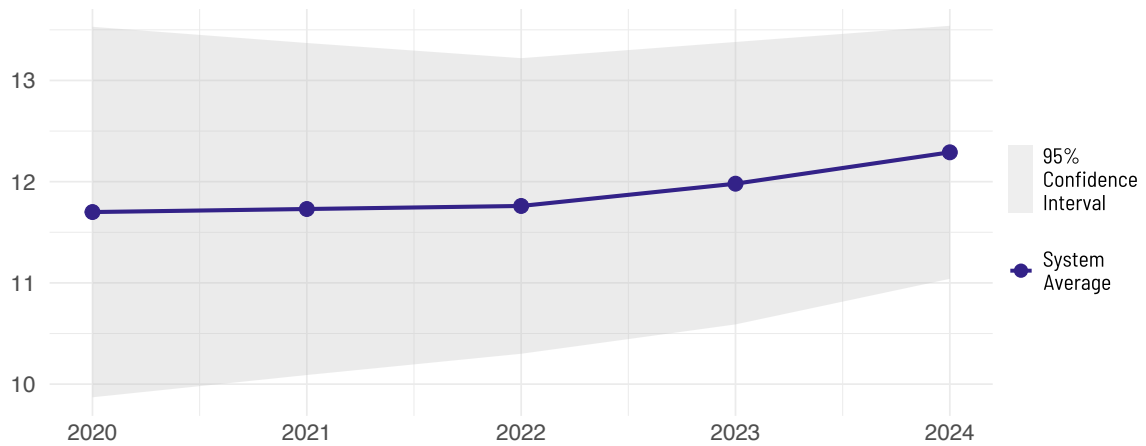
GRAPH 5. Ratio of Jurisdiction to HR FTEs
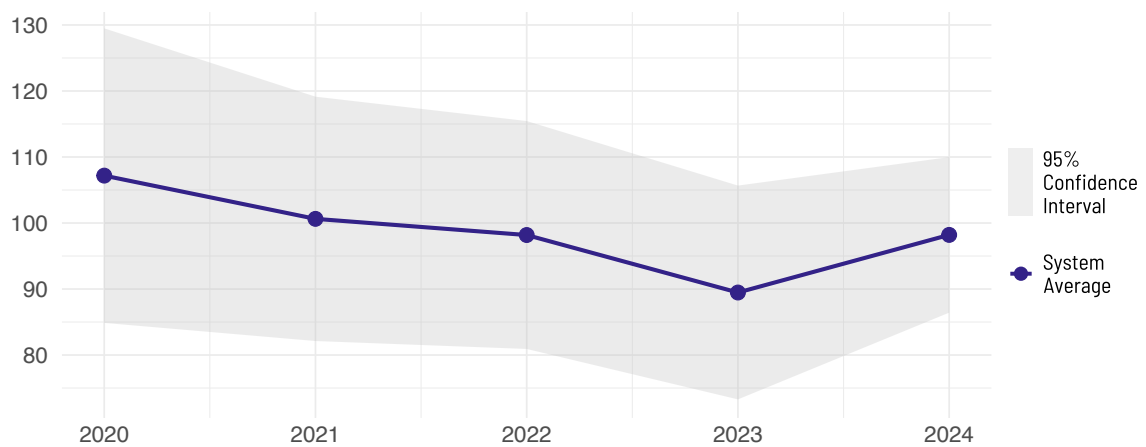
GRAPH 6. Expenses for Central Human Resources per Capita
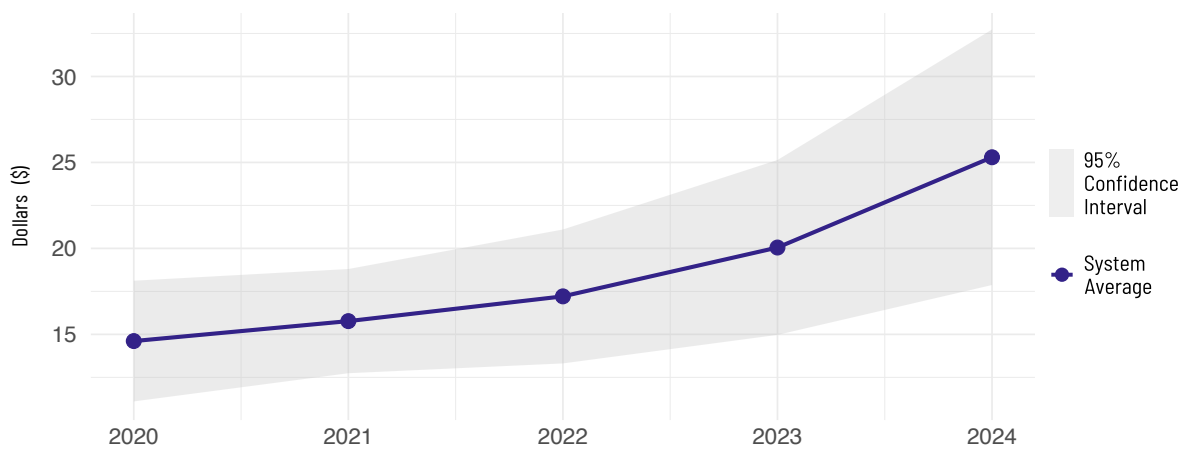
PARKS AND RECREATION

IN NOVEMBER 2024, PARKS AND RECREATION OFFICIALS from the Benchmarking 2.0 municipalities convened at the School of Government for the annual Performance Strategy Session to discuss strategies and define outcomes of a high-performing parks and recreation department. This collaborative session explored key operational challenges, emerging trends, and innovative strategies to enhance service delivery. Participants examined critical issues, including staffing shortages, public health initiatives, equitable access to recreational programs, facility maintenance, and financial sustainability. They also shared successful strategies and identified both feasible short-term improvements and long-term demanding strategies that require policy evolution and sustained investment. The participants identified the following characteristics of a high-performing parks and recreation department:

- a healthy and active community,
- strong community participation,
- community support,
- high-quality facilities,
- strong fiscal health, and
- a resilient workforce.

We discuss each of these characteristics in detail below.

A Healthy and Active Community

A high-performing parks and recreation department plays a vital role in promoting health, wellness, and social connection across the community. Participants in the 2024 Performance Strategy Session emphasized that access to safe, well-maintained parks and inclusive recreational programming contributes to physical activity, mental health, and overall quality of life. Participants identified the following key aspects of a high-performing parks and recreation department's contribution to a healthy community:

- Increased participation in active lifestyles and preventive health programs that support long-term community wellness
- Reduced juvenile crime rates and improved public safety through recreational programming that offers positive, structured outlets for youth engagement
- Enhanced environmental stewardship through the integration of conservation initiatives and sustainable practices in parks and recreation programming
- Improved mental health outcomes supported by programs and facilities that reduce stress and promote overall well-being
- Broader community engagement through ensuring that parks and recreational services are accessible, inclusive, and widely utilized across diverse populations

Strategies for Promoting Healthy and Active Communities

Participants in the session focused on identifying strategies that parks and recreation departments can implement to promote healthy and active communities through recreational services. Feasible strategies are those that municipalities can implement in the short term using existing resources, policies, and partnerships. Demanding strategies, by contrast, are more aspirational, requiring broader investment, interagency coordination, or policy reform. While more challenging to achieve, these long-term efforts hold the potential to significantly transform how parks and recreation contribute to holistic community health and wellness.

Feasible strategies are highlighted in **green**.

- **Partnering with Police and Fire Departments for Safety Resources.** Collaboration between parks and recreation departments and police and fire services helps improve safety in public spaces through joint initiatives such as emergency preparedness training, increased patrols, and on-site safety infrastructure. These partnerships can foster trust, improve emergency response times, and reduce safety concerns. One municipality described a successful initiative that installed emergency call boxes in high-traffic parks as part of a broader joint safety effort, resulting in quicker responses to medical incidents and public safety issues.

- **Expanding Community Engagement.** Offering fitness classes, outdoor group activities, and recreational leagues at no or minimal cost helps increase public participation, encourages healthy lifestyles, and builds stronger community bonds. Departments that host regular wellness events—such as yoga in the park, weekend fitness bootcamps, or nutrition education workshops—report higher levels of resident engagement and improved public perception of parks as inclusive, health-oriented spaces. One municipality piloted a weekend wellness program that combined yoga, fitness classes, and nutrition workshops in local parks, leading to a measurable increase in park usage and positive survey responses.

- **Creating Community Gardens.** Establishing community gardens within parks provides residents with access to fresh produce, supports environmental education, and encourages physical activity through gardening. These spaces promote food security and sustainable practices while enhancing the recreational value of green spaces.

- **Offering Youth Entrepreneurship Programs.** Creating opportunities for youth to host small markets or business showcases within park settings helps foster learning, creativity, and community involvement. These programs offer youth a structured, positive outlet while developing leadership and entrepreneurial skills.

- **Enhancing Health and Wellness with Discounted Services.** Partnering with local gyms, healthcare providers, and wellness businesses to offer discounted memberships, screenings, and incentives helps residents adopt and sustain healthy behaviors. These initiatives can be especially impactful for low-income communities, removing financial barriers to health services. One municipality highlighted a collaboration with regional fitness centers that offered subsidized gym access for qualifying residents, resulting in increased participation in fitness programs and greater community health engagement.

Strong Community Participation

A high-performing parks and recreation department fosters inclusive, widespread participation by offering accessible, engaging, and culturally relevant programs. Participants in the 2024 Performance Strategy Session emphasized that success in this area is not solely defined by enrollment numbers but also by the diversity of participants, the accessibility of services, and the department's ability to meaningfully engage all segments of the community. Participants identified the following key indicators of a high-performing parks and recreation department that fosters community participation:

- Increased program participation and retention, reflected in high enrollment rates and strong return engagement from past participants

- Equitable access to parks and recreation programs, ensuring inclusive service delivery across all demographics, including underserved communities

- Delivery of high-quality programming that offers a diverse range of events, sports, and cultural activities aligned with identified community needs

Strategies for Strengthening Community Participation

Participants in the session focused on identifying both feasible and demanding strategies that parks and recreation departments could implement to broaden engagement and ensure inclusivity. Feasible strategies are practical and actionable in the short term using existing staff, tools, and community networks. Demanding strategies, on the other hand, require broader investments, organizational change, or long-term strategic planning. While more ambitious, these efforts offer transformative potential for community connection and equitable access.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Building Authentic Community Relationships.** Establishing direct, ongoing engagement with residents builds trust and encourages participation in recreational programs. By prioritizing relationship-building, departments can better understand community needs and tailor programs accordingly. One municipality created a Parks Ambassador Program,

in which staff members regularly attended neighborhood meetings and local events, leading to a significant increase in community feedback and program participation.

- **Reflecting the Community with a Diverse Workforce.** Ensuring that parks and recreation staff reflect the demographics of the community they serve helps to foster inclusivity and encourages broader participation. Representation among staff members helps enhance cultural competency and makes programs more welcoming to all residents. One municipality introduced a recruitment initiative focused on bilingual staff hiring, which increased engagement among non-English-speaking participants and improved communication with diverse communities.

- **Fostering Targeted Community Engagement.** Implementing outreach efforts tailored to specific demographics helps ensure that all residents are aware of and feel welcome in recreation programs. This includes engagement through social media, multilingual materials, and partnerships with local organizations. One department launched a targeted marketing campaign using geofencing (location-based) advertisements and multilingual messaging, which resulted in a noticeable increase in program registrations from historically underrepresented neighborhoods.

- **Collecting Data.** Accurate data collection and analysis helps departments make data-driven decisions. Tracking attendance, participant demographics, and survey responses allows agencies to refine offerings and optimize resource allocation. One department implemented a digital registration system that provided real-time participation metrics, enabling it to adjust program schedules to meet demand and reduce waitlists.

Community Support

A high-performing parks and recreation department fosters a deep connection with the community by ensuring accessibility, building trust, and promoting inclusivity. Participants in the 2024 Performance Strategy Session emphasized that successful departments not only provide recreational services but also strengthen social bonds, enhance public safety, and contribute to community identity.

Strategies for Improving Community Support

Participants in the session focused on identifying both feasible and demanding strategies that parks and recreation departments could implement to deepen resident engagement and increase public trust. Feasible strategies can be implemented in the short term using existing staff, funding, and partnerships. Demanding strategies, on the other hand, require broader investment, policy evolution, or long-term structural change. While more challenging to achieve, these efforts have the potential to significantly enhance community relationships and ensure sustained public support for recreation services.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Organizing and Promoting Volunteer Programs.** Establishing or enhancing volunteer opportunities allows residents to actively contribute to parks and recreation services, fostering a sense of ownership and civic pride. This strategy helps increase community engagement, reduces staffing burdens, and enhances programming. One municipality created a Parks Volunteer Corps, in which residents assisted with park cleanups,

event staffing, and mentorship programs, leading to increased resident investment in public spaces.

- **Offering Free or Subsidized Recreational Opportunities for Youth.** Implementing initiatives that allow children to participate in recreational activities regardless of financial circumstances helps ensure that all community members have access to programming. This approach helps promote equity, foster early engagement in recreation, and provide positive youth development opportunities. One municipality partnered with local businesses to fund a Coaches' Kids Play Free program, covering registration costs for youth sports leagues, leading to a notable increase in participation among lower-income families.

- **Establishing Public–Private Partnerships.** Collaborating with local businesses, nonprofits, and educational institutions allows parks and recreation departments to expand programming, share resources, and secure sponsorships. These partnerships help enhance service quality while reducing financial strain on municipal budgets. One department partnered with a regional healthcare provider to introduce wellness programming in parks, including free fitness classes and health screenings, resulting in higher program attendance and stronger community health outcomes.

- **Promoting Storytelling and Public Engagement.** Highlighting success stories, resident testimonials, and program impact through digital media and outreach campaigns helps strengthen public awareness and support. By effectively communicating their value, parks and recreation departments can build stronger relationships with residents and municipal leadership. One municipality launched a campaign, featuring participant testimonials and success stories, on social media and local news outlets, which increased community engagement and advocacy for recreation funding.

- **Measuring Community Impact.** Implementing surveys and tracking participation metrics allows departments to measure public satisfaction, identify areas for improvement, and demonstrate the impact of programs. One department introduced a quarterly community feedback survey that collected qualitative and quantitative data on resident satisfaction, which was then used to adjust program offerings and secure additional funding based on demonstrated needs.

High–Quality Facilities

A high-performing parks and recreation department maintains safe, clean, and well-equipped facilities that meet the needs of the community. Participants in the 2024 Performance Strategy Session emphasized that effective maintenance not only enhances the user experience but also extends the lifespan of recreational assets and supports long-term sustainability. Departments that prioritize proactive maintenance, strategic planning, and data-driven resource allocation can ensure that parks, trails, and recreational facilities remain accessible, functional, and attractive for residents of all ages.

Strategies for Enhancing Facility Maintenance and Management

Participants in the session focused on identifying strategies that parks and recreation departments could implement to improve infrastructure quality and operational efficiency. Feasible strategies involve short-term, cost-effective measures that optimize existing resources. Demanding strategies require long-term investment, policy changes, or innovative infrastructure solutions to create lasting facility improvements. While more challenging to implement,

these initiatives help ensure that parks and recreation facilities remain safe, functional, and attractive for future generations.

Feasible strategies are highlighted in **green**.

- **Securing Dedicated Lifecycle Funding.** Allocating dedicated funding for ongoing repairs, upgrades, and replacements helps parks and recreational facilities remain in optimal condition. Regular investment in lifecycle maintenance helps prevent costly emergency repairs and extends the lifespan of infrastructure. One municipality implemented a dedicated maintenance fund for playground resurfacing and equipment updates, reducing long-term costs and improving safety.

- **Conducting Comprehensive Asset Inventories.** Regularly assessing parks and facility assets allows departments to track equipment conditions, prioritize repairs, and allocate resources efficiently. A well-maintained inventory helps prevent unexpected failures and supports strategic budgeting. One municipality introduced an annual asset inventory process using Geographic Information System (GIS) mapping, allowing staff to monitor equipment lifespans and schedule proactive replacements.

- **Expanding Outdoor Amenities.** Adding features such as pickleball courts, greenways, and outdoor workout stations helps ensure that parks remain relevant and engaging for diverse user groups. Thoughtful expansions based on community needs can enhance participation rates and overall satisfaction. One department that installed outdoor fitness stations along walking trails saw a measurable increase in park usage and positive resident feedback.

- **Tracking Maintenance Works.** Implementing performance tracking systems helps departments measure maintenance efficiency, identify service gaps, and make data-driven improvements. One municipality developed a digital reporting dashboard that tracked maintenance requests, completion times, and community feedback, resulting in a 25 percent reduction in response times for repairs.

- **Recognizing Maintenance Staff for Their Work.** Acknowledging and incentivizing maintenance teams for their contributions helps improve morale and retention and encourages high performance. Departments that highlight staff achievements foster a positive work environment and increase job satisfaction. One municipality implemented a recognition program where maintenance employees received quarterly awards for outstanding service, leading to increased staff engagement and reduced turnover.

Strong Fiscal Health

A high-performing parks and recreation department requires a stable and well-managed financial foundation to ensure consistent service delivery, facility upkeep, and program expansion. Participants in the 2024 Performance Strategy Session emphasized that securing diverse funding sources, maintaining balanced budgets, and aligning financial planning with long-term strategic goals are critical to sustaining high-quality services. Participants identified the following key indicators of a high-performing and fiscally healthy parks and recreation department:

- Stable and diversified funding sources that support long-term financial health and ensure uninterrupted program and service delivery

- Transparent budgeting and financial planning practices that promote accountability and enable strategic investment in department priorities
- Consistent support from elected officials, with reliable council backing and approval of funding requests
- Maximized cost recovery and operational efficiency, allowing for sustainable program delivery without over-reliance on general tax revenue
- Financial alignment with master planning and capital improvement priorities, ensuring that resources support long-term department objectives
- Expanded access to financial assistance programs that reduce cost-related barriers to participation and promote equity in service delivery

Strategies for Achieving Financial Sustainability

Participants in the session focused on identifying both feasible and demanding strategies that parks and recreation departments could implement to enhance resource management and long-term financial stability. Feasible strategies are practical actions departments can take with existing staff and resources to improve budgeting, planning, or revenue generation. Demanding strategies, by contrast, require broader investment, interagency partnerships, or structural policy shifts. While more challenging, these efforts have the potential to transform the financial foundation of municipal recreation services.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Pursuing Corporate Sponsorships for Program and Facility Funding.** Partnering with local businesses and corporate sponsors can provide additional revenue streams for park enhancements, event funding, and facility improvements. This approach may reduce reliance on municipal budgets while strengthening community partnerships. One department established a naming-rights program for sports fields and community centers, generating dedicated revenue for maintenance and upgrades without increasing participant fees.

- **Leveraging Public–Private Partnerships (PPPs).** Collaborating with private entities for facility management, special event funding, and service delivery helps enhance financial sustainability while maintaining public accessibility. These partnerships allow municipalities to expand services without significant upfront investments. One municipality partnered with a regional sports league to co-fund the construction of a multi-use athletic complex, increasing recreational opportunities while sharing operational costs.

- **Conducting an Annual Department-Wide Budget Review.** Performing a structured financial review each year helps ensure that resources are aligned with departmental priorities. This practice enables proactive adjustments to funding strategies and helps identify cost-saving opportunities. One department introduced an internal budgeting workshop for staff to assess spending trends, resulting in a reallocation of funds to underutilized programs with growing demand.

- **Maximizing Cost Recovery.** Adjusting program fees based on participant income levels, service demand, or facility usage allows departments to balance affordability with financial sustainability. One municipality implemented a tiered pricing model for recreation classes, offering reduced rates for low-income families while maintaining standard fees for general participants, increasing overall program accessibility without financial strain on the department.

■ **Ensuring Financial Transparency.** Providing clear, accessible budget reports and financial performance metrics helps foster community trust and increases the likelihood of funding approvals. One department launched a public-facing financial dashboard displaying program costs, funding sources, and expenditure breakdowns, leading to stronger resident advocacy for future bond measures.

A Resilient Workforce

A well-trained, adequately staffed, and highly engaged workforce is the foundation of a high-performing parks and recreation department. Participants in the 2024 Performance Strategy Session emphasized that recruitment, retention, and professional development directly influence the quality of services, operational efficiency, and community engagement. Participants identified the following key indicators of a high-performing parks and recreation department's workforce effectiveness:

• Low staff turnover and high retention rates among full-time, part-time, and seasonal employees, contributing to greater operational continuity

• High levels of employee satisfaction and workplace morale, fostering a supportive and positive organizational culture

• Increased return rates of seasonal staff, preserving institutional knowledge and reducing onboarding and training costs

• Expanded access to professional development and clear career growth pathways that encourage long-term employee commitment

• Inclusive hiring practices and workplace policies that reflect and respect the diversity of communities served

• Department recognition and accreditation—such as Commission for Accreditation of Park and Recreation Agencies (CAPRA) certification—demonstrating a sustained commitment to promising practices and industry standards.

Strategies for Improving Staffing and Workforce Retention

Participants in the session focused on identifying both feasible and demanding strategies that parks and recreation departments could implement to build and sustain a high-performing team. Feasible strategies can be implemented in the short term using current staff, budget, and organizational structures. Demanding strategies, in contrast, require longer-term investment, policy changes, or cross-departmental coordination. While more ambitious, these initiatives have the potential to create transformative improvements in employee recruitment, satisfaction, and retention.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

● **Recognizing the Contributions of Parks and Recreation Employees.** Highlighting the contributions of parks and recreation staff both internally (within municipal leadership) and externally (to the public) helps increase recognition and appreciation for their role in community well-being. This strategy helps improve morale, foster a sense of purpose among employees, and strengthen retention. One department implemented an internal awareness campaign highlighting the economic and social impact of recreation services, leading to increased municipal support for staffing initiatives.

- **Providing Clear Career Development Pathways.** Establishing structured professional development opportunities, such as tuition assistance, certification stipends, and internal promotional tracks, helps provide avenues for career growth to employees. Employees who see long-term advancement opportunities are more likely to remain with the department, reducing turnover. One municipality that introduced a leadership development program for entry-level staff saw a higher retention rate among employees who advanced into supervisory roles.

- **Collaborating Across Departments.** Encouraging parks and recreation staff to work alongside other municipal departments—such as public works, public safety, and planning—helps broaden skill sets and creates pathways for career mobility. This approach can foster interdepartmental cooperation, enhance job variety, and increase employee engagement. One municipality launched a rotational program where recreation staff assisted with community event planning across multiple departments, leading to stronger interagency relationships and increased job satisfaction.

- **Ensuring Competitive Pay and Benefits.** Offering salaries and benefits that align with industry standards helps attract top talent and reduce staff turnover. Competitive compensation is likely to improve job satisfaction and prevent the loss of skilled employees to higher-paying organizations. One department that conducted a salary benchmarking study and adjusted wages accordingly reported a decline in vacancies and an increase in job applications for open positions.

- **Encouraging the Return of Seasonal Staff.** Providing incentives such as end-of-season bonuses, flexible scheduling, and loyalty recognition programs increases the likelihood of seasonal employees returning in subsequent years. Retaining experienced seasonal workers may reduce training costs and improve service continuity. One department introduced a tiered pay structure that rewarded returning seasonal employees with incremental raises, resulting in a significant increase in year-over-year staff retention.

Summary

The 2024 Performance Strategy Session highlighted the critical role parks and recreation departments play in fostering healthy, connected communities. Key discussions focused on staffing, public health, participation, community support, maintenance, and financial sustainability, emphasizing both immediate, resource-feasible improvements and long-term investments for transformational change. Strategic planning, data-driven decision-making, and cross-sector collaboration emerged as essential for adapting to evolving community needs. Leveraging innovative partnerships, sustainable funding models, and inclusive programming helps ensure equitable access to recreational services. By integrating these insights into operational planning, municipalities can strengthen parks and recreation departments as vital pillars of public health, social cohesion, and environmental stewardship, creating lasting benefits for current and future generations.

FIGURE 8. STRATEGIES FOR A HIGH-PERFORMING PARKS AND RECREATION SERVICE

● Feasible Strategy | ■ Demanding Strategy

● Collaboration with Police & Fire Departments
● Expanded Community Engagement
● Community Gardens
● Youth Entrepreneurship Programs
● Discounted Health & Wellness Services

A Healthy & Active Community

● Building Community Relationships
● Workforce Reflects Local Diversity
● Targeted Community Engagement
■ Data Collection

Strong Community Participation

● Recreational Opportunities for All Youth
● Volunteer Programs
● Public–Private Partnerships
● Storytelling & Public Engagement
■ Measuring Community Impact

Community Support

High-Performing Parks and Recreation Service

● Dedicated Lifecycle Funding
● Comprehensive Asset Inventories
● Expanded Outdoor Amenities
● Tracking Maintenance Works
● Recognizing Maintenance Staff

High-Quality Facilities

● Corporate Sponsorships
● Leveraging Public–Private Partnerships
● Annual Department-Wide Budget Reviews
■ Maximizing Cost Recovery
■ Financial Transparency

Strong Fiscal Health

● Recognizing Staff Contributions
● Clear Career Development Pathways
● Cross-Department Collaborations
■ Competitive Pay & Benefits
■ Incentives for Returning Seasonal Staff

A Resilient Workforce

SELECTED PARKS AND RECREATION BENCHMARKING PROJECT GRAPHS

GRAPH 1. Park Acreage per 10,000 Residents
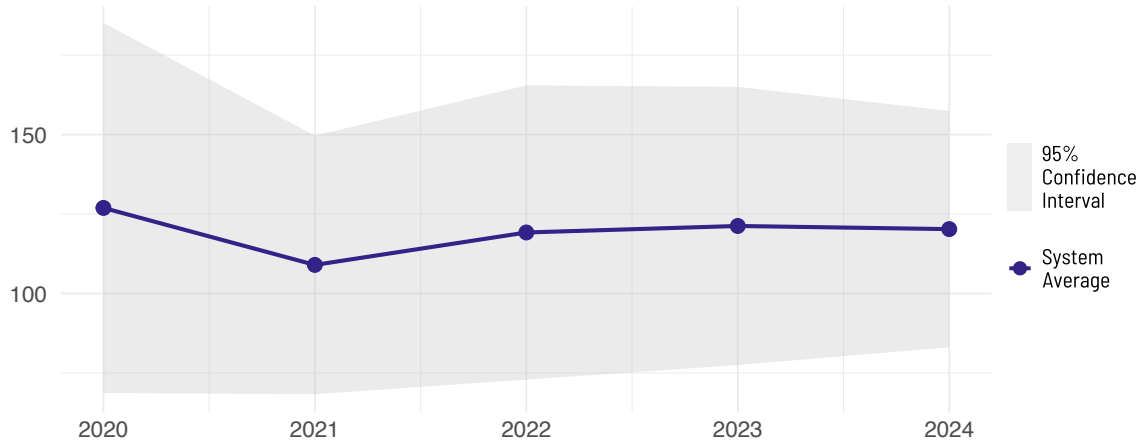
GRAPH 2. Athletic Programs Participation per Capita
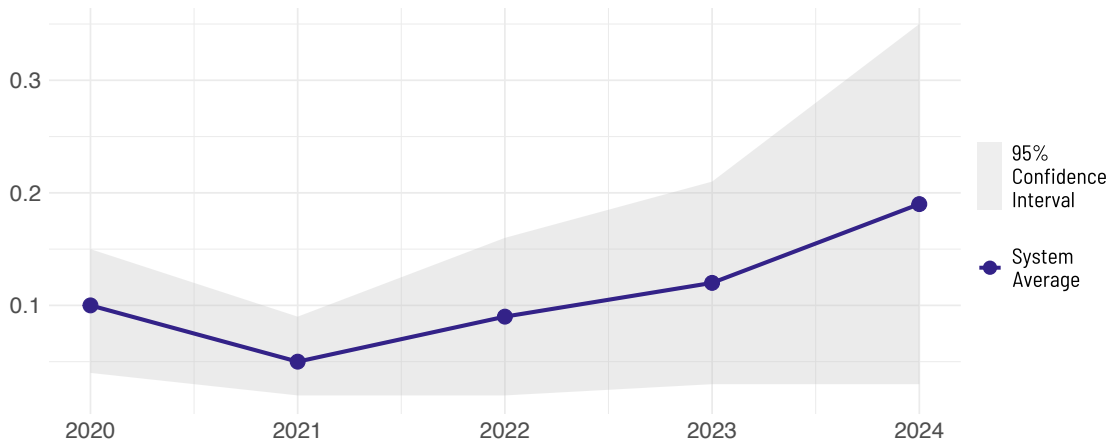
GRAPH 3. Community Events Participation per Capita
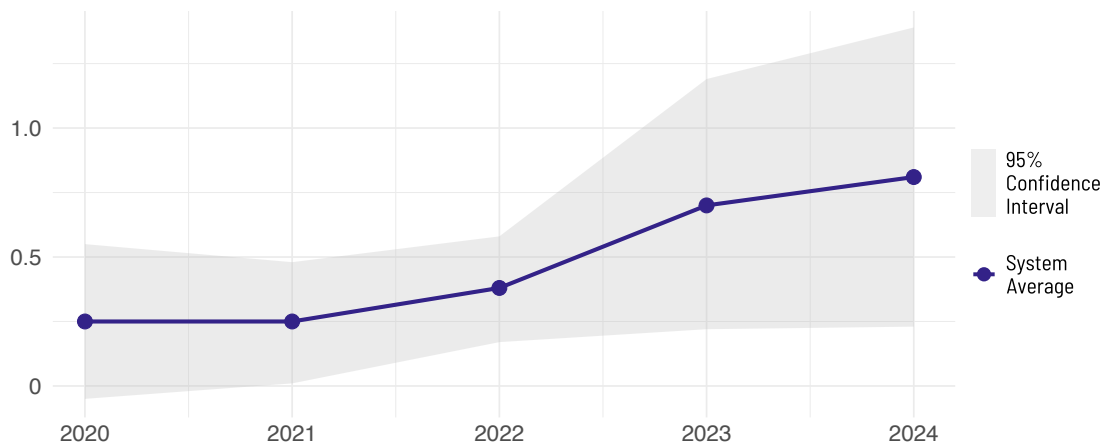
GRAPH 4. Approved Parks and Recreation Full-Time Equivalents (FTEs) per 10,000 Residents
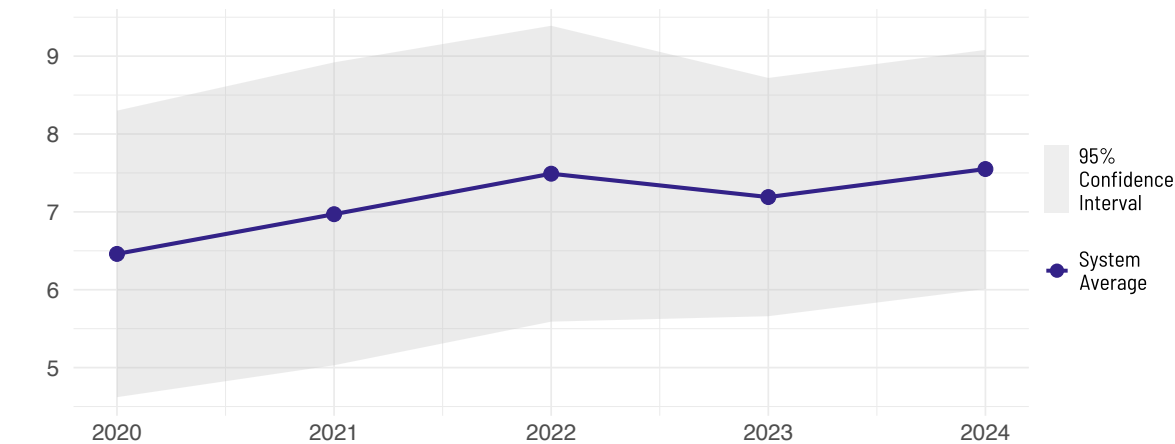
GRAPH 5. Revenue Generated as a Percentage of Total Expenses
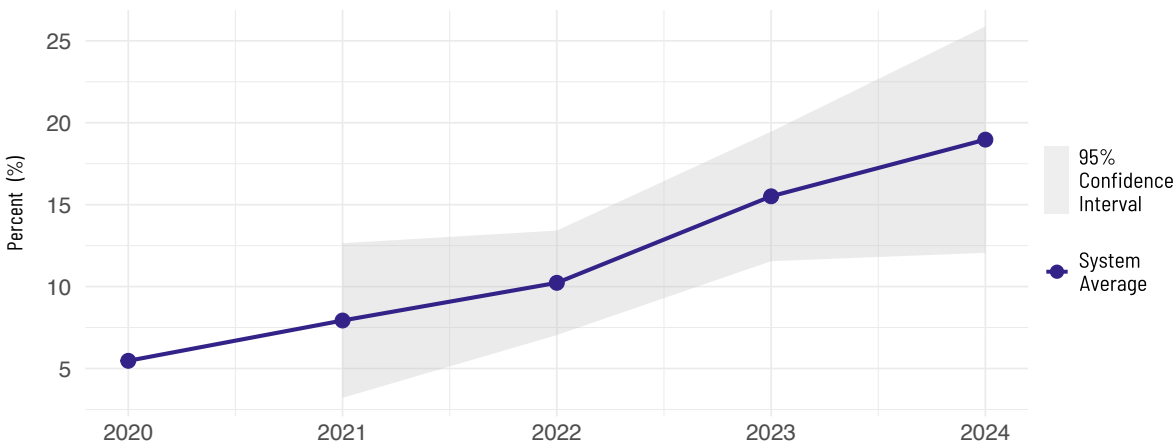
GRAPH 6. Expenses for Parks and Recreation per Capita
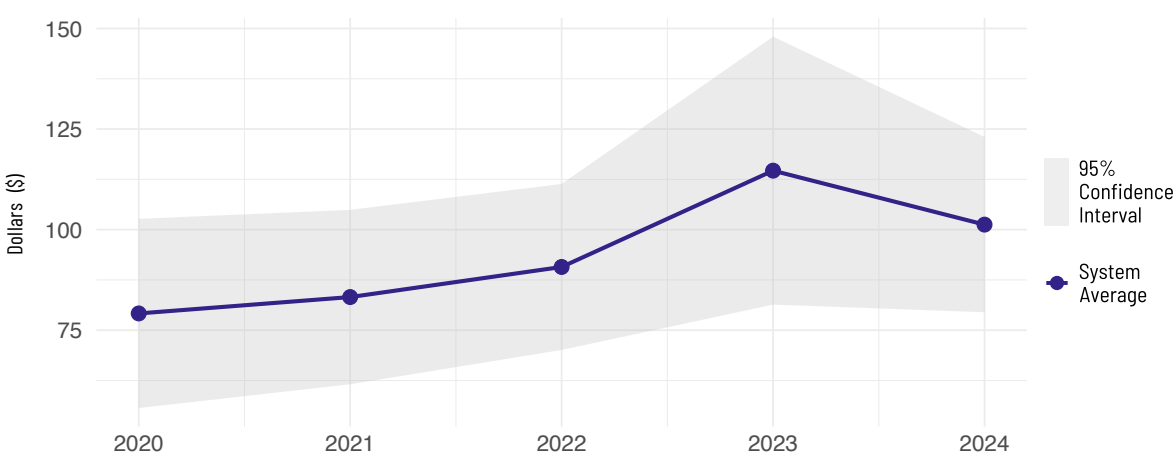
POLICE SERVICE

IN NOVEMBER 2024, POLICE OFFICIALS from the Benchmarking 2.0 municipalities convened at the School of Government for the annual Performance Strategy Session to discuss strategies and define outcomes of a high-performing police department. This collaborative discussion focused on critical operational challenges, including staffing shortages, crime reduction, community trust, and officer wellness. Participants examined emerging trends, shared successful strategies, and explored both short-term solutions and long-term reforms to enhance department performance. The session emphasized data-driven decision-making, interagency collaboration, and alignment with community expectations to ensure that law enforcement agencies remain effective, accountable, and responsive to public needs. The participants identified the following key characteristics of a high-performing police service:

- safe communities,
- community trust,
- strong fiscal health,
- professional excellence,
- a resilient workforce, and
- officer well-being.

We discuss each of these characteristics in detail below.

Safe Communities

Crime reduction and prevention are central objectives for high-performing police departments. Participants in the 2024 Performance Strategy Session emphasized that a data-driven, multifaceted approach—combining high-visibility policing, strategic partnerships, and proactive interventions—yields the most effective results. Beyond reactive enforcement, successful crime prevention involves collaborating with stakeholders, leveraging technology for intelligence-led policing, and addressing root causes such as economic instability and social challenges.

Strategies for Ensuring Safe Communities

The participants focused on identifying both immediate, actionable strategies and long-term, transformative approaches to improving public safety. Feasible strategies are short-term solutions that departments can implement using existing staffing, technology, and partnerships to enhance visibility, strengthen enforcement, and reduce crime rates. Demanding strategies focus on larger-scale initiatives, such as expanding crime prevention programs, integrating advanced technology, and addressing the social drivers of crime, which require broader collaboration and investment.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Maintaining High Visibility.** Increasing officer presence in high-crime areas serves as a deterrent while enhancing public confidence in law enforcement. Agencies that expand foot, bike, and vehicle patrols in targeted locations have reported lower crime rates and improved relationships with residents. Some departments have explored high-visibility patrols in targeted areas as a means to improve public confidence and deter crime. However, funding was mentioned as a potential barrier to implementation.

- **Increasing Transparency.** Making crime data publicly available improves trust and allows residents to stay informed about safety trends in their communities. Departments that utilize dashboards, public reports, and real-time data sharing see increased community engagement and reduced misinformation. A department that introduced a crime data dashboard saw a decline in public records requests, as residents could independently access crime trends and department performance metrics.

- **Enhancing External Partnerships.** Strengthening collaborations with businesses, community leaders, nonprofits, and other government departments helps law enforcement address the root causes of crime. Agencies that engage with community organizations have seen improvements in youth crime prevention and support for individuals at risk of reoffending.

- **Implementing Focused Patrols.** Using crime data to guide patrol deployment allows departments to target high-risk areas more effectively. Intelligence-led policing and predictive analytics help agencies allocate resources efficiently and prevent crime before it happens.

- **Fostering Strong Relations with the DA's Office.** Regular meetings with prosecutors, U.S. Marshals, and federal officials create opportunities for law enforcement agencies to coordinate crime reduction strategies and improve case outcomes. One department implemented monthly gun-violence meetings with the prosecuting office, U.S. Marshals, and federal prosecutors to discuss legal challenges before cases proceed to court.

These meetings have helped officers anticipate potential obstacles in prosecution, increasing the likelihood of securing convictions and ensuring a more effective criminal justice process.

- **Policing Proactively.** Engaging in problem-solving policing and early intervention strategies helps address crime at its source. Officers who actively build relationships with residents and businesses are better equipped to identify emerging crime trends and prevent escalation. One department that implemented a mental health response team for crisis calls reduced unnecessary arrests and improved outcomes for individuals in need of care.

- **Securing Sustained Funding.** External funding allows agencies to expand violence prevention programs, youth outreach, and specialized investigative units, but securing and managing these funds remains a challenge. While grants provide short-term solutions, departments struggle to maintain long-term crime prevention efforts without permanent funding. Officers emphasized the need for a strategic approach to grant applications to ensure sustainability rather than reliance on one-time financial boosts.

- **Fostering Multiagency Collaboration.** Tackling housing instability, employment barriers, and mental health crises as crime prevention measures requires collaboration beyond law enforcement. While some agencies partner with social services and public health organizations, sustained funding and structured coordination remain challenges. Without a multiagency approach, the ability of police departments to address social drivers of crime is limited.

- **Implementing Artificial Intelligence (AI) and Predictive Policing Technologies.** AI-driven crime mapping, surveillance, and predictive analytics offer potential benefits for policing, but privacy concerns, funding limitations, and public trust issues pose barriers to implementation. Officers noted that while technology can enhance policing strategies, its use must align with ethical standards and community expectations. Full-scale adoption requires careful planning to ensure transparency and operational effectiveness.

- **Ensuring Partner Accountability.** Prosecutors, parole officers, and rehabilitation programs play a key role in crime reduction, but there is no standardized system for measuring partner accountability. Some departments hold regular meetings with prosecutors and federal agencies to address legal challenges early, improving conviction rates. However, without formalized tracking of recidivism, case resolutions, and rehabilitation success, assessing the effectiveness of these partnerships remains difficult.

- **Providing Community-Based Prevention and Workforce Development Programs.** Mentorship programs, career training, and youth engagement initiatives help prevent crime, but funding and implementation challenges limit their reach. While partnerships with businesses and nonprofits support these efforts, law enforcement alone cannot sustain large-scale prevention programs. Expanding these initiatives requires long-term investment and policy support to move from aspiration to reality.

Community Trust

Community trust and engagement are fundamental to a high-performing police department. Participants in the 2024 Performance Strategy Session emphasized that fostering positive relationships with residents, ensuring transparency in policing efforts, and aligning departmental

goals with community expectations are critical to strengthening public confidence. Beyond traditional outreach, effective community engagement involves proactive communication, resident involvement in decision-making, and visible department responsiveness to public concerns. Departments that successfully implement these strategies build long-term partnerships, improve public perception, and create safer communities through mutual trust and cooperation. Participants identified the following key indicators of a high-performing police department that has earned the trust of its community:

- Increased public confidence in law enforcement with transparent communication and proactive outreach
- Strong partnerships between police and community members foster collaboration in public safety efforts
- A reputation as a trusted institution, engaging with residents, addressing concerns, and aligning policing strategies with community priorities

Strategies for Enhancing Community Trust and Engagement

Participants in the session focused on identifying both feasible and demanding strategies that police departments can implement to improve transparency, foster resident collaboration, and build public confidence in law enforcement. Feasible strategies are practical, short-term initiatives that departments can adopt using existing resources, policies, and community partnerships. Demanding strategies, in contrast, represent long-term commitments requiring significant investment, policy changes, or cultural shifts to achieve deep-rooted and sustainable improvements in community relations.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Establishing a PIO and Social Media Program.** Establishing a dedicated Public Information Officer (PIO) and utilizing social media platforms allows departments to engage directly with the public, provide real-time updates, and address misinformation. Agencies that actively manage social media accounts report improving public perception, transparency, and trust as a result of quickly disseminating accurate information on crime trends, safety initiatives, and departmental policies. Participants discussed the possibility of weekly Q&A sessions on social media, during which officers answer residents' concerns about traffic enforcement and crime prevention.

- **Creating a Public Safety Academy.** A structured academy that educates residents about police operations, policies, and challenges offers hands-on experience and direct engagement with officers. These programs help demystify police procedures, improve community understanding of law enforcement challenges, and foster positive relationships between officers and participants. One department's eight-week public safety academy included ride-alongs, crime scene simulations, and use-of-force training, leading to an increase in resident participation in neighborhood watch programs.

- **Offering a Youth Police Academy.** This program is designed to introduce high school and college students to law enforcement careers through interactive learning experiences. Engaging young residents fosters early trust in police officers, promotes positive attitudes toward law enforcement, and serves as a recruitment pipeline for future officers. One department introduced a summer-long Youth Academy featuring crime scene investigations and patrol simulations, which led to increased interest in law enforcement careers among participants.

- **Conducting Community/Citizen Surveys.** Conducting periodic surveys provides an opportunity to assess public concerns, satisfaction levels, and trust in the police department. The feedback gathered allows departments to refine policies, adjust training, and tailor community engagement strategies in line with residents' priorities, ultimately strengthening accountability and responsiveness. One department used survey results to identify traffic enforcement as a top public concern, leading to a reallocation of resources toward speed enforcement and pedestrian safety initiatives.

- **Implementing Forward-Facing Dashboards.** Public dashboards provide residents with real-time access to department data, such as crime statistics, response times, and community outreach efforts. These dashboards help enhance transparency, reduce misinformation, and build trust by giving the public direct insight into department activities and performance metrics. One department that implemented a real-time crime data dashboard saw a reduction in public records requests, as residents could independently access crime trends and policing statistics.

- **Creating a Community Engagement Division.** A specialized unit dedicated to maintaining relationships with residents, organizing outreach programs, and fostering trust-building initiatives can help ensure consistent, meaningful community engagement. A dedicated division allows officers to address local concerns before they escalate into major issues. Some departments have established community engagement divisions or assigned community resource officers to specific areas, helping coordinate outreach efforts and strengthen relationships with residents.

- **Establishing a Community Liaison Program.** Assigning officers as permanent liaisons for specific neighborhoods allows for direct, long-term engagement with residents. Having officers dedicated to particular communities helps to foster stronger relationships, familiarity, and trust between law enforcement and residents.

- **Forming a Community Task Force.** A task force made up of police officers, community leaders, business owners, and residents helps provide a structured forum to address public safety concerns collaboratively. These task forces empower community members to actively participate in shaping policing policies, helping ensure that enforcement priorities reflect community needs.

- **Incorporating Community Input into Major Decisions.** Creating formal mechanisms for residents to provide feedback on major policy and procedural decisions helps ensure greater transparency and accountability. Structured public participation increases accountability, builds transparency, and ensures that police practices align with community values.

Strong Fiscal Health

Effective budget management is a cornerstone of a high-performing police department, ensuring that resources are allocated strategically to meet operational demands, training needs, and long-term sustainability goals. Participants in the 2024 Performance Strategy Session emphasized that transparent financial planning, cost-saving measures, and proactive forecasting improve fiscal stability while allowing departments to adapt to evolving challenges. Beyond routine financial oversight, effective budget strategies enhance operational efficiency, prevent resource shortages, and enable strategic investments in workforce development and

public safety initiatives. Participants identified the following key indicators of a high-performing and fiscally healthy police department:

- Improved budget forecasting and financial planning, ensuring effective resource allocation
- Increased ability to secure and maximize external funding sources, such as grants and donations, to support department initiatives
- Recognition for efficient financial management that reduces operational costs while maintaining high-quality services

Strategies for Smart Budgeting

Participants focused on identifying both practical cost-saving measures and larger financial strategies to improve department efficiency. Feasible strategies consist of short-term improvements, such as budget training, strategic financial forecasting, and hosting regional training to reduce costs. Demanding strategies include long-term financial restructuring, more efficient fleet management, and securing sustainable grant funding, requiring departments to navigate complex budgeting processes and policy adjustments to achieve lasting impact.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Providing Budget-Process Training.** Offering foundational budgeting training for officers and department personnel improves financial decision-making and resource allocation. Departments that implement budget workshops help enhance coordination between command staff and financial managers, leading to better financial planning and fewer administrative errors.

- **Hosting Agency-Sponsored Trainings.** Serving as a host agency for training programs reduces travel costs and increases free training opportunities for officers. Departments that offer in-house or regionally hosted sessions can save money while improving training accessibility and participation rates. One agency partnered with a state training academy to host de-escalation courses, allowing multiple departments to attend at a reduced cost.

- **Budgeting for Personnel Vacancies.** Forecasting vacancy credits helps ensure that departments can reallocate salary savings to critical needs such as training, overtime, or equipment purchases. Agencies that apply vacancy credit models reported improved financial transparency and better alignment of staffing projections with actual expenditures. Some officers emphasized that vacancy budgeting helps reduce funding shortfalls while maintaining flexibility in personnel planning.

- **Maintaining Donations and Grants Policies.** Developing structured policies for managing grants and donations helps departments maximize external funding without compromising operational priorities. Agencies that proactively seek and manage grant opportunities can supplement their budgets for specialized programs, such as technology upgrades or officer wellness initiatives. Some departments have created dedicated grant teams, leading to successful funding for body-worn cameras and mental health training.

- **Ensuring Accurate Separation-Pay Budgeting.** Improving forecasting for separation pay allows departments to prepare for retirements and resignations without unexpected financial strain. Many agencies struggle with unanticipated payout costs, leading to last-minute budget reallocations. While some agencies have adopted separation-pay projections, others face challenges due to fluctuating retirement trends and limited financial flexibility.

- ■ **Reducing Vehicle Accidents with Specialized Programs.** Vehicle maintenance and repair costs place a significant financial burden on departments, particularly when preventable accidents increase fleet downtime. Implementing specialized defensive driving programs has helped reduce vehicle crashes, extending the lifespan of department vehicles. Departments that introduced targeted training saw declines in accident-related expenses, but widespread implementation remains challenging due to training costs and scheduling constraints.

- ■ **Streamlining Vehicle Repairs and Replacement.** Extended wait times for fleet vehicles and unpredictable repair costs create financial and logistical challenges for departments. Accurate budgeting for vehicle maintenance and replacement cycles can ensure that agencies avoid operational disruptions and unexpected financial strain. Some departments have implemented long-term fleet-replacement plans, but others struggle with budget limitations and the increasing costs of new vehicles.

Professional Excellence

Continuous training and professional development are fundamental to maintaining a high-performing police department. Participants in the 2024 Performance Strategy Session emphasized that regular, scenario-based training, combined with career progression programs, helps ensure that officers remain adaptable, well-equipped, and prepared for modern policing challenges. Departments that prioritize robust training frameworks often see improvements in operational readiness, legal compliance, and officer decision-making under high-pressure situations. Participants identified the following key indicators of a high-performing police department that prioritizes professional excellence:

- • Officers equipped with up-to-date skills and knowledge through consistent, scenario-based, and specialized training programs
- • Expanded access to leadership development and career growth opportunities, ensuring long-term professional advancement
- • Training structures that reflect modern policing challenges, incorporating real-world incident analysis and cutting-edge techniques

Strategies for Advancing Professional Excellence

Participants highlighted both immediate, implementable strategies and aspirational long-term goals to ensure that officers remain well-equipped to meet modern policing challenges. Feasible strategies involve expanding routine training, enhancing scenario-based instruction, and improving access to specialized courses using existing resources. Demanding strategies focus on career-path training, developing advanced facilities, and integrating cutting-edge technologies into law enforcement education, requiring significant investment and long-term commitment.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- ● **Implementing Training Based on Recent Events.** Incorporating real-world incidents into training ensures that officers stay informed about emerging threats and evolving industry best practices. Immediate training on high-liability incidents, such as use-of-force events and vehicle accidents, enhances officers' ability to respond effectively in critical situations. Some

officers emphasized that delaying instruction for months reduces preparedness, making timely after-action reviews, case studies, and body-camera footage analysis essential.

- **Offering Weekly Training.** Conducting regular training sessions helps officers remain proficient in use-of-force decision-making, de-escalation techniques, and legal updates. Departments that implement weekly or bi-weekly roll-call training reported an improvement in knowledge retention without disrupting daily operations. Some officers noted inconsistencies in training frequency across agencies, with some departments offering fewer training opportunities, affecting overall preparedness.

- **Providing Access to Training Facilities and Instructors.** Access to dedicated training facilities, experienced instructors, and scenario-based simulations enhances officers' ability to perform under stress. Agencies that invest in virtual reality (VR) training systems and 3D simulations reported improved tactical response and decision-making. However, some officers highlighted challenges in securing facilities, acquiring simulation tools, and training specialized instructors, limiting the scalability of these initiatives.

- **Offering Career Path Training.** Establishing structured career-development programs allows officers to transition into investigative roles, tactical teams, and leadership positions. Agencies that introduced specialized training tracks for detectives and leadership roles reported higher retention rates and improved succession planning. However, some officers noted that balancing training demands with operational responsibilities and securing consistent funding remain ongoing challenges.

- **Training Civilian Personnel.** Providing specialized training for non-sworn personnel enhances operational efficiency and interdepartmental coordination. Equipping administrative staff, records personnel, and analysts with law-enforcement-related skills allows departments to function more effectively. Some officers acknowledged that civilian personnel often lack access to professional training opportunities, and limited funding has hindered widespread implementation.

- **Providing Annual Training on High-Liability Areas.** Conducting annual refresher training on use-of-force policies, legal standards, and crisis intervention helps officers maintain critical skills. Departments that mandate yearly legal and tactical training reported increased officer accountability and reduced liability risks. However, some agencies struggle with budget constraints and scheduling limitations, making it difficult to implement consistent annual training department-wide.

A Resilient Workforce

Effective staffing is the foundation of a high-performing police department. Participants in the 2024 Performance Strategy Session emphasized that a well-staffed department is one that maintains low vacancy rates, retains skilled personnel, and offers clear career progression opportunities. Beyond simply filling positions, effective staffing ensures that officers are properly trained, operationally ready, and motivated to remain in their roles long-term. Participants identified the following key indicators of workforce resiliency in a high-performing police department:

- Low vacancy rates and high retention of both sworn and non-sworn personnel

- Career progression opportunities tied to improved compensation and specialized roles

- A reputation as a "quality employer" that fosters morale, inclusivity, and innovative policies

Strategies for Building a Resilient Workforce

Participants in the session focused on identifying both feasible and demanding strategies that police departments could implement to improve recruitment, retention, and overall workforce stability. Feasible strategies are those that departments can easily implement in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent more aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create transformative improvements in staffing conditions.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Overhiring.** Hiring additional personnel beyond current vacancies allows agencies to account for anticipated retirements and attrition, ensuring adequate staffing levels and minimizing operational disruptions. This strategy provides greater scheduling flexibility and reduces overtime burdens on existing staff. One department successfully obtained approval to overhire, which enabled them to maintain sufficient staffing levels despite ongoing retirements and resignations.

- **Creating Consistent Training Programs.** Establishing regular and structured training programs for sworn and non-sworn personnel ensures that officers remain proficient and prepared for the challenges of modern policing. Some departments highlighted the importance of career-path training for specialized roles like detectives and supervisors, which helped retain officers by providing clear advancement opportunities.

- **Conducting Employee Satisfaction Surveys.** Administering regular employee satisfaction surveys helps agencies assess morale and identify areas for workplace improvement. Departments using these surveys have been able to refine wellness initiatives and address burnout risk factors effectively. The feedback collected has led to targeted policy changes, such as adjustments to shift schedules and mental health resource expansions, ultimately improving officer retention.

- **Offering Flexible Schedules.** Allowing officers to choose between fixed and rotating schedules or implementing alternative shift arrangements can be an effective strategy to improve work-life balance and job satisfaction. Agencies that introduced flexible schedules and alternative shift arrangements reported higher retention rates, particularly among younger officers who prioritize work-life balance.

- **Increasing Pay and Benefits.** Raising salaries and improving benefits can be effective strategies for recruitment and retention. Competitive compensation helps attract high-quality candidates and reduces turnover rates. Participants noted that pay raises, differential pay, and bilingual incentives have resulted in a noticeable decrease in officer attrition.

- **Increasing PTO Options.** Expanding paid time off (PTO) allowances, including vacation and personal leave, has reportedly led to higher employee satisfaction and reduced burnout rates. Departments that increased PTO accrual rates for officers with over five years of service found that this policy contributed to improved morale and retention.

- **Providing Specialized Opportunities for Career Growth.** Giving officers access to specialized assignments and promotional pathways can help improve job satisfaction and long-term retention. Departments have introduced career ladders, leadership development programs, and rotational assignments to give officers broader experience and maintain their interest in policing. Agencies have also adjusted timelines for investigative roles and specialized units to better align with officers' career aspirations.

● **Establishing Well-Rounded Wellness Programs.** Enhancing wellness programs by incorporating mental, physical, and emotional health initiatives has helped agencies improve officer well-being and job performance. Some departments have established peer support teams, mental health counselors, and fitness incentives to promote overall wellness. For example, agencies have introduced wellness apps to track fitness and stress management, as well as therapy dogs to provide emotional support.

■ **Offering Full Retirement Options Earlier.** Allowing officers to retire earlier with full benefits could improve recruitment and long-term retention, making law enforcement careers more attractive. However, while early retirement programs could attract recruits and retain experienced officers, this remains an aspirational goal due to the financial and structural challenges involved in pension system changes.

Officer Well–Being

A high-performing police department prioritizes officer wellness as a critical factor in operational effectiveness and long-term retention. Participants in the 2024 Performance Strategy Session emphasized that ensuring officer well-being requires a holistic approach, integrating mental health support, structured debriefing processes, and proactive wellness initiatives. Participants identified the following key indicators of a high-performing police department that prioritizes officer well-being:

- Increased mental, emotional, and physical well-being among officers through structured wellness programs and peer support initiatives
- Normalized mental health support that reduces stigma and encourages participation in wellness programs

Strategies for Prioritizing Officer Wellness

Participants examined both short-term improvements and long-term structural changes that departments can pursue to promote mental, emotional, and physical well-being among officers. Feasible strategies include initiatives that can be implemented immediately, such as peer support programs, structured debriefings, and improved access to mental health resources. Demanding strategies involve system-wide changes, such as expanding crisis intervention teams, reshaping department culture around wellness, and implementing long-term career sustainability programs, all of which require additional funding, staffing, and policy shifts.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

● **Leveraging External Resources.** Officers often interact with individuals experiencing homelessness, addiction, or domestic violence, but without proper partnerships, their ability to offer meaningful support is limited. Establishing collaborations with victim advocacy groups, rehabilitation centers, and local health agencies helps enhance law enforcement's ability to direct individuals to appropriate services while reducing officer workload. During the Performance Strategy Session, participants discussed how a department's partnership with the health department allows officers to notify health officials after an overdose, ensuring that victims receive follow-up care within twenty-four hours.

● **Establishing Counseling Requirements.** Exposure to high-stress incidents without structured mental health support can lead to burnout and decreased officer effectiveness. Implementing peer counseling, mandatory check-ins, and post-incident

debriefs helps ensure that officers have access to emotional and psychological resources. One department shared that after recognizing gaps in handling critical incidents, it established a step-by-step procedure for officer mental health support and now trains officers on what to expect during an investigation.

- **Conducting Debriefing After Significant Events.** Without structured debriefing, officers may struggle to process trauma, leading to long-term stress and decreased job performance. Formalized debriefing sessions allow officers to discuss their experiences, share insights, and receive support following high-intensity situations. One session participant noted that implementing routine debriefs has helped officers decompress after long shifts, promoting both mental well-being and professional development.

- **Fostering Community-Based Engagement.** Positive community interactions improve officer morale and foster public trust. Programs like "Shop with a Cop" and youth mentorship initiatives provide opportunities for officers to connect with residents outside of enforcement roles. Officers who initially hesitated to participate in these programs later reported greater job satisfaction and stronger community relationships, with some even bringing their families to subsequent events.

- **Tracking Community-Assistance Outcomes.** Officers frequently assist vulnerable individuals but rarely receive updates on their long-term outcomes, which can be frustrating and demoralizing. Implementing feedback loops between law enforcement and social services would allow officers to track the progress of those they help, reinforcing the impact of their efforts. Participants highlighted that while follow-up is challenging due to staffing and Health Insurance Portability and Accountability Act (HIPAA) constraints, officers expressed a strong interest in knowing whether the individuals they assisted successfully accessed support.

- **Providing Non-Uniformed CARE Team Responses.** Collaboration, Assistance, Referral, and Education (CARE) teams provide specialized support for mental health emergencies, reducing police workload and improving community outcomes. Expanding these teams to handle homelessness, addiction, and behavioral health crises would allow officers to focus on public safety while ensuring that individuals receive appropriate care. While some agencies attempted to establish such teams in collaboration with local sheriffs' offices, funding challenges ultimately prevented implementation.

Summary

The 2024 Performance Strategy Session provided law enforcement leaders with a platform to refine strategies for improving staffing, community engagement, crime reduction, and officer wellness. Key discussions emphasized recruitment incentives, career progression pathways, and wellness initiatives to attract and retain high-quality personnel. Community engagement efforts focused on transparency, resident involvement, and structured outreach to build public trust, while crime prevention strategies highlighted high-visibility policing, data-driven approaches, and multiagency collaboration. Ensuring officer wellness through mental health resources and structured debriefing processes was also identified as essential to workforce resilience. As law enforcement agencies navigate evolving challenges, implementing these strategies is crucial to fostering operational excellence, public trust, and long-term sustainability. By adopting industry best practices, leveraging data-driven decision-making, and prioritizing innovation, departments can enhance their effectiveness and responsiveness to community needs.

FIGURE 9. STRATEGIES FOR A HIGH-PERFORMING POLICE SERVICE

● Feasible Strategy | ■ Demanding Strategy

Safe Communities
- ● High Visibility
- ● External Partnerships
- ● Transparent Crime Data
- ● Focused Patrols
- ● Strong Relations with the DA's Office
- ● Proactive Policing
- ■ AI & Predictive Policing Technologies
- ■ Partner Accountability
- ■ Securing Sustained Funding
- ■ Multiagency Collaboration
- ■ Community-Based Initiatives

Community Trust
- ● Forward-Facing Dashboards
- ● Youth Police Academy
- ● Community Engagement Division
- ● Public Safety Academy
- ● PIO & Social Media Program
- ● Community/Citizen Surveys
- ■ Incorporating Community Input
- ■ Community Liaison Program
- ■ Community Task Force

Strong Fiscal Health
- ● Budget-Process Training
- ● Agency-Sponsored Trainings
- ● Donations & Grants Policies
- ● Budgeting for Vacancies
- ■ Training to Reduce Vehicle Accidents
- ■ Accurate Separation-Pay Budgeting
- ■ Streamlined Vehicle Repairs & Replacement

Professional Excellence
- ● Training on Recent Events
- ● Weekly Training
- ● Access to Training Facilities & Instructors
- ■ Career Path Training
- ■ Annual Training on High-Liability Areas
- ■ Training Civilian Personnel

A Resilient Workforce
- ● Overhiring
- ● Consistent Training Programs
- ● Flexible Schedules
- ● Employee Satisfaction Surveys
- ● Increased Pay & Benefits
- ● Wellness Programs
- ● Increased PTO Options
- ● Career Growth Opportunities
- ■ Earlier Full Retirement Options

Officer Well-Being
- ● External Partnerships
- ● Counseling Requirements
- ● Debriefing After Significant Events
- ● Community-Based Engagement
- ■ Tracking Community-Assistance Outcomes
- ■ Non-Uniformed CARE Team Responses

High-Performing Police Service

SELECTED POLICE SERVICE BENCHMARKING PROJECT GRAPHS

GRAPH 1. Reported Robberies per 10,000 Residents
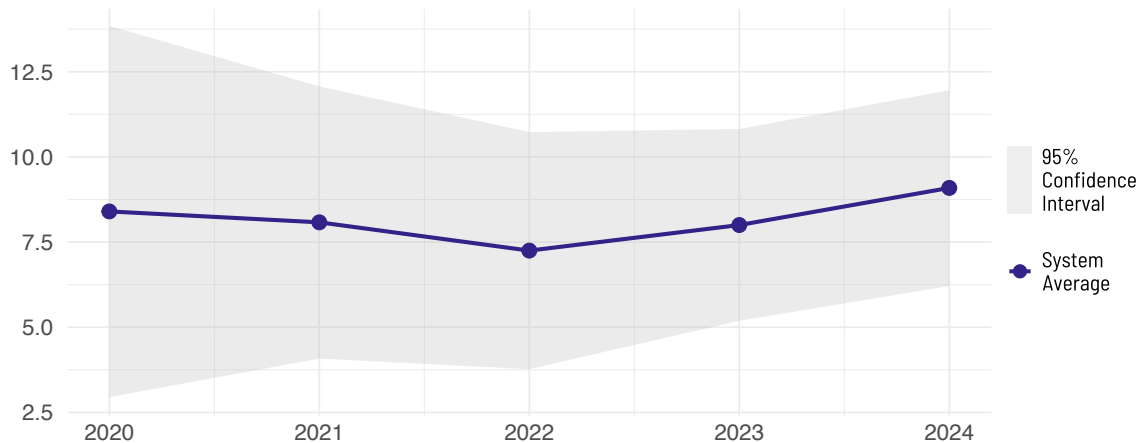
GRAPH 2. Reported Motor Vehicle Thefts per 10,000 Residents
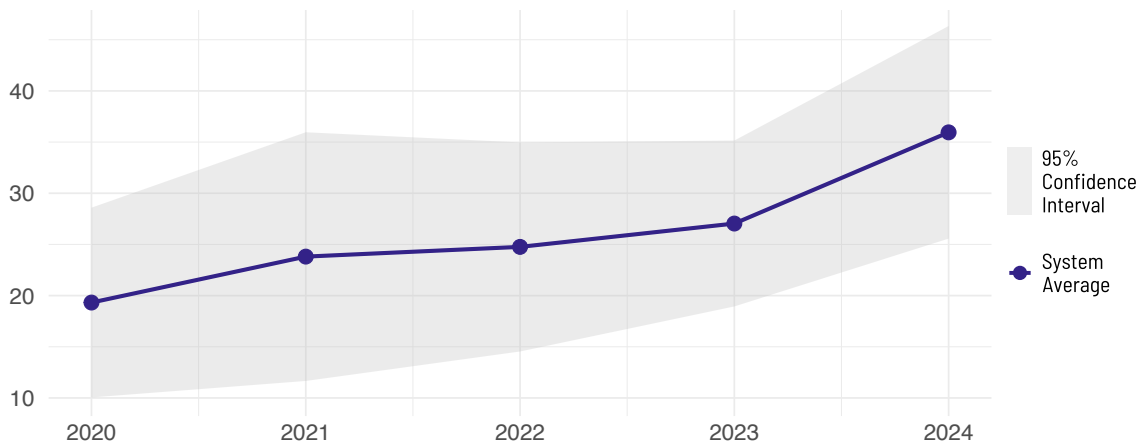
GRAPH 3. Ratio of Misdemeanor to Felony Arrests
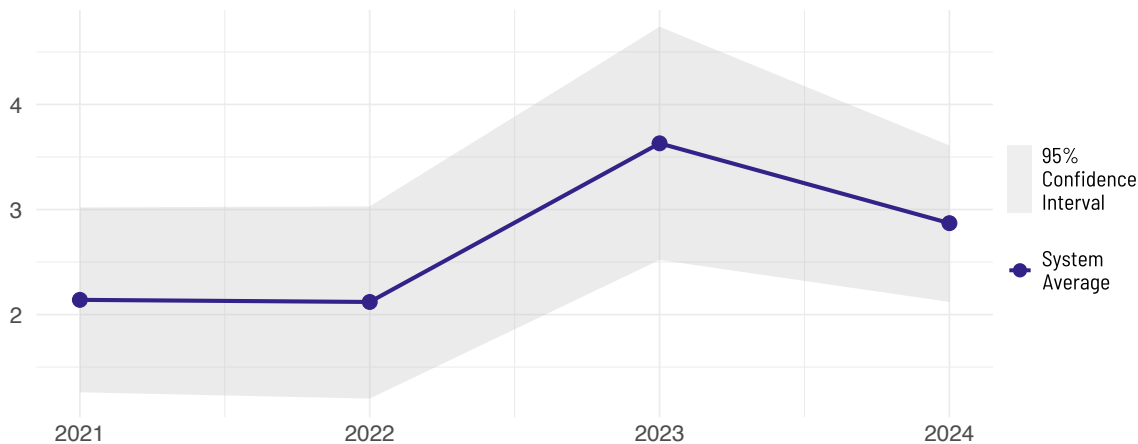
GRAPH 4. System Calls Dispatched per Sworn Officer Full-Time Equivalent (FTE)
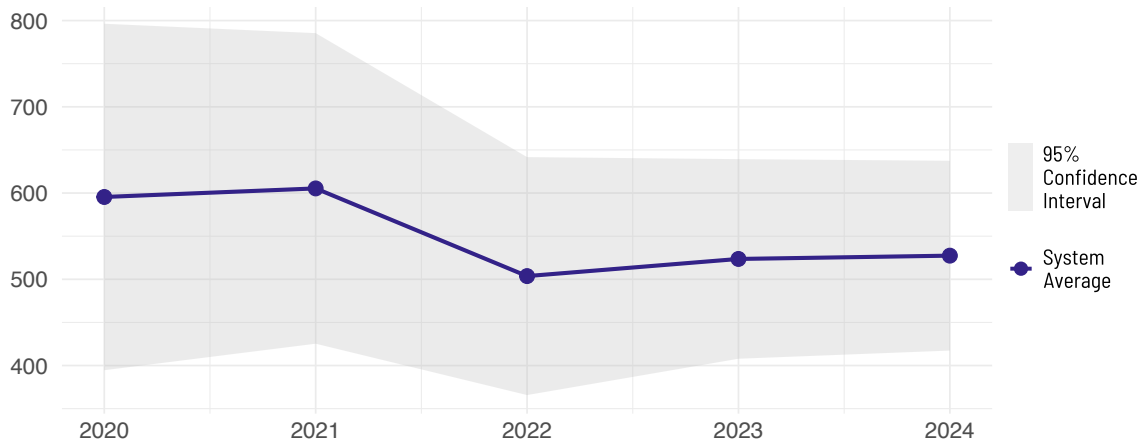
GRAPH 5. Approved Sworn Officer FTEs per 1,000 Residents
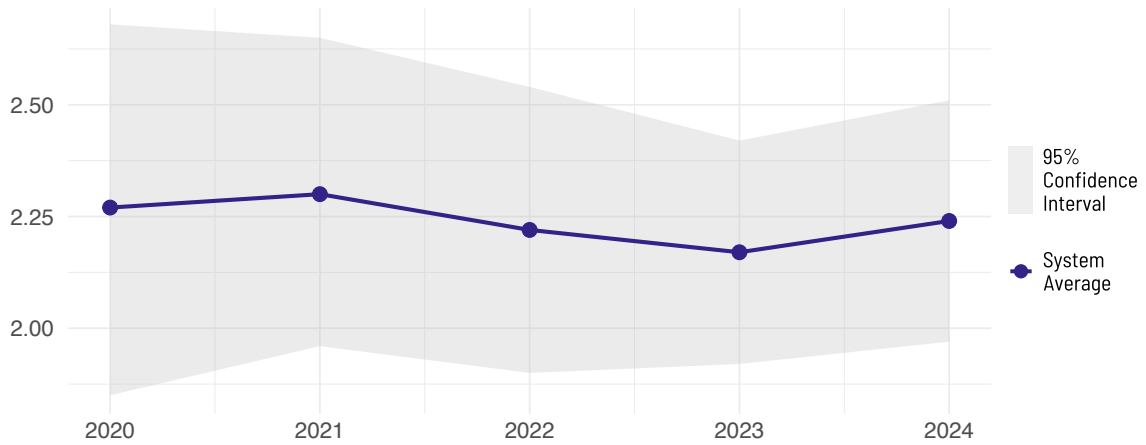
GRAPH 6. Expenses For Police Service per Capita
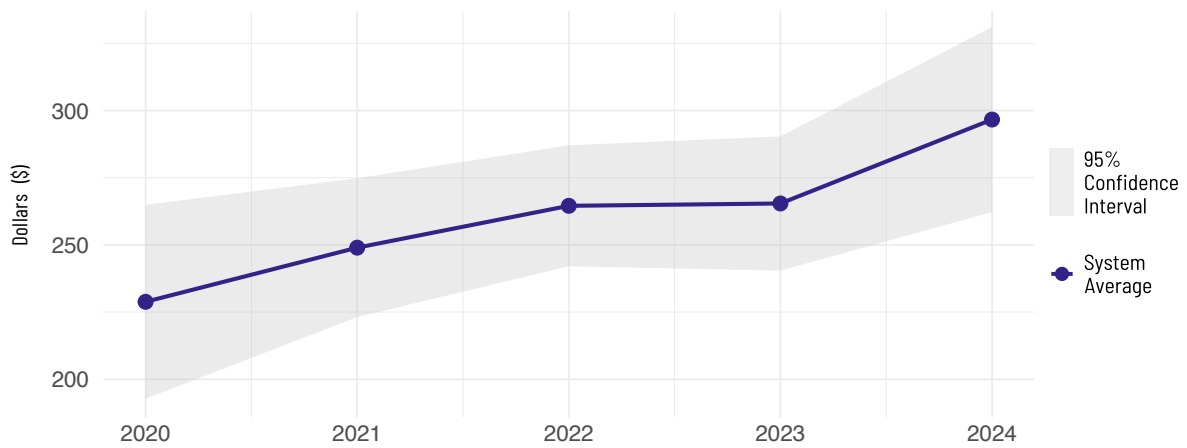
SOLID WASTE

IN NOVEMBER 2024, SOLID WASTE OFFICIALS from the Benchmarking 2.0 municipalities convened at the School of Government for the annual Performance Strategy Session to discuss strategies and define outcomes of a high-performing solid waste department. The discussion centered on key challenges, including staffing shortages, fleet management, budgeting constraints, community engagement, customer satisfaction, and data-driven decision-making. Participants shared successful practices, emerging trends, and innovative approaches to improving service delivery while maintaining cost-efficiency. The session emphasized the importance of strategic planning, interdepartmental collaboration, and resident education to ensure that solid waste departments remain effective, sustainable, and responsive to community needs.

The participants identified the following key characteristics of a high-performing solid waste service:

- operational effectiveness,
- customer satisfaction,
- community engagement,
- cost-efficiency, and
- a resilient and well-staffed workforce.

We discuss each of these characteristics in detail below.

Operational Effectiveness

Operational effectiveness is a critical factor in delivering high-quality solid waste services that meet community expectations while maintaining cost-effectiveness. Participants in the 2024 Solid Waste Performance Strategy Session emphasized that a well-functioning department ensures timely and consistent collections, minimizes service disruptions, maintains safe working conditions, and continuously improves its operations. A department that optimizes its routes, fleet, workforce, and customer communication provides reliable, efficient, and valuable waste services to residents. Participants discussed the following key aspects of operational effectiveness in a high-performing solid waste service:

- Consistent and timely collections, minimizing missed pickups and delays
- Regular removal of leaves in storm drains to prevent blockages and environmental hazards
- Maximization of waste diversion from landfills via recycling and composting programs

Strategies for Enhancing Operational Effectiveness

Participants identified both feasible and demanding strategies that solid waste departments can implement to improve operational efficiency. Feasible strategies are those that departments can easily adopt in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create transformative improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Maintaining Equipment.** A structured fleet-replacement plan combined with routine preventative maintenance ensures that solid waste departments operate with reliable, efficient, and well-maintained vehicles. Establishing a proactive replacement schedule can prevent collection trucks from becoming unreliable, while strict maintenance programs can extend vehicle lifespan and reduce unexpected breakdowns. A well-maintained fleet can minimize missed collections and reduce service delays caused by unexpected vehicle failures.

- **Planning for Long-Term Success.** Developing comprehensive plans for route optimization, fleet management, and staffing enables departments to anticipate service demands and prevent operational bottlenecks. Some municipalities have used historical data and Geographic Information System (GIS) mapping to refine collection schedules and workforce distribution, improving service efficiency.

- **Conducting Employee Reviews.** Regular employee performance appraisals help identify training needs and areas for improvement. Departments that prioritize employee feedback and training report higher job satisfaction, improved performance, and fewer service disruptions.

- **Optimizing Routes.** Using routing software and data analytics tools allows municipalities to optimize collection routes, balance workloads, and improve customer response times. Departments that have implemented real-time tracking systems report fewer missed collections and improved route efficiency. One municipality employed route optimization software to balance collection routes and prevent driver overload. This improved collection efficiency and reduced unnecessary fuel consumption.

- **Training for Consistency and Safety.** Ongoing staff training ensures that employees adhere to industry best practices in waste collection, vehicle operation, and customer interaction. Municipalities with structured training programs are likely to experience fewer accidents, higher productivity, and improved service consistency.

- **Communicating with Customers.** Establishing clear communication channels—such as text alerts, mobile apps, and dedicated hotlines—helps residents stay informed about collection schedules, delays, and service changes. Municipalities that prioritize proactive customer communication report fewer complaints and improved public trust. One municipality introduced an app that provided real-time updates on waste collection schedules. Cameras powered by artificial intelligence (AI) were also used to provide customers with feedback on recycling contamination, reducing confusion and improving compliance.

- **Optimizing Service Delivery.** Improving collection routes and service density enhances operational efficiency by reducing fuel consumption, vehicle wear, and overtime costs. Route balancing ensures that collection workloads are evenly distributed based on service demand, geographic layout, and seasonal fluctuations, while increasing service density allows departments to cover more households with fewer resources. One municipality reportedly found disparities in collection stops during an analysis of service route workloads. By balancing routes, it reduced driver workload inconsistencies and lowered operational costs.

- **Negotiating Good Contract Terms.** For municipalities that outsource solid waste services or lease collection equipment, negotiating strong contract terms ensures service reliability and cost-efficiency. Performance-based contracts—which include penalties for missed collections or poor service—help to hold vendors accountable for meeting municipal standards. One municipality negotiated a contract with a private waste collection vendor that included liquidated damages for service failures, ensuring that vendors maintained service quality and met performance standards.

- **Acquiring New Equipment.** While fleet-replacement cycles improve efficiency, fully transitioning to a modernized fleet—including electric or alternative-fuel vehicles—can yield long-term cost savings and environmental benefits. However, this transition requires significant capital investment and sustained financial planning.

- **Educating Customers.** Educating residents on proper waste disposal, recycling contamination prevention, and collection schedules is essential for improving operational efficiency and service reliability. Municipalities can implement feasible education strategies—such as informational websites, utility bill inserts, and direct mailers—to enhance public awareness and reduce contamination and service disruptions. However, sustaining recurring education efforts through continuous outreach, interactive workshops, and multilingual engagement requires long-term investment and dedicated resources.

- **Establishing Customer Fees.** Implementing customer fees can help municipalities recover costs, maintain service quality, and invest in infrastructure improvements, but the feasibility of such programs depends on local political and policy environments. Some municipalities can easily introduce customer fees for special collections, additional bins, or premium services, while others face political and public resistance to new or increased fees. For these communities, implementing structured, recurring-fee models that adjust over time to reflect service costs and operational demands remains a long-term challenge.

■ **Investing in Spare Vehicles.** A well-functioning fleet is critical for maintaining service reliability and reducing daily stress for employees. Municipalities that invest in spare vehicles—ensuring that crews always have a backup in case of breakdowns—report higher morale, fewer missed collections, and reduced worker frustration.

Customer Satisfaction

A high-performing solid waste department ensures responsive, transparent, and high-quality service delivery to meet the expectations of residents. Participants in the 2024 Solid Waste Performance Strategy Session emphasized that low complaint rates, proactive communication, and strong community relationships are critical indicators of customer satisfaction. Beyond simply providing waste collection services, departments that focus on clear communication, resident education, and service reliability foster greater public trust and stronger partnerships with the communities they serve. By implementing data-driven service improvements and engaging with residents proactively, municipalities can reduce service complaints, enhance public perception, and create a more efficient and responsive waste management system. Participants identified the following key indicators of strong public satisfaction in a high-performing solid waste department:

- Low number of customer complaints, indicating consistent and reliable service
- High customer satisfaction ratings, reflecting public confidence in waste collection efforts

Strategies for Achieving Customer Satisfaction

The 2024 Performance Strategy Session discussion identified both feasible strategies that municipalities can implement with existing resources and demanding strategies that require long-term investment or policy shifts. Feasible strategies focus on improving communication, enhancing education efforts, and responding effectively to resident concerns, while demanding strategies aim to achieve near-perfect satisfaction levels and service frequency improvements.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Promoting Greater Transparency.** Ensuring that residents are consistently informed about collection schedules, policy changes, and service expectations reduces confusion and prevents unnecessary complaints. Some municipalities have improved customer satisfaction by using automated notifications, social media updates, and online portals to provide real-time service updates.

- **Enhancing Analyst Education.** Analyzing high-complaint zones and service inconsistencies allows departments to target specific areas for improvement. Municipalities that provide specialized training for analysts and customer service teams report better issue resolution rates and reduced repeat complaints.

- **Providing Service Information.** Many residents, especially seniors, rely on traditional forms of communication. Municipalities that have included solid waste service updates in mailed utility bills and senior center bulletins have seen higher awareness and improved compliance with collection rules.

- **Improving Resolution Rates.** Timely follow-up on customer complaints ensures that issues are addressed efficiently and residents feel heard. Some municipalities have

introduced structured complaint tracking systems that enable staff to proactively reach out to residents after resolving an issue, increasing overall satisfaction.

- **Monitoring Complaints.** Residents frequently voice concerns on neighborhood forums like Nextdoor and Facebook. Monitoring these platforms helps municipalities identify service gaps, clarify policies, and respond quickly to widespread concerns before they escalate into larger problems.

- **Educating Residents.** Providing clear and recurring education on proper waste disposal, recycling contamination, and bulk pickup policies helps minimize service disruptions and customer frustration. Municipalities that implement seasonal awareness campaigns and direct resident outreach report fewer service complaints and higher compliance rates.

- **Fostering Interdepartmental Collaboration.** Collaborating with other departments—such as police patrol units, community relations teams, and emergency services—ensures that consistent messaging reaches a wider audience. Municipalities that integrate solid waste updates into broader jurisdiction-wide communication efforts have seen improved resident engagement and fewer misunderstandings about service expectations.

- **Providing Clear Communication Options for Residents.** Providing residents with multiple channels to ask questions and request service adjustments—including hotlines, mobile apps, and online chat options—creates a more accessible and responsive customer experience. Municipalities that implement user-friendly service request portals report faster response times and improved satisfaction ratings.

- **Increasing Leaf-Collection Frequency.** Many municipalities face seasonal surges in leaf accumulation, leading to resident concerns about delayed pickup and clogged storm drains. Expanding leaf-collection frequency—whether through additional seasonal pickups or extended collection windows—requires funding adjustments but significantly improves customer satisfaction in affected areas.

Community Engagement

A high-performing solid waste department fosters strong communication and engagement with the community, ensuring that residents are well-informed about waste management practices, service changes, and recycling efforts. Participants in the 2024 Solid Waste Performance Strategy Session emphasized that municipalities with proactive outreach strategies experience higher resident participation, fewer service-related complaints, and improved compliance with waste disposal guidelines. Beyond basic service delivery, effective community engagement builds trust, enhances public awareness, and encourages residents to play an active role in responsible waste management. By leveraging multi-channel communication, educational initiatives, and direct engagement opportunities, municipalities can create a more informed and cooperative public. Participants identified the following key indicators of a high-performing solid waste department that engages effectively with the community:

- Educated and informed customers who understand waste collection policies and industry best practices
- Strong communication between the community and the department, fostering trust and cooperation

Strategies for Enhancing Community Engagement

The 2024 Performance Strategy Session discussion identified both feasible strategies that municipalities can implement with existing resources and demanding strategies that require long-term investment and deeper community collaboration. Feasible strategies focus on improving accessibility, increasing public awareness, and strengthening direct outreach, while demanding strategies aim to deepen engagement at the neighborhood level.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Using Magnets and Cart Stickers.** Providing residents with easy-to-reference materials, such as magnets or cart stickers, ensures that waste disposal guidelines remain visible and accessible. Municipalities that have implemented sticker-based reminders for recycling and yard waste disposal report higher compliance rates and fewer contamination issues.

- **Developing Waste Management Apps.** Many municipalities have mobile apps that provide real-time service updates, collection schedules, and recycling guidelines. Promoting greater usage of these apps—through local government websites, social media, and direct outreach—can help residents stay better informed and engaged with solid waste services.

- **Organizing Festivals and Community Events.** Engaging directly with residents at festivals, environmental fairs, and public events provides an opportunity to educate the community about waste management, recycling programs, and upcoming service changes. Municipalities that actively participate in these events report higher public awareness and stronger relationships with residents.

- **Establishing Multilingual Communication and Outreach.** Ensuring that waste management materials and service updates are accessible to non-English-speaking residents is critical for inclusive community engagement. Municipalities that have translated service guides, recycling instructions, and online content into Spanish, Hindi, Russian, and other locally spoken languages report increased compliance and stronger community connections.

- **Promoting Neighborhood and HOA Outreach.** Establishing communication channels with neighborhood associations and homeowners' associations (HOAs) allows municipalities to tailor outreach efforts to specific community needs. Municipalities that have created neighborhood ambassador programs—where community leaders serve as liaisons between residents and the solid waste department—have reported greater trust, improved service understanding, and higher resident engagement in recycling programs.

Cost–Efficiency

Effective budget management is the foundation of a high-performing solid waste department, ensuring that resources are strategically allocated to maintain cost-effective services, invest in essential infrastructure, and support operational resilience. Participants in the 2024 Solid Waste Performance Strategy Session emphasized that a well-managed budget allows departments to deliver reliable waste collection without excessive costs, plan for fleet investments, and recover operational expenses through sustainable funding models. Municipalities that optimize their budgeting strategies can balance service affordability with operational

excellence, ensuring that solid waste services remain both financially viable and responsive to community needs. Participants identified the following key indicators of a high-performing and cost-efficient solid waste department:

- Low cost per capita (CP) while maintaining high service quality
- Efficient and cost-effective services that maximize operational value
- Adequate cost recovery to sustain long-term service delivery

Strategies for Smart Budgeting and Cost Management

The 2024 Performance Strategy Session discussions identified both feasible strategies that departments can implement with existing resources and demanding strategies that require long-term investments and financial planning. Feasible strategies focus on cost controls, procurement efficiency, and fleet maintenance, while demanding strategies require a greater commitment to financial restructuring and pay competitiveness.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Conducting Annual Fee Reviews.** Regularly reviewing customer fees and operational costs helps departments adjust pricing models to reflect inflation, service demands, and resource costs. Some municipalities conduct annual fee assessments to ensure that solid waste operations remain financially sustainable without placing excessive burdens on residents.

- **Reviewing Procurement Policies.** Evaluating procurement policies allows departments to streamline purchasing processes, negotiate better contract terms, and identify cost-saving opportunities in equipment, vehicle parts, and disposal contracts. Municipalities that standardize procurement practices report greater efficiency in budget management and reduced unnecessary expenditures.

- **Proactively Maintaining the Fleet.** Investing in proactive fleet maintenance programs reduces long-term repair costs and extends vehicle lifespan. Municipalities that prioritize preventative maintenance report fewer vehicle breakdowns, lower emergency repair costs, and improved operational consistency, all of which contribute to better budget stability.

- **Tracking Costs.** Hiring a data specialist to track operational costs, route efficiency, and fleet performance allows departments to make data-driven budgeting decisions. Municipalities that have implemented real-time budget tracking and performance analytics have been able to identify cost-saving opportunities and justify funding requests with clear, evidence-based insights.

- **Ensuring Appropriate Staffing.** Ensuring that solid waste departments are neither overstaffed nor understaffed helps municipalities balance labor costs while maintaining efficient service delivery. Right-sized staffing reduces unnecessary overtime expenses and ensures that departments can meet service demands within budget constraints.

- **Supporting Sustainable Growth.** Securing additional funding sources—such as grants, public–private partnerships, or municipal bonds—allows departments to invest in long-term infrastructure improvements, fleet upgrades, and workforce expansion. Some municipalities have successfully leveraged external funding to modernize waste collection equipment and implement new service initiatives.

■ **Using Market Analysis for Competitive Pay and Retention.** Conducting a market analysis of industry wages helps municipalities determine how their pay scales compare to private-sector waste management companies. Ensuring that salaries remain competitive is key to reducing turnover, improving recruitment, and maintaining a stable workforce—all of which contribute to long-term budget efficiency by lowering training and hiring costs.

A Resilient and Well-Staffed Workforce

Effective staffing is the foundation of a high-performing solid waste department. Participants in the 2024 Solid Waste Performance Strategy Session emphasized that a well-staffed department is one that maintains low vacancy rates, retains skilled personnel, and fosters career advancement opportunities. Beyond simply filling positions, effective staffing ensures that employees are properly trained, operationally prepared, and motivated to remain in their roles long-term. Departments that successfully meet these goals are viewed as quality employers that cultivate strong morale, inclusivity, and professional growth. Participants identified the following key indicators of a high-performing solid waste department with effective workforce strategies:

- Fully staffed operations to meet service demands efficiently
- High retention rates and career progression opportunities for employees
- Low vacancy and turnover rates, reducing disruption in collection and waste management services

Strategies for Building a Resilient and Well-Staffed Workforce

Participants identified both feasible and demanding strategies that solid waste departments can implement to improve recruitment, retention, and overall workforce stability. Feasible strategies are those that departments can easily adopt in the short term with existing resources, policies, and funding. Demanding strategies, on the other hand, represent aspirational, long-term initiatives that require significant investment or policy changes. While more difficult to implement, demanding strategies have the potential to create transformative improvements in staffing conditions.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Offering Workforce Flexibility.** Cross-training employees across multiple solid waste operations—such as solid waste, recycling, yard waste, and bulk collection—allows departments to redistribute staff when shortages arise, reducing service disruptions. Municipalities that have implemented cross-training programs report improved operational efficiency and employee engagement, as workers gain a broader skill set and more opportunities for internal promotions.

- **Implementing Flexible Scheduling.** Many solid waste jobs involve early shifts, long hours, and physically demanding work, which can contribute to burnout. Some municipalities have experimented with flexible scheduling options, such as staggered shifts or four-day workweeks, allowing employees more control over their work-life balance. Some municipalities have experimented with incentive-based scheduling ("Run Until Done"), allowing crews to finish their shifts early after completing their routes efficiently. Early results suggest higher retention rates among employees who can tailor their schedules to personal needs.

- **Promoting Career Advancement.** Providing employees with clear career pathways can significantly improve retention and morale. Some departments have established career-ladder programs, in which workers can move from entry-level collection roles to supervisory, administrative, or fleet maintenance positions through structured training and certification opportunities.

- **Offering Sign-On Bonuses.** Given the competitive job market, especially for positions requiring commercial driver's licenses (CDLs) or heavy equipment operation, some municipalities have introduced sign-on bonuses for new hires in hard-to-fill roles. This strategy has been particularly effective in attracting qualified candidates who might otherwise opt for private-sector opportunities with higher starting wages.

- **Maintaining Appropriate Staffing.** Ensuring that solid waste departments are neither overstaffed nor understaffed is key to maintaining both cost-efficiency and service reliability. Some municipalities have analyzed workload data to determine the optimal number of employees needed in each service area, leading to more strategic hiring decisions and reduced reliance on overtime or temporary workers.

- **Fostering a Culture of Appreciation.** Recognizing employees' hard work and contributions plays a crucial role in maintaining high morale and job satisfaction. Simple acknowledgments—such as verbal appreciation, newsletters, or recognition at staff meetings—can significantly boost employee engagement and motivation. Additionally, organizing team-building events, such as pizza days or appreciation lunches, fosters a positive work environment and strengthens team camaraderie.

- **Offering Competitive Compensation.** One of the biggest challenges in solid waste staffing is competition from private waste management companies, which often offer higher wages and benefits. To remain competitive, some municipalities have implemented regular pay scale adjustments tied to inflation, regional wage trends, and cost-of-living increases. These adjustments ensure that public sector wages remain attractive while preventing high turnover rates.

- **Implementing Cross-Training Across the Entire Department.** While some departments train employees in limited operational areas, full cross-training across all solid waste divisions (e.g., solid waste, recycling, yard waste, and landfill operations) could create a highly versatile workforce capable of filling gaps whenever needed. While logistically complex, this approach enhances service reliability and creates more career mobility opportunities for employees.

- **Providing Heavy Equipment Operation Training for Internal Promotion.** Rather than relying solely on external hires for specialized positions, some municipalities are investing in internal training programs for heavy equipment operation (e.g., front-loaders, compactors, and specialized collection trucks). This strategy not only reduces hiring challenges but also provides existing employees with professional development opportunities, improving retention rates and overall job satisfaction.

Summary

The 2024 Solid Waste Performance Strategy Session provided municipal leaders with a structured forum to refine strategies for enhancing the efficiency, sustainability, and responsiveness of solid waste operations. Key discussions focused on staffing, fleet management, budget sustainability, customer satisfaction, and community engagement. Employee retention, competitive compensation, and career advancement were identified as critical to building a resilient workforce, while fleet modernization, preventative maintenance, and data-driven route optimization were emphasized for improving service reliability. Budgeting strategies highlighted cost recovery models and procurement efficiencies to ensure financial sustainability. Strengthening customer satisfaction through clear communication, education initiatives, and direct outreach was also a priority. Additionally, interdepartmental collaboration and technological advancements were recognized as essential for optimizing service delivery. As solid waste departments navigate evolving regulations and service demands, implementing these strategies will be key to maintaining operational excellence. By balancing short-term improvements with long-term investments in workforce development, technology, and policy alignment, municipalities can ensure that solid waste services remain reliable, cost-effective, and responsive to community needs.

FIGURE 10. STRATEGIES FOR A HIGH-PERFORMING SOLID WASTE SERVICE

● **Feasible Strategy** | ■ **Demanding Strategy**

Operational Effectiveness
- ● Maintaining Equipment
- ● Long-Term Planning
- ● Employee Reviews
- ● Route Optimization
- ● Training for Consistency & Safety
- ● Customer Communication
- ● Optimized Service Delivery
- ● Negotiating Strong Contracts
- ■ New Equipment
- ■ Customer Education
- ■ Customer Fees
- ■ Spare Vehicles

Customer Satisfaction
- ● Greater Transparency
- ● Monitoring Complaints
- ● Analyst Education
- ● Providing Service Information
- ● Improved Resolution Rates
- ● Resident Education
- ● Interdepartmental Collaboration
- ● Clear Communication Options for Residents
- ■ Increased Leaf Collection

Community Engagement
- ● Magnets & Cart Stickers
- ● Waste Management Apps
- ● Multilingual Communication & Outreach
- ● Festivals & Community Events
- ■ Neighborhood & HOA Outreach

Cost-Efficiency
- ● Annual Fee Reviews
- ● Procurement Policy Reviews
- ● Proactive Fleet Maintenance
- ● Cost Tracking
- ● Appropriate Staffing
- ■ Supporting Sustainable Growth
- ■ Market Analysis for Competitive Pay

A Resilient & Well-Staffed Workforce
- ● Career Advancement
- ● Workforce Flexibility
- ● Culture of Appreciation
- ● Appropriate Staffing
- ● Sign-On Bonuses
- ● Flexible Scheduling
- ■ Heavy Equipment Training
- ■ Cross-Training
- ■ Competitive Compensation

High-Performing Solid Waste Service

SELECTED SOLID WASTE BENCHMARKING PROJECT GRAPHS

GRAPH 1. Tons of Residential Yard Waste Collected per Capita
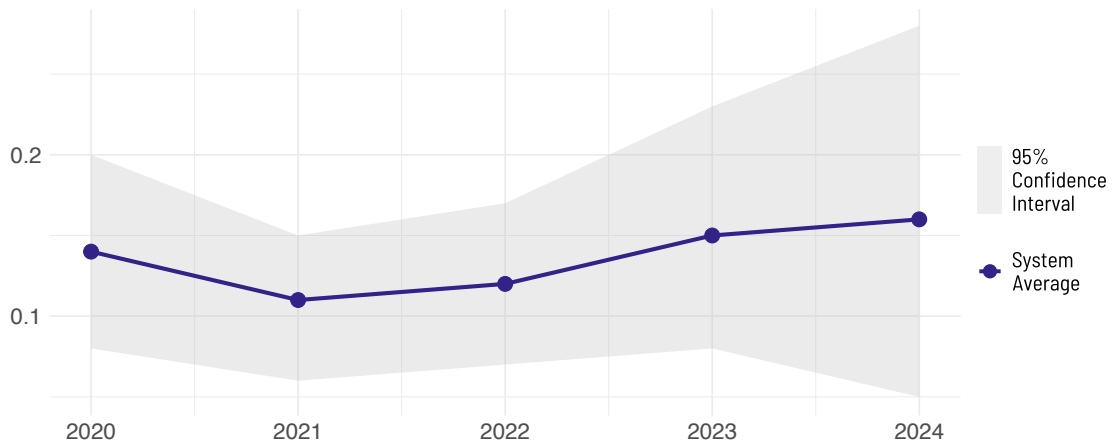
GRAPH 2. Total Expenses per Ton of Residential Yard Waste Collected
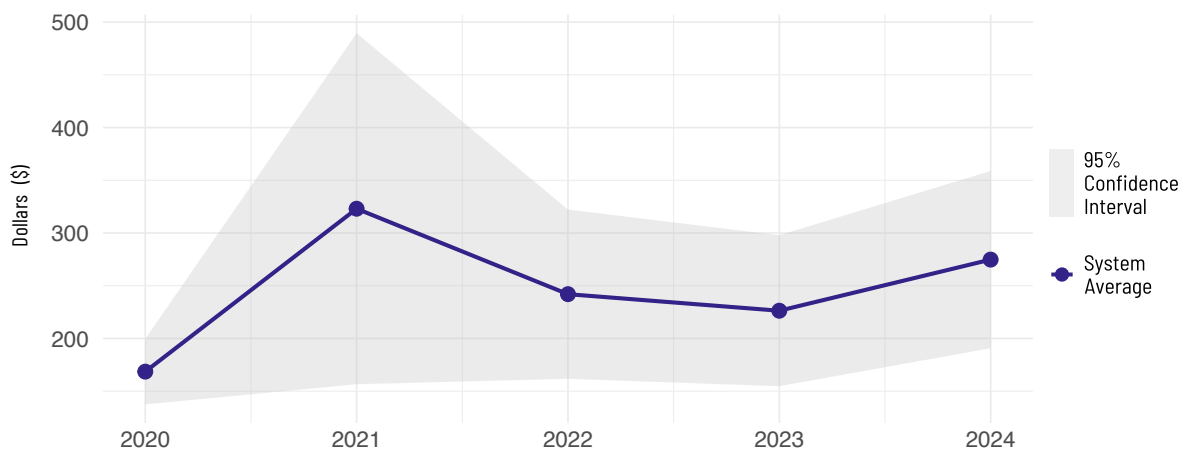
GRAPH 3. Total Expenses per Ton of Curbside Recycling Collected
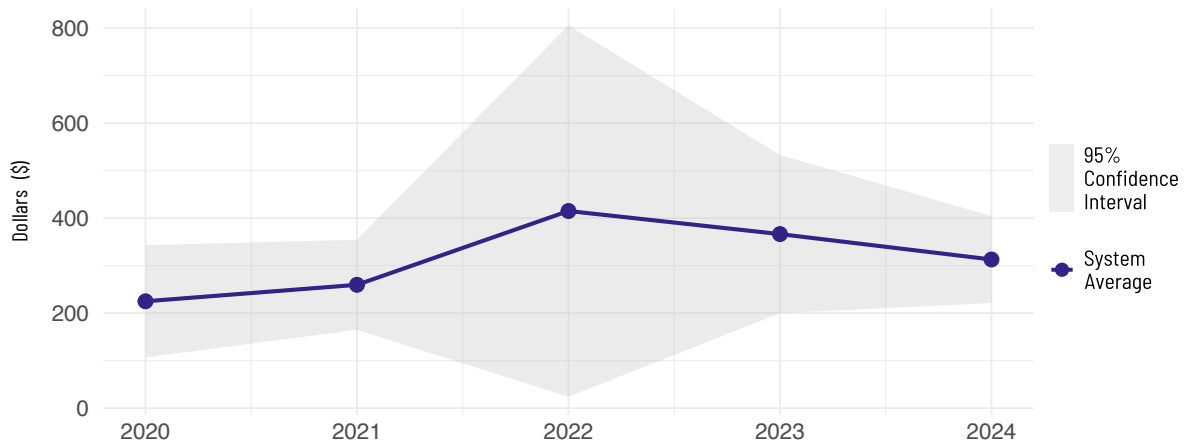
GRAPH 4. Total Expenses per Ton of Residential Refuse Collected
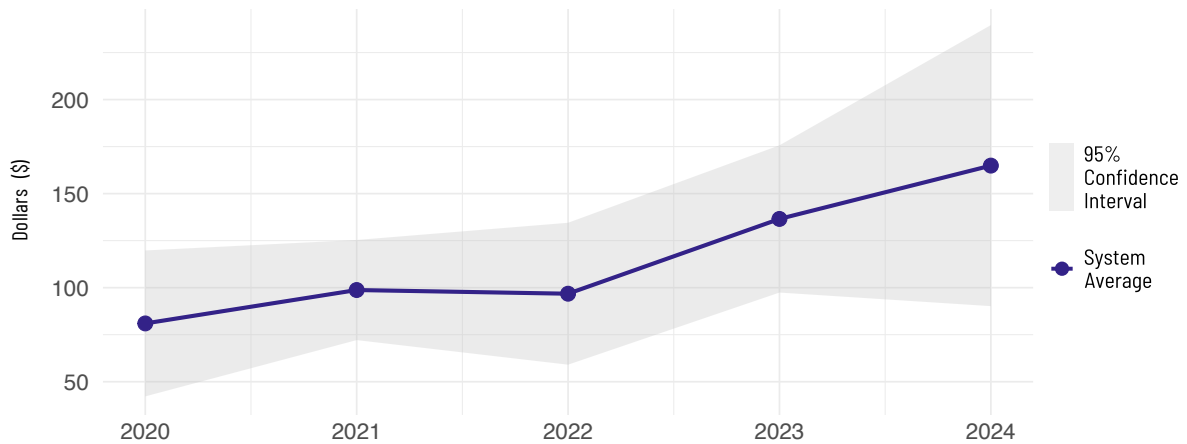
GRAPH 5. Requests for Residential Refuse Pickup Outside of Normal Routing Schedule per Collection Point
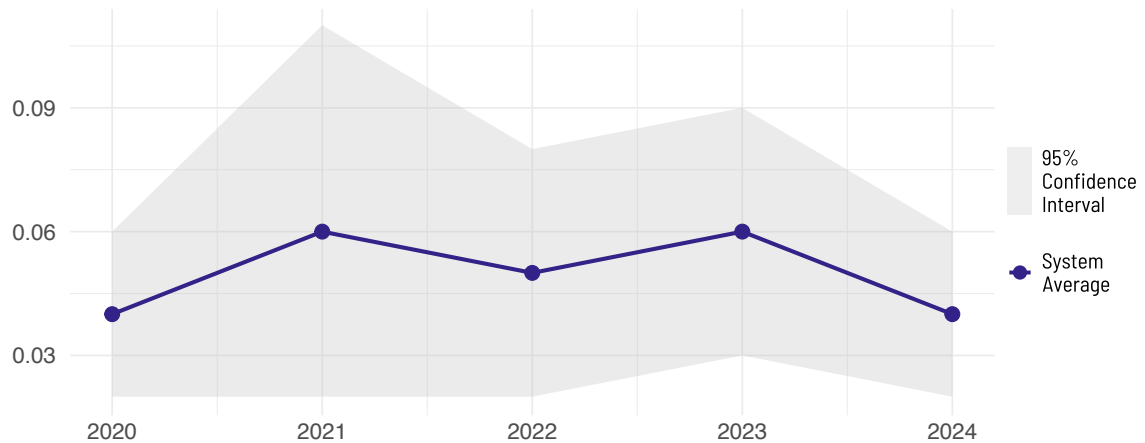
GRAPH 6. Expenses for Residential Refuse per Capita
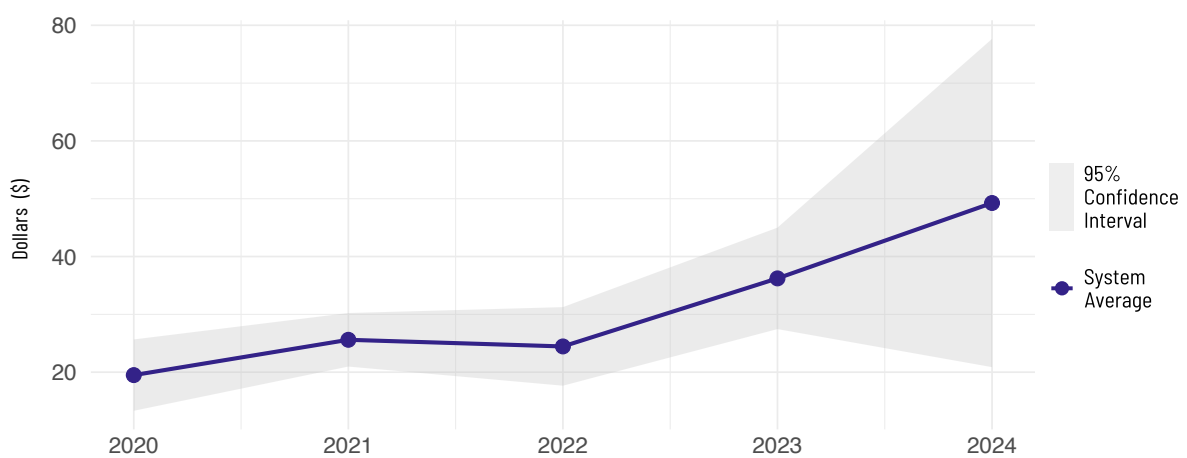
WASTEWATER SERVICE

IN NOVEMBER 2024, WASTEWATER OFFICIALS from the Benchmarking 2.0 municipalities convened at the School of Government for the annual Performance Strategy Session to discuss strategies and define outcomes of a high-performing wastewater department. This collaborative session addressed key challenges, including compliance, workforce development, financial sustainability, transparency, preventative maintenance, and public engagement. The participants emphasized the importance of data-driven decision-making, interagency collaboration, and alignment of operations with community expectations. Key strategies included integrating advanced treatment technologies, strengthening workforce recruitment, securing stable funding for infrastructure, and enhancing transparency and public engagement to build trust and ensure long-term system resilience. The participants identified the following key characteristics of a high-performing wastewater service:

- high water quality,
- cost-efficiency,
- fiscal sustainability,
- public engagement, and
- a resilient and well-staffed workforce.

We discuss each of these characteristics in detail below.

High Water Quality

High-performing wastewater departments prioritize compliance with environmental regulations and maintain high water quality standards to protect public health and the environment. By implementing proactive management strategies and adopting innovative approaches, these departments enhance wastewater treatment efficiency while ensuring compliance with regulatory requirements. Meeting or exceeding discharge standards not only safeguards natural resources but also reduces costly penalties and legal risks associated with improper wastewater management.

Strategies for Ensuring High Water Quality

Participants in the session focused on identifying both feasible and demanding strategies that wastewater departments could implement to maintain regulatory compliance and enhance treatment effectiveness. Feasible strategies are those that can be implemented in the short term using existing infrastructure, policies, and funding. Demanding strategies, on the other hand, require significant investment in new technologies, process improvements, or regulatory changes to achieve long-term advancements. While more difficult to implement, these goals have the potential to create lasting improvements in environmental protection and public trust in wastewater systems.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Establishing a Proactive Fats, Oils, and Grease (FOG) Management Program.** A proactive FOG management program minimizes blockages in sewer lines and reduces sanitary sewer overflows (SSOs). This approach helps maintain compliance with environmental regulations while improving overall system performance. One municipality implemented a jurisdiction-wide FOG ordinance requiring restaurants to install grease traps, leading to a significant reduction in sewer backups and maintenance costs, ensuring better long-term infrastructure performance.

- **Prioritizing Risk-Based Interceptor Upgrades.** Implementing a risk-based approach to prioritize interceptor (the large sewer line that collects and transports wastewater from smaller collection pipes to a treatment facility) upgrades ensures that high-need areas receive attention first. This method improves wastewater system resilience and minimizes the risk of infrastructure failures. One utility that adopted this strategy used condition assessments and predictive analytics to allocate capital improvement funds efficiently, reducing emergency repair incidents and increasing system longevity.

- **Implementing Advanced Process-Control Technologies.** Automating treatment processes enhances efficiency and ensures regulatory compliance by optimizing chemical dosing and aeration rates. One wastewater plant successfully integrated automated process controls, reducing energy costs while improving effluent quality. However, full-scale automation requires significant investment in equipment and training, making it a long-term strategic initiative.

- **Utilizing PFAS Removal Technologies.** Developing and implementing advanced treatment methods for removing per- and polyfluoroalkyl substances (PFAS) from wastewater is necessary to meet evolving federal regulations and protect public health. Though essential for compliance, PFAS removal remains expensive and technically challenging, requiring investment in research and new filtration systems.

■ **Maximizing Nutrient Recovery and Reuse Programs.** Implementing nutrient recovery initiatives to capture and repurpose nitrogen and phosphorus from wastewater treatment processes for agricultural or industrial use helps promote sustainability and regulatory compliance. This strategy reduces environmental discharge while creating an additional revenue stream for utilities.

■ **Harnessing Microbial and Bioaugmentation Strategies.** Integrating microbial enhancements into treatment processes to naturally break down organic waste reduces the need for chemical treatments. However, this environmentally friendly approach requires further research and development to optimize effectiveness and ensure regulatory approval for new biological treatment methods.

Cost–Efficiency

High-performing wastewater systems require robust infrastructure and proactive maintenance to prevent system failures and service disruptions. Preventative measures and data-driven decision-making can reduce long-term repair costs and extend the lifespan of infrastructure. Participants identified the following key indicators of a high-performing wastewater service:

- Improved reliability and reduced emergency maintenance incidents
- Cost-effective asset management and preventative maintenance planning
- Increased lifespan of wastewater infrastructure through proactive investments
- More efficient allocation of funds for infrastructure maintenance and expansion

Strategies for Enhancing Cost–Efficiency

Participants examined both feasible and demanding strategies to ensure long-term system sustainability. Feasible strategies focus on proactive maintenance programs, real-time monitoring, and data-driven asset management to extend infrastructure lifespan and reduce emergency repairs. Demanding strategies require significant investment in predictive maintenance technologies, underground infrastructure protection, and regional collaboration to enhance system-wide resilience. These efforts aim to reduce costs, improve reliability, and support sustainable growth.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

● **Establishing Inspection and Condition Assessment Programs.** Regularly scheduled pipe inspections ensure early detection of potential failures, reducing costly emergency repairs. A utility that implemented a condition assessment program based on Geographic Information System (GIS) technology achieved a 30 percent reduction in main breaks over five years.

● **Using Smart Sensors and Real-Time Monitoring.** Deploying sensors throughout the wastewater network to track flow, detect leaks, and monitor system health can provide real-time data for proactive maintenance. However, integration with existing SCADA (Supervisory Control and Data Acquisition) systems remains a challenge for many municipalities, as legacy infrastructure may not be compatible with newer digital tools.

● **Prioritizing Asset Inventory and Replacement.** Keeping an up-to-date asset inventory and weighing failure probabilities against replacement costs helps utilities make strategic

investment decisions. One wastewater facility that adopted this approach improved capital planning and resource allocation for long-term infrastructure sustainability.

◼ **Accurately Rating the Condition of Assets.** Implementing advanced assessment methods, including analytics driven by artificial intelligence (AI), can enhance infrastructure evaluation and optimize maintenance schedules. However, achieving precise condition ratings requires substantial investment in data infrastructure and staff training.

◼ **Expanding Programs for Underground Infrastructure Protection.** Implementing additional protections for underground pipes, including corrosion-resistant coatings and trenchless rehabilitation methods, can extend pipeline longevity and reduce service disruptions. Participants discussed these strategies as critical investments that require multiyear planning and dedicated funding sources.

◼ **Developing Regional Collaborations for Infrastructure Resilience.** Establishing partnerships between neighboring municipalities to share resources and coordinate large-scale infrastructure projects was highlighted as an opportunity to reduce costs and improve service reliability. However, regional collaboration requires careful negotiation and shared governance frameworks to ensure equitable participation and investment.

Fiscal Sustainability

Effective budgeting and financial planning enable wastewater departments to maintain service quality while ensuring long-term sustainability. High-performing departments implement strategic financial policies to maximize resources and fund critical infrastructure improvements. Participants identified the following key indicators of a high-performing and fiscally sound wastewater department:

- Sustainable financial practices that ensure long-term service stability
- Increased fund balance reserves to support infrastructure investments
- Reduced reliance on external funding sources for essential operations

Strategies for Fiscal Sustainability

Participants explored strategies that wastewater departments could implement to optimize financial planning and resource allocation. Feasible strategies include refining rate structures, separating enterprise and general funds, and leveraging industrial partnerships to generate additional revenue. Demanding strategies, such as regional cost-sharing agreements and grant-funded infrastructure innovations, require legislative coordination and long-term financial commitments but can significantly enhance the financial stability of wastewater utilities.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

● **Offering Industrial Incentives.** Offering lower rates on reclaimed water to industrial users encourages sustainable practices and generates additional revenue for wastewater utilities. One municipality that introduced this policy successfully attracted new industries while optimizing water reuse.

● **Maintaining Financial Stability Through Enterprise Funds.** Ensuring that wastewater funds remain separate from general municipal funds protects financial stability and supports long-term infrastructure investments. One utility department successfully

advocated for a policy change that allowed revenues to be reinvested in system upgrades.

- **Adopting Capital Outlay Financing and Asset Management Planning.** Implementing structured capital outlay financing helps utilities manage large-scale infrastructure projects without financial strain. One department that adopted a long-term capital improvement plan secured stable funding for critical upgrades and maintenance.

- **Creating Regional Cost-Sharing Agreements.** Establishing cost-sharing partnerships allows multiple municipalities to jointly fund wastewater treatment improvements and infrastructure projects. However, this collaborative model requires legislative coordination and agreement among local governments.

- **Ensuring Long-Term Stability with Rate-Stabilization Plans.** Implementing multiyear rate adjustment plans can provide financial stability for long-term infrastructure investments while minimizing impact on customers. Though beneficial, rate adjustments must be carefully managed to avoid affordability concerns.

- **Securing Funding for Backup Equipment and Critical Components.** Ensuring that municipalities have access to funding for backup equipment for major wastewater system components can improve resilience and reliability. Currently, many municipalities struggle with acquiring and maintaining backup equipment due to budget constraints, making it a stretch goal rather than a standard practice. Some municipalities have explored equipment-sharing arrangements with vendors or neighboring jurisdictions to mitigate these challenges. Additionally, supply chain delays have complicated the process of securing replacement parts, further emphasizing the need for dedicated funding to maintain operational continuity.

Public Engagement

Public trust in wastewater management is strengthened through transparency and active community engagement. High-performing departments prioritize clear communication and public education to enhance understanding and support for wastewater initiatives. Participants identified the following key indicators of a high-performing wastewater department that prioritizes community engagement:

- Increased public awareness and trust in wastewater operations
- Improved stakeholder engagement in wastewater policy and planning
- Greater community support for infrastructure investments and rate adjustments

Strategies for Enhancing Public Engagement

Participants focused on practical approaches to increasing public trust and support for wastewater management. Feasible strategies include public education initiatives, facility tours, and online dashboards to improve awareness of wastewater operations. Demanding strategies involve structural changes, such as dedicated community liaison programs and formalized public-feedback mechanisms, to ensure long-term transparency and community involvement in wastewater decision-making. These strategies help align municipal wastewater management with public expectations and foster support for infrastructure investments.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Offering Facility Tours and Public Education Programs.** Offering wastewater treatment plant tours helps educate the public on wastewater processes and fosters support for infrastructure investments. One municipality reported increased public trust after implementing an annual open house event.

- **Developing Online Reporting and Public Dashboards.** Developing interactive dashboards displaying wastewater system performance metrics increases transparency and allows the public to track service reliability and compliance data.

- **Establishing Community Liaison Programs.** Assigning dedicated personnel to engage with the community ensures consistent outreach and responsiveness to public concerns. This approach strengthens relationships but requires dedicated staffing.

- **Conducting Public Feedback Surveys.** Several municipalities have conducted anonymous surveys to gather residents' concerns, but participation has been low. Transparency issues arise when residents feel their feedback is ignored, highlighting the importance of responding to survey results.

- **Issuing Plain Language Reports.** Many municipalities issue annual wastewater system reports, but these are often filled with technical jargon that is difficult for the public to understand. Efforts have been discussed to simplify these reports using a more engaging and accessible format, similar to the Popular Financial Reports used in budget communications.

A Resilient and Well–Staffed Workforce

A sustainable and well-trained workforce is essential for maintaining efficient wastewater operations. High-performing departments focus on recruitment, retention, and professional development to build a resilient workforce. Workforce shortages and turnover can lead to operational disruptions, making it essential to implement strong hiring and retention strategies. Participants identified the following key indicators of a high-performing wastewater department with effective workforce strategies:

- Increased retention rates and reduced vacancy levels
- A highly trained and multiskilled workforce capable of handling operational challenges
- Enhanced employee morale and job satisfaction
- Strong career pathways to encourage long-term commitment to the field

Strategies for Building a Resilient and Well–Staffed Workforce

Participants focused on strategies for recruiting, retaining, and developing a skilled wastewater workforce. Feasible strategies prioritize practical, immediate solutions such as competitive pay, certification-based incentives, and cross-training to maximize employee flexibility. Demanding strategies involve more complex, long-term investments such as AI-driven workforce planning, childcare support programs, and comprehensive career pathways. These strategies aim to ensure that wastewater utilities maintain a stable, well-trained workforce capable of meeting operational and regulatory demands.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Offering Competitive Pay and Certification-Based Incentives.** Offering pay increases based on favorable evaluations and certifications encourages workforce development and improves retention. One department that implemented this strategy saw an increase in employee certification levels and a reduction in turnover.

- **Developing Internship and Career Pathway Programs.** Developing recruitment tracks from high school to technical school to full-time employment helps build a pipeline of skilled professionals. One municipality partnered with local community colleges to create an internship-to-employment program, successfully filling entry-level positions with trained graduates and strengthening the long-term workforce.

- **Providing Cross-Training and Professional Development.** Providing cross-training opportunities helps enhance workforce flexibility and ensures coverage across various roles. One wastewater utility that introduced rotational training for employees improved staff availability and operational continuity, reducing the impact of staffing shortages.

- **Implementing Retention Bonuses.** Implementing retention bonuses for employees who remain with the department for a certain number of years helps reduce turnover and retains institutional knowledge. While effective, funding constraints may limit widespread adoption, requiring strategic budget allocation.

- **Establishing On-Site Childcare and Family Support Programs.** Providing on-site childcare facilities and family support services helps reduce stress and improves work-life balance, leading to increased retention. However, this requires investment in infrastructure and operational costs, making it a long-term initiative.

Summary

The 2024 Performance Strategy Session provided municipal wastewater utility leaders with a platform to address regulatory compliance, infrastructure resilience, financial sustainability, workforce development, and public trust. Key discussions emphasized proactive monitoring, emerging contaminant management, and treatment process improvements to ensure compliance with state and federal discharge standards. Financial sustainability remained a priority, with municipalities exploring rate-stabilization plans, capital financing models, and regional cost-sharing agreements to balance infrastructure investments and ratepayer affordability. Infrastructure resilience challenges, including aging systems and climate-related vulnerabilities, underscored the need for GIS-based asset management, predictive maintenance, and regional collaboration for cost-efficient capital projects. Workforce shortages highlighted the importance of certification-based pay incentives, career pathway programs, and expanded apprenticeship opportunities to attract and retain talent. Strengthening public engagement through transparent reporting, facility tours, and interactive dashboards was also identified as key to building trust and awareness. As municipalities navigate evolving challenges, implementing these strategies—through both incremental improvements and long-term investments—will be essential for maintaining resilient, compliant, and fiscally sustainable wastewater systems that effectively serve their communities.

FIGURE 11. STRATEGIES FOR A HIGH-PERFORMING WASTEWATER SERVICE

● **Feasible Strategy** | ■ **Demanding Strategy**

High Water Quality
- ● FOG Management System
- ● Risk-Based Interceptor Upgrades
- ■ Advanced Process-Control Technologies
- ■ PFAS Removal Technologies
- ■ Nutrient Recovery & Reuse Programs
- ■ Microbial & Bioaugmentation Strategies

Cost-Efficiency
- ● Inspection & Condition Assessment Programs
- ● Smart Sensors & Real-Time Monitoring
- ● Asset Inventory & Replacement
- ■ Accurate Condition Ratings
- ■ Underground Infrastructure Protection
- ■ Regional Collaboration

Fiscal Sustainability
- ● Industrial Incentives
- ● Enterprise Funds
- ● Financing & Asset Management Planning
- ■ Regional Cost-Sharing Agreements
- ■ Long-Term Rate-Stabilization Plans
- ■ Funding for Backup Equipment

Public Engagement
- ● Facility Tours & Public Education Programs
- ● Online Reporting & Public Dashboards
- ● Community Liaison Programs
- ● Public Feedback Surveys
- ■ Plain Language Reports

A Resilient & Well-Staffed Workforce
- ● Competitive Pay & Certification Incentives
- ● Internship & Career Pathway Programs
- ■ Cross-Training & Professional Development
- ■ Retention Bonuses
- ■ On-Site Childcare & Family Support Programs

High-Performing Wastewater Department

SELECTED WASTEWATER SERVICE BENCHMARKING PROJECT GRAPHS

GRAPH 1. Ratio of Gravity to Forced Sewer Main Line
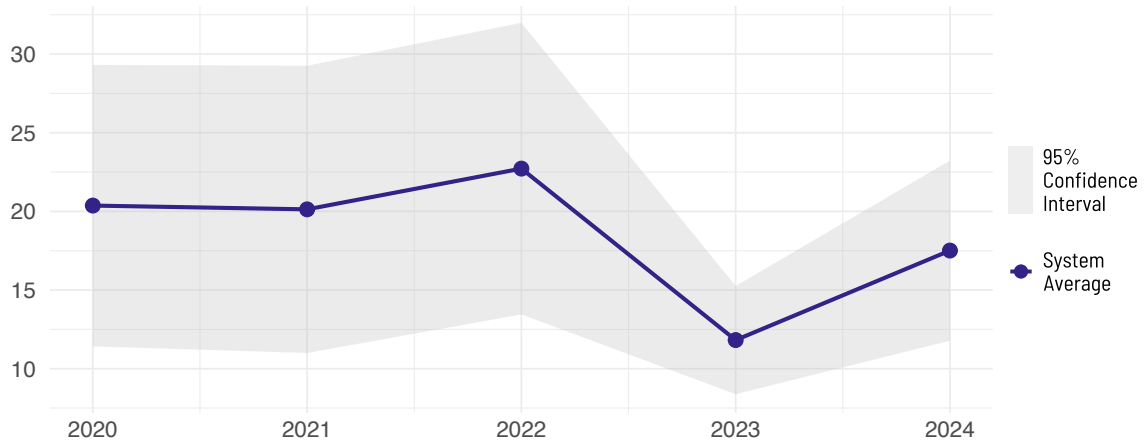
GRAPH 2. Percentage of Biosolids Reused
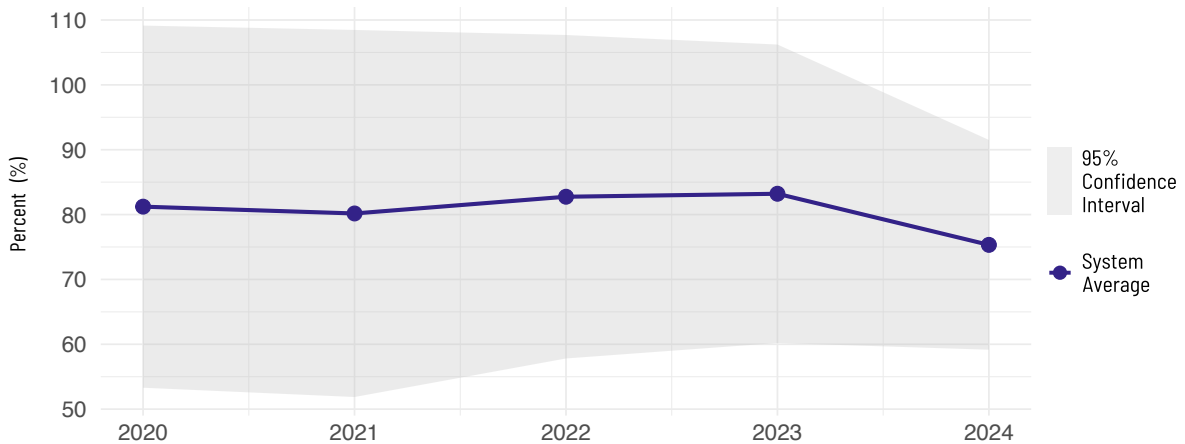
GRAPH 3. Electricity Used in Wastewater System per Millions of Gallons per Day (MGD) of Wastewater Treated
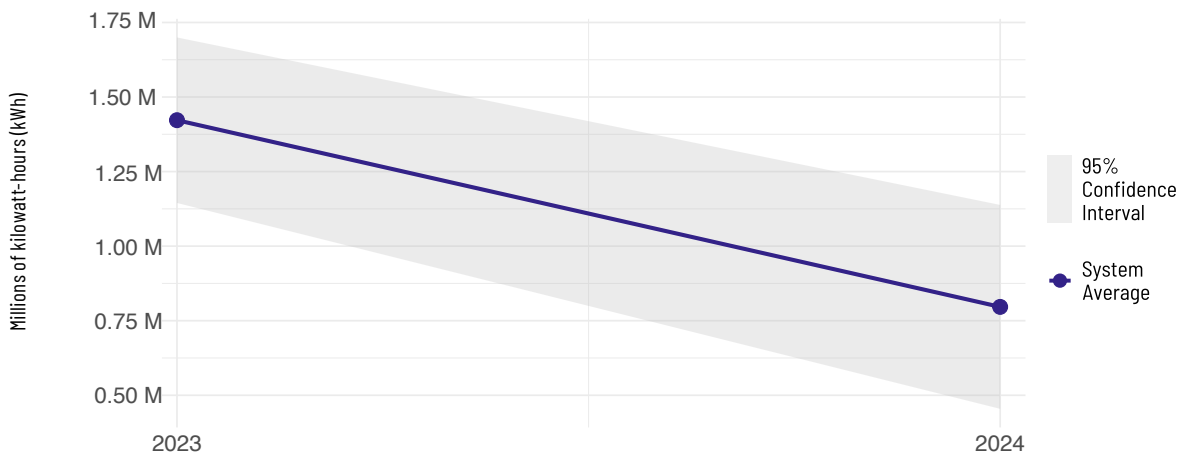
GRAPH 4. Total Expenses for Wastewater Service per Account
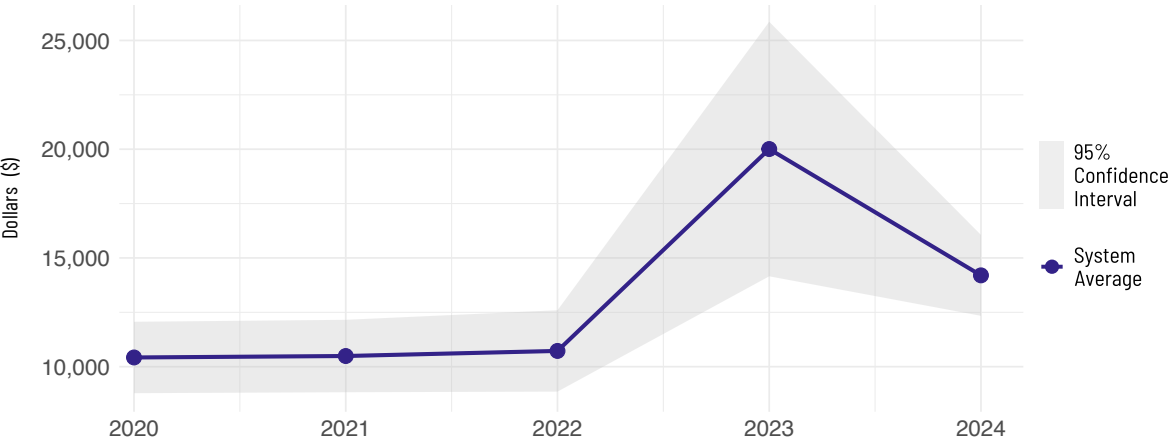
GRAPH 5. Total Expenses for Wastewater Service per MGD of Wastewater Treated
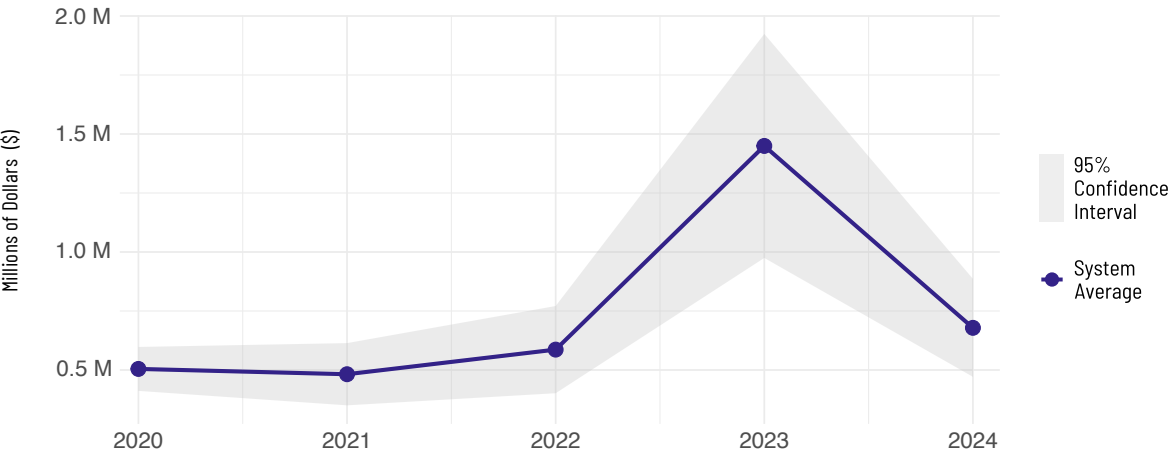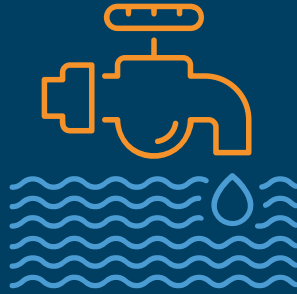
WATER SERVICE
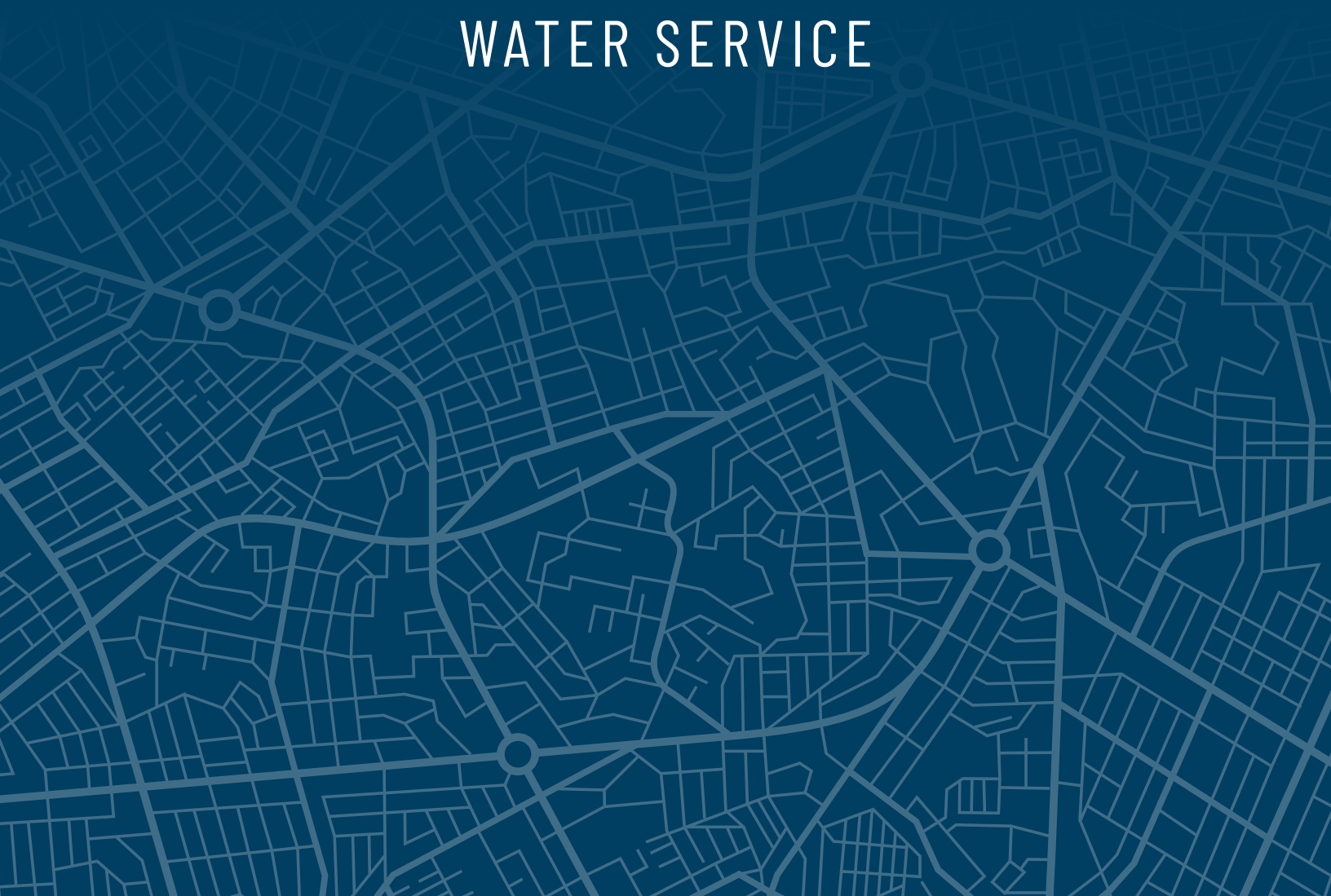
IN NOVEMBER 2024, WATER UTILITY OFFICIALS from the Benchmarking 2.0 municipalities convened at the School of Government for the annual Performance Strategy Session. This collaborative session focused on identifying strategies and defining outcomes of a high-performing water department. Participants discussed key operational challenges, including public trust and education, financial management, compliance with water quality regulations, infrastructure planning, and workforce development. The session emphasized data-driven decision-making, long-term strategic planning, and community engagement to ensure the reliability, safety, and sustainability of municipal water services.

The participants identified the following key characteristics of a high-performing water service:

- high water quality,
- enhanced infrastructure,
- financial sustainability,
- public trust and education, and
- a resilient workforce.

We discuss each of these characteristics in detail below.

High Water Quality

Ensuring compliance with water quality regulations is fundamental to protecting public health. Participants emphasized the need for proactive measures to exceed regulatory requirements and address emerging contaminants. Participants identified the following key indicators of a high-performing water service:

- Consistent compliance with all state and federal water quality regulations
- Enhanced public perception of water quality and safety

Strategies for Ensuring Compliance and High Water Quality

Participants focused on identifying feasible and demanding strategies that water departments could implement to maintain regulatory compliance, enhance treatment effectiveness, and improve customer confidence. Feasible strategies include routine testing, regulatory training, and improved public communication. Demanding strategies involve advanced treatment technologies, real-time monitoring, and long-term infrastructure investments to ensure that water quality continues to meet or exceed federal and state standards.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Conducting Routine Water Quality Testing and Sharing Reports.** Multiple departments emphasized the importance of frequent, transparent water quality reporting to combat misinformation. Some municipalities already exceed federal testing standards and are working to improve communication about their results to residents.

- **Training Employees on Regulatory Updates.** As water quality regulations evolve, participants agreed that regular staff training is essential to ensure compliance and effective operations. Investing in continuing education programs for water-utility staff can help municipalities stay ahead of regulatory changes.

- **Strengthening Coordination with State Regulators.** Participants highlighted the importance of direct engagement with the North Carolina Department of Environmental Quality (NCDEQ). Some municipalities have established regular check-ins with NCDEQ representatives to ensure compliance and gain insight into upcoming regulatory changes.

- **Proactively Communicating with the Public on Emerging Contaminants.** Many municipalities reported that residents frequently express concerns about per- and polyfluoroalkyl substances (PFAS) and perfluorooctanesulfonic acid (PFOS) due to misleading third-party advertisements. Water departments can counter misinformation by publishing factual, easy-to-understand resources about what is and is not in the water.

- **Delivering Targeted Consumer Messaging on Filtration Standards.** Some municipalities noted that private companies selling water softeners and filtration systems often misrepresent municipal water quality. Educational materials explaining treatment standards and dispelling myths can help rebuild public trust in municipality water.

- **Implementing Advanced Water Treatment Technologies.** To address concerns about emerging contaminants, some municipalities are exploring high-tech filtration and treatment solutions that go beyond federal requirements. However, the costs associated with these technologies remain a barrier.

- **Developing a Lead Service Line Inventory and Replacement Plan.** Several municipalities have begun identifying and mapping lead service lines in preparation for

upcoming state and federal mandates. A long-term funding strategy for replacement is necessary to ensure full compliance.

■ **Implementing Real-Time Digital Water Quality Monitoring.** Some municipalities expressed interest in implementing automated, AI-driven water quality monitoring systems to provide real-time data on contaminants, chlorine levels, and pressure fluctuations.

■ **Establishing a Public Notification System for Water Quality Changes.** Residents expect immediate updates on water safety concerns. A real-time alert system that notifies customers of water quality changes via text, email, and dashboards could increase transparency.

■ **Facilitating State-Level Coordination for PFAS/PFOS Removal Grants.** While municipalities are responsible for compliance and water treatment, state and federal funding remains a critical component of addressing emerging contaminants. Advocating for dedicated financial support could help offset the costs of compliance upgrades.

Enhanced Infrastructure

Strategic infrastructure investment ensures the reliability and sustainability of water services. Participants discussed the need for comprehensive planning, proactive maintenance, and long-term asset management to address aging infrastructure and population growth. Water departments must balance immediate repair needs with future capital improvements, ensuring that systems remain resilient and capable of supporting economic development.

Strategies for Sustainable Infrastructure and Capital Improvement Plans (CIPs)

Participants focused on feasible and demanding strategies for ensuring system reliability, extending asset lifespans, and supporting long-term growth. Feasible strategies emphasize condition assessments, preventative maintenance, and efficient resource allocation, while demanding strategies require large-scale investments in automation, redundancy, and strategic partnerships.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

● **Implementing Lifecycle Modeling for Asset Management.** Multiple municipalities discussed using data-driven decision-making to prioritize infrastructure upgrades. One participant mentioned that tracking infrastructure conditions through a Geographic Information System (GIS) and lifecycle models has helped reduce emergency repairs and extend asset life. Expanding asset management software ensures that water departments can proactively plan replacements before failures occur.

● **Establishing Scheduled Preventative Maintenance Programs.** Several participants highlighted the shift from reactive maintenance to proactive replacement schedules. One municipality shared that implementing a structured valve and hydrant maintenance program reduced emergency service disruptions and extended equipment longevity.

● **Conducting Competitive Bidding for CIP Projects.** Municipalities noted that rising material costs and contractor shortages have impacted capital project timelines and

budgets. Some departments are exploring cooperative purchasing agreements and regional bidding partnerships to reduce procurement delays and improve cost-efficiency.

- **Performing Infrastructure Mapping and Condition Assessments.** Many municipalities lack comprehensive, updated maps of underground infrastructure. One participant emphasized that conducting full system condition assessments using GIS-based tools has improved planning accuracy and funding requests.

- **Improving Coordination with Elected Officials.** Several utility directors mentioned that capital project approvals often face delays due to council concerns about budget impacts. Participants recommended enhancing CIP-planning presentations using clear data visualizations to help elected officials understand the long-term cost savings of proactive investment.

- **Conducting 100 Percent Condition Assessment of CIP Items.** Participants emphasized the need for system-wide asset condition assessments but noted that staffing shortages and data inconsistencies hinder progress. Municipalities that have conducted full pipeline assessments found it easier to secure state and federal funding for upgrades.

- **Addressing Cost-Inflation for Capital Projects.** Several municipalities reported that longer project timelines due to supply chain delays have led to significant cost overruns. One suggestion was to explore long-term material procurement contracts that lock in pricing and protect against inflation-driven cost increases.

- **Implementing Automated Water Plant Systems.** Operators discussed the long-term benefits of automation in water treatment plants, including reduced manual labor, improved efficiency, and quicker response times to equipment failures. However, participants noted that automation requires significant upfront investment and long-term workforce training.

- **Exploring Funding Mechanisms for CIP Expansion.** Some municipalities expressed concerns about funding constraints limiting their ability to expand water capacity for new developments. Some departments are evaluating impact fees, developer contributions, and state/federal grants to finance infrastructure growth without burdening existing ratepayers.

- **Pursuing Regional Water Infrastructure Partnerships.** One municipality raised the possibility of regional collaboration for major capital projects to reduce individual cost burdens and improve long-term resiliency. Participants agreed that coordinating infrastructure projects with neighboring jurisdictions could be a cost-effective solution for expanding treatment capacity and improving redundancy.

Financial Sustainability

Effective financial management is crucial to maintaining high-quality water services. Participants discussed strategies to ensure stable and affordable water rates while balancing operational costs, capital investments, and regulatory compliance. Participants identified the following key indicators of effective financial management in a high-performing water service:

- Sustainable and competitive water rates aligned with affordability benchmarks
- Strong financial planning that supports long-term capital improvements
- Effective budgeting that balances infrastructure needs with customer affordability

Strategies for Effective Financial Management

Participants focused on identifying feasible and demanding strategies that municipalities can implement to strengthen fiscal sustainability. Feasible strategies include improving internal budgeting processes, conducting rate studies, and increasing public awareness of utility costs. Demanding strategies involve long-term financial planning mechanisms such as multiyear rate-stabilization plans, reserve funds, and alternative funding structures.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Conducting Annual Rate Studies and Transparent Reporting.** Several municipalities conduct annual rate studies to assess affordability and infrastructure funding needs. Communicating these findings to residents and elected officials fosters trust and accountability.

- **Cross-Training Staff in Budgeting Processes.** Officials emphasized that department heads must be better equipped to advocate for necessary funding. Training managers in financial forecasting and budget advocacy enhances long-term planning.

- **Establishing Customer Assistance Programs.** Some municipalities have established customer assistance programs to support low-income residents struggling with water bills. Expanding these efforts helps ensure affordability while maintaining revenue stability.

- **Conducting Operational Cost Reviews.** While outsourcing services is sometimes considered, officials cautioned that it can increase costs and reduce municipal control. Conducting internal operational reviews helps identify cost-saving opportunities without relying on external contractors.

- **Implementing Revenue Forecasting Tools.** Participants expressed interest in financial dashboards that track revenue trends and expenses. Implementing these real-time tools can enable better long-term budgeting and infrastructure planning.

- **Developing Multiyear Rate-Stabilization Plans.** A structured rate plan was identified as a way to ensure predictable funding for capital improvements while minimizing financial shocks.

- **Establishing Dedicated Infrastructure Reserve Funds.** Some municipalities expressed concern about unexpected infrastructure failures straining budgets and advocated for establishing reserve funds.

- **Exploring Public–Private Partnerships (PPP) for Infrastructure Financing.** Participants discussed PPP agreements as alternative funding mechanisms to finance major capital projects without overburdening ratepayers.

- **Coordinating Regional Utility Efforts.** Municipalities operating smaller water utilities face competitive disadvantages compared to larger regional authorities. Coordinating purchasing agreements and resource-sharing can reduce costs and improve service reliability.

- **Exploring Utility Authority Models.** Some municipalities explored whether transitioning from direct municipal management to a utility authority model would provide greater financial flexibility and efficiency.

Public Trust and Education

Public trust is essential for a high-performing water department. Participants emphasized the need for transparent communication, community outreach, and educational initiatives to build confidence in municipal water services. Ensuring that residents understand water utility operations, safety measures, and compliance efforts enhances credibility and reduces misinformation. A well-informed public is more likely to support infrastructure investments, conservation efforts, and policy decisions that sustain long-term water quality and reliability. Key priorities include increasing public confidence in water quality and reliability, improving awareness of utility regulations, and fostering greater resident engagement through proactive communication strategies.

Strategies for Building Public Trust and Educating the Community

Participants in the session focused on identifying both feasible and demanding strategies that water departments could implement to strengthen engagement and improve transparency. Feasible strategies are those that can be executed in the short term using existing resources, communication channels, and educational programs. Demanding strategies require long-term investment, policy changes, or significant outreach expansions to create a sustained impact on public perception and confidence. While more difficult to implement, these initiatives have the potential to reshape how residents view and interact with their local water utilities.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Deploying Social Media Campaigns.** Several departments noted that misinformation, particularly regarding PFAS, spreads rapidly through Facebook, Nextdoor, and Reddit. Municipalities that have successfully engaged the public at community events found that these interactions help dispel myths and improve trust. Implementing social media education campaigns can directly address public concerns and improve transparency.

- **Organizing Facility Tours and Open Houses.** Departments that host public tours of water treatment plants reported that residents who see operations firsthand develop greater confidence in water quality. Expanding these education-focused tours and pairing them with interactive demonstrations can build credibility and trust.

- **Establishing a Dedicated Public Information Officer (PIO).** Many officials stated that public inquiries about water quality and billing concerns consume significant staff time. A dedicated PIO ensures consistent messaging, reducing misinformation by directing residents to accurate information sources.

- **Offering Educational Programs in Schools.** Some departments have developed mascots and school outreach programs to teach children about water treatment and conservation. Youth engagement fosters intergenerational trust, as students relay what they learn to their families.

- **Providing Customer FAQs and Proactive Outreach.** Participants agreed that public trust erodes when utilities only communicate during emergencies. Developing an FAQ portal, issuing regular updates, and proactively addressing common concerns can mitigate confusion and strengthen public confidence.

■ **Developing Branded Water-Utility Campaigns.** Several municipalities expressed concern that residents undervalue municipal water services. Some jurisdictions have considered bottling municipal water for promotional use, reinforcing confidence in tap water quality.

■ **Creating a Citizen Water Academy.** One municipality reported success with a Citizens Academy that educates residents about local government operations. Expanding this into a Water Academy could help create community ambassadors who share factual information and counter public skepticism.

■ **Pursuing Legislative Advocacy for Water Transparency.** Officials emphasized that current regulatory reporting does not effectively communicate how municipalities exceed federal water safety standards. Advocacy efforts could push for clearer state-level reporting requirements to better inform residents.

■ **Expanding the Public Engagement Team.** Larger municipalities noted that their communications teams are stretched thin. Creating a dedicated public engagement team for water utilities could allow for continuous outreach rather than reactive communication.

■ **Implementing a Real-Time Water Quality Monitoring Dashboard.** Residents increasingly demand real-time updates on water quality and service disruptions. A public-facing dashboard displaying water quality data could reinforce transparency and preempt complaints.

A Resilient Workforce

A high-performing water department requires a skilled and stable workforce to ensure service reliability, regulatory compliance, and institutional knowledge retention. However, municipalities continue to face staffing shortages, an aging workforce, and challenges in recruiting and retaining certified personnel. Participants emphasized that entry-level pipelines into the industry are limited, and experienced staff are often lured away by higher-paying private-sector jobs. The 2024 Performance Strategy Session highlighted the need for strong recruitment programs, competitive pay structures, professional development opportunities, and workplace flexibility to attract and retain skilled water professionals. Participants discussed successful strategies used by municipalities to improve workforce retention, as well as long-term workforce planning initiatives that require larger investments and policy shifts. They identified the following key indicators of a high-performing water service with effective workforce strategies:

- Low turnover rates and high retention of certified personnel
- Career growth opportunities that incentivize long-term employment
- A workplace culture that attracts top talent and fosters institutional knowledge

Strategies for Strengthening Workforce Resilience

Participants focused on identifying feasible and demanding strategies to enhance recruitment, career development, and workplace culture. Feasible strategies include improving certification pathways, structured career progression plans, and compensation adjustments. Demanding strategies involve regional workforce collaborations, childcare benefits, and restructuring municipal employment policies to create a long-term, sustainable water workforce.

Feasible strategies are highlighted in **green**. Demanding strategies are highlighted in **orange**.

- **Offering Certification Incentive Pay.** Participants agreed that employees who achieve higher-level certifications should receive immediate compensation adjustments. Several municipalities have introduced tiered pay structures that reward employees for obtaining higher certifications, reducing turnover and incentivizing professional development.

- **Implementing Career Ladders.** Many municipalities struggle to retain staff due to a lack of clear career progression opportunities. Some departments have begun defining structured career paths that provide promotion opportunities at set experience and certification levels, ensuring that employees see long-term potential within their organizations.

- **Developing Targeted Recruitment Programs.** Participants noted that water utilities are not widely promoted as career opportunities to young professionals. Some municipalities are implementing high school and community college outreach programs to introduce students to the water industry and build a local pipeline of future operators.

- **Offering On-Call Pay Incentives.** Several water departments reported that on-call responsibilities are a major deterrent for retaining employees, especially younger staff. Municipalities that increased on-call pay rates and adjusted schedules found improvements in employee retention and reductions in burnout.

- **Establishing Peer Mentorship and Training Programs.** Participants emphasized that new hires struggle to adapt to field operations without structured training programs. Municipalities that have introduced formal mentorship programs, in which experienced staff guide new employees through certification and daily operations, have seen higher retention rates.

- **Creating Regional Apprenticeship Programs.** Participants acknowledged that many municipalities compete for the same limited pool of licensed operators. Establishing regional water workforce apprenticeship programs in partnership with community colleges and technical schools could provide a sustained talent pipeline and reduce hiring challenges.

- **Offering Pay and Benefits Adjustments.** Some municipalities lose employees to private-sector jobs that offer significantly higher salaries. A long-term goal for many departments is to restructure compensation packages to offer higher base salaries, improved retirement benefits, and more attractive health plans to remain competitive.

- **Developing Childcare and Family Support Initiatives.** Workforce retention is impacted by work-life balance challenges, particularly for younger employees. One participant suggested that subsidized childcare or flexible scheduling policies could help attract and retain a more diverse workforce.

- **Facilitating Conversion to Utility Authority.** Some municipalities have explored moving water utilities from municipal-controlled employment structures to independent utility authorities. This transition allows for greater flexibility in setting salaries and benefits and could increase competitiveness with the private sector.

- **Using Automated Workforce Management Systems.** Several municipalities noted that staffing shortages create challenges in maintaining 24/7 operations. Some utilities are exploring AI-driven workforce management software to optimize shift scheduling, anticipate staffing shortages, and improve efficiency in resource allocation.
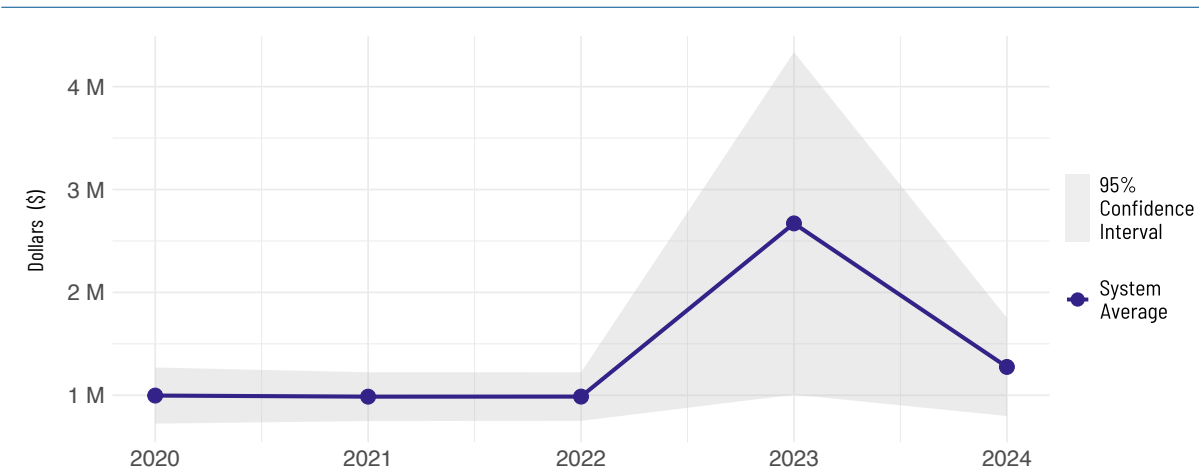
Summary

The 2024 Performance Strategy Session provided municipal water utility leaders with a platform to address service delivery, infrastructure resilience, financial sustainability, workforce development, and public trust. Key discussions emphasized the importance of transparency, proactive engagement, and educational outreach to build public confidence in drinking water systems. Financial sustainability remained a priority, with municipalities exploring data-driven rate structures, financial forecasting tools, and customer assistance programs to balance affordability with long-term infrastructure investments. Compliance with evolving water quality regulations was another central theme, highlighting the need for proactive regulatory alignment, routine testing, and investments in advanced treatment technologies to address emerging contaminants. Infrastructure planning discussions underscored the urgency of strategic investment in aging water systems through GIS-based asset management, preventative maintenance programs, and capital improvement planning. Workforce development challenges highlighted the need for certification-based incentives, career ladders, and regional apprenticeship programs to attract and retain skilled professionals. As municipalities navigate evolving challenges, implementing these strategies—through both incremental improvements and long-term investments—will be essential for maintaining resilient, compliant, and financially sustainable water utilities that effectively serve their communities.
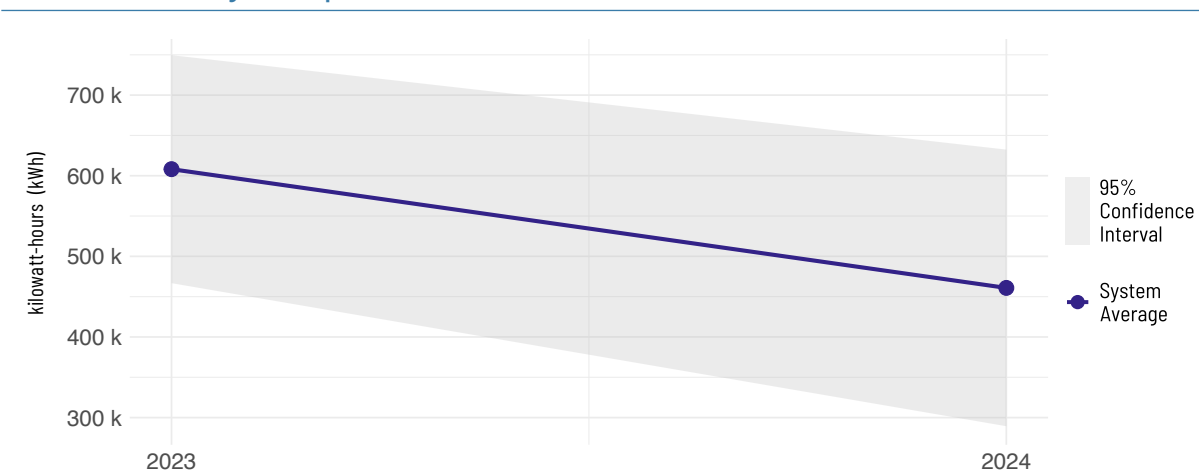
FIGURE 12. STRATEGIES FOR A HIGH-PERFORMING WATER SERVICE

● Feasible Strategy | ■ Demanding Strategy

- ● Proactive Public Communication on Emerging Contaminants
- ● Water Quality Testing & Report Sharing
- ● Employee Training on Regulatory Updates
- ● Targeted Consumer Messaging on Filtration Standards
- ● Strong Coordination with State Regulators
- ■ Advanced Water Treatment Technologies
- ■ Lead Service Line Inventory & Replacement Plan
- ■ Real-Time Digital Water Quality Monitoring
- ■ Public Notification System for Water Quality Changes
- ■ State-Level Coordination for PFAS/PFOS Removal Grants

High Water Quality

- ● Improving Coordination with Elected Officials
- ● Scheduled Preventative Maintenance Programs
- ● Competitive Bidding for CIP Projects
- ● Lifecycle Modeling for Asset Management
- ● Infrastructure Mapping & Condition Assessments
- ■ System-Wide Condition Assessments
- ■ Long-Term Material Procurement Contracts
- ■ Automated Water Plant Systems
- ■ Funding Mechanisms for CIP Expansion
- ■ Regional Water Infrastructure Partnerships

Enhanced Infrastructure

- ● Annual Rate Study & Transparent Reporting
- ● Cross-Training Staff in Budgeting Processes
- ● Customer Assistance Programs
- ● Operational Cost Reviews
- ● Revenue Forecasting
- ■ Multiyear Rate-Stabilization Plans
- ■ Dedicated Infrastructure Reserve Funds
- ■ Regional Utility Coordination
- ■ Utility Authority Models
- ■ Public-Private Partnerships for Infrastructure Financing

Financial Sustainability

High-Performing Water Service

- ● Social Media Campaigns
- ● Facility Tours
- ● Dedicated PIO
- ● Educational Programs
- ● Customer FAQs & Outreach
- ■ Branded Water-Utility Campaigns
- ■ Citizen Water Academy
- ■ Legislative Advocacy for Water Transparency
- ■ Expanded Public Engagement Team
- ■ Real-Time Water Quality Monitoring Dashboard

Public Trust & Education

- ● Certification Incentive Pay
- ● Career Ladders
- ● Targeted Recruitment Programs
- ● On-Call Pay Incentives
- ● Peer Mentorship & Training Programs
- ■ Regional Apprenticeship Programs
- ■ Pay & Benefits Adjustments
- ■ Childcare & Family Support Initiatives
- ■ Conversion to Utility Authority
- ■ Automated Workforce Management Systems

A Resilient Workforce

SELECTED WATER SERVICE BENCHMARKING PROJECT GRAPHS
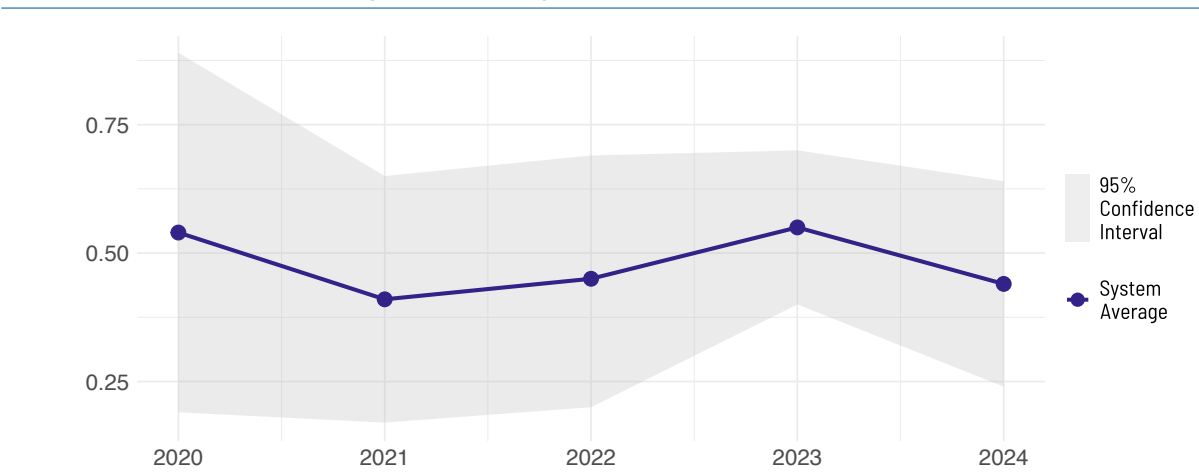
GRAPH 1. Total Expenses per Millions of Gallons per Day (MGD) of Finished Water
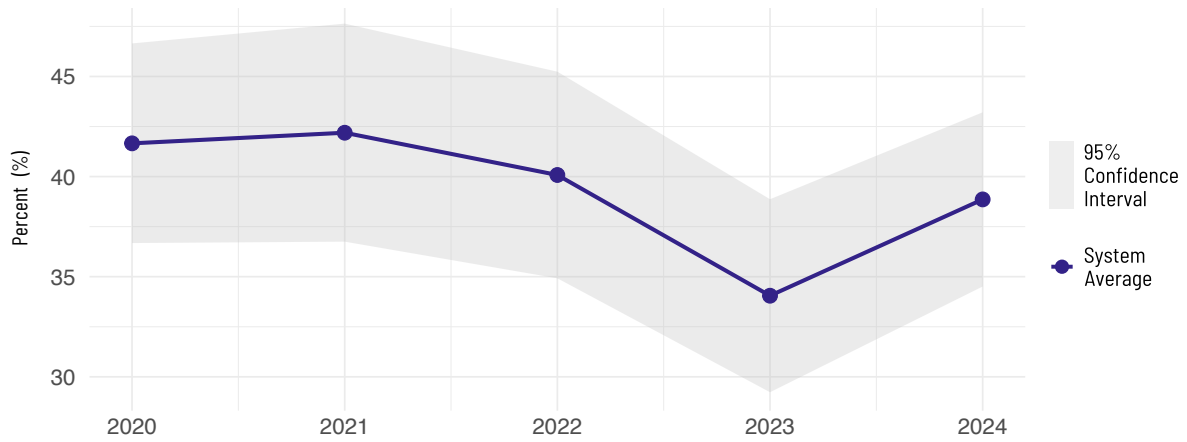

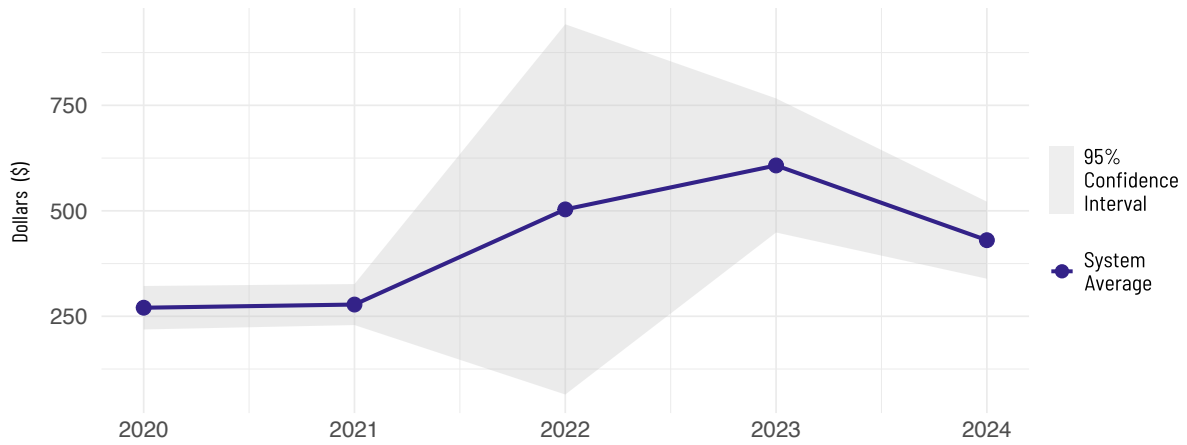
GRAPH 2. Electricity Used per MGD of Water Treated

GRAPH 3. Water Main Breaks per Mile of Pipe

GRAPH 4. Personnel Expenses as a Percentage of Total Water Service Expenses

GRAPH 5. Water Service Expenses per Meter

REPORT SUMMARY

REPORT SUMMARY

THE 2025 NORTH CAROLINA BENCHMARKING PROJECT REPORT highlights the strategic innovations and operational challenges facing municipal service departments across the state. Informed by data submitted through the Benchmarking 2.0 platform and the collaborative insights of November's Performance Strategy Sessions, this report reflects how local governments are using performance data to drive improvements in service delivery. Departments outlined both feasible and stretch strategies to advance their goals, emphasizing workforce resilience, technological modernization, interdepartmental coordination, and public trust. The following summary synthesizes the major outcomes and strategies developed by participating municipalities across each service area.

ASPHALT MAINTENANCE

Departments focused on five key outcomes: rapid response, durable road repair, safe mobility, strong external coordination, and a skilled, resilient workforce. Timely repairs, particularly for pothole patching, remain essential to maintaining public trust and road usability. Municipalities reported success deploying asphalt-recycling trucks, integrating 311 with work order systems, and adopting twenty-four-hour maintenance shifts. Durable repairs were linked to strong vendor relationships, rigorous inspections, and coordinated utility work. Safe mobility was strengthened through ADA-compliant sidewalk retrofits, traffic calming designs, and real-time alerts to residents. GIS-based project tracking and centralized scheduling tools supported coordination, while tiered certification pay and career ladders helped recruit and retain field staff.

BUILDING INSPECTIONS

Participants identified five essential outcomes for success: building safety, excellent customer service, efficient service delivery, strong external collaboration, and sufficient staffing. Departments discussed the implementation of e-plan reviews, mobile inspection tools, and training programs designed to expand inspector capacity amid retirements. To improve customer service, municipalities developed plain-language guides and streamlined reinspection processes. Enhanced collaboration with developers, planners, and utilities allowed municipalities to align inspection timelines with broader permitting workflows. Several jurisdictions emphasized pay equity and the development of internal career pathways to improve hiring and retention.

EMERGENCY COMMUNICATIONS

Departments emphasized four outcomes: excellent call handling, quick response, advanced 911 technology, and a resilient workforce. Municipalities reported rising call volumes and persistent staffing shortages, prompting the adoption of backup call centers, internal float pools, and adjusted shift schedules. Technology modernization remained a priority, with several municipalities upgrading their CAD systems and implementing real-time location tracking for first responders. Workforce strategies focused on mental health support, lateral entry programs, and enhanced training curricula tailored to the evolving demands of emergency communication roles.

FIRE SERVICE

Participants centered their efforts on four key outcomes: effective incident response, equipment readiness, community risk reduction, and professional standards. Rapid response and station coverage were discussed in the context of annexation, population growth, and rising service calls. Several departments enhanced field operations by equipping units with mobile data terminals, developing co-response teams for behavioral health incidents, and scaling up community paramedicine initiatives to better address non-emergency calls. Equipment readiness was supported by preventive maintenance schedules and shared procurement contracts. Risk reduction strategies included expanded public education campaigns and high-risk occupancy inspections, while professional standards were reinforced through accreditation efforts and structured officer development programs.

FLEET MAINTENANCE

Departments identified five outcomes: maximized vehicle availability, driver and passenger safety, cost-efficient operations, effective data strategies, and strong team performance. Preventive maintenance compliance and technician utilization were key areas of focus. Municipalities expanded technician apprenticeship programs and used scorecards to track driver behavior and reduce collisions. Departments explored route optimization, right-sizing of fleet inventories, and leasing options for non-core vehicles. Several municipalities adopted fleet management software to improve work order tracking, cost analysis, and lifecycle forecasting. Workforce investments included market pay adjustments and internal promotion structures for lead mechanics.

HUMAN RESOURCES

Human Resources departments prioritized four key outcomes: a resilient and engaged workforce, employee well-being, robust appraisal systems, and accessible policies. Strategies to enhance engagement included expanded onboarding programs, stay interviews, and revised performance review systems aligned with department goals. Wellness initiatives ranged from mental health days to financial counseling benefits. To modernize HR policy management, departments created centralized portals and updated manuals for legal compliance and user accessibility. Many municipalities implemented succession planning tools and targeted outreach campaigns to diversify applicant pools.

PARKS AND RECREATION

Departments focused on six outcomes: a healthy and active community, community participation, community support, high-quality facilities, fiscal health, and a sustainable workforce. Program participation remained a central metric of community health, supported by inclusive programming and outreach to underrepresented neighborhoods. To build support, departments invested in neighborhood branding initiatives, interactive events, and trail connectivity. Facility maintenance was addressed through performance tracking systems, asset inventories, and capital needs assessments. Budget strategies included cost-recovery policies and grant-seeking efforts. Staffing solutions included flexible scheduling, part-time-to-full-time conversion paths, and cross-training seasonal staff.

POLICE SERVICE

Departments identified six performance outcomes: community safety, public trust, fiscal health, professional excellence, workforce resilience, and officer well-being. As communities

called for both safety and reform, police departments reported success with non-sworn response models, enhanced data transparency, and resident engagement platforms. Fiscal strategies included optimizing overtime usage and aligning resource deployment with crime trends. Training efforts focused on scenario-based instruction and supervisory development. Officer wellness was addressed through embedded clinicians, peer support teams, and mental health leave policies. Recruitment remained a core concern, with jurisdictions implementing signing bonuses, community-based cadet programs, and compressed academies.

SOLID WASTE

Departments emphasized five outcomes: operational effectiveness, customer satisfaction, community engagement, cost-efficiency, and a resilient workforce. Municipalities adopted route-optimization tools, expanded recycling services, and introduced mobile apps for service updates. Customer satisfaction was tied to consistent service delivery, driver training, and timely communication. Community engagement campaigns, especially those targeting contamination reduction, proved effective in increasing recycling participation. Budget strategies included tipping fee analysis, fee-for-service models, and fleet electrification plans. Workforce retention strategies included CDL training reimbursements, internal promotional tracks, and market rate adjustments.

WASTEWATER SERVICE

Participants focused on five outcomes: high water quality, cost-efficiency, fiscal sustainability, public engagement, and workforce resilience. Departments described capital investments in nutrient removal, biosolids management, and aging infrastructure replacement. Long-term financial planning tools, including rate studies and debt forecasting models, supported fiscal health. Public engagement campaigns emphasized environmental stewardship and storm-water education. To recruit and retain operators, departments explored partnerships with community colleges, expanded on-call pay, and launched mentorship programs to improve onboarding.

WATER SERVICE

Water departments emphasized five outcomes: high water quality, enhanced infrastructure, financial sustainability, public trust, and a resilient workforce. PFAS compliance and public communication dominated the 2024 sessions, with municipalities pursuing education campaigns, facility tours, citizen academies, and real-time quality dashboards. Infrastructure upgrades were prioritized through GIS-based capital improvement planning and asset condition scoring. Municipalities discussed legislative advocacy to improve state-level reporting and transparency. Staffing remained a major challenge, addressed through certification pay, regional apprenticeships, and the restructuring of compensation systems to compete with the private sector.

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