

# 2022-2027 SIX-YEAR STRATEGIC BUSINESS PLAN

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LAKE WHATCOM WATER & SEWER DISTRICT



Adopted December 8, 2021

#### Mission

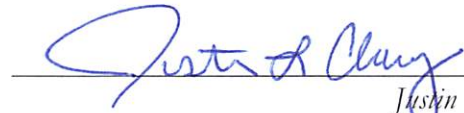
*To provide the best possible water and sewer services to District customers in a cost efficient manner,  
and in a way that contributes to protecting Lake Whatcom water quality.*

LAKE WHATCOM WATER & SEWER DISTRICT  
1220 LAKEWAY DRIVE  
BELLINGHAM, WASHINGTON 98229

2022-2027  
SIX-YEAR STRATEGIC BUSINESS PLAN  
LAKE WHATCOM WATER & SEWER DISTRICT



*Laura Abele*  
*President, Board of Commissioners*



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*General Manager*

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# ACRONYMS AND ABBREVIATIONS

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Board	Board of Commissioners
CCCP	cross connection control program
City	City of Bellingham
COG	Whatcom Council of Governments
County	Whatcom County
District	Lake Whatcom Water and Sewer District
EUM	Effective Utility Management
District	Lake Whatcom Water and Sewer District
IACC	Washington Infrastructure Assistance Coordinating Council
LWMP	Lake Whatcom Management Program
Plan	Six-Year Strategic Business Plan
RCW	Revised Code of Washington
SCADA	supervisory control and data acquisition (system)
SVCA	Sudden Valley Community Association
SWFA	South Whatcom Fire Authority
USEPA	U.S. Environmental Protection Agency
WASWD	Washington Association of Sewer and Water Districts
WSRMP	Washington Water and Sewer Risk Management Pool
WUCC	Whatcom Water Utility Coordinating Committee
WWA	Whatcom Water Alliance

# 1 INTRODUCTION

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This is the Lake Whatcom Water and Sewer District's (District) first six-year strategic business plan (Plan), which has been developed to look beyond the traditional annual budget process in identifying, and better positioning the District to adequately respond to future needs and fiscal constraints. Recognizing that the District annually undergoes development of Board of Commissioners (Board) -guided goals through creation of an annual budget, this Plan looks six years into the future with an intent to proactively plan today for what is anticipated tomorrow. Built into this Plan are department-specific goals with strategies for completion, and workload indicators and performance measures to monitor goal attainment.

This Plan looks at the trends of the District to anticipate future needs. Financial resources are also forecast, taking into consideration economic indicators, recent legislation, and anticipated mandates. This Plan is then focused on using available resources in the most efficient manner to provide quality service to our customers, while supplementing existing resources as necessary to meet the current and future needs of the District.

## 1.1 District Guiding Principles

The District is a special purpose district authorized under [Title 57 Revised Code of Washington](#) (RCW). Originally formed in 1968 as Whatcom County Water District No. 10, the District provides water service to approximately 4,000 connections and sewer service to approximately 4,400 connections (a population base of approximately 12,000 customers) in an 18-square mile area encompassing Lake Whatcom. The District is operated by 18 full-time professionals, governed by a five-member board of commissioners elected from within the District, and has an annual budget of approximately \$8 million.

The District's mission is *to provide the best possible water and sewer services to District customers in a cost efficient manner, and in a way that contributes to protecting Lake Whatcom's water quality*. The mission is achieved through continual pursuit of the following principles:

1. Provide safe and reliable drinking water with sufficient capacity to meet fire flow requirements and sewage collection to District customers.
2. Establish connection charges and utility rates necessary to maintain the District's financial viability.
3. Protect the natural resources within the Lake Whatcom watershed through cooperative efforts with other community and governmental organizations.
4. Be recognized as an outstanding public utility that is responsive to the diverse expectations of its customers.
5. Maintain the District's facilities through effective planning, prevention, and corrective maintenance practices.

6. Provide sewer and water service to those portions of the District as may reasonably be served.
7. Have an organization environment that is responsive to customer needs, promotes teamwork and a safe work environment, and allows all people to achieve their full potential.

## 1.2 Plan Purpose

The purpose of this strategic business plan is to define District goals, and the actions and resources necessary to achieve those goals, over the near-term (six year) planning horizon, while ensuring consistency with the District's mission and Board-defined policy objectives.

## 1.3 Plan Development Process

This Plan serves as an integral mechanism supporting the District's objective of continual improvement of its operations and services. The District's mission statement, when coupled with its administrative code, form the *foundation* from which all operational-level decisions are made. Relying upon the policies defined in its foundation, the Board develops operational and capital improvement budgets that align with the foundation and that are influenced by employee input, District planning processes, and analysis and other forms of *internal input*, along with *external input* received from our customers and partners.

To define areas in which to focus improvement efforts relative to all District functions, the District first conducted a comprehensive assessment of all operational attributes of its services. To accomplish this, District Board and staff underwent a systematic process of assessing the ten attributes of a water/sewer utility, as defined under the Effective Utility Management (EUM) process (USEPA, 2017). The ten attributes are:

- product quality
- customer satisfaction
- employee and leadership development
- operational optimization
- financial viability
- infrastructure strategy and performance
- enterprise resiliency
- community sustainability
- water resource sustainability
- stakeholder understanding and support

The EUM self-assessment process allows for the rating of the District's performance of each attribute, and for the ranking of importance of each attribute relative to the others. The self-assessment process was completed independently by the Board, management team, and staff to determine each group's assessment of current performance and prioritization of attributes, and then aggregated into an overall assessment for Board consideration. Conducting the self-assessment exercise independently by each group allowed that group to gain a better understanding of the other two groups' perspectives (Appendix A presents the overall results of the 2020 EUM self-assessment).

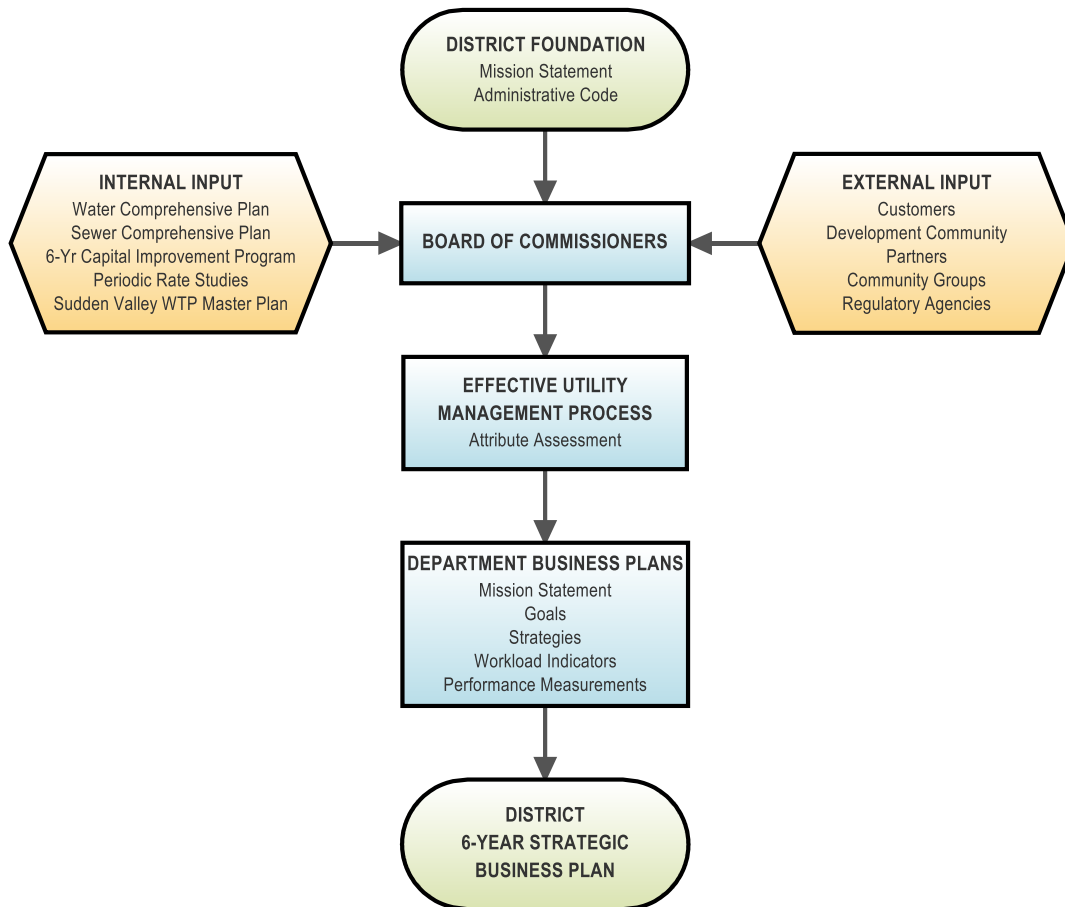
From the EUM self-assessment process outcomes, the Board identified areas in which additional resources should be allocated over the six-year planning horizon, while still maintaining an overall

focus on meeting the District’s mission and compliance with all applicable laws and regulations. Attributes identified by the Board for additional focus are:

- operational optimization
- infrastructure strategy and performance

That said, the Board was also clear in its desire that additional focus towards improvement within these attribute services not be to the detriment of District performance associated with the remaining attributes. Relying upon the District’s Foundation while taking into consideration Board direction received through undertaking the EUM self-assessment process, each District department developed a mission statement that guides its function and goals, and a supporting department-specific business plan that is consistent with the Board vision. Each department’s business plan was then integrated into this Plan.

Following provides an overview of the process undertaken to prepare this Plan.



## 2 DEPARTMENT-SPECIFIC PLANS

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Building upon the District's mission and Board direction as an outcome of the EUM self-assessment process, each department developed a department-specific mission; goals to pursue over the six year planning horizon that align with the District's and departmental missions and Board direction; schedule, and budgetary and staffing impacts necessary to attain each goal; and performance measures to monitor goal attainment.

### 2.1 Executive

#### Mission Statement

Provide the Board and staff with leadership and advice while implementing best practices to achieve adopted goals and deliver quality services to the community.

#### Overview

The Executive Department is accountable to the Board for the operational results of the organization, effective support of elected officials in achieving their collective goals, fulfillment of the requirements of the general manager, implementation of Board-adopted policies, and provision of a communication linkage among customers, the Board, District departments and other government agencies.

#### Description of Programs

The General Manager recommends and implements policy, oversees the operations of the District, and develops and implements the budget. All employees report directly or indirectly to the General Manager. The General Manager is directly supported by the Assistant General Manager, management team, and the Administrative Assistant.

**Administration.** The Administrative Assistant is responsible a variety of administrative functions including management of District records in accordance with state laws, maintenance of District resolutions and the Administrative Code, maintaining a log of all contracts and agreements, and providing timely response public records requests, as well as serving as clerk to the Board.

**Legal.** Legal counsel services are contracted through personal services agreements. Primary, day-to-day counsel is provided by the District Attorney, while additional counsel services may be contracted on a case-by-case basis as needed.

**Governmental Affairs.** Governmental affairs are primarily completed by the General Manager in collaboration with the Washington Association of Sewer and Water Districts (WASWD). The General Manager works with WASWD lobbyists to ensure that the District's state and federal legislative agendas align with and are promoted during WASWD lobbying efforts.

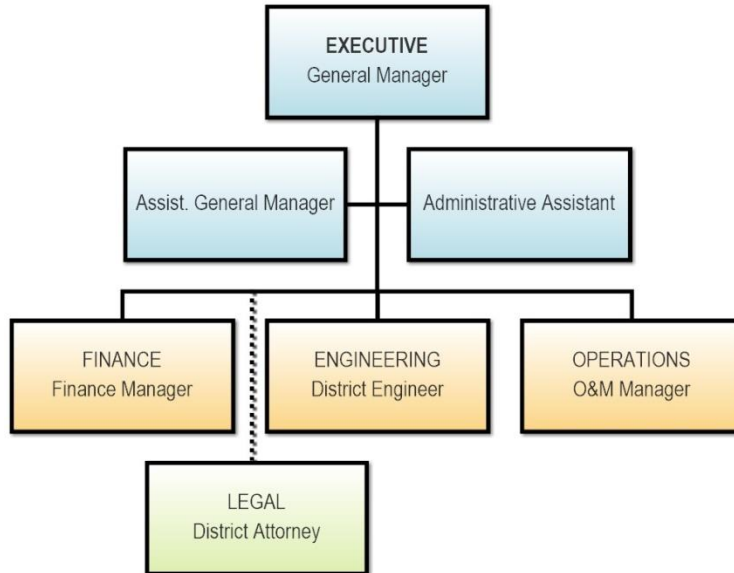
**Public Relations.** The General Manager and Administrative Assistant collaborate in developing and publicizing communications that support the distribution of information on District issues



and activities to internal and external constituents with the ultimate goal of enhancing public awareness, understanding and interest in District programs, policies, services and initiatives.

Human Resources. The General Manager, with support from the District Attorney and department managers, is generally responsible for human resources-related functions including labor relations, risk management, serving as the claims agent, citizen advocacy and Title VI civil rights compliance.

## 2021 Organizational Chart



### Six-Year Goal Summary:

The Executive Department’s goals over the six-year planning period consist of:

- Goal 1 – Facilitate achievement of annually established Board initiatives
- Goal 2 – Biennial EUM attribute assessment and update to the Six-Year Business Plan
- Goal 3 – Pursue implementation of performance management throughout District operations
- Goal 4 – Overhaul records management system
- Goal 5 – Expand intergovernmental relations program
- Goal 6 – Enhance public relations program

### Detailed Six-Year Goal List

Goal 1 – Facilitate achievement of annually established Board initiatives

Applicable Guiding Principle(s) (see Section 1.1)

- Principle(s) will vary dependent upon Board initiative

Applicable EUM Attribute(s)

- Attributes vary dependent upon Board initiative

Strategies

1. Annually develop objectives and strategies to accomplish Board initiatives
2. Report goal attainment progress to the community in the semi-monthly Manager’s Report

#### Workload Indicators

- Meetings with management team to attain Board initiatives
- Reporting on the status of completion of Board initiatives
- Annual number of Board initiatives
- Annual number of Board meetings/work sessions held

#### Performance Measures

- Completion of initiatives within Board/staff agreed timelines

### Goal 2 – Biennial EUM self-assessment and update to the Six-Year Business Plan

#### Applicable Guiding Principle(s) (see Section 1.1)

- Principles 4, 5, and 7

#### Applicable EUM Attribute(s)

- Product Quality
- Financial Viability

#### Strategies

1. Update the associated financial forecast on an ongoing basis
2. Update departmental business plans
3. Project fiscal impacts identified in business plans
4. Assess revenue and expenditure trends
5. Merge trend data with business plan cost data
6. Determine the financial delta
7. Develop best/worst case scenarios
8. Formulate revenue and expenditure options
9. Determine affordable service levels
10. Select budget balancing options
11. Obtain Board authorization to proceed with selected option(s)

#### Workload Indicators

- Draft Departmental Business Plans completed by June 30 of each even-numbered year
- Financial forecast reviewed and updated biennially (each even-numbered year)
- Balanced budget presented to District Board annually

#### Performance Measures

- Completion of business plan and associated financial forecast updates by September 1 of each even-numbered year

### Goal 3 – Pursue implementation of performance management throughout District operations

#### Applicable Guiding Principle(s) (see Section 1.1)

- Principle 5

#### Applicable EUM Attribute(s)

- Operational Optimization

#### Strategies

1. Explore performance management approaches (PerformanceStat, Lean/Six Sigma, etc.) for applicability within District functions
2. Identify the preferred performance management approach
3. Implement approach in District operational and work flow analysis

#### Workload Indicators

- Review literature associated with potential approaches
- Meet with applicable vendors/consultants representing potential approaches
- Departmental operational reviews to identify opportunities for optimization

#### Performance Measures

- Number of performance management approaches analyzed
- Number of meeting with performance management vendors/consultants
- Budgetary allocation supporting implementation of performance management approach
- Implementation of performance management approach in District operations

#### Goal 4 – Overhaul records management system

##### Applicable Guiding Principle(s) (see Section 1.1)

- Principles 5 and 7

##### Applicable EUM Attribute(s)

- Operational Optimization

##### Strategies

1. Convene internal committee to review records management processes and system
2. Refine records management processes that comply with state requirements
3. Identify new records management system/software, if applicable
4. Procure new system/software and migrate existing records to new system

#### Workload Indicators

- Review literature associated with potential approaches
- Meet with applicable vendors/consultants representing potential approaches
- Departmental operational reviews to identify opportunities for optimization

#### Performance Measures

- Number of records management committee meetings held
- Number of presentations to Board on topic
- Budgetary allocation supporting acquisition of new system/software
- Implementation of new system

#### Goal 5 – Expand intergovernmental relations program

##### Applicable Guiding Principle(s) (see Section 1.1)

- Principles 3 and 4

##### Applicable EUM Attribute(s)

- Stakeholder Understanding and Support

##### Strategies

1. Continue participation in regional organizations (e.g., Lake Whatcom Management Program [LWMP], Whatcom Water Alliance [WWA], Whatcom Water Utility Coordinating Committee [WUCC], Whatcom County Council of Governments [COG], Whatcom Water District Caucus, etc.).
2. Expand collaboration with city of Bellingham (City), Whatcom County (County), Sudden Valley Community Association (SVCA), and South Whatcom Fire Authority (SWFA) staff and officials

3. Expand participation in state organizations (e.g., Washington Association of Sewer and Water Districts [WASWD], Water and Sewer Risk Management Pool [WSRMP], Infrastructure Assistance Coordinating Council [IACC], etc.)

Workload Indicators

- Participation in LWMP data group, interjurisdictional coordinating team, policy group, and joint councils meetings
- Participation in WWA, WUCC, COG, and Whatcom Water Districts meetings
- Participation WASWD and WSRMP meetings (section meeting, managers meetings, etc.)
- Meet with City, County, SVCA, and SWFA staff
- Attendance of WASWD and IACC conferences
- Presentation at SVCA board meetings

Performance Measures

- Annual budgetary allocation supporting organization memberships, as applicable
- Number of LWMP meetings attended
- Number of WWA, WUCC, COG, and Whatcom Water Districts meetings attended
- Number of meetings with City, County, SVCA, and SWFA staff
- Number of conferences attended
- Number of presentations to the SVCA board

Goal 6 – Expand public relations program

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 3, 4, and 7

Applicable EUM Attribute(s)

- Customer Satisfaction
- Community Sustainability
- Stakeholder Understanding and Support

Strategies

1. Comprehensive update of website in 2025
2. Explore District rebranding
3. Increase number of Facebook followers
4. Increase frequency of issuance of press releases and Facebook posts
5. Continue participation in community events (Sudden Valley Trunk-or-Treat, Whatcom Water Week, etc.)

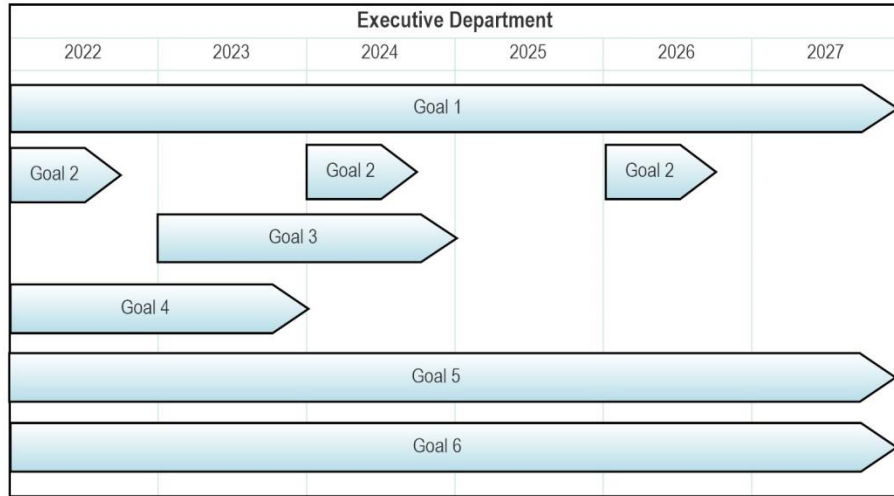
Workload Indicators

- Update of the District’s website
- Issuance of press releases and Facebook posts on a regular basis
- Active participation in community events

Performance Measures

- Completion of website update by December 31, 2025
- Completion of Board discussion on District rebranding
- Number of Facebook followers
- Number of press releases issued
- Number of Facebook posts
- Number of community events District participates in

## Timeline for Goal Completion



## Budgetary/Staffing Impacts to Implement

Following presents estimated staffing increases (presented as full-time equivalents) above baseline (2021) conditions associated with implementation of departmental goals.

Position	2022	2023	2024	2025	2026	2027	Total
none	-	-	-	-	-	-	-

Following presents an estimated cost above baseline (2021) conditions associated with implementation of each departmental goal.

Goal	2022	2023	2024	2025	2026	2027	Total
1	\$ TBD*	\$ TBD*	\$ TBD*	\$ TBD*	\$ TBD*	\$ TBD*	\$ TBD
2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	\$ -	\$ 20,000*	\$ 20,000*	\$ -	\$ -	\$ -	\$ 40,000
4	\$ 50,000	\$ 10,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 80,000
5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	\$ -	\$ -	\$ 10,000*	\$ -	\$ 30,000*	\$ -	\$ 40,000

\*pursue subject to available funds

## 2.2 Finance

### Mission Statement

Utilize a financial best practices model to effectively employ compliance, innovation, technology, and resources through a service-oriented, team approach in meeting regulatory responsibilities and customer needs while creating financial sustainability.

### Overview

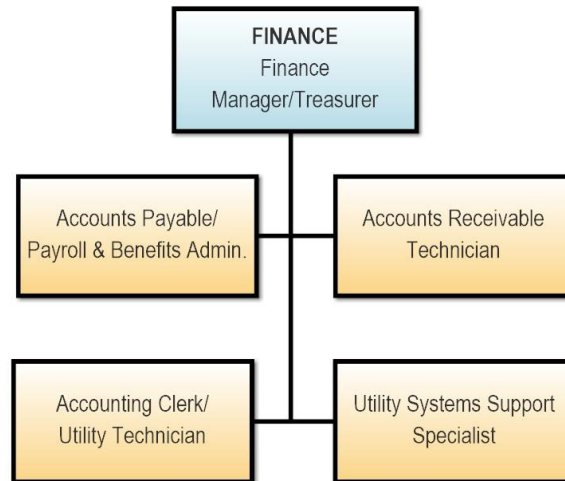
The Finance Department oversees the financial planning for the District to include budgeting for capital projects and operations, investments, debt service obligations, and fiscal policy development. The Finance Department also manages the financial resources and accounting functions of the District, which includes maintenance of the financial system, preparation of the comprehensive

annual financial statements, payroll, utility billing, and benefit administration. The department is managed by the Finance Manager.

### Description of Programs

The Finance Department ensures the District’s financial stability through proper accounting procedures and management of funds that include revenues, expenditures, investments, and debt service, in accordance with District fiscal policies and state statutes. The Finance Department is also responsible for long-range planning relative to service rates, general facilities charges, and investments.

### 2021 Organizational Chart



### Six-Year Goal Summary:

The Finance Department’s goals over the six-year planning period consist of:

- Goal 1 – Commit to excellence to improve performance standards and enhance professional growth and development
- Goal 2 – Improve financial sustainability and forecasting
- Goal 3 – Develop and implement a supplemental utility customer assistance program
- Goal 4 – Maximize and utilize technology to improve workflow

### Detailed Six-Year Goal List

Goal 1 – Commit to excellence to improve performance standards and enhance professional growth and development

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 4 and 7

Applicable EUM Attribute(s)

- Employee Leadership and Development
- Operational Optimization

### Strategies

1. Conduct a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis specific to the department
2. Expand employee cross-training and focus on employee professional development
3. Develop a recognition program for department staff
4. Reinforce adopted policies and procedures
5. Enhance communication between staff and management

### Workload Indicators

- Meet individually with each department member to assess SWOTs within their positions
- Review each job description within the department on a regular basis and seek opportunities for cross-training where job descriptions and duties allow
- Identify professional trainings and webinars that align with job duties for each employee
- Work with the Board to develop a Public Finance Professionals Appreciation week similar to the National Public Works and Public Safety appreciation weeks in May
- Issue weekly updates to staff addressing policies, procedures, events, and ongoing projects
- Increase number of finance staff meetings

### Performance Measures

- Complete a comprehensive SWOT analysis
- Implement strategies identified through completion of the analysis
- Number of trainings and webinars attended by staff
- Implementation of cross-training and development a tracking system for each employee as part of their annual review listing new skills and knowledge base acquired year over year
- Adoption of Public Finance Professionals Appreciation week
- Staff receiving weekly updates from the Finance Manager
- Number of staff meetings and engagement activities

## Goal 2 – Improve financial sustainability and forecasting

### Applicable Guiding Principle(s) (see Section 1.1)

- Principles 2 and 5

### Applicable EUM Attribute(s)

- Financial Viability

### Strategies

1. Develop and propose the benefits of shifting to a biennial budget
2. Manage overhead and personnel costs for rate sustaining operational costs
3. Develop a 6-year forecasting model
4. Review and update of financial policies
5. Review of investments and investment opportunities
6. Remain current with financial industry standards

### Workload Indicators

- Work sessions to develop biennial budget process
- Development and routine evaluation of forecasting model
- Routine evaluation of financial policies
- Routine evaluation of investments

- Number of financial webinars, seminars, and conferences attended

Performance Measures

- Transition to biennial budget process
- Overhead and personnel costs align with sustainable rate revenue by increasing proportionately to rate increase
- Forecasting model is utilized on a regular basis for “what if?” situations, budgeting, and forecasting, and is updated on a regular basis to provide assistance in making sound financial decisions
- Financial policies are kept current and practiced to align with current industry best practices and standards
- Investment revenue increases
- Financials and financial policies comply with State Auditor’s Office and ensure all material within the audit is presented fairly

Goal 3 – Develop and implement a supplemental utility customer assistance program

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 4 and 7

Applicable EUM Attribute(s)

- Customer Satisfaction
- Community Sustainability

Strategies

1. Work with state and local agencies in development of assistance program
2. Integrate program with existing billing/financial systems software

Workload Indicators

- Meet with state and local resource agencies to develop program and seek funding for program
- Meet with General Manager and hold work sessions with the Board to develop and adopt program

Performance Measures

- Number of meetings with state and local agencies
- Number of meetings with General Manager
- Number of work sessions with the Board
- Implementation of program

Goal 4 – Maximize and utilize technology to improve workflow

Applicable Guiding Principle(s) (see Section 1.1)

- Principle 7

Applicable EUM Attribute(s)

- Operational Optimization

Strategies

1. Research implementation of Cloud Digital conversion and development of Springbrook financial management software (District’s current financial software)
2. Research alternative financial management systems that might better suit the District and be more cost effective



3. Work with other departments within the District to implement an electronic document management program
4. Increase staff training and use technology to improve workflow

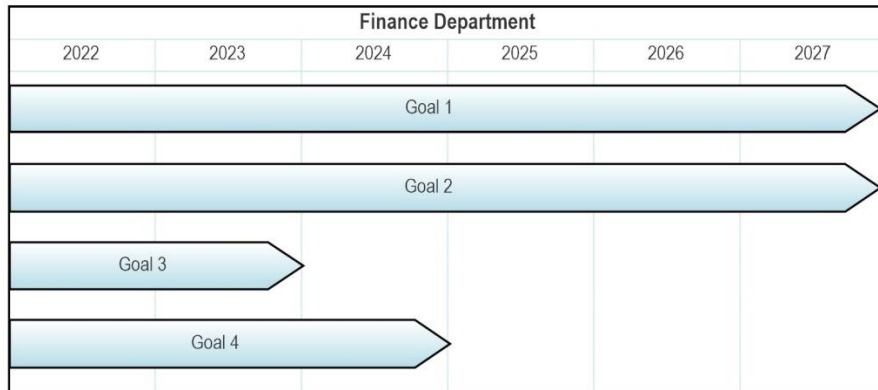
**Workload Indicators**

- Meet with service providers to better understand the capabilities of Springbrook
- Meet with service providers to investigate potential transition to a different financial management system
- Develop a cost-benefit analysis of staying with Springbrook relative to transitioning to new financial management system
- Analyze new and current financial management system to accommodate growth needs, workflow improvement, and reporting
- Increase staff and management trainings

**Performance Measures**

- Implementation of alternative financial management software or more detailed use of Springbrook
- Implementation of document management software that everyone has access to
- Number of staff and management trainings held and increased use of software

**Timeline for Goal Completion**



**Budgetary/Staffing Impacts to Implement**

Following presents estimated staffing increases (presented as full-time equivalents) above baseline (2021) conditions associated with implementation of departmental goals. Of note, the sole staffing change anticipated over the six year planning horizon is the planned shift of the Utility Systems Support Specialist position to the Operations and Maintenance Department upon the retirement of the individual currently in that position (2025 is shown for general planning purposes only—no firm timeline for retirement has been provided by the employee).

Position	2022	2023	2024	2025	2026	2027	Total
Utility Systems Support Specialist	-	-	-	(1.0)	(1.0)	(1.0)	(1.0)

Following presents an estimated cost above baseline (2021) conditions associated with implementation of each departmental goal.

Goal	2022	2023	2024	2025	2026	2027	Total
1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	\$ 5,000*	\$ 10,000*	\$ 10,000*	\$ -	\$ -	\$ -	\$ 25,000
3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	\$ -	\$ 25,000*	\$ 25,000*	\$ 25,000*	\$ 25,000*	\$ 25,000*	\$ 125,000

\*pursue subject to available funds

## 2.3 Engineering

### Mission Statement

Manage the development, renewal, and replacement of District public infrastructure to provide efficient, reliable, and sustainable water and sewer service utilizing asset management principles; and provide engineering technical support to Operations & Maintenance, Finance, and Administrative staff as well as existing and future customers.

### Overview

The Engineering Department manages the District’s capital improvement (system reinvestment) program, which consists of the design, permitting, and construction of all new and existing District-owned infrastructure. The department also manages the District’s information technology systems, asset management system, safety program, and emergency readiness and response program. The department is managed by the District Engineer, with support provided by the Construction Engineer, Engineering Technician/Safety Officer and consulting engineer.

### Description of Programs

**System Reinvestment Program.** The Engineering Department is responsible for implementing and periodically updating the District’s Water System Comprehensive Plan and Comprehensive Sewer Plan which define utility system improvements over the 20-year planning horizon. The department manages and implements a 6-year system reinvestment plan for each utility that schedules and allocates funding for specific capital projects. Capital projects are managed by the department. Consulting engineers typically provide support for pre-design, permitting, design, bidding, and construction administration. The Construction Engineer typically takes the lead role of project manager and field inspector of construction projects, and utilizes a consulting engineer as needed for specialized technical support and materials testing.

**Asset Management.** The District uses GIS-based Cartegraph asset management software to track asset location, condition, maintenance, labor/equipment/material costs, remaining service life, and renewal/replacement of all District-owned infrastructure and equipment. The asset management goal is to maximize the service life of infrastructure and equipment, and plan for renewal/replacement prior to failure. Cartegraph is also used to track and document customer services requests, lookup customer account records related to private water/sewer permits and as-builts, and to track and document land development requests including water/sewer permits from initial inquiry to final water/sewer connection.

Development Services. The Engineering Department provides development services through performing water/sewer availability assessments, which consist of physical identification of the locations of connection of new development to water/sewer infrastructure, communication of additional development requirements (e.g., restrictive covenants, utility local improvement district and/or latecomer fees, etc.), and development and administration of developer extension agreements.

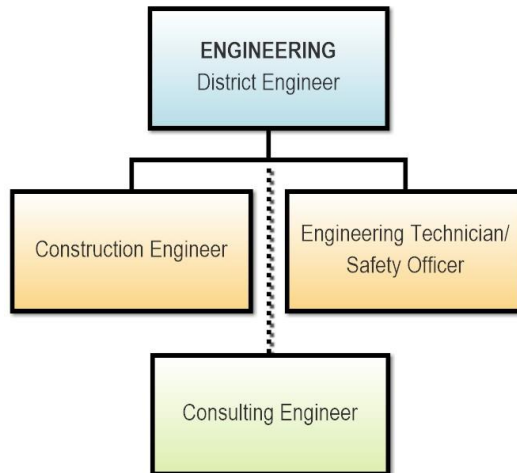
Safety Program. The Engineering Technician/Safety Officer administers the District’s safety program, creates and updates safety programs, and provides staff training needed to maintain certifications and proficiency.

Emergency Preparedness and Response Program. The Engineering Technician/Safety Officer lead the District’s efforts in maintaining its emergency response plan, crisis communications plan and business continuity plan, as well as facilitating field and tabletop emergency response exercises.

Cross Connection Control Program (CCCP). The Engineering Technician/Safety Officer implements the District’s CCCP to comply with drinking water regulations.

Business Information System and SCADA System. The Engineer/Assistant General Manager manages the District business information system and Supervisory Control and Data Acquisition (SCADA) system. The District utilizes multiple consultants to provide the services needed for user support, hardware and software updates/maintenance, backups, system monitoring, cybersecurity, networking, and telemetry.

### 2021 Organizational Chart



### Six-Year Goal Summary:

The Engineering Department’s goals over the six-year planning period consist of:

- Goal 1 – Enhance oversight, management, maintenance, and resiliency of the business information, infrastructure SCADA, and cybersecurity systems
- Goal 2 – Improve water/sewer permitting process and status lookups for application, issuance, inspection, and completion

Goal 3 – Increase field inspection/condition grading of assets; improve accuracy of asset locations documented in GIS

### Detailed Six-Year Goal List

Goal 1 – Enhance oversight, management, maintenance, and resiliency of the business information, infrastructure SCADA, and cybersecurity systems

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 1 and 5

Applicable EUM Attribute(s)

- Operational Optimization
- Enterprise Resiliency

Strategies

1. Coordinate with consultants to assist in defining core IT responsibilities
2. Develop a District-specific IT job description and conduct workload analysis to determine if a full time position is warranted
3. Review which department this position might best fit
4. Coordinate with other departments to supplement IT responsibilities with other labor resource needs (position might not warrant a full-time position)
5. Coordinate with union/research appropriate wages
6. Analyze funding needs as part of rate studies
7. Summarize all prior expenditures for annual, out-sourced IT services that overlap with the new position, recognizing that similar future expenses would be within the umbrella of the new position and offset position costs

Workload Indicators

- Number of IT consultant support tickets generated
- Number of IT consultant computer engineer support hours billed
- Number of SCADA on-call support consultant hours billed
- Number of SCADA, telemetry, electrical engineering on-call consultant hours billed for SCADA and telemetry work
- Number of physical and virtual servers
- Number of gigabytes of backup storage utilized
- Number of managed on-premise business applications
- Number of telemetry communication and control system equipment issues reported by O&M department

Performance Measures

- Develop tracking methods to collect workload indicator numbers over time
- Develop internal technical memorandum analyzing job description functions to determine if new part-time or full-time employee is warranted
- Fund new position

Goal 2 – Improve water/sewer permitting process and status lookups for application, issuance, inspection, and completion

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 4 and 7

Applicable EUM Attribute(s)

- Customer Satisfaction

Strategies

1. Consult with special purpose districts and cities that have implemented online permitting systems
2. Research vendors that provide services
3. Develop cost estimates to implement program

Workload Indicators

- Number of water/sewer permits processed annually
- Estimated number of email exchanges and telephone calls by staff to complete permitting process from start to finish
- Number of locations (both electronic and paper filing systems) permitting information is entered and tracked to process a permit from start to finish

Performance Measures

- Explore/research systems and develop implementation costs in 2022 and 2023
- Develop internal technical memorandum to document various options, potential labor efficiency gains, implementation cost estimates, and provide recommendation to Board for consideration of funding project starting in 2024 budget
- Program implementation

Goal 3 – Increase field inspection/condition grading of assets; improve accuracy of asset locations documented in GIS

Applicable Guiding Principle(s) (see Section 1.1)

- Principle 5

Applicable EUM Attribute(s)

- Operational Optimization
- Infrastructure Strategy and Performance

Strategies

1. Redirect department labor resources towards field inspection/GPS, GIS map dataset improvements, and Cartegraph asset management and associated Overall Condition Indices.
2. Coordinate with other departments to allocate administrative staff resources towards basic land development and water/sewer permit processes (to free-up some department labor)
3. Fund temporary GIS/engineering interns for asset field inspections, collection of GPS locations, updates to GIS datasets
4. Use engineering consultants for asset field inspections, collection of GPS locations, updates to GIS datasets

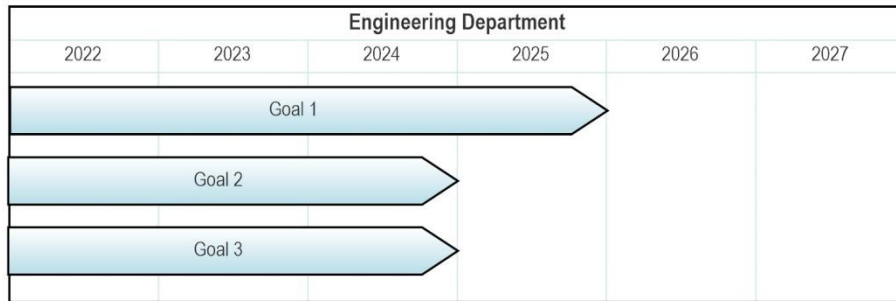
Workload Indicators

- Number of assets field located by GPS
- Number of assets inspected and assigned condition rating
- Number of asset locations updated in GIS
- Number of assets in Cartegraph with active Overall Condition Index decay curves

Performance Measures

- Develop technical memorandum to estimate amount of department labor available if other staff resources are allocated towards basic land development/permit processes.
- Revise administrative staff job description
- Budget for and hire temporary summer GIS/engineering intern to assist with asset field inspection/GPS and update GIS datasets

Timeline for Goal Completion



Budgetary/Staffing Impacts to Implement

Following presents estimated staffing increases (presented as full-time equivalents) above baseline (2021) conditions associated with implementation of departmental goals.

Position	2022	2023	2024	2025	2026	2027	Total
IT Specialist	-	-	-	1.0	1.0	1.0	1.0

Following presents an estimated cost above baseline (2020) conditions associated with implementation of each departmental goal.

Goal	2022	2023	2024	2025	2026	2027	Total
1	\$ 5,000	\$ 5,000	\$ 5,000	\$ 175,000*	\$ 178,000*	\$ 181,000*	\$ 549,000
2	\$ 5,000	\$ 5,000	\$ 20,000*	\$ 22,000*	\$ 24,000*	\$ 26,000*	\$ 102,000
3	\$ 5,000	\$ 25,000	\$ 5,000	\$ 25,000	\$ 5,000	\$ 25,000	\$ 90,000

\*pursue subject to available funds

## 2.4 Operations and Maintenance

### Mission Statement

Manage the District’s water and wastewater systems in a manner that provides reliable services, ensures public health and safety, meets all regulatory requirements, protects environmental resources, and operates in a financially sound manner.

### Overview

The Operations and Maintenance (O&M) Department manages the operation and maintenance of all District-owned facilities, including water and sewer infrastructure and District buildings. The department also is responsible for the inspection and construction of all sewer and water connections, respectively, for new development connecting to District systems to ensure compliance

with state and District standards. The department is managed by the O&M Manager, with regular support provided by the Lead Maintenance Worker.

### Description of Programs

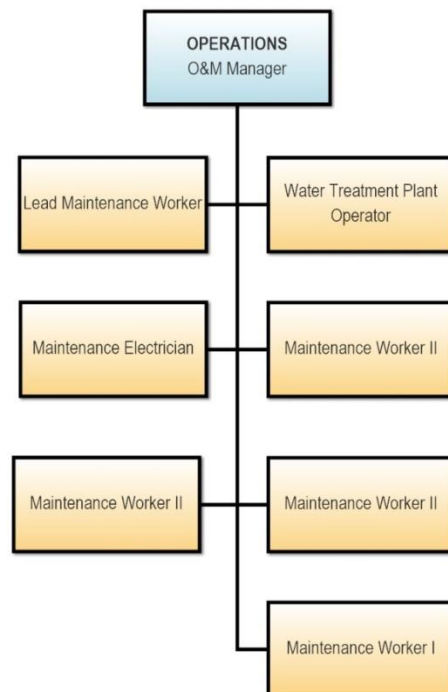
**Water Utility.** The department operates and maintains the District’s three Group A water supply systems in compliance with state water quantity and quality requirements. This includes performing all functions associated with day-to-day operation and maintenance of the water system including response to utility service requests, emergency repairs, facilities inspection, supplies, monitoring, communicating with customers, maintenance management, and all other functions associated with the operation and maintenance of the water system.

**Sewer Utility.** The department provides sewer services to residents/customers located in the Sudden Valley-Geneva area and the North Shore of Lake Whatcom. This includes performing all functions associated with the day-to-day operation and maintenance of the wastewater system including maintenance management and all other functions associated with the operation and maintenance of this system.

**Facilities.** The department performs all routine maintenance of District facilities, most notably being the District’s administrative office (1220 Lakeway Drive) and maintenance facility (1010 Lakeview Street).

**Development Services.** The O&M Manager inspects all new connections to the water and sewer systems to ensure construction in accordance with District construction standards, and prepares daily inspection records and as-built documentation. In addition, field staff perform all connections to District water mains for new development.

### 2021 Organizational Chart



## Six-Year Goal Summary:

The Operations Department's goals over the six-year planning period consist of:

Goal 1 – Ensure the continuity of potable water production that meets or exceeds regulatory requirements

Goal 2 – Sustain, and as applicable enhance, utility efficiency and resiliency provided through the proactive maintenance of District electrical systems, generators and SCADA instrumentation

Goal 3 – Ensure the effective and reliable collection and conveyance of sewage out of the watershed through routine inspection and preventative maintenance of sewer infrastructure

Goal 4 – Ensure the realization of the maximum operable life of District water infrastructure

Goal 5 – Maintain level-of-service expectations related to development services

## Detailed Six-Year Goal List

Goal 1 – Ensure the continuity of potable water production that meets or exceeds regulatory requirements

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 1 and 5

Applicable EUM Attribute(s)

- Product Quality

Strategies

1. Maintain funding for Water Treatment Plant Operator position dedicated to operation of water treatment plants and distribution systems with weekend/on-call support by maintenance staff

Workload Indicators

- Number of routine water system reports submitted to agencies
- Number of permit-required water treatment plant samples collected/analyzed
- Number of permit-required water distribution system samples collected/analyzed
- Number of hours performing equipment calibration and maintenance
- Number of hours inventorying and preparing treatment chemicals

Performance Measures

- Meet all Department of Health water quality requirements
- Annual receipt of Treatment Optimization Program (TOP) award
- Annual issuance of Consumer Confidence Reports by state deadline
- Number of annual water quality customer complaints received
- Operating Permit is color green

Goal 2 – Sustain, and as applicable enhance, utility efficiency and resiliency provided through the proactive maintenance of District electrical systems, generators and SCADA instrumentation

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 1 and 5

Applicable EUM Attribute(s)

- Operational Optimization
- Enterprise Resiliency

Strategies

1. Maintain funding for Maintenance Electrician position



2. Provide funding through annual budget process to support Maintenance Electrician with on-call electrical services

Workload Indicators

- Scheduled inspections of electrical cabinets, components and associated equipment
- Scheduled repair of electrical cabinets, components and associated equipment
- SCADA hardware/software installation and maintenance
- Execution of annual contract for generator inspection/maintenance

Performance Measures

- Number of inspections per year
- Number of repairs per year
- Number of generators inspected/maintained per year

Goal 3 – Ensure the effective and reliable collection and conveyance of sewage out of the watershed through routine inspection and preventative maintenance of sewer infrastructure

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 1 and 5

Applicable EUM Attribute(s)

- Product Quality
- Customer Satisfaction
- Infrastructure Strategy and Performance

Strategies

1. Perform weekly inspection of sewer lift stations, and maintain as needed
2. Perform annual inspection of 15 sewer lift station submersible pumps
3. Perform annual inspection of 11 Smith & Loveless priming system components
4. Annual cleaning of sewer lift station wet wells
5. Televising/inspect sewer mains using NASSCO standards to define pipe condition, and clean as needed (148,000 feet/year)
6. Assess condition of manholes (648/year)
7. Inspect and maintain sewer air relief valve devices (half of inventory annually; other half twice per year)

Workload Indicators

- Weekly inspection of sewer lift stations (16 labor hours/week)
- Annual inspection/maintenance of submersible pumps (6 labor hours/pump)
- Annual inspection/maintenance of Smith & Loveless priming system components (6 labor hours/pump)
- Annual cleaning of all wet wells (4 labor hours/well)
- Labor hours expended televising/inspecting and cleaning sewer mains
- Manholes inspection (1 labor hour/manhole)
- Labor hours expended to clean and inspection of air relief valves (3 labor hours/valve)

Performance Measures

- Number of sewer system overflows per year
- Number of lift station true fail alarms per year (false alarms not counted)
- Trend of reducing annual lift station energy costs (reflecting increased pump efficiencies)
- Trend of reducing costs associated with pump repairs
- Miles of sewer main televised/inspected per year

- Miles of sewer main cleaned per year
- Downward trend of volume of I&I conveyed to City of Bellingham

Goal 4 – Ensure the maximum operable life of District water infrastructure

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 1 and 5

Applicable EUM Attribute(s)

- Product Quality
- Customer Satisfaction
- Infrastructure Strategy and Performance

Strategies

1. Annually exercise all water main valves
2. Biannually flush all water mains and hydrants (50% of system/year)
3. Annually inspect and repair, as needed, pressure reducing valves
4. Rebuild pressure reducing valves every five years (20% of inventory/year)
5. Semi-annually inspect reservoirs and clean roofs (200% of inventory/year)

Workload Indicators

- Annual exercise of water valves (1,032 labor hours/year)
- Biannual water main/hydrant flushing (1,032 labor hours/year)
- Annual pressure reducing valve inspection/repair (6 labor hours/valve)
- Pressure reducing valve rebuilds (6 labor hours/valve)
- Reservoir inspection (3 labor hours/reservoir)

Performance Measures

- Number of valves requiring replacement per year
- Number of distribution system water quality violations per year
- Levels of disinfection byproducts monitored
- Number of customer complaints regarding water pressure per year
- Miles of water main flushed per year
- Number of reservoir inspections conducted per year

Goal 5 – Maintain level-of-service expectations related to development services

Applicable Guiding Principle(s) (see Section 1.1)

- Principles 4 and 7

Applicable EUM Attribute(s)

- Customer Satisfaction

Strategies

1. Monitor workload to drive appropriate staffing/resource allocation

Workload Indicators

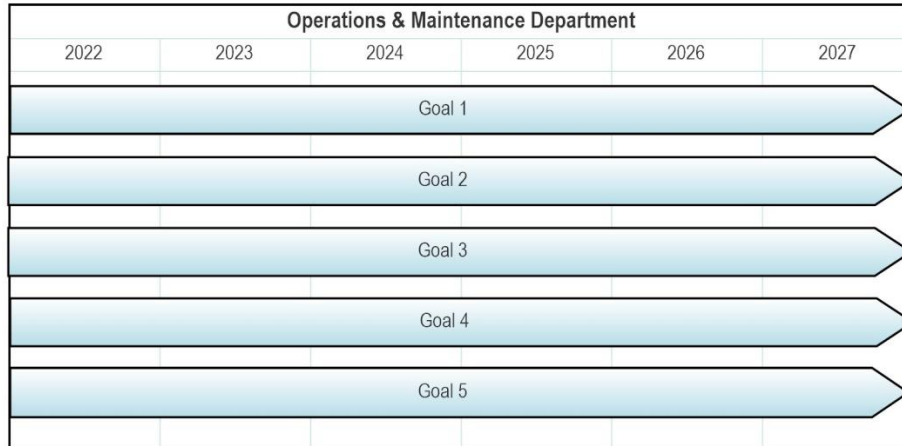
- Water/sewer connection inquiries processed
- Water/sewer connection permits issued
- Pre-construction meetings attended
- Inspections conducted
- New water service installations

Performance Measures

- Number of permits issued within five working days per year

- Number of inspections completed per year
- Number of water connections made within ten working days of request per year

### Timeline for Goal Completion



### Budgetary/Staffing Impacts to Implement

O&M Department functions are predominantly comprised of routine, scheduled preventative maintenance tasks to ensure efficient operation and realization of the full service life of District infrastructure. The increased sophistication of District systems (e.g., SCADA controls, implementation of asset management system), coupled with increasing age of most infrastructure (creating more frequent unanticipated system repairs), has resulted in an increased demand on O&M Department staff. This has coincided with an actual decrease in available field staff (creation of the O&M Manager position shifted a part-time field position to a nearly full-time administrative/development services position, the Lead Maintenance Worker position has taken on a number of administrative functions [task scheduling/coordinating, asset management system input, etc.], and the Maintenance Electrician position is now fully dedicated to maintaining electrical and SCADA control systems). As a result, to initiate departmental initiatives, additional staffing is needed to supplement the four current maintenance worker positions. Following presents estimated staffing increases (presented as full-time equivalents) above baseline (2021) conditions associated with implementation of departmental goals.

Position	2022	2023	2024	2025	2026	2027	Total
Maintenance Worker I	0.5	1.0	1.0	2.0	2.0	2.0	2.0
Utility Systems Support Specialist	-	-	0.5	1.0	1.0	1.0	1.0

Following presents an estimated cost above baseline (2021) conditions associated with implementation of each departmental goal.

Goal	2022	2023	2024	2025	2026	2027	Total
1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	\$ 40,000	\$ 85,000	\$ 90,000	\$ 95,000	\$ 100,000	\$ 105,000	\$ 515,000
4	\$ -	\$ -	\$ -	\$ 150,000*	\$ 85,000*	\$ 90,000*	\$ 325,000
5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

\*pursue subject to available funds

# 3 SIX-YEAR BUDGET AND STAFFING SUMMARY

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From 2022 through 2027, a total of three new positions are anticipated with estimated annual costs above the 2021 baseline ranging from \$40,000 in 2022 and \$376,000 in 2027. The estimated costs include personnel, vehicles and equipment, but do not include overhead such as office space and utilities.

Position	2022	2023	2024	2025	2026	2027	Total
IT Specialist	-	-	-	1.0	1.0	1.0	1.0
Maintenance Worker I	0.5	1.0	1.0	2.0	2.0	2.0	2.0

Following presents an estimated cost above the 2021 baseline conditions associated with implementation of each departmental business plan.

Department	2022	2023	2024	2025	2026	2027	Total
Executive	\$ 50,000	\$ 30,000	\$ 35,000	\$ 5,000	\$ 35,000	\$ 5,000	\$ 160,000
Finance	\$ 5,000	\$ 35,000	\$ 35,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 150,000
Engineering	\$ 15,000	\$ 35,000	\$ 30,000	\$ 222,000	\$ 207,000	\$ 232,000	\$ 741,000
Operations	\$ 40,000	\$ 85,000	\$ 90,000	\$ 245,000	\$ 185,000	\$ 195,000	\$ 840,000
Total	\$ 110,000	\$ 185,000	\$ 190,000	\$ 497,000	\$ 452,000	\$ 457,000	\$ 1,891,000

\*certain goals will only be pursued subject to available funds

## 4 DISTRICT-WIDE STRATEGIC BUSINESS PLAN

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This Plan compiles the departmental business plans for 2022-2027 into a holistic District-wide plan, which pools all functions of the District into one common purpose—to achieve service delivery goals. This Plan is intended to assist decision makers in understanding the interrelationship between and impacts of all departments and programs.

Planning is the strength of government and is vital to ensure future community needs are met. Planning is continuous within the organization in areas such as financial management, capital improvements, and utility system component repair and replacement. These plans flow into strategic goals of departmental plans.

With departmental plans in place and steps taken to implement them, performance measures may be established to assess the District's performance in achieving strategic goals. Progress towards achieving strategic goals may be monitored through collection of data. Because this is the District's first attempt at implementing performance measures, initial data will provide benchmarks against which future data is compared.

As such, this Plan is not an annual or biennial process, but rather it is one that is continually monitored and refined. Departments will meet on a regular basis to assess measurements and maintain focus on goals. Employees will apprise the General Manager on how things are going at the customer interaction level while stakeholders will let the Board know how they perceive the function of services.

## REFERENCES

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USEPA. 2017. Effective Utility Management, A Primer for Water and Wastewater Utilities. U.S. Environmental Protection Agency. January 2017.

# APPENDIX A

2020 EFFECTIVE UTILITY MANAGEMENT  
SELF-ASSESSMENT RESULTS

Attribute		Importance (1-10)	Achievement (1-5)
Product Quality	PQ	1.2	1.3
Customer Satisfaction	CS	5.2	1.9
Employee and Leadership Development	ED	6.6	2.7
Operations Optimization	OO	4.1	2.5
Financial Viability	FV	3.3	1.8
Infrastructure Strategy and Performance	IS	4.4	2.4
Enterprise Resiliency	ER	6.2	2.2
Community Sustainability	SU	9.1	1.9
Water Resource Sustainability	WS	6.5	1.8
Stakeholder Understanding & Support	SS	8.2	2.4

**2020 Attribute Ranking**  
Lake Whatcom Water and Sewer District

