



CITY AUDITOR'S OFFICE
FINAL REPORT



FORESTRY AND SOLID WASTE EFFICIENCY STUDY UPDATE

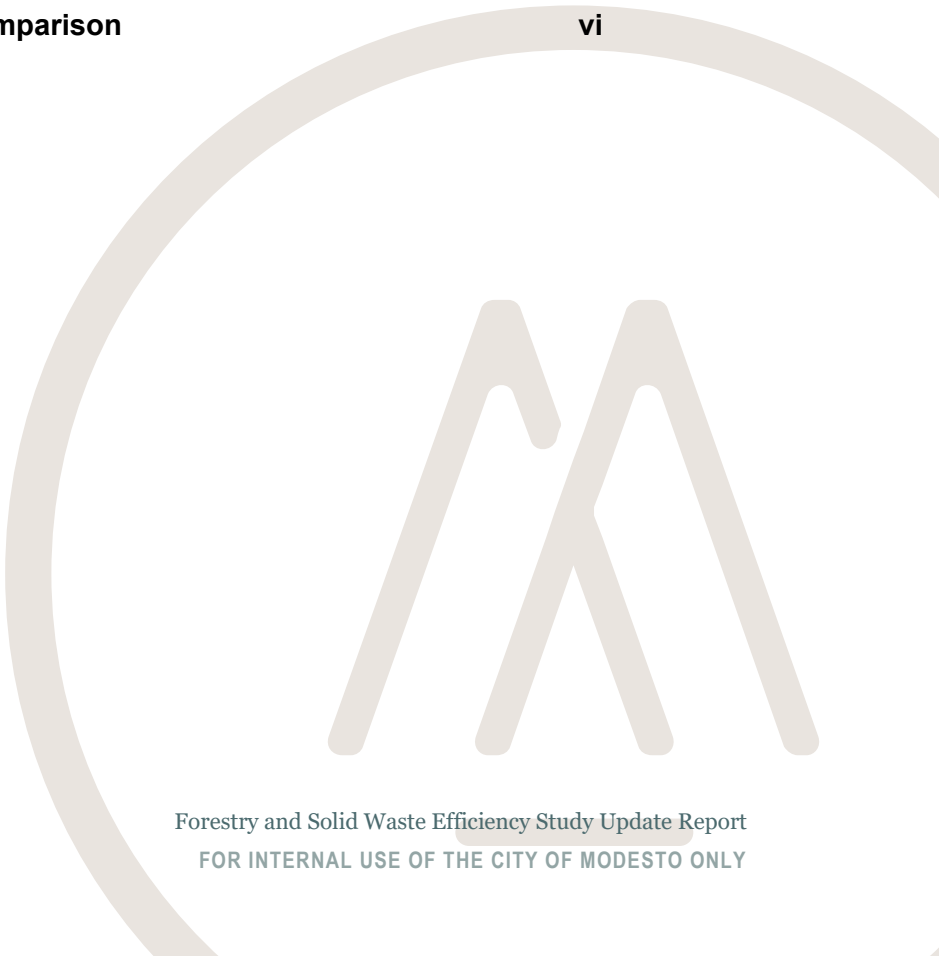
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I. EXECUTIVE SUMMARY

A. INTRODUCTION

The City of Modesto (the City) engaged its internal auditor, Moss Adams LLP (Moss Adams), to conduct a follow-up review of the Solid Waste Division Efficiency Study conducted by Moss Adams in 2016. The prior study evaluated opportunities for improvement in management, organization, and operations in the Solid Waste Division (Solid Waste), which at that time included oversight of the compost, green waste, street sweeping, solid waste, and forestry functions. Since that study, the City has created a separate Forestry Division (Forestry). This study covers both divisions to provide continuity.

Overall, the City has made progress in many areas identified in the 2016 report. We observed that two prior findings have been resolved, eight are ongoing but their risk has been diminished through the divisions' continued efforts, and one is an increasing risk. Below is a summary of the status of the findings from the previous review.

2016 STUDY PROGRESS REPORT			
Organization and Staffing			
Topic	2016 Finding	Status	Notes
Organization Structure	The Solid Waste Division's organization structure is inefficient.	Resolved	Solid Waste and Forestry were separated. No challenges regarding organization structure arose during this assessment.
Span of Control	The span of control of the Forestry Operations Supervisor is unusually high.	Ongoing Decreasing	The Forestry Operations Supervisor's span of control has decreased but remains unusually high.
Staff Capacity	The Solid Waste unit has significant unmet code enforcement and compliance needs.	Ongoing Increasing	Staff capacity continues to be the foremost challenge in Solid Waste and Forestry.
Employee Retention and Succession	Employee turnover has averaged 8% per year over the past three fiscal years, primarily due to retirements, and 27% of the current workforce has more than 20 years of service with the City.	Ongoing Decreasing	Employee turnover was high between 2021 and 2023 but has decreased significantly in 2024.
Staff Morale	Morale is impacted by limited resources and the perception of favoritism.	Ongoing Decreasing	Morale has significantly improved due to a focus on building trust. However, limited resources continue to impact morale, particularly in Solid Waste.
Management			
Tree Ordinance	The City's Tree Ordinance can be strengthened in several areas.	Ongoing	The City's Tree Ordinance has not been updated, but Forestry has



2016 STUDY PROGRESS REPORT			
		Decreasing	begun to undertake community engagement activities.
Performance Metrics	The Division is underutilizing performance metrics for workloads and operations across its units.	Resolved	All teams across Solid Waste and Forestry are regularly tracking and reporting on performance metrics.
Operations and Maintenance			
Tree Maintenance Backlog	Current staffing levels are not sufficient to address the City's tree maintenance backlog.	Ongoing Decreasing	The City has taken steps to address the tree maintenance backlog, but it remains high.
Tree-Related Risk	The City has significant and increasing tree-related risks and potential liability.	Ongoing Decreasing	The City continues to have significant tree-related risks and liability, though tree claims for FY24 have significantly decreased compared to the prior three years.
Equipment	The Division has significant equipment replacement needs.	Ongoing Flat	Equipment replacement needs are a high priority, but there is no formal asset management strategy and faulty equipment continues to impact operations.
Procurement	Limited central procurement capacity has impacted the Division's ability to obtain necessary equipment.	Ongoing Flat	Though Procurement's capacity has increased, supply chain delays and continued cross-functional challenges are still impacting Forestry and Solid Waste's ability to obtain equipment.

This follow-up study was conducted between April and July 2024.

B. SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS

Observation and recommendations are grouped into three sections that mirror the 2016 report structure: [Organization and Staffing](#), [Management](#), and [Operations and Maintenance](#). Observations and recommendations are summarized below.

OBSERVATIONS AND RECOMMENDATIONS		
Organization and Staffing		
1.	Observation	The span of control for the Forestry Manager is unusually high, which may be limiting their ability to support employee career growth and development.
	Recommendation	Continue to pursue transitioning two Crew Leader positions to supervisory positions to reduce span of control.



OBSERVATIONS AND RECOMMENDATIONS		
2.	Observation	Solid Waste continues to have significant code enforcement, blight abatement, and compliance needs due to increasing state regulations and stagnant staffing levels.
	Recommendation	<ul style="list-style-type: none"> A. Prioritize adding capacity to the Code Enforcement team. B. Explore options to convert the PT Blight Abatement positions into FT positions to recruit for those roles more effectively. C. If the Recycling Program and Public Education’s workload increases, consider adding additional capacity and explore options to ensure that interns join the team on a regular basis. D. Consider adding dedicated regulatory compliance function to the Compost team, either through a PT position or contracted out.
3.	Observation	Forestry employees reported understaffing in several areas.
	Recommendation	Consider adding equipment operators, inspectors, and an Administrative Office Analyst (AOA) to increase team efficiency.
4.	Observation	Employee turnover averaged 13% in Forestry and 18% in Solid Waste between 2021 and 2023, and 19% of the current workforce in Forestry and 8% in Public Works are eligible for retirement in the next five years.
	Recommendation	Continue to improve employee retention by prioritizing formal succession planning for all key positions, providing expanded training opportunities, considering implementing step levels for certain positions, and reviewing compensation for maintenance workers.
5.	Observation	While staff morale across both divisions has significantly improved since 2016, morale in Solid Waste continues to be impacted by understaffing and limited resources.
	Recommendation	Take steps to increase Code Enforcement staffing as compliance requirements continue to rise, as recommended in the Solid Waste Staff Capacity section.
Management		
6.	Observation	The City’s Tree Ordinance can be strengthened in several areas.
	Recommendation	Update the Tree Ordinance based on International Society of Arborists (ISA) best practice guidance.
Operations and Maintenance		
7.	Observation	Current staffing and equipment levels are not sufficient to address the City’s tree maintenance backlog and maintain a tree pruning cycle aligned with best practices.



OBSERVATIONS AND RECOMMENDATIONS	
	<p>Recommendation</p> <ul style="list-style-type: none"> A. Continue to contract out for additional capacity aimed at stump grinding, tree removal, and pruning. Consider increasing these contracts. B. Consider adding additional Forestry staff and equipment to reach a five- to six-year pruning cycle.
8.	<p>Observation</p> <p>The City has significant tree-related risks and potential liability.</p>
	<p>Recommendation</p> <p>Continue to take measures to address the tree maintenance backlog to reduce tree-related risks.</p>
9.	<p>Observation</p> <p>The divisions have begun to address equipment replacement needs, but equipment needs persist and there is no formal equipment asset management strategy.</p>
	<p>Recommendation</p> <ul style="list-style-type: none"> A. Conduct an asset inventory and condition assessment. B. Collaborate with Fleet to formally define equipment maintenance roles and responsibilities. C. Develop policies and procedures that call for adequate preventative maintenance and repair to ensure that assets are maintained to maximize useful life.
10.	<p>Observation</p> <p>Technology limitations impact Forestry's operations.</p>
	<p>Recommendation</p> <ul style="list-style-type: none"> A. Continue to adapt Lucity to act as an effective and efficient tree management system. B. Continue to modernize processes, including migrating away from paper-based processes and moving requests online.
11.	<p>Observation</p> <p>Procurement delays are still impacting Forestry and Solid Waste's ability to obtain necessary equipment, likely due to limited central procurement capacity and supply chain issues.</p>
	<p>Recommendation</p> <ul style="list-style-type: none"> A. Work with Purchasing to establish service level standards and performance targets that will support efficient operations in Forestry and Solid Waste. B. Designate a procurement liaison in each division who can work with Procurement and Fleet to ensure that all purchased specialty parts are the correct item. C. As noted in <u>Equipment</u>, develop backup inventory over time for all major equipment to prevent procurement challenges from majorly impacting operations in the future.



II. INTRODUCTION

A. PROJECT OVERVIEW

Background

Solid Waste

Solid Waste employs 26 full-time employees (FTEs) and is responsible for waste removal in Modesto. Solid Waste is made up of three teams: Recycling Program and Public Education, Enforcement, and Compost.

- The Recycling Program and Public Education team is responsible for community outreach and public education as it relates to sorting recyclables and compost, special events, grant management, and compliance. This team is also involved with state reporting.
- The Enforcement team is responsible for all waste-related code enforcement in the City. Enforcement now includes a Blight Abatement team who is responsible for removing all illegal dumping in the City.
- The Compost team manages the City's compost facility, which plays an essential role in the City meeting state-mandated diversion and organic recycling requirements. The compost facility receives approximately 52,000 tons of diverted organic waste annually for processing into compost from residents, commercial accounts, and Forestry. The compost produced is sold to the public, donated for special projects, and utilized internally by the City.

Solid Waste also manages two service agreements to provide residential, commercial, and industrial solid waste services, and monitors the City's former landfills.

Forestry

Forestry employs 58 FTEs and is responsible for urban forest management of the 81,000+ publicly owned trees in Modesto. While many other California cities outsource forestry operations and maintenance, the City's program has always been operated in-house.

Forestry is comprised of four teams: Street Sweeping and Green Waste, Pruning, Preservations, and Requests.

- The Street Sweeping and Green Waste team is responsible for street sweeping and green waste removal (e.g., leaves, grass clippings, and other yard waste) throughout the City. Street sweeping equipment operators follow behind green waste collection and leaf collection to sweep the streets and remove litter, which prevents pollutants from entering the City's storm drain system.
- The Pruning, Preservation, and Requests teams work together to maintain, prune, plant, and remove public trees, stumps, and roots.

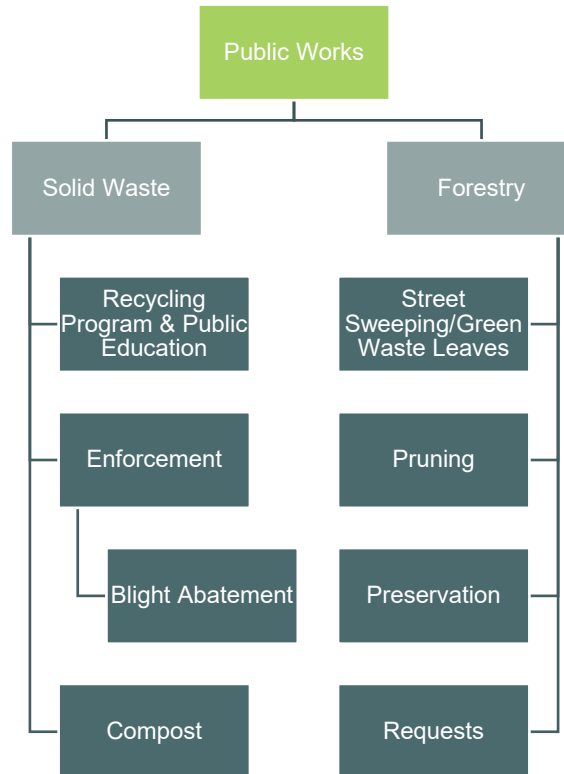
In addition to these services, Forestry crews provide emergency response to hazard trees or storm damage 24 hours a day.

Much of the work of Forestry involves invasive species management, as the City's trees are infested with mistletoe. The Modesto Ash is particularly vulnerable to mistletoe, which can stunt growth and kill



trees. Forestry crews are responsible for removing mistletoe, trimming trees for safety and health, and removing trees that are unsafe or dying.

SOLID WASTE AND FORESTRY ORGANIZATIONAL STRUCTURE



Scope

The FY23-24 Internal Audit work plan included a follow-up review of the Solid Waste Division Efficiency Study conducted by Moss Adams in 2016. The prior study evaluated Solid Waste, which at that time included oversight of the compost, green waste, street sweeping, solid waste, and forestry functions. Since that study, the City has created a separate division called Forestry. This study covers both Solid Waste and Forestry to provide continuity.

The purpose of this assessment is to both provide an update on progress toward the issues identified in 2016 and determine any additional opportunities for improvement in management, organization, and operations within Solid Waste and Forestry. Areas of focus for the study include:

- Organizational structure, staffing levels, and span of control
- Employee development and succession planning
- Policies and procedures
- Internal processes
- Equipment and systems
- Levels of service



This assessment was completed under the consultancy standards of the American Institute of Certified Public Accountants (AICPA).

Approach

The study was conducted between April and July 2024. The project consisted of four major phases as detailed in the table below.

PROJECT PHASES		
Phase	Description	Period
1	Start-Up and Management <ul style="list-style-type: none"> Project initiation consists of collaborative project planning with the City and project management tasks, including developing our scope of work and final work plan. 	April 2024
2	Fact-Finding and Data Collection <ul style="list-style-type: none"> In the second phase we conduct our fieldwork, including documentation review, interviews, and employee surveys. We interviewed 13 members of staff and management and distributed an all-staff survey. 	April to May 2024
3	Analysis <ul style="list-style-type: none"> Based on the information gained during our fieldwork phase, we perform a gap analysis of current conditions and identify opportunities for improvement. Leveraging best practice information, and our own experience from working with similar entities, we develop practical recommendations. 	May to June 2024
4	Reporting Results <ul style="list-style-type: none"> We communicate the results of our analysis with observations and recommendations presented first in a draft report that is reviewed with management to confirm the practicality and relevance of recommendations before finalizing the report. 	July 2024 (anticipated presentation to Audit Committee Fall 2024)

Commendations

It is important to note the areas of strength and existing good practices that can be leveraged for further improvement within the City. The following is a list of commendations that the Moss Adams team would like to note:

- **Staffing and Morale:** Staffing levels have improved since the last study, and division management has prioritized improving the workplace culture. As a result, staff morale is no longer as significant of a concern as it was in the prior study.
- **Increased Efficiency:** The team has prioritized finding process efficiencies where possible. For example, the in-house Blight Abatement team now handles illegal dumping that was previously contracted out in a slower and less cost-effective manner, and the City has made progress toward addressing the tree maintenance backlog.
- **Performance Measures:** Both teams are regularly tracking high-quality performance measures.

We would like commend Forestry and Solid Waste staff and management for their willingness to assist us in this assessment process. These commendations, coupled with our findings and




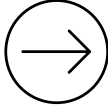


recommendations, provide an overview of areas of strengths and weaknesses that can help improve operations and reduce risk at the City.



III. OBSERVATIONS AND RECOMMENDATIONS



Based on the input gathered from interviews, document review, a survey, and comparisons to best practices, we prepared the following set of observations and recommendations. We have grouped our observations and recommendations into sections that mirror the 2016 report and pertain to Organization and Staffing, Management, and Operations and Maintenance.

Observations and recommendations are also coded according to the key below to differentiate between 1) topics that pertain solely to Forestry or Solid Waste, and 2) topics that are continuations of observations contained in the 2016 study or that are newly identified.

KEY			
Division		Observation Type	
Forestry		Ongoing Observation from 2016 Study	
Solid Waste		Newly Identified Observation	

A. ORGANIZATION AND STAFFING

Span of Control

1.	Observation	The span of control for the Forestry Manager is unusually high, which may be limiting their ability to support employee career growth and development.	
	Recommendation	Continue to pursue transitioning two Crew Leader positions to supervisory positions to reduce span of control.	

OBSERVATION

The 2016 study found that the span of control of the Forestry Operations Supervisor was unusually high. At the time, the Forestry Operations Supervisor oversaw four crew leaders with three different functions, for a span of control of 1:36. Today, there is one Forestry Manager and one Forestry Operations Supervisor in Forestry overseeing Pruning, Preservation, and Requests. The Forestry Operations Supervisor is currently on leave, resulting in the Forestry Manager having a span of control of 1:40. When the Forestry Operations Supervisor is not on leave, they have a span of control



of 1:31. For teams with standardized practices, the best practice span of control is typically 1:11 to 1:15.¹

Civil service rules require supervisor-level staff and above to perform all personnel management. Although interviewed and surveyed staff noted that the span of control on these teams was operationally feasible due to crew leaders providing on-the-job oversight, a span of control above 1:15 makes it difficult for a supervisor to properly assess employee effectiveness, provide meaningful performance feedback, and prioritize employee development.

To address this, Forestry leadership is currently working to change two Operations Crew Leader positions to supervisor positions. This will result in a span of control of 1:6 for the Forestry Manager, and 1:13 for each of the three future supervisors overseeing Pruning, Preservation, and Requests (if the 39 field employees are divided equally between teams).

In addition, the Street Sweeping/Green Waste Operations Supervisor has a span of control of 1:15. If the number of crew members increases on this team, there will be a need for an additional supervisor to maintain the best practice ratio maximum of 1:15.

RECOMMENDATION



The City should prioritize converting two Operations Crew Leaders to supervisors to ensure effective management of Forestry personnel. A narrower span of control will result in better supervision of employees, in turn increasing efficiency, productivity, and safety. Creating additional supervisory positions also creates more advancement opportunities for employees, which could help the City retain the knowledge and skills of talented staff.

Supervisors with fewer reports will also have more time to coach and develop staff. Surveyed employees noted the desire for additional training opportunities from experts in the field, safety-related meetings, and increased team-building opportunities. An additional supervisory position could take on that work.

¹ <https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/how-to-identify-the-right-spans-of-control-for-your-organization>



Solid Waste Staff Capacity

2.	Observation	Solid Waste continues to have significant code enforcement, blight abatement, and compliance needs due to increasing state regulations and stagnant staffing levels.	
	Recommendation	<ul style="list-style-type: none"> A. Prioritize adding capacity to the Code Enforcement team. B. Explore options to convert the part-time (PT) Blight Abatement positions into full-time (FT) positions to recruit for those roles more effectively. C. If the Recycling Program and Public Education’s workload increases, consider adding additional capacity and explore options to ensure that interns join the team on a regular basis. D. Consider adding a dedicated regulatory compliance function to the Compost team, either through a PT position or contracted out. 	

OBSERVATION

Interviewed employees reported that teams throughout Solid Waste are struggling to keep up with their workloads given current staffing levels. When asked to rate the adequacy of current staffing levels across Solid Waste as a whole, 43% of survey respondents within Solid Waste said that the division was somewhat understaffed, and 38% said that it was adequately staffed.

Code Enforcement

The 2016 report found that Solid Waste had significant unmet code enforcement and compliance needs, largely stemming from Assembly Bill (AB) 341 and AB 1826. Since that report, California passed State Bill (SB) 1383, which has significantly increased the code enforcement and compliance workload. In 2023, SB 1383 compliance activities represented 30% of all code enforcement activities. The City is currently under a state corrective action plan to get all businesses in compliance with SB 1383. Though the City has requested an extension, there are currently about 2,000 businesses that are not in compliance, and a typical business requires reaching out through the mail, site visits, re-inspections, and hearings. Code Enforcement staff estimate that their caseload has more than doubled and they are currently completing about 50% of their workload. Staffing levels within this group have not changed since SB 1383 passed.

In addition, the Code Enforcement team was expected to conduct an annual audit of all inactive accounts in the City in 2023 but was unable to due to the SB 1383-related workload.

Blight Abatement

Staff report that the Blight Abatement team is also experiencing a high workload. The team recently requested to convert two PT positions to two FT roles because 1) there is too much illegal dumping to keep up with and 2) it is difficult to keep a PT position filled. The PT roles have been vacant for six months as of June 2024. However, the request was denied due to the limitations of Measure H funding. The Blight Abatement team’s goal is to pick up illegal dumping within three business days, and City Council has said it would ideally be one business day. However, the team is currently able to respond to illegal dumping within about two weeks. The current situation creates frustration among community members, who may submit multiple reports of illegal dumping before it is resolved.



Recycling Program and Public Education

Employees report that the Recycling Program and Public Education’s staffing is currently sufficient, but that is largely due to the eight state interns that are currently assigned to the team. The interns are not guaranteed every year, but staff report that they are instrumental in meeting state compliance requirements, including working directly with the Code Enforcement team at times, though that is not the intent of the internship. Interviewed staff shared the concern that staffing would not be sufficient if 1) the interns were to diminish in number or 2) compliance requirements were to increase, as they may with the upcoming SB 54 regulation. If passed, SB 54 will impact what material the City can and cannot accept and require significant new education efforts.

The Recycling Program and Public Education team previously had an additional PT role that worked on recycling education and special events, but now has only one FT role and reportedly a much higher workload.

Compost


The Compost team’s operations are most impacted by equipment challenges, as detailed in the [Equipment section](#). However, it is common to have a dedicated person responsible for ensuring compliance with regulations related to composting. Currently, the Compost Facility Supervisor is responsible for supervising all operations and ensuring compliance.

RECOMMENDATION

The 2016 report recommended reallocating staff to meet evolving compliance and enforcement workloads. Solid Waste’s staffing needs are now too great to be addressed through reallocation. The City should:

- Hire at least one more code enforcement officer. Staff estimate that one additional FTE would allow them to complete 75% of their work, and two more would bring them to 100%.
- Explore options to convert the PT Blight Abatement positions into FT positions to recruit for those roles more effectively.
- If Recycling Program and Public Education’s workload increases, consider adding additional capacity and explore options to ensure that interns support the team on a regular basis.
- Consider adding a dedicated regulatory compliance function to the Compost team, either through a PT position or by contracting this function out.

Forestry Staff Capacity

3.	Observation	Forestry employees reported understaffing in several areas.	
	Recommendation	Consider adding equipment operators, inspectors, and an AOA to increase team efficiency.	NEW

OBSERVATION

Forestry employees reported understaffing in several areas.



Street Sweeping and Green Waste: Employees shared that staffing is sufficient during slower seasons, but additional capacity is needed during leaf season. Between October and February, Street Sweeping and Green Waste borrow staff from other crews to keep pace with the workload, but overtime is still used if there is not enough coverage to maintain the street sweeping schedule. Street Sweeping has had the same size crew since 2009, but the City has grown and will continue to grow.

Requests: The Requests team conducts work order inspections, which are currently handled almost entirely by the Operations Crew Leader. The City will likely need additional inspectors if it continues to adopt the trees planted by developers in new subdivisions.

Administrative Office Analysts (AOA): There are currently two AOAs within Forestry. The AOAs support Forestry and Green Waste, which includes answering all incoming requests. The AOAs reportedly respond to 500- to 800 calls per month, which will increase when Green Waste calls are added in July. Though the second AOA is a recently added position, it is funded by Measure H and is required to spend 50% of their time supporting Crew Leaders—not responding to calls. Staff report that one additional AOA would allow that team to reasonably handle incoming calls. In addition, Pruning, Preservation, and Street Sweeping and Green Waste reported that they would benefit from increased access to administrative assistance from an AOA.

When asked to rate the adequacy of current staffing levels across Forestry as a whole, 59% of survey respondents within Forestry said that the division was somewhat understaffed, and 22% said that it was very understaffed.



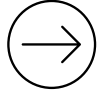
RECOMMENDATION

Consider adding the following Forestry staff to increase capacity and efficiency:

- Two additional equipment operators (one sweeper operator and one green waste operator) year-round, and two new pieces of equipment for them to operate
- Additional inspectors (The number of inspectors needed will depend on the monitoring cadence that the team would like to maintain. Monitoring and early detection can help manage risks associated with mistletoe infestation, and shift toward a more proactive approach versus reacting to incidents or resident complaints.)
- One additional AOA



Employee Retention and Succession

4.	Observation	Employee turnover averaged 13% in Forestry and 18% in Solid Waste between 2021 and 2023, and 19% of the current workforce in Forestry and 8% in Public Works are eligible for retirement in the next five years.	 
	Recommendation	Continue to improve employee retention by prioritizing formal succession planning for all key positions, providing expanded training opportunities, considering implementing step levels for certain positions, and reviewing compensation for maintenance workers.	

OBSERVATION

Twenty-three employees left Forestry and 13 left Solid Waste between 2021 and 2023. The table below shows the percent turnover for each division over the past four fiscal years, including FY24 year-to-date.

EMPLOYEE TURNOVER RATES				
DIVISION	2021	2022	2023	2024 YTD
Forestry	12%	17%	9%	2%
Solid Waste	8%	15%	30%	0%

Although employee turnover rates are high on both teams (Gallup recommends organizations aim for a 10% annual turnover rate), interviewed employees say that retention is improving, as evidenced by the low turnover rate for 2024 year-to-date.² Staff shared that high turnover rates were largely due to past management styles (accordingly, the leading cause of past turnover on both teams was resignation), but the low pay classification of maintenance workers also contributes to turnover on these teams. Both teams rely heavily on maintenance workers.

Additionally, 19% of the current workforce in Forestry and 8% of the current workforce in Solid Waste are eligible for retirement in the next five years. There are not currently any formal succession plans in place, nor is there a formal approach to training. When asked to rate the level of cross-training and backup within their immediate teams, the majority of respondents in Forestry said average (34%) or poor (28%), and the majority of respondents in Solid Waste staff said average (48%).

RECOMMENDATION

To proactively plan for upcoming retirements and to continue to limit employee turnover, leadership should:



- Provide formal training opportunities. Surveyed employees noted the desire for hands-on training opportunities in the field by a manager or supervisor.

² <https://news.gallup.com/businessjournal/316/truth-about-turnover.aspx>



- Encourage City leadership to review compensation for maintenance workers to ensure that compensation is fair and competitive.
- Prioritize the development of succession strategies for all positions, focusing on knowledge transfer, leadership development, and technical training. Public Works and Human Resources should prepare a template for succession plans, provide guidance and technical support, and review plans. An effective succession planning process should contain the following elements:
 - Active executive involvement
 - Integration with the Citywide strategic plan
 - Processes to identify essential positions and their critical competencies
 - Procedures to identify, promote, and select high potential staff, along with plans for individual career development
 - Procedures to monitor individual development through coaching, mentoring, and performance management
 - Methods to identify and fill gaps in succession (e.g., strengthen internal capabilities and/or recruit from the outside)
 - Regular reviews of plans to ensure effectiveness
- Consider implementing step levels in certain positions to promote employee growth and development.

Staff Morale

5.	Observation	While staff morale across both divisions has significantly improved since 2016, morale in Solid Waste continues to be impacted by understaffing and limited resources.	
	Recommendation	Take steps to increase Code Enforcement staffing as compliance requirements continue to rise, as recommended in the Solid Waste Staff Capacity section.	

OBSERVATION

The 2016 study found that staff morale was impacted by limited resources and the perception of favoritism. Since then, interviewed and surveyed staff report that morale in Solid Waste and Forestry has significantly improved due to a focus on building trust and stronger support from management. However, heavy workloads continue to impact morale in Solid Waste, particularly within Code Enforcement. Based on interviews and the staff survey, Code Enforcement staff are overwhelmed, and retention is a concern due to risk of employee burnout.



RECOMMENDATION

As described in the [Solid Waste Staff Capacity](#) section, code enforcement requirements have continued to increase but Code Enforcement staffing and resources have not increased accordingly. Leadership should ensure that workloads in Code Enforcement remain reasonable.



B. MANAGEMENT

Tree Ordinance

6.	Observation	The City's Tree Ordinance can be strengthened in several areas.	
	Recommendation	Update the Tree Ordinance based on ISA best practice guidance.	

OBSERVATION

The 2016 study noted that the City's Tree Ordinance could be strengthened in several areas. The Tree Ordinance has not been updated since that time. The International Society of Arborists (ISA) recommends that municipal tree ordinances contain seven key elements. The table below, originally provided in the 2016 study, shows how the City's Tree Ordinance fulfills the ISA best practice guidance.

ISA KEY ELEMENT	CITY TREE ORDINANCE
Basic performance standards	Yes
Clear and specific goals	No
Developed with community support	No
Flexibility	Yes
Part of comprehensive tree management strategy	Partial
Responsibility and authority	Yes
Specified enforcement actions	No

Although the ordinance itself has not been updated, Forestry has taken steps to increase public communication about the division's goals. As part of this effort, Forestry staff have conducted public outreach like attending jobs fairs and Earth Day events, met with local colleges and counties to explore opportunities for collaboration, and increased communication with City personnel in other departments to improve the public's perception of the division's work.

RECOMMENDATION

The City should update the Tree Ordinance based on ISA best practice guidance. The following elements should be strengthened:

- *Clear and specific goals:* Articulate the goals of urban forest management in the ordinance.
- *Community support:* Solicit input from the community through surveys or public outreach.
- *Comprehensive tree management strategy:* Develop a stronger link between the ordinance, the Street Tree Plan, and maintenance activities.





- *Specified enforcement actions:* Determine consequences for the actions prohibited or required by the ordinance, such as notices of violation or fines.

Included in Appendix A is a detailed comparison of the City’s Tree Ordinance to the cities of Oakland and Pasadena, as reported in the 2016 study.

C. OPERATIONS AND MAINTENANCE

Tree Maintenance Backlog

7.	Observation	Current staffing and equipment levels are not sufficient to address the City’s tree maintenance backlog and maintain a tree pruning cycle aligned with best practices.	
	Recommendation	<ul style="list-style-type: none"> A. Continue to contract out for additional capacity aimed at stump grinding, tree removal, and pruning. Consider increasing these contracts. B. Consider adding additional Forestry staff and equipment to reach a five- to six-year pruning cycle. 	

OBSERVATION

The 2016 report noted the City’s significant tree maintenance backlog. With the 2016 levels of staffing in Forestry (40 FTEs), the City was supporting a 12-year tree pruning cycle. While recommended pruning cycles vary by species, they typically range from three to five years. Trees that are not pruned regularly represent a safety hazard to people and property. In addition, longer pruning cycles typically mean pruning is more drastic, which can cause decay and shorten the life of the tree.

Invasive species management is also a complicating factor in the City’s efforts to manage the urban forest. Because mistletoe goes to seed every three to four years, it is important to prune affected trees in a timely manner to prevent its spread. If mistletoe is not removed, it will stunt tree growth and can kill trees over time.

Since 2016, Forestry has added staff capacity, increased internal efficiency, and worked with contractors to begin to address the tree maintenance backlog. Efforts to address the backlog include the following:

- Pruning, Preservation, and Requests have pooled teams and vehicles to increase efficiency and hold daily morning meetings to distribute workloads.
- Forestry is contracting out stump grinding, tree removal, and some pruning tasks. These efforts have resulted in addressing 800 requests for stump removal in the first five months of 2024, double the amount of requests addressed in all of 2023.
- Forestry is adopting lighter pruning practices to increase pruning speed.



FORESTRY PERFORMANCE METRICS			
	2021 CALENDAR YEAR	2022 CALENDAR YEAR	2023 CALENDAR YEAR
Trees Pruned	3,463	10,180	12,816
Stumps Removed	487	665	414
Trees Planted	46	1,156	584
Damaged/Diseased Trees Removed	95	668	1,577
Trees Pruned for Mistletoe	685	1,027	1,191

The division has made significant positive improvements in the past several years and anticipates even stronger numbers in 2024. However, staff estimate there is still a three-year tree maintenance backlog and that the current pruning cycle is around 10-12 years. Work to address the backlog will often be deprioritized to address customer requests or urgent needs, such as sidewalks that are being uplifted by a root system, and there are not enough staff members to stay on top of both areas. As a result, the backlog can grow and create additional risk. Forestry’s Tree Pruning Guide assumes a tree pruning cycle of four to five years and division leadership noted that they would like to see at least a five- to six-year pruning cycle by 2027.

Staff estimate that adding three trucks, two trailers, and hiring crew to operate them would enable a five- to six-year pruning cycle. Equipment needs are discussed in the [Equipment](#) section.



RECOMMENDATION

The City has made positive progress toward addressing the tree maintenance backlog. The City should continue to contract with private companies for tree trimming and add staffing and equipment when possible to address the tree maintenance backlog and reach a five- to six-year pruning cycle.

The improvements noted in the [Equipment](#) and [Procurement](#) sections that concern the availability and reliability of equipment will also contribute to addressing the tree maintenance backlog.



Tree-Related Risk

8.	Observation	The City has significant tree-related risks and potential liability.	
	Recommendation	Continue to take measures to address the tree maintenance backlog to reduce tree-related risks.	

OBSERVATION

Over the past three fiscal years, the City has spent a total of \$477,183 on tree-related insurance claims. The number of insurance claims and dollars paid for tree-related damages and injuries have increased since FY19, as shown in the table below. Tree-related claims include root issues, damage to property from trees, falling limbs, and trip and fall claims from sidewalk uplift.

TREE-RELATED INSURANCE CLAIMS	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24 YTD*
Forestry						
Number of Claims	177	137	144	154	177	10
Amount Paid	\$68,306	\$483,758	\$89,838	\$203,840	\$262,237	\$11,106
Street Trip/Fall						
Number of Claims	1	2	0	0	0	0
Amount Paid	\$0	\$50	\$0	\$0	\$0	\$0

* As of June 24, 2024.



A large maintenance backlog increases risk, liability, and the cost to the City in insurance claims. The City has been working to address the tree maintenance backlog, and the number of tree-related claims may be reduced in FY24, as shown in the table above.

RECOMMENDATION

To reduce tree-related risk, the City should continue to address the tree maintenance backlog as noted in the [Tree Maintenance Backlog](#) section.



Equipment

9.	Observation	The divisions have begun to address equipment replacement needs, but equipment needs persist and there is no formal equipment asset management strategy.	
	Recommendation	<ul style="list-style-type: none"> A. Conduct an asset inventory and condition assessment. B. Collaborate with Fleet to formally define equipment maintenance roles and responsibilities. C. Develop policies and procedures that call for adequate preventative maintenance and repair to ensure that assets are maintained to maximize useful life. 	

OBSERVATION

The 2016 study found that the division had significant unmet equipment replacement needs. Since then, staff report that equipment replacement has been made a priority. However, equipment needs are still an area of concern and surveyed and interviewed employees stressed that having sufficient equipment that is well-maintained is one of the major changes that leadership could make to improve workplace resources.

Equipment Needs

Employees reported that equipment often breaks down, which has a significant impact on the teams' ability to complete their work. The following equipment maintenance and replacement needs were highlighted by staff:

Forestry

About half of Forestry's equipment has been replaced with higher-quality equipment in recent years, including three sweepers and two top tier loaders. Though the remaining equipment continues to impact work efficiency, the team estimates that those pieces will be upgraded over the next four to seven years – including phasing out the use of packer dump trucks and claw load trucks, which Forestry staff say are not ideal for tree pruning operations. Still, staff shared that the team would benefit from additional equipment if staffing levels were to increase to allow for the capacity to operate them. When asked to rate their level of agreement with the statement “I have sufficient equipment to do my job effectively,” 22% of Forestry respondents somewhat disagreed and 13% strongly disagreed.

Forestry is also experiencing delayed timelines as described in the [Procurement](#) section. For example, the team has ordered a new chipper, but there is reportedly a five-year backlog. The team has also ordered two aerial towers that have not yet arrived.

Solid Waste

The Compost team reported that the equipment currently in use at the compost facility is not sufficient to maintain the facility's operability. The composting process requires a loader, water truck, grinder,



and screener. All existing equipment is old and frequently shuts down. As a result, there have been compost materials waiting to be processed for over a year because the screener has been down. The screener is now functional, but there is a year's backlog of material to process. When materials build up in this way, the City runs out of space and has to stop accepting green waste. The green waste backlog is stored in piles that measure 100' x 100' x 12'. The piles can catch on fire if the temperature is too hot. There are currently 11 piles in the compost facility.

There are currently two loaders, but there is no backup for the grinder and screener. Both machines are over 10 years old. The grinder was purchased in 2007 and the screener was purchased in 2011.

When asked to rate their level of agreement with the statement "I have sufficient equipment to do my job effectively," 10% of Solid respondents somewhat disagreed and 10% strongly disagreed.

Asset Management

The 2016 study recommended that the division conduct an asset inventory and condition assessment and collaborate with Fleet and Purchasing to develop a plan for funding and replacing equipment. This work has not yet occurred. There is not currently an asset inventory or condition assessment, and the team does not have a method by which to accurately and proactively track equipment condition and replacement needs. Without this type of inventory and assessment, the City cannot identify and plan for the significant financial investment required to maintain or replace equipment.

The lack of a formal asset inventory also contributes to the difficulty of maintaining equipment. Though Fleet is meant to maintain all City vehicles, staff report that Forestry and Solid Waste's working arrangement with Fleet is unclear. Vehicles that break down are often out of commission for extended periods of time due to understaffing in Fleet, and there are very limited communications regarding the time it will take to repair major equipment. Staff noted that Forestry teams maintain daily logs and inspection reports for all equipment, which include conducting a visual inspection. Moss Adams is currently conducting a Fleet Operations Internal Controls review.

Finally, California is shifting toward the use of battery saws instead of gas saws, which include many pieces that will need to be inventoried. The City will need to develop a strategy to track and maintain high-value equipment prior to transitioning to the use of battery saws.

RECOMMENDATION

Public Works leadership should conduct an asset inventory and condition assessment in partnership with the Fleet Department. This assessment should be used to determine the remaining equipment replacement needs for Forestry and Solid Waste. This may include replacing vehicles that frequently break down and providing backup trucks so that the composting process is not halted when one machine is down.


Sufficient funds should be allocated in a multi-year capital plan to replace vehicles and equipment. The capital plan should be prioritized based on safety, utilization, and other factors critical to sustaining operations. The assessment should be conducted at least every three years and used to proactively identify equipment replacement needs.

Forestry and Solid Waste management should also collaborate with Fleet to formally define equipment maintenance roles and responsibilities. Policies and procedures reflecting that decision should be formalized and adhered to. The equipment maintenance procedure should include



directions for preventative maintenance and repair to ensure that assets are maintained to maximize useful life.

Systems and Technology

10.	Observation	Technology limitations impact Forestry's operations.	
	Recommendation	<ul style="list-style-type: none"> A. Continue to adapt Lucy to act as an effective and efficient tree management system. B. Continue to modernize processes, including migrating away from paper-based processes and moving requests online. 	NEW

OBSERVATION

Technology limitations are currently impacting Forestry's operations in two areas: tree management and community request processes.

Tree Management

Forestry currently uses Lucy as its tree management system. Lucy is a relatively new City platform. Recently, a full inventory of City street trees was added to Lucy; this work was completed by a contractor through a Cal Fire grant. However, staff report that the system has shortcomings that significantly slow down work in the field. While Lucy is an efficient asset management system for tools, it does not have sufficient capabilities to manage living things. For example, Lucy requires manual selection of each individual tree and includes 40 different work codes. Staff report that this significantly slows down work in the field and does not provide meaningful information relevant to tree management.

Community Request Processes

Some key processes in Forestry are paper-based or inefficient, including:

- The forms homeowners fill out for tree removal and work on roots and stumps are paper-based. Paperwork is turned in daily by crew.
- Residents contact Forestry's main phone line, monitored by an AOA, with requests. The AOA then calls or emails a Crew Leader to pass on the request.
 - Green Waste's calls have been routed to City Hall but will be routed to the Forestry AOA beginning in July.
 - Residents can also submit work requests in the GoModesto app, but not all choose to do so.
- Records are stored in physical file cabinets, and staff are not currently able to prioritize document management.

RECOMMENDATION

The City should continue to invest IT resources to adapt Lucy as an effective tree management system. Ideally, a tree management system should be able to quickly update the following information about each tree:




- Tree species and age



- Current and historical growth rates
- Lead and needle color and condition
- Presence of pests or diseases
- Soil moisture and nutrient levels
- Trunk stability and structural integrity
- Signs of decay or damage
- Maintenance and treatment history

In addition, Forestry should continue to work to modernize processes. The division should consider opportunities to migrate more resident requests online, including by offering a website-based form.

Procurement

11.	Observation	Procurement delays are still impacting Forestry and Solid Waste's ability to obtain necessary equipment, likely due to limited central procurement capacity and supply chain issues.	 
	Recommendation	<p>A. Work with Purchasing to establish service level standards and performance targets that will support efficient operations in Forestry and Solid Waste.</p> <p>B. Designate a procurement liaison in each division who can work with Procurement and Fleet to ensure that all purchased specialty parts are the correct item.</p> <p>C. As noted in Equipment, develop backup inventory over time for all major equipment to prevent procurement challenges from majorly impacting operations in the future.</p>	

OBSERVATION

The 2016 study found that limited central procurement capacity was impacting the division's ability to obtain necessary equipment. This was largely due to significant turnover in Purchasing at that time. Purchasing has continued to experience high turnover since then, with an average turnover rate of 24.6% in the past three fiscal years. Although the City has added staff to its Purchasing team to accommodate increased purchasing demand, as noted in the Procurement Performance Audit conducted by Moss Adams concurrently with this study, some Purchasing staff are still experiencing high workloads and limited capacity.

Accordingly, interviewed and surveyed employees for this study noted that procurement delays for equipment purchases are still a challenge, though there has been improvement since 2016. Staff noted that some delays may be due to supply chain issues for specialized equipment like chippers. Forestry staff also shared the perception that there are times when Fleet inadvertently orders the incorrect replacement parts for specialized equipment, which slows down equipment maintenance timelines.



RECOMMENDATION

The 2016 study suggested that Public Works could assign procurement responsibilities to division or department staff, and ensure they are adequately trained to coordinate procurements. However, Procurement should ultimately handle all major purchasing Citywide. In addition, Forestry and Solid Waste staff do not have capacity to undertake significant procurement-related duties at this time. With this in mind, Forestry and Solid Waste should:

- Work with Purchasing to establish service level standards and performance targets that will support efficient operations in Forestry and Solid Waste, as recommended in the Procurement Performance Audit. In addition to the clarity brought by shared expectations, setting service level standards will help the divisions understand if procurement delays are due to limited internal capacity or external supply chain issues.
- As noted in [Equipment](#), develop backup inventory over time for all major equipment to prevent procurement challenges from majorly impacting operations in the future.

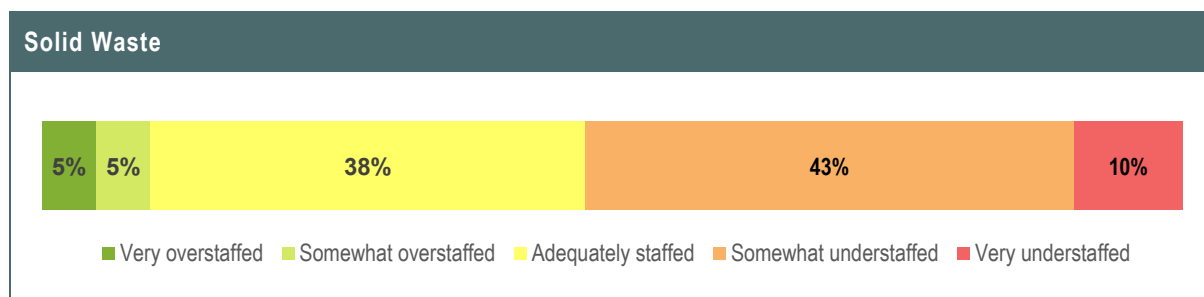
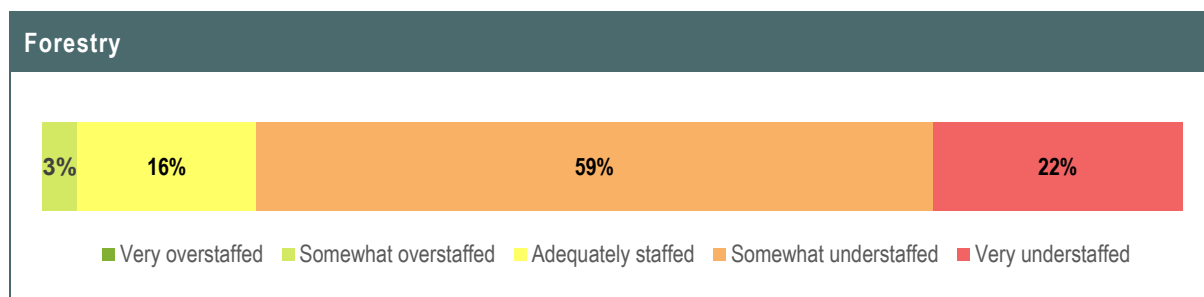


APPENDIX A: SURVEY RESULTS

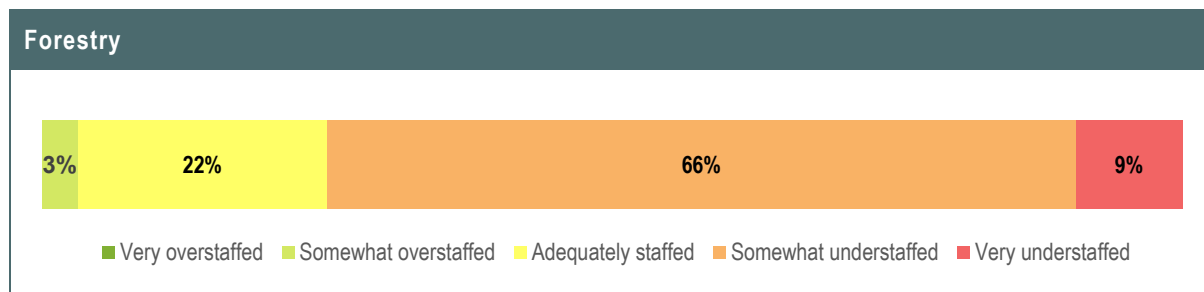
An all-staff survey was distributed to 86 Forestry and Solid Waste staff on May 31, 2024. Despite remaining open for two weeks, the survey garnered a 10% response rate, which is considered relatively low. The responses were evenly divided between Forestry and Solid Waste. To garner additional responses, the survey was reopened between August 30 and September 13, 2024. At the end of this period, the survey received a 62% overall response rate – 32 from Forestry staff and 21 from Solid Waste staff.

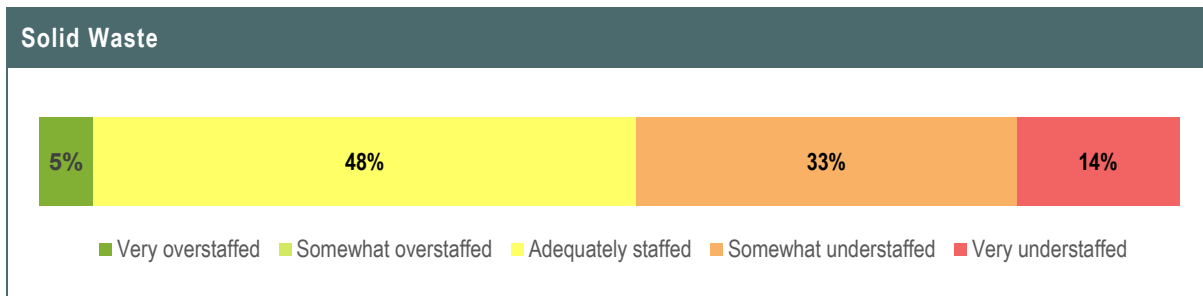
Survey results are used throughout the report and included below.

How would you rate the adequacy of current staffing levels (aka are there enough people to perform the work) across your department as a whole?

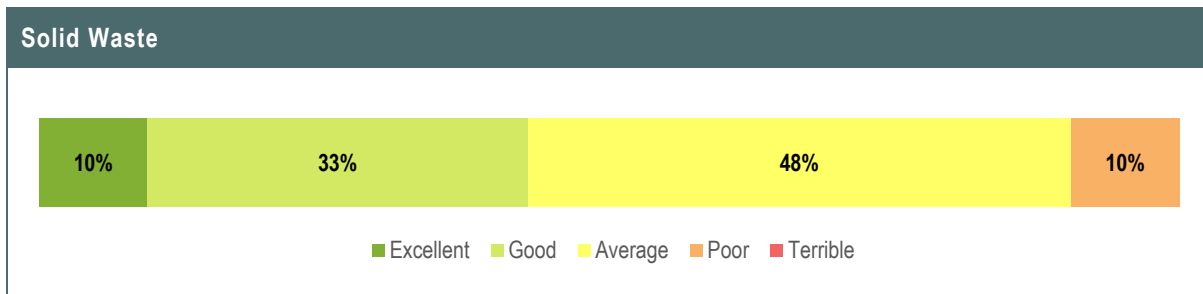
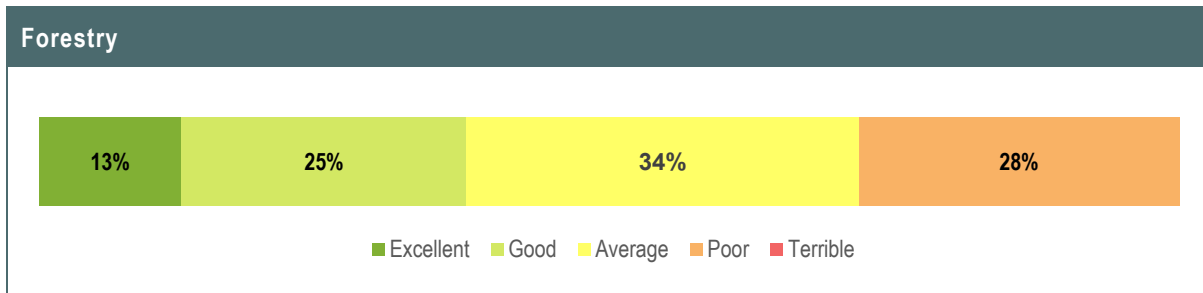


How would you rate the adequacy of current staffing levels (aka are there enough people to perform the work) within your immediate team?





How would you rate the level of cross-training and backup within your immediate team?



Employee Engagement: How much do you agree with the following statements?

	STRONGLY AGREE	SOMEWHAT AGREE	NEUTRAL	SOMEWHAT DISAGREE	STRONGLY DISAGREE
Overall, I am satisfied with my job.					
Forestry	31%	41%	25%	0%	3%
Solid Waste	33%	19%	24%	24%	0%
I feel valued by my supervisor.					
Forestry	53%	28%	13%	6%	0%
Solid Waste	38%	19%	14%	10%	19%
I feel valued by my peers and other members of the organization.					
Forestry	38%	50%	13%	0%	0%



	STRONGLY AGREE	SOMEWHAT AGREE	NEUTRAL	SOMEWHAT DISAGREE	STRONGLY DISAGREE
Solid Waste	38%	33%	19%	5%	5%
I feel engaged by my day-to-day work.					
Forestry	41%	41%	19%	0%	0%
Solid Waste	33%	33%	19%	14%	0%
My team has positive relationships with customers/citizens.					
Forestry	53%	34%	9%	3.13%	0%
Solid Waste	29%	43%	19%	5%	5%
I do not experience bullying or harassment from other employees.					
Forestry	69%	13%	13%	3%	3%
Solid Waste	57%	14%	19%	10%	0%
Discipline is used consistently with all employees across the organization (i.e. everyone is treated fairly).					
Forestry	34%	25%	22%	6%	13%
Solid Waste	33%	19%	33%	5%	10%
I receive useful and consistent feedback about my performance.					
Forestry	41%	31%	16%	13%	0%
Solid Waste	33%	19%	33%	10%	5%
I am given opportunities to learn and advance my skills or knowledge.					
Forestry	44%	25%	16%	6%	9%
Solid Waste	38%	14%	33%	10%	5%

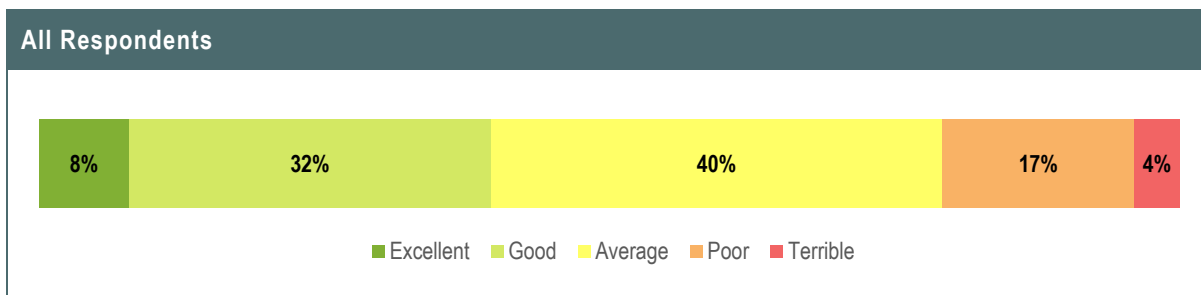
Collaboration and Communication: How much do you agree with the following statements?

	STRONGLY AGREE	SOMEWHAT AGREE	NEUTRAL	SOMEWHAT DISAGREE	STRONGLY DISAGREE
In general, teams within the department work well together and collaborate effectively.					
Forestry	38%	53%	9%	0%	0%
Solid Waste	38%	29%	14%	19%	0%

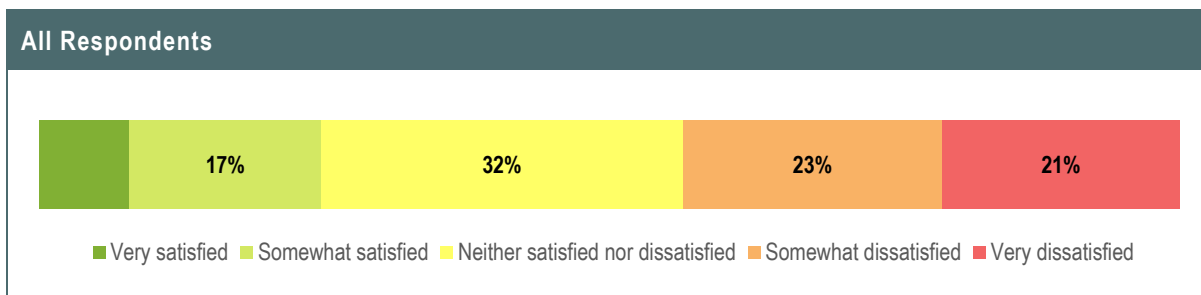


	STRONGLY AGREE	SOMEWHAT AGREE	NEUTRAL	SOMEWHAT DISAGREE	STRONGLY DISAGREE
Department management works well together.					
Forestry	50%	9%	22%	16%	3%
Solid Waste	33%	14%	29%	14%	10%
Communication within my division is effective.					
Forestry	44%	19%	25%	9%	3%
Solid Waste	24%	38%	24%	10%	5%
Communication from my supervisor is effective.					
Forestry	56%	22%	19%	3%	0%
Solid Waste	34%	19%	34%	9%	3%
Communication from my department director is effective.					
Forestry	34%	19%	34%	9%	3%
Solid Waste	19%	14%	38%	14%	14%

How would you rate the City's current efforts to develop and train employees?



How satisfied are you with the competitiveness of the City's compensation and benefits?



Resources and Support: How much do you agree with the following statements?



	STRONGLY AGREE	SOMEWHAT AGREE	NEUTRAL	SOMEWHAT DISAGREE	STRONGLY DISAGREE
I have sufficient technology to do my job effectively.					
Forestry	25%	44%	22%	6%	3%
Solid Waste	29%	33%	19%	5%	14%
I have sufficient equipment to do my job effectively.					
Forestry	9%	31%	25%	22%	13%
Solid Waste	29%	33%	19%	10%	10%
My workspace (building, office, etc.) is adequately maintained.					
Forestry	36%	23%	19%	23%	0%
Solid Waste	29%	38%	19%	10%	5%
My work environment is physically safe.					
Forestry	38%	22%	25%	13%	3%
Solid Waste	29%	43%	14%	5%	10%



APPENDIX B: TREE ORDINANCE COMPARISON

The table below compares the City's Tree Ordinance to two other city ordinances, based on the structural elements recommended by the ISA.

ISA Structural Element	Modesto	Oakland	Pasadena
Clear and specific goals	None	[List of benefits to the community provided by trees.] For all these reasons, it is in the interest of the public health, safety, and welfare of the [City] community to protect and preserve trees by regulating their removal; prevent unnecessary tree loss and minimize environmental damage from improper tree removal; encourage appropriate tree replacement plantings; effectively enforce tree preservation regulations; promoted the appreciation and understanding of trees.	In recognition of the benefits to the community provided by trees and to increase the tree canopy in [City], the City Council adopted measures to protect public trees in certain areas of the city.
Comprehensive tree management strategy	Criteria for tree removal include, in part, if the tree is required to maintain the intent and spirit of the Street Tree Plan.	None	Criteria for action(s) taken are based in part on consistency with the Master Street Tree Plan and other long-term planning documents.
Community support	None	Opportunity for public comment.	None
Flexibility	Appeals process for any administrative actions.	Appeal process for tree removal requests.	Appeal process for tree removal requests.



Specified enforcement actions	None	<p>If damage to a street tree occurs as a result of on-site work, the tree reviewed may require a replacement.</p> <p>If someone removes, damages, or endangers any protected tree in the city except in compliance with the ordinance, they are guilty of an infraction. They are liable for all costs associated with the investigation and enforcement of the ordinance, required to provide replacement trees and/or fees. The Office of Parks and Recreation may put a lien on the violator's real property for this amount.</p>	<p>Violators of the ordinance may be charged with a misdemeanor or infraction. An infraction can result in a \$250 fine; a misdemeanor may result in up to 6 months imprisonment and a maximum \$1000 fine. Other penalties may apply (late payments, administration fees, etc.).</p>
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