PERFORMANCE AUDIT REVIEW

TIGARD, OREGON

matrix consulting group

September 20, 2019

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1 Introduction and Executive Summary

The Matrix Consulting Group was retained by the City of Tigard to conduct a Performance Audit of general fund operations. Additionally, the scope of work included development of recommended performance metrics for each department. The following report presents the results and findings of the study.

The project team has assembled this draft final report which summarizes our findings, conclusions and recommendations.

1. Study Methodology

In this Performance Review of the City of Tigard General Funded functions, the Matrix Consulting Group project team utilized a wide variety of data collection and analytical techniques. The project team conducted the following data collection and analytical activities:

- At the outset of the project, the study team interviewed key staff members from each department to develop an initial understanding of the issues and background for the departments.

- The project team worked with city staff to collect a wide variety of data designed to document workloads, costs, service levels and operating practices.

- The project team developed descriptive summaries, or profiles, of each department summarizing organizational structure, staffing, technology and other key aspects of each department.

- In order to make the assessments of operational strengths and performance opportunities, the project team developed a set of performance measures, called "best management practices" against which to evaluate current services, workloads and service levels in Tigard. These service and performance measures were reviewed with staff in draft format.

- Both an employee and community survey were conducted to gather input from these key stakeholders. This information was considered, in conjunction with the issues identified during the best management practices phase, as part of the analytical effort that led to the development of recommendations.

From these efforts, key issues were developed for analysis and development of specific recommendations for each department.

2. Key Themes

Several key themes arose from the assessment that are worth noting to put the following recommendations into context. Overall, the City of Tigard is providing high levels of customer service to the public and generally providing services at a level higher than might be expected with current resource allocations. The notable themes that emerged included:

- Strong focus on customer service and responsiveness to the public.
- Many services provided at levels matching or exceeding relevant industry standards.
- Strong inter-departmental cooperation and coordination in provision of services.
- Generally lean staffing levels throughout the organizational structure. However, Tigard makes more extensive use of part-time and reduced hour full-time employees than typically seen in other organizations.
- Limited ability to access existing data within the organization and software systems impacting ability to analyze available data for use in evaluating current operations, thus limiting the ability to plan, manage, and understand emerging service trends.
- Lack of integration of existing technologies – limiting the ability to automate some processes or data requirements.

Many of the limitations noted above have been recognized by staff prior to or during the conduct of this evaluation and efforts are underway to mitigate or eliminate these potential impediments for greater efficiency and effectiveness in the organization.

3. Listing of Recommendations.

The following table summarizes the key recommendations contained in the report – grouped by department. For each recommendation, there is a priority, timeframe and cost impact of the recommendation listed to provide guidance during implementation.

	Recommendation	Priority	Timeframe
	CITY MANAGEMENT		
1	The Annual Workplans for each department should be guiding documents that are considered a part of performance evaluations and developed in alignment with the overall City Strategic Plan.	High	2020

	Recommendation	Priority	Timeframe
2	The Senior Management Analyst position should be charged with overseeing the development and implementation of the City's performance management program.	High	2020
3	The City should expand on their existing performance measures by identifying and adopting additional performance and workload measures to enlighten the public regarding the Department's performance and accomplishments.	High	2020 (with budget)
4	The Department should develop a methodology for predicting upcoming retirements based on age and years of service of employees and update it at least annually to anticipate which employees and skills will need to be replaced.	Medium	2020
5	The Department should prioritize efforts to expand the diversity of applicant pools to enable it to work toward a City workforce that is reflective of the community.	Medium	2021
6	The City should update the performance evaluation tool and implement a compensation approach that more closely ties pay increases to individual performance.	Medium	2021
7	Additional staffing resources, in the range of .5 to .75 FTE, should be allocated to the Human Resources Department.	Medium	Next budget cycle
	CENTRAL SERVICES		
8	The City should utilize internal and external customer surveys to determine satisfaction and effectiveness of web content.	Low	2020
9	The City should utilize a work order system for all requests for web content modification.	Low	2021
10	The City should develop a written communication strategic plan.	High	2020
11	The Graphics Design division staff should meet with stakeholders before beginning work on large project design requests.	Medium	2020
12	The Court should adopt a written strategic plan to guide future decision making for operations and employee performance expectations.	Medium	2020
13	The court should maintain staffing levels, so workload demands are within 10% of annual productive hours per employee.	Medium	Ongoing
14	Fleet maintenance should perform analytics and random verification of fuel purchases	Medium	Ongoing

	Recommendation	Priority	Timeframe
15	The City should ensure that its asset management system is meeting the needs of fleet and facilities maintenance staff.	High	2020
16	Property Management should regularly assess amounts spent on vendors for specialty services to determine if in-house staff should perform those functions.	Medium	2021
17	Property Management should implement a proactive building preventive maintenance program to prevent reactive maintenance issues as much as is reasonably possible.	High	2020
18	Fleet & Facilities should conduct spot inventory checks to mitigate the inherent risk of asset misappropriation.	Medium	2021
19	Fleet & Facilities should maintain staffing levels in the general range of one (1) employee for every 35,000 – 45,000 square feet of facilities under management.	High	2020
20	Project managers should receive project management certification.	Medium	2021
	COMMUNITY DEVELOPMENT		
21	The Department should ensure that in-house staff have the ability to produce workload and performance reports from Accela.	High	2020
22	The Department should generate routine reports on workload and level of service performance measures in order to gauge effectiveness in meeting established benchmarks.	High	2020
23	The Department should distribute an electronic customer satisfaction survey to all customers at the conclusion of their application and compile responses as a performance measurement tool.	Low	2020
24	The Department should implement expedited permit application reviews as a fee-based option for customers.		
25	The Department should designate a second position as an Accela power user and require that the management responsibilities of that system be shared.	High	2020
26	The Department should ensure that the system which replaces Springbrook can be integrated with Accela to eliminate the need for duplicate entries.	High	Immediate
27	The Department should monitor inspector staffing levels to ensure that they remain appropriate for the required workload.	High	Ongoing

	Recommendation	Priority	Timeframe
28	The Department should maintain an online library of standard conditions of approval for land use permits, which is shared with staff and the public.	Medium	2020
	FINANCE & INFORMATION SYSTEMS		
29	With appropriate staffing, the Finance Department should perform regular data analysis on its data to help detect any financial irregularity or non-compliance with financial policies.	Medium	Ongoing
30	Provide cross training so that critical functions for each finance position have at least two people who can complete them and require the employee performing the critical task as a backup to complete the function at least twice annually.	High	2020
31	Complete an annual fraud risk assessment.	Low	2021
32	Management should conduct regular audits of purchases to detect and deter asset misappropriation.	Medium	2020
33	Determine if automatic notification of payroll changes is possible within the City's payroll/financial software system.	Medium	2020
34	The City should assign a second employee to provide verification checks of garnishment data entered into the payroll system.	High	2020
35	The City should ensure that its asset management system fully integrates with its financial software system and has the capabilities necessary to foster an efficient, transparent, and data-centric approach to fixed asset management.	High	2020
36	With available time, the City should proactively research and seek buying discounts in addition to State bid discounts.	Medium	2020
37	The City should install and operate adequate software to monitor IT logs and detect any attempt at system intrusion.	Low	2021
38	The City should ensure GIS staff spend at least 10% of their time working to proactively introduce GIS technology into every department in the City.	Medium	2020
39	The City should create an information technology committee that meets at least quarterly.	High	2020
40	The City should reduce its internal phishing campaign employee clickthrough rate to no more than 5%.	Medium	2021
41	The City should hire one (1) additional FTE into an IT support position.	High	2020

	Recommendation	Priority	Timeframe
	LIBRARY		
42	The Library should reduce service hours to between 62 – 64 hours per week, either through elimination of some evening hours or an earlier closing for all evenings. Closing at 8pm each night should be implemented, the hour after which visits decline markedly.	High	2020
43	Develop a comprehensive marketing plan encompassing traditional print and advertising and social media components. Use this opportunity to brand the Library as consistently as possible to the community. Finally, make one person responsible for the coordination, development and posting of social media while continuing to seek the input of other staff. The lead person should be the Communications Coordinator. Then management team should set direction and develop a review process.	High	2020
44	The new Director needs to continue the recent focus on furthering team building and open communication among Library staff.	High	2020
45	Create an internal team to research, develop and present to the City a Library Information Technology Needs Assessment and Long-Range Plan.	High	2020
	POLICE		
46	Maintain current Administration staffing levels.	n/a	n/a
47	Add 8 additional Officers to maintain higher minimum staffing to achieve stated goal of 5 minute response to priority 1 and 2 calls for service. Staffing should be 4 Officers on Day Shift, 5 Officers on Afternoon Shift and 4 Officers on Night Shift.	High	2020
48	Maintain current staffing of two K9.	n/a	n/a
49	Minimum Staffing should be Sergeant on duty at all times.	n/a	n/a
50	Fill 2nd CSO position for a total of two CSOs.	Medium	2021
51	Maintain current staffing for traffic unit.	n/a	n/a
52	Review case screening process.	Medium	2020
53	If all workable cases are currently assigned, the department should eliminate two detective positions.	Medium	2021

	Recommendation	Priority	Timeframe
54	Maintain current staffing but use the recommended benchmarks to re-evaluate staffing on an annual basis to determine when more property/evidence staff is needed.	High	Ongoing
55	Maintain current staffing for records management.	n/a	n/a
56	Add an additional analyst in the next 1 to 3 years.	Medium	2022
57	Maintain current Administrative Specialist staffing levels.	n/a	n/a
58	Maintain current SRO staffing but add one additional SRO in the next 1 to 3 years.	Medium	2022 – 2023
	PUBLIC WORKS		
59	The Department should establish a routine cycle of measurement, review, and action based on their selected performance metrics.	High	Ongoing
60	Performance measures and their results should be published each year in the annual budget.	High	Ongoing
61	The City should ensure that the selected asset management system replacing the existing work order system has the capabilities necessary to foster an efficient, transparent, and data-centric approach to infrastructure maintenance and workload management.	Medium	2021
62	The Department should track all field work – proactive and reactive – using work orders within the asset management system.	Medium	2021
63	The Department should develop a preventive and routine maintenance calendar for the Parks Maintenance Division in the asset management system and use this tool as the basis for calculating staffing needs.	Medium	2021
64	The City should ensure that the system which replaces Springbrook has a robust project management module or invest in a separate software specifically designed for capital project management.	High	2020
65	The Department should seek to update each system master plan once per six years on a rotating basis.	High	Ongoing

	Recommendation	Priority	Timeframe
66	The Department should include some strategic discussion in the master plans of the systems' purpose for the community and how the plan supports the goals of the Department and the City.	High	Ongoing
67	The Department should provide development review backup for the Principal Engineer, including the use of other P.E.'s in the Engineering Division.	Medium	2020
68	The Department should adjust the organizational structure to narrow the Parks Supervisor's span of control and allow more effective oversight of seasonal staff.	Medium	2021
69	The Department should adjust the organizational structure to narrow the City Engineer's span of control and provide oversight assistance to project management staff.	Medium	2021

The following chapters provide narrative detailing with the rationale and basis for each recommendation.

2 City Management

This chapter covers the recommendations related to the City Manager's Office and the Human Resources Department. The analysis focused on key recommendations to improve the operational effectiveness of each department and the staffing required to provide those services. The Policy and Administration Program in the budget also consists of the Mayor and Council and Office of the City Attorney functions; however, these services were not reviewed or assessed as part of this report.

1. City Manager's Office.

The City Manager's Office is responsible for overall management of the City of Tigard including Council support, organizational leadership, operational support, general policy and procedure development and administration governing all City operations. This office is responsible for implementation of the City's Strategic Plan, coordination of the City's legislative agenda, and communicates City Council's direction to the executive staff and employees.

The City Manager's Office has an annual operating budget of approximately $740,000 and a staff of four positions: City Manager, Assistant City Manager, Executive Assistant to the City Manager, and Senior Management Analyst.

(1) Departmental Annual Workplans and the City's Strategic Plan should be in Alignment.

The effectiveness of the City's adopted strategic plan can be enhanced by ensuring that the key goals and objectives in future strategic plans are well delineated and that these are used as the basis for on-going policy and management decisions. In particular, the performance metrics and annual departmental workplans should align, where practical, with the strategic plan elements. Tigard has a refreshment of the city's strategic plan underway that is scheduled for completion in early 2020. Annually, departments should develop their annual workplan and notate the key efforts that will further or support the achievement of the strategic goals – or position the City operations to move closer to the achievement of the goals.

Annual workplans should be a guiding effort for each department's focus during the year, and a portion of the performance evaluation for staff in that department should be linked to accomplishing the workplan. Progress on the workplans should be reviewed at least quarterly between the City Manager, Assistant City Manager and the respective department head. A semi-annual update on progress should be provided to the City Council.

Recommendation 1: The Annual Workplans for each department should be guiding

documents that are considered a part of performance evaluations and developed in alignment with the overall City Strategic Plan.

(2) The Senior Management Analyst Positions should be Tasked with the Development and Oversight of the Performance Management Program.

The City Manager's Office has operated for much of this year with half of the positions vacant. The Assistant City Manager and Senior Management Analyst positions were vacant for nearly one year. The Assistant City Manager position has recently been filled and this will provide significant assistance in the effective operation of this critical office and provide support to the City Manager by taking direct oversight of a number of the operating departments and provide support by handling special projects and initiatives.

The Senior Management Analyst position is in the process of being filled and various considerations have been given to the duties to be assigned to this position. Given the position's location in the City Manager's Office and the high priority that is being placed on data analysis, data-informed decision-making and the need to fully implement the performance measurement program under development, it is recommended that the principal duty of this position be allocated to development, implementation and coordination of the performance measurement and report card efforts underway. This will take close cooperation and interaction with all departments. This position will also provide analytical support as departments work to enhance their internal data analytical abilities.

In addition, this position should be tasked with conducting special studies, analysis, and analytical activities to support projects and duties performed by the City Manager and Assistant City Manager, and in support of the city's strategic plan and City Council goals. Currently, these positions have limited analytical support requiring them to be intricately involved in the development of projects and initiatives which limits their time to spend on more strategic and longer-term efforts important to the City.

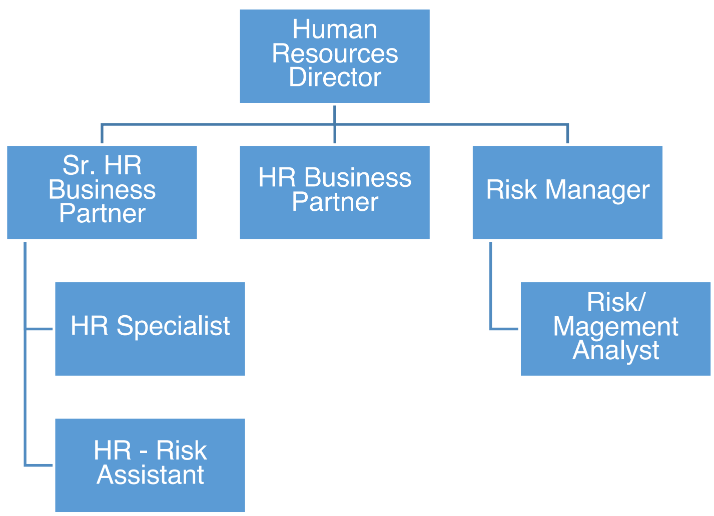
Recommendation 2: The Senior Management Analyst position should be charged with overseeing the development and implementation of the City's performance management program.

Recommendation 3: The City should expand on their existing performance measures by identifying and adopting additional performance and workload measures to enlighten the public regarding the Department's performance and accomplishments.

2. Human Resources Department.

The Human Resources function is responsible for the administration and oversight of all City human resources programs to the City organization. Programs and services provided include: recruitment, selection and testing, benefits administration, labor negotiations, personnel policy administration, employee relations, job classification and salary administration, employee recognition, investigations, training, organization development and performance management, workforce planning, equal opportunity, and wellness and risk management with oversight and coordination of the city's worker's compensation and liability claims management, insuring city assets, the city's retirement programs and safety programs.

The Human Resources Department has an annual operating budget of approximately $680,000 for Human Resources functions and $823,000 for Risk Management ($567,000 of that is the cost of citywide insurance of assets.) The staffing is shown in the following chart:



(1) Additional Workforce Planning Should be Undertaken.

Information about upcoming retirements can be used in an organization to determine when vacancies are likely to open up in various departments, which allows HR staff to get a head start on developing a qualified pool of applicants. Anticipating openings due to retirement can help the department begin to make decisions about succession planning tactics sooner rather than later. However, the department does not currently have a formal methodology for projecting the likely retirement of employees over time. While staff within a customer department may know when retirements are upcoming, the HR Department is not always informed about these transitions. In order to optimize the effectiveness of the recruitment staff in this effort, the Department should adopt a more formal workforce and retirement planning model.

One model for projecting employee retirement involves totaling employees' ages and their years of service, and indexing those totals at the current time, as well as for future dates, to determine likely retirements. Both of those figures could easily be obtained from data readily available. An example of this method is depicted in the table below, showing retirement risk at the current time, as well as in 2 years and 5 years:

Employee	Age	Years	Current Total	2 Year Total	5 Year Total
Employee 1	23	1	24	28	34
Employee 2	48	15	63	67	73
Employee 3	45	19	64	68	74
Employee 4	50	19	69	73	79
Employee 5	48	23	71	75	81
Employee 6	48	24	72	76	82
Employee 7	49	27	76	80	86
Employee 8	52	25	77	81	87
Employee 9	54	32	86	90	96
Employee 10	57	35	92	96	102

While a model like this one can be constructed manually, this represents an area where technology can be used to improve the Department's operations. Existing data should be sufficient to generate reports such as the one above (or at least data that can be presented as a report). These projections should be updated on at least an annual basis in order to account for employee turnover and refresh the Department's strategy for replacing lost employees and skills.

Employee skills and certifications could also be included in these projections. This would help the HR department anticipate when skills will be lost and begin strategizing to replace them, either by hiring new employees with the desired skills or by incentivizing existing employees to acquire those skills and certifications.

Recommendation 4: The Department should develop a methodology for predicting upcoming retirements based on age and years of service of employees and update it at least annually to anticipate which employees and skills will need to be replaced.

(2) Continued and Enhanced Efforts Should be Undertaken to Ensure the Workforce Reflects the Community Demographics.

The Department's recruitment staff currently use multiple avenues for recruiting candidates for open positions, all of which funnel applicants to a single recruiting module. NeoGov is used to collect, filter, and assess applicants in order to develop a pool of highly qualified candidates. While staff in the Department learn on an informal basis which recruitment sources are the most effective, the Department should focus analytical efforts at determining which recruitment sources have proven reliable in the past in providing both qualified and diverse candidates for consideration.

The Department should work toward a long-term goal of achieving a workforce that is reflective of the Tigard community and the market demographics from their typical recruitment area (which is larger than the City of Tigard). Doing this would allow the Department to make an assessment about which recruitment sources produce the greatest numbers and/or diversity of interview-worthy candidates.

Recommendation 5: The Department should prioritize efforts to expand the diversity of applicant pools to enable it to work toward a City workforce that is reflective of the community.

(3) A More Robust Compensation Practice Should be Implemented that Ties Pay Increases to Individual Performance.

Currently, typical salary adjustments for employees (not represented by collective bargaining agreements) are loosely tied to performance. While the City utilizes performance evaluations, the delineation between staff performance is not sufficient to result in pay adjustments that vary by much – most employees are getting a similar pay increase annually.

There are a number of municipalities that use an evaluation system to provide additional benefits to their employees via a pay-for-performance or merit program. Such a program rewards employees for their individual contribution to the department or the municipality as a whole. These programs are separate from standard cost of living adjustments or step increases and are solely designed to recognize outstanding workmanship. However, most pay-for-performance plans tend to be set up for non-union employees due to limitations posed by bargaining contracts. It is not impossible to implement pay for performance within unionized environments, it is just harder.

In a survey performed by the International City/County Management Association (ICMA), they found that in Olathe, Kansas, their pay-for-performance provides the basis for promotions, pay increases, transfers and performance bonuses. The City has a formal performance review that begins with supervisors and employees identifying job specific goals and how their individual work performance contributes to those goals. The City uses a rating scale to determine how, or if, employees met the expectations set forth at the beginning of the rating period which then determines the amount of additional benefits, if any. The goal of their program is to recognize employees who have done outstanding work above and beyond expectations, thereby providing them with more than the "routine" cost of living adjustment normally received by all employees regardless of productivity.

The implementation of compensated related performance incentives has shown that more satisfied employees are motivated to perform at a higher level and be more productive for the organization. Reward based recognition can certainly be a motivating factor for employees to perform at maximum levels benefiting both themselves and the City.

The City will likely need to develop a new, or refine the existing, performance evaluation tool to implement this suggestion and provide the definitive scoring approaches that will distinguish solid from outstanding performance.

Recommendation 6: The City should update the performance evaluation tool and implement a compensation approach that more closely ties pay increases to individual performance.

(5) Additional Staffing Resources are Needed to Provide the Services Required.

To accomplish the additional duties outlined above for Human Resources, additional staffing resources are needed. It is estimated that at least .5 to .75 FTE should be allocated to Human Resources to support existing programs and provide the additional services outlined above. Many of the positions in Human Resources are at the reduced level "full-time" equivalency. They are eligible for benefits but do not work a full workweek. The easiest, and least costly approach would be to convert all of these reduced hour positions to true full-time positions. Alternatively, the City can implement a new .5 to .75 FTE position to supplement the current staffing allocation.

Recommendation 7: Additional staffing resources, in the range of .5 to .75 FTE, should be allocated to the Human Resources Department

3 Central Services

The following chapter focuses on the City's Central Services Department, addressing opportunities for improvement in the Design and Communications, Municipal Court, Property Management, and Fleet Maintenance divisions. In addition to each specific division within the Central Services Department, the Department Director also functions as the City's ADA coordinator.

The Central Services Department consists of four primary divisions: Communications, City Recorder/Records, Municipal Court, and Fleet & Facilities Operations. Within Fleet & Facilities, there are both property management and fleet maintenance divisions. The Recorder & Records Division is not assessed as part of this study.

DEPARTMENT STRENGTHS

While this chapter focuses on changes that the Department can make to improve the way it operates, the following points should be noted as particular strengths of the Department in the functions reviewed as part of this study:

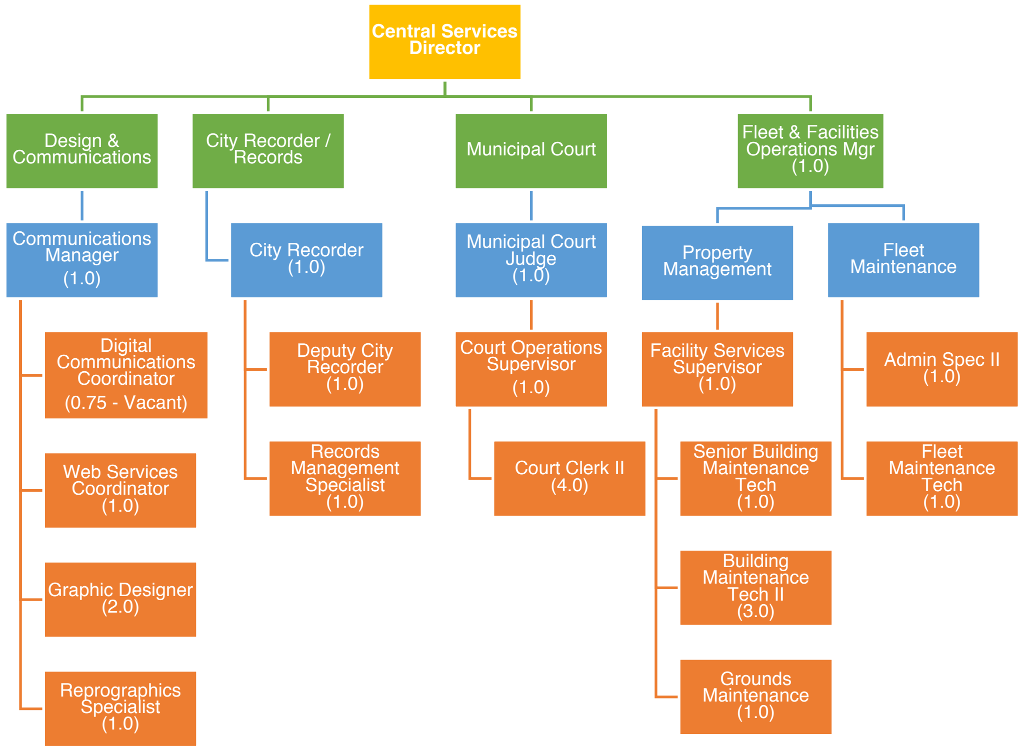
- The City's website is user-friendly and easy to navigate.
- While several departments have their own staff to coordinate their communication efforts, the City uses centralized communications for several communication's functions, including graphic design for written communication.
- The City's communication's team is available to serve all departments.
- Courts are adequately staffed to handle anticipated workload.
- The Court has written policies and procedures to assist staff with completing their responsibilities.
- Maintenance, replacement, and management of fleet and equipment are centralized.
- The City maintains a fleet fund reserve to ensure timely replacement of fleet assets.

- Charge back rates for fleet services are in place and evaluated at least annually.
- The Department uses electronic work orders for all maintenance activities.
- The Department is adequately staffed for Capital Construction Project Management.

The Central Services Department budget data summary show a very modest overall increase of 0.58% from FY18 revised numbers to FY19 adopted numbers. While there is no indication that workload levels are decreasing, the budget reveals decreasing expenditures in, both, Design & Communications and Fleet Maintenance. The Design & Communication's budget shows a reduction between FY18 revised and FY19 adopted of just over 4%, while the Fleet Maintenance budget shows a decrease of 4.62% for that same period.

Division	FY 17 Actual	FY 18 Revised	FY 19 Adopted
Design & Communications	$563,930	$614,925	$590,187
Municipal Court	$463,992	$560,880	$603,845
City Recorder/Records	$464,811	$526,129	$533,494
Fleet Maintenance	$222,732	$322,503	$307,589
Property Management	$1,736,512	$1,888,409	$1,900,539
Total	**$3,451,977**	**$3,912,846**	**$3,935,654**

The following organizational chart shows an overview of the organizational chart of the Central Services Department.



The following sections address changes to technology, organizational structure, and operational practices which the Department should make in order to become more efficient, responsive, and data-driven.

1 | Communications

The Communications Division provides support for the City's branding and communications efforts to achieve effective communication with the public. The Division provides internal services support with communications planning, website design and updating, editing, creating annual reports, graphic design, copywriting, printing, video production, and news releases. Examples of final products the division helps create include brochures, posters, human resources recruiting fliers, business cards, letterhead, stationary, and a variety of electronic media design.

The assessment revealed several very positive strengths of the Communication's division. These strong points are indicative of a competent, well-led organization which thus far is successful in achieving its goals and standards. Examples include:

- The City uses a webmaster to maintain the website with up-to-date information across all departments.

- The City's website is user friendly and easy to navigate.

- The City uses centralized communications for several communication functions, including graphic design for written communications.

- The City's communication's team is available to serve all city departments.

- The City's communication's team provides numerous services to city departments to assist with the creation of effective written documents (fliers, brochures, posters, etc.).

The sections below discuss areas where the department has opportunities to improve its level of service even further.

(1) The City Should Utilize Internal and External Customer Surveys to Determine Satisfaction and Effectiveness of Web Content

The City utilizes internal and external customer surveys for certain departments; however, the City is not currently utilizing customer surveys to gather data on user satisfaction and effectiveness of web services.

As the City already knows, by better understanding what internal and external stakeholders want in relation to website content and design, the City can be in a better position to ensure effective overall external communications while delivering results internal and external customers want to see.

With regard to web services, the City might be doing a fantastic job for internal and external customers; however, from the customer's perspective, there might also be areas in which there could be improvement. An annual survey would be beneficial as an opportunity to learn about customer satisfaction with web-related services (content, design, ensuring what the public wants to see on the website is available and on the site, satisfaction with timeliness of providing data to the public in relation to timing of matters that involve public input, etc.).

Recommendation 8: The City should utilize internal and external customer surveys to determine satisfaction and effectiveness of web content.

(2) The City Should Utilize a Work Order System for all Requests for Web Content Modification

Currently, each person wanting changes to web content will email or otherwise contact the Web Services Coordinator, who will make any modifications on the website as appropriate. Web Services Coordination then prioritizes each request and regularly reviews the status of requests to ensure timely delivery of results to internal customers. This process does not involve the use of work orders, but rather a spreadsheet to document and manage workload.

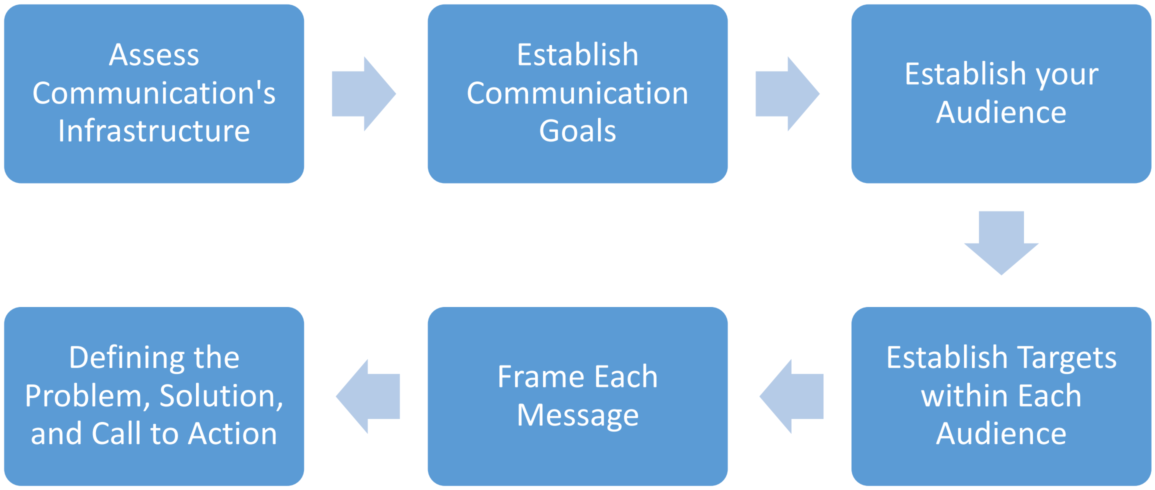
With graphic design using a work order ticketing system and several other divisions/ departments in the city using them, the City should implement a work order system for all web services-related work requests. The use of such a system will provide the city with a better opportunity to track projects by priority, ensure timely delivery of requests, and to run reports on workload performance data.

Recommendation 9: The City should utilize a work order system for all requests for web content modification.

(3) The City Should Develop a Written Communication's Strategic Plan

The City does not currently have a written communication's strategic plan to guide communications' integration with programs across multiple departments and to guide all communications efforts (including public education and advocacy) over the next several years.

While the City's Communication's leadership is knowledgeable and skilled with municipal government communication's objectives and overall strategies, the following information is worth mentioning as it relates to overall guidance. There are six steps in designing an effective communication's strategic plan. The diagram below highlights these six steps:



The first step of assessing the City's communication's infrastructure might be one of the most important steps as it allows you to self-assess where you are now and to draw on any lessons learned from past experiences. The assessment begins with understanding what communication's efforts have worked well for the City in the past and what did not work well. This process also involves determining how many staff are available to commit to communications efforts, what each of those people will specifically do in each communication's project, and how much budget is available to promote effective communication's efforts.

The next steps in the plan include framing the City's communication's strategy by ensuring every project has established communication's goals, the general audience is defined as well as any specific targets (i.e. a specific TV station reporter who might be able to get the message on the evening news), each message is clearly framed, and the message identifies the "problem, solution, and a call to action".

Even though this is not a specific step in the process, an important effort is to ensure there is a plan to select and train those people who will be spokesperson's for the City, whether through a centralized department, individual departments, or some combination of the two dependent upon the message being delivered. All efforts to ensure adequate spokesperson training for decentralized communication's efforts should be managed by the city's Design & Communication's division.

Having these efforts memorialized in writing will provide guidance to city staff and ultimately provide additional focus for the city as it seeks to achieve effective communications with both internal and external stakeholders.

Recommendation 10: The City should develop a written communication's strategic plan.

(4) The Graphics Design Division Should Be Involved in Projects from Inception and Should Meet with Stakeholders Before Beginning Work on Design Requests.

The City's graphic design team, excluding the Communication's Manager, consists of 1.75 FTE staff. At present, the team gets involved in projects when someone submits a workorder; however, by the time the workorder is submitted, it is probable that the project planning process is well underway. In order to better serve their customers, it is beneficial for the graphic design team to become involved with a project as early as possible, often at the inception of the planning process. If there is a probability that design will be involved at some point of a project, then graphic designers should be involved as early as possible.

For larger design-work projects, such as annual reports or those that will take design staff more than two full days of work, departments should be encouraged to create a work order at the very beginning of a project's planning phase, thus allowing the graphic design team the opportunity to sit in on meetings or otherwise become knowledgeable about a project's goals, target audience, messaging requirements, as early as possible. The sooner the graphic design team is involved, the more likely they are to create a design with limited revisions that meets the needs of their internal customers.

At present, customers submit design requests and for larger projects, the graphic design team spends what can be a considerable amount of time on an initial design. While design staff routinely reach out to the staff member who submitted a work order before much effort is put into the design, it is probable that this does not always occur.

The project team recognizes that with current staffing levels and current workload, it is not always feasible for design staff to attend meetings prior to a workorder being submitted for design work; however, the earlier design staff are involved in the visioning process for a project, the less likely there will be any differences in vision for what the final product should look like.

For larger projects, the design team member assigned the project should meet with the requester prior to beginning any design work to help ensure everyone is on a similar page with regard to what the final product should look like.

By bringing in the graphic design team early in the project's planning stage and requiring the graphic design team to verbally consult with project stakeholders prior to beginning actual design work, there will be more clarity for design staff and the results are much less likely that any time will be wasted designing something that was not what the customer wanted to see.

Recommendation 11: The Graphics Design staff should meet with stakeholders before beginning work on large-project design requests.

2 Municipal Court

The Municipal Court handles primarily traffic, parking, and limited ordinance infractions in the City of Tigard.

The assessment revealed several positive strengths of the Municipal Court division. These strong points are indicative of a competent, well-led organization which thus far is successful in achieving its goals and standards. Examples include:

- The Court is adequately staffed to handle existing and anticipated workload demand (especially considering the proposed traffic camera enforcement program about to begin).

- The Court has numerous department operating instructions (DOIs) to provide guidance to staff for various work processes.

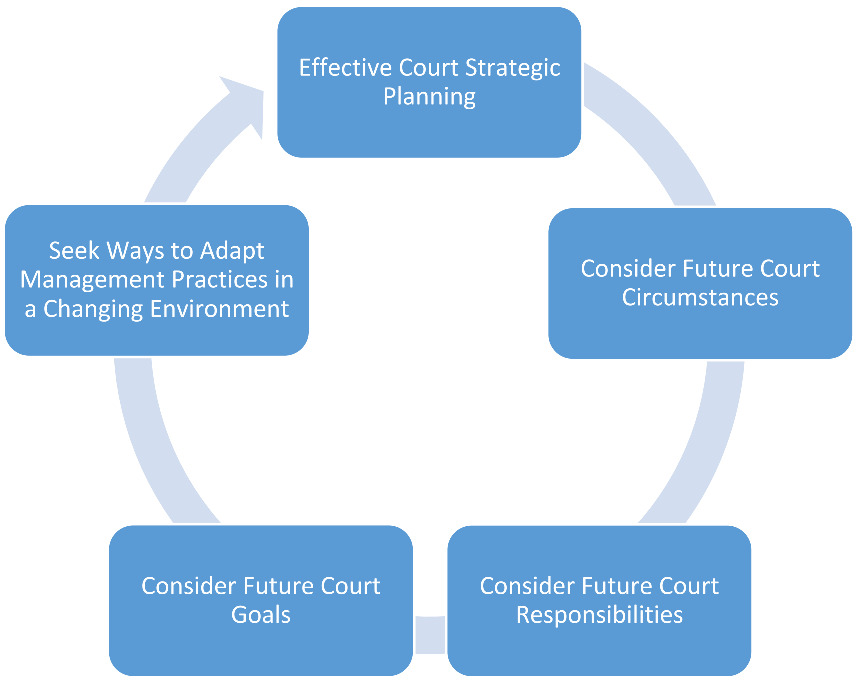
- The City uses centralized communications including graphic design for written communications.

- The majority of citations are electronic and do not require hand entry into the Court's record keeping system.

The sections below discuss areas where the department has opportunities to improve its level of service even further.

(1) The Court Should Adopt a Written Strategic Plan to Guide Future Decision Making for Operations and Employee Performance Expectations

The National Center for State Courts (NCSC) recognizes the importance of strategic planning for court operations and they published a Strategic Planning Resource Guide to assist with court strategic planning efforts.[1] According to the NCSC, it is a prerequisite to enhancing court performance and administration that a strategic plan be developed and include the following:



Court strategic planning is similar to other strategic planning initiatives and yet with often changing technologies utilized within courtroom-related tasks/functions, there is a distinct need to remain flexible within this changing environment. The Municipal Court does not currently have a strategic plan; however, development of one can help guide the Court's future efforts to best serve citizen and court needs. Additionally, employees will have an even better understanding of performance expectations both, now and in the future, with a well-developed strategic plan.

Recommendation 12: The Court should adopt a written strategic plan to guide future decision making for operations and employee performance expectations.

[1] NCSC Strategic Planning Resource Guide https://www.ncsc.org/Topics/Court-Management/Strategic-Planning/Resource-Guide.aspx

(2) The Court Should Maintain Staffing Levels so Workload Demands are Within 10% of Annual Productive Hours per Employee.

A sampling of the division's workload is provided in the table below:

Court	FY17	FY18
Court Caseload	4,927	6,015
Total Violations Processed	3,015	4,141
Traffic Safety Diversions Processed	1,156	1,094
Traffic Safety Diversion Compliance Rate	91.5%	90.3%

Annual productive hours are an important calculation for determining available time per employee for handling essential functions of the job. This calculation is determined with both objective and subjective criteria. To calculate annual productive hours, you start with an assumption of 2,080 hours in a work year (this can change depending on the year, but 2,080 hours is a reasonable assumption). Next, we deduct time for allotted holidays, vacation, and sick leave. Finally, time for breaks, meetings, and training is deducted. The resulting number is the total number of hours an employee is anticipated to be at work performing their core job-related functions.

The following table shows annual productive hours for Tigard Municipal Court employees:

Category	Amount (Hrs)
Base Full Time Hours	**2,080**
Holidays (12 days a year)	(96)
Vacation (15 days a year)[2]	(120)
Sick (12 days a year)	(96)
Breaks / Meetings / Training[3]	(391)
Subtotal of Hours to Be Excluded	*(703)*
Annual Productive Hours	**1,377**

The majority of workload is the result of citations – traffic, parking, and limited ordinance infractions in the City of Tigard. Arraignments occur weekly and total staff time in the courtroom is approximately 90 minutes. Trials occur every other Thursday for three hours each (assumption of six hours monthly). There are currently about 500 citations processed monthly (this can vary widely, but 500 is a reasonable assumption for this workload metric). The City just received approval to implement a traffic camera enforcement program. In anticipation of a significant increase in citations due to the

[2] The City has multiple ranges for employee vacation time. A middle estimate of "15 days" is used for this calculation.
[3] The Breaks / Meetings / Training hours assumes 30 minutes daily for phone calls, 30 minutes daily for breaks, 30 minutes daily for meetings, and two (2) days of training per year.

implementation of this automated traffic enforcement program, the Court recently hired two additional staff members to keep up with workload.

To process a citation, staff must enter information into the computer (verify e-citation data and hand enter about 5% of total citations, which are hand written), file required paperwork, process driving record data, process no show paperwork if that occurs, issue letters to defendants as required, set up payment plans, process diversion program paperwork, make payments, and close case files. Total processing time likely averages 45 minutes per citation for an efficient operation. Answering phone calls and handling walk in traffic not specifically related to a case take up another eight (8) hours weekly of total staff time. If staff are new or otherwise not completely efficient at each function, this time estimate will increase.

Time estimates for workload data are as follows:

Workload	Total annual hours
24 trial days per year at three (3) hours each	72
Arraignments occurring 52 times annually at 90 minutes each	78
Citation processing from inception to completion	4,500
Phone calls and other public assistance at eight (8) hours weekly	416
Total hours	5,066

A recommendation is that court staff are utilized between 90 and 110% of annual productive hours, which in Tigard results in 1,240 to 1514 hours per employee. Some overtime can be good for employees and can save the city money when compared with deciding to hire additional staff simply to avoid paying overtime. For this reason, up to a 110% staff utilization rate is appropriate. The approximate total workload in hours for five (5) employees handling court-related functions (one supervisor and four clerks), is 1,013.2 hours per employee (based on 5,066 total hours). With 1,377 available hours, the current staff utilization rate is 73.58%. This utilization rate is acceptable due to the pending implementation of an automated traffic camera enforcement program.

The City recently hired additional court clerks in anticipation of the implementation of an upcoming traffic camera enforcement program. This is good business practice in that it takes time to get court staff trained in all functions of court operations. Had the city not made these hires, the staff utilization rate for three (3) employees would be 1,688.67, which represents a utilization rate of 122.63%. This rate is higher than the recommended utilization range and supports the prior justification for hiring additional court staff considering the anticipated increase in workload from traffic camera citations.

The Court Operations Supervisor should determine the staff utilization rate on an annual basis and use the updated data to determine whether staffing levels should be modified for the upcoming fiscal year.

Recommendation 13: The court should maintain staffing levels so workload demands are within 10% of annual productive hours per employee.

3 | Fleet Operations

Fleet services provides oversight of vehicle maintenance and repair of city vehicles and equipment. Staff works to help determine appropriate vehicle and equipment replacement schedules, as well as ensure proper preventative maintenance occurs on vehicles and equipment.

The assessment revealed several strengths of the Fleet Operations division. These strengths are indicative of a competent, well-led organization which thus far is successful in achieving its goals and standards. Examples include:

- Maintenance, replacement, and management of fleet and equipment are centralized.
- A replacement reserve has been established to help ensure timely replacement of fleet assets.
- Charge back rates are in place and evaluated annually.
- A preventive maintenance schedule has been adopted.
- Customers receive prior notification of upcoming preventive maintenance services.
- Work orders are electronic and maintained for all maintenance activities.

During FY17 and FY18, the Fleet Maintenance division completed an average of 224 preventive maintenance work orders and an average of 836 scheduled maintenance work orders. Through February 2019, the division completed 141 preventive maintenance and 466 scheduled maintenance work orders.

Fleet Maintenance	FY17	FY18	FY19
Fleet Preventative Maintenance Work Orders	191	257	141
Fleet Scheduled Maintenance Work Orders	866	805	466

Work orders are delivered electronically and prioritized by department (public safety first, public works second, then other departments). In-house staff complete many repairs in-house and only contract out work that is either too time consuming to perform or preventive maintenance work on vehicles. In-house staff take care of preventive maintenance for all equipment. The total amount outsourced in combined labor and supplies is approximately $75,000 annually. This shows in-house staff are efficient and effective in determining what work should be outsourced versus completing the work in-house.

The sections below discuss areas where the department has opportunities to improve its level of service even further.

(1) Fleet Maintenance Should Perform Analytics and Random Verification of Fuel Purchases

The City of Tigard has its own fuel tanks/pumps. Invoices for fuel purchases are decentralized so they are delivered directly to individual departments. There is an inherent risk related to internal controls and both the detection and deterrence of fuel theft when a centralized department does not regularly perform analytics and random expense verification of fuel purchases.

Other local government organizations have experienced incidents of theft of fuel, when an employee will fuel up a personal vehicle and claim that it was a city vehicle. If required to input data about the vehicle being fueled, the employee can input false data in an attempt to mislead anyone who might want to verify the fuel purchase.

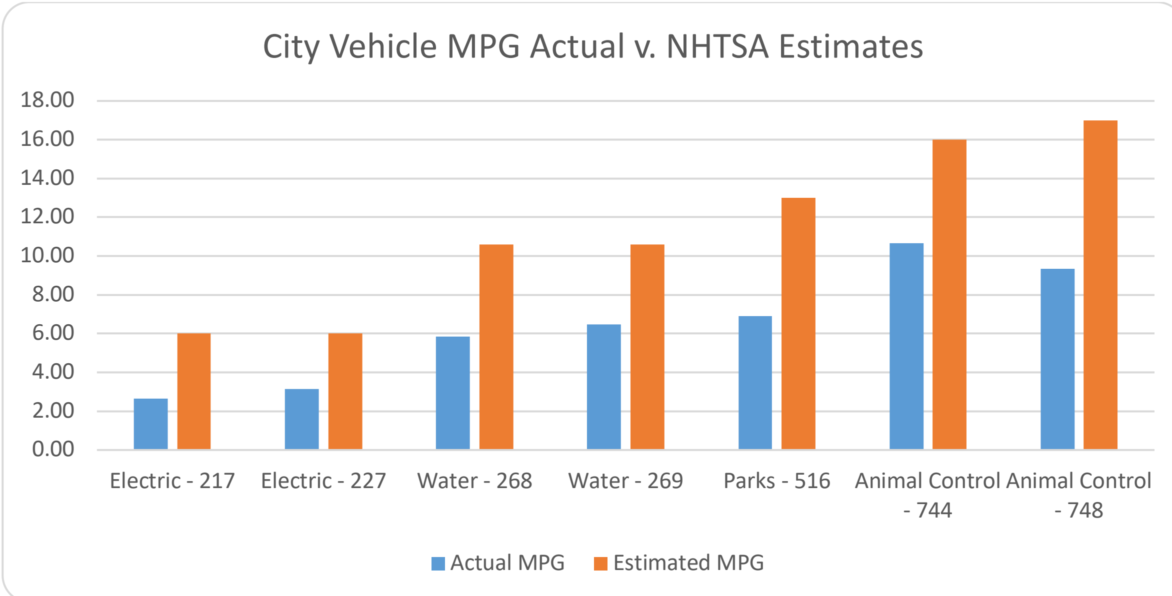
The City requires employees to enter certain data at the pump when fueling a City vehicle. That data is then routed to individual departments, which in turn keeps records on fuel usage.

An example of a fuel verification check is having a staff member sample a certain number of fuel purchases each quarter. The vehicle is located and its current mileage verified. The fuel report for the prior ten (10) fuel purchases are reviewed for each vehicle sampled to determine if the actual mileage is consistent with what one would expect to find based on prior mileage entries.

The fuel usage data and current mileage are entered into an Excel spreadsheet and a miles per gallon over a period of time is determined. The review includes pulling data for average miles per gallon from the National Highway Traffic Safety Association (NHTSA) for the vehicle year, make, and model being fueled. If the review finds actual miles per gallon are significantly lower than NHTSA estimates, that could be an indication of fuel theft and reason for additional investigation. Random sampling fuel usage verification checks provide a useful tool to both detect theft should it have occurred and to deter any future consideration of committing such an act.

The following is a sample report of miles per gallon actual versus NHTSA estimated based on a sampling of a city's vehicles (after verification of actual mileage). The data in the sample report show mileage per gallon are consistently lower across all sampled vehicles than NHTSA estimates. Since this is consistent across several departments, it is less concerning that there is an incident of theft (unless it is widespread theft) but more indicative of something else (i.e. those city vehicles are weighted down with equipment and/or drivers could have a heavy foot).

Since the fleet maintenance division maintains the fuel tanks and pumps, it should be responsible for ensuring appropriate fuel usage. The division's administrative specialist could run analytics on fuel usage while coordinating with department directors to verify mileage on sampled vehicles. Any discrepancies or areas needing further inquiry would be referred to the appropriate department director for further investigation.



Recommendation 14: Fleet maintenance should perform analytics and random verification of fuel purchases.

(2) *The City Should Ensure that its Asset Management System is Meeting the Needs of Fleet and Facilities Maintenance Staff.*

An effective asset management system allows an organization to optimize efficiency and effectiveness by budgeting accurately for the likely cost of maintenance and repairs, staffing appropriately for the projected workload, and using a preventive maintenance program to ensure assets do not deteriorate due to an unacceptable level. Some organizations use as a primary tool for this work, a computerized maintenance management system (CMMS) or dedicated asset management software with an integrated work order system. A CMMS is not always recommended, but what is recommended is any program that has an asset management system that seamlessly integrates with both a work order system and financial reporting software.

The City currently uses an asset management and work order system; however, staff indicate a desire for that system to perform additional functions. The City should ensure its asset management program includes an effective work order system which is integrated with the asset inventory. The Department should adopt a formal asset management strategy which involves three components: a Department-wide asset inventory, a lifecycle costing system, and a work order system.

The following table shows common components of an effective asset management/work order integrated system.

Essential Function	Description/Explanation
Asset Management	The software should allow the City to upload a complete and classify a completed listing of infrastructure assets that would be maintained by Fleet and Facilities. It should allow each asset to be classified by its category and type and assigned to an “owner” division.
Lifecycle Costing	The software should allow each asset to be assigned a construction or full replacement cost, as well as an anticipated lifecycle and depreciation schedule. This information is vital for capital budgeting.
GIS Integration	Most systems available are compatible with ESRI ArcGIS, which means that each stationary infrastructure asset can be assigned a specific location in one of the public works GIS layers. The City’s software should allow this capability so that the geographical location of any asset can be quickly searched, and GIS layers can display information about, and link to, the assets populating them. While most fleet assets will not need this level of service, other areas in the city do need them.
Work Order Management	The software should be able to manage a work order system which provides the basis for a Department-wide preventive maintenance program, detailed reporting, and staffing allocations.
Field Access	The software should include access to a mobile application which can be used by staff in the field to look up work orders, identify their geographic location, read prior status updates for them, record labor hours and vehicle/equipment use against work orders, and update work orders’ status or mark them complete. Each crew in the field should be able to access this application on tablets to update the system in real time.
Reporting	The software should be able to produce detailed reports from the work order system, as well as the program’s asset management module. Examples of reports may include a) the total depreciation of the asset over a selected time period, b) the total maintenance and replacement cost of the asset in any given fiscal year, c) the total labor hours spent on non-routine maintenance of the asset, and d) the total number of work orders related to each asset (to know if there is need to re-do work, or simply there are high maintenance costs associated with the asset).

While the City’s systems might perform many or all of these functions, staff using them must be comfortable with the particular system and all that it has available to them so they can best do their job.

Recommendation 15: The City should ensure that its asset management system is meeting the needs of fleet and facilities maintenance staff.

4 Property Management

The Property Management (Facilities Services) Division is responsible for environmental health, safety, and security of city facilities. These services include providing security, janitorial services, fire safety, maintenance, and repair of city buildings. Additionally, they assist the other city staff with limited physical work (moving filing cabinets, etc.).

Staff handle all minor repairs, maintenance, minor remodels, painting, floor repairs, door maintenance, and many preventative maintenance functions. Employees are not licensed to perform specialty work and as such they do not complete HVAC, plumbing, or electrical repairs. However, they are on-site for those issues and handle contracting with outside vendors as necessary.

Grounds maintenance is staffed with one employee and this employee is responsible to complete mowing, blowing, weeding, and landscaping for all city administrative buildings (senior center, PW, city hall, and library).

There are three (3) authorized FTE positions as building maintenance technician II, one (1) authorized FTE as a senior building maintenance technician, one (1) authorized FTE for grounds maintenance, and one (1) FTE supervisor position. In addition to the responsibilities of maintaining city buildings, the supervisor is also responsible for being the city's single capital construction project manager.

The assessment revealed strengths of the Property Management division. Example of these strengths include:

- There is an effective Project Management staffing ratio for capital construction projects.
- The division utilizes a work order system to ensure projects are completed in time and efficiently.
- Given the size of buildings under management and the challenges associated with aging buildings that are not always co-located, staffing levels are appropriate.

One of the strengths mentioned was project management staffing. The project team recognizes that the City of Tigard does not have a "project manager" by title but rather those services are a small portion of the job for another position. Capital projects vary in how much time they require from a project manager to manage a project to completion (skill of the project manager, complexity of the project, whether more time needs to be allocated to the planning phase or the construction phase, etc.).

In recognition that there is a level of subjectivity to adequate staffing for capital construction project management, the project team developed a model for determining the number of project management staff needed in an upcoming year using a weighted metric which accounts for both the dollar value per manager and the number of projects per manager. The theory behind this is that the more a project costs, the greater its complexity, and thus the more time necessary for a project manager to spend on it.

A brand-new project manager might not be assigned more than four (4) or five (5) non-complex projects in a year, while an experienced project manager can handle more complex projects at double that amount.

A 2014 study[4] examined project management companies and determined whether they were high performing or low performing companies. They determined that high performing companies had their project management staff handling an average of 8.4 projects while low performing companies had their project managers handling an average of 11.3 projects. Based on best industry practices and appropriate studies, the project team uses a weighted metric ratio of 70% cost and 30% number of projects with eight (8) projects valued at a total of $25M under management per project manager as best practice numbers.

There are currently 12 projects under management with a total cumulative value of approximately $1M. Using a weighted metric of 70% cost and 30% number of projects, the City has a weighted average of 0.48. The weighted metric of 0.48 represents the estimated workload demand on the employee performing project management functions. In this case, an estimated 0.48% of the Facility Services Supervisor's time is spent managing projects. This means that while the city is appropriately staffed in this function at present, future workload demands on the Facility Services Supervisor will necessitate the need to hire additional staff.

Metric	FY19
Dollar Value of Projects	$1,000,000
Recommended PM (Based on dollar value)	0.04
Weighted at 70%	

4 https://www.pmsolutions.com/reports/State_of_the_PMO_2014_Research_Report_FINAL.pdf

Metric	FY19
Number of Capital Projects	12
Recommended PM (Based on number of projects)	1.5
Weighted at 30%	
Combined Weighted PM Staffing	**0.48**

The sections below discuss areas where the department has opportunities to improve its level of service even further.

(1) Property Management Should Regularly Assess Amounts Spent on Vendors for Specialty Services to Determine if In-House Staff Should Perform Those Functions

The City's building maintenance staff perform significant maintenance work on all of the city's buildings; however, none of them hold specialty certifications (HVAC, plumbing, electrical, etc.). This is not unusual for a City the size of Tigard; however, whether city staff should hold specialty certifications should be the result of ongoing analysis on the amount of money the City spends for HVAC, plumbing, electrical, or other specialty-type repairs/maintenance.

If the cost of outsourcing specialty maintenance/repair functions exceeds the cost to hire a city employee into a newly created position with appropriate classification/ compensation, and the City believes there will be a continued need for those specialty services, the City should require at least one employee to hold an appropriate certification so those functions can be performed using in-house staff.

Recommendation 16: Property Management should regularly assess amounts spent on vendors for specialty services to determine if in-house staff should perform those functions.

(2) Property Management Should Implement a Proactive Building Preventive Maintenance Program to Prevent Reactive Maintenance Issues as Much as is Reasonably Possible.

While building maintenance staff perform preventive maintenance, there currently does not exist a written formal preventive maintenance program in place. Within the City's asset management program, there should exist a method to enter data into the system that will automatically schedule work orders for a multitude of preventive maintenance tasks.

In order to build a preventive maintenance plan for building maintenance functions, the City will want to decide which of its building assets will be included in the plan. Next, all information about the asset is gathered (original equipment manufacturer (OEM) recommendations, prior repair history, knowledge from existing maintenance staff about what repairs/maintenance might be needed in the future, etc. Next is to create an initial preventive maintenance plan and enter that data into the city's asset management/work order system. Once the plan is complete, employees perform the required preventive maintenance services, track results, and adjust the plan in subsequent years as needed.

Recommendation 17: Property Management should implement a proactive building preventive maintenance program to prevent reactive maintenance issues as much as is reasonably possible.

(3) Fleet & Facilities Should Conduct Spot Inventory Checks to Mitigate the Inherent Risk of Asset Misappropriation.

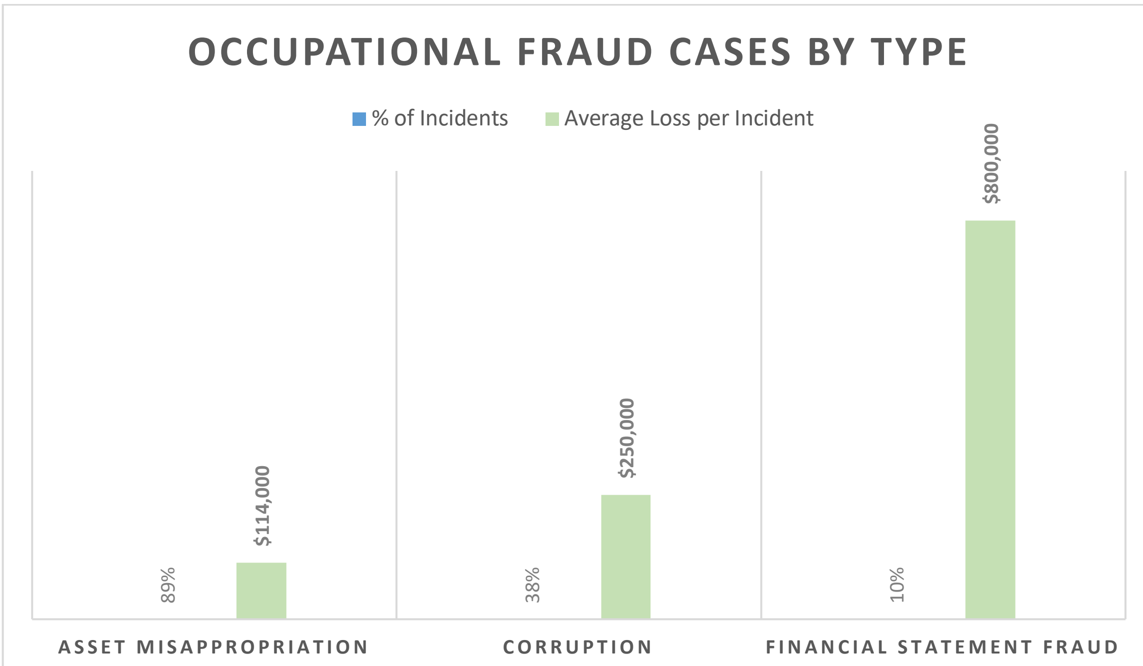
There will always be an inherent risk of asset misappropriation associated with local government operations. This is regardless of who any specific employees are in various positions – the risk itself is inherent and it is real. There are numerous examples from local governments across the country where asset misappropriation has occurred. Even though small tools or smaller pieces of equipment are generally not too expensive, the risk of their misappropriation is greater than for other assets a city might own.

There are several ways in which management can mitigate the risk of inventory theft or misuse. These include limiting who has access to where these items are stored, installing cameras showing who enters the room and coverage for the entire inside of the room, requiring employees sign in/out all equipment, and to conduct spot inventory checks of tools and small equipment.

According to the Association of Certified Fraud Examiners (ACFE) 2018 *Global Report to the Nations*, asset misappropriation is by far the most commonly discovered type of occupational fraud, having occurred in 89% of all known frauds analyzed in their latest report. The average cost of an asset misappropriation scheme is $114,000 USD per incident.[5]

[5] 2018 ACFE Global Report to the Nations: https://s3-us-west-2.amazonaws.com/acfepublic/2018-report-to-the-nations.pdf

The following graphic shows additional data from the 2018 AFCE report. While it might be more appropriate for this chart to be associated with a finance department, the important takeaway is that while there are other more costly types of occupational frauds that occur, a significant majority of frauds that occur involve asset misappropriation. The discrepancy with reconciliation of fraud incidents by percent is that several types of fraud schemes overlap categories and thus the total will always be more than 100%.



Recommendation 18: Fleet & Facilities should conduct spot inventory checks to mitigate the inherent risk of asset misappropriation.

(4) Fleet & Facilities Should Maintain Staffing Levels in the General Range of 1 Employee for every 35,000 – 45,000 Square Feet of Facilities Under Management.

As a general best practice, the ratio of facilities to maintenance staff is around 45,000 – 50,000 square feet of buildings to maintain per one (1) maintenance employee. This ratio however, is flexible for several reasons: the number of contracted repairs necessary for technical expertise, the proximity of building locations to one another, and the age/ condition of the buildings being maintained.

As an example, if a city had 20 buildings totaling 300,000 square feet, spread out over 40 square miles and the majority of buildings were very old and in general disrepair, it will take more maintenance staff to adequately take care of those buildings than if there were five buildings with the same 300,000 total square feet all co-located next to one another. The same square footage exists under this scenario; however, the former scenario will require more maintenance personnel.

Excluding the supervisor, there are four staff to maintain 12 buildings, with a cumulative 129,184 square feet of building space (including common areas). Additional maintenance occurs at other buildings (Fanno Creek House, Summer Lake Shop, skate park, etc.) This comes to 32,296 per maintenance employee plus those other facilities. This ratio is slightly lower than the ratio normally recommended; however, some of the city's facilities are older and thus require more time and effort to maintain them. Additionally, facilities are not reasonably co-located which creates the justification for the City's existing ratio.

As a general rule, the City of Tigard should strive to achieve a ratio of one (1) maintenance employee for every 35,000 – 45,000 square feet of buildings under management.

Property Management	Square Footage of Maintenance
City Hall	8,400
Permit Center	11,840
Police Department	12,804
Library	48,001
City Hall Modular	1,980
Niche	3,240
Police Department Annex	2,652
Police Storage	2,820
Senior Center	7,718
Ash/Burnham Street	7,440
Public Works	17,968
Canterbury	4,321
Total (including common areas)	**129,184**

As the City adds buildings or buildings continue to age, the City should continuously re-evaluate the appropriate number of personnel necessary to adequately maintain city facilities.

Recommendation 19: Fleet & Facilities should maintain staffing levels in the general range of one (1) employee for every 35,000 – 45,000 square feet of facilities under management.

(5) Project Managers Should Receive Project Management Certification

Construction project management is a combination of multiple important roles in the life of a capital project. From planning, budgeting, and supervising projects from start to finish, project managers are responsible for the entire project. A partial list of responsibilities includes developing a budget, creating work timetables, determining the best overall strategy for construction, coordinating with city leaders and contractors to ensure timetables are met, understanding technical and contractual details to ensure they are met, ensuring a safe construction site, making sure the project is completed on-time and on-budget, and meeting all of the necessary reporting requirements for each project.

Effective project management starts before design work on a capital project begins. It starts at the time the project is initially thought about at the department head level, with a project manager being assigned at that early point to ensure there is cohesiveness with not only that project, but in how that one project might affect other projects under consideration.

Project manager certification helps ensure projects are managed according to best industry standards and practices. While any project might turn out okay, the project team recognizes the inherent risks of not having a certified project manager on staff and recommends that all project managers receive appropriate certifications.

Project manager certification can be obtained from the Project Management Institute (https://www.pmi.org/certifications/types). There are several possible certifications available with a recommended certification being the “Project Management Professional” or “PMP”.

Recommendation 20: Project managers should receive project management certification.

4 Community Development

The following chapter focuses on the City's Community Development Department, addressing opportunities for improvement in performance measurement, technology utilization, cost recovery, staffing, and customer service.

DEPARTMENT STRENGTHS

The Community Development Department in Tigard has a number of strengths which should be noted before delving into the improvement opportunities. These strong points are indicative of a competent, well-led organization which thus far is successful in achieving its goals and standards. Examples include:

- All plan review functions are co-located in the same building so that application submittal is a "one-stop shop" for applicants. The filing system is easy to use for employees and records are easy to retrieve.

- Customer service is emphasized at the Department. The City's website includes application forms, information about submittal requirements, citizen access to Accela, fee schedules, and the development code. Building permit application guides are readily available for customers. The counter is open four days per week, and over-the-counter plan checking is offered every day that the Department is open.

- The Department has embraced technology. All divisions of the Department are GIS-enabled; GeoCortex is available to all plan review staff, Accela is used to track application reviews and make information available to the public, staff have access to the system via tablets in the field, and the Department is in the process of implementing electronic plan review.

- The Building Division has a comprehensive operating plan which covers administrative, plan review, inspections, permitting, and compliance standards. This division also operates as an enterprise fund, and revenues are more than sufficient to offset expenditures.

- A clear system is in place for land use applications; they are classified by their type, meetings with the applicant are conducted at the outset, and workload is carefully tracked to ensure that staff meet the cycle times required by the State of Oregon.

- There is a strong focus on training and maintaining the required certifications for each position, and this is included in annual performance evaluations.

The sections below discuss areas where the Department can change its operating practices, assignment of roles, and use of technology in order to improve its level of service further.

(1) The Department Should Adopt a Measurement and Reporting Cycle to Quantify Performance.

In order to gauge the effectiveness and efficiency of the services provided by the Department to the public, the Community Development Department should institute a regular practice of performance reporting. High-performing organizations define the outcomes of success and track the measures that will inform them of whether or not they are reaching those outcomes. Typically, these measures can be derived from data recorded in the course of providing services, and benchmarks are established to define the goals which the organization aspires to reach. These benchmarks, or performance measures, provide a number of benefits to an organization:

- They help the organization align its efforts with its wider strategic goals and its mission, vision, and values.

- They allow the organization to identify strengths and weaknesses, and to track its progress toward established goals over time.

- They frame discussions of success based on desired outcomes rather than personalities or behaviors of staff.

- They cultivate a growth mindset of long-term, continuous improvement and open discussion.

The Department has a head start on implementing a performance measurement system. In the City's budget, a number of quantitative metrics are listed under the Community Development section. These include the total construction valuation per Building Department FTE, the total permit fee value collected, and the total number of hearings conducted. While dubbed “performance measures”, these metrics are better suited for gauging workload than assessing the quality of work or level of service provided by staff.

The Department also has cycle time objectives established for some functions (the Building Division aims for a maximum of 2-3 weeks for conducting initial plan checks and the Planning Division has a memo of internally established cycle time objectives), but no systematic approach of reporting and review is followed in order to attain the four benefits listed above.

To address this, the Department should establish service level metrics that will be used as performance measures and begin tracking and reporting on them quarterly or annually. The following key steps should be taken:

1. Determine the level of service that the Department is committed to providing in building, planning, and inspections.

2. Select metrics that specifically measure the Department’s success in meeting established levels of service.

3. Establish target benchmarks against which the Department’s performance can be measured. These will serve to inform decision-makers of whether performance levels are acceptable or not.

With these steps in place, the Department should begin tracking the selected measures. Because Accela is already used to process applications, the reporting functions of this tool should be used to their fullest extent. Performance measures should focus on Department work outcomes, particularly those that are within the control of staff. A list of recommended performance measures for each function within the Community Development Department can be found in a dedicated chapter of this report.

Gathering the data necessary to report on the selected metrics will require that the Department is able to produce Accela reports. The software has a built-in reporting tool and the ability to produce a variety of workload and performance reports, but staff have not yet been trained to generate them from the system. The Department should be able to independently produce the reports used for routine quarterly performance measurement. This training may be obtained from a consultant or from an Accela trainer, and the City’s IT Department should provide as much support as they are able. Obtaining this training for the appropriate staff should be among the highest priorities for the

Department; a permitting system is losing half its usefulness when staff cannot access reports from it.

Each quarter, the Department's performance against the selected metrics should be reviewed by management, and a determination made whether the level of service provided meets the established targets. Areas of high performance should be recognized and celebrated. Areas of poor performance should be identified, and a discussion held among management (and staff, as necessary) to establish a plan for improvement.

Recommendation 21: The Department should ensure that in-house staff have the ability to produce workload and performance reports from Accela.

Recommendation 22: The Department should generate routine reports on workload and level of service performance measures in order to gauge effectiveness in meeting established benchmarks.

(2) The Department Can Benefit from an Electronic Customer Satisfaction Survey.

As outlined earlier this this chapter, the Department does a number of things to promote a high level of customer service. Because customer service is a focus of the Department, the Department should implement a means of evaluating their performance in this area through the eyes of their customers. Customer feedback is a valuable tool for performance measurement and organizational self-evaluation. The Department has a comment box currently which allows customers to provide opinions. This can be improved upon by using an electronic survey which is sent to each customer by email address following the conclusion of their application.

- By reaching out to customers rather than requiring them to take initiative to submit an opinion, the Department can reduce some of the selection bias inherent in a self-initiated survey of the type currently being used.

- Electronic surveys can be tracked to make sure only one response is submitted per email address.

- The results of a digital survey are easier to compile and analyze than hand-written survey responses.

The survey should ask customers to rate their level of satisfaction with elements such as how well the process was explained to them by staff, how well they were kept informed of the status of their application, the timeliness of review, and the courtesy of employees.

Instituting a routine invitation to take a customer survey at the conclusion of each application will provide the Department with a rich source of data directly from their customers and valuable insights into their perceived strengths and weaknesses. It can be used as the basis for one or more performance measures, as outlined in a dedicated section of this report.

Recommendation 23: The Department should distribute an electronic customer satisfaction survey to all customers at the conclusion of their application and compile responses as a performance measurement tool.

(3) The Department Should Offer Expedited Plan Review.

Many cities, in addition to the normal plan review timeframes established for permit applications, offer an expedited plan review option. This allows applicants, for a fee, to receive an accelerated turnaround time on their application. The Department does not currently offer expedited plan review, but should do so, when allowed by state law, as a way to enhance the level of service offered to customers and maintain an economic development advantage. The following points should be considered in implementing this:

- Expedited plan reviews should not involve prioritizing one application over another or “jumping the line”. Rather, additional staffing resources should be contracted to accommodate the additional workload imposed by shorter cycle times while ensuring that other, non-expedited applications can still be completed on time. The Department already uses contracted plan reviewers for some applications, and thus is well-positioned to expand their use to expedited reviews.

- Contracted plan reviews, in this context, should not be used as a means of handling periods of peak permit activity, but as a way to provide an exceptional level of service to applicants.

- The additional fee charged for expedited review should be sufficient to recover the cost of the contracted plan reviewers’ time. Expedited reviews should be cost-neutral to the Department.

- The Department should begin offering expedited reviews incrementally, beginning with just a few common application types which can be consistently handled by contracted staff. Accelerated plan review should be offered for more application types once the process is running smoothly.

Providing customers with the option to expedite their permit application's review is an enhancement of service and will allow portions of the Department's workflow to move more quickly toward approval. It may also be used by the Department to expedite projects which are important to the City from an economic development standpoint. The Department should establish the parameters of this service and the circumstances under which it is offered over the coming year.

Recommendation 24: The Department should implement expedited permit application reviews as a fee-based option for customers.

(4) The Department Should Address Staffing and Financial Data Issues Related to Accela.

In many respects, the Department utilizes technology well. Several software systems are in use to help staff manage their core functions.

- The Department has a dedicated permitting software, Accela, which is used to create and update records of building and land use permit applications, record the work done by staff, coordinate plans examination, and receive and review certain types of applications (those not requiring plan submittal) electronically.

- The Department uses auxiliary tools such as Selectron, Laserfiche, and the City's GeoCortex GIS system to schedule inspections, digitally archive documents, and determine the location and appropriate land use requirements for applications.

In addition, the Department is in the process of implementing an electronic permitting and plan review system which will allow for the digital submittal and routing of plans, significantly improving the Department's workflow and eco-friendliness.

For these strengths, the Department also has two primary technology issues which limit the use of one of its core systems.

The Accela permitting system is not integrated with the City's financial management information system, Springbrook. This creates a number of issues, because financial processes are integral to community development work. Ideally, actions with financial consequences (such as receiving a payment) would be automatically reflected in Springbrook, but this is not the case. As a result, all financial transactions must be entered in both systems. For example:

- The Building Services Supervisor must generate periodic reports on all payments received and balance the cash drawer accordingly, then provide the report to the Finance Department for entry into Springbrook.

- The refund process requires a monthly report to be provided to the Finance Department, which writes refund checks for Community Development to distribute to the correct recipient and enter the amounts into Accela accordingly. This work is mostly done on weekends and overtime.

The duplication of effort that results from the lack of integration between these two systems costs the Department employees' time and increases the likelihood of making an error. To address this, there are two key steps that the Department should take:

1. While most staff in the Department use Accela in the course of their daily activities, the Building Services Supervisor functions as the system administrator. In addition to supervising the front desk permitting technicians, this position oversees user setup and security, serves as the liaison with the vendor, manages the implementation of system updates, and handles the additional accounting functions necessitated by the lack of integration with Springbrook as described. Nobody else plays this integral role, and there is no backup for this position. The City should require each department and division which uses Accela for case management to designate one employee as an Accela power user. This employee should receive training and support the Building Services Supervisor with the duties of managing the software, running reports, and assisting other users with the system in order to ensure sufficient backup and prevent burnout.

2. The City's intent is to replace Springbrook with another FMIS within the coming two to three years. When this occurs, the Department should petition the Finance Department to ensure that the selected system is compatible with Accela and can be integrated to eliminate the need for duplicate data entry.

Providing the Building Services Supervisor with a knowledgeable Accela management backup position will lighten that position's workload, help to prevent burnout, and ensure that system knowledge remains within the organization. Planning ahead to eliminate the need for workarounds entirely when Springbrook is replaced will position the Department to become more accurate and streamlined as the technology used for community development and financial management evolves over the coming years.

Recommendation 25: The Department should designate a second position as an Accela power user and require that the management responsibilities of that system be shared.

Recommendation 26: The Department should ensure that the system which replaces Springbrook can be integrated with Accela to eliminate the need for duplicate entries.

(5) The Department Should Monitor Inspectors' Workload and Aim to Limit Inspection Stops to Fifteen Per Day.

To ensure that inspections staffing is commensurate with the workload required and that the Department can continue to provide a timely level of service, the number of stops made by building inspectors each day should be monitored. Typically, inspectors' workload should require no more than 12-15 stops per day. Multiple inspections may be completed at each stop, but the number of individual addresses inspected should not exceed this level in order to ensure work quality and prevent burnout.

In Tigard, most inspectors average 10-15 address stops per day, but staff commonly exceed 15 stops per day. The busiest inspector averages 16 per day, and 23% of all days have more than 15 stops. The following chart shows how many inspection days over the course of a year days entailed a reasonable number of stops and how many exceeded the recommended limit. An inspection day is defined as a count of the unique addresses visited by a single inspector on a given date.

As the graph shows, most days involve 15 or fewer stops, and the number of inspection days trails off for heavier workloads of more than that. The most common number of inspection stops per day is 14. However, inspectors made 16 or more stops in 2018 on 282 occasions, and 95 of those occasions involved 20 or more stops for a single inspector.

While these figures may suggest that staffing should be adjusted upward to meet workload demand, it is important to consider the following points:

- Many of the building inspections performed by inspectors are for subdivision homes, where the elements to be inspected are fairly uniform and the addresses are very close to each other (walking distance, in many cases).

- Despite apparent heavy workload, the Department's inspectors successfully conducted 99.5% of inspections within 48 hours of receiving the request.

With these points in mind, the Department should monitor inspector staffing levels and make future adjustments if the level of service suffers (inspection response time is a recommended performance measure) or staff overtime levels become burdensome.

Recommendation 27: The Department should monitor inspector staffing levels to ensure that they remain appropriate for the required workload.

(6) The City's Standard Conditions of Approval for Land Use Permits Should be Maintained in an Online Library.

The conditions of approval used by a city are crucial components for issuing land use permits, and planning staff must be familiar with the standard conditions used in their jurisdiction. It is important that the standard conditions of any city remain consistent from application to application, in order to ensure a uniform quality of plan review and development.

The best way to promote consistent and standardized conditions of approval for land use applications is to maintain an online library or database which can be updated when necessary and used as a common point of reference for staff. Currently, the City of Tigard does not have its standard conditions in a digital library; instead they are included as part of a template which staff use to develop written opinion/decision documents. While useful in the context of developing these documents, the City's standard conditions should be maintained in an online library.

Using a shared digital format for standard conditions of approval allows them to be updated as necessary, and all planning staff can be assured that they have instant access to the most recently updated version of the document. It also allows them to be shared with the public through the City's website. In this format, the standard conditions become a living document, useful to staff and stakeholders.

Recommendation 28: The Department should maintain an online library of standard conditions of approval for land use permits, which is shared with staff and the public.

5 Finance and Information Services

The following chapter focuses on the City's Finance and Information Services Department, addressing opportunities for improvement in the Information Services, Finance Administration, Finance Operations, and Contracts and Purchasing Divisions. Utility Billing is a part of the Department; however, it was not reviewed or assessed as part of this report.

The following table shows a summary of the Department's operating budget for FY17 actual, FY18 revised, and FY19 adopted.

Division	FY 17 Actual	FY 18 Revised	FY 19 Adopted
Finance Administration	$398,079	$561,441	$488,493
Financial Operations	$603,711	$757,014	$772,116
Utility Billing	1,094,993	1,258,484	1,205,191
Information Technology	$2,505,621	$2,173,801	$2,286,373
Contracts and Purchasing	$213,707	$221,778	$229,751
Total	**$4,816,111**	**$4,972,518**	**$4,981,924**

The overall budget for the Department remained relatively flat from FY18 revised to FY19 adopted, with total expenses of $4,972,518 in FY18 and increasing only 0.19% to FY19 at $4,981,924. During that same time the budget for Finance Administration dropped by 13%.

DEPARTMENT STRENGTHS

While this chapter focuses on potential improvements that the Department can make, the following points should be noted as particular strengths of the Department in the functions reviewed as part of this study. The City's finance department is staffed at a level that otherwise might be found in a smaller sized city. With limited available staffing resources, Finance staff are doing an excellent job. There are many more positive attributes to the Finance and Information Services Department, but some of the noteworthy strengths include:

- The City utilizes a GIS steering committee to assist with entity-wide implementation of GIS-related services and technology.

- City employees receive ongoing training in online security procedures.

- The City has a multi-year Capital Improvement Plan (CIP) that includes enough comprehensive data so that elected officials can make informed decisions.

- The City uses a P-card/credit card program that provides financial incentives to the city and there is a policy in place for the cards' use.

- Written policies and procedures are in place for critical financial processes and finance staff are cross trained to perform critical processes.

- The City uses long-term financial forecasting models including annual contingency funding.

- The City has been able to maintain at least a 16.67% General Fund reserve.

- The City has a centralized contract monitoring system in place to allow for better oversight of City contracts to help ensure compliance with legal requirements.

The following sections address changes to technology, organizational structure, and operational practices which the Department should make in order to become more efficient, responsive, and data driven.

1 | Finance Administration

Finance Administration is responsible for preparing/coordinating the City's annual budget process, long range financial planning, financial analysis, completing an annual 6-year Capital Improvement Plan (CIP), issuance of business licenses, managing the city's investments, management of the issuance of debt, and development of financial policies.

This study did not involve a thorough assessment of internal controls; however, an initial review revealed that if finance staffing levels were increased, more could be done to strengthen controls. Staffing levels in the Department have remained static for the past nine (9) years, with the same number of FTEs authorized since 2010. With existing workload statistics and a need to ensure strong, modern internal controls, there is an inherent risk for the potential of fraud, waste, or abuse.

The City should not drop staffing levels in finance and if they were increased, residual risk related to internal controls could be improved. The ability to implement additional internal controls, as mentioned later in this chapter, and the ability to provide timely reviews of financial documents, are affected by an organization's finance staffing levels.

Analysis of the Finance Administration Division operations revealed several strengths. These include, but are not limited to:

- The division publishes a budget calendar with clear deadlines and this calendar is communicated with employees responsible for completing budget documents.

- The City's capital improvement plan (CIP) includes six-years' worth of projects and within the plan for each project there is a project name, project description, project location, funding source, and budgeted amounts for each year of the project.

- The Finance Department has adequate policies in place that provide staff with guidance on City financial operations.

- The City employs long-term financial forecasting (10-years) and this data includes estimates for various reserves (emergency, cash, and service level), revenues, and expenditures. This data is provided in numeric format with appropriate visual displays, including trendlines. The City averages 4.2% contingency funding across general fund departments.

As mentioned previously, City Finance staff are doing a great job with their limited staffing resources. Any discussions in this report related to internal controls are for the purposes of "risk" only and they do not in any way imply or suggest any actual wrongdoing. Increasing staffing levels in finance can help reduce inherent internal control risks (those found in any local government organization of similar size and with similar finance staffing levels).

The sections below discuss areas where the finance administration division has opportunities to improve its level of service even further.

(1) The Finance Department Can Benefit from the Ability to Perform Regular Financial Analytics to Ensure Compliance with Policies and for Internal Control Purposes

With adequate time to perform analyses, there are several financial calculations that can be performed with basic spreadsheets to detect financial policy violations or potential issues related to expenditures. The use of data analytics to detect fraud can be an effective measure to protect an organization. The use of horizontal analysis, vertical analysis, Benford's analysis, and duplicate testing are all viable means to detect possible inappropriate items within the thousands of financial data fields seen in most municipal government operations.

With adequate time, finance staff could proactively and regularly run analytics to look for missing data fields in vendor files, missing data fields in accounting entry fields, verify even dollar amounts, check for duplicate voucher payments, and even perform data set matching analysis with vendor to vendor files or vendor to employee files. At least quarterly and if time permits, staff could run a Benford's analysis on entire data sets to uncover predictable patterns often associated with fraudulent invoices.

The ability to perform these functions is often limited only by staffing levels and time to perform them. The project team noted that the City of Tigard's finance staff do an excellent job in their efforts; however, they are limited in their ability to do more proactive work by existing workload and current staffing levels.

Type of Analysis	Method	Benefits
Horizontal	This method compares financial statement items ratios or line items over any of a number of accounting periods.	Can detect items with a significant percentage change between periods that could warrant additional investigation.
Vertical	This method compares relationships between financial components of the same time period. Items are expressed as percentages of a whole and compared between periods.	Can detect increases in spending that warrant further investigation that might not otherwise be visible to the naked eye.
Benford's	This method compares large data sets by assigning expected values to each number (0-9) in an invoice amount and comparing the expected number to the actual number found in the data set.	Can detect fraudulent invoices when someone makes up billing numbers.
Duplicate	This method searches for duplicate payments of invoices.	Can detect if a payment to a vendor was made more than once for the same service.

Recommendation 29: With appropriate staffing, the Finance Department should perform regular data analysis on its data to help detect any financial irregularity or non-compliance with financial policies.

(2) The City Should Ensure Adequate Employee Cross Training for all Finance and Information Services Critical Functions

Conflicting information came from employee interviews as to how often they were required to perform cross-trained work for other employee critical functions. It was clear to the project team that financial management staff value the importance of cross training employees to perform critical functions of other staff members; however, limited finance staffing levels make it challenging to ensure there are adequate back up staff to perform the essential functions of other positions.

Adequate staffing levels and cross training are important since if the only person who regularly does payroll is out and the one person who infrequently performs as that person's back up is also unavailable, the vital function of paying employees on-time could be disrupted. Even if the backup is available, it is important that this person perform the backup task with some degree of regularity to ensure they can properly complete the tasks. They almost certainly will not perform the tasks as efficiently as the person who regularly does it, but with required training and having to complete the work at least twice annually, they should be able to handle the function when called upon.

Multiple positions within finance divisions have critical functions that must be performed. When employees are trained in how to perform work for other areas not specifically within their normal realm of responsibilities, it allows employees a better opportunity to collaborate together when issues arise. Employees can feel better motivated if they believe they are contributing to the overall good of the organization and when they know that their work is valued (they are the back up for a critical function in another area), positive benefits for employee morale can occur.

The overall benefits of cross training revolve around it being a good return on investment for the organization. This includes increased employee efficiency when someone is out of the office (rather than grinding to a halt, things continue on – even if not as thoroughly as with the person who normally performs the work). Additionally, the organization has a greater ability to build important succession planning skills into several employees.

One of the important factors with cross training, especially with finance-related functions, is the person who acts as someone's backup should be required to perform the function at least twice annually. By requiring a backup employee to handle payroll, or pay invoices, it allows that employee to learn the process by actually doing it on a somewhat regular basis (with the person who regularly handles the function nearby to answer questions).

There is a greater chance the job will be done correctly by the backup employee when the person who regularly handles it is out and unavailable, if the backup employee performs the function with some degree of regularity (at least twice annually) with the trainer nearby. Additionally, if each critical task someone does, has two different backup employees who can perform them, that is even better.

Recommendation 30: Provide cross training so that critical functions for each finance position have at least two people who can complete them and require the employee performing the critical task as a backup to complete the function at least twice annually.

2 | Finance Operations

Finance Operations is responsible for all day-to-day financial and budgetary requirements for the city. This includes preparation of monthly financial reports, pension fund assets, debt management, recording of cash receipts, accounts payable and accounts receivable functions, capital assets, inventory recording and reporting, project cost tracking, preparing the City's Comprehensive Annual Financial Report (CAFR), grant accounting, payroll services, maintaining the General Ledger, and monitoring all city funds. This division also oversees the annual external financial statement audit.

Some of the many strengths observed in the Finance Operations division include:

- Finance staff receive annual training and professional development.
- Monthly budget-to-actual reports are prepared and sent to Departments.
- All disbursements are supported by adequate documentation.
- Invoices are reviewed and approved prior to payment.
- Accounts payable are processed in sufficient time to take advantage of discounts and to not pay penalties.

- Changes to payroll require written authorization and can only be completed by limited personnel.

- Deposits are made daily and bank reconciliations occur monthly.

- The City accepts online payments for services.

The sections below discuss areas where the finance operations division has opportunities to improve its level of service even further.

(1) Completing an annual fraud risk assessment

As mentioned previously, there is no indication of any actual incident occurring or having occurred in the City. This recommendation addresses a best practice from the National Association of Certified Fraud Examiners.

An annual fraud risk assessment is not associated with any particular known fraudulent scheme but rather a means for the city to use its own senior staff to assess its occupational fraud risks, to discuss ways in which misconduct can occur, to determine the likelihood it could occur based on existing controls, to determine how significant it could be to the organization, if something happens (in terms of both financial and reputational harm), and to identify areas in which additional controls might be appropriate (or conversely, existing controls are no longer necessary).

At the completion of the assessment, staff are left with more knowledge on how they can better protect organizational assets and what can be done to improve preventive or detective controls. Areas of high probability or high significance should be addressed by the city's senior management team to determine if any additional controls can further mitigate risk of occurrence or increase the likelihood of detection.

It's important to communicate with the assessment team that these risks are generalities and not specific to any particular employee. They are known areas of risk that have occurred elsewhere, and the City is simply trying to mitigate their own inherent risks that something could occur locally.

Fraud risk assessments should be conducted with as many senior staff as possible in the room at the same time. With someone facilitating the discussion, senior staff members are updated on known incidents in other municipalities with information on how those incidents occurred. Senior staff members then discuss risks specific to the City of Tigard.

The facilitator then ranks each general risk from 1-5 (probability of occurring with 5 being most likely, and significance if it occurs with 5 being very significant). Significance should include both financial loss and the risk to reputational harm. Those two numbers are multiplied together to get the fraud risk rating for that particular risk. The higher the number, the greater the risk to the City and the more attention that should be paid to mitigate that risk.

Recommendation 31: Complete an annual fraud risk assessment.

(2) The City Should Regularly Conduct Management Audits of Purchases for Internal Control Purposes

There are numerous other municipal organizations that have experienced purchasing schemes. By conducting random and unannounced verification checks of purchases, it serves to not only detect something that might be amiss, but even more so it provides for an excellent deterrent against misconduct. The City currently checks anything that appears suspicious and there are regular quarterly audits of purchasing cards; however, management audits of purchases offer even more protection.

To perform this function, finance staff would sample a certain number of invoices each quarter (ideally each month) and then track down the item to ensure that it is used, or was used, for official city business. Once the item is confirmed, finance staff call the vendor's accounts receivable department to verify the amount on the invoice the city has is the same amount the vendor shows. The latter is verified because one particular fraud scheme involves ordering supplies, receiving them, having the finance office pay the entire invoice, and then shipping back a portion (or all) of the goods while having the refund check sent to another location (so the involved employee can intercept it). Unless someone calls a vendor to verify there weren't any returns and verifies the correct "final" amount to be paid, this type of scheme can occur. If there are any discrepancies between the amount the City actually paid and the amount the vendor says should be owed, then an investigation is warranted.

Performing regular management audits of purchases not only assists with identifying any irregularities, but more importantly it serves as an excellent deterrent for asset misappropriation. Existing staffing levels will make it difficult to implement this recommendation.

Recommendation 32: Management should conduct regular audits of purchases to detect and deter asset misappropriation.

(3) Payroll Services

The City of Tigard pays employees every two weeks, or 26 times annually. As discussed in a prior recommendation, there should be more than one backup employee trained to handle this critical function.

Two issues identified during the project team's review of payroll services were a lack of verification of payroll changes in the system and nobody assigned to verify wage garnishment data prior to payroll being issued.

Wage garnishments are entered by a single person without subsequent verification. The only way to know whether something was entered incorrectly is if the person whose pay was garnished, knows the exact amount that was supposed to be withheld and confirms that it was correctly entered. Because of the importance of handling garnishments correctly, there should be a second employee to verify all wage garnishment entries into the payroll system. The employee who currently performs payroll backup is recommended.

Payroll fraud has been identified in many other local governments. If the person entering payroll ever wanted to change a pay rate, they can create a fraudulent payroll authorization form (PAF), make the change, and then if the annual auditor (or anyone else) checked, they would see the "approved" PAF and think everything is legitimate.

The current practice for adjustments to the payroll system includes a supervisor approving a salary adjustment, human resources approving the change, and then the city manager has the final approval. Once fully approved, the paperwork is delivered to payroll who makes the changes. There is nobody to confirm the amount authorized in the change was entered correctly by the payroll employee. Without a verification process, there is risk that there could be fraudulent entries or honest mistakes made.

If the City's payroll system allows for automatic notification to others anytime a change is made, the project team recommends the Accounting Supervisor be automatically notified anytime a change is made to someone's payroll data (salary, withholdings, benefits changes, etc.). An additional reason for this recommendation is that the person entering payroll can change rates back and forth throughout the year if they believe nobody will check and if an audit happens, hopefully the check with the fraudulent amounts isn't audited. Automatic notifications allow the Accounting Supervisor to question anything unexpected.

It is important to reiterate that all discussions related to internal control risk are inherent risks to local government operations and in no way are indicative of anything related to any particular employee.

Recommendation 33: Determine if automatic notification of payroll changes is possible within the City's payroll/financial software system.

Recommendation 34: The City should assign a second employee to provide verification checks of garnishment data entered into the payroll system.

(4) Capital Asset Management Software Should Fully Integrate with the City's Financial Software System

Finance employees track capital projects, capital project funds, and fixed assets. According to interviews, the system(s) currently used might not integrate well and thus there could be challenges with finance staff's ability to do their work as effectively as possible. The inventory for capital assets is through Springbrook and MaintStar is not regularly reconciled with Springbrook.

Many cities use software programs that allow them to maintain records of all infrastructure components, integrate this inventory with their GIS systems, create preventive maintenance calendars, assign work orders to assets and update/track their status, and generate reports, all while integrating with the City's financial software in a seamless manner.

Tigard's financial software should seamlessly integrate with its asset management software. The table below identifies essential functions that are important in an integrated fixed asset/asset management/financial system:

Essential Function	Description/Explanation
Asset Management	The software should allow the City to upload a completed listing of infrastructure assets and integrate with fixed asset financial software.
Lifecycle Costing	The software should allow each asset to be assigned a construction or full replacement cost, as well as an anticipated lifecycle and depreciation schedule. This information is vital for capital budgeting.

Essential Function	Description/Explanation
GIS Integration	Most systems available are compatible with Esri ArcGIS, which means that each stationary infrastructure asset can be assigned a specific location in one of the public works GIS layers. The City's software should allow this capability so that the geographical location of any asset can be quickly searched, and GIS layers can display information about, and link to, the assets populating them.
Work Order Management	The software should be able to manage a work order system which provides the basis for a Department-wide preventive maintenance program, detailed reporting, and staffing allocations. This information should integrate with financial software.
Reporting	The software should be able to produce detailed reports from the work order system, as well as the program's asset management and financial software modules. Examples of reports may include a) the total depreciation of sidewalks over a selected time period, b) the total maintenance and replacement cost of signs in FY 2017, or c) the total labor hours spent on non-routine maintenance of vehicles over the past 18 months.

Recommendation 35: The City should ensure that its asset management system fully integrates with its financial software system and has the capabilities necessary to foster an efficient, transparent, and data-centric approach to fixed asset management.

3 Contracts & Purchasing

Contracts & Purchasing is responsible for processing purchase orders; creating, processing, and compliance with bids and requests for proposals (RFP), informal requests for proposals (IRFP), invitation to bid (ITB), requests for qualifications (RFQ); and for writing the associated bid or RFP contracts.

There are currently one and a half (1.5) FTEs in purchasing with one employee also performing back up functions for utility billing, payroll, business licensing, and cash receipting. There is a vacant position for this workgroup and if filled, it will bring staffing levels up to a more effective 2.5 FTEs.

Some of the strengths observed by the project team within the Contracts and Purchasing division include:

- Purchasing thresholds and policies have been established.

- The City uses electronic purchase requisitions and purchase orders to streamline the procurement process and to help mitigate risk of noncompliance to purchasing policies.

- The City uses a P-card/credit card program with a rebate or other financial incentive.

The section below identifies an area where the contracts and purchasing division has opportunities to improve its level of service even further.

(1) The City Should Proactively Research and Seek Buying Discounts in Addition to State Bid Discounts

The following table shows workload statistics for FY18 for the number of purchase orders processed, the dollar value of those purchase orders, and the number of requests for proposals, requests for qualifications, invitations to bid, or informal requests for proposals:

Contracts & Purchasing	FY18
# of Purchase Orders Processed	144
Dollar Value of Purchase Orders	$7,690,725
# RFP/IRFP/ITB/RFQ's issued	37

Additional responsibilities of this function include issuing purchase cards to city employees, processing requisitions, writing and monitoring certain city contracts, auditing travel expenses quarterly, and auditing purchase cards quarterly. This position also serves as the backup for utility billing, business licensing, cash receipts, and payroll.

With only limited employees to handle contracts and purchasing workload, there may be inadequate time to regularly and proactively seek out buying discounts that might be available for upcoming city purchases. The City is able to take advantage of state discounts already pre-negotiated; however, if workload and time permit, more proactive efforts toward seeking other buying discounts could prove beneficial.

Recommendation 36: With available time, the City should proactively research and seek buying discounts in addition to State bid discounts.

4 Information Services

Information Technology is responsible for all central computer operations for city departments, helpdesk functions of PC management, planning and developing new systems, troubleshooting, installation, and maintenance of the city's network infrastructure – including switches, cables, and servers, supporting system design and programming services, maintaining the city's phone and voicemail systems, managing the City's GIS system including data integration from various city departments for use by employees and the public, and supplying necessary employee training for software applications.

Throughout the analysis of the Information Services Division, the project team noted numerous strengths. Some of those strengths include:

- Information Services not only completes an annual customer survey to identify service levels and technology satisfaction, they complete these surveys daily.

- Information Services enforces password security including periodic changes to employee passwords with character restrictions.

- Information Services expenditures as a percentage of the city budget are between 2% and 3% (2.78%).

- Information Services uses helpdesk tracking software to ensure timely responses to needs and to identify areas in which overall improvements can be made.

The sections below discuss areas where the information services division has opportunities to improve its level of service even further.

(1) The City Should Install and Operate Adequate Software to Monitor IT Logs and Detect any Attempt at System Intrusion

There have been many recent incidents of someone attempting to hijack a municipal organization's server system and then demand a "ransom" in order to release the system controls back to the local government. One of many recent examples is a Florida City that was forced to pay almost a half a million dollars because someone gained complete control over their server system. Lake City, Florida recently paid $460,000 as a ransom to regain control over their computer systems[6].

The City of Tigard does not currently have in place a system to monitor and identify any attempts of unauthorized server access – a system that would automatically notify the City's Information Technology personnel if an attempt were made. Without such security systems in place, the City is at increased risk of losing access to its computer systems.

Recommendation 37: The City should install and operate adequate software to monitor IT logs and detect any attempt at system intrusion.

(2) GIS Operations Analysis

The City of Tigard clearly places a high value on GIS services as several staff perform GIS-related functions and a GIS Steering Committee in place. GIS employees are responsible for managing the GIS program, GIS data analysis for mapping requests, GIS system maintenance, programming GIS software applications, managing GIS system automation, GIS data maintenance, data editing and data configuration, processing all GIS mapping requests, and ensuring proper application of the city's entire GIS architecture.

A city's ability to utilize GIS-related services in each of its departments is dependent on both GIS staffing levels and the desire of individual department directors to explore the potential of what GIS can offer them. Departments that implement GIS services often find they have a better ability to use spatial analysis of their existing data to improve their decision-making abilities.

At present, the City of Tigard GIS staff track their work within a workorder system. The GIS staff currently maintain approximately 200 different GIS data layers for multiple departments and GIS staff proactively show departments ways in which GIS can help them make better decisions once a year or once every two years.

More staff time dedicated to proactively working with different departments on implementing new GIS-related projects could help those other departments better understand the value GIS mapping can offer. A proactive and positive way to introduce

[6] https://www.nytimes.com/2019/06/27/us/lake-city-florida-ransom-cyberattack.html

new GIS technology abilities is for GIS staff to meet with department managers at least semi-annually in an effort to design at least one GIS program for that department.

While several departments (public works included) utilize extensive GIS services, not all departments utilize GIS services as thoroughly. GIS staff allocating at least 10% of their annual available time to making presentations and working on new projects for departments that do not extensively use GIS services, should prove beneficial. The City's GIS Steering Committee should be responsible for monitoring progress toward achieving this recommendation.

Recommendation 38: The City should ensure GIS staff spend at least 10% of their time working to proactively introduce GIS technology into every department in the City.

(3) The City Should Create an Information Technology Steering Committee

The City currently has a GIS steering committee in place to help guide GIS services, goals, and objectives for the City; however, no such steering committee exists for information technology services.

A best management practice seen in many cities is when they have an information technology steering committee in place. This committee is tasked with assisting with IT strategic planning efforts, providing input on major IT projects, and assisting with recommending the allocation of IT resources. The Finance and Information Services Director still maintains full control and authority over IT personnel and activities; however, the steering committee allows senior staff from multiple departments to provide valuable input into the direction of the city's IT resources.

Recommendation 39: The City should create an information technology committee that meets at least quarterly.

(4) The City Should Implement Necessary Policies and Procedures to Ensure its Internal Phishing Campaign has a Clickthrough Rate of no more than 5%.

Discussed in a prior recommendation was the need to increase IT security. As part of that overall effort, reducing the City's internal phishing campaign clickthrough rate to no more than 5% is important.

The City uses an internal phishing campaign, which is excellent; however, statistics on the clickthrough rate shows it to be at 50%. Scammers will often introduce computer viruses or other threats to a city's IT systems through links created in emails or attachments to emails. An employee who clicks a link in an email or opens an attachment might inadvertently introduce a virus into the city's computer system – which could cause incredible financial, operational, and reputational harm to the city.

With a city-sponsored phishing campaign, the city proactively sends emails to employees to record whether that employee clicks on a link or opens an attachment. One example is the City sending an email that says something like "Congratulations, you won a free pizza. Click here for your free coupon". The email shows up in the format of a coupon and in the name and color scheme of a known pizza company. Regardless of the type of email sent, the City's tracking of how many people "click" (the clickthrough rate) on a link or open an attachment compared with the total number of people who could possibly click shows a 50% clickthrough rate. Best management practices strive for no greater than a 5% clickthrough rate.

Cybersecurity awareness in general is vitally important for the City. At present, there is no policy restricting when someone can click a link they receive via email. With a 50% clickthrough rate, that is indicative of employees who either do not take seriously the threat of cybersecurity or they do not fully understand the risks that exist. With such a high clickthrough rate and the knowledge that city employees are professionals who care about their work, it is more likely that cybersecurity is not on their minds.

The City should implement more cybersecurity awareness training as it strives to achieve an internal phishing campaign clickthrough rate of no more than 5%. This can be accomplished through policies, employee disciplinary action for repeated incidents of clicking on links, and through more cybersecurity awareness training.

Recommendation 40: The City should reduce its internal phishing campaign employee clickthrough rate to no more than 5%.

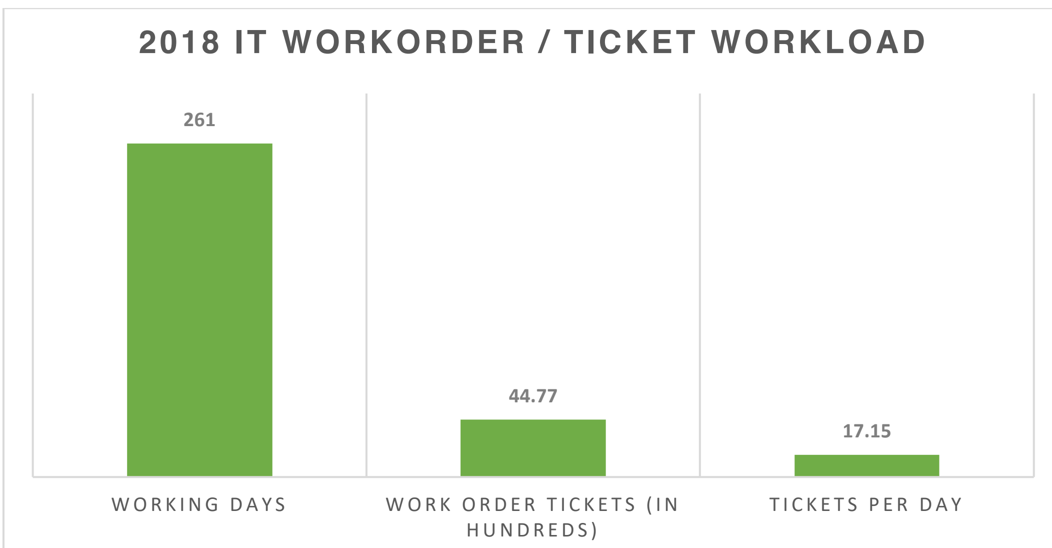
(5) The City Should Increase Information Systems staffing by one (1) FTE.

One of the best management practices seen by the project team in high performing public sector IT departments/divisions across the country is that the ratio of IT staff to total city staff is between 2% and 3%. Excluding GIS staff members, the City of Tigard's IT staffing levels of five (5) employees represents 1.74% of total City FTE's (286.3). This is below what the project team expects to see in a high performing IT division.

Workload statistics for IT personnel show they respond to approximately 4,500 IT service tickets annually. Depending on the time requirements to service and complete a ticket, the City's current IT staffing levels are questionable as to their adequacy. Current time frames for responses to tickets are four (4) hours for urgent matters, eight (8) hours for priority matters, and four (4) days for regular matters.

Staff burnout is a concern. There were approximately 261 working days in 2018 and with 4,477 IT service tickets, that equates to an average of 17.15 IT service tickets each day the City is open throughout the entire year. Some tickets likely take only a few minutes to resolve; however, others likely take considerable time and effort for one or more IT employees.

The following chart displays 2018 workorder ticket data, the number of working days in the year, and the average number of tickets per working day:



With IT services and solutions being an integral part of municipal government operations, to reduce the risk of IT employee burnout, and to achieve the best management practices ratio of 2% to 3% of IT employees to total city employees, the City should hire one (1) additional FTE in an IT support position. Hiring one additional employee into an IT support position will mean there are six (6) IT employees out of what will now be 287.3 FTEs, representing 2.08% IT FTE's to total City FTE's.

Recommendation 41: The City should hire one (1) additional FTE into an IT support position.

6 Library

This chapter of the report provides the project team's evaluation and analysis of the organization and operations of the Tigard Public Library. Our analyses focused on Library service and staffing issues. The section, that follows, provides a brief descriptive summary of the Library.

1. Summary of the Tigard Public Library

The Tigard Public Library provides a wide variety of patron services including, the various collections in the Library; reader advisory services for adults and youth; various programs for adults and youth; references services; as well as all of the internal services associated with keeping a public library open and serving patrons and visitors.

Service Area	Service Indicators	Service Area	Service Indicators
Overall Indicators	• Total holdings – 229,774 and digital collections. • There are 30,961 registered borrowers. • 69 service hours per week and 7 days per week with 9pm closings on weeknights.	**Collection and Circulation**	• Circulation of books, audio visual and other materials. Total circulated in 2017-18 was 1.22m. • An estimated 343,056 Library visits in 2018. • An estimated 19,750 volunteer hours – 9.5 FTE equivalent.
Children's	• Children's programs and collections. • In 2018 there were 561 children's programs with 18,255 attendees.	**Young Adults**	• Extensive programs and collections for young adults. • In 2018 there were 51 children's programs with 698 attendees.
Technical Services	• Responsible for acquisitions and processing of library materials. • Responsible for cataloging and classification of library materials. • Responsible for care and repair of library materials. • 79 computer workstations (avg. 596 hours of use).	**Reference**	• Responsible for developing and maintaining the Reference collection. • In 2018 answered an estimated 29,967reference questions from patrons. • Oversees the delivery of services, both print and electronic data.
Outreach	• Extensive outreach to pre-schools, schools and for memory care seniors.		

The Tigard Public Library's $6.2m budget is funded through a combination of sources – but mostly City (41% of the total budget) and the Washington County Cooperative Library Services (almost 59% of the total budget) funds.

The Tigard Public Library is served by a staff of 50 full and part time personnel for 39.7 FTEs in total.

In addition, as noted earlier, paid staff resources are supported by an extensive cadre of volunteers who last year provided about 19,750 hours to the Public Library, equivalent to 9.5 FTEs in effort.

The organization of the Library is shown on the following page.

2. Assessment of the Tigard Public Library

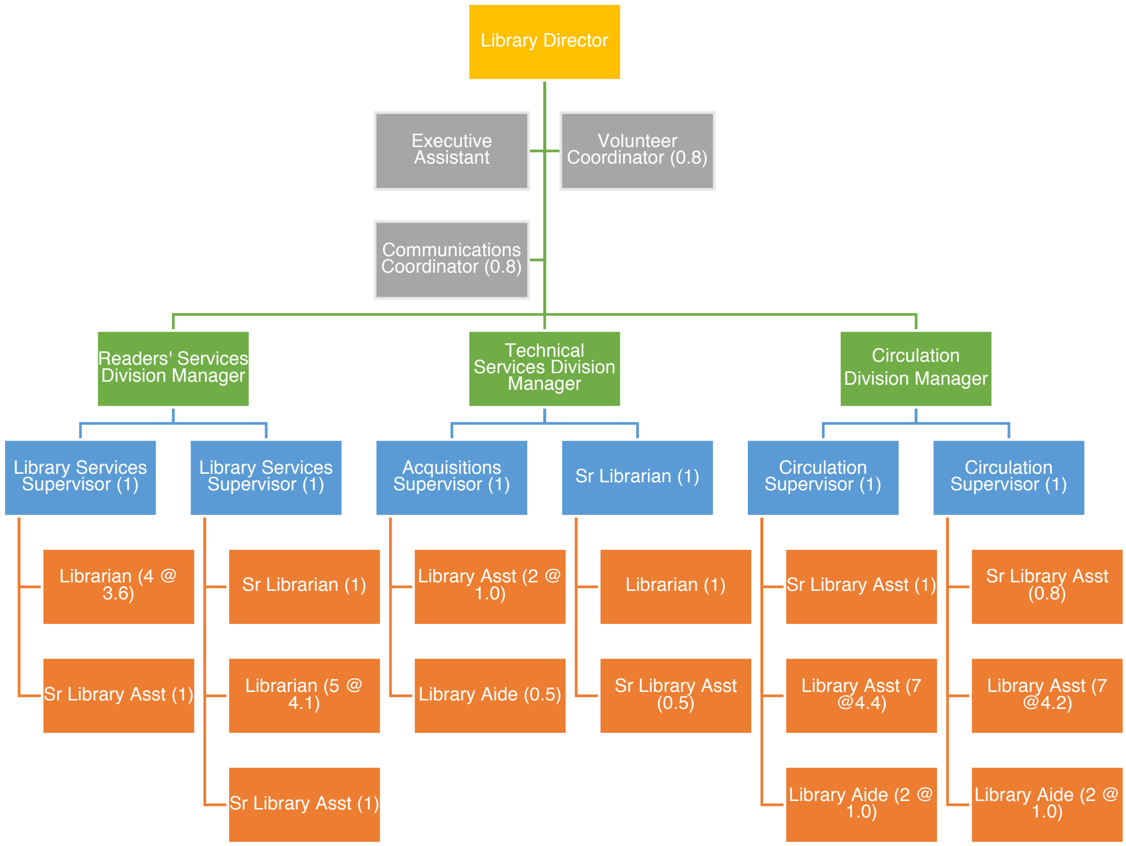
The project team has developed an assessment of the Tigard Public Library against 'best management practices' in library services. This assessment and the performance targets underlying it are based on the firm and project team's experience evaluating library services across the country. As a result of this assessment, there many positive features regarding Tigard's Public Library which are summarized below. Additional details on this assessment are provided in the technical appendices to the report.

(1) Positive Features of the Tigard Public Library

- The Library developed a 5-year plan in 2015 – 'Tomorrowland: The Future Belongs to Dreamers and Doers'. There are 3 goals and 9 objectives, all of which are specific and measurable.

- The Library extensively monitors performance consistent with the measures tracked by the Oregon State Library.

- In spite of the fact that the percent of the service population who are cardholders is below target (48% for Tigard versus 65% for the target), at over 36 items per cardholder, Tigard patrons actively use library resources (not counting electronically circulated items).



- New physical items were 12% of the collection last year, compared to the target of 5%. Again, this does not include e-resources.

- The Tigard Library is a member of the Washington County Cooperative Library Services (WCCLS) which shares collections.

- At 69 hours per week, the Tigard Library is accessible to patrons. Moreover, the Library is open seven (7) days each week and until 9 PM on weeknights.

- Reference questions can be asked via the phone, email or chat online (Answerland).

- Reference collections are located in adult and in youth services sections; reference questions are answered in both areas (in fact, in the latter, in both, the Children's Desk and the Teen Scene Desk).

- The Library conducts annual surveys. In addition, the Library develops quarterly program evaluations which survey patrons on specific topics (e.g., summer reading interests).

- The Library is effective at outreach and marketing as well as the use of social media to inform the public about Library programs, services and special events.

- Volunteer contributions are critical to the Library. Approximately 170 volunteers support the Library each month, totaling over 19,000 hours in the last fiscal year (equal to 9 FTEs). The roles are varied in circulation, readers' and technical services. A volunteer coordinator recruits, trains and provides oversight to volunteer support in the Library.

These are major positive features for public library today. Many comparably-sized libraries struggle to field the service hours, programs and services that Tigard has as its foundation. The contributions of volunteers are one key – their contributions free up staff for critical tasks like program and collection development.

Staff, too, are highly experienced and dedicated to the service commitments of the Library. The following points underscore this from the employee survey:

- Almost 45% of staff have worked with the Library for over 11 years.

- About 72% of Library staff point to the teamwork involved to make the Library a success for the community.

- Almost 95% of Library staff feel empowered to use their judgment to improve programs and services.

- A similar percentage of employees felt that they do an excellent job planning services. Moreover, about 97% of employees believe that management have a clear strategic direction.

- About 87% of employees want to make a career of working at the Library.

These attributes have supported the delivery of high levels of service to the community. The following points underscore this from the employee survey:

- Over 90% of employees believe that they provide a high level of service to the community.

- A similar percentage of employees believe that work quality is important.

The project team's analysis of the programs and services offered by the Tigard Public Library supports current staffing allocation at the service hours or operation and programs offered. The community survey clearly underscored the value of library services to people who responded – it was consistently among the highest rated services.

2. Analysis of the Staffing and Operations of Tigard's Public Library.

This section provides an analysis of the staffing, operations, programs and workloads of the Tigard Public Library.

(1) The Project Team Conducted a Survey to Compare Library Services in the City of Tigard with Other Libraries in Oregon.

The following subsections show survey results for comparably sized libraries in Oregon. It should be noted that there is no attempt to make general comparisons of the cities, only to examine practices in communities in the State which are roughly the same size as Tigard. The communities chosen have been consistently utilized in this study. The Oregon State Library publishes an annual summary of comparative statistical data for all libraries in the State which facilitates the consistent comparison of libraries. The most recent report for FY 2017-18 was used in this assessment.

(1.1) Service Cost Characteristics Show Tigard in the Middle of the Range in Comparably Sized Libraries in the State.

The table, below, compares the Tigard Public Library to other libraries compared to in Oregon in terms of financial resources and expenditures. Key characteristics of this information include:

- In terms of total per capita expenditures, Tigard's Library is the among the highest of the comparison cities – it is the highest in dollar total and the seconds highest on a per capita basis.

- In terms of the ability of each library to 'keep itself current' in terms of acquisitions of books and other materials, Tigard is also in the upper end of the range. At $6.96 per capita, Tigard's collection renewal budget is only exceeded by Lake Oswego.

	Albany	Lake Oswego	Oregon City	Tigard	Tualatin
Population	52,710	42,386	59,585	64,089	31,875
Total Funds	$2,676,622	$5,112,604	$2,348,861	$5,742,222	$2,163,366
Total Per Capita Exp.	$50.78	$120.62	$39.42	$89.60	$67.87
Collection Expenditures	$240,907	$416,490	$190,160	$445,933	$242,909
Per Capita Collection Expend.	$4.57	$9.83	$3.19	$6.96	$7.62

(1.2) Holdings Show Tigard in a Narrow Range in Comparably Sized Libraries in Oregon, Though It Is the Highest in Number of Holdings.

The table, below, compares the Tigard Public Library to other libraries compared to in the State in terms of library 'holdings' (or total collection size). Key characteristics of this information include:

- In terms of the number of library holdings, a general indicator of public support, the Tigard Public Library is the highest of the comparison group.
- Expressing holdings on a per capita basis, all of the libraries reporting are comparable (within about 10% high to low).

	Albany	Lake Oswego	Oregon City	Tigard	Tualatin
Population	52,710	42,386	59,585	64,089	31,875
Total Holdings	177,769	159,088	49.395	229,774	110,318
Holdings / Capita	3.37	3.75	NR	3.59	3.46

(1.3) Staffing Levels Show Tigard in the High End of the Range in Comparable Libraries in Oregon and Having the Greatest Contribution of Volunteers.

The table, below, compares the Tigard Public Library to other libraries compared to in the State in terms of the staff and volunteer resources dedicated to library services. Key characteristics of this information include:

- In terms of the number of total staff, the Tigard Library has the highest number in the comparison group at almost 41.
- Tigard has the highest number of service hours of the group, too. When expressed on the basis of service hours, Tigard remains at the top of the comparison group.
- Tigard's use of volunteers also significantly adds to these resources – its 15,000+ hours in 2017-18 is almost 50% above the next highest total. Volunteer hours converted to 8.4 FTEs in 2017-18, 17% of total hours.

	Albany	Lake Oswego	Oregon City	Tigard	Tualatin
Population	52,710	42,386	59,585	64,089	31,875
Total Library Staff	21.2	33.7	14.9	40.9	24.15
Total Weekly Hours	54	65	56	69	65
Staff FTE Per Hour	0.39	0.52	0.27	0.59	0.37
Volunteer Hours	7,538	10,648	4,376	15,156*	7,515
Volunteer FTEs	4.2	5.9	2.4	8.4	4.2
Volunteer FTEs/Total FTEs (%)	16%	15%	14%	17%	15%

- Previous year to that reported above.

(1.4) Service Characteristics Show Tigard at the Highest End of the Range Based on a Number of Indicators.

The table, below, compares the Tigard Public Library to other libraries compared to in the State in terms of various service characteristics. Key characteristics of this information include:

- In terms of programming, the Tigard Library is at or near the top of the comparison group for children's, young adults and adults – both in terms of the number of programs and the number of participants.

- Circulation is also among the highest in absolute terms as well as expressed on a per capita basis.

	Albany	Lake Oswego	Oregon City	Tigard	Tualatin
Children's Programs	425	266	391	561	364
Children's Participants	16,058	9,970	15,294	18,255	15,274
Young Adult Programs	92	33	22	51	230
Young Adult Participants	501	345	166	698	2,488
Adult Programs	58	155	165	244	4,153
Adult Participants	1,436	17,983	2,910	4,153	1,736
Circulation	580,726	949,817	535,237	1,227,561	596,694
Circulation / Capita	11.02	22.41	8.98	19.15	18.72

While there are many comparisons that can be made, it is clear that the Tigard Public Library has the support and the participation of the community and in turn the Library provides very high levels of service.

(2) The Tigard Library to Provide Very High Service Levels to the Community Compared to Library "Best Practices".

The project team as part of this study of the City developed an analysis of the how library (and other services) compared to 'best practices'. Unlike the comparative analysis provided in the previous subsections, a best practices analysis identifies the strengths and improvement opportunities to standards developed by the Matrix Consulting Group in its work with hundreds of communities in the Pacific Northwest and throughout the United States. In this diagnostic assessment, the Tigard Public Library compared very favorably to these standards as summarized by the table, below:

Best Practice/Operational Target	Meets Target	Does Not Meet Target	Comment
Overall Indicators			
Cardholders as a percent of population exceed 65%.		√	At 48% Tigard falls moderately below the target.
Annual circulation per cardholder exceeds 12 per year	√		At over 36 items per cardholder, Tigard patrons actively use library resources. These counts do not include electronically circulated items.
Proportion of collection replaced per year exceeds 5%.	√		New physical items were 12% of the collection last year. Again, this does not include e-resources.
Services coordinated with other service providers in the City (e.g., recreation services).	√		Some coordination with recreation and with local non-profits with opportunities to increase these efforts.
Collections of non-book materials, including archival/cultural materials, audio-visual materials, games (computer and board games), Braille materials, etc.	√		Extensive non-book physical and virtual collections.
The Library leverages community resources (private, not-for-profit, Friends of the Library, etc.) to supplement City funds?	√		The Library is supported by a Foundation and Friends organization. There are, however, opportunities to increase this support.

Best Practice/Operational Target	Meets Target	Does Not Meet Target	Comment
Service Delivery			
The Library is open at least 60 hours per week.	√		At 69 hours per week, the Tigard Library is accessible to patrons.
The Library is open and available to the public during non-business hours and days.	√		The Library is open 7 days each week and until 9pm on weeknights. However, the Library should evaluate how useful some later evening hours are for patrons (visits drop off significantly after about 8pm).
Reference questions are offered online or on the phone.	√		Reference questions can be asked via the phone, email or chat online (Answerland).
Programs designed to reach numerous target audiences (children, adults, seniors, etc.). Program performance, quality and community feedback is tracked.	√		The Library offers programs for children, young adults and adults on a near daily basis.
Outreach efforts exist to get to audiences who cannot get to the library (e.g., homebound services)?	√		Outreach efforts are targeted toward schools as well as the homebound. However, there may be opportunities to support specific segments of the community (e.g., seniors).
Technology			
The Library has extensive investments in electronic media.	√		The Library is substantially invested in electronic media (e.g., e-books and e-databases). Three (3) automated circulation checkouts are also available for patron use.
Public workstations have wait times managed.	√		Two hours of continuous use, per policy.

Best Practice/Operational Target	Meets Target	Does Not Meet Target	Comment
The library has a long-term technology plan.	√	√	While the Library is part of the City's overall technology planning, the Library should have a more robust plan covering its specific needs.
A central webmaster is designated to manage the content of the Library's website		√	The Library shares social media content among several staff with risks to consistency and quality.
Marketing			
The Library has developed a consistent brand for its communications and marketing efforts, including internet.		√	Marketing materials (both print and online – web and social media) are not a branded with a consistent look. Multiple people are involved in social media and web presence.
The Library utilizes social media extensively for outreach.	√	√	Yes, but content management is decentralized.

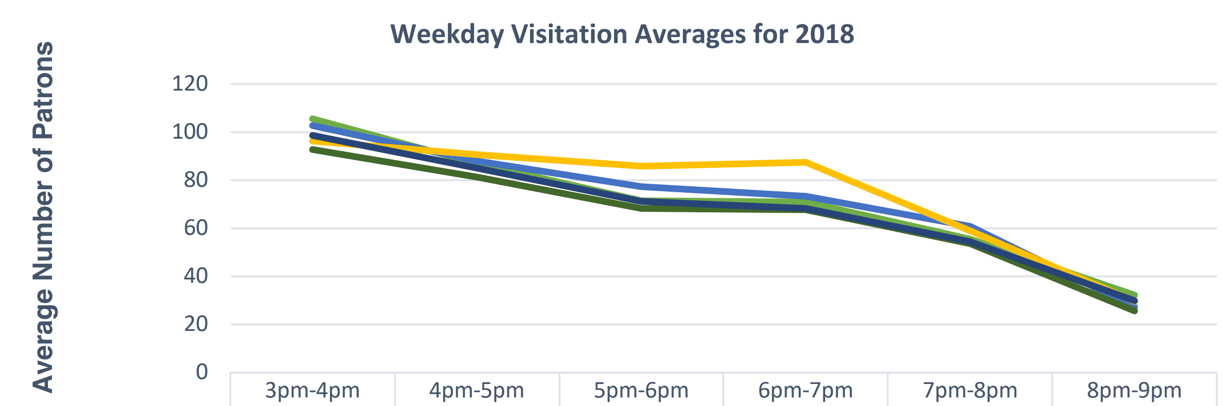
This is an extensive list of positives for the Tigard Public Library.

3. Issues for Analysis

There can be management, staffing and service/programmatic issues even for the most positive municipal functions and the Tigard Public Library is no exception. The project team focused on the following:

- **Until recently, there has been a leadership vacuum at the Library with the Library Director on a leave of absence**. The Library was without a dedicated Director for over six (6) months. In the interim a collective leadership of Division Managers ran the Library. While this approach allowed the Library to operate effectively during the Director's absence the lack of a permanent Director was an impediment to service planning and organizational development. Indeed, this was the highest rated 'improvement need' identified by Library staff in the employee survey. In the past two months, however, a new Director was named from among the Division Managers and this issue has been eliminated. However, there is much to be done in the Library. In spite of the extremely high marks that employees gave to the Library, interviews conducted during the intervening period showed that there was much uncertainty about the future of the Library and its continued success. Since 'openness' is new to the Library, the new Director's focus has been and will be to build upon this new management style.

- **While the Library's Commitment to a High Number of Service Hours to the Public Is Exemplary, Many Evening Hours Have Few Patrons**. As noted previously, the Tigard Public Library and the City have made the delivery of library services a priority. This commitment can be seen in its collection size, staffing levels and programs. It can also be seen in the number of hours it is open each week. At 69 hours per week, including every weekday evening until 9pm, this is an extraordinary commitment. However, this commitment has returns which diminish significantly as the evening progresses. This can be seen in the following table which displays average patron visits in the evening for 2018.



	3pm-4pm	4pm-5pm	5pm-6pm	6pm-7pm	7pm-8pm	8pm-9pm
Monday	106	87	71	71	56	32
Tuesday	103	88	77	73	61	27
Wednesday	96	91	86	87	59	30
Thursday	93	81	68	68	54	26
Friday	99	85	71	68	54	30

It is clear that patron visits are much reduced in the evening:

Drop off between 7-8 pm	Drop off between 6-8
-42%	-55%
-55%	-63%
-50%	-66%
-52%	-62%
-45%	-56%

Moreover, evening visits are diminishing over time – compared to 2017, patron visits after 8pm are between 5% and 15% lower on Wednesdays, Thursdays and Fridays.

While the comparative statistics show Tigard's Public Library staffing levels to be relatively high (though not the highest), operating a two-story library with multiple service desks makes meeting service commitments difficult. Moreover, while volunteer commitments are high their utilization is high for the roles which are appropriate for them.

The Tigard Public Library should consider a service hour reduction and redistribute staff hours to better serve core hours when patron visits peak. Reducing the number of late evenings is one approach; reducing late evenings overall is another. Closing at 8pm each night should be implemented, the hour after which visits decline markedly.

- **In spite of the depth and breadth of the Library's marketing and outreach program, in some respects it is not a coordinated effort.**

  – Marketing materials (both print and online – web and social media) are not branded with a consistent look.

  – Multiple staff positions are involved in social media and web presence. Several staff can contribute to social media without review. This is not to deny the experience and professionalism of staff in the Library, but new media functions like old media for purposes of branding and needs consistency in messaging.

- **As a large department with specialized information technology needs, the Tigard Public Library needs to plan for its long-range needs in better support of the City's technology plan.** Any large organization with its own special resource needs requires a dedicated plan for the support and renewal of those resources. A Library, like selected other municipal services for example police, have a great need not only for highly trained and dedicated personnel, but also equipment such as information technology. A library has great and growing needs for:

  – Up to date and highly functioning cataloging and circulation systems and equipment which are provided through the WCCLS.

  – A relatively large number of public access computers that meet expectation for speed and effective user interfaces.

  – Data which today and in the future, increasingly mean fee supported access to dedicated databases.

  – Accessibility for the sight impaired.

While the City has an overall technology plan which is based on and reflective of municipality-wide needs and priorities, the Library would better feed into that process with a comprehensive needs assessment of its technology requirements.

Recommendation 42: The Library should reduce service hours to between 62 – 64 hours per week, either through elimination of some evening hours or an earlier closing for all evenings. Closing at 8pm each night should be implemented, the hour after which visits decline markedly.

Recommendation 43: Develop a comprehensive marketing plan encompassing traditional print and advertising and social media components. Use this opportunity to brand the Library as consistently as possible to the community. Finally, make one person responsible for the coordination, development and posting of social media while continuing to seek the input of other staff. The lead person should be the Communications Coordinator. Then management team should set direction and develop a review process.

Recommendation 44: The new Director needs to continue the recent focus on furthering team building and open communication among Library staff.

Recommendation 45: Create an internal team under Technical Services to research, develop and present to the City a Library Information Technology Needs Assessment and Long-Range Plan.

7 Police

This chapter provides an assessment of the Police Department staffing and operations requirements.

A. ADMINISTRATION DIVISION.

The Chief's Administration consists of the Chief, two Commanders, a Business Manager, a Public Information Officer, a Community Engagement Program Coordinator and Confidential Executive Assistant. Each of these roles will be briefly discussed in the following section, though there are no specific performance measures that captures all aspects of the roles, e.g. the Confidential Executive Assistant handles many tasks for the Chief and some tasks are one time while others may be handled as needed, yet the role is essential for the coordination of operations within the Chief's administration and as a point of contact for the chief.

The Chief is in-charge of day to day operations and is supported by two commanders and four administrative personnel. The Chief assigns tasks and is involved in all major decision making.

The Command staff has a clear separation of tasks, though they assist each other when needed. The Commanders oversee Patrol, Investigations and other units. The Commanders serve as part of the overall leadership team and are assigned tasks in support of overall operations. The Commanders serve as the second in command and oversee policy development, grants and sergeants.

As noted above the Confidential Executive Assistant handles many tasks for the Chief and some tasks are one time while others may be handled as needed. The Executive Assistant coordinates the Chief's schedule, files confidential department correspondence and serves as point of contact for the Chief.

The Public Information Officer (PIO) responds to significant events, coordinates the department media response to incidents or information that is disseminated to the public. They also handle media enquiries. The PIO also manages the department's social media activity. The department has the following major social media accounts:

Report Type	Number of Followers	Estimated Population of Tigard	Percentage of population Following*
Facebook	6,967	54,758	12.7%
Twitter	9,617	54,758	17.5%
*Not all followers are necessarily Tigard residents			

The above table indicates the department is active on social media and is successfully reaching online population. The department is also on “Nextdoor” which is a specialized targeted social media application for residents of the city. The department reaches approximately 8,000 residents on the platform. Social media is an important aspect of public outreach as the number of people who get their information online is increasing.

The Community Engagement Program Coordinator is responsible for department’s outreach to the community. The coordinator organizes several annual events such as National Night Out, the Department Open House and the National Prescription Drug Take back. The Coordinator also arranges officer attendance at many community and neighborhood events. The department has attendance at the Tigard Festival of Balloons, Trick or Treat on Main Street as well as conducts safety classes for kids and self-defense for young women. An important aspect of this position is that it helps build community trust of the police which is a pillar in 21st Century policing.

The Business Manager has overall responsibility for developing the budget, completes financial reports, handles accounts payable and receivable, grants, and asset forfeiture. The Business manager coordinates with City Budget office on daily, weekly basis to manage the department budget and reporting.

The Chief’s Administration and Command Staff are able to handle the daily tasks of the department administration.

Recommendation 46: Maintain current Administration staffing levels.

B. OPERATIONS DIVISION.

This initial section of the chapter focused on data and analysis associated with the workload associated with the Operations Division and subsequent staffing requirements. Patrol Operations consists Patrol, Tri-Met, Traffic Enforcement and Community Safety Officers. Patrol Operations is led by a Commander who is supported by two Lieutenants. This section of the report will focus on data and analysis associated with the workload associated with Patrol and subsequent staffing requirements.

1. Analysis of the Police Patrol Unit Workload

There are many factors that impact the workload associated with any law enforcement agency. The nature of work for most law enforcement agencies, especially for officers responsible for responding to community generated calls for service, fluctuates greatly. This section of the report will analyze the community generated workload.

(1) Calls for Services Analysis

Our project team has calculated the community-generated workload of the City of Tigard Police Department by analyzing incident records in the computer aided dispatch (CAD) database, for 2018. For incidents to be identified as community-generated calls for service and included in our analysis of patrol, each of the following conditions needed to be met:

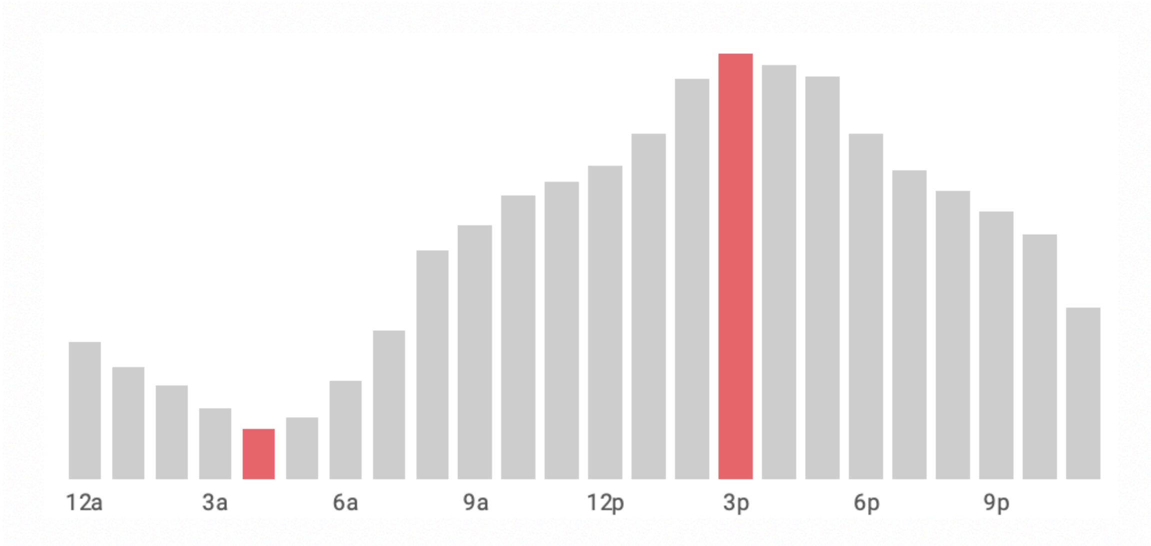
- The incident must have been unique.
- The incident must have involved at least one Officer assigned to patrol, as identified by the individual unit codes of each response to the call.
- The incident must have been originally initiated by the community.

After filtering through the data using the methodology outlined above, the remaining incidents represent the community-generated calls for service (CFS) handled by Tigard patrol officers.

(2) Call Distribution by Time of Day

As to be expected, the CFS volume fluctuates by the time of day. The following graph presents the CFS volume throughout the day.

Calls for Service by Hour



CFS is the lowest during the early morning hours, then steadily increase throughout the day, peaking at 3pm. After 10pm CFS steadily decline.

Additionally, the project team analyzed the CFS workload by hour and day of week. The following table presents the CFS by hour and day.

Calls for Service by Hour and Weekday

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
12am	105	50	58	59	61	52	76	**461**
1am	68	44	46	43	61	50	62	**374**
2am	61	46	30	34	33	47	65	**316**
3am	45	34	39	28	18	27	44	**235**
4am	21	29	21	22	24	23	31	**171**
5am	26	27	43	33	26	23	26	**204**
6am	34	53	61	46	55	54	28	**331**
7am	41	76	96	73	80	72	65	**503**
8am	63	135	143	108	124	97	99	**769**
9am	86	144	125	119	134	129	119	**856**
10am	130	165	148	140	120	126	125	**954**
11am	123	175	158	164	130	119	129	**998**
12pm	154	153	159	128	168	148	142	**1,052**
1pm	141	182	194	147	166	179	149	**1,158**
2pm	186	226	174	190	193	209	166	**1,344**
3pm	178	231	199	206	229	205	179	**1,427**
4pm	150	237	204	204	202	224	169	**1,390**
5pm	175	218	203	198	189	209	163	**1,355**
6pm	125	181	168	176	165	182	165	**1,162**
7pm	133	159	145	151	143	145	162	**1,038**
8pm	128	144	122	146	135	140	150	**965**
9pm	117	129	119	107	133	136	155	**896**
10pm	106	98	100	109	126	130	156	**825**
11pm	74	80	77	71	81	88	109	**580**
Total	2,470	3,016	2,832	2,702	2,796	2,814	2,734	19,364

Note: Green indicates fewer calls per hour while red indicates higher calls per hour.

The CFS workload by day of week is fairly stable throughout the week but peaks on Friday. Furthermore, the most CFS peaked around mid to late afternoon each day. However, noting that the largest single time for CFS was on Monday between 4pm and 5pm.

In total, Tigard Patrol Officers responded to a total of 19,364 community generated CFS during a one-year period, with workloads varying significantly by time of day. The total number of calls for service for a community the size of Tigard is within the expected range based on current demographics in a suburban area.

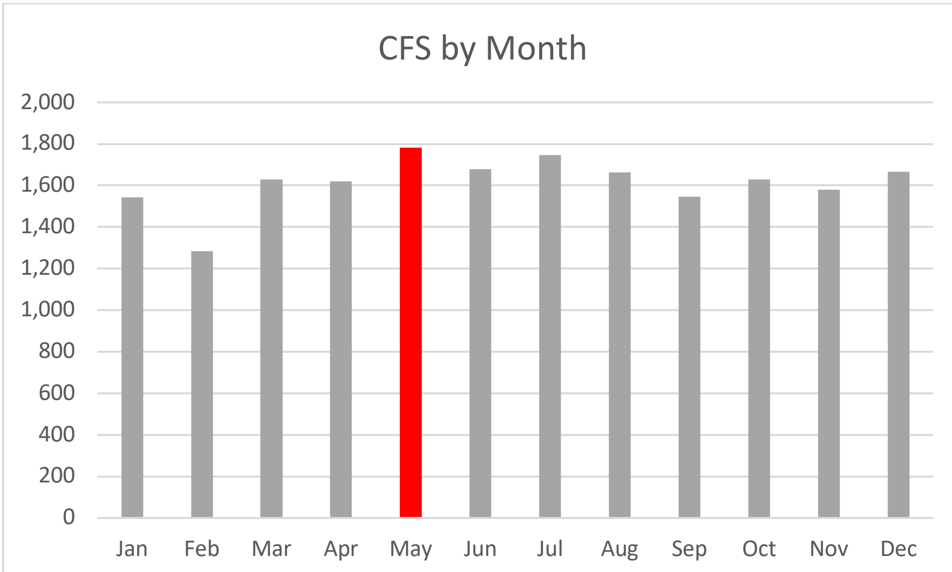
(3) Calls for Service by Month

The following table displays CFS totals by month, showing seasonal variation as a percentage difference from the quarterly average:

Calls for Service by Month

Month	# of CFS	Seasonal +/-
Jan	1,542	
Feb	1,285	-7.9%
Mar	1,630	
Apr	1,619	
May	1,780	+4.9%
Jun	1,677	
Jul	1,747	
Aug	1,663	+2.4%
Sep	1,545	
Oct	1,629	
Nov	1,580	+0.7%
Dec	1,667	
Total	**19,364**	

As expected, the CFS workload varies throughout the year. The CFS by month begins to increase in March and peaks in May; though the summer months are the busiest. The following graph provides a graphic illustration of CFS by month:



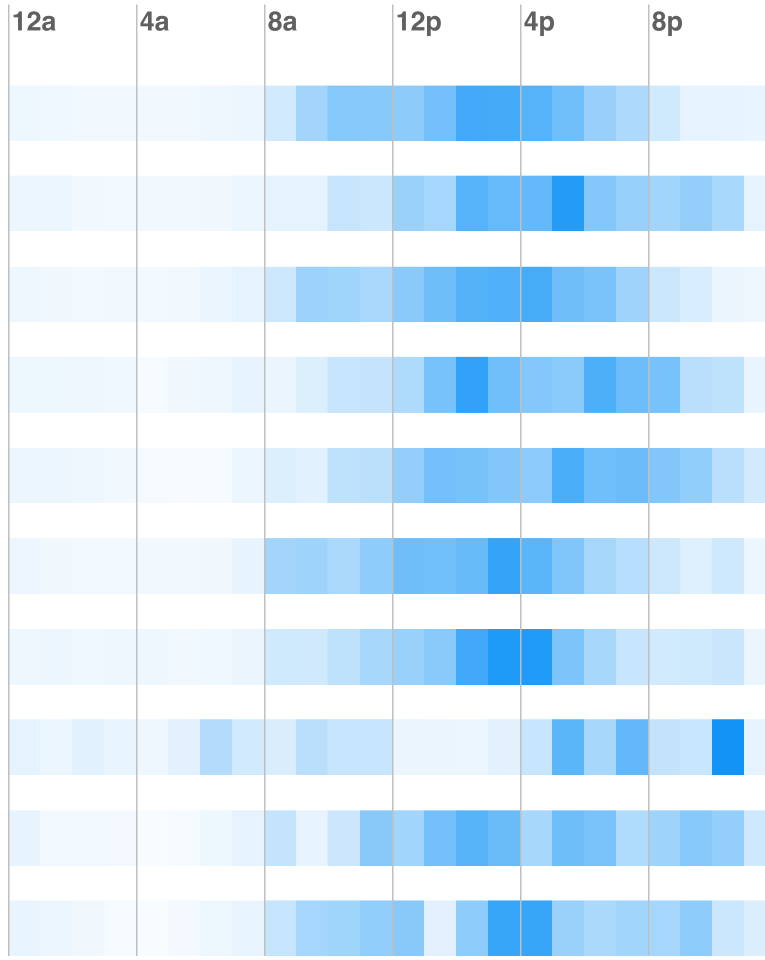
(4) Most Common Types of Calls for Service

The following table provides the ten most common incident categories of CFS handled by patrol officers over the last year, as well as the average call handling time (HT)[7] for each. Please note the darker the shade of blue indicates the more frequent the timeframe.

[7] Handling time (HT) is defined as the total time in which a patrol unit was assigned to an incident, as identified by its dispatch and clear time stamps recorded in the CAD data.

Most Common CFS Incident Types and Distribution by Time of Day

Incident Type	# CFS	HT
ASSIST PERSON	1,886	22.6
WELFARE CHECK	1,379	31.6
THEFT COLD	1,120	38.9
SUSPICIOUS PERSON	922	27.0
SUSPICIOUS CIRCUM	814	26.1
FOLLOW UP	761	25.3
MESSAGE	744	23.0
ALARM AUDIBLE	689	18.2
SUSPICIOUS VEHICLE	688	24.5
UNWANTED	686	32.8
All Other Types	9,675	37.3
Total	**19,364**	**32.3**



The ten most common CFS represent 50% of the call types received by the Department. These types of call types represent a wide variety of workload with Assist Person representing the most frequent call type (9%) followed by Welfare Check (7%). The majority of the CFS peaked during the late afternoon/early evening hours.

2. Analysis of Net Availability and Proactivity

The following sections build upon the initial analysis of patrol CFS to determine patrol service levels based on current workloads and net availability of patrol officers.

(1) Purpose of Calculating Patrol Proactivity

Analysis of the community generated calls for service workload handled by patrol units provides the basis for patrol staffing needs. Developing an understanding of where, when, and what types of calls are received provides a detailed account of the service needs. Additionally, measuring the time used in responding and handling these calls, the staffing requirements for meeting the community's service needs can then be determined.

In addition to responding to CFS, patrol officers provide other services that impact the community as a whole. Providing a high-level of service, patrol officers work proactively to address community issues, conduct problem-oriented policing, and perform other self-directed engagement activities within the community. As a result, patrol staffing needs are calculated not only from a standpoint of current resources to handle CFS workload, but also their ability to provide a certain level of service beyond responding to CFS. In Tigard, officers spend significant time on self-initiated activity such as vehicle stops, business checks and pedestrian stops.

These needs are determined by measuring the proactivity of patrol, or the uncommitted time that patrol units have outside of handling call for service workloads and administrative duties, which is expressed as a percentage of the total time that they are on-duty and available to handle workloads. With this focus in mind, the following sections examine the process used by the project team to determine patrol resource needs based on current workloads, staff availability, and service level objectives.

(2) Patrol Officer Net Availability

Schedules provide a roster of assigned staff; the number of personnel that are actually on-duty and available to work at any given time varies greatly. For example, an officer is assigned to work a total of 2,080 hours annually. However, a significant percentage of scheduled time, is not actually spent on-duty and available in the field, for a variety of reasons. As a result, it is important to understand the amount of time officers are available to staff their post and analyze the data associated with time away. This analysis and calculation is referred to as net availability - the amount of time that an officer is available to actively patrol and respond to calls for service.

As a result, it is critical to understand the amount of time that officers are on leave – including vacation, sick, injury, personal, military, comp time, or any other type of leave – as well as any hours dedicated to on-duty court or training time, and all time spent on administrative tasks such as attending shift briefing. The impact of each of these factors is determined through a combination of calculations made from the Tigard Police Department data and estimates based on the experience of the project team, which are then subtracted from the base number of annual work hours per position.

The result represents the total net available hours of patrol officers, or the time in which they are both on-duty and available to respond to calls for service and other activities in the field. The following table summarizes this calculation process, displaying how each individual net factor contributes to the overall net availability of patrol officers. Factors that have been estimated by the project team are shown with an asterisk:

Breakdown of Officer Availability

Base Annual Work Hours		**2,080**
Total Leave Hours	–	279
On-Duty Training Hours	–	60
On-Duty Court Time Hours	–	20
Administrative Hours	–	270
Net Available Hours Per Officer	**=**	**1,450**
Number of Officer Positions	*x*	*31*
Total Net Available Hours	**=**	**44,955**

Overall, officers are available for a combined 44,955 net available hours per year, representing the total time in which they are on duty and able to respond to community-generated incidents, and be proactive. The net hours above show the total hours per year that officers are available to respond to calls for service or conduct self-initiated activity. These hours are calculated irrespective of actual calls for service hours that are detailed later in this report.

(3) Overview of Call for Service Workload Factors

Previous sections of this chapter examined various trends in patrol workloads, including fluctuations by time of day and of week, common incident types, and other various analytics. The following section builds on this preliminary analysis, detailing the full extent of resource demands that these incidents create for responding patrol officers.

Each call for service represents a certain amount of workload, much of which is not captured in the handling time of the primary responding unit. Some of these factors can be calculated directly from the data provided by the Department, while others must be estimated due to limitations in their availability or measurability.

The following table details factors that must be considered in order to capture the true workload associated with community-generated workload:

Factors Used to Calculate Total Patrol Workload

Number of Community-Generated Calls for Service

Data obtained from an export of CAD data covering a period of an entire year that has been analyzed and filtered in order to determine the number and characteristics of all community-generated activity handled by patrol officers.

The calculation process used to develop this number has been summarized in previous sections.

Calculated from TPD data: **19,364 community-generated calls for service**

Primary Unit Handling Time (multiplied by the rate)

The time used by the primary unit to handle a community-generated call for service, including time spent traveling to the scene of the incident and the duration of on-scene time. For each incident, this number is calculated as the difference between 'call cleared' time stamp and the 'unit dispatched' time stamp. At 32.3 minutes, the average handling time for TPD units is in the typical range for most agencies.

Calculated from TPD data: **32.3 minutes of handling time per call for service**

Number of Backup Unit Responses

The total number of backup unit responses to community-generated calls for service. This number often varies based on the severity of the call, as well as the geographical density of the area being served. This number can also be expressed as the *rate* of backup unit responses to calls for service and is inclusive of any additional backup units beyond the first. This information was calculated based on secondary units responding to calls for service from the CAD data.

Calculated from TPD data: **0.75 backup units per call for service**

Backup Unit Handling Time (multiplied by the rate)

The handling time for backup units responding to calls for service is calculated using the same process that was used for primary units, representing the time from the unit being dispatched to the

unit clearing the call.
Estimated: **24.2 minutes of handling time per backup unit**

Number of Reports Written

The total number of reports and other assignments relating to calls for service that have been completed by patrol units, estimated at one report written for every three calls for service. This includes any supporting work completed by backup units. In the absence of report data, the project team estimated one in three calls for service requires an incident report.

Estimated: **0.33 reports written per call for service**

Report Writing Time (multiplied by the report writing rate)

The average amount of time it takes to complete a report or other assignment in relation to a call for service. Without any data detailing this specifically, report writing time was estimated based on the responses provided in the employee survey. Results of the survey analysis result in an estimated 45 minutes are spent per written report, including the time spent by backup units on supporting work assignments.

Estimated: **45 minutes per written report**

Total Workload Per Call for Service

The total time involved in handling a community-generated call for service, including the factors calculated for primary and backup unit handling time, including jail transport/booking time, and report writing time. This number represents the addition of the previous factors, relative to their rates (e.g., 45 min. of report writing time is added to approximately 0.33 of all calls for service). The total number of workload hours for the year is then divided by the number of calls, producing an average per incident.

Calculated from previously listed factors: **65.5 total minutes of workload per call for service**

Each of these factors contributes to the overall picture of patrol workload – the total time required for patrol units to handle community-generated calls for service, including primary and backup unit handling times, report writing time, and jail transport time.
These factors are summarized in the following table:

Summary of Patrol Workload Factors

The total number of committed hours for patrol officers responding to the community-generated workload for 2018, the last complete year of data provided was approximately

21,131 hours. The total committed hours can be altered depending on whether officers clear from calls prior to writing reports or whether officers indicate they are out of service to write reports. Due to this, the project team subtracts an average of 45 minutes per written report to more accurately reflect actual available time which is based on numerous previous studies. The table below shows the report writing time included in the calculation of call workload. It should be noted that officers often write reports while indicating they are clear and available for a call. This is due to prevailing police culture of "being available for the next call" even when they are not completely clear from a previous call.

	Value	%
Total Number of Calls for Service	**19,364**	49%
Avg. Primary Unit Handling Time (min.)	32.3	
Backup Units Per CFS	**0.75**	28%
Avg. Backup Unit Handling Time (min.)	24.2	
Reports Written Per CFS	**0.33**	23%
Time Per Report (min.)	45.0	
Avg. Workload Per Call (min.)	65.5	
Total Workload Hours	**21,131**	

(4) Calculation of Patrol Proactivity

Equally important to understanding the time associated with responding to the community-generated workload, is the amount of proactive or unassigned time of patrol officers. Proactive time is important in any community, especially for communities such as Tigard which emphasis strong public relations and interactions between the Police Department and citizens.

Patrol proactivity is calculated by comparing the total call-driven workload handled by patrol against the resources available to handle it. This is done by subtracting the total net available hours that patrol officers spend on duty against total workload hours:

$$\frac{\text{Total Net Available Hours} - \text{Total CFS Workload Hours}}{\text{Total Net Available Hours}} = \%\ \text{Proactivity}$$

With net availability and call-driven workloads having been calculated previously in the analysis, overall proactivity for patrol officers can be calculated as follows:

Overall Patrol Proactivity

Total Patrol Net Available Hours		46,406
Total Patrol Workload Hours	–	21,131
Resulting # of Uncommitted Hours	**=**	**25,275**
Divided by total net available hours	÷	46,406
Overall Proactivity Level	**=**	**54.5%**

An overall proactivity level of 54.5 indicates some proactive capabilities of patrol officers; however, most of the proactive time for Tigard occurs after 11pm and before 7am when there are less community engagement opportunities and fewer community contacts possible. For a community the size of Tigard and its engaged citizenry, a proactive goal of 60% or greater would be considered an effective target. It should be noted that available proactive time does not mean the officers are not active when they are not on community generated calls for service. Tigard officers are engaged in self-initiated activity when not on calls for service, as noted previously.

(5) Proactivity and Deployment Effectiveness

As discussed previously, the community-generated workload fluctuates throughout the day. Based on the current deployment of minimum staffing of 3 patrol officers on day shift (7am to 5pm), minimum staffing of 4 patrol officers on afternoon shift (2pm to Midnight) and minimum staffing of 3 patrol officers on night shift (10pm to 8am) the following table presents proactivity by weekday in four-hour time blocks:

Percentage of Proactivity Time Available by Hour and Weekday

Time	S	M	T	W	Th	F	Sa	Overall
2am–6am	81%	83%	84%	89%	90%	85%	76%	**84%**
6am–10am	72%	47%	47%	54%	45%	51%	58%	**60%**
10am–2pm	22%	-5%	-3%	14%	8%	13%	28%	**11%**
2pm–6pm	50%	32%	42%	42%	43%	35%	53%	**46%**
6pm–10pm	42%	34%	39%	40%	40%	35%	35%	**38%**
10pm–2am	69%	77%	78%	76%	76%	78%	70%	**76%**
Overall	59%	50%	52%	56%	54%	53%	57%	**54%**

As seen in the table, patrol proactivity is very robust and well above benchmark targeted ranges of over 54%. However, the table indicates that there is a net negative proactive time available between 10am and 2pm on Mondays and Tuesdays. This means there are generally more calls for service than dedicated patrol staffing can effectively handle.

(6) Use of Proactive Time

The effective use of proactive time relies on the front line supervisor's ability to direct the time so that it used to best serve the community. With 54%overall proactive time available to the department, there is the ability to be proactive; however, it is limited since most of the proactive time occurs during overnight time hours when there are fewer opportunities to be proactive (Traffic and Pedestrian activity decreases).

Sergeants need to be actively involved in identifying problems in the community that would benefit from more proactive emphasis, the deployment of field patrol staff to address those problems and making them accountable for resolution.

In Tigard, officers are engaged in more proactive enforcement and community engagement activities between 11pm and 1am. The table bellows shows self-initiated activities by hour and weekday.

Self-Initiated Incidents by Hour and Weekday

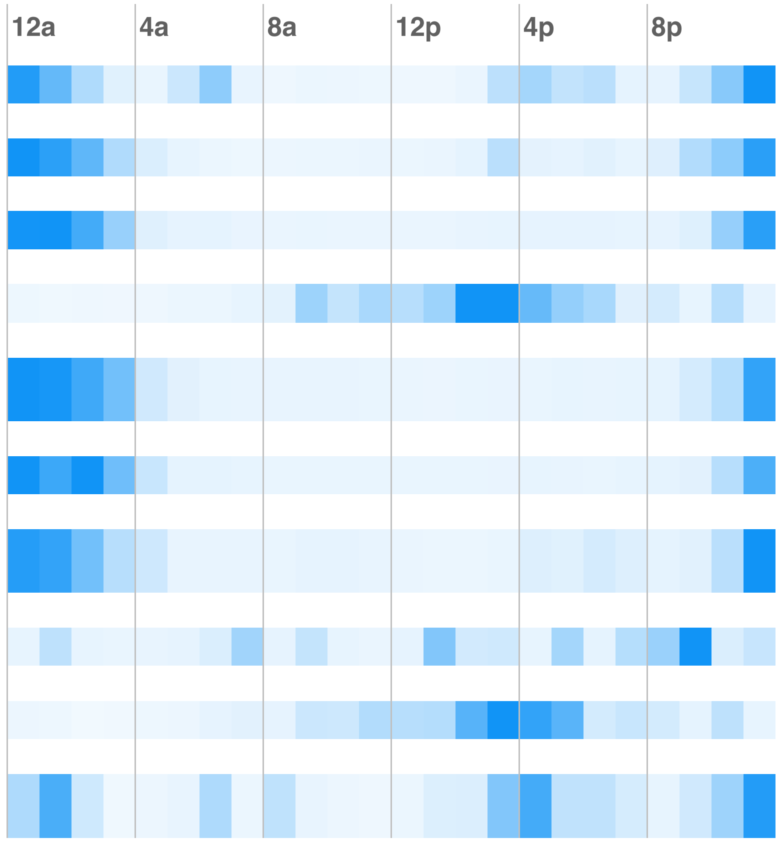
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
12am	195	156	120	137	171	190	224	**1,193**
1am	208	117	119	95	140	161	211	**1,051**
2am	133	113	101	87	150	102	132	**818**
3am	77	53	69	48	117	60	103	**527**
4am	32	40	25	23	50	64	41	**275**
5am	54	40	40	28	70	53	57	**342**
6am	86	61	60	57	53	80	90	**487**
7am	39	37	44	23	31	25	31	**230**
8am	29	26	23	15	26	29	35	**183**
9am	51	30	44	34	30	48	38	**275**
10am	40	22	39	29	33	45	38	**246**
11am	39	36	20	31	35	43	39	**243**
12pm	38	27	22	20	21	33	33	**194**
1pm	23	17	28	48	32	34	34	**216**
2pm	54	46	60	55	40	54	68	**377**
3pm	88	87	76	66	58	105	119	**599**
4pm	78	92	62	47	67	88	115	**549**
5pm	81	81	44	46	52	74	82	**460**
6pm	90	72	61	37	44	72	89	**465**
7pm	41	56	44	42	35	62	61	**341**
8pm	50	44	19	54	47	65	62	**341**
9pm	72	58	38	80	54	80	90	**472**
10pm	91	83	54	67	101	123	136	**655**
11pm	121	151	123	173	188	253	258	**1,267**
Total	1,810	1,545	1,335	1,342	1,645	1,943	2,186	11,806

Note: Green indicates low self-initiated activity while red indicates more self-initiated activity.

The most common type of self-initiated activity in Tigard is traffic stops followed by Extra Patrol and then Subject Stops. The following table shows the top 10 self-initiated activity by type:

Self-Initiated Incident Types

Incident Type	# CFS	HT
TRAFFIC STOP	4,451	12.3
EXTRA PATROL	1,719	14.9
SUBJECT STOP	1,654	14.6
FOLLOW UP	737	35.7
OUT W/ SUSP VEH	707	9.7
PREMISE CHECK	522	11.0
SUSPICIOUS VEHICLE	356	11.5
DETAIL	259	154.3
FOLLOW	227	33.8
MOTORIST ASSIST	153	7.8
All Other Types	1,021	33.6
Total	**11,806**	**19.5**



The table indicates that Tigard patrol officers spend significant time on self-initiated activity when not on a call for service.

3. Analysis of Patrol Staffing Needs

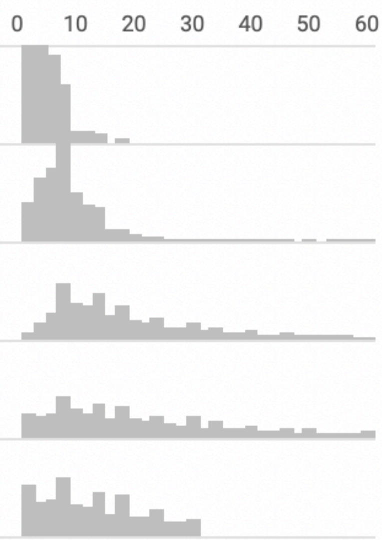
Staffing needs can be calculated for certain targeted levels of proactivity, with each officer position representing 1,450 net available hours per year. The typical proactivity ranges utilized to calculate staffing needs for larger agencies are between 35% to 45%. However, in small to mid-sized departments there tends to be a much higher level of proactive time as is the case in Tigard at 54%. The above proactive time levels are achieved by a minimum staffing of 3 officers and a supervisor on day shift, 4 officers and a supervisor on afternoon shift and 3 officers and a supervisor on night shift. Tigard's current proactive range of 54% is achieved by lower calls for service levels after 11pm until about 7am the next day.

Staffing of police operations must consider the normal operating environment and then allow for proactive time. In Tigard, drive time, road networks, geography and time for back up must also be considered to provide for effective call response times and officer safety. Tigard covers approximately 11 square miles. In calculating the patrol officer needs for Tigard, we note that the busiest time for calls is between 4pm and 5pm on a Monday at 237 calls for the year occurring on that day and time. Since there are 52 weeks in a year we know that approximately 4.5 calls on average will occur on any given Monday between 4pm and 5pm. Though this is shift overlap time, 3 of the 7 officers on shift will be ending their shift at 5pm which means there is a high likelihood that all officers will be assigned to a call at some point during that hour. Additionally, this is a heavy vehicle commute time which will slow patrol response times.

While available proactive time is an important factor in determining appropriate staffing in a department the size of Tigard, it is critical to consider call response time as well. In Tigard the call response time increased 20% between 2012 and 2017 (latest data available) from an average of 5.18 minutes to 6.23 minutes. The following tables show the breakdown of call response by priority, call handling time and response time in 2018:

Response Time Distribution by Priority Level

Priority	# CFS	%	Avg. HT	Response Time (min.)
1	113	1%	75.9	
2	3,987	21%	43.2	
3	5,579	29%	31.2	
4	5,645	29%	31.4	
5	4,038	21%	22.4	



As the table indicates, priority 1 calls represent approximately 1% of all calls and call response time averages above 5 minutes. Priority 2 calls represented approximately 21% of calls for service and average response was above 7 minutes. The department has a goal of responding to Priority 1 and 2 calls in 5 minutes or less. Many larger agencies have a call for service response time goal for priority 1 and 2 calls at between 5 and 7 minutes. However, many departments similar to Tigard, have a goal of a 5 minute response to these calls. The size of a city, road networks and geography can greatly impact call response time. Priority 1 and 2 calls are the most serious calls for service and typically mean a crime is in progress or there a life-threatening incident occurring.

In order to achieve an approximately 5-minute response time, additional officers would be needed. The current average response time of 6.23 minutes would need to be lowered by approximately 20% (5 - 6.23/6.23 x 100% = -19.74%).

Current minimum staffing requires 10 officers per day (3 –Day Shift, 4 Afternoons and 3 Night Shift). Adding 1 officer to each shift would require 13 officers per day to be assigned to work, however, with vacation and other absences, each officer works approximately 1,450 hours per year. To add 1 additional officer per shift to cover 365 actually requires approximately 2.5 officers per shift as the table below indicates.

Shift hours per day.	Shifts per year	Total hours needed	Current average work hours per officer per year	Hours needed divided by average work hours per year	Personnel needed (3 shifts X 2.5)
10	365	3,650	1,450	2.51	7.55 (8)

This increase would represent a net 25% to 33% increase in minimum staffing. This would increase the likelihood that an officer is available for a call and also increase the likelihood that an officer is closer to the call for service using current zone and deployment structure.

Patrol also consists of two K9 officers who work routine patrol with a K9 partner. This arrangement adds additional resources to patrol without creating a dedicated unit. K9 reported the following statistics for 2017:

Hours needed divided by average work hours per year	Personnel needed (3 shifts X 2.5)	Average per month
2.51	7.55 (8)	12
		.4
		1
		1.9
		1.7
Assists	8	.6

Though the activity levels are low for a two-person K9 unit, their primary duty is to respond to calls for service. The addition of tracking and searching provided by the K9 units, offer patrol and the City of Tigard a safer, more efficient approach to apprehending suspects. Many of the captures may not have taken place without the added ability K9 units provide. Staffing of patrol with current resources is matched to the workload with more officers assigned during the busier portions of the day.

Recommendation 47: Add 8 additional Officers to achieve higher minimum staffing to achieve stated goal of 5 minute response to priority 1 and 2 calls for service. Staffing should be 4 Officers on Day Shift, 5 Officers on Afternoon Shift and 4 Officers on Night Shift.

Recommendation 48: Maintain current staffing of two K9.

4. Patrol Supervisory Staffing

Patrol supervision is a critical component to effective policing for a community. Patrol supervision sets the tone for what type of policing will be delivered and what patrol expectations are for officers in the field. Patrol supervisors should support the direction of the command staff and work to implement their policing priorities. The lack of effective patrol supervision can lead to morale issues, failure to adequately serve the community, poor investigative follow up and increased liability for the department and the City. The following is a list of some of the basic requirements that encompass effective field supervision:

- Supervisors should monitor priority calls and respond quickly.
- Supervisors should help resolve critical incidents.
- Supervisors should instill the department vision on subordinates.
- Sergeant should mentor officers.
- Supervisors should properly assess officers for performance evaluations.

- Supervisors should help officers work within policy and address problems.
- Supervisors should direct patrol activities during proactive times.
- Supervisors should help officers address community related problems.

Having well trained and professional patrol supervisors in the field can help reduce liability for the department by providing frontline supervision and addressing performance issues as they arise.

The Tigard Police Department has 1 sergeant minimum staffing assigned to each patrol shift (2 sergeants assigned per shift with opposite days off). During our interviews the project team was informed that patrol supervision is effective. Sergeants respond to all critical incidents are available to take calls for service when needed.

The current ratio of sergeants to officers is 5.5 officers to 1 sergeant. This is an appropriate ratio for the City of Tigard. The ratio allows close supervision and assistance for officers.

Recommendation 49: Minimum Staffing should be Sergeant on duty at all times.

5. Tri-Met

The Tri-met unit consists of 1 Sergeant and 2 officers who are assigned full time to a multi-agency transit enforcement function. Though the officers and sergeant are supplied by Tigard, the unit is fully funded by the transit agency. This unit was not analyzed as part of this study as performance measures for this unit are not directly tied into operations of the police department.

6. Community Safety Officer (CSO)

The community safety officer is a uniformed non-armed/non-sworn position that assists with low level calls for service where suspect contact is highly unlikely. These include, theft, vandalism, parking and assisting on traffic crashes. The CSO assists with many tasks that are administrative in nature such as phone and radio inventory. The CSO also performs delivery of evidence and paperwork to the District Attorney. There were 2 CSOs.

The CSO performs many tasks that would have to be done by sworn personnel if the CSO position did not exist. The CSO is a less expensive option for delivery of non-emergency police services. Many agencies around the United States are employing CSOs to perform tasks that do not require full sworn training to conduct. This frees up officer time for investigations and follow up. Adding a CSO could reduce overall costs for functions that do not require law enforcement training.

Recommendation 50: Fill 2nd CSO position for a total of two CSOs.

7. Traffic

The Traffic Unit consists of 1 sergeant and two officers who provide enhanced traffic safety enforcement to the City of Tigard. They also respond to vehicle crashes and perform investigations. In 2017, there were 1,700 crash calls with 2 fatalities and 112 with a reported injury. This represents almost 5 crashes per pay. Patrol does respond to crashes as well, but if there is serious injury, the traffic unit will respond. In 2018, the traffic unit issued 296 traffic infraction warnings and 2,925 traffic citations for a total of 3,221 traffic related contacts. The following tables indicates workload per hour for just traffic enforcement.

Work hours per year for unit (includes Sgt.)	Traffic Contacts per year	Approximate Traffic contacts per work hour
4,350	3,221	.75

As the table indicates the traffic unit makes nearly 1 traffic contact per hour even though they also respond to crash investigations and perform other duties. Though specific hours for traffic investigations and other duties are not tracked, we know from previous studies that when time from those investigations and other duties are subtracted, the traffic unit is likely making more than one traffic related contact per hour when dedicated to that activity. This is within a general target range for traffic enforcement.

Recommendation 51: Maintain current staffing.

C. SUPPORT SERVICES DIVISION.

This section of the report will focus on data and analysis associated with the workload of the Support Operations Division and subsequent staffing requirements. Investigations consists of Investigations, Records, Property and Evidence, Crime Analysis, and School Resource Officers. Support Services is led by a Commander who is supported by a Crime Analyst, an Administrative Specialist, two Sergeants and a Records Supervisor.

1. Investigative Analysis

The evaluation of staffing levels in investigations requires a different approach because, unlike field services, qualitative determinants of workload and work practices are more important. Patrol services have the benefit of several quantitative measures, such as calls for service, response time and proactive time, to assist in the evaluation of staffing requirements. Investigative services, given the nature of this work, have fewer such reliable measures. Investigative staffing requirements need to be examined from a variety of perspectives in order to obtain an overall portrait of staffing issues, case handling issues and operational philosophies.

Investigative workload can employ a series of indicators to determine the extent to which core investigative staffing is adequate and general workload is appropriate. Performance against these metrics can ultimately influence staffing requirements for detectives. The Matrix Consulting Group has devised an approach where staffing is based on how investigative resources are used and how the caseloads are managed now and could be managed in the future. The approach used is unique for each law enforcement agency under study.

2. Detective Staffing

The Tigard Police Department Investigations consists of two distinct units: Criminal investigations Unit (CIU) and the Commercial Crimes Unit (CCU). CIU investigates all serious crime follow up with a focus on person crimes while CCU focuses on property related crimes (Organized Retail Theft). CIU is staffed with 1 sergeant and 5 Detectives (3 full time and 2 on rotation) and CCU is staffed with 1 sergeant and 4 detectives (1 is assigned full time to the DEA).

3. CIU Caseload Information

The project team was provided partial year's stats since the department has transitioned to a new RMS system and older caseload information was not available. The project team reviewed partial year caseload and compared it to the 2017 caseload (last full year available). CIU reported average of 6 new cases assigned per month for the first three months of 2019. This is equals just over one new case per investigator per month.

The table below shows the case load for 2017:

2017 CIU Caseload

Number of detectives	Total cases for the year	Average number per detective per year	Average per Detective Month
5	140	28	2.3

As the table above indicates CIU detectives averaged 2.3 new cases per month.

4. CCU Caseload Information

The project team was provided partial year's stats since the department has transitioned to a new RMS system and older caseload information was not available. The project team reviewed partial year caseload and compared it to the 2017 caseload (last full year available). CCU reported average of 4 new cases assigned per month for the first three months of 2019. This is equals just over one new case per investigator per month.

The table below shows the case load for 2017:

2017 CCU Caseload

Number of detectives	Total cases for the year	Average number per detective per year	Average per Detective Month
3	99	33	2.75

As the table above indicates CCU detectives averaged 2.75 new cases per month.

5. Analysis of Investigative Staffing

When reviewing caseloads for police departments the project team uses benchmarks from other departments and available research as summarized below. These benchmarks include investigative tasks such as writing search warrants, conducting interviews, submitting evidence to the property room or lab, conducting surveillance, writing reports and other common investigative tasks. Investigations are complex and require resources and time to complete.

Comparative Measures	Detective Workload Expectations
Active cases assigned to "generalists" Detectives.	12 to 15 **active** cases per month based on a survey of dozens of law enforcement agencies performed by the Matrix Consulting Group over many years. Recent research by our firm suggests this range has been reduced to **8-12 cases** as the complexity of evidence collection and testing has increased the overall time required to investigate a case.

As shown by the data above, average caseloads that could be assigned to a detective would be within the recommended caseload for a generalist investigator. In reviewing the caseloads for CIU and CCU the project team found the investigative caseloads were well below workload expectations.

In 2017 there were a total of 2,620 Part 1 person or property crimes reported, but detectives were only assigned 239 total cases or just 9% of cases were assigned. This appears to be a low level of case follow up. It is common for cases to receive little to no follow up based on the lack of workable leads or victim cooperation, however, this study did not review actual case files to determine why the low case issuance occurs. In order to increase detective caseloads, the department should review its case screening process to ensure all cases that have leads are assigned. If all workable cases are currently assigned there are more detectives than needed.

Recommendation 52: Review case screening process.

Recommendation 53: If all workable cases are currently assigned, the department should eliminate two detective positions.

6. ANALYSIS OF PROPERTY AND EVIDENCE.

Property and Evidence consists of personnel. The unit is overseen by the Records Supervisor. The property room reported the following work metrics for 2018:

Activity	Number
Property In	**6,358**
Items Destroyed	3,745
Returned to Owner	721
Items Incinerated	764
Auctioned	456
Purged	**4,998**

The property room is located within the police department with an additional storage area for larger items. Evidence is stored appropriately and to best practice. Some large items are stored in secondary storage, this is due to facilities issues and limited size of the property room(s). All items are documented, barcoded and entered into the property management software. The property room took in 6,358 items in 2018. This is an average of 530 items per month. At 10 minutes per item this represents approximately 1,060 hours of work per year just to process items taken in. It takes approximately 20 minutes per item to return, destroy or sell unneeded items. There were a total of 4,998 items purged, sold or returned to the owner in 2018.

7. Analysis of Property Room/Evidence Staffing

When reviewing workloads for property /evidence, the project team uses benchmarks from other departments and the International Association For Property & Evidence Inc. (IAPE) standards and available research as summarized below. These benchmarks include tasks such as data entry, barcoding, storing in appropriate areas, releasing to officer/ owner/court, paperwork processing to destroy or sell. Not included in these workload measures are annual and quarterly audits, transfer and return of items to lab, answering phones or correspondence with other agencies. Property room and evidence management is complex and requires exact documentation and accountability for all items. Also, not included in the workload analysis is the need to have operational hours for staff and community member contact.

The table shows the workload hours associated with property and evidence activities:

Activity	Number	Average time to process one item (Mins)	Total time to process in minutes	Time to process in Hours
Property In	**6,358**	**10**	**63,580**	**1,059**
Items Destroyed	3,745	20	-	-
Returned to Owner	721	20	-	-
Items Incinerated	764	20	-	-
Auctioned	456	20	-	-
Purged	**4,998**	**20**	**99,960**	**1,666**
Total Work hours for all Processes				**2,725**

There is minimum of 2,725 work hours associated with property room activities. With two personnel assigned to this function, the property and evidence unit is at or near capacity.

Recommendation 54: Maintain current staffing, but use the recommended benchmarks to re-evaluate staffing on an annual basis to determine when more property/evidence staff is needed.

8. Analysis of Records

Records serves as the depository for all departmental records. Subsequently, records staff are responsible for the filing, storage, distribution, and disposal of departmental records and reports. Additional tasks include responding to public records requests and producing reports. Each police report must be checked for errors and when errors are found the report must be sent back to officers for corrections.

The records unit is comprised of a Records Supervisor and five Records Specialists Records reported the following processing statistics for 2018:

Report Type	Number processed	Avg. per month	Avg mins to process*	Total time (mins / yr)	Total time hrs / yr
Incidents	7,091	590	15	106,365	1,772
Arrests	1,408	117	20	28,160	469
Total	**8,499**	**708**	**N/A**	**134,525**	**2,242**

*Average processing times are estimates based on our interviews, observations or the work process and the result of our work with other clients. These estimates fluctuate on the software used or actual process. Actual processing time is typically not captured as a performance measure.

The above data indicates it takes approximately 2,242 hours to process all incident reports and arrests. The unit also answered 10,828 phone calls in 2018. This is only a portion of the work performed by records as they process other documents, and customer walk-ins, process public records requests including video, but these performance metrics are not tracked. Not included in the above workload measures is that records is staffed 24 hours a day to serve patrol officers.

Every report that is written by officers are first reviewed and approved by supervisors as mentioned above before they are forwarded to the records unit. Each report is then reviewed by records staff to make sure there are no NBIRS coding errors. Many of the reports must be sent back for corrections. The records unit is under tight time requirements to file cases where a suspect has been charged. Staff must process all felony cases with the DA's office.

The Tigard Police Department recently switched to a new RMS which has required training and time to learn the new system. The records unit is able to keep current on report processing.

Recommendation 55: Maintain current staffing.

9. Analysis of Crime Analyst

The Crime Analyst produces all statistical reports, assists with investigative cases and helps put case folders together. The Crime Analysts produces daily, weekly and monthly reports and responds to statistical requests for information. The analyst also uses investigative databases in support of detectives. Day to day performance measures are not tracked for this function, however, through the course of project team interviews it was learned that at times the analysts has more requests for assistance and support than they are able to accomplish which requires prioritization of tasks. The Tigard police department is using data driven decision making to utilize limited resources in the most efficient manner possible. Additionally, the department spends significant effort to track data in order to address crime and livability issues. To accomplish these goals takes a well-trained analyst and time to organize and analyses data. It also requires the development of reports so that the information can be shared.

There is only one analyst to perform these additional tasks in support of the department, in addition to the tasks assigned to support detectives.

Recommendation 56: Add an additional analyst in the next 1 to 3 years.

10. Analysis of the Police Services Administrative Specialist

The Police Services Administrative Specialists - maintains records and performs assigned tasks. There are no performance metrics for this position, however, the position has numerous daily and weekly tasks. In addition, the position supports the division by providing a constant point of contact for the division.

Recommendation 57: Maintain current staffing.

11. Analysis of School Resource Officers (SRO)

The School Resource Unit consists of 2 SROs. The unit responds to calls for service at local schools, conducts meetings, teaches classes and assists with providing school security. Members of the unit work with staff, students and parents with the goal of assisting to provide a safe learning environment. SROs also attend after school events for safety and security.

There are no performance metrics for the SRO unit, though it is typical to have one SRO assigned to high schools with a student population over 1,000 and 2 for schools with a population over 2,000. The Tigard High School has an approximate student population of 1,954. There are two public middle schools also located within the City of Tigard with student populations of approximately 805 and 1,061.

The Tigard Police Department had four SROs, but two of the positions were eliminated due to staffing reductions. There is a need to fill one of the positions to maintain proper staffing based on typical call loads for large suburban high schools and middle schools.

Recommendation 58: Maintain current staffing; but add one additional SRO in the next 1 to 3 years.

8 Public Works

The following chapter explores the engineering, administrative, and parks maintenance divisions of the Tigard Public Works Department. The following sections provide analysis and recommendations regarding issues which the Department faces on its way to best meeting the needs of the community, including technology utilization, workload tracking and performance measures, and capital project planning,

While this chapter focuses on changes that the Department can make to improve the way it operates, the following points should be noted as particular strengths of the department in the functions reviewed as part of this study.

- The department has five detailed system master plans, one for each of the major infrastructure systems in Tigard. These plans project the anticipated future capacity needed in each system, outline the City's planned investment in each system, and provide a basis for capital planning.

- The department takes a strategic approach to parks maintenance. Even without an asset management system, the Parks Maintenance Division has a detailed report on parks including the type and classification of each park and its acreage. Maintenance standards and frequencies are established for each classification of park. The Division also uses a master spreadsheet tool to project the hours needed for routine and preventive maintenance tasks at each park, by month.

- The department has a strong capital planning approach: The CIP extends six years, and it is developed based on existing system master plans, as well as a quantitative scoring system from staff and citizen advisory committees. Goals, priorities, and expected impacts are established for each of the systems included in the CIP.

The following sections address changes to technology, organizational structure, and operational practices which the Department should make in order to become more efficient, responsive, and data driven.

(1) The Department Should Adopt a Routine Cycle of Performance Measurement and Reporting.

The City's FY 2018-19 budget contains three performance measures on pg. 127-128 for the Department of Public Works. These are shown here:

Achieve ongoing required level of service for infrastructure while accommodating growth of those various systems.
Ensure city infrastructure is resilient against natural disaster, security breaches and degradation due to aging.
Ensure Tigard's streets are in fairly good condition. The city's annual Pavement Condition Index (PCI) meets or exceeds an overall value of 67.0 for the streets system.

The PCI measure is an excellent example of a useful metric which can be used to determine levels of service and make decisions about resource allocation. The other two measures lack a level of detail or relevance that is sufficient to drive decision-making based on strategic goals.

The importance and benefits of performance measurement is addressed elsewhere in this report. It is worth reiterating, however, the steps which the Department should take in order to institute a consistent performance measurement cycle.

1. Determine the level of service that the Department is committed to providing in each of its divisions and functional areas.

2. Select metrics that specifically measure the Department's success in meeting established levels of service.

3. Establish target benchmarks against which the Department's performance can be measured, and which can serve to inform decision-makers of whether performance levels are acceptable or not.

The chapter of this report focusing specifically on performance measures endeavors to complete Steps 1 and 2 of this process by identifying metrics which distill the core elements – or at least accurate indicators – of departmental performance into quantifiable data. Specific performance measure recommendations for the Public Works Department can be found in that chapter.

In the Public Works Department, the ability to collect and report on some of the data needed for performance measurement will depend on implementation of new technology systems or upgrades to existing systems. For example, the development engineering group should measure plan review volume and turnaround times, but this will require the ability to generate workload reports from Accela, the permitting software used by the Community Development Department. Similarly, other software capabilities will be necessary to produce useful performance metric reports for other divisions of the Public Works Department. Those needs are discussed in dedicated sections later in this chapter.

As the Department begins to implement a performance measurement cycle, the selected performance measures and their results should be published annually in the budget in clear language for the public to understand. This should include a brief definition of the metric and the established benchmark, an explanation of why it is important or how it indicates the effectiveness of Department operations, and finally the result of that measure for the most recent year.

Recommendation 59: The Department should establish a routine cycle of measurement, review, and action based on their selected performance metrics.

Recommendation 60: Performance measures and their results should be published each year in the annual budget.

(2) The Department Should Implement an Asset Management System Which Will Enable Efficient, Transparent, and Data-Driven Asset Management.

Highly effective public works departments take a holistic, lifecycle-centered approach to the maintenance, repair, and capital replacement of the infrastructure and assets for which they are responsible. At its core, this approach involves the use of three components:

- A complete asset inventory, which includes all of the City's infrastructure. Each catch basin, sign, mile of pavement, bridge, city-owned tree, etc. should be given an asset number and entered into a database.

- A lifecycle costing system, which projects the estimated lifecycle of each asset, the cost to replace it, and the typical maintenance costs involved in upkeep. Lifecycle costing is used to help develop capital and operating budgets for public works.

- A work order system which is integrated with the asset inventory and allows preventive maintenance tasks, proactive repairs, and citizen requests to be translated into work orders, assigned to the appropriate asset, and recorded in order to gather information about the labor, vehicle usage, and costs associated with maintaining each asset.

Asset management allows an organization to optimize efficiency and effectiveness by budgeting accurately for the likely cost of maintenance and repairs, staffing appropriately for the projected workload, and using a preventive maintenance program to ensure assets do not deteriorate to an unacceptable level. The primary tool for asset management is a computerized maintenance management system (CMMS) or dedicated asset management software with an integrated work order system.

Tigard currently uses MaintStar as its CMMS and work order system. This software has a number of shortcomings for the Department's needs.

- It integrates poorly with the City's GIS system. The Department is not able to tie individual assets within the system or work orders to geographical locations in GeoCortex map layers.

- It integrates poorly with the City's financial management system, Springbrook. This eliminates the possibility of effectively tracking costs associated with work orders.

- It does not easily produce reports on workload or efficiency, so while work orders can be tracked and completed, data on past work orders cannot be efficiently obtained. This eliminates the possibility of using the system for performance measurement or decision-making about resource allocation.

- It does not have mobile capabilities, which means that staff are not able to receive, view, and update work orders in real time as they work in the field.

As a result of these issues, MaintStar does not provide the City with the platform necessary to geographically locate assets and work orders, pull useful data for performance measurement and resource planning, or adopt a data-driven, lifecycle cost approach to asset management. The Department has recognized these needs and intends to replace this software with a new system in the coming year. The following table provides a listing of useful features and capabilities that the Department should seek to obtain in its new system.

Essential Function	Description/Explanation
Asset Management	The software should allow the City to upload a complete and classify a completed listing of infrastructure assets. This would include each block or segment of road, drainage structure, traffic light, sign, catch basin, turf field, and drinking fountain. It should allow each asset to be classified by its category and type and assigned to an "owner" department and/or division.
Lifecycle Costing	The software should allow each asset to be assigned a construction or full replacement cost, as well as an anticipated lifecycle and depreciation schedule. This information is vital for capital budgeting.
GIS Integration	The software should be compatible with the City's GIS system, which means that each stationary infrastructure asset can be assigned a specific location in one of the public works GIS layers. The City's software should allow this capability so that the geographical location of any asset or work order can be quickly searched, and GIS layers can display information about, and link to, the assets populating them.
Work Order Management	The software should be able to manage a work order system which provides the basis for a Department-wide preventive maintenance program, detailed reporting, and staffing allocations. Work orders should be comprehensive enough to project labor needs based on historical workload volume.
Public Portal	The software should provide one of the following two functionalities: It should a) offer a public portal feature which integrates with the software's work order system, or b) be compatible with the City's existing service request portal and be able to convert these requests into work orders. In either scenario, the system should allow citizen requesters to log in and view (and receive updates on) the status of their request as it is scheduled, updated, and completed.
Field Access	The software should include access to a mobile application which can be used by staff in the field to look up work orders, identify their geographic location, read prior status updates for them, record labor hours and vehicle/equipment use against work orders, and update work orders' status or mark them complete. Staff in the field should be able to access this application on mobile devices to update the system in real time.
Reporting	The software should be able to produce detailed reports from the work order system, as well as the program's asset management module. Examples of reports may include a) the total depreciation of sidewalks over a selected time period, b) the total maintenance and replacement cost of signs in FY 2017, c) the total labor hours spent on non-routine maintenance of drainage culverts over the past 18 months, e) the total number of work orders requested for the pavement of a particular block or road segment.

A software system with these capabilities will allow the Department to become more strategic, transparent, and efficient in the way it manages its workload, maintains the City's infrastructure and public assets, and measures performance.

Recommendation 61: The City should ensure that the selected asset management system replacing the existing work order system has the capabilities necessary to

foster an efficient, transparent, and data-centric approach to infrastructure maintenance and workload management.

(3) The Department Should Seek to Maximize the Use of Work Orders In Its Asset Management System.

One of the primary components in a functional asset management program is a work order system which is integrated with the asset inventory. The Department's current system allows work orders to be assigned to a parks or infrastructure asset, which is an important feature, but it also has several crucial shortcomings as outlined earlier in this chapter.

When a new asset management and work order system is implemented, the Department should focus on capturing as much of their staff's activities as possible. Citizen-requested service requests, preventive maintenance work, and regularly scheduled tasks such as mowing should all be tracked using work orders in the system. Each work order should capture the source (preventive maintenance, citizen request, etc.), the type of work, the corresponding asset, and the dates received, scheduled, and completed.

When work is completed, the labor and vehicle time used to execute the work order should be recorded. For example, a work order composed of completing a scheduled day of mowing fields would consist of 7-8 hours of staff time. A work order for pothole repairs would include the time spent by each laborer, as well as any time for the hot mix trailer or other equipment used.

With intensive data collection in the work order system, the Department will be able to begin reporting on data such as the timeliness of completing work orders of different priority levels, hours of staff time spent working on different assets, and the percent of proactive vs. reactive activity. These are important metrics for measuring performance, identifying infrastructure which may need replacement, and assessing Department workload.

Recommendation 62: The Department should track all field work – proactive and reactive – using work orders within the asset management system.

(4) Parks Staffing Should Be Based on Labor Projections from a Preventive and Routine Maintenance Calendar.

To determine the number of staff needed, the Parks Maintenance Division uses a “master spreadsheet” which shows all of the parks and acreage within the City of Tigard. The spreadsheet shows the number of hours per month required for each park element, and it totals the number of hours needed across all parks to produce a month-by-month labor needs assessment. The Division’s use of this master spreadsheet to project labor needs is a good practice and forms the basis of a preventive maintenance calendar.

With the establishment of a work order system that enables reporting on past workload and scheduling of maintenance tasks, the content of the master spreadsheet should be imported into the asset management system. With this, the Division will have the information resources needed to adopt a more long-range staff planning approach.

1. The Division should estimate the labor required for the preventive and routine maintenance and upkeep tasks on its calendar in order to project the number of days needed for that work and the dates when it should occur. The existence of the parks master spreadsheet will make this exercise fairly straightforward.

2. To this baseline schedule, the Division should add additional time for responding to citizen requests or management directives, based on historical workload volume for the season in question.

It will only be possible to anticipate reactive workload volume (part 2) when a year’s worth of work order data is available, so initially the only scheduled work may be preventive maintenance.

The Division should use the resulting labor requirements from this exercise to determine the number of full-time and seasonal staff required to accomplish the preventive and routine maintenance calendar. The routine maintenance calendar should form the basis of the Division’s staffing plan, with reactive workload volume factored in as the data collected makes that workload more apparent.

Recommendation 63: The Department should develop a preventive and routine maintenance calendar for the Parks Maintenance Division in the asset management system and use this tool as the basis for calculating staffing needs.

(5) The Department Should Seek to Implement a Fully Functional Capital Project Management System.

One of the most important functions of the Public Works Department is the oversight of capital project construction. The management of construction projects involves a significant amount of documentation and paperwork, including bid documents, contracts, plans, permits, specifications, invoicing, accounting, and grant management. To streamline this work, many municipalities utilize dedicated project management software. In Tigard, the City's organization-wide financial management system, Springbrook, is used for capital project management. This system is not suited for project management, and leaves the Department looking for workarounds in a number of areas:

- The system does not allow changes to project budgets to be made easily and cannot allocate revenues associated with a specific project (such as grant funding) to that project.

- The software is not able to track funding encumbrances beyond one fiscal year, which presents significant difficulty because most construction contracts extend beyond one year.

- The system has a timekeeping module in which staff enter their time, but hours cannot be allocated to specific projects in the system. This prevents it from being effective as a project cost accounting tool.

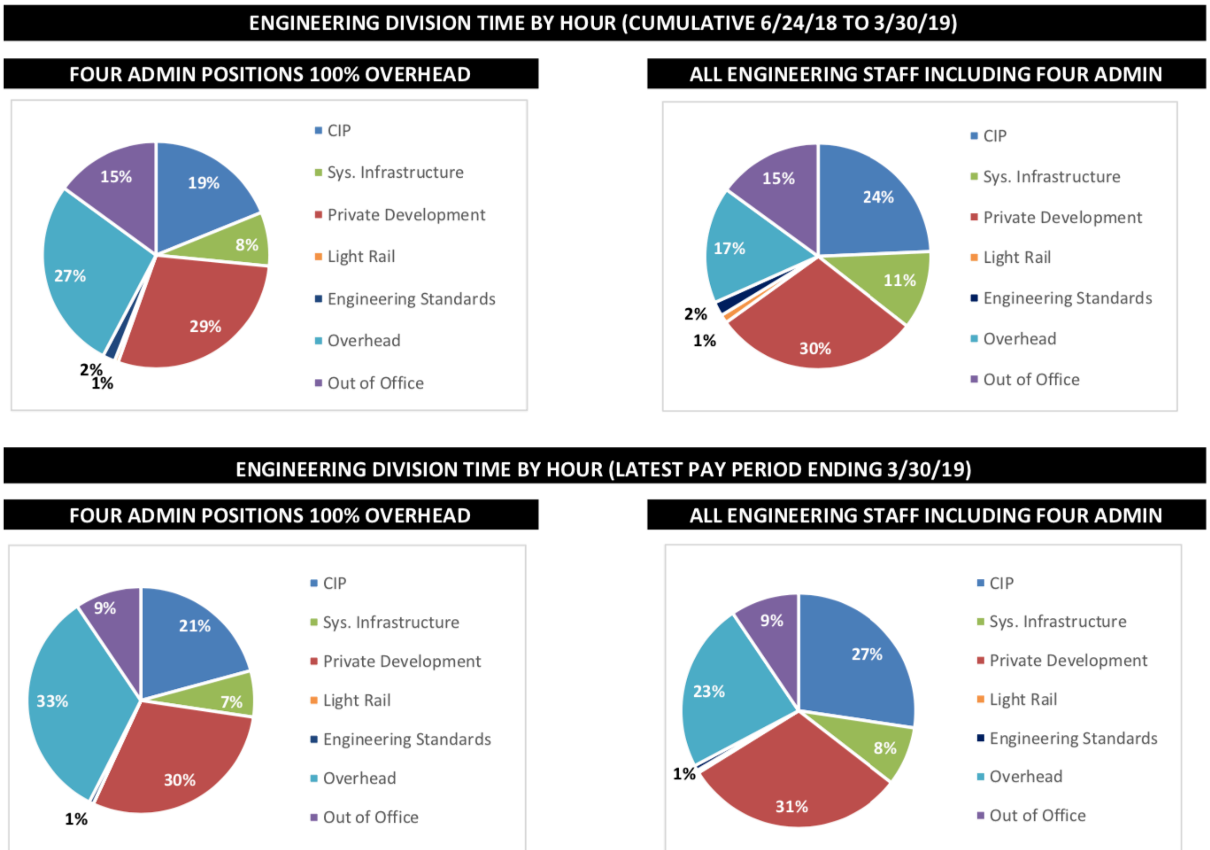
In order to manage the necessary functions involved in project management without the help of an effective software system, the Department's staff use a myriad of excel sheets as workaround solutions. The image below shows an in-progress project report generated by engineering staff using Excel in order to accurately account for project revenues and expenditures.

95047 Hunziker Industrial Core / Wall Street

Total Project Cost : **4,713,000**

	Total Project Actual through 2018	2018 Adopted Budget	Supplemental or Other	Revised 2018 Budget	Estimated Actuals 2018	Actuals 2018 as of 2/17/19	Remaining 2018 Budget (Estimated-Actual)
EXPENSES							
Internal Expenses							
Construction Inspection	18,664					18,664	(18,664)
Project Management	272,464	60,000		60,000	75,000	75,880	(880)
Total Internal	291,128	60,000	-	60,000	75,000	94,544	(19,544)
External Expenses							
Land/Right of Way Acquisition	373,961			-	400,000	373,961	26,039
Design and Engineering	647,314	550,000		550,000	445,000	331,681	113,319
Construction	1,021,965	2,300,000		2,300,000	1,900,000	1,021,965	878,035
Contingency	-	514,000		514,000	537,098		537,098
Total External	2,043,240	3,364,000	-	3,364,000	3,282,098	1,727,607	1,554,491
Total Project Expense	2,334,368	3,424,000	-	3,424,000	3,357,098	1,822,151	1,534,947
REVENUES							
Revenue Funding Source							
200-Gas Tax Fund	92,554						
Total Revenue Funding	92,554	-	-	-	-	-	-
Other Revenue Source							
Other - Developer Contrib.	722,685	1,378,000		1,378,000	1,378,000	676,551	701,449
Other - Federal EDA Grant	722,684	1,860,000		1,860,000	1,770,000	676,551	1,093,449
Other - State Earmark	651,520	186,000		186,000	186,000	398,411	(212,411)
Total Revenue Funding	2,096,889	3,424,000	-	3,424,000	3,334,000	1,751,513	1,582,487
Total Revenues	2,189,443	3,424,000	-	3,424,000	3,334,000	1,751,513	1,582,487

Likewise, the image below shows allocations of engineering time developed by staff using excel due to Springbrook's difficulty with this function.



Producing updates on project budget and status, and accounting for staff time spent on projects, should be straightforward tasks for a strong capital project management software. While the Department currently has no option but Springbrook, the system is nearing the end of its useful life and is slated for replacement in the next two to three years. When this occurs, the Department should work with the Finance Department to ensure that the selected system has the ability to facilitate capital project management. If this cannot be arranged, the Department should implement its own project management software in order to eliminate the need for multiple workaround tools and improve the efficiency of project management staff.

Recommendation 64: The City should ensure that the system which replaces Springbrook has a robust project management module or invest in a separate software specifically designed for capital project management.

(6) The Department Should Adjust Its Approach to Making System Master Plan Updates.

The Public Works Department maintains a series of system master plans for the five major infrastructure systems in Tigard. These are the water, wastewater, stormwater, streets, and parks systems. These master plans outline the Department's planned investment in each system over a ten-year period; they are used as part of the capital planning process and provide technical background for planned or considered projects, ensuring that each system is able to meet the needs of the community. These plans take the place of a Department strategic plan, which would be a 5+ year document outlining the vision and mission of the department and the steps planned toward realizing them. The system master plans are able replacements, and have the ability to focus in more detail on the specific nature of each infrastructure system; this is a benefit since streets, parks, and utilities each have different public perceptions, capacity needs, funding mechanisms, stakeholder groups, etc.

The master planning system can be improved in two ways:

1. Currently, the system master plans are updated every 10 years. The Department should shift to a staggered 6-year update cycle instead. This will provide more continuity between master plan updates, prevent the plans from becoming outdated, and allow the Department to focus on one master plan update per year.

2. The system master plans should include some discussion about the purpose of the infrastructure system and how the master plan supports the vision and goals of the Department and the City of Tigard. While these documents will remain primarily technical, the addition of some strategic context will help these documents become more relevant to the City as a whole and more accessible to the public.

Recommendation 65: The Department should seek to update each system master plan once per six years on a rotating basis.

Recommendation 66: The Department should include some strategic discussion in the master plans of the systems' purpose for the community and how the plan supports the goals of the Department and the City.

(7) The Department Should Provide Additional Engineering Help in the Development Engineering Group.

The development engineering group is led by a Principal Engineer who oversees 4 Senior Engineering Technicians and one Engineering Tech II. All six of these staff conduct design review of plans submitted with permit applications, but only one of them – the Principal Engineer – is a professional engineer. Without the credentials or experience that come with P.E. certification, Engineering Technicians are limited in the types of determinations they can make, and they cannot develop conditions of approval.

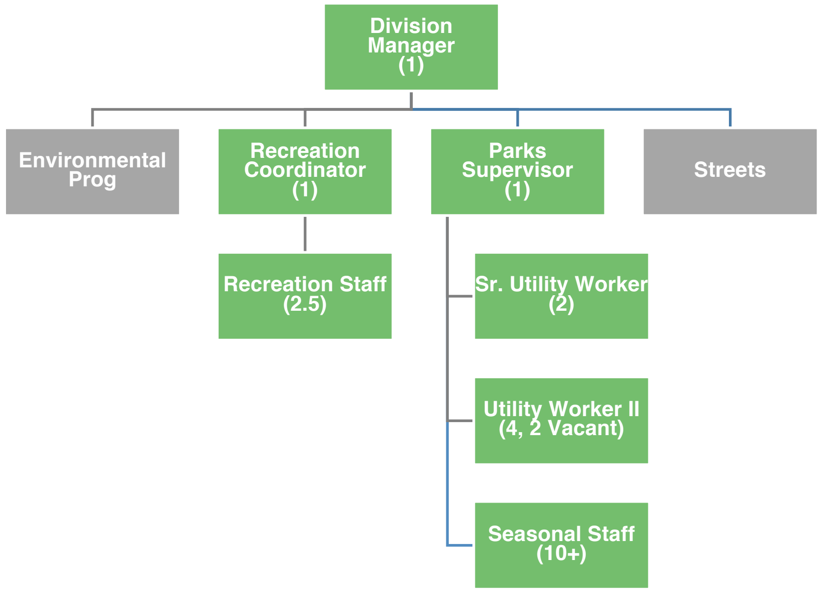
These technical engineering responsibilities fall exclusively to the Principal Engineer. When the Principal Engineer is unavailable - on vacation or other types of leave, the responsibility for leading the more complex engineering functions of the group falls to the Assistant City Engineer, who oversees the Principal Engineer.

To better support the development engineering function, the Department should ensure that a backup protocol is in place to address the need for P.E. oversight and involvement in instances when the Principal Engineer is not available or when workload requiring the attention of that position exceeds capacity. This should include the use of other P.E.'s in the Engineering division as necessary in order to avoid potential bottlenecks.

Recommendation 67: The Department should provide development review backup for the Principal Engineer, including the use of other P.E.'s in the Engineering Division.

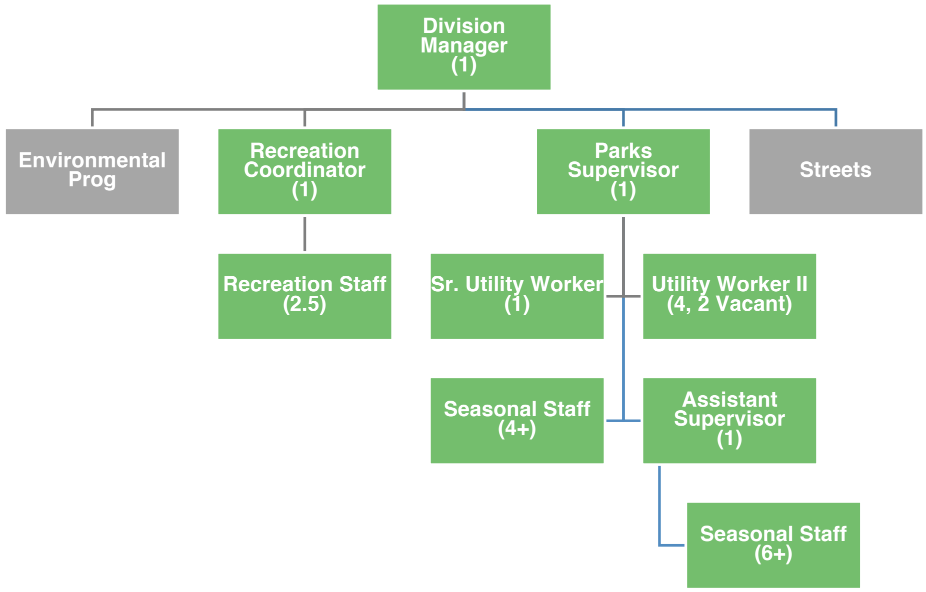
(8) The Seasonal Influx of Parks Maintenance Staff is Excessive for the Existing Organizational Structure.

The Parks Maintenance Division uses many seasonal staff during the spring, summer, and fall months. These staff all report to the Parks Supervisor during their time with the City. The organizational chart below depicts this structure.



An appropriate span of control for the Parks Supervisor would be no more than 8-10 staff. During the winter months, the Division's staffing falls well under that threshold. When seasonal staff arrive, however, the Parks Supervisor is often tasked with directly overseeing 18 or more staff. This span is excessive and prevents the supervisor from giving sufficient attention and oversight to staff.

To address this, the Department should structure the seasonal workforce so that many of the workers report to another employee other than the Parks Supervisor. This may be an Assistant Supervisor position which replaces one of the Senior Utilities Worker positions, or one of the Senior Utilities Workers acting as a supervisor during the seasonal months. The following chart shows how this revised structure would look.

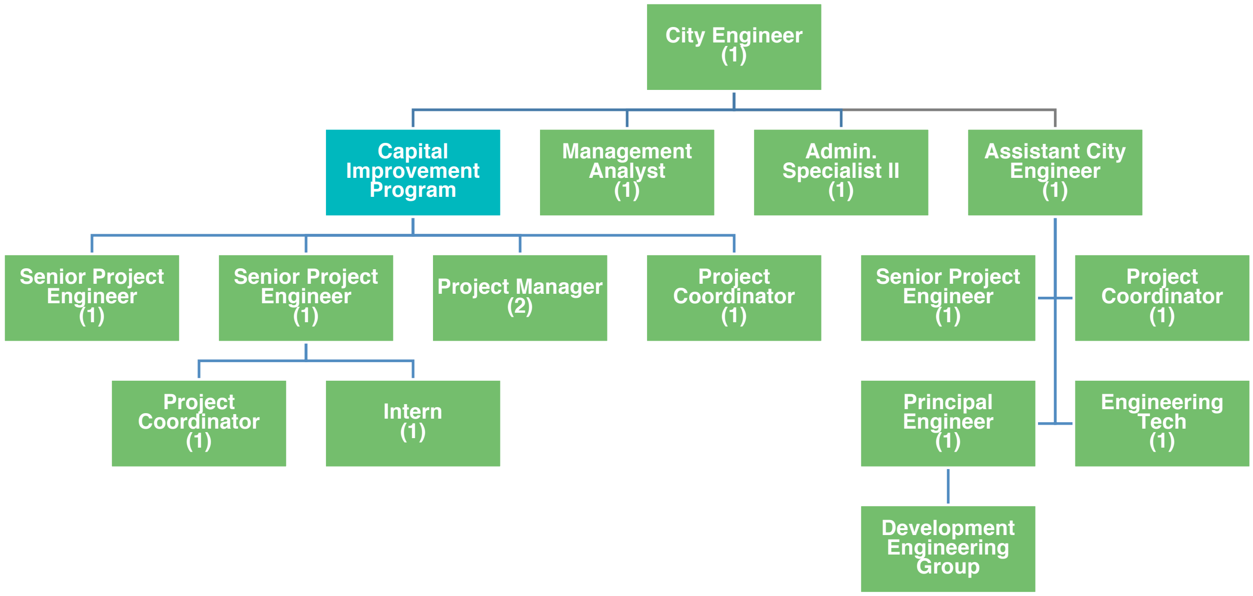


Adding this level of stratification will reduce the management burden on the Parks Supervisor and allow more effective oversight of seasonal staff.

Recommendation 68: The Department should adjust the organizational structure to narrow the Parks Supervisor's span of control and allow more effective oversight of seasonal staff.

(9) The City Engineer's Span of Control Should Be Narrowed.

The City Engineer's position requires management of many staff in disparate roles. The position is responsible for managing the development and coordination of Tigard's CIP, overseeing the funding, design, and construction of capital projects, coordinating grants for the construction of capital projects, working around the functional shortcomings of the Department's available software, and supervising the Assistant City Engineer. As the following chart shows, this involves management of 8 employees in varying functions.



For positions with high-stakes responsibilities such as delivering an $18,000,000 capital improvement plan, and those charged with supervising a wide range of responsibilities, a narrower span of control with no more than 6-7 staff is appropriate. The Department plans to work with another consultant to specifically assist them with an analysis of their department structure. In this effort, the Engineering Division will be evaluated with one intended outcome being a reduction in the span of control for the City Engineer.

Recommendation 69: The Department should adjust the organizational structure to narrow the City Engineer's span of control and provide oversight assistance to project management staff.

9 Performance Measures

The City of Tigard is preparing for the implementation of a more data-informed decision-making framework, as discussed in the chapter on City Management. By collecting, analyzing and utilizing data regarding service provision, the City can improve decision-making and education of the public regarding City performance. This will work well with the current Mayor and Council's goal of ensuring "sound, transparent decision-making".

Ideally, the City will identify a small number of critical performance metrics for each department with the City's performance in meeting these measures widely reported – both to the City Council and the public – and published in a dashboard approach on the City's website. Where ever practical, the City should attempt to identify performance metrics that report on outcomes achieved from the services provided and which are linked to the overall adopted strategic goals of the City as adopted by the City Council in the City's strategic plan.

The following sections provide sample recommended performance measures for each operational area of the City's organization. It is important to note that in many cases, the City does not currently have data available necessary to report on preferred measures and staff will need to start capturing this data before the measures can be reported on. It is likely to take several years to fully implement a robust performance measurement program and embed into the organizational culture a data-informed approach to management and policy decisions. Notwithstanding this data limitation, there are many measures that can be implemented immediately, or as interim measures, until the data becomes available to implement the desired measures.

An effective and robust performance measurement program is designed to meet many organizational needs. Some common aspects include:

- Serving as a tool to assist in the evaluation of the quality and effectiveness of operations. It is accomplished by collecting, analyzing, and reporting performance-related data.

- Measures can be based on inputs (resources used), outputs (activities performed), efficiency measures (ratio between inputs and outputs), or outcomes (results achieved). Efficiency and outcome measures are often the most difficult to effectively measure or quantify but provide more useful data than simple input/output counts.

- Government accountability is often a driving factor in local government use of performance measurement. Effective use of performance measures can enhance transparency and public trust.

- Measures should ideally be aligned with adopted strategic goals. Is progress being made toward the highest-level goals? What has the greatest effect on the people served?

- The performance measure should be easily understood by the general public. Overly complicated or obscure measures, even if providing great data on performance, will not be effective if the public cannot understand what it is showing? Some measures are more important for use by managers to make decisions, but aren't appropriate for public reporting.

- A department may monitor more performance measures than those reported as part of the City's dashboard. Public facing measures should be ones that inform on overall service outcomes, when possible, and that provide insight to the public and policy makers regarding City performance. Additional measures may be utilized internally, only by the City Manager and Department Heads, as indicators of staff or process efficiency and/or effectiveness.

Ideally, the performance measures would be provided on the City's website with frequent updating (to maintain relevancy) at least quarterly or monthly. The following sections provide recommended measures for each operational department.

1. CITY MANAGEMENT

Measure	Intent	Data Requirements	Suggested Benchmark
City Manager's Office			
% of respondents feeling City is well-managed	Indicator or public perception of overall city operations.	Requires annual survey to be conducted to provide data.	80%
Annual work plans developed for each department with quarterly review conducted.	Ensures annual workplan developed by each department to guide work efforts. A quarterly review should be conducted by the City Manager with one semi-annual update to Council.	n/a	100% of departments.
Human Resources			
Annual turnover rating	Measures staff turn-over. Over time, this could be established as two separate measures: (1) involuntary; and (2) voluntary.	Data currently exists to measure this.	<10% annually

Measure	Intent	Data Requirements	Suggested Benchmark
% of recruitments completed within established targets	To maintain fast moving recruitment processes to attract and acquire best quality candidates.	Data is/or can easily be captured in NeoGov.	<45 days for entry level positions; <60 days for professional positions; <90 days for executive positions.
% of recruitments with qualified applicants from underrepresented groups.		Data currently available to measure.	>95% of positions filled.
% of employees still employed 1 year after hire.	Measure of effectiveness of the recruitment process to represent both qualified candidates and those that fit the organizational culture.	Data is currently available to measure this though not complied.	>95%
% of Staff rating training courses as providing valuable content.	Measure to evaluate quality of the training provided to employees.	Surveys will need to be conducted after each training session.	>90%
Workers' Compensation Modification Factor	Measure of effectiveness of workers' compensation program. Industry standard is 1 – any factor below one represents city program is more cost effective than industry standard.	Date currently available.	<1

2. CENTRAL SERVICES

Measure	Intent	Date Requirements	Suggested Benchmark
Design & Communications			
Percent of social media followers who identify their primary language as other than English.	The City's goals include diversity, equity, and inclusion. This metric shows if the City is connecting to a more diverse population group with its social media outreach efforts.	The City will collect data from Facebook, Twitter, and Instagram on how many of the followers on those platforms identify their primary language as other than English.	≥ 3%

Measure	Intent	Date Requirements	Suggested Benchmark
Communication's published written material	This is an output measure related to effective communication of written material provided or reviewed by Central Service's communication's team. Error free messages are highly important.	The City will need to record any errors discovered post-publication.	≥ 98% are error free
Social Media w/tracking ability (Facebook, etc.) shows an increase in people liking or otherwise following the city's posts.	This is an efficiency measure. The goal is to encourage staff to be innovative in ensuring a specific growth measures are achieved with the outcome measure of transparency.	Data of "likes" or people following the city's posts will need to be obtained from each social media site utilized by the City.	≥ 5% annual increase from the prior year
Number of articles published about the City's Strategic Plan.	The City is in the process of updating its Strategic Plan. Getting information to the public about those updates and about the overall Plan is important.	The City will record the number of publications it puts out regarding its Strategic Plan	≥ 12 publications annually
Percentage of design projects completed by the agreed upon deadline.	This is an efficiency measure designed to assist with the evaluation of project staff efficiency.	Before starting a design project, design staff will communicate with the requestor of the work and come up with an agreed upon deadline.	≥ 80% of projects are completed by the agreed upon deadline.
Municipal Court			
Defendants successfully comply with court orders prior to a suspension being issued.	The outcome is theoretical in that you are "connecting" with offenders in a way that is successful enough to get them to comply with court orders.	The City will continue to compare the number of compliance matters compared with those that require additional court action.	≥ 85%
Case clearance rate	Clearance rates measures a court's ability to dispose of incoming cases. The goal is to dispose of as many cases as are received, or as close to this amount as is reasonable. This is a measure of court operations efficiency and could indicate staffing deficiencies.	Total incoming cases and total cleared cases must be recorded.	≥ 97%
Case load aging	The goal is to clear cases in a timely manner.	The date when a case enters the court and the date when the case is resolved (excluding cases that go to warrant) are recorded.	≥ 60% of cases are cleared within 90 days.

Measure	Intent	Date Requirements	Suggested Benchmark
Property Management			
Workorder completed as scheduled.	Measures whether staff are being scheduled effectively.	Work order data is maintained that shows scheduled versus actual start date	≥ 80% or greater start when scheduled.
The number of re-work workorders required	When maintenance staff do a job but have to come back to do it again because something was not completed correctly or as expected, that can be a measure of the quality of work they are providing their customers.	Work order data is maintained that shows whether the work is “re-work”.	≤ 5% of total work orders is “re-work”
The percentage of outsourced maintenance work to in-house work on a project basis	Measures whether the City is excessively contracting out repairs. This could be an indication of maintenance issues that need to be addressed or a matter of having staff trained / certified to perform repairs in-house.	Total work orders completed with city staff compared with total work orders outsourced to a vendor.	≤ 10% of work is outsourced
Fleet Maintenance			
The number of preventative maintenance tasks performed on schedule	This measures the efficiency of the City’s fleet preventive maintenance program.	Total work orders with preventive maintenance work showing a scheduled start date are compared with the actual start date.	≥ 95% of preventive maintenance tasks are performed on schedule
Fleet workorder “re-work” rate	This is an indication of service quality.	Total work orders are compared to the number of re-work workorders.	≤ 5% of total work orders are re-work orders

2. COMMUNITY DEVELOPMENT

Measure	Intent	Data Requirements	Suggested Benchmark
Building			
Percent of residential building plan reviews completed within 15 business days	Measures the Department’s efficiency in quickly routing and reviewing residential plans in order to provide timely customer service.	Accela can produce these reports, but the Department currently needs consultant help to generate them.	95%

Measure	Intent	Data Requirements	Suggested Benchmark
Percent of commercial building plan reviews completed within 20 business days	Measures the Department's efficiency in quickly routing and reviewing commercial plans in order to provide timely customer service.	Accela can produce these reports, but the Department currently needs consultant help to generate them.	95%
Percent of submittals received electronically	Measures the City's rate of utilization for more efficient and technology-driven methods, as well as the Department's effectiveness in publicizing their availability.	Tracking this measure will require full implementation of electronic document review, including digital plans submittals.	50%
Land Use[8]			
Percent of Type I applications closed within 30 days	Measures the Department's efficiency in quickly reviewing straightforward land use applications and bringing them to a resolution in a timely manner.	Accela can produce these reports, but the Department currently needs consultant help to generate them. Project tracking spreadsheets are being used in the interim.	90%
Percent of Type II and III applications closed within 90 days (date of complete application received to date of decision, excluding appeals)	Measures the Department's efficiency in reviewing more complex land use applications and bringing them to a resolution before the State-mandated deadline.	Accela can produce these reports, but the Department currently needs consultant help to generate them. Project tracking spreadsheets are being used in the interim.	90%
Inspections and Code Compliance			
Percent of inspections completed within 1 business day of request	Measures the Department's efficiency in providing timely customer service and ensuring that building and code compliance inspections occur without delay.	This measure can be reported upon already using Accela.	98%
Average number of address stops per inspector workday	Measures the Department's workload per inspector and ability to spread inspections effectively among inspectors.	This measure can already be reported upon with Accela; inspections data was provided to the project team.	15

[8] Land use application cycle times are largely governed by State laws which dictate when an application may be deemed incomplete and when it must be acted upon once submitted.

Measure	Intent	Data Requirements	Suggested Benchmark
General			
Percent of "satisfied" and "very satisfied" responses to customer survey	Measures the Department's overall ability to meet customer expectations	This measure requires implementation of a customer survey tool.	80%

3. FINANCE

Measure	Intent	Data Requirements	Suggested Benchmark
Finance Administration			
Credit rating	The City is fiscally responsible and impacts future borrowing costs	Earned credit rating from at least Moody's or Standard & Poor's rating services	Target AA1 / AA+
General Fund Reserve	The City is fiscally responsible and ensures sufficient reserves to weather economic downturn or unexpected financial need of the organization.	Financial statements showing the percent of unassigned general fund reserves as a percentage of the City's total general fund operating budget	≥ 16.67% General Fund reserve balance
Finance Operations			
Fund balance budget versus actual	This measure shows how accurate city staff are at budgeting in comparison to actual financial performance	The City already maintains budget-to-actual data. Analysis will be completed on the percentage difference between mid-year budget projections and ending actual numbers	≤ 5%
Contracts & Purchasing			
Purchase orders under $1,000 are made with a rebate p-card or credit card.	With the City using a rebate program for P-card purchases, the more department staff use those cards, the greater the city's rebate (considering payment on the cards are made timely).	The City will need to have its financial software record the total number of invoices under $1,000 and then identify the total number of those purchases made with a P-card.	≥ 80%

Measure	Intent	Data Requirements	Suggested Benchmark
Information Services			
Server intrusion identification	Identifying any attempt to penetrate the City's computer network	Appropriate software that monitors for system intrusion and immediately reports any suspected attempts	Within 24 hours of occurrence
Internal Phishing campaigns clickthrough rates	Reducing the risk of system intrusion caused from employees clicking on email links or opening email attachments	The City will continue to employ an active phishing campaign and keep records of the total emails sent and total emails that were "clicked" or otherwise had an attachment opened	≤ 5%
Helpdesk ticket response times	This is measure of IT workorder ticket effectiveness and efficiency.	IT will monitor total workorder / tickets and record in the workorder system times of ticket creation and initial arrival time in response to the workorder / ticket.	Within 4 hours for priority or emergency incidents and within 3 business days for all other incidents.
Average cycle time for open IT workorder tickets	This measures the time it takes for IT staff to complete a workorder ticket. Cycle times will vary depending on the difficulty of the repair, but if the average per ticket is high, that could be indicative of a need to determine the cause.	IT will monitor and record workorder creation date with workorder closure date.	≤ 3 days

4. LIBRARY

Measure	Intent	Data Requirements	Suggested Benchmark
Collection turnover above x%.	To ensure that the library is making the best use of space available and meeting patron needs.	Tracking circulation overall and by program area.	> 5 times
Proportion of collection replaced per year.	To keep the library current and meeting patron needs for new materials.	Tracking circulation overall and by program area.	> 5% of the collection.

Measure	Intent	Data Requirements	Suggested Benchmark
Getting new materials into circulation.	To keep the library current and meeting patron needs for new materials.	Technical services tracking incoming orders and turnaround time to shelves,	3 days
Programs attended do not decline in attendance	To keep programs current and fresh in meeting patron needs; to ensure that staff are constantly using patron feedback and monitoring attendance to improve programs.	Patron surveys Monitoring attendance trends	Depends on the program
% of programs provided to underserved patrons	Ensure that full needs of the entire community are met by focusing some efforts on underserved populations.	Tracking of the number of programs conducted by target audience category.	>10% of programs (initially). Overtime, program %ages should be reflective of population served.
% of participants indicating satisfaction with the program.	To measure participant perception of program value.	Will need to conduct post program survey to collect data.	>80% per program.

5. POLICE

Measure	Intent	Date Requirements	Suggested Benchmark
Average response time to calls for service (by priority)	To measure response time to calls based on priority (faster response to higher priority timeframes).	Data available from CAD system.	Must be in alignment with staffing levels adopted.

Measure	Intent	Date Requirements	Suggested Benchmark
Annual Proactive Time	To measure amount of time available for officers on street to interact and engage with the public (excludes all training, administrative, and call response/handling time). Higher proactive time provides greater opportunities for public engagement.	Data readily available from CAD data but will need to be coordinated with other datasets regarding administrative time (training, report writing, etc.) to get net available proactive time.	60% or greater proactive target. Must be adopted in alignment with the staffing allocations adopted.
Case clearance rate	To measure percentage of cases cleared / closed over time.	Data readily available but will need to be tracked consistently.	

6. PUBLIC WORKS

Measure	Intent	Data Requirements	Suggested Benchmark
Development Review			
Percent of engineering plan reviews meeting established cycle times	Measures the Department's consistency in providing timely service to facilitate sound development.	Accela can produce these reports, but the Department currently needs consultant help to generate them.	95%
Percent of engineering inspections completed within 2 business days of request	Measures the Department's efficiency in providing timely customer service and ensuring that engineering inspections occur without delay.	This measure should be reported upon using Accela, but a consultant may be needed currently to obtain this data.	98%
Parks Maintenance			
Percentage of parks receiving a score of "good" or "excellent" in an annual parks condition assessment	Measures the division's ability to keep parks in a condition that is appealing to residents.	This will require an annual parks condition assessment.	90%
Percentage of households living within ½ mile of a park.	Measures the accessibility of parkland and open space to City residents.	This will require GIS analysis to determine the distance of housing units from parks and open spaces.	85%

Measure	Intent	Data Requirements	Suggested Benchmark
Park acres per 1,000 residents equals or exceeds national average.	Measures the overall availability of parks and open space to residents of Tigard.	This calculation can already be conducted with available park acreage and population data.	10 (national average)
Proportion of total work orders (or labor hours) spent on routine tasks and preventive maintenance rather than service requests	Measures the degree to which the Department's focus is on routine and preventive maintenance rather than "putting out fires". Indicates the quality of park conditions.	This will require a functional asset management and work order system with reporting capabilities.	70%
Recreation			
Percentage of residents who consider the City's recreation programs to be "good" or "very good"	Measures the recreation program's effectiveness in meeting the needs and expectations of Tigard's residents.	This will require an annual community survey.	75%
Percent of recreation programming costs recovered through user fees	Measures the cost efficiency and value generated by recreation programming – a target cost recovery level should be a policy decision made by City leadership	This metric can be measured currently using budget and recreation revenue figures.	TBD
Percent of recreation programs meeting minimum enrollment	Measures the City's effectiveness in reaching residents with appealing recreation offerings and limiting programs to those in which residents have interest.	This metric will require attendance counts at recreation programming and the establishment of minimum enrollment benchmarks.	80%
Capital Planning			
Percent of CIP projects which are completed within 90 days of their initially planned completion date	Measures the City's ability to accurately predict and effectively manage the timing of capital project progression.	None, this data is already readily available.	80%
Percent of CIP projects which are completed within the initially planned budget	Measures the City's ability to accurately scope and cost capital projects and manage project-related expenses during the progression of the project.	None, this data is already readily available.	85%
Percent of CIP projects with change orders totaling less than 15% of the initially planned budget	Measures the City's ability to manage change orders and their impact on costs over the life of the project.	None, this data is already readily available.	85%

Recommendation: The Departments should expand on their existing performance measures by identifying and adopting additional performance and workload measures to enlighten the public and internal stakeholders regarding the Department's performance and accomplishments.