LAKE WASHINGTON WASTEWATER LAKE LINE MANAGEMENT PLAN

SEPA Final Environmental Impact Statement

Prepared for June 2024 City of Bellevue





LAKE WASHINGTON WASTEWATER LAKE LINE MANAGEMENT PLAN

SEPA Final Environmental Impact Statement

Prepared for City of Bellevue June 2024

2801 Alaskan Way Suite 200 Seattle, WA 98121 206.789.9658 esassoc.com

Atlanta Palm Beach County San Diego Bend Pasadena San Francisco Irvine Pensacola San Jose Los Angeles Petaluma Sarasota Portland Seattle Mobile Oakland Tampa Rancho Cucamonga Thousand Oaks Orlando Sacramento



D201901003.02

OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

City of Bellevue



Post Office Box 90012 ■ Bellevue, Washington ■ 98009 9012

June 27, 2024

Lake Washington Wastewater Lake Line Management Plan Final Environmental Impact Statement

Dear Interested Parties:

The City of Bellevue Utilities Department is developing a management plan to identify long-range operational and capital improvement strategies for the future repair, replacement and maintenance of the existing sewer line located underwater or on land adjacent to Lake Washington. The Lake Washington Wastewater Lake Line (LWWLL) system includes approximately 14.6 miles of sewer lines, as well as 15 pump stations and 8 flush stations. Improvements included in the Management Plan to the LWWLL would be located along the shoreline of Lake Washington throughout the following jurisdictions: Bellevue, Beaux Arts, Medina, Hunts Point, Yarrow Point, and unincorporated King County.

The City of Bellevue Development Services Department is the Lead Agency under the State Environmental Policy Act (SEPA) for the proposal and issued a Draft Programmatic (non-project) Environmental Impact Statement (EIS) for the environmental review of the adoption of the Management Plan. Public comments were received on the Draft EIS for 30-day comment period. Comments received are included in Appendix D: Draft EIS Comments and Responses, along with responses to each comment. The EIS has been prepared in accordance with Chapter 197-11 WAC.

The EIS evaluated four alternatives:

- In-Water Alternative
- On-Shore Alternative
- Upland Alternative
- No Action Alternative

Bellevue Utilities Department is reviewing information about the lake line system to develop strategies for future repair, replacement, or maintenance for the six defined Service Areas in the management plan area. Some sections may not require work; others will require repair, replacement, or maintenance. The City will use the LWWLL Management Plan to identify long-range operational and capital improvement strategies for the future repair, replacement, and maintenance of the existing sewer line located underwater or on land adjacent to Lake Washington. In combination with the identification of the preferred alternative (In-Water, Onshore, or Upland Alternative) for future repair and replacement of the aging system, further evaluation and analysis will be performed to determine the best-suited construction method(s) at individual location(s) to implement the operational and capital improvement strategies. Improvements at the pump stations will be evaluated in each Service Area as part of the alternative selection process. The City will select the alternative(s) to be implemented based on several

evaluation factors such as environmental, regulatory, social, technical, and cost. Different alternatives may be selected depending on the Service Area.

The Management Plan will be incorporated as an appendix to the City's Wastewater System Plan at the time the Wastewater System Plan is next updated. The current version of the system plan is the Wastewater System Plan adopted by City Council via Resolution 8771 in July 2014 and adopted by King County Council via Ordinance 17968 in February 2015. The plan was approved by the Washington State Department of Ecology (Ecology) in May 2015. At the time of the publication of the Management Plan (expected June 2024), the City expects that updates to the Wastewater System Plan will begin in 2024, followed by the adoption of the Wastewater System Plan (including the Management Plan as an appendix) by City Council.

Implementation of any projects identified in the Management Plan would require a number of permits and approvals from the local jurisdiction prior to construction.

Under SEPA, the Final EIS may be appealed only after the City of Bellevue has taken a specific governmental action, in accordance with RCW 43.21C.075 and WAC 197-11-680. Any appeal of this Final EIS, must wait until action by the City Council to adopt the Management Plan. Notice of the action and specific appeal information will be provided at the time of the action.

The Final and Draft EIS and additional background materials are available for viewing online and can be downloaded from the City's website at https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/capital-projects/lake-washington-line.

Thank you for your interest in the Lake Washington Wastewater Lake Line Management Plan.

Sincerely,

Reilly Pittman

Reilly Pittman
Environmental Planning Manager and SEPA Responsible Official
Development Services Department

FACT SHEET

City of Bellevue Lake Line Management Plan SEPA Final Environment Impact Statement

Proposal Title

Lake Washington Wastewater Lake Line (LWWLL) Management Plan (the Management Plan, or the Plan)

Proposed Action

The following alternatives were identified for evaluation in this Programmatic Environmental Impact Statement (EIS):

- In-Water Alternative
- On-Shore Alternative
- Upland Alternative
- No Action Alternative

Location

Improvements included in the Management Plan to the LWWLL would be located along the shoreline of Lake Washington throughout the following jurisdictions (referred to as Service Areas):

- Bellevue
- Beaux Arts
- Medina
- Hunts Point
- Yarrow Point
- King County

Plan Proponent and Lead Agency

City of Bellevue Bellevue Utilities 450 110th Avenue NE Bellevue, WA 98004

Project Information / Background Data Contact Person

Angela Chung, PE, LEED-AP Senior Utilities Engineer Phone: (425) 452-4320

Email: LkWaLakeLine@bellevuewa.gov

State Environmental Policy Act (SEPA) Lead Agency, Responsible Official, and Contact Information

City of Bellevue Development Services Department Reilly Pittman, Environmental Planning Manager and SEPA Responsible Official Development Services Department Email: LakeLineEIS@bellevuewa.gov

Authors and Principal Contributors to this EIS

This Final Environmental Impact Statement (EIS) has been prepared in coordination with Bellevue Utilities. The following consulting firms provided research and analysis associated with this EIS:

- Environmental Science Associates (ESA) Lead EIS consultant, document preparation; writing of all EIS sections.
- Carollo Engineers, Inc. Lead Management Plan consultant, writing and analysis of the Management Plan.
- Confluence Environmental Company Assisting consultant, writing and preparation of the Management Plan Aquatic Impacts Assessment.
- Ahern Management Consulting Technical consultant for the City of Bellevue.

Date of Issuance of Final EIS

June 27, 2024

Date of Issuance of Draft EIS

April 6, 2023

Due Date of the Draft EIS Comments

Comments were received on the Draft EIS for a 30-day comment period and were required to be postmarked or emailed on or before midnight on May 8, 2023.

Date of the Draft EIS Public Hearing

A virtual public meeting on the Management Plan and a public hearing on the Draft EIS were held simultaneously on Tuesday, April 18, 2023, from 5:00 to 6:00 p.m. on the Zoom platform and made available on the City's website at https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/capital-projects/lake-washington-line. Attendees were able to sign up in advance or at the meeting to provide oral comments during the meeting. The meeting was recorded and transcribed, and responses to the comments are provided in this Final EIS as **Appendix D**, **Draft EIS Comments and Responses**.

The purpose of the public hearing was to provide an opportunity for individuals, agencies, and organizations to review information presented in the Draft EIS and to present oral or written comments on the Draft EIS.

Organization of the Final EIS

The Draft EIS laid the foundation for the initial environmental analysis that was conducted and is a companion document to this Final EIS and is incorporated by reference in accordance with Washington Administrative Code (WAC) 197-11-635. The Draft EIS chapters updated for the Final EIS include Chapter 1, *Introduction & Summary*, Chapter 2, *Description of the Lake Washington Lake Line Management Plan and Alternatives*, and Chapter 8, *References and Source Material*, to account for further development of the Management Plan and comment responses. No further Draft EIS chapters were updated, including any changes to conclusions or the significance of impacts, and are not included in the Final EIS. Two appendices have been included in addition to the Draft EIS appendices. Comments received on the Draft EIS and responses are included as part of this Final EIS in **Appendix D**, **Draft EIS Comments and Responses**. The **Lake Washington Wastewater Lake Line Management Plan Community Outreach Summary** is included as **Appendix E**. Appendices A through C are included with the Draft EIS and are not reproduced in the Final EIS.

Appeals Process

Under SEPA, the Final EIS may be appealed only after the City of Bellevue has taken a specific governmental action, in accordance with Revised Code of Washington (RCW) 43.21C.075 and WAC 197-11-680. Any appeal of this Final EIS, the non-project proposal, will be considered along with an appeal of the City Council's adoption of the Management Plan, per WAC 197-11-680 (3)(iii). Further, any appeal of the SEPA determination made with the project decision, in this case City Council adoption of this Final EIS via the approval of the Management Plan, must be filed within 14 days after the notice of the decision (City Council approval) under RCW 36.70B.130.

Document Availability

The Final and Draft EISs and additional background materials are available for viewing online and can be downloaded from the City's website at https://bellevuewa.gov/city-government/departments/utilities-projects-plans-standards/capital-projects/lake-washington-line.

June 2024

Selection of a Preferred Alternative

The City of Bellevue and the Management Plan team reviewed information about the lake line system to develop strategies for the future repair, replacement, or maintenance for the six defined Service Areas in the Management Planning area. Some sections may not require work; others will require repair, replacement, or maintenance. The City may use the Lake Washington Wastewater Lake Line Management Plan to identify long-range operational and capital improvement strategies for the future repair, replacement, and maintenance of the existing sewer line located underwater or on land adjacent to Lake Washington. This programmatic environmental analysis, in addition to the Management Plan, will serve as a resource to analyze environmental effects and contribute to identifying improvements needed to repair and/or replace the lake line system. These improvements would likely include different future site-specific projects or alternative(s) in each Service Area. In combination with the identification of the preferred alternative(s) (In-Water, Onshore, or Upland Alternative) for future repair and replacement of the aging system, further evaluation and analysis will be performed to determine the best-suited construction method(s) at individual location(s) to implement the operational and capital improvement strategies.

Improvements at the pump stations will be evaluated in each Service Area as part of the alternative selection process. The City may select the alternative(s) to be implemented based on several evaluation factors such as environmental, regulatory, social, technical, and cost. Different alternatives may be selected depending on the Service Area.

The Management Plan will be incorporated as an appendix to the City's Wastewater System Plan at the time the Wastewater System Plan is next updated. The current version of the system plan is the Wastewater System Plan adopted by City Council via Resolution 8771 in July 2014 and adopted by King County Council via Ordinance 17968 in February 2015. The plan was approved by the Washington State Department of Ecology (Ecology) in May 2015. At the time of the publication of the Management Plan (in June 2024), the City expects that updates to the Wastewater System Plan will begin in 2024, followed by the adoption of the Wastewater System Plan (including the Management Plan as an appendix) by City Council.

The City continued soliciting input on the Management Plan from the public and other interested parties during and following the Draft EIS comment period. Identification of preferred alternatives is expected to occur following release of the Final EIS in mid-2024.

Timing of Additional Environmental Review

The analysis presented in this EIS is programmatic in nature. Programmatic plans typically establish broad policies or guidelines for future actions or projects, potentially affecting various aspects of the environment. The City Council's adoption of the Management Plan is the SEPA action as the approval process involves governmental decision-making that may result in environmental impacts. The EIS has been prepared to disclose probable significant adverse impacts associated with implementation of the Management Plan to repair, replace, and/or maintain the aging Lake Washington wastewater system. As individual improvements are identified in each Service Area, site-specific environmental review will be conducted prior to implementation. Depending on the preferred alternative(s) selected in each Service Area and the amount of time needed to obtain regulatory approval of the Management Plan, some projects and actions may be ready for site-specific environmental review starting in 2025.

Potential Required Approvals or Permits

Because alternatives and construction methods have not been selected for any improvements, it is not possible to present a complete list of approvals and permits that would be required for future improvements. It is possible to identify the most common types of approvals and permits that would generally be required for the types of improvements presented in the Management Plan.

Potential approvals and permits are listed below by jurisdictional agency.

Federal

- Section 10 or Section 404 Permit U.S. Army Corps of Engineers (Corps)
- Regional General Permits (RGP) or the Nationwide Permit (NWP) Program Corps (Dredged Material Management Office [DMMO])
- Endangered Species Act Consultation National Marine Fisheries Service (NMFS) and/or U.S.
 Fish and Wildlife Service (USFWS)

• State

- National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit – Ecology
- Section 401 Water Quality Certification Ecology
- Shoreline Conditional Use Permit, or Variance Ecology
- Hydraulic Project Approval (HPA) Washington Department of Fish and Wildlife (WDFW)
- Section 106 National Historic Preservation Act Department of Archaeology and Historic Preservation (DAHP)
- Executive Order 21-02 Consultation DAHP
- Open Water Disposal Site Use Authorization Washington Department of Natural Resources (WDNR)

• Local Jurisdictions

- SEPA compliance
- Environmentally Critical Areas Review/Approval
- Land Use Permit
- Shoreline Permit(s)
- Building and Related Permit(s)
- Clearing and Grading Permit(s)
- Right-Of-Way Use Permit(s)
- Street Use Permit(s)

Fact Sheet

Intentionally Blank

CONTENTS

City of Bellevue Lake Line Management Plan SEPA Final Environment Impact Statement

			<u>Page</u>
Fact Sheet			FS-i
Acronyms	and Ab	breviations	iii
Chapter 1		duction & Summary	
Gliaptoi i	1.1	What are the objectives of the Management Plan?	
	1.2	What is a non-project EIS?	
	1.3	How were the potential impacts of the proposed Lake Washington	
		Wastewater Lake Line Management Plan evaluated?	1-3
		1.3.1 What impacts and mitigation measures did we identify?	1-4
		1.3.2 What is the difference between the alternatives?	1-9
	1.4	Are there any potential unavoidable adverse impacts?	1-11
	1.5	What are the cumulative impacts of the Management Plan?	1-12
	1.6	What are the areas of concern?	1-13
	1.7	How has the public been involved with the development of the	
		Management Plan and the EIS?	
	1.8	How will the Plan be implemented?	
	1.9	What are the policy considerations?	
		1.9.1 In-Water Alternative	
		1.9.2 On-Shore Alternative	
		1.9.3 Upland Alternative	1-16
	1 10	1.9.4 Summary of Policy Considerations	1-17
	1.10 1.11	What future project-level analyses will be conducted? What interim actions could occur?	1 17
	1.11	What emergency actions could occur?	
	1.12	What are the benefits of implementation and disadvantages of	1-10
	1.13	delayed implementation?	1_19
Chantan 0	Daga		
Chapter 2	Mana	ription of the Lake Washington Wastewater Lake Line agement Plan and Alternatives	2-1
	2.1	Location	
	2.2	Overview of the Existing Wastewater Lake Line System	
		2.2.1 Components of the Lake Line System	
	2.3	Planning Context	
	2.4	How were the Service Areas developed?	
		2.4.1 Overview of the Service Areas	2-5
	2.5	EIS Alternatives	2-10
		2.5.1 In-Water Alternative	-
		2.5.2 On-Shore Alternative	
		2.5.3 Upland Alternative	
		2.5.4 No Action Alternative	
	2.6	Potential Construction Methods for Capital Improvement Strategies	2-12

	2.7		nal Strategies and Maintenance Proposed in the nent Plan	2-12
		2.7.1	Existing Maintenance	
		2.7.2	Operational Strategies	
	2.8	Implemer 2.8.1	ntation Approach and Timing Typical Implementation	
Chapter 8	Refe	rences and	d Source Material	8-1
Appendices and included			B, and C are included with the Draft EIS. Appendices D and S)	d E are new
C. Cultural D Draft EIS	ction Ap Resou S Comr	oproaches a rces within	and Methods the Plan Area Responses nmary	
Figures				
Figure 1-1	In-V	Vater Altern	native	1-9
Figure 1-2	On-	Shore Alter	rnative	1-10
Figure 1-3	Upl	and Alterna	ıtive	1-10
Figure 2-1	Lak	e Washingt	ton Lake Line System Location	2-2
Figure 2-2			ine System Operation	
Figure 2-3			ton Lake Line Service Areas and System Components	
Figure 2-4			/aluation Process	
Figure 2-5	Тур	ical Implem	nentation Phases	2-17
Tables				
Table 1-1	Pot	ential Impa	cts and Mitigation Measures by Environmental Resource	1-5
Table 2-1			ength and Stations	
Table 2-2	Acti	on Alternat	ives and Construction Approaches and methods	2-12

Operational Strategies2-14

Table 2-3

ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
AC	asbestos cement
ADA	Americans with Disabilities Act
AP	Analytic Period
BACT	Best Available Control Technology
BAVMC	Beaux Arts Village Municipal Code
BCC	City of Bellevue Land Use Code
BMPs	best management practices
CFR	Code of Federal Regulations
cfs	cubic feet per second
CIP	Capital Improvement Plan
CIPP	cured-in-place pipe
City	City of Bellevue
Corps	U.S. Army Corps of Engineers
CSWPPP	Construction Stormwater Pollution Prevention Plan
DAHP	Department of Archaeology and Historic Preservation
dB	decibel(s)
dBA	A-weighted decibels
DMMO	Dredged Material Management Office
DO	dissolved oxygen
DU	dwelling unit
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FHWA	Federal Highway Administration
FMO	foraging, migration, and overwintering
FMR	fire-modified rock
FOG	fats, oils, and grease
FR	Federal Register
GIS	geographic information system
GMA	Growth Management Act
HGL	hydraulic grade line
HPA	Hydraulic Project Approval

Abbreviation	Definition
1&1	infiltration and inflow
I-405	Interstate 405
I-90	Interstate 90
IDP	Inadvertent Discovery Plan
IPaC	Information for Planning and Consultation
KCC	King County Code
L_{eq}	equivalent continuous sound pressure level
LUC	Land Use Code
LWWLL	Lake Washington Wastewater Lake Line
MMC	Medina Municipal Code
MUTCD	Manual on Uniform Traffic Control Devices
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NTUs	Nephelometric turbidity units
NWP	Nationwide Permit
O&M	operations and maintenance
OHWM	ordinary high water mark
PHS	Priority Habitats and Species
PM	particulate matter
PM ₁₀	particles below 10 microns in diameter
PM _{2.5}	fine particles below 2.5 microns in diameter
PS	Pump Station
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
RCW	Revised Code of Washington
RGP	Regional General Permit
RPZ	Residential Parking Zone
RUL	remaining useful life
SCADA	supervisory control and data acquisition
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Office
SMA	Shoreline Management Act
SMP	Shoreline Master Program
SOP	Standard Operating Procedure
SPR	spiral-wound pipe
sq ft	square feet
SR	State Route
TESC	Temporary Erosion and Sediment Control
TMDL	Total Maximum Daily Load
USFWS	U.S. Fish and Wildlife Service

Abbreviation	Definition
UT	ultrasonic thickness
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WHR	Washington Heritage Register
WISAARD	Washington Information System for Architectural and Archeological Records Data
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WTD	Wastewater Treatment Division
YPMC	Yarrow Point Municipal Code

Acronyms and Abbreviations

Intentionally Blank

CHAPTER 1

Introduction & Summary

The City of Bellevue (City) has lake lines in both Lake Washington and Lake Sammamish that are an important part of Bellevue Utilities' wastewater system. The Lake Washington Wastewater Lake Line (LWWLL) system includes approximately 14.6 miles of sewer lines that are either underwater or on land adjacent to Lake Washington, as well as 15 pump stations and eight flush stations. The Lake Sammamish lake lines are not part of this evaluation.

Most of the Lake Washington lake lines were constructed in the 1950s and 1960s to prevent raw sewage from being discharged directly into the lake. Today, this infrastructure serves approximately 1,900 parcels in Bellevue, Beaux Arts, Medina, Hunts Point, Yarrow Point, and unincorporated King County and still plays a crucial role in keeping Lake Washington water clean. However, the pipes and pump/flush stations that constitute the lake line system are aging, and their location creates challenges for repair and replacement. Without advance planning, components of the lake line system may begin to fail, potentially causing a loss of sewer service to residents and risk to the sensitive lake environment. Line failures could result in property damage to individual homes and widespread contamination of Lake Washington.

Bellevue Utilities is developing a Management Plan for the repair, replacement, and maintenance of the aging lake line system. The Lake Washington Wastewater Lake Line Management Plan (the Management Plan, or the Plan) will develop and document a long-range approach for the rehabilitation or replacement of the lake lines, including financial and policy components, to guide future capital improvements to the system. The Management Plan will help ensure the City can continue to provide safe and reliable sewer service to the community, protect public health, and support the Lake Washington ecosystem, while responsibly addressing risks and challenges for the City and residents. As part of this process, the City is preparing a non-project, or "programmatic" environmental impact statement (EIS). This programmatic EIS evaluates the environmental impacts associated with the following four alternatives (three Action Alternatives and the No Action Alternative) to replacement and repair of the lake line system as the capital improvements identified in the Management Plan. Alternative details and potential construction methods are further described in Chapter 2, Description of the Lake Washington Wastewater Lake Line Management Plan and Alternatives.

- 1. <u>In-Water Alternative</u> Any permanent system improvements to conveyance system infrastructure (the system of force main pipes, intakes pipes, emergency overflows, and all other components used to collect and move sewage to the treatment plant) would be generally located below the ordinary high water of Lake Washington.
- 2. On-Shore Alternative Any permanent system improvements to conveyance system infrastructure would be generally located between the residences, parks, commercial properties and/or public spaces, and the ordinary high water of Lake Washington.

- 3. <u>Upland Alternative</u> Any permanent system improvements to conveyance system infrastructure would be generally located upland of the residences, park, commercial property and/or public space, and/or within the general vicinity of the public right-of-way.
- 4. No Action Alternative Required by the State Environmental Policy Act (SEPA) Potential implementation methods include continued wastewater system operational strategies and maintenance of existing infrastructure, cleaning and condition assessments and monitoring, piecemeal repair and replacement (projects one-by-one as needed), emergency actions, and actions that are taken to maintain or limit degradation of the existing system. Strategies and actions would address immediate needs, but would not address long-term degradation of the existing system in a holistic manner. Under the No Action Alternative, the Management Plan would be adopted; however, the Action Alternative(s) would not be implemented.

Note that different areas of the lake line system may have different selected alternatives – multiple alternatives could eventually be selected for the Lake Washington wastewater lake line system. Implementation of the alternative(s) will occur over different planning period horizons. Improvements, including alternative(s) implementation, are expected to be recommended for the near-term, mediumterm, and long-term planning periods. Interim actions, including early action projects and emergency planning and actions, are improvements recommended to be implemented in the near-term planning period in tandem with or prior to other system improvements (see Sections 1.11 and 1.12). The alternatives and planning period implementation are described in more detail in Section 2.5 and Section 2.8, respectively.

1.1 What are the objectives of the Management Plan?

The Lake Washington Wastewater Lake Line Management Plan will identify capital improvement and other system improvement strategies to provide a responsible and effective, long-range approach to maintaining operation of the lake line system. Specifically, the Plan will achieve the following objectives:

- Provide a reliable level of service for existing customers for peak flows while minimizing backups or overflows.
- Maintain, rehabilitate, or replace the lake line system infrastructure with system(s) that are reliable, durable, and maintainable while minimizing risk to the environment.
- Minimize new obligations on the homeowner for infrastructure maintenance and minimize impacts on private property.
- Develop operational strategies that can be implemented in a timely fashion to maintain or improve the quality
 of the existing system without raising the rates to existing customers outside of typical market levels.

1.2 What is a non-project EIS?

SEPA requires agencies to consider the likely environmental consequences of governmental decisions, including decisions on the adoption of plans, policies, or programs, pursuant to Chapter 43.21C Revised Code of Washington [RCW] and the SEPA Rules (Chapter 197-11 Washington Administrative Code [WAC]). The SEPA Rules provide detail for the environmental review process, including the EIS process.

A non-project EIS is being prepared because the Management Plan is not a specific project, but rather a series of potential future improvement strategies to proactively manage the lake line system. A non-project EIS, also known as a programmatic EIS, is prepared to inform planning decisions that provide the basis for later proposed improvement review (WAC 197-11-704). Non-project actions are governmental actions involving decisions on policies, plans, or programs that provide requirements for how the environment can be modified, in this case, standards around how proposed solutions to address the aging lake line system can modify Lake Washington and the surrounding environment, or standards that will govern a series of connected actions through implementation of the Management Plan. Non-project review allows consideration of the "big picture" and will form the basis for subsequent improvement-specific review. The EIS examines the broad plan-level issues related to the general location of alternatives and how combinations of improvements may collectively impact the environment. A non-project EIS differs from a "project-specific" EIS in that it does not focus on specific projects or project locations, design details, or precise footprints of project(s).

1.3 How were the potential impacts of the proposed Lake Washington Wastewater Lake Line Management Plan evaluated?

To evaluate impacts at a programmatic level, certain construction characteristics were used to compare the potential for impacts among the three Action Alternatives (i.e., In-Water, On-Shore, and Upland Alternatives), which could involve larger, more complex construction activities than the No Action Alternative. For the purposes of the impact analyses (Chapter 4 of the Draft EIS), the various construction approaches (i.e., gravity sewer line, vacuum sewer, pipe bursting) were categorized as either open cut construction methods or trenchless construction methods to evaluate the potential impacts on a programmatic level for each potential Action Alternative (see Section 2.6). If the potential impacts from any of the construction methods varied with the Action Alternative, the construction method impacts were reviewed independently for each element of the environment. Improvements to associated system pump stations were also considered as part of each alternative.

Construction impacts were primarily identified based on the following items for each Action Alternative.

- Excavation Quantities. Improvement components requiring a substantial amount of earthwork (excavation) could affect earth, air quality, surface water, traffic, and cultural resources.
- <u>Surface Disturbance</u>. The larger the surface disturbance area of an improvement, the greater the potential for impacts on environmental resources discussed in this EIS.
- <u>Duration</u>. Improvement construction ranges in length from a few months to 2 years in any given location. The longer the duration of construction, the greater the potential for impacts on most of the resources considered in this EIS.

Impacts on environmental resources are documented as either **significant** or **less-than-significant**; a significant adverse impact for most of the resources refers to impacts that are potentially inconsistent with regulatory standards and/or permit requirements that may require extensive mitigation measures or situations that could not be mitigated.

Similar to the potential construction impact analyses, operational impacts were evaluated at a programmatic level for operation and maintenance of the improvements. Operational impacts were analyzed for the Action Alternatives and No Action Alternative.

1.3.1 What impacts and mitigation measures did we identify?

Impacts

The impact analyses accounted for open cut construction methods requiring more surface disturbance for a longer duration than trenchless construction methods. Surface and infrastructure disturbance would generally be more extensive with the Upland Alternative based on the adjacency to residences, parks, commercial properties and/or public spaces, and the location of public right-of-way. As such, construction impacts on environmental resources, including but not limited to, land use, earth and soils, plants and animals, transportation, and cultural resources, would be more extensive and occur over extended periods of time with open cut construction methods under the Upland Alternative than the other Action Alternatives due to the additional excavation, larger equipment and required construction time. Similarly, based on the location of the In-Water Alternative in Lake Washington, construction impacts on surface water resources and fish and aquatic resources would be more prominent than the other Action Alternatives and the No Action Alternative. **Table 1-1** summarizes the identified potential construction and operation impacts, as well as presents an overview of most potential measures that the City could take to reduce or minimize potential impacts associated with the Action Alternatives and No Action Alternative. Potential impacts were described in more detail in Draft EIS Chapter 4, *Impacts*.

Mitigation Measures

Mitigation would primarily be guided by local, state, and federal approvals and permits that would generally be required for the types of improvements presented in the Management Plan (potential individual approvals and permits are listed in the EIS Fact Sheet). Additional solutions and mitigation for impacts could include, but are not limited to, the following (summarized in Table 1-1):

- Avoid private properties to the extent practicable while siting improvements.
- Isolate construction work areas.
- Construct in-water improvements during prescribed in-water work windows for fish protection.
- Comply with existing policies and procedures.
- Proactive coordination with potentially affected utilities and property owners.
- Adhere to permit conditions.

Mitigation measures were described in more detail in Draft EIS Chapter 5, Mitigation Measures.

TABLE 1-1
POTENTIAL IMPACTS AND MITIGATION MEASURES BY ENVIRONMENTAL RESOURCE

Resource	Potential Impacts	Potential Significant Impacts	Potential Mitigation Measures
Land Use and Visual Quality	Acquisition of property and easements, incompatibility with surrounding land uses, conflicts with existing plans and policies, changes to views, light and glare	Action Alternatives – If private property acquisition is necessary.	 Restore disturbed areas. Maintain access to properties and businesses during construction. When siting potential new facilities, prioritize in public property and rights-of-way. Comply with existing land use policy. Follow federal, state, and local real estate transaction and property management process regulations, where appropriate.
Earth	Erosion, slope failure, unsuitable or excess soils, dewatering and spoils disposal	No Action Alternative – Risk of system failure, substantial contamination, and geologic risk possible.	 Geologic risk assessment and design improvements to minimize geologic hazards. Erosion control measures. Appropriate soils disposal and monitoring of settlement during dewatering.
Air Quality and Odors	Dust, odors, and emissions	Not expected	 Construction specifications and measures to control dust. Reduce vehicle emissions, idling, and travel distances, and encourage carpooling for employees. Design facilities to control odors and emissions with regular maintenance.

Resource	Potential Impacts	Potential Significant Impacts	Potential Mitigation Measures
Surface Water Resources	Stormwater and runoff, turbidity, release of pollutants from construction equipment, and sediments	 Action Alternatives – Risk of system failure releasing untreated wastewater could affect water quality. No Action Alternative – Highest potential risk (out of all the alternatives) of system failure releasing untreated wastewater that could affect water quality. 	 Isolate work areas from open water during dewatering. Implement erosion and sediment control measures. Use appropriate plans for monitoring and construction activities. Implement pollution control measures and waste handling measures. Decontaminate equipment and restore cleared areas. Isolate the work area to prevent spillage of construction materials and have spill response materials on-site. Where possible, use non-petroleum based solvents and fluids and fuel construction equipment 50 feet or more from surface waterbodies.
Fish and Aquatic Resources	Potential noise in and near Lake Washington and its tributaries In-Water Alternative – Could disrupt fish species, especially with open cut construction	No Action Alternative (Construction) – Risk of habitat alterations from emergency repairs and turbidity and dissolved oxygen if in-water work occurs outside of in-water work windows for fish species. No Action Alternative (Operational) – Risk of large untreated wastewater release.	 Isolate in-water work area. Work during prescribed in-water work windows for fish protection. Install anchor logs for habitat complexity and bioengineered shoreline stabilization. Install a layer of fish mix gravels in areas impacted by open cut construction. Restore/enhance disturbed riparian vegetation in onshore and upland areas.
Plants and Animals	Increased Noise and Human Disturbance in Construction Areas	Action Alternatives (Operational) – If clearing of large areas occurs without complying with land use and shoreline regulations	 Avoid breeding and rearing periods of the sensitive species, if necessary. Follow permit conditions for construction site runoff. Retain site vegetation and revegetate. Comply with National Bald Eagle Management Guidelines. Implement invasive species control and management.

Resource	Potential Impacts	Potential Significant Impacts	Potential Mitigation Measures
Noise	Noise generated by construction equipment and activities, increased noise levels in residential areas and near sensitive receptors	Not expected	 Encourage noise-reducing measures. Work within permitted hours and noise levels to reduce nuisance to adjacent residents, adhere to applicable noise regulations. Use noise-reducing equipment on construction equipment. Comply with noise levels specified in facility design.
Transportation	Construction truck trips and barge use, construction employee commute trips, road closures and associated traffic, transit, non-motorized impacts, and parking impacts	Not expected	 Coordinate with transportation services, local neighborhoods, property owners (where appropriate), school districts, and departments to minimize disruption with advance notice. Develop a Traffic Control Plan for work within the right-of-way. Avoid construction routes at congested intersections. Maintain access for private roads and pedestrian and bicycles or detours, as applicable. Provide off-street parking at staging areas for construction vehicles and on-site loading areas for material delivery and removal. Prioritize ridesharing for construction workers, as possible. Provide traffic detour plans and post standard construction warning signs in advance of construction areas. Provide access for emergency vehicles at all times. Repair or restore the roadway right-of-way to its original condition or better. Perform an evaluation(s) for feasibility of dock construction to support the barge, if necessary.

Resource	Potential Impacts	Potential Significant Impacts	Potential Mitigation Measures
Cultural Resources	Risk of Encountering Archaeological or Cultural Resources; Temporary Visual and/or Auditory Impacts on Historic Built Environmental Resources	On-Shore Alternative, Upland Alternative, and Pump Station Improvements (Construction) – Likelihood to encounter and/or disturb cultural resources.	 Develop and implement an Inadvertent Discovery Plan (IDP), as appropriate. Develop an Archaeological Monitoring Plan and conduct on-site observation of excavations by an archaeologist, if determined appropriate. Potential additional coordination with the Department of Archaeology and Historic Preservation (DAHP), and any Affected Tribes.
Public Utilities	Disruption of Existing Above- and Below-ground Utilities during Construction	 Action Alternatives - Risk of system failure and loss of service and sewer backups. No Action Alternative - Risk of system failure could cause sewer overflows and interrupt service to customers. 	Coordinate and determine potential conflicts with other utilities and transportation departments to plan for shared construction and to avoid consecutive construction projects (road construction and other underground utilities). Develop construction sequence plans and coordinate schedules to minimize service disruptions and provide ample advance notice if service disruption is unavoidable. Utilize temporary pumping to continue service to LWWLL customers, if needed. Conduct utility locates prior to ground-disturbing activities.

1.3.2 What is the difference between the alternatives?

The difference between the alternatives is primarily related to their implementation location, the technical feasibility of construction methods with each alternative (further detail is provided in Section 2.6), and the location of the associated facilities (i.e., pump and flush stations). The alternatives identified and evaluated in this EIS and their primary differences are described below:

In-Water Alternative – Improvements would generally be located below the ordinary high water mark (OHWM) of Lake Washington; system infrastructure would either be relocated in-water or replaced in-water (see Figure 1-1). Potential construction methods include gravity sewer line via open cut construction or trenchless technology, cured in-place pipe, spiral wound pipe, slip lining, pipe bursting, or emerging technologies. Potential impacts would be primarily associated with the inwater environment and adjacent environmental resources.

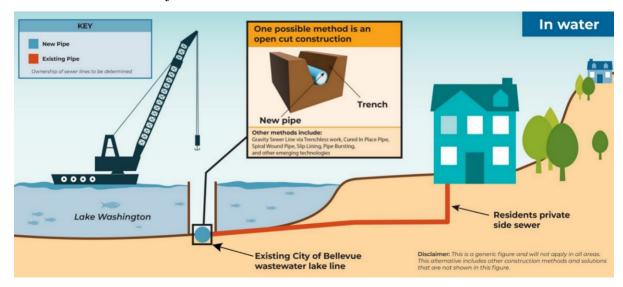


Figure 1-1
In-Water Alternative

On-Shore Alternative – Improvements would generally be located between the residences, parks, commercial properties and/or public spaces, and OHWM of Lake Washington (see Figure 1-2). Potential construction methods include gravity sewer line via open cut construction or trenchless technology, or vacuum sewers. Potential impacts would be primarily concentrated on the on-shore area and associated human and environmental resources; however, construction could affect the aquatic environment.

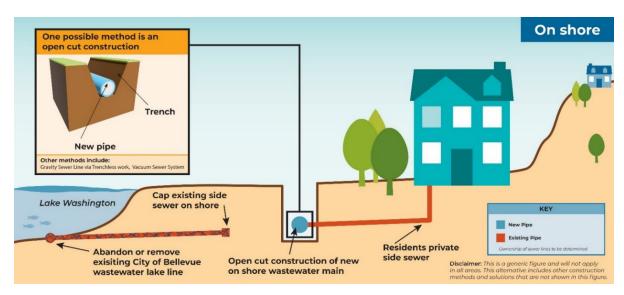


Figure 1-2
On-Shore Alternative

• Upland Alternative – Improvements would generally be located upland of the residences, park, commercial property and/or public space, and/or within the general vicinity of the public right-of-way (see Figure 1-3). The pump and flush stations connected to the lake line system are also located in the upland area. Potential construction methods include gravity sewer line via open cut construction or trenchless technology, vacuum sewers, or grinder pumps. Potential impacts would primarily be concentrated on the upland area and associated human and environmental resources.

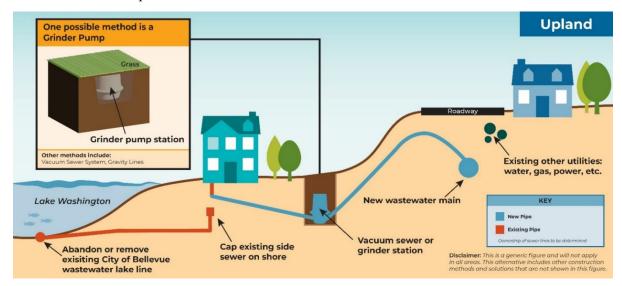


Figure 1-3 Upland Alternative

• No Action Alternative – Continuation of existing operational strategies and maintenance of existing infrastructure in place. Methods could include cleaning and condition assessments and monitoring, piecemeal repair and replacement (projects one-by-one), emergency actions, and actions that are

taken to maintain or limit short-term degradation. Potential impacts would be concentrated where the existing system is located and could potentially affect the adjacent environmental resources.

1.4 Are there any potential unavoidable adverse impacts?

SEPA defines significant impact as "a reasonable likelihood of more than a moderate adverse impact on environmental quality" (WAC 197-11-794). Summarized below are the potential significant unavoidable adverse impacts associated with the Action Alternatives and the No Action Alternative. Refer to Chapter 6, Significant Unavoidable Adverse Impacts, for further discussion.

- Land and Shoreline Use Since most of the Lake Washington shoreline is developed for residential use, direct or indirect impacts on the adjacent properties and aquatic habitat during any construction of wastewater system improvements are likely unavoidable. To the extent possible, the City would avoid private property acquisition and displacement of residents or businesses if property is needed for a new facility (e.g., pump station). Significant unavoidable adverse impacts would occur if acquisition of private property or displacement of residents or businesses were required to implement the Plan.
- Earth Resources The No Action Alternative could result in significant impacts on the earth and soils of the Plan area in the future, as the system continues to age, should a system failure occur. The frequency and likelihood of failure of the system as it ages would also increase. Undetected leaks over an extended period could contaminate adjacent soils and increase the potential for erosion.
- Surface Water Resources Although the Management Plan Action Alternatives would reduce the risk of surface water contamination by updating the aging system, the risk of system failure cannot be completely eliminated by any of the alternatives. If a system failure occurred in or near Lake Washington and its tributaries, it would impact water quality by releasing untreated wastewater, which could degrade water quality, impact fish habitat, and create a public health and safety hazard by releasing bacterial and chemical pollutants. The risk of system failure cannot be eliminated and is considered a significant impact. The frequency, likelihood, and potential impact of failure is higher with the No Action Alternative than with any of the Action Alternatives due to the age and condition of the existing system.
- Fish and Aquatic Resources Habitat alterations from emergency repairs, along with turbidity and
 dissolved oxygen impacts associated with emergency repairs under the No Action Alternative, have
 the potential to have significant impacts on fish and aquatic resources if unplanned in-water repairs
 occur outside of the in-water work windows for fish species.
- Public Utilities Impacts from system failure could result in a loss of service for some customers
 and sewer backups. Although the likelihood of a system failure is low, no mitigation measures could
 completely eliminate the possibility of an incident or the resulting impacts. Therefore, the result of
 system failure is considered a significant adverse impact on public utilities. While this impact is
 present with all alternatives, the No Action Alternative poses a higher risk of failure than any of the
 Action Alternatives.

1.5 What are the cumulative impacts of the Management Plan?

Cumulative impacts are the effects that may result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 Code of Federal Regulations [CFR] 1508.7). Plan elements could be constructed in areas that may have recently been subject to other construction projects or will be subject to construction of future planned projects. The cumulative impacts associated with the Management Plan relate largely to construction of the Action Alternatives.

The Management Plan could potentially result in cumulative impacts associated with extended construction impacts from Plan improvements that would require long-term construction and may overlap with other construction activities in the Plan area. Long-term construction could contribute to surface water impacts from ongoing runoff based on the location of the existing infrastructure. Proper construction best management practices (BMPs) to control runoff would be implemented.

The long-term effects of construction-related impacts can negatively affect residents, businesses, and those who access or travel to the area, resulting in impacts that range from temporary inconvenience to construction fatigue on residents, businesses, and recreational activities.

Transportation capital projects and neighborhood projects may occur concurrently within the Plan area. Due to the potential extended timeframe of Plan implementation, many major ongoing projects in the Plan area are expected to be completed by the time some of the Plan improvements will be built.

The primary construction impacts related to improvements from the Action Alternatives would include traffic and slowdowns, increased dust and emissions, and construction noise. Many neighborhoods, residents, and workers may experience ongoing construction noise and traffic delays for years from unrelated construction efforts. "Construction fatigue" could be worse in neighborhoods that have seen a high level of construction for other projects in recent years or that would experience extended construction times. Impacts from construction could be offset by deferring construction in areas where construction has occurred under other Plan improvements. To the greatest extent practicable, the City would try to schedule construction projects to minimize neighborhood impacts and reduce overall construction-related impacts in affected communities. The City may need to coordinate closely with the proponents of major projects to minimize the potential for cumulative impacts; however, some level of cumulative impact is likely unavoidable. As appropriate, site-specific mitigation during the review period for each individual improvement would be developed.

The Action Alternative improvements would have long-term benefits to the environment and customers by providing a more reliable level of service and extending the life of the lake line system while minimizing risk to the environment. After construction, the lake line system would be less likely to fail and able to be maintained more efficiently, resulting in a lower risk of environmental contamination from system failures. In addition to protecting water quality in Lake Washington, this would reduce the potential for human health risks associated with potential system failure and provide benefits to existing customers. Cumulative impacts are not expected from the No Action Alternative; however, the No Action

Alternative has the highest probability of minor or major system failure out of all the alternatives, which would threaten environmental conditions.

1.6 What are the areas of concern?

The Lake Washington lake line pipes are deteriorating in many places and are known to be partially filled with debris in places. Without implementation of improvements, potential pipe failures could result in economic, environmental, and social costs, threatening sensitive shoreline habitat, closing beaches, and interrupting wastewater service to homeowners. As with all major infrastructure improvements and construction, there will be difficult decisions and areas of concern associated with implementation of the Plan. Improvements to extend the useful life of the lake line system may require a significant commitment of funding to construct major infrastructure projects or programs. Concerned parties will likely have questions about the Management Plan regarding funding and prioritization of projects, tradeoffs, and coordination with other projects that may take place concurrently. The timing of strategy or improvement implementation is a potential concern, and a wide range of viewpoints can be expected.

Timing of the construction of system improvements under the In-Water Alternative would also be restricted by the Washington Department of Fish and Wildlife (WDFW) and U.S. Army Corps of Engineers (Corps) established in-water work windows in Lake Washington for fish species. Additionally, construction of system improvements in a highly developed mostly residential setting where limited undeveloped land is available will result in difficult siting decisions that could require short-term or permanent impacts on existing land uses, including the potential for impacts on parks or recreational facilities, private property, or community facilities. These challenging siting decisions will be present particularly in the On-Shore and Upland Alternatives.

Construction-related traffic impacts will be of considerable concern to affected residents and business owners. Some neighborhoods in the Service Areas have been the location of previous major construction projects and may experience additional construction-related impacts as part of implemented alternatives. The City would follow its policies regarding the siting of wastewater system infrastructure and facilities, which give preference for City-owned or other public property and rights-of-way, but there may be concern if private sites are identified.

1.7 How has the public been involved with the development of the Management Plan and the EIS?

Public engagement is an important part of both the Management Plan and SEPA processes. The City has a Lake Washington Lake Line Management Plan website (https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/capital-projects/lake-washington-line), where they solicited comments on the Plan via an online survey, email, and phone number. Between July 2022 and December 2023, Bellevue Utilities facilitated virtual public meetings, more than 20 community briefings, several online open houses with accompanying community surveys publications, and a series of in-person community events to collect input from project neighbors and partnering jurisdictions for the Management Plan (see Appendix E for the Lake Washington Wastewater Lake Line Management Plan Community Outreach Summary [Appendix E is a new appendix included with the Final EIS]). Other engagement efforts included postcard mailings, engagement in communities in eight languages,

article publications, social media and website updates and posts, and community poster placement and distribution.

Community feedback included input on the most important consequences to consider in the event of a lake line failure, evaluation factors, and water quality. When asked about the consequences to consider in the event of a lake line failure, the majority of people prioritized the difficulty of repair or replacement of a lake line, the number of customers impacted, and the risk to the environment. In regard to evaluation factors, community members ranked impacts on land use and property easements, environmental impacts, and the feasibility of long-term maintenance as most important. Some people shared a desire to maintain Lake Washington's water quality and to protect native habitat. Additional input included a desire for long-term and sustainable solutions to prevent further disruption to Lake Washington and to prioritize the impacts on the community members over the cost of the project (see **Appendix E** for more details).

Consistent with SEPA, the City collected EIS scoping comments through a Lake Washington Sewer Line EIS Online Open House extending from July 11 to August 5, 2022, a virtual public scoping meeting on Tuesday, July 26, 2022, and via email. By the close of the scoping period, the City had received six different comments—two comments were submitted via the Engaging Bellevue comment portal, and four comments were submitted via email. Comments were summarized in a final Scoping Report that identified the major topics and themes contained in the comments, and the scoping summary was posted to the City's website. See **Appendix A** for the Scoping Report (Appendices A through C are included with the Draft EIS but not reproduced in the Final EIS).

Bellevue Utilities also hosted an online open house on the <u>EngagingBellevue.com</u> platform. The online open house was live from Monday, July 11 to Wednesday, August 31, 2023, extending longer than the scoping period. The online open house shared information about the Lake Washington lake line system, why a Management Plan and EIS are needed, and potential alternatives for the aging lake lines.

Public comments were invited on the Draft EIS, and an EIS Online Public Meeting took place to solicit comments on the Draft EIS. All public comments received during the Draft EIS comment period were considered and are addressed, and comment topics are summarized below. Comments on the Draft EIS were received from individuals, government entities, and a local corporation. Comments from individuals focused on the lake line system location related to private property and potential improvement preferences on private property. Government entity and local corporation comments were primarily related to regulations and additional analyses to be followed as the improvements are determined and move into future analyses and requested ongoing coordination. The full comments and responses are included in **Appendix D, Draft EIS Comments and Responses** (Appendix D is a new appendix included with this Final EIS).

1.8 How will the Plan be implemented?

The purpose of the Management Plan is to provide an overarching guidance document for the management of the lake line system, similar to the Wastewater System Plan, Water System Plan, or Emergency Water Supply Master Plan (City of Bellevue 2017a, 2023a). It is intended to be a living document that will change as additional data are collected, future studies and analyses are completed, City budget priorities are identified, and in tandem with changing permitting regulations. As such, the

implementation of typical operational and capital improvement strategies will require future phases of analysis at a more project-focused level.

The Management Plan will be incorporated as an appendix to the City's Wastewater System Plan at the time the Wastewater System Plan is next updated. The current version of the system plan is the 2013 Wastewater System Plan, adopted by City Council via Resolution 8771 in July 2014; the King County Council adopted the plan via Ordinance 17968 in February 2015. The Washington State Department of Ecology (Ecology) approved the Plan in May 2015. At the time of the publication, the City expects that updates to the Wastewater System Plan will begin in 2024, followed by the adoption of the Wastewater System Plan (including the Management Plan as an appendix) by City Council. Programmatic plans typically establish broad policies or guidelines for future actions or projects, potentially affecting various aspects of the environment. The City Council's adoption of the Management Plan is the SEPA action as the approval process involves governmental decision-making that may have environmental implications.

The City may need to adopt policies to support the implementation of the Upland, On-Shore, and In-Water Alternatives. Much of the existing lake line system is a legacy system that was installed before the current adopted policies. Policy modifications or additions are required to support the operational and capital improvement strategies, which could include replacement of the lake line system as part of the Service Area preferred alternative(s) (see Section 1.9 of the Final EIS for more details on policy considerations).

The policies allow the City to work toward systematically implementing the Action Alternatives to upgrade the lake line system. A failure or delay in enacting the required supporting legal framework associated with the lake line alternatives, emergency repairs, and continued operation and maintenance make the City more vulnerable to infrastructure failures over time.

Future project-level analyses will occur after the completion of the Management Plan. No new specific capital improvements or projects are planned or proposed to be constructed as a result of adoption of the Plan; however, the purpose of the Plan is to inform and guide the identification, selection, timing, and implementation of future capital improvement projects. While the capital improvement projects are being selected for implementation, the Plan also recommends interim actions (i.e., pump and flush station improvements, emergency repairs, and other system improvements) to be taken. Future repair, replacement, or maintenance activities of the wastewater lake line and associated facilities will require separate project-level environmental review. The future project-level review(s) will inform decision-makers about site-specific, project-level environmental impacts and mitigation.

1.9 What are the policy considerations?

Much of the existing City sewer lake line system was constructed ahead of development of many of the City's policies and codes. The City also has sewer system agreements in place with neighboring communities and King County. A review of these existing City policies, codes, and agreements was needed to identify modifications or additions that would be required to implement each sewer lake line alternative. Refer to Chapter 4 of the Management Plan for further discussion.

1.9.1 In-Water Alternative

Should the City proceed with the In-Water Alternative, additional federal, state, and local permitting efforts would be required to address environmental and aquatic impacts, define associated mitigation measures, and demonstrate that the Plan objectives cannot be achieved by siting the sewer lake line in any other location. For example, federal permits would include a Section 10 and/or Section 404 permit(s) from the Corps for in-water infrastructure, where the premise of the Section 404 program is to not permit discharge of dredged or fill material, including construction dredging activities, if a practicable alternative exists that is less damaging to the aquatic environment. Also, the City may need to update its Shoreline Master Program because the program currently discourages new lake line features and encourages moving new lake line facilities away from the shoreline (utility systems in a shoreline area are subject to Substantial Development Permit(s) or exemption requirements [Bellevue City Code [BCC] 20.25E.030]). Similarly, other communities served by the City's sewer system may need to update their Shoreline Master Programs.

1.9.2 On-Shore Alternative

Since the On-Shore Alternative calls for gravity pipes and force mains proximate to the Lake Washington shoreline, the City may need to update the Shoreline Master Program because of the existing language about encouraging moving new lake line facilities away from the shoreline. The City may need update its ownership and/or easement policies specific to the sewer lake line along shorelines. The City may need to update its Sewer Utility Code (BCC 24.04) to clarify who operates and maintains onshore pipe and laterals and for who pays for restoration and/or protection of structures within utility setbacks. The City may also consider establishing a shoreline buffer within its Sewer Code.

1.9.3 Upland Alternative

To implement the Upland Alternative, the City may need to update its ownership and/or easement policies specific to grinder pumps and force mains. The City may need to update its Sewer Code to:

- Change the type of service from gravity to grinder pumps.
- Specify who owns and operates/maintains upland assets (grinder pumps and force mains).
- Accommodate potential sewer configurations of the Upland Alternative (e.g., more than four properties connected to a private system).
- Allow for the City to maintain private facilities and construct new private facilities, and who obtains
 permits for their construction.

The City may need to update its ownership and/or easement policies specific to an upland sewer line and update the agreements between private landowners and the City specific to lake lines.

Upland assets would be built in compliance with Ecology Guidelines for Sewer Works Design (Ecology 2023) and City Building Code, with City Building Code to be reviewed to allow for the City to construct new private facilities as mentioned above.

1.9.4 Summary of Policy Considerations

To implement the Management Plan regardless of alternative, the City may need to conduct a detailed public process with specific alternatives identified by location. The City may need to determine financial policies regarding payment structure to fund the Plan. A review of existing City policies, codes, and sewer system agreements in place with neighboring communities and King County occurred in order to identify modifications or additions that would be required to implement each alternative. Regardless of alternative, the City may need to modify the Sewer Utility Code and update the Bellevue Utilities Wastewater System Plan.

In addition to the policy considerations listed above, the following are recommended regardless of alternative:

- Develop Operations & Maintenance (O&M) Standard Operating Procedures (SOPs) specific to the Lake Washington sewer lake line.
- Revise the Bellevue Utilities' Engineering Standards for Sewer (City of Bellevue 2024).
- Revisit the franchise agreement with Yarrow Point regarding the responsibilities for relocation of facilities.

Refer to Chapter 4, *Policy Considerations*, of the Management Plan for further details and descriptions.

1.10 What future project-level analyses will be conducted?

The Management Plan will provide a framework for the City to evaluate options for the repair and/or replacement of segments of the Lake Washington wastewater lake line system. As described in Section 1.2, this non-project EIS is being prepared to provide a basis for later review of improvements and assist in the selection of future improvements based on the Management Plan. As part of the non-project EIS process, the selection of future improvements will be informed by the analysis of potential environmental impacts from implementing the Management Plan alternatives evaluated in the EIS and be tailored to the best improvement at a specific location based on the unique location constraints. Additionally, the future improvement-level environmental analyses can incorporate and expand on the environmental issues identified during the non-project stage for each specific location and improvement type. The results of this non-project EIS will inform future improvement decisions and minimize unforeseen constraints as improvements proceed to the permitting and implementation stage.

1.11 What interim actions could occur?

The Management Plan recommends that the City implement the capital improvements in each Service Area in order of risk-based priority, where the highest risk Service Areas will be improved first for efficiency in system function, design, permitting, and outreach. Service Areas were categorized into the following planning periods for implementation of the capital improvement strategies: near-term, medium-term, and long-term, based on the overall risk score for each Service Area. However, interim improvements, such as pump and flush station improvements, designation of emergency repair funds, and other system improvements, are recommended in all Service Areas while the capital improvements (preferred alternative[s]) are being implemented during the longer planning periods (medium and long-

term). Ongoing cleaning and inspection to keep the lake line system functioning is a necessary interim action, in addition to development of a robust Emergency Response Plan and applicable resources to maintain the system and prolong the estimated useful life. Recommended pump and flush station improvements from the 2015 Wastewater Pump Station Evaluation Final Report (MSA 2015) were prioritized for implementation in the near-term planning period and would be implemented based on how large the recommended improvements to the pump and flush stations were, deficiencies occurring during the modeled 25-year storm, in addition to input from City Operations and Maintenance staff for stations with a history of performance deficiencies. See Section 2.8 of the Final EIS for the alternative and implementation period based on prioritization for each Service Area.

It is recognized that it is infeasible to immediately take action on all areas of the lake line system. It is also impossible to predict future failures of the lake line with certainty. As such, prioritization of resources and planning efforts for emergency repairs and continued operations is needed.

1.12 What emergency actions could occur?

Ongoing maintenance of the current lake line system is vital until the new operational and capital improvements strategies are in effect. However, the City may face implementation challenges because of capacity and funding. Future lake line failures are unpredictable, so prioritizing resources for emergencies is key. Recommendations focus on easing the burden of emergency responses, many of which can be handled by City staff. Emergency planning recommended to be implemented in the near-term planning period includes developing an Emergency Response Plan, developing standard details for repair applicable to the continued function or construction of a replacement in-kind system, and creating a roster of contractors for repair and procurement of materials.

The City recognizes the importance of a detailed lake line repair Emergency Response Plan to mitigate the potential environmental and public health impacts associated with such incidents. The ability to swiftly address and rectify sewer overflows is key to maintaining the public's trust of the City as a public utility provider. Having a robust lake line repair Emergency Response Plan in place is essential to minimize potential loss of service and environmental damage.

Delaying improvements to the lake line system presents risks. The inaccessibility and inherent risk of the lake line system has led to previous system failures, which are expected to continue. Mitigation requirements associated with expedited and emergency actions can be significantly higher than a planned action. The threshold between what is considered repair or replacement is largely project-specific, and different regulatory agencies may have differing interpretations. The following are potential considerations to evaluate whether a proposed project is considered a repair or replacement: (1) determining the percentage of the system being replaced, and setting a percentage threshold over which is considered replacement instead of maintenance; (2) examining the location of the system; repair if it remains in the same location (minor deviations may be permitted), replacement if not; and (3) examining the purpose of the system; repair if it serves the same purpose (minor upgrades may be permitted), replacement if not.

1.13 What are the benefits of implementation and disadvantages of delayed implementation?

Per SEPA rules (WAC 197-11-440 (5)(c)(vii)), the benefits and disadvantages of delaying the implementation of the proposal (Plan), as compared with possible approval at this time, were evaluated. Several system issues could occur over time without implementation of the Management Plan. The infrastructure may experience problems such as leaks, blockages, external damage, or failure of the pump and flush stations. The lake line system is especially at risk as various modes of failure can disrupt service for multiple customers. For instance, a mid-line blockage or malfunction at a flush or pump station could affect all customers served by that reach. Sanitary sewer issues (relative to other utility emergencies) are particularly notable due to their potential impact on the environment and public health. Since most of the lake line system is located on private property or in inaccessible areas, both planned and unplanned disturbances could substantially affect residents. Proactive, timely, and regular maintenance is essential to uphold the functionality of the existing and any future replacement lake line system. Implementation of the Management Plan will allow the City to be prepared for unexpected failures, by developing an Emergency Response Plan and securing a dedicated emergency repair fund; gathering additional data and renewing individual assets to provide a more accurate remaining useful life, which could allow for a more gradual fundraising strategy and realistic project delivery approach; and using a programmatic approach to develop a repeatable framework that can be applied to subsequent service areas.

Chapter 1. Introduction & Summary

Intentionally Blank

CHAPTER 2

Description of the Lake Washington Wastewater Lake Line Management Plan and Alternatives

2.1 Location

A portion of the Lake Washington wastewater lake line system is owned and operated by the City of Bellevue, serving customers in multiple jurisdictions. The portions managed by the City of Bellevue are located along the shoreline of Lake Washington within the following areas (see **Figure 2-1**):

- Bellevue
- Beaux Arts
- Medina
- Hunts Point
- Yarrow Point
- King County (unincorporated)

2.2 Overview of the Existing Wastewater Lake Line System

The lake line system includes approximately 14.6 miles of lake lines along the Lake Washington shoreline with 15 pump stations and eight flush stations. The lake lines are sewer pipes that follow the shoreline of Lake Washington underwater and in some cases on land adjacent to the lake. Approximately 9 miles of these pipelines are cast iron, 3 miles are asbestos cement, and 1 mile is unknown and miscellaneous material types. Most of the lake line system was constructed in the 1950s and 1960s. Wastewater enters the lake line through City-owned collectors, pump stations, and numerous private lateral side-sewers that discharge directly to the lake line.

The lake line system relies on pump and flush stations to convey wastewater to the gravity system or King County Wastewater Treatment Division (WTD) regional conveyance system. The City's lake line pump and flush stations are commonly located on the waterfront and on private properties, often resulting in difficult access. Pump and flush stations convey flows through the lake lines and then discharge flow in the upland sewer system.

June 2024



Sources: System Infrastructure: Carollo Engineers 2022; City Boundaries: WADNR 2022

Bellevue Lake Line EIS

Figure 2-1 Lake Washington Lake Line System Location

In 2016, a preliminary condition assessment showed varying degrees of aging in the lake line pipes and interior pipe linings (Tetra Tech 2016). The current system is an operational challenge, primarily because the system is located under a sensitive lake environment, and in many cases, maintenance access is only available through private property. The flat pipe slopes that have resulted from settlement and changes in the lakebed over time and the lack of pipe access for regular cleaning operations in a sensitive lake environment have made operational maintenance of the current system a challenge. The lake line system pipes are aging in many places, and some locations are known to be partially filled with debris. Since some sewer rehabilitation alternatives require a clean host pipe, cleaning of these lake lines in the future is a priority (if it can be done without risking further damage to aging pipes) if certain rehabilitation alternatives are considered. If the pipeline is kept in the same alignment as it is now, these constraints would likely continue to hinder future O&M. Additionally, components of the lake line system may begin to fail, and without advance planning could cause a loss of service to residents and extensive risk to the water quality and the sensitive lake environment.

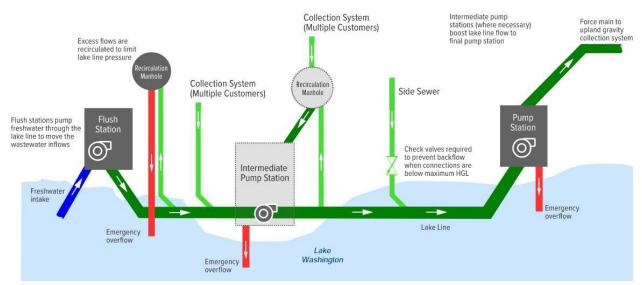
2.2.1 Components of the Lake Line System

Lake line systems require multiple components to function. An overview of the Lake Washington sewer lake line system is shown in Figure 2-1 and system components are summarized below.

- Flush Stations Flush stations that use lake water to "flush" or assist the movement of sewage through the lake line. Flush stations are typically run at least once per day on a set schedule, often overnight when sewer flows are lowest to maximize flushing effectiveness.
- **Pump Station (PS)** Pump stations are used to convey flows from and through the lake line systems and then discharge flow into the upland sewer system.
- Lake Lines Wastewater conveyance pipelines buried near the shoreline in Lake Washington or in some cases on the shoreline. In the 1990s and early 2000s, several capital improvement plan projects placed rock over the most vulnerable locations. The lake lines have unique and complex hydraulics that require different operation from the City's gravity collection mains and force mains.
- Lake Line Cleanouts and Maintenance Holes Access points to lake lines within Lake Washington that are largely only accessible by boat.
- Force Mains Pressurized pipelines conveying wastewater from pump stations to upland sewer systems.
- Recirculation Maintenance Holes Specialized maintenance holes that protect low-lying customers by limiting the pressure in the lake lines. Once the downstream operating capacity of the lake line is reached, the recirculation returns excess flows to the pump station, rather than forcing additional flow at a higher pressure that may cause backups to low-lying customers downstream.
- Customer Lateral Side-Sewers Pipes that connect from the private customer homes and business lines on land to the Lake Washington lake lines. A portion of lateral side-sewers (5 feet) are located within the City's sewer easement and are maintained by the City. Many lateral side-sewers serve more than one customer.
- **Gravity Mains** Publicly owned gravity pipelines conveying wastewater throughout the system. A limited number of gravity mains convey upland flow into the lake lines in Lake Washington.

Figure 2-2 provides a schematic of the operation and function of a typical lake line system. Typical operations are shown on the figure:

- Flows from customers enter the lake line via customer lateral side-sewers and gravity sewers.
- Sustained high flows cause higher pressures in the lake line. These flows may be from a combination of upstream flush and pump stations and infiltration and inflow (I&I) from customer lateral side-sewers and gravity sewers. The pressure is based on the elevation of the recirculation pipe within the recirculation structure and set in relation to the hydraulic gradient data charts. Once the highest pressure/flow is achieved in the lake line, the recirculation back to the wet well will cause the station to overflow due to capacity along with overcoming pumping capacity. See description of recirculation maintenance holes below.
- Recirculation maintenance holes return flow to wet wells to maintain lower lake line pressure. The
 pressure regulation that occurs is set by the physical open end of pipe elevation of the recirculation
 pipe within the recirculation maintenance hole.
- At most stations, very high wet well levels caused by excessive inflows are relieved by an overflow to Lake Washington.



*HGL = Hydraulic grade line

Figure 2-2
Typical Lake Line System Operation

2.3 Planning Context

There is potential that components of the lake line will begin to fail, potentially causing a loss of service to residents and risk to the sensitive lake environment, and advanced planning to reduce risk is necessary. Bellevue Utilities is developing the Lake Washington Wastewater Lake Line Management Plan (the Plan) to guide the repair, replacement, and maintenance of the lake line system. The Plan will ensure the City can continue to provide safe and reliable sewer service to the community and protect public health and the sensitive Lake Washington ecosystem.

The Management Plan documents a long-range approach to rehabilitation or replacement of the lake line and connected pump and flush stations. The Plan consists of eight major elements, including Introduction, Existing System, System Alternatives and Other System Improvements, Policy Considerations, Service Area Plans, Financial Considerations, Implementation Plan, and Hydraulic Model. Service Area Plan refers to the multiple capital and other system improvement strategies, including the preferred alternative(s), that are applied to specific components of the system within the Service Area (Chapter 4 of the Management Plan).

2.4 How were the Service Areas developed?

The lake line system has been divided into six "Service Areas" for analysis and planning. The Management Plan team is reviewing information about the lake line system to develop strategies for future repair, replacement, or maintenance in these Service Areas. Some sections may not require work; others will require repair, replacement, or maintenance.

The Service Areas were developed based on sections of the lake line with similar characteristics. A Service Area includes all attributes of the lake line system such as the lake line pipe, pump/flush stations, recirculation maintenance holes, cleanouts and lateral side-sewers, as well as the characteristics of the basin such as parcels/customers, topography and land cover, zoning, critical areas, docks, and bulkheads. Service Areas are used for efficiency or interdependencies of hydraulic function, construction sequencing/methodology, and permitting.

2.4.1 Overview of the Service Areas

The locations of the six Service Areas dividing the Lake Washington sewer lake line system are shown in **Figure 2-3**; the length and pump stations in each Service Area are listed in **Table 2-1**, followed by a description of each Service Area from north to south.

Portions of the shoreline of the Service Areas contain infrastructure to address erosion, including bulkheads. According to a 2001 study, 70 percent of Lake Washington's shoreline was armored with concrete, riprap, sheet pile, or another type of bulkhead (City of Seattle 2013).

Hunts Point and Yarrow Point Service Area

The Hunts Point and Yarrow Point Service Area (approximately 3.2 miles of lake line) covers the entirety of the lake line system in the cities of Hunts Point and Yarrow Point, including a portion of Yarrow Bay and Cozy Cove Bay, and fully encompasses the peninsula of Hunts Point. The Hunts Point and Yarrow Point Service Area spans from approximately 0.15 mile north of Morningside Park following the Lake Washington lake line system to incorporate the system in Hunts Point, ending where Fairweather Bay intersects the peninsula containing Fairweather Place roadway.

TABLE 2-1
SERVICE AREA LENGTH AND STATIONS

Service Area	Approximate Pipe Length (Linear Feet) ¹	Approximate Parcels Served ¹	Pump and Flush Stations
Hunts Point and Yarrow Point	16,755	587	Flush Station #1 Yarrow Point Pump Station Cozy Cove Pump Station Hunts Point Pump Station Flush Station #2
Evergreen Point	8,423	172	Evergreen East Pump Station Evergreen West Pump Station Fairweather Pump Station Flush Station #3*
Medina South	12,320	213	Flush Station #3* Lakecrest Pump Station Medina City Hall Pump Station Flush Station #4
Meydenbauer Bay	9,082	448	Flush Station #5 Flush Station #6 Parkers Pump Station Grange Pump Station Meydenbauer Pump Station
Killarney	12,965	336	Flush Station #7 Killarney Pump Station
Newport South	10,175	149	Pleasure Point Pump Station Bagley Pump Station Flush Station #8

^{1.} Numbers are approximated based on the best available GIS information and are not confirmed by survey information.

The Hunts Point and Yarrow Point Service Area serves approximately 587 parcels, which are zoned primarily as residential and contain approximately 154 private docks with interspersed bulkhead infrastructure. The existing zoning in the Hunts Point portion of the Hunts Point and Yarrow Point Service Area is single-family residential on lots ranging from 20,000 to 40,000 square feet (sq ft) (R20 and R40) and public use or town park property (Town of Hunts Point 2007 Zoning Map). Similarly, in the Yarrow Point section, the zoning is Public Uses and single-family residential (R-15). The public use zoning is composed of Road End Beach Park and the Wetherill Nature Preserve (Town of Yarrow Point 2015 Comprehensive Plan).

The Service Area is primarily low-intensity development land cover with some medium intensity developed areas and sparse evergreen and deciduous areas and woody wetlands in Wetherill Nature Preserve. All of the shoreline of the Service Areas is located within a moderate to high liquefaction hazard area. The Hunts Point and Yarrow Point Service Area also contains the following critical areas: a landslide deposit at the northernmost point of Yarrow Point adjacent to Lake Washington, and some steep slopes on the east side of Yarrow Point (see Section 3.2).

^{*} Note that Flush Station #3 is at Service Area boundaries and is necessary for the operation of the lake line system in both areas.



Sources: System Infrastructure: Carollo Engineers 2022; City Boundaries: WADNR 2022; Parcels: King County 2022

Bellevue Lake Line EIS

Figure 2-3
Lake Washington Lake Line Service Areas and System Components

June 2024

Evergreen Point Service Area

The Evergreen Point Service Area (approximately 1.6 miles of lake line) covers a small portion of Hunts Point and the western side of the Fairweather Bay peninsula north of State Route (SR)-520; spans the lake line system into the City of Medina, Evergreen Point, and the portion of the system that intersects SR-520 perpendicularly; and ends approximately 0.4 mile south of SR-520.

The Evergreen Point Service Area serves approximately 172 parcels where the existing zoning is primarily single-family residential and parks and public places, including Lake Lane Park and Fairweather Nature Preserve and Park (Town of Hunts Point 2007 Zoning Map and City of Medina 2018 Official Zoning Map). There are approximately 72 private docks along the shoreline and a City of Medina dock at Lake Lane Park. The land cover in the Service Area is primarily open space and low-intensity development with medium to high-intensity development for SR-520 and interspersed forest cover. The shoreline of the Evergreen Point Service Area is within a moderate to high liquefaction hazard area and contains a small landslide deposit along the shoreline north of NE 24th Street.

Medina South Service Area

The Medina South Service Area (approximately 2.3 miles of lake line) encompasses most of the lake line system in the City of Medina, beginning at the southern terminus of the Evergreen Point Service Area south of SR-520, and extends along the shoreline of Lake Washington following the lake line system to the edge of Groat Point at Meydenbauer Bay and covering about half of the Groat Point peninsula inland.

The Medina South Service Area serves approximately 213 parcels and is zoned primarily as single-family residential and parks and public places, including Medina Beach Park and Viewpoint Park (City of Medina 2018 Official Zoning Map). There are approximately 75 private docks along the shoreline and a City of Medina dock at Viewpoint Park at 84th Avenue NE. The land cover in the Service Area is partially evergreen forest and open space development with areas of low to medium intensity development in the southern portion. The shoreline of the Medina South Service Area is within a moderate to high liquefaction hazard area and also contains the following critical areas: interspersed areas of landslide deposits west of Evergreen Point Road near 73rd Avenue NE and steep slopes along Lake Washington for the span of Evergreen Point Road.

Meydenbauer Bay Service Area

The Meydenbauer Bay Service Area (approximately 2.1 miles of lane line) covers the eastern portion of Groat Point, the lake line system along Meydenbauer Bay and Whalers Cove, and ends approximately where SE Shoreland Drive turns south as it intersects SE Shoreland Place. The Meydenbauer Bay Service Area is located partially in the City of Medina to the west and transitions into the City of Bellevue on the east approximately where Overlake Drive E meets Lake Washington Boulevard NE.

The Meydenbauer Bay Service Area serves approximately 448 parcels, which are zoned primarily as residential, specifically single-family residential in the City of Medina and single- and multi-family residential in the City of Bellevue and contains approximately 92 private docks (City of Medina 2018 Official Zoning Map and City of Bellevue 2015 Comprehensive Plan). Clyde Beach Park and Meydenbauer Bay Beach Park are located in the residential zoned areas as a land use compatible with the low residential density. The land cover in the Service Area is mostly low and medium density with higher

intensity development near Downtown Bellevue and interspersed forested areas. The shoreline of the Meydenbauer Bay Service Area is also located within a moderate to high liquefaction hazard area and areas of landslide deposits along Overlake Drive E and SE Shoreland Drive, with steep slopes east of Overlake Drive E and adjacent to SE Shoreland Drive.

Killarney Service Area

The Killarney Service Area (approximately 2.1 miles of lake line) begins at the terminus of the Meydenbauer Bay Service Area south along the lake line system in the City of Bellevue, encompasses the lake line system in Beaux Arts Village, and extends approximately 0.2 mile south of Interstate 90 (I-90).

The Killarney Service Area is zoned primarily as single-family residential and public parks and public spaces, including Chism Beach Park, Burrows Landing Park, Chesterfield Beach Park, and Enatai Beach Park within Bellevue; it serves approximately 336 parcels and contains approximately 93 private docks (City of Bellevue 2015 Comprehensive Plan and Town of Beaux Arts Village 2015 Comprehensive Plan). The portion of the Service Area in the Town of Beaux Arts Village along the shoreline is privately owned by the Western Academy of Beaux Arts (incorporated in 1908) and was designated as Open Space under RCW 84.34 by the Town of Beaux Arts Village in 1972; single-family residential properties are on average more than 150 feet inland from the shoreline.

The land cover in the northern portion of the Service Area is a mix of open space, low-intensity development, evergreen and deciduous forested areas, and evergreen forest along the shore in Beaux Arts Village, with higher intensity development in the southern section near the I-90 bridge. The shoreline of the Killarney Service Area is located within a moderate to high liquefaction hazard area and contains the following critical areas: landslide deposits west of 94th Avenue SE and at Chism Beach Park; location atop the Seattle Fault Zone in the southern section of the Service Area, which puts the area at risk for shallow crustal earthquake and surface rupture; and steep slopes along most of the shoreline.

Newport South Service Area

The northern terminus of the Newport South Service Area (approximately 1.9 miles of lake line) is approximately 1.5 miles south of the southern terminus of the Killarney Service Area. The connecting pipeline between the Killarney Service area and the Newport South Service is located upland (the pipeline is not located in the lake in this segment). Beginning at the southern portion of Newcastle Beach Park, the Newport South Service Area extends following the lake line system in the southern portion of the City of Bellevue into unincorporated King County, parallels Interstate 405 (I-405) to the east and ends approximately 500 feet north of the Virginia Mason Athletic Center in Renton.

The Newport South Service Area serves approximately 149 parcels and within Bellevue is zoned as single-family residential and in King County as residential, with 6 dwelling units per acre (R-6) and contains approximately 98 private docks (City of Bellevue 2015 Comprehensive Plan and King County 2018 iMap). The land cover in the Service Area is mostly low to medium intensity development, which includes the I-405 roadway with some open space developed areas. Similar to the other Service Areas, the shoreline of the Newport South Service Area is also located within a moderate to high liquefaction hazard area, and contains the following critical areas: landslide deposits along Lake Washington Boulevard SE

and Hazelwood Lane SE, location atop the Seattle Fault Zone putting area at risk for shallow crustal earthquake and surface rupture, and steep slopes adjacent to I-405.

2.5 EIS Alternatives

The City is considering four different alternatives in the Management Plan. Potential solutions could take place in the lake, on land, and on individual properties. It is important to note that different areas of the system will have different selected alternatives. There will not be one alternative selected for the entire lake line.

Consistent with SEPA, the non-project EIS also evaluates the No Action Alternative, which describes what would occur if the Management Plan Action Alternatives are not implemented and includes potential operational strategies. Development of the Management Plan is also part of the No Action Alternative by identifying strategies for operation and maintenance to consider if the Action Alternatives are not fully implemented.

2.5.1 In-Water Alternative

With the In-Water Alternative, any permanent system improvements to infrastructure would be generally located below the OHWM of Lake Washington (refer to Figure 1-1 for depiction). Depending on system components and conditions, system infrastructure would be relocated in-water or replaced in-water. If an in-water pipeline is decommissioned, the decommissioning would comply with permit conditions, but the pipeline segment would likely be emptied, capped at both ends, and left in place to minimize the risk of contamination or future issues. Removal of the pipeline segment would likely cause more disturbance to the lakebed to remove it than leaving it in place.

Various pipeline replacement technologies and rehabilitation approaches could be used. Implementation methods may include: gravity sewer line via open cut construction, gravity sewer line via trenchless construction, trenchless rehabilitation (cured-in-place pipe [CIPP], spiral-wound pipe [SPR], slip lining, pipe bursting, emerging technologies), new or retrofitted pump/flush stations, and associated improvements. Existing pump/flush stations are located on-shore, and new pump flush stations would be sited either on-shore or in upland areas.

2.5.2 On-Shore Alternative

In the On-Shore Alternative, any permanent system improvements to infrastructure would be generally located between the residence, park, commercial property and/or public space, and the OHWM of Lake Washington. Depending on system components and conditions, system infrastructure would be relocated or replaced on-shore (refer to Figure 1-2 for depiction).

Implementation methods may include: gravity sewer line via open cut construction, gravity sewer line via trenchless construction, a vacuum sewer system, as well as new or retrofitted pump/flush stations and associated improvements. Many of the existing stations have been recommended for upgrades, but verification of flows to each station will be conducted if flows to the station are altered because of improvements to other portions of the lake line.

2.5.3 Upland Alternative

In the Upland Alternative, any permanent system improvements to infrastructure would be generally located upland of the residence, park, commercial property and/or public space, and within the general vicinity of the public right-of-way. Depending on system components and conditions, system infrastructure would be relocated or replaced in the upland area (refer to Figure 1-3 for depiction).

Implementation methods may include: gravity sewer line via open cut or trenchless construction, grinder pump system, vacuum sewer system, new or retrofitted pump/flush stations, and associated improvements. Grinder pump systems and vacuum valve chambers would be located below ground. These components would vary depending on how many houses are connected to the lateral side-sewer line and which type of system is used. In general, the grinder pumps and vacuum valves are roughly 2 to 3 feet in diameter. See Section 2.6 below for a description of these methods.

Associated Facilities

Improvements to associated system pump and flush stations are also considered as part of each alternative. Improvement options range from replacement or upgrade of individual components, significant upgrades (i.e., adding odor control; major repairs that do not require replacement of the structure itself), or complete replacement of the pump/flush station structure. Impact analyses for pump and flush station improvement options are included in Chapter 4 of the Draft EIS, along with the EIS alternatives impact analyses per environmental resource topic.

2.5.4 No Action Alternative

SEPA requires that an EIS "present a comparison of the environmental impacts of the reasonable alternatives and include the no action alternative" (WAC 197-11-440 (5)(vi)). The No Action Alternative provides an understanding of what would occur if the Management Plan is not fully implemented. For this EIS, the No Action Alternative is defined as implementation of the same types of operation and maintenance activities that have occurred in the past and that are likely to continue into the future. The No Action Alternative would have no capital improvements. Under the No Action Alternative, the Management Plan would be adopted; however, the Action Alternative(s) would not be implemented.

The operation and maintenance of pump stations and flush stations and associated system infrastructure would continue in the existing locations as before. Maintenance would occur as incremental and uncoordinated repairs and replacements, and the system would not function optimally. The system components will eventually fail after extending the life where feasible by conducting emergency repairs, cleaning, and condition assessments, which could result in system failures and wastewater overflows.

Operational strategies are actions that are taken to maintain or limit degradation of the existing infrastructure. Methods may include review of operations procedures, cleaning and inspection, access improvements (maintenance hole, cleanout installation), data collection, and emergency repairs. They can also include tasks for planning or preparing for capital improvements.

The current and ongoing operational strategies are described below in Section 2.7.1 and 2.7.2.

Potential Construction Methods for Capital Improvement Strategies

Construction methods would be analyzed for future improvements for feasibility and applicability under each Management Plan Action Alternative, in combination with an evaluation of other factors (as described in Section 2.8), to determine the best strategy or strategies to implement for each Service Area. For the purposes of the impact analyses (Chapter 4 of the Draft EIS), the construction approaches (i.e., gravity sewer line, vacuum sewer, pipe bursting) were categorized as either open cut construction methods or trenchless construction methods to evaluate the potential impacts on a programmatic level for each potential Action Alternative (see **Table 2-2**). The alternative and construction methods selection process will consider and weigh the impact analysis, evaluation factors, and location constraints to determine the best construction method at any given location. More details on the evaluation factors, such as environmental, regulatory, social, technical, and cost, are included in Section 2.8. Various construction methods are described in **Appendix B** (included with the Draft EIS).

TABLE 2-2
ACTION ALTERNATIVES AND CONSTRUCTION APPROACHES AND METHODS

Alternative	Construction Method	Construction Approach	
In-Water	Open Cut	Gravity Sewer Line via Open Cut Construction	
	Trenchless	Gravity Sewer Line via Trenchless Technology	
	Trenchless	Cured In-place Pipe (CIP)	
	Trenchless	Spiral Wound Pipe (SPR)	
	Trenchless	Slip Lining	
	Trenchless	Pipe Bursting	
	Trenchless	Emerging Technologies	
On-Shore	Open Cut	Gravity Sewer Line via Open Cut Construction	
	Open Cut	Vacuum Sewers	
	Trenchless	Gravity Sewer Line via Trenchless Technology	
Upland	Open Cut / Trenchless	Gravity Sewer Line via Open Cut Construction	
	Trenchless	Gravity Sewer Line via Trenchless Technology	
	Open Cut / Trenchless	Grinder Pumps	
	Open Cut	Vacuum Sewers	

2.7 Operational Strategies and Maintenance Proposed in the Management Plan

Operational strategies are actions that would be taken to maintain or limit degradation of the existing infrastructure. During the decision process for individual improvements on segments of the lake line, operational strategies and maintenance efforts may be used in conjunction with the alternatives identified.

2.7.1 Existing Maintenance

Existing maintenance for the lake line infrastructure is outlined in the 2015 City of Bellevue Wastewater System Plan and includes maintenance on the pipelines, flush and pump stations, and maintenance holes. Regular inspection, condition assessments, and cleaning are scheduled for maintenance holes and pipelines to prevent blockages or structural failure. Existing maintenance based on specific system infrastructure components is summarized below.

- Pump Stations All pump stations are maintained on a monthly schedule. Inspection and wet well maintenance are performed during the first 10 business days of each month, and scheduled repairs and maintenance activities are performed during the remainder of the month. Routine minor repairs and cleaning and lubrication of pumps, controls, and pumping equipment are performed at each visit. Wet wells are hosed down until sludge and debris are discharged.
- Flush Station Similar to pump station maintenance, flush stations are checked monthly to see that pumps, motors, dehumidifiers, and the 24-hour clock are working properly. The 24-hour clock controls operation of the flush station. Cell phone communication provides remote control of on/off capabilities of the flush stations.
- Lake Pipelines Lake pipelines, classified as special case pipelines, have limited access, complicating preventive maintenance activities. Lake lines are cleaned primarily on an immediate response basis; some lake lines are on a regular cleaning schedule depending on past observed overflows and/or tendency for sedimentation. Cleanouts are opened and visually inspected for grease buildup.
- Maintenance Holes Inspections are part of an ongoing maintenance hole survey program, and maintenance holes near lakes and other critical area buffers are surveyed more frequently. All maintenance holes are visually inspected for structural defects, system problems, and accessibility, with a goal of visually inspecting one-third of the system annually.

Maintenance on the existing wastewater lake line system includes implementation of emergency repair. Damage to wastewater system components could lead to spills of sewage or the inability of the treatment plant to process waste, allowing it to flow untreated into the local environment. Emergency repair activities are separate from planned repair and existing maintenance planning. Because of the immediate nature of emergencies, the repair options available are limited and focus on reducing the threat to the proper performance of essential wastewater system functions and services. The consequences associated with emergency repairs may be higher than typical maintenance operations since repair options would be limited and the required constrained timeframe.

2.7.2 Operational Strategies

Several actions can be taken to limit degradation of existing infrastructure as the Management Plan is being implemented. Operational strategies specific to the lake line system are categorized as follows and described in **Table 2-3**:

- Operations Procedure Review
- Cleaning and Inspections

- Access Improvements
- Data Collection
- Emergency Repair Planning

TABLE 2-3 OPERATIONAL STRATEGIES

Operational Strategy	Description				
Operations Procedure Review					
Review Standard Operating Procedures (SOPs)	Review the City's catalog of standard operating procedures specific to the lake line. Document and formalize any other routine maintenance tasks completed by staff that are not SOPs. Develop new SOPs where existing procedures are deficient.				
Development Review	Ensure that current standards relevant to the lake line are enforced. This could include permitting and inspection of any new lake line lateral side-sewers, docks, bulkheads, or significant grading activities.				
Facility Review	Develop standard procedures for asset inventories and condition assessments, to uniformly evaluate needed facility improvements.				
Cleaning and Inspections	s				
Cleaning and Inspection	Continue feasible routine cleaning and inspection of elements critical to lake line function (i.e., removal of debris from flush station and pump intakes, solids removal from pipes, etc.).				
	Consider purchasing additional or specialized maintenance equipment to expand City's inhouse maintenance capabilities.				
	Evaluate the use of non-traditional cleaning methods (such as ice pigging that uses a two-phase ice and liquid slurry) to prevent further damage to aging pipes.				
	Inspect existing flush station inlet screens and replace if damaged or missing.				
	Conduct public outreach to educate customers on the importance of keeping FOG out of the sewer system.				
Cleanout Modifications	Continue work to raise cleanouts above lake surface.				
Access Improvements					
Lake Line	Improve future access and ability to locate lake line. This may include installation of vaults under the docks that can isolate a segment and allow bypass to clean between vaults.				
	Construct additional maintenance holes or access points near known occurrences of debris accumulation. Maintenance holes and vaults should be designed with sumps or other means of debris collection and removal in mind.				
	Reduce public access to pump and flush stations by installing fencing or other barriers to reduce risk of damage or injury.				
Pump and Flush	Construct permanent access for necessary maintenance equipment.				
Station Access	Obtain legal access to all pump and flush stations that currently do not have easements or public rights-of-way that supports how it is regularly accessed.				
	Coordinate with property owners to maintain existing landscaping around existing cleanouts, pump and flush stations to facilitate O&M access.				
Data Collection					
Survey	Confirm pipe size, material, and location of lake line pipe relative to shoreline. Feasibility of capital improvements depends primarily on location due to permitting restrictions and construction method limitations.				
	Confirm locations of exposed lake line pipe and monitor as storms may move rocks and expose new areas of pipe that could be subject to damage from nearshore activities.				
Overflow Monitoring	Implement a recirculation maintenance hole and pump station overflow monitoring system for recirculation maintenance holes that is linked to the telemetry/SCADA system.				

Operational Strategy	Description			
HGL at Cleanouts	 Monitor and log the HGL at cleanouts. This information can be used to identify failures in the lake line system that lead to unusual operating conditions, identify properties at highest risk for overflow damages, and calibration of the lake line system hydraulic model. 			
I&I Evaluation	Complete I&I evaluation in areas where leaks are suspected (areas experiencing unusual pump/flush station cycling, previous breaks, visible leaks).			
Customer Complaints	Conduct public outreach to educate customers on what type of issues to report, how to reduce risks of damaging the existing infrastructure, and proper complaint channels. Log complaints in a database that is identifiable by location and relationship to lake line system.			
Flush/Pump Station Operation	 Monitor the existing operation of flush and pump stations closely for deviations from typical operating conditions that may be indicative of a failure within the lake line system. This may require purchasing and installing additional monitoring equipment. Install permanent flow meters downstream of pump stations to measure the combined customer and flushing flows. 			
Lateral Side-sewer Inventory	Develop a database of existing lateral side-sewers identifying known parameters such as age pipe material, location, replacement/repair history, and properties served.			
Structure Inventory	Develop a database of existing structures with the potential to damage the existing lake line of City-owned portion of lateral side-sewers (i.e., bulkheads, docks, landscaping features).			
Condition Assessment	 Collect additional pipe assessments at locations near previous evaluations to track pipe degradation over time. Conduct condition assessments of pump and flush stations that do not have a current evaluation. Perform UT measurement of the pipe wall (or using other emerging pipe assessment technologies) where feasible and as allowed by permitting constraints. Conduct at regular 			
Emergency Repair Plann	intervals to validate RUL estimates.			
Overflow SOP	Develop plans to respond to overflows of the lake line system. Plan should identify documentation and reporting procedures, mitigation measures, and cleanup standards.			
Pipe Failure SOP	Develop a plan to respond to failures of the lake line pipe based on pipe size, material, condition, and location.			
	dard operating procedure; FOG = fats, oils, and grease; HGL = hydraulic grade line; SCADA = supervisory control and ition; I&I = infiltration and inflow; UT = ultrasonic thickness; RUL = remaining useful life			

2.8 Implementation Approach and Timing

The Lake Washington Wastewater Lake Line Management Plan is intended to be used by the City to identify long-range operational and capital improvement strategies for the future repair, replacement, and maintenance of the existing sewer line located underwater and on land adjacent to Lake Washington. In combination with the identification of the preferred alternative (In-Water, Onshore, or Upland Alternative) for future repair and replacement of the aging system components, further evaluation and analysis will be performed to determine the best-suited construction method(s) at individual location(s) to implement the operational and capital improvement strategies. Improvements at the pump stations will be evaluated in each Service Area as part of the alternative selection process. Several evaluation factors such as environmental, regulatory, social, technical, and cost can be used by the City to select the alternative(s) to be implemented.

Different alternatives may be selected depending on the Service Area. Evaluation factors that will be considered will include the following factors (refer to **Figure 2-4**).

- **Permitting** Evaluate the effort required to prepare and obtain the necessary permits from local, state, and federal agencies.
- Environmental Impact Evaluate the extent of the impacts on regulated environmental resources (lake, wetland, stream, or associated buffers) and geologic hazards.
- **Right-of-Way and Easement** Evaluate the extent to which land use rights would need to be acquired or modified to implement the alternative.
- **Performance**, **O&M** Evaluate how the location of the lake line system impacts the ease and feasibility of long-term maintenance.
- **Constructability** Evaluate the technical feasibility and risk associated with constructing the alternative.
- Cost Evaluate the relative total cost of the alternative, including design, construction, mitigation, permitting, and life cycle.
- Local Community and Stakeholders Evaluate the potential various impacts on or challenges to local residents, community groups and stakeholders.

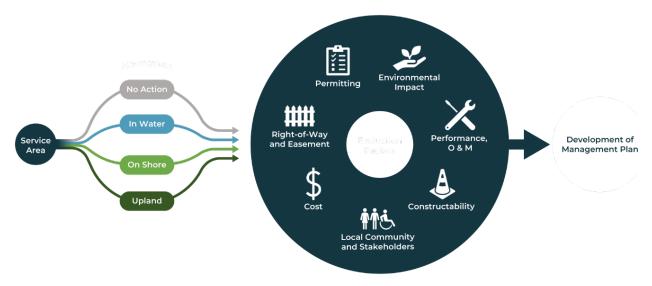


Figure 2-4
Alternatives Evaluation Process

The Management Plan includes risk-based prioritization and recommended capital and other system improvements of the lake line system that are intended to establish location priorities and guide future capital improvements; however, no specific capital projects are planned or proposed to be constructed as a result of the Management Plan. Recommended improvements are expected to be proposed for the near-term, medium-term, and long-term planning periods.

The Management Plan recommends the City implement the capital improvement strategies, preferred alternative(s) in each Service Area, in order of risk-based priority, with the highest risk Service Areas improved first for efficiency in system function, design, permitting, and outreach. The recommended timing for the proposed pump and flush station improvements in a Service Area does not follow the proposed implementation period for the Service Area that was based on the risk ranking of the overall Service Area. Per the 2015 Wastewater Pump Station Evaluation Final Report (MSA 2015), there are still pump and flush station that need improvements, and the interim recommended improvements have been proposed for the medium-term planning implementation period and prioritized for implementation by size of the recommended improvements, stations with a history of performance deficiencies and modeled performance deficiencies. Similarly, interim cleaning and inspection and pipe assessment projects have been split into phases so the City can complete these activities over the near-term planning period.

Only one Service Area, Meydenbauer Bay, has an implementation period for the preferred alternative(s) within the near-term planning period; however, interim actions including pump and flush station improvements, designation of emergency repair funds, and other system improvements are recommended in the same planning period across all Service Areas. Near-term improvements will largely depend on the availability of City resources. Implementation of near-term planning period activities for the Meydenbauer Bay preferred alternative include pump and flush station improvements (beginning with Evergreen Point pump and flush station improvements), cleaning and inspection, emergency planning, data collection and ongoing routine inspections, monitoring, complaint logging, emergency repairs, and public outreach and education.

The Newport South, Hunts Point and Yarrow Point, Killarney, Evergreen Point and Medina South Service Areas have implementation periods within the medium-term planning period, and Medina South Service Area has a recommended long-term implementation (planning) period. The Management Plan outlines the estimated implementation costs by planning period and outlines the typical alternative implementation and planning, which would apply to the Meydenbauer Bay Service Area first of the Service Areas.

2.8.1 Typical Implementation

Implementation of the capital improvement strategies, preferred alternative(s) in each Service Area, will occur in phases. The typical implementation phases will likely include the following: initiation of the capital improvements, a pre-design phase, design phase, and construction. The City can refine this process as the projects from each alternative are implemented in each Service Area. The typical implementation phases of the operational and capital improvement strategies, including the preferred alternative(s), in each Service Area are illustrated in **Figure 2-5**.



Figure 2-5
Typical Implementation Phases

Initiation steps could include project definition, scoping, preparation of the contractor acquirement, and internal data collection, followed by the pre-design phase. This phase may include conducting a conditions assessment, field data collection, additional analyses and modeling, planning-level cost estimating, and public outreach. During design, the next phase, agreements with agencies and jurisdictions could occur including easement and property acquisition agreements. Permitting, property acquisition, and additional public outreach and project-level cost estimating could occur during this step. The final phase is construction, where the capital improvements are constructed, the portion of the lake line system that was updated is operational, the replaced/existing lake line system portion is abandoned, and lessons learned are documented for future lake line projects. The construction phase may also include actions such as permit compliance and starting new or transitioning City staff to train for O&M of the portion of the lake line that was improved.

The implementation of the operational and capital improvement strategies, including the preferred alternative(s), in a given Service Area would encompass a relatively large geographic project area. As such, it is recommended that the City identify other planned improvements (transportation, other City utilities, major franchise utility projects) in the area to coordinate construction, permitting, and restoration where feasible. In addition to potential cost savings for the City, this can help prevent construction fatigue for residents, workers, and the traveling public in project areas.

CHAPTER 8

References and Source Material

- Alicea, Simone. 2017. Meydenbauer Bay Whaling Fleet Proves There Are Old Things in Bellevue. KNKX, July 3. URL: https://www.knkx.org/news/2017-07-03/meydenbauer-bay-whaling-fleet-proves-there-are-old-things-in-bellevue, accessed October 5, 2022.
- American Public Works Association. 1977. Standard Specifications for Municipal Public Works Construction and Supplement No. 1. Prepared by the Washington State Chapter of the American Public Works Association.
- Ames, Kenneth M., and Herbert G. Maschner. 1999. Peoples of the Northwest Coast: Their Archaeology and Prehistory. Thames and Hudson, New York.
- Anderson Map Company. 1907. Anderson's Atlas of King County. URL: http://www.historicmapworks.com/Map/US/1250019/Page+19+++Township+25+North++Range+5+East/King+County+1907/Washington/, accessed March 25, 2021.
- Baldwin, Garth L., James J. Schumacher, and Alex L. Berry. 2021. A Cultural Resources Assessment for Lakeside Bulkhead and Pier Improvements at 3423 Hunts Point Road, Hunts Point (TPN:353490-0505), King County, Washington. Prepared for Joe Sabey by Drayton Archaeology, Blaine. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Beaux Arts Village. 2015. Town of Beaux Arts Village 2015-2035 Comprehensive Plan. URL: https://beauxarts-wa.gov/documents/153/FINAL_CompPlan_w_Attachments_July_2015_.pdf.
- Berger, Knute. 2013. How one artsy visionary grew Bellevue out of his horse pasture. Crosscut. September 30. URL: https://crosscut.com/2013/10/nudist-arts-colony-spawned-downtown-bellevue, accessed October 7, 2022.
- Berger, Margaret. 2017. Cultural Resources Assessment for the Clapp Beach Restoration Project, King County, Washington. Prepared for Seaborn Pile Driving by Cultural Resource Consultants, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Bixby, Ginny. 1969. Marymoor Prehistoric Indian Site National Register of Historic Places Inventory Nomination Form. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Blukis Onat, Astrida R., Maury E. Morgenstein, Philippe D. LeTourneau, Robert P. Stone, Jerre Kosta, and Paula Johnson. 2001. Archaeological Investigations at stuwe'yuq Site 45KI464, Tolt River, King County, WA. Prepared for Seattle Public Utilities by BOAS, Inc., Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Blukis Onat, Astrida R., Roger A. Kiers, and Philippe D. LeTourneau. 2005. Preliminary Ethnographic and Geoarchaeological Study of the SR 520 Bridge Replacement and HOV Project. Prepared for Washington State Department of Transportation by BOAS, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

- Boersema, Jana. 2012. Cultural Resources Survey for Bulkhead Replacement Project at King County Assessor's Parcel 353490-0450, Hunts Point, Washington. Prepared for Mark and Daryl Russinovich by Cascadia Archaeology, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Boersema, Jana, and Teresa Trost. 2012. Cultural Resource Survey for the Beaux Arts Shoreline Restoration Project, King County, Washington. Prepared for Western Academy of Beaux Arts by Cascadia Archaeology, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Booth, Derek B. 1994. Glaciofluvial infilling and scour of the Puget Lowland, Washington, during ice-sheet glaciation. Geology 22:695–698.
- Boyd, Robert T. 1990. Demographic History. In Northwest Coast, edited by Wayne Suttles, pp. 135-148. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Buerge, David M. 1984. Indian Lake Washington. The Weekly 7 August: 29-33. Seattle.
- Bundy, Barbara E. 2015. Cultural Resources Assessment Meydenbauer Bay Park Phase I. Prepared for City of Bellevue Parks and Community Services Department by Anchor QEA, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Caltrans (California Department of Transportation). 2022. Caltrans Division of Environmental Analysis On-Demand Trainings Noise Impact Analysis for the Generalist/Planner. URL: http://etp.dot.ca.gov/env/files/noise-impact-analysis/index.htm.
- Cascade Water Alliance. 2022. Water Supply Overview. URL: https://cascadewater.org/water-supply-plan-overview/.
- CH2M Hill and IFC Jones & Stokes. 2009. SR 520, Medina to SR 202: Eastside Transit and HOV Project Environmental Assessment, Historic Built Environment and Archaeological Resources Technical Memorandum. Prepared for Washington State Department of Transportation by CH2M Hill and ICF Jones and Stokes, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- City of Bellevue. 2012. Annexation Map. URL: https://apps.bellevuewa.gov/gisdownload/PDF/Planning/annex_eb.pdf, accessed October 6, 2022.
- City of Bellevue. 2014. Bellevue Transit Master Plan. URL: https://bellevuewa.gov/sites/default/files/media/pdf document/TMP-Bellevue-Transit-Master-Plan-2014.pdf.
- City of Bellevue. 2015. Comprehensive Plan. URL: https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan.
- City of Bellevue. 2015. *Shoreline Master Program 32-33*. Accessed August 2022. URL: https://bellevuewa.gov/sites/default/files/media/file/2019-07/SMP%202018%200312no%20heron%20boat%202.indd_.pdf.
- City of Bellevue. 2015. Wastewater System Plan. URL: https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/utilities-plans-and-reports/wastewater-system-plan.
- City of Bellevue. 2017. City of Bellevue Transportation Department Design Manual. URL: https://wsdot.wa.gov/publications/manuals/fulltext/M51-02/Chapter5.pdf.

- City of Bellevue. 2017a. Water System Plan. URL: https://bellevuewa.gov/city-government/departments/utilities-projects-plans-standards/utilities-plans-and-reports/water-system-plan.
- City of Bellevue. 2019. City of Bellevue Comprehensive Plan. URL: https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan.
- City of Bellevue. 2022. 2021–2027 Adopted Capital Investment Program Plan. URL: https://bellevuewa.gov/sites/default/files/media/pdf_document/2021/CIP%20%202021-2022%20Adopted%20Budget.pdf.
- City of Bellevue. 2022. Bellevue City Code Ch 9.18 Noise Control. URL: https://bellevue.municipal.codes/BCC/9.18.060.
- City of Bellevue. 2022. Drinking Water Quality. URL: <a href="https://bellevuewa.gov/city-government/departments/utilities/manage-your-utility-services/water/drinking-water-quality#:~:text=Bellevue's%20high%2Dquality%20drinking%20water,that%20your%20water%20is%20safe.
- City of Bellevue. 2022a. Bellevue Map Viewer. Accessed August 2022. URL: https://cobgis.maps.arcgis.com/apps/webappviewer/index.html?id=e1748172d4f34f1eb3710032a351cd57.
- City of Bellevue. 2022b. Neighborhood Profiles and Neighborhood Liaisons. URL: https://bellevuewa.gov/city-government/departments/community-development/neighborhoods/neighborhood-profiles, accessed October 6, 2022.
- City of Bellevue. 2023. Projects in Your Neighborhood map. URL: https://gtxexternalpr.bellevuewa.gov/Html5Viewer/?viewer=piyn.
- City of Bellevue. 2023a. Emergency Water Supply Master Plan. URL: https://bellevuewa.gov/emergency-water-supply-master-plan.
- City of Bellevue. 2024. Sewer Engineering Standards. URL: https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/utilities-codes-and-standards/sewer-engineering-standards.
- City of Medina. 2010. Medina City Council Regular Meeting Minutes: Medina City Hall Council Chambers, September 13, 2010; 6:30 pm. URL: https://mcclibraryfunctions.azurewebsites.us/api/munidocDownload/31202/4588026ff721c/pdf.
- City of Medina. 2015. Comprehensive Plan. URL: https://mcclibraryfunctions.azurewebsites.us/api/munidocDownload/31202/465f8c318caba/pdf.
- City of Medina. 2016. "Local Info." Archived March 4 by the Wayback Machine. URL: https://www.medina-wa.gov/index.asp?Type=B_BASIC&SEC=%7B0EF1CA38-E35B-489B-8446-8B309737C420%7D, accessed October 4, 2022.
- City of Medina. 2018. Medina Zoning Map. Accessed August 2022. URL: https://library.municode.com/wa/medina/munidocs/munidocs?nodeId=47fd1d82a2906.
- City of Medina. 2022. Medina City Code. Title 8 Health and Safety Code of Ordinances. URL: https://library.municode.com/wa/medina/codes/code_of_ordinances?nodeId=CD_ORD_TIT8HESA_CH8.06NO.

- City of Medina. 2022. Subtitle 16.6. Shoreline Master Program, Medina, Washington Code of Ordinances. Accessed August 2022. URL: https://library.municode.com/wa/medina/codes/code of ordinances?nodeId=TIT16UNDECO SUBTITLE 16.6SHMAPR.
- City of Medina. 2023. City Projects Map. URL: https://www.medina-wa.gov/projects.
- City of Renton. 2019. Water Supply Service Area City of Renton and Adjacent Water Systems. URL: <a href="https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_7922657/File/City%20Hall/Public%20Works/Utility%20Systems/Water%20Quality%20Engineering/Renton's%20Drinking%20Water/WaterSupply2019REV2.pdf.
- City of Seattle. 2013. Green Shorelines Bulkhead alternatives for a healthier Lake Washington. URL: https://www.seattle.gov/documents/Departments/SDCI/Vault/ShorelineMasterProgram/GreenShorelines.pdf.
- Clutter, Stephen, and Joni Balter. 1991. Bellevue Is A Perfect Host For 'Edge-City' Conference -- It's Gaining Identity, Says Geographer. Seattle Times, September 26. URL: https://archive.seattletimes.com/archive/?date=19910926&slug=1307612, accessed October 7, 2022.
- Confluence Environmental Company. 2022a. Lake Washington Wastewater Lake Line Management Plan Environmental Impact Statement Aquatic Environmental Conditions. Prepared for the City of Bellevue. June 2022.
- Confluence Environmental Company. 2022b. Lake Washington Wastewater Lake Line Management Plan. Aquatic Impacts Assessment. Prepared for the City of Bellevue. December 2022.
- Cornwall, Warren. 2002. A history with mansions. Seattle Times, December 6. URL: https://archive.seattletimes.com/archive/?date=20021206&slug=goldcoast06e, accessed October 5, 2022.
- Corps (U.S. Army Corps of Engineers). 2020. Navigable Waters of the United States in Washington State. URL: https://www.nws.usace.army.mil/Portals/27/docs/regulatory2/FormsEtc/NavigableSec10List-v20200212.pdf?ver=2020-02-12-191659-707.
- DAHP (Department of Archaeology and Historic Preservation). 2010. Statewide Predictive Model. Last updated 2010. URL: http://www.dahp.wa.gov/, accessed October 3, 2022.
- DAHP (Department of Archaeology and Historic Preservation). 2022. Washington Information System for Architectural and Archaeological Records Data (WISAARD) database. Secure database, http://www.dahp.wa.gov/, accessed October 3, 2022.
- Department of Justice. 2010. 2010 ADA Standards for Accessible Design. September 15, 2010. URL: https://www.ada.gov/law-and-regs/design-standards/.
- Dougherty, Phil. 2015a. Hunts Point Thumbnail History. HistoryLink.org Essay No. 11125. Electronic resource; https://www.historylink.org/File/11125, accessed October 4, 2022.
- Dougherty, Phil. 2015b. Yarrow Point incorporates on June 15, 1959. HistoryLink.org Essay No. 11146. Electronic resource; https://www.historylink.org/File/11146#:~:text=The%20community%20got%20its%20name,Wordsworth%20(1770%2D1850), accessed October 4, 2022.
- Dougherty, Phil. 2015c. Medina Thumbnail History. HistoryLink.org Essay No. 1059. Electronic resource; https://www.historylink.org/File/1059, accessed October 4, 2022.

- Dougherty, Phil. 2016. Beaux Arts Village Thumbnail History. HistoryLink.org Essay No. 11184. Electronic resource; https://www.historylink.org/file/11184, accessed October 7, 2022.
- Duwamish Tribe. 2018. History of the Duwamish People. URL: https://www.duwamishtribe.org/history, accessed October 2022.
- Eastside Heritage Center. 2006. Lake Washington: The East Side. Charleston: Arcadia Publishing.
- Eastside Heritage Center. 2019. Meydenbauer Bay. March 6. URL: https://eastsideheritagecenter.org/news/2019/3/7/eastside-stories-meydenbauer-bay, accessed October 5, 2022.
- Ecology (Washington State Department of Ecology). 2018. State Environmental Policy Act Handbook, 2018 Updates. URL: https://ecology.wa.gov/DOE/files/4c/4c9fec2b-5e6f-44b5-bf13-b253e72a4ea1.pdf.
- Ecology (Washington State Department of Ecology). 2022a. Water Quality Assessment and 303(d) list. URL: https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d.
- Ecology (Washington State Department of Ecology). 2022b. Water Quality Atlas Map. URL: https://apps.ecology.wa.gov/waterqualityatlas/wqa/map.
- Ecology (Washington State Department of Ecology). 2022c. What's in My Neighborhood: Toxics Cleanup. URL: https://apps.ecology.wa.gov/neighborhood/?lat=47.500000&lon=-121.000000&zoom=7&radius=false.
- Ecology (Washington State Department of Ecology). 2023. Criteria for Sewage Works Design (Orange Book). URL: https://apps.ecology.wa.gov/publications/summarypages/9837.html.
- Elder, J. Tait, and Patrick Reed. 2011. Results of Archaeological Monitoring of Geotechnical Borings within the SR 520 Limits of Construction. Prepared for Washington State Department of Transportation by ICF International, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Elder, J. Tait, and Stacy Schneyder. 2012. Cultural Resources Investigations in the SR 520, I-5 to Medina Lake Washington Geographic Segment. Prepared for Washington State Department of Transportation by ICF International, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Elder, J. Tait, Stacy Schneyder, Melissa Cascella, Alex Stevenson, and Kurt Perkins. 2011. SR 520 Bridge Replacement and HOV Program, I-5 to Medina: Bridge Replacement and HOV Project, Section 106 Technical Report: Volume I, Archaeology. Prepared for Washington State Department of Transportation by ICF International, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

- EPA (U.S. Environmental Protection Agency). 1972. The Metro Story: How Citizens Cleaned Up Lake Washington. U.S. Government Printing Office. URL:
 - https://nepis.epa.gov/Exe/ZyNET.exe/940099D5.txt?ZyActionD=ZyDocument&Client=EPA&Index=Prior%20to%201976&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C70THRU75%5CTXT%5C00000032%5C940099D5.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-
 - &MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Displa y=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page &MaximumPages=1&ZyEntry=1&slide#, accessed January 24, 2023.
- EPA (U.S. Environmental Protection Agency). 2022. Criteria-Air-Pollutants. URL: https://www.epa.gov/criteria-air-pollutants.
- ESA (Environmental Science Associates). 2015. Eastside Rail Corridor Regional Trail Master Plan Project, Historic and Cultural Resources. Prepared for King County Parks by Environmental Science Associates, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- FHWA (Federal Highway Administration). 2009. Manual on Uniform Traffic Control Devices for Streets and Highways. URL: https://mutcd.fhwa.dot.gov/pdfs/2009r1r2r3/mutcd2009r1r2r3edition.pdf.
- Goetz, Linda Naoi. 2006. Cultural Resources Assessment of NE 24th Street Improvements, Bellevue, Washington. Prepared by Landau Associates for KPG Inc. and the Washington State Department of Transportation. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Gray, Connie Walker. 2008. Cultural Resources Survey of SR 520 Urban Partnership Agreement Variable Tolling Project, Evergreen Point Bridge, Seattle, King County, Washington. Prepared by Washington State Department of Transportation, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Gray, Connie Walker, Christopher Hetzel, Melissa Cascella, S. Orton, and Lori Durio Price. 2011. SR 520 Bridge Replacement and HOV Program, I-5 to Medina: Bridge Replacement and HOV Project, Section 106 Technical Report: Volume 2, Built Environment. Prepared for Washington State Department of Transportation by Gray Lane Preservation and Planning, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Greengo, Robert E. and Robert Houston. 1970. Excavations at the Marymoor Site. Department of Anthropology, University of Washington, Seattle.
- Hedlund, Gerald, John A. Ross, and Robert K. Sutton. 1978. Cultural Resource Overview of the Green River Watershed Area. Project Report No. 19. Mt. Baker-Snoqualmie National Forest Contract No. 03057. Washington Archaeological Research Center, Washington State University, Pullman.
- Hilbert, Vi, Jay Miller, and Zalmai Zahir. 2001. Puget Sound Geography: Original Manuscript from T. T. Waterman. Lushootseed Press, Federal Way, Washington.
- Hunts Point. 2015. Hunts Point Comprehensive Plan 2015-2035. URL: https://huntspoint-wa.gov/vertical/sites/%7BC1015BB4-DD89-4FBF-BEA2-28483C12923F%7D/uploads/HP CompPlan Final 2015.pdf.

- ICF. 2021. Cultural Resources Discipline Report: I-405, Ripley Land Stream Connection Project, Renton, King County, Washington. Prepared for Washington State Department of Transportation ESO Megaprojects by ICF, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Ives, Ryan, Jennifer Thomas, Stephen Emerson, Jason Jones, and Timothy J. Smith. 2016. Cultural Resources Survey for the Washington State Department of Transportation's I-405 Renton to Bellevue Improvement Project: SR 169 to I-90, King County, Washington. Prepared for Washington State Department of Transportation, Northwest Region by Archaeological and Historical Services, Cheney. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Jones & Stokes. 2005. Archaeological Survey of the Housing at the Crossroads Kensington Square Project, City of Bellevue, King County, Washington. Prepared by Jones & Stokes for Housing at the Crossroads. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Jordan, A. J., Stacy Schneyder, and Shane Sparks. 2009. State of Washington Archaeological Site Inventory Form: 45KI945. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Juell, Kenneth E. 2001. Cultural Resources Inventory of the Proposed Washington Light Lanes Project. Prepared for Universal Communication Networks by Northwest Archaeological Associates, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Kauhi, Tonya C. 2013. Statewide Predictive Model. Prepared for the Department of Archaeology and Historic Preservation by GeoEngineers, Tacoma, WA. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Kelly, Katherine. 2012. Results of an Archaeological Assessment of the Proposed Construction Project at 8925 Groat Point Drive in Medina, King County, Washington. Prepared for Watershed Company by Cultural Resource Consultants, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Kidd, Robert. 1964. A Synthesis of Western Washington Prehistory from the Perspective of Three Occupation Sites. Unpublished Master's Thesis. Department of Anthropology, University of Washington, Seattle.
- King County. 2016. Road Design and Construction Standards. King County Department of Transportation Road Services. URL: https://kingcounty.gov/~/media/depts/local-services/roads/2016-road-standards/2016-king-county-road-standards.ashx?la=en.
- King County. 2016. 2016 King County Comprehensive Plan. URL: https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/2016CompPlanUpdate/2022UpdateTo2016-asAmended/2016_KCCP_KingCountyComprehensive_Planupdated_12062022_with_Ord_19555.ashx?la=en.
- King County. 2016. King County Comprehensive Plan. Chapter 6, Shorelines. 6-72–6-73. Accessed August 2022. URL: <a href="https://kingcounty.gov/en/legacy/council/CompPlan/2016compplan/-/media/council/documents/CompPlan/2016/FullCouncil/adoptedplan/Attachment_A-KingCountyComprehensivePlan-120516.ashx?la=en&hash=CEB88B9AA3EF80DFFB55AA194C02B604.

- King County. 2016. Invasive Animal Species in King County: New Zealand Mudsnails. URL: https://kingcounty.gov/services/environment/animals-and-plants/biodiversity/threats/Invasives/Mudsnails.aspx.
- King County. 2016. The Lake Washington story. URL: https://kingcounty.gov/en/legacy/services/environment/water-and-land/lakes/lakes-of-king-county/lake-washington/lake-washington-story, accessed January 24, 2023.
- King County. 2018. King County iMap. Accessed August 2022. URL: https://kingcounty.gov/en/legacy/services/gis/maps/imap.
- King County. 2022. King County Code Title 12 Public Peace, Safety and Morals. URL: https://aqua.kingcounty.gov/council/clerk/code/15_Title_12.pdf.
- King County. 2022a. King County Noxious Weed List. URL: https://kingcounty.gov/en/legacy/services/environment/animals-and-plants/noxious-weeds/laws/list.
- King County. 2022b. King County iMap. URL: https://gismaps.kingcounty.gov/iMap/.
- King County. 2023. King County capital projects map. URL: https://kingcounty.gov/services/environment/water-and-land/projects-map.aspx.
- King County. 2023. King County's 2023-24 Biennial Budget. URL: https://kingcounty.gov/council/budget.aspx#:~:text=The%20proposed%20budget%2C%20set%20to%20fund%20King%20County,Metro%20on%20target%20for%20zero-emission%20transit%20by%202035.
- Knauss, Suzanne. 2003. Yarrow Point Thumbnail History. HistoryLink.org Essay No. 4212. Electronic resource; https://www.historylink.org/File/4212, accessed March 25, 2021.
- Kopperl, Robert, Charles Hodges, Christian Miss, Johonna Shea, and Alecia Spooner. 2016. Archaeology of King County, Washington: A Context Statement for Native American Archaeological Resources. Prepared for King County Historic Preservation Program by SWCA Environmental Consultants, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Kroll Map Company. 1912. Kroll's Atlas of King County. URL: http://www.historicmapworks.com/Map/US/503576/Township+25+N+Range+5+E/King+County+1912/Washington/, accessed March 25, 2021.
- Kroll Map Company. 1926. Kroll's Atlas of King County. URL: http://www.historicmapworks.com/Map/US/1610888/Plate+019+++T++25+N+++R++5+E+++Lake+ Washington++Kirkland++Lake+Sammamish++Houghton++Redmond/King+County+1926/Washingt on/, accessed March 25, 2021.
- Lane, Barbara. 1975. Anthropological Report on the Identity, Treaty Status and Fisheries of the Snoqualmie Tribe of Indians. Prepared for the U.S. Department of the Interior and the Snoqualmie Indian Tribe. On file, ESA, Seattle.
- Lane, Barbara. 1988. The Duwamish Indians and the Muckleshoot and Port Madison Indian Reservations. Prepared for the Suquamish Indian Tribe and Muckleshoot Indian Tribe. On file, ESA, Seattle.
- LeWarne, Charles R. 1997. Bellevues I Have Known: Reflections on the Evolution of an "Edge City." Columbia Magazine, Summer: Vol 11, No. 2. Electronic document on file, Washington State Historical Society, Tacoma. URL: https://www.washingtonhistory.org/wp-content/uploads/2020/04/bellevues-known-1.pdf, accessed October 7, 2022.

- Lothrop, Colin W., and Bryan Hoyt. 2014. State of Washington Archaeological Site Inventory Form: 45KI1217. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Manetas, Cassandra. 2015. SR 520, Medina to SR 202: Eastside Transit and HOV Project Archaeological Monitoring Report. Prepared by Washington State Department of Transportation ESO Megaprojects, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Marino, Cesare. 1990. History of Western Washington Since 1846. In Northwest Coast, edited by Wayne Suttles, pp. 169-179. Handbook of North American Indians, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.
- Marsha, Alia. 2017. How Bellevue businessmen who stoked fears benefited after Japanese American incarceration. February 19, The Seattle Globalist. URL: https://seattleglobalist.com/2017/02/19/antijapanese-movement-led-development-bellevue/62732. Accessed October 7, 2022.
- Matson, R.G., and Gary Coupland. 1995. The Prehistory of the Northwest Coast. Academic Press, San Diego.
- McDonald, Lucile. 2000. Bellevue: Its First 100 Years. Revised edition. Canada: The Bellevue Historical Society.
- Medina City Council. 2022. 2023–2028 Six Year Capital Improvement Plan (CIP). URL: https://www.medina-wa.gov/sites/default/files/fileattachments/public_works/page/2538/_2023-2028 six year cip tip non tip.pdf.
- Metsker Map Company. 1936. Metsker's Atlas of King County. URL: http://www.historicmapworks.com/Map/US/1260051/Township+25+N+++Range+5+E+++Redmond+Bellevue++Houghton++Kirkland/King+County+1936/Washington/, accessed March 25, 2021.
- Meydenbauer Bay Yacht Club. 2022. History. URL: https://mbycwa.org/history, accessed October 5, 2022.
- Miller, Jay. 2014. Elders Dialog: Ed Davis and Vi Hilbert Discuss Native Puget Sound Language, Culture, and Heritage. Lushootseed Press, Federal Way, Washington.
- Miller, Jay, and Astrida R. Blukis Onat. 2004. Winds, Waterways, and Weirs: Ethnographic Study of the Central Link Light Rail Corridor. Prepared for Sound Transit, Central Link Light Rail, by BOAS, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- MSA (Murray, Smith & Associates, Inc.). 2015. Wastewater Pump Station Evaluation, Final Report. Prepared for City of Bellevue. May 2015.
- Muckleshoot Indian Tribe. 2022. History of the Muckleshoot Indian Tribe and its Reservation. URL: http://www.muckleshoot.nsn.us/about-us/overview.aspx, accessed October 2022.
- Murphy, Laura, and Lynn L. Larson. 2003. Final Ripley Lane Pipeline Excavation Project (CIP #200799) Archaeological Resources Monitoring. Prepared for the King County Department of Transportation, Road Services Division by Larson Anthropological Archaeological Services Limited, Gig Harbor. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Nelson, Charles M. 1990. Prehistory of the Puget Sound Region in Northwest Coast. In Northwest Coast, edited by Wayne Suttles, pp. 481-484. Handbook of North American Indians, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

- NETROnline. 2022. 1936, 1964, 1968, 1969, 1980, 1981, 1990, 1998, 2002, 2006, 2009, 2011, and 2013 aerial imagery. URL: https://www.historicaerials.com/viewer, accessed October 4, 2022.
- NIDCD (National Institute on Deafness and Other Communication Disorders). 2017. Listen Up! Protect Your Hearing (infographic). URL: https://www.nidcd.nih.gov/health/listen-infographic.
- NIDCD (National Institute on Deafness and Other Communication Disorders). 2022. Noise-Induced Hearing Loss. URL: https://www.nidcd.nih.gov/health/noise-induced-hearing-loss#3.
- NOAA (National Oceanic and Atmospheric Administration). 2022. Point Source Pollution Sources. URL: <a href="https://oceanservice.noaa.gov/education/tutorial_pollution/03pointsource.html#:~:text=The%20U.S._%20Environmental%20Protection%20Agency%20(EPA)%20defines%20point%20source%20pollution,common%20types%20of%20point%20sources.
- NOAA Fisheries (National Oceanic and Atmospheric Administration, National Marine Fisheries Service). 2022. Understanding Town of Hunts Point. 2022. Hunts Point Municipal Code Chapter 8.4 Noise Control. URL: https://www.codepublishing.com/WA/HuntsPoint/#!/HuntsPoint08/HuntsPoint0840.html.
- NPMS (National Pipeline Mapping System). Public Viewer. URL: https://pvnpms.phmsa.dot.gov/PublicViewer/.
- Obniski, Monica. 2008. "The Arts and Crafts Movement in America." The Met. URL: https://www.metmuseum.org/toah/hd/acam/hd acam.htm, accessed October 6, 2022.
- OSHA (U.S. Department of Labor Occupational Safety and Health Administration). 2022. Occupational Safety and Health Administration. (OSHA) Technical Manual Section III: Chapter 5. URL: https://www.osha.gov/otm/section-3-health-hazards/chapter-5.
- Pacific Aerial Surveys. 1937. Aerial Photograph, Township 25 North, Range 5 East, Section 18. URL: https://info.kingcounty.gov/transportation/kcdot/roads/mapandrecordscenter/mapvault/Default.aspx?DocId=-iDToARMXio1, accessed March 25, 2021.
- Palmer, Stephen P.; Magsino, Sammantha L.; Bilderback, Eric L.; Poelstra, James L.; Folger, Derek S.; Niggemann, Rebecca A. 2004. Liquefaction susceptibility and site class maps of Washington State, by county: Washington Division of Geology and Earth Resources Open File Report 2004-20, 1 DVD [78 plates, 45 p. text].
- Pappas, Evan. 2019. "Bellevue celebrates Meydenbauer Bay Park Grand Opening." Bellevue Reporter, March 21. URL: https://www.bellevuereporter.com/news/bellevue-celebrates-maydenbauer-bay-park-grand-opening/, accessed October 5, 2022.
- Phillips, James W. 1972. Washington State Place Names. 3rd ed. (revised). University of Washington Press, Seattle.
- PSCAA (Puget Sound Clean Air Agency). 2011. Criteria-Air-Pollutants. URL: https://pscleanair.org/163/Criteria-Air-Pollutants.
- PSCAA (Puget Sound Clean Air Agency). 2021. 2021 Air Quality Data Summary: August 2022. URL: <a href="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId="https://www.pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PD
- PSE (Puget Sound Energy). 2019. Puget Sound Energy service area map. URL: https://www.pse.com/en/Customer-Service/pse-locations-2.

- Republic Services. 2022. Environmental services for a more sustainable world. URL: https://www.republicservices.com/.
- Rinck, Brandy A. 2017. Cultural Resources Assessment for the 152nd Avenue Main Street Project, Redmond, King County, Washington. Prepared for Widener & Associates by Cultural Resources Consultants. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Seattle Times. 2003. How the Bellevue years go by. March 25. URL: https://www.seattletimes.com/seattle-news/eastside/how-the-bellevue-years-go-by/, accessed October 6, 2022.
- Snoqualmie Indian Tribe. 2020. Snoqualmie Sovereignty. URL: https://snoqualmierightsday.snoqualmietribeweb.us, accessed October 2022.
- Sound in the Ocean. URL: https://www.fisheries.noaa.gov/insight/understanding-sound-ocean#.
- State of Washington. 2022. Revised Code of Washington (RCW). URL: https://app.leg.wa.gov/RCW/default.aspx.
- Stein, Alan J. 1998. Bellevue Thumbnail History. November 9. History Link essay 313. URL: https://www.historylink.org/File/313, accessed October 5, 2022.
- Stevenson, Alexander, Shane Sparks, and Stacy Schneyder. 2011. SR 520, Medina to SR 202: Eastside Transit and HOV Project, Local Connector Trail Archaeological Survey. Prepared for Washington State Department of Transportation by ICF International, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Suquamish Tribe. 2015. History and Culture. URL: https://suquamish.nsn.us/home/about-us/history-culture/, accessed October 2022.
- Suttles, Wayne, and Barbara Lane. 1990. Southern Coast Salish. In Northwest Coast, edited by Wayne Suttles, pp. 485-502. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Takami, David. 1998. Japanese Farming. HistoryLink.org Essay No. 298. URL: https://www.historylink.org/File/298, accessed March 25, 2021.
- Tetra Tech. 2016. Sewer Lake Line Condition Assessment Phase 2 Lake Washington Final Report.
- The Noise Control Act of 1974. Washington Administrative Code Chapter 173-60 (1974 and Supp. 2000). URL: https://app.leg.wa.gov/WAC/default.aspx?cite=173-60.
- Thrush, Coll P. 2007. Native Seattle: Histories from the Crossing-Over Place. University of Washington Press, Seattle.
- Town of Beaux Arts Village. 2014. Shoreline Master Program 44-45. Accessed August 2022. URL: https://beauxarts-wa.gov/documents/153/Shoreline Management Plan Final-2014.pdf.
- Town of Beaux Arts Village. 2015. Town of Beaux Arts Village 2015–2035 Comprehensive Plan 16. Accessed August 2022. URL: https://beauxarts-wa.gov/documents/153/FINAL CompPlan w Attachments July 2015 .pdf.
- Town of Beaux Arts Village. 2021. Beaux Arts Capital Investment Plan [2022 2027] Exhibit A. URL: https://www.beauxarts-wa.gov/documents/153/Copy of CIP 2022-2027 final.pdf.

- Town of Beaux Arts Village. 2021. Beaux Arts Village Municipal Code. URL: https://www.codepublishing.com/WA/BeauxArts/#!/BeauxArts18/BeauxArts1820.html.
- Town of Beaux Arts Village. 2022. History. URL: https://beauxarts-wa.gov/history, accessed October 7, 2022.
- Town of Beaux Arts Village. 2022. Water Department. URL: https://beauxarts-wa.gov/water-department.
- Town of Hunts Point. 2007. Town of Hunts Point Zoning Map. Accessed August 2022. URL: https://huntspoint-wa.gov/vertical/sites/%7BC1015BB4-DD89-4FBF-BEA2-28483C12923F%7D/uploads/Hunts Point Zoning 2007 0807.pdf.
- Town of Hunts Point. 2015. Comprehensive Plan 2015 2035. URL: https://huntspoint-wa.gov/vertical/sites/%7BC1015BB4-DD89-4FBF-BEA2-28483C12923F%7D/uploads/HP CompPlan Final 2015.pdf.
- Town of Hunts Point. 2015. *Hunts Point Shoreline Master Program 46*. Accessed August 2022. URL: https://huntspoint-wa.gov/vertical/sites/%7BC1015BB4-DD89-4FBF-BEA2-28483C12923F%7D/uploads/Hunts_Point_SMP_2015_final.pdf.
- Town of Hunts Point. 2022. History of Hunts Point. URL: https://huntspoint-wa.gov/index.asp?SEC=2CCFDCC1-40AF-4FAB-8B8E-37C5A0BCB767, accessed October 4, 2022.
- Town of Yarrow Point. 2015. Town of Yarrow Point Comprehensive Plan. URL: https://yarrowpointwa.gov/wp-content/uploads/2018/02/Yarrow-Point-Comprehensive-Plan-Adopted-September-2015.pdf.
- Town of Yarrow Point. 2017. *Shoreline Master Program 52-53*. August 2022. URL: https://yarrowpointwa.gov/wp-content/uploads/2019/07/2019-Yarrow-Point-Shoreline-Master-Program.pdf.
- Town of Yarrow Point. 2017. *Yarrow Point Zoning Map*. Accessed August 2022. URL: https://yarrowpointwa.gov/wp-content/uploads/2018/04/Zoning-Map-Updated-2017.pdf.
- Town of Yarrow Point. 2022. Capital Improvement Plan (2023 2028) Transportation Improvement Plan (2023–2028). URL: https://yarrowpointwa.gov/capital-improvement-plan/.
- Town of Yarrow Point. 2022. Yarrow Point Municipal Code. Chapter 8.06 Public Noise Disturbances. URL: https://www.codepublishing.com/WA/YarrowPoint/#!/html/YarrowPoint08/YarrowPoint0806.html.
- Troost, Kathy G. 2011. Geomorphology and Shoreline History of Lake Washington, Union Bay, and Portage Bay Technical Memorandum. Prepared by Troost Geological Consulting, Seattle, Washington. Prepared for Washington State Department of Transportation and Federal Highway Administration.
- Troost, Kathy G., and Derek B. Booth. 2008. Geology of Seattle and the Seattle area, Washington. In Landslides and Engineering Geology of the Seattle, Washington, Area, edited by Rex L. Baum, Jonathan W. Godt, and Lynn M. Highland, pp. 1–35. Reviews in Engineering Geology XX. The Geological Society of America, Boulder.
- Troost, Kathy G., Derek B. Booth, and William T. Laprade. 2003. Quaternary geology of Seattle. Field Guide 4. Geological Society of America, Boulder.

- Troost, Kathy G., Derek B. Booth, and William T. Laprade. 2003. Quaternary Geology of Seattle. In Western Cordillera and Adjacent Areas, edited by Terry Swanson, pp. 267–284. Field Guide No. 4. Geological Society of America, Boulder, Colorado.
- Tulalip Tribes. 2016. Who We Are. URL: https://www.tulaliptribes-nsn.gov/WhoWeAre/AboutUs, accessed October 2022.
- U.S. Bureau of Land Management. 1977. Township 25 North, Range 5 East Master Title Plat. URL: https://www.blm.gov/or/landrecords/survey/yPlatView1_2.php?path=PWA&name=250n050em01.jpg, accessed October 4, 2022.
- USFWS (U.S. Fish and Wildlife Service). 2007. National Bald Eagle Management Guidelines. URL: https://www.fws.gov/sites/default/files/documents/national-bald-eagle-management-guidelines 0.pdf.
- USFWS (U.S. Fish and Wildlife Service). 2022. Information for Planning and Consultation. URL: https://ipac.ecosphere.fws.gov/location/index.
- USFWS (U.S. Fish and Wildlife Service). 2022a. Wetlands Mapper. URL: https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper.
- USGS (U.S. Geological Survey). 1897. Snohomish, WA. 30' Series Quadrangle. U.S. Geological Survey, Reston, Virginia.
- USGS (U.S. Geological Survey). 1901. Seattle, WA. 30' Series Quadrangle. U.S. Geological Survey, Reston, Virginia.
- USGS (U.S. Geological Survey). 1956. Kirkland, WA. 7.5' Series Quadrangle. U.S. Geological Survey, Reston, Virginia.
- USGS (U.S. Geological Survey). 1967. Kirkland, WA. 7.5' Series Quadrangle. U.S. Geological Survey, Reston, Virginia.
- USGS (U.S. Geological Survey). 1976. Kirkland, WA. 7.5' Series Quadrangle. U.S. Geological Survey, Reston, Virginia.
- USGS (U.S. Geological Survey). 2022. U.S. Quaternary Faults Mapper. URL: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf.
- U.S. Surveyor General. 1871. Township 25 North, Range 5 East Survey Map. URL: https://www.blm.gov/or/landrecords/survey/yPlatView1_2.php?path=PWA&name=t250n050e_001.jpg, accessed March 25, 2021.
- Valentine, A.L. 1907. Yarrow, King County, Washington. Plat Map. URL: https://recordsearch.kingcounty.gov/LandmarkWeb/Document/GetDocumentByBookPage/?booktype=PLAT&booknumber=015&pagenumber=092, accessed March 25, 2021.
- Waterman, T.T. 1922. The Geographical Names Used by the Indians of the Pacific Coast. Geographical Review 12 (2):175–194.
- WDFW (Washington Department of Fish and Wildlife). 2022. Lake Washington. URL: https://wdfw.wa.gov/fishing/locations/lowland-lakes/lake-washington.
- WDFW. 2023. Using Priority Habitats and Species (PHS) on the webmap. URL: https://wdfw.wa.gov/species-habitats/at-risk/phs/maps/using.

- WDNR (Washington Department of Natural Resources). 2022. Washington Geologic Information Portal. URL: https://geologyportal.dnr.wa.gov/2d-view#natural_hazards?-13608270,-13602198,6036231,6040856?Seismic Scenarios.
- Wilma, David. 2000. Metro Council, formed to clean up Lake Washington, holds inaugural meeting on October 1, 1958. History Link Essay 1353. URL: https://historylink.org/File/1353, accessed January 24, 2023.
- WSDOT (Washington State Department of Transportation). 2017. Manual on Uniform Traffic Control Devices for Streets and Highways. URL: https://apps.leg.wa.gov/WAC/default.aspx?cite=468-9.
- WSDOT (Washington State Department of Transportation). 2018. Washington State Park and Rides (arcgis.com). URL: https://wsdot.maps.arcgis.com/apps/webappviewer/index.html?id=31a3d9a42681442096fbbd38590f3af7.
- WSDOT (Washington State Department of Transportation). 2021. Work Zone Traffic Control. Publication No. M 51-02.10. May 2021.
- WSDOT (Washington State Department of Transportation). 2022. WSDOT GeoPortal. URL: https://wsdot.wa.gov/data/tools/geoportal/.
- WSDOT (Washington State Department of Transportation). 2023. Standard Specifications for Road, Bridge, and Municipal Construction. URL: https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/manuals/standard-specifications-road-bridge-and-municipal-construction.
- Yamamoto, Christopher, Chanda R. Schneider, and Chris Lockwood. 2021a. Cultural Resources Assessment 4053 Hunts Point Road, Hunts Point, King County, Washington. Prepared for Seaborn Pile Driving by Environmental Science Associates, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.
- Yamamoto, Christopher, Chanda R. Schneider, and Chris Lockwood. 2021b. Cultural Resources Assessment 4601 91st Place NE, Yarrow Point, King County, Washington. Prepared for Seaborn Pile Driving by Environmental Science Associates, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

Appendix D **Draft EIS Comments and Responses**

APPENDIX D

Draft EIS Comments and Responses

Summary of Comments and Responses on the Draft EIS

This summary includes all comments received on the Draft EIS and responses to each of the comments. The Draft EIS was issued on Thursday April 6, 2023, and included a 30-day comment period, which ended on Monday May 8, 2023. A virtual public meeting on the Management Plan and a virtual public meeting on the Draft EIS was held on Tuesday April 18, 2023, from 6 to 7 p.m. with 12 attendees.

During the Draft EIS comment period, comments were submitted through the EIS comments email address, lakelineeis@bellevuewa.gov, and via phone call to the Project Manager. The Draft EIS received a total of seven comments from individuals and agencies.

This summary includes all of the comments received (by comment number), as organized by comments from individuals and government entities, and the City's responses to the comments received.

Reponses to Comments

No.	Name of Commenter/Comment	Response	
Comr	Comments from Individuals		
1-1	Dan Williams Hello, and thank you for the April 6 notice in the mail. I'm a resident of 4224 95th Ave NE, Yarrow Point, WA 98004. My question is just whether the Lake Line runs along or through my property. Thank you.	The property located at 4224 95th Avenue NE, Yarrow Point, WA is adjacent to Lake Washington and may contain infrastructure associated with the lake line system. Refer to your property title information for specifics on lake line infrastructure location. Appendix A in the Management Plan (https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/capital-projects/lake-washington-line) contains mapping of infrastructure in the Plan area.	
2-1	Richard Fade Hello, Thanks for the information on this process and running the public meeting next week. I have read the Draft EIS Statement in it's entirety – also the Lake Line Web site. The Draft EIS documents a broad range of options with dramatically different impacts on the community and adjacent landowners – but there is no proposed or draft plan. Public may not realistically provide any comment or reaction until such time a proposal is presented, all you are going to get with the information provided is – an understanding you are taking many complex factors under consideration and, fear. As a resident with a property adjacent to one of your pump stations (current tax assessment >\$12m) I have a keen interest in what you are thinking to do next door to my home? Thank you!	Thank you for your comment. The intent of the Draft Programmatic EIS is to study the potential environmental impacts associated with the potential actions that are included in the Management Plan. A non-project EIS was prepared on the Management Plan because the Plan is not a specific project, but rather a series of potential solutions for the lake line. The EIS was prepared to disclose probable significant adverse impacts associated with implementation of the Management Plan to repair, replace, and/or maintain the aging Lake Washington wastewater system. As such, improvement-specific impacts are not evaluated because they have not been identified at this time. The EIS documents a broad range of options to provide decision-makers and the public with an impartial analysis of the potential environmental impacts associated with implementation of the proposed Management Plan. The improvements selected in individual locations will vary between strategies for future repair, replacement, or maintenance. Some sections may not require work; others will require repair, replacement, or maintenance. Further evaluation and analysis will be performed to determine the best-suited construction method(s) at each individual location to implement the operational and capital improvement strategies. The City will select the alternative(s) to be implemented based on several evaluation factors such as environmental, regulatory, social, technical, and cost (further detailed in Section 2.8 of the Draft and Final EIS). As individual improvements are identified, site-specific environmental review and analyses will be conducted as required prior to implementation, which may include coordination with property owners of affected properties.	

Name of Commenter/Comment Re

3-1 Richard Fade

Thank you for your kindness and patience in listening to me today and for explaining the process and many considerations the team evaluating the Lake Line Plan is taking into account. I have two observations I would like to share for your teams consideration. After speaking with you I realized my first comments are relative to an adjacent ongoing project not the Lake Line Project itself – I re-read the EIS and see this listed in the "Public Projects and Actions in the Plan Area" table: S16 Sewer Pump Station Improvements – Cozy Cove, Hunts Point, Evergreen East and West, and Fairweather Pump Stations

Our property sits immediately adjacent and shares a property line to Evergreen East Pump Station – the existing facility is about 30 ft from the side wall of our home. This underground utility vault / pump station has worked well over the years – it suffers from old age and is in need of updating (some seals no longer function and it is difficult to contain fumes in the summer months when wastewater is not moving efficiently). My comment is – this facility is within public land – at the end of Lake Lane – as such it should be relatively easy to perform whatever excavation and replacement to update this pump station with minimal costs and mitigation. I would think replacing and continuing to operate this pump facility as it is today – updated with new more effective equipment is in the best interest of the City.

Response

Thank you for your input and feedback on the existing facility adjacent to your property. During the alternatives selection process as part of the Management Plan, the pump and flush stations will be evaluated for improvement options, which may include replacement or upgrade of individual components (such as the underground utility vault and seals), significant upgrades (e.g., adding odor control; major repairs that do not require replacement of the structure itself), or complete replacement of the pump/flush station structure. As noted in the Response to Comment 2-1, the City will consider several factors during the alternative selection process for the pump and flush stations (as detailed in Sections 1.8 and 2.8 of the Draft and Final EIS). The recommendation for the Evergreen East Pump Station in the Evergreen Point Service Area is noted.

My second comment is related to the Lake Line Project itself .. I would like to address the future location of any proposed new or replacement line, I realize there is not a "one size fits all" approach which is going to work for every location and that the SEPA goes to great detail to represent the options and consequences of several approaches. In the area of Evergreen Point – specifically on the Fairweather Bay (east) side of the Point (my comment will be more uniformly true for this side of the point as the west side has more varied topography but may experience similar issues).

I would like to strongly recommend the plan consider various methods to replace the line with the current "In Water" location or "Upland" alternatives as is detailed in the DRAFT EIS

- The current In Water method has served the community well for decades and is an established easement in the community.
- I do not believe "Alternative 2 On Shore" should be considered for this east side of Evergreen Point and potential the west side as well.
 - Most residents had to install a rock bulkhead as part of the process of establishing a residence – this would mean the path of any pipeline (and easement) would need to move up slope from those bulkheads to be installed – this would put any easement and construction literally at many residents "back door". Hugely disruptive and intrusive.
 - The area has extensive development and landscaping the cost to rip up and restore these properties, including patios, landscaping, trees, hedges would be significant and prohibitive – especially in light of the fact you have

In combination with the identification of the preferred alternative (In-Water, On-Shore, or Upland Alternative) for future repair and replacement of the aging system, further evaluation and analysis will be performed to determine the best-suited construction method(s) at each individual location to implement the operational and capital improvement strategies. The alternative and construction methods selection process in all the Service Areas, including the Evergreen Point Service Area, will consider and weigh the impact analysis, evaluation factors (including impacts on private property owners), and location constraints to determine the best construction method in each location.

As part of the process, the potential impacts on or challenges to local residents, community groups, and stakeholders, including construction impacts on residents and properties, will inform the selection of location-specific improvements to be evaluated. The right-of-way and easement evaluation factor will consider the extent to which land use rights would need to be acquired or modified to implement the alternative and will be a consideration in the selection of improvements when access is required, or existing infrastructure lies on private land. As individual improvements are identified, site-specific environmental review and analyses will be conducted prior to implementation, which may include coordination with property owners of affected properties.

Name of Commenter/Comment Response an existing easement where the pipeline is currently located – in the lake – which has served the community for decades. Placing an easement on so many homeowner's property when and easy easement already exists is likely to draw significant opposition from residents. Maintenance / Access can also be a problem with the Onshore Plan – today the pipeline runs offshore in many places but it is also on shore under existing homeowners properties. I have been told in the past 24 months, by a City of Bellevue Wastewater technician – when servicing the pump station next to our home – that in summer when there is significantly less waste water flow – the pipeline stagnates a bit and needs to be stimulated / flushed - in one location in particular which is on the NW side of Evergreen Point which is underground under a residence sidewalk to their dock. The City employee explained to me "it would help us a lot to be able have access there but the City is reluctant to rip up a residence property to provide it ..." moving to an Alternative 2 makes access problematic years after the installation and restoration of residents property. I am not making this up this is an existing problem where the City has an onshore easement under a residents vard today, why would you create more of this? In summary why would the City consider abandoning an existing easement which has worked well for decades in favor of imposing easements (real impact on property values) and significant development hardship on residents adjacent to the Lake? The Upland option should be considered where public right of way can be disturbed to install pipeline and provide access for ongoing maintenance. This is similar to the Alternative 1 in that is an existing easement, controlled by the City - which can be manipulated without minimal impact on residents of Bellevue / Medina / Hunts or Yarrow Point. Thank you for considering my points above. 4-1 Meredith Shank Thank you for your comments. In combination with the identification of the preferred alternative (In-Water, On-Shore, or Upland Alternative) for future repair and HI – thanks for the opportunity to comment. I live in Yarrow Point and would like to replacement of the aging system, further evaluation and analysis will be performed see the sewer pipe removed from the water where there are too many potential to determine the best-suited construction method(s) at individual location(s) to harms to the water, fish and wildlife and our human in and on water recreation. From implement the operational and capital improvement strategies. The alternative and looking at the EIS. I believe that locating the lake line on land using the trenchless construction methods selection process in all the Service Areas, including the method provides the least harm to the environment and to neighbors over the long Service Area containing Yarrow Point, will consider and weigh the impact analysis, term. evaluation factors (including environmental impact), and location constraints to determine the best construction method in each location. The process will evaluate Thank you. the extent of the impacts on regulated environmental resources (lake, wetland, stream, or associated buffers) and geologic hazards in the near term and long term and will inform the selection of location-specific improvements. The "Performance, Operations, and Maintenance" Evaluation Factor will evaluate the feasibility of longterm maintenance and potential impacts (factors further detailed in Section 2.8 of the Draft and Final EIS). As individual improvements are identified, site-specific environmental review and analyses will be conducted prior to implementation.

No. Name of Commenter/Comment

Response

Comments from Government Entities

Washington Department of Archaeology & Historic Preservation (DAHP)

Please see the attached letter from the DAHP commenting on the Draft EIS for the Lake Washington Lake Line Management Plan. As outlined in our letter, we agree that all three project alternatives have a high likelihood of impacting archaeological resources. The In Water Alternative is less likely to encounter protected archaeological resources, however, all three alternatives may impact resources. Therefore we agree with the recommendations in the Draft EIS that a cultural resources survey be conducted in advance of ground disturbing activities associated with the project once an alternative is selected.

One note. The report states that Governor's Executive Order 05-05 will have to be followed if State capital budget funded is used for the project. In the letter we note that the executive order has been updated to Governor's Executive Order 21-02. We recommend the Final EIS be updated to include the updated number.

Responses to the comments in the attached letter are presented below. The agreement with the potential impacts on archaeological resources under the alternatives is noted. The recommendation to conduct a cultural resources survey before ground-disturbing activities associated with projects is noted and is consistent with Section 5.9, *Measures to Reduce or Eliminate Potential Impacts on Cultural Resources*, of the Draft EIS.

The Final EIS will reference the latest executive order number, currently Governor's Executive Order 21-02.

COMMENT **RESPONSE**

Comment No. 5



Allyson Brooks Ph.D., Director State Historic Preservation Officer

April 21, 2023

Reilly Pittman City of Bellevue

In future correspondence please refer to: Project Tracking Code: 2022-12-08376

Property: City of Bellevue _ Lake Washington Wastewater Lake Line Management Plan _ 22-112187-LE

Archaeological Survey Work Requested; Built Environment Assessment of Any Historical Period Buildings/Structures Impacted

Dear Reilly Pittman:

5-1

The Washington State Historic Preservation Officer (SHPO) and Department of Archaeology and Historic Preservation (DAHP) has been provided with documentation regarding the above referenced project. As a result of our review, our professional opinion is that the project area has the potential to contain archaeological resources and has the potential to impact built environment

We have reviewed the DRAFT EIS Document and agree with the conclusions and recommendations in Section 3.9 Cultural Resources. Specifically, we agree that all three alternatives (In Water, On Shore, and Upland) have the potential to impact protected archaeological resources

- 5-2
- The In Water alternative, as it is off-shore of the historic shoreline, is most likely to impact submerged resources, such as precontact period dugout canoes and fish weirs, historical period boats and piers, and other sunken resources.
- Both the On Shore and Upland alternatives have the potential to impact precontact period villages, camps, and processing areas, as well as a variety of historical period resources. Although the On Shore and Upland areas are heavily developed in many areas. archaeological sites are often found below roads and historical period construction and are often found during utility replacement projects in urban areas.

5-3

The DAHP recommends that once an alternative is selected, that a professional archaeologist assess the route of the proposed work through subsurface testing, and/or monitoring if testing in advance is not feasible due to hardscaping and existing utilities. If any historical period buildings/structures may be impacted by the project, appropriate Historic Property Inventory Forms (HPIFs) should be completed and reviewed by the DAHP. The DAHP requests the opportunity to review any archaeological survey/monitoring plans and any resulting cultural resource reports and

5-4

We also recommend consultation with the concerned Tribes' cultural committees and staff regarding cultural resource issues prior to the initiation of ground disturbing activities.

> State of Washington • Department of Archaeology & Historic Preservation P.O. Box 48343 • Olympia, Washington 98504-8343 • (360) 586-3065 www.dahp.wa.gov



- 5-1 Comment noted.
- 5-2 Your comments are noted. The statements regarding the potential impacts from the In-Water Alternative on submerged resources and the On-Shore and Upland Alternatives on precontact period areas, historical period resources, and archaeological sites are consistent with Section 4.9.1 of the Draft EIS.
- The recommendation that a professional archaeologist assess the proposed 5-3 improvements is noted and is consistent with Section 5.9, Measures to Reduce or Eliminate Potential Impacts on Cultural Resources, of the Draft EIS. Potential mitigation measures in the Draft EIS also include preparation and implementation of an Archaeological Monitoring Plan and monitoring of select areas by a professional archaeologist during ground-disturbing activities. The City will continue to coordinate with DAHP as individual improvements are identified and move forward. As appropriate, Historic Property Inventory Forms and archaeological survey/monitoring plans and/or cultural resource reports and documents will be submitted for review.
- The recommendation to consult with concerned Tribes' cultural committees and 5-4 staff is noted and consistent with the potential measures in Section 5.9, Measures to Reduce or Eliminate Potential Impacts on Cultural Resources, of the Draft EIS.

	COMMENT		RESPONSE
5-5 5-6 5-7		5-5 5-6 5-7	The potential for adherence to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800, is noted and is consistent with the Fact Sheet for the Draft EIS, which identifies Section 106 as one of the potential consultations and approvals that may be required as individual improvements are identified. The Final EIS will reference the latest executive order number, currently Governor's Executive Order 21-02. The latest Governor's Executive Order will be followed if state capital budget funding is utilized for any individual improvements. The City will continue to coordinate with DAHP as individual improvements are identified and move forward. The DAHP Project Number (Project Tracking Code: 2022-12-08376) will be attached to any future correspondence with DAHP accordingly.
	Stephanie Jolivette Local Governments Archaeologist (360) 628-2755 Stephanie Jolivette@dahp.wa.gov		

No.	Name of Commenter/Comment	Response
6	King County Wastewater Treatment Division Attached please find King County Wastewater Treatment Division's comments on the Draft Environmental Impact Statement (DEIS) for the Lake Washington Wastewater Lake Line Management Plan (LWWLL), project 22-112187-LE. Our agency has facilities in the vicinity of the proposed project site. Thank you for the opportunity to review and comment on this project.	Responses to the comments in the attached letter are presented below. Coordination with King County Wastewater Treatment Division (WTD) will be conducted for any proposed improvements or projects located in the vicinity of the listed facilities under the jurisdiction of King County.

COMMENT RESPONSE,

Comment No. 6



King County

Department of Natural Resources and Parks Wastewater Treatment Division King Street Center, KSC-NR-5505 201 South Jackson Street Seattle, WA 98104-3855

May 1, 2023

sent via email: LakeLineEIS@Bellevuewa.gov KC OAP Ref No.: 1951

Reilly Pittman City of Bellevue 450 110th Avenue NE Bellevue, WA 98004

Dear Reilly Pittman:

The King County Wastewater Treatment Division (WTD) has received the Draft Environmental

Impact Statement (DEIS) for the Lake Washington Wastewater Lake Line Management Plan (LWWLL), project 22-112187-LE, that proposes Bellevue Utilities is developing a management plan to identify long-term operational and capital improvement strategies for the future repair, replacement and maintenance of the 14.6 miles of existing sewer line located underwater or on land adjacent to Lake Washington, as well as 15 pump/lift stations and 8 flush stations, in the cities of Bellevue, Beaux Arts, Medina, Hunts Point, Yarrow Point, and unincorporated King County.

King County facilities, the Enatai Interceptor and the Medina Pump Station outfall are located in the LWWLL and DEIS project area. (See enclosed map showing the location of the WTD facility in the project vicinity).

In order to protect these wastewater facilities, WTD requires that City of Bellevue submit construction drawings for specific projects identified in the LWWLL management plan/DEIS as they move into implementation, so that WTD can assess potential impacts. Please send drawings

Local Public Agency Program
King County WTD, Engineering and Technical Resources
201 South Jackson Street, KSC-NR-0503
Seattle, WA 98104-3855
(206) 477-5414 / Jpa team@kingcounty.gov

King County has permanent easements for sewer lines in the LWWLL and DEIS project area and must be assured the right to maintain and repair the WTD sewer lines. In the event that the lines must be relocated, a new permanent easement must be provided. Please contact King County regarding this easement, at:

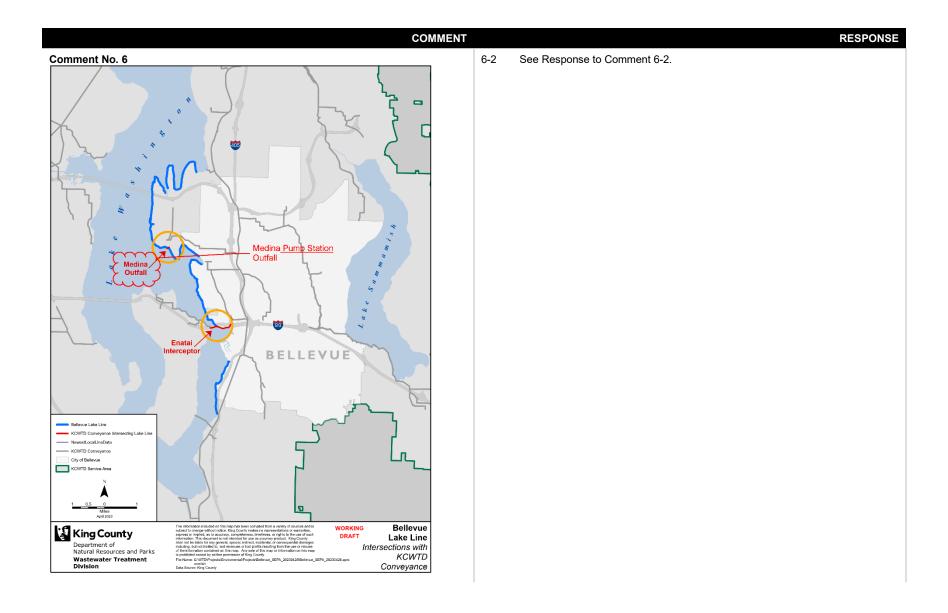
Bill Wilbert Permitting Compliance and Property Acquisition King County Wastewater Treatment Division 201 South Jackson Street, KSC-NR-0512

- 6-1 Comment noted.
- 6-2 The City acknowledges that the following King County facilities, the Enatai Interceptor and the Medina Pump Station outfall, are located in the LWWLL Plan area (as shown on the enclosed map). The City will continue to coordinate with King County as individual improvements are identified and implemented, and drawings will be sent to the indicated address, as appropriate.
- 6-3 King County's permanent easements in the LWWLL Plan area are noted, in addition to the right to maintain and repair the WTD sewer lines. The City will continue to coordinate with King County WTD as individual improvements are identified and implemented and should the need for a new permanent easement arise.

6-3

6-2

RESPONSE COMMENT Comment No. 6 May 1, 2023 Page 2 of 2 Seattle, WA 98104-3855 (206) 477-5523 / <u>bill.wilbert@kingcounty.gov</u> 6-3 Thank you for the opportunity to review and comment on this proposal. Sincerely, Rachael Hartman Rachael Hartman Environmental Planner Mark Lampard, Local Public Agency Coordinator Claire Christian, Permitting Compliance and Property Acquisition Enclosure



No.	Name of Commenter/Comment	Response
Comi	ments from Corporation	
7	Western Academy of Beaux Arts Board of Trustees Thank you for allowing us submit corrections to the Draft EIS on behalf of the Western Academy of Beaux Arts. We look forward to partnering in the planning for the sewer line upgrade. Attached is a letter with our corrections to the EIS. Please let us know if you have any questions.	While this letter was received after the comment period had closed, it has been included for reference and factual correction. Coordination with Western Academy of Beaux Arts (WABA) will be conducted for any proposed improvements or projects located in the vicinity of WABA property.

COMMENT RESPONSE

Comment No. 7

7-1

May 18, 2023

Angela Chung, PE, LEED-AP Senior Utilities Engineer City of Bellevue Bellevue Utilities 450 110th Avenue NE Bellevue, WA 98004

Sent via email to LkWaLakeLine@bellevuewa.gov

Dear Angela,

As the shoreline and tidelands landowner within the Town of Beaux Arts Village, the Western Academy of Beaux Arts (WABA) would like to offer the following corrections and comments to the Lake Washington Wastewater Lake Line Management Plan SEPA Draft Environmental Impact Statement (EIS).

The City of Bellevue Utilities has an indeterminate wastewater system through WABA property, for which a utility easement will need to be negotiated, regardless of the outcome of your project. WABA has a current unrecorded survey of the sewer pipes along with other of its facilities. As President of the WABA Board of Trustees, our board and I look forward to future discussions on this topic before any right of way plans are completed.

Per Angela Chung's conversation earlier this month with WABA Vice President, Carrie Oliver, we are writing to 1) Provide suggested corrections to the EIS and 2) Offer context on WABA outside of the EIS for your team's background and knowledge.

Corrections To EIS

Last paragraph on page 2-9 that flows into 2-10.

The Killarney Service Area is zoned primarily as single-family residential and public parks and public spaces, including Chism Beach Park, Burrows Landing Park, Chesterfield Beach Park, and Enatai Beach Park within Bellevue; it serves approximately 336 parcels and contains approximately 93 private docks (City of Bellevue 2015 Comprehensive Plan and Town of Beaux Arts Village 2015 Comprehensive Plan). The portion of the Service Area in the Town of Beaux Arts Village along the shoreline is privately owned by the Western Academy of Beaux Arts (WABA, incorporated in 1908) and was designated as Open Space under RCW 84.34 by the Town in 1972; single-family residential properties are on average over 150-feet inland from the shoreline.

Table 3.1-1

Column 3, Row 5 (Killarney)

- Single family
- Privately owned Open Space adjacent to Single Family Residential.

- 7-1 Although this comment was received after the comment period ended on May 8. 2023, it has been included in the comment summary.
- 7-2 The City acknowledges that WABA is the shoreline and tidelands landowner within the Town of Beaux Arts Village and that a utility easement will need to be negotiated. The City will continue to coordinate with WABA as individual improvements are identified.
- Updates to the last paragraph as noted on pages 2-9 and 2-10 will be made in the Final EIS. No substantial updates to Chapter 3 are required for the Final EIS; as such, the chapter will not be updated; however, the updates to Table 3.1-1 are noted.

COMMENT RESPONSE

The overview of WABA and its relationship to the Town of Beaux Arts Village

Comment No. 7

Background on WABA

Outside of the EIS, at Angela's suggestion we wanted to provide a brief overview of WABA and its relationship to the Town of Beaux Arts Village.

The Western Academy of Beaux Arts (WABA) is a non-profit corporation that owns, operates and maintains in trust the 1,100 feet of Lake Washington shoreline in the Town of Beaux Arts Village, Washington. WABA is managed by an elected Board of Trustees and funded through an annual property assessment required by Covenant of all property owners within the unrecorded plat of Beaux Arts Village. This private property, also known as the WABA Beach and Commons area, was established in 1909 for the enjoyment of and use by WABA members and their accompanied quests.

The elected WABA Board of Trustees (Board) is responsible for managing, operating, maintaining, and improving the Corporation's shoreline assets, which include a swim beach and docks, boat moorage for over 55 watercraft, multiple picnic areas, an off-leash dog area, children's play areas, tennis/pickleball courts, private access roads and parking areas, and surrounding woodlands and trails. WABA also owns open spaces on the Town of Beaux Arts Village's northern and southern borders and a few other areas within the Town of Beaux Arts Village. In addition, WABA owns the first class shorelands/tidelands adjacent.

Conservation and celebration of the Arts are WABA's top priorities. Our roughly five-acre waterfront and woodlands contain dozens of old growth, significant, and younger Douglas Fir, Western Cedar, Coast Redwood, and Big Leaf Maples, several of which run just a few feet back from the shoreline. The property is also home to many other trees and native foliage, a pair of nesting Bald Eagles, and a multitude of other wildlife both aquatic and terrestrial.

Some of the conservation efforts we have made over the years include restoration of our shoreline in partnership with the Lake Washington / Cedar / Sammamish Chinook Salmon Recovery Plan and the King Conservation District to support salmon habitat; The Puget Sound Commission to minimize stormwater impacts on Lake Washington; and a years-long Woodlands Restoration Project to ensure the health of our forest and overall flora, which included replacing non-native plants with appropriate native species, removing ailing trees and shrubs, and planting a new generation of protected large and small coniferous and deciduous trees.

We look forward to future discussions regarding a utility easement and your Lake Washington Wastewater Lake Line Management Plan project.

Sincerely,

Jeff Avansino
President, Western Academy of Beaux Arts Board of Trustees
(206) 356-1727
jeff.avansino@gmail.com

7-4

D-14

7-4

has been noted

Appendix E Community Outreach Summary

Prepared for:



Lake Washington Wastewater Lake Line Management Plan

Community Outreach Summary

Spring 2022 – Spring 2024 Development of the Lake Line Management Plan

Prepared by:



Table of Contents

Project background	3
Report summary	3
By the numbers	3
Community engagement goals	4
Informed consent principles	4
Priority audiences	4
Community engagement report	5
Notifications	6
Key themes	6
Next steps	7
Accessibility	7
Appendix A: Audience spreadsheet	8
Appendix B: Briefing outreach summary	10
Appendix C: Virtual public meeting summary	13
Appendix D: Online open house summaries	15
Appendix E: Community pop-up event summary	18
Appendix F: Survey data	19
Appendix G: Notification examples	21
Appendix H: Full list of public comments	22

Project background

The City of Bellevue's Lake Lines are a portion of the sewer system located along the shorelines of Lake Washington and Lake Sammamish. The Lake Washington Wastewater Lake Line is the portion of the system that runs through the lake and adjacent to the shoreline of Lake Washington. It includes 14.6 miles of sewer line with 15 pump stations and eight flush stations along the shoreline.

This infrastructure serves more than 1,000 community members in Bellevue and neighboring communities. However, pipes in the lake line system are aging, and the aquatic environment creates challenging conditions for repair and replacement activities. The Lake Washington Sewer Lake Line Management Plan was developed to effectively assess lake line conditions and plan for the management and maintenance of the lake lines. The plan will help ensure the City can continue to provide safe and reliable sewer service to the community. Equally important, it will help us protect public health and the delicate Lake Washington ecosystem.

Report summary

Hearing from community members is a critical part of Bellevue Utilities' planning and decision-making process. From July 2022 to December 2023, the project team conducted virtual public meetings, provided community briefings, published several online open houses with accompanying community surveys, and hosted a series of in-person community events to collect input from project neighbors and partnering jurisdictions. The project team incorporated community feedback into the management plan alternative analysis and environmental documentation. This report summarizes the Bellevue Utilities' community outreach efforts and feedback received from the community.

By the numbers

- Engaged 21 community partners for project briefings
- Hosted a virtual public meeting with 12 attendees
- Hosted in-person pop-up events across eight locations
- Engaged communities in eight languages (Simplified Chinese, Traditional Chinese, English, Japanese, Korean, Russian, Spanish, Vietnamese)
- Sent two postcards to 6,342 residents each time
- Hosted two online open houses with 1,200 total visitors throughout the project
- Fielded two community surveys with 27 total respondents
- Published three "It's Your City" articles
- Posted four social media posts
- Published three website updates
- Distributed 15 posters to nine community locations

Community engagement goals

The project team engaged the community and local partners to:

- Build and maintain public support by sharing how the project will benefit the community.
- Raise awareness of the importance of Lake Washington lake line, as well as the needs, challenges and impacts for lake line rehabilitation and/or replacement.
- Communicate the repercussions to the community and Lake Washington if no action is taken to rehabilitate and/or replace the aging lake line.
- Lay groundwork and develop strong community relationships for future improvement projects that could include planning, design, and construction phases.
- Identify the needs of audiences directly affected by lake line rehabilitation or replacement.
- Share information early and often to ensure transparency and prevent surprises.
- Provide opportunities for public input during key steps of the project and incorporate audience feedback into project decisions.

Informed consent principles

The project team followed guidelines of informed consent to provide clear and transparent communication about the project and opportunities for public involvement. The project team used the following informed consent principles during outreach:

- Be clear about what problem the project is solving and why it is important.
- Establish the City's legitimacy as the right entity to solve the problem, and that it would be irresponsible to not address it.
- Be transparent about who is potentially affected, the problems and opportunities that the solutions solve or address and the benefits to the community of managing the lake line in contrast to not doing anything.
- Provide ample and early opportunities for engagement, while shifting the approach over time to adapt to each phase of the project.
- Be clear and transparent about the decision-making process and share how public feedback will be incorporated into that process.

Priority audiences

The project team prioritized engagement with audiences who will be directly impacted when the projects outlined in this planning effort are implemented. This included people who live, work, or recreate in the project service areas as well as Bellevue Utilities ratepayers. Additionally, the project team engaged community or advocacy groups who may have interest in the lake line system, as well as permitting authorities, and partner jurisdictions who may have decision-making authority on future work.

See Appendix A for a detailed list of audiences in the project area.

Community engagement report

The project team engaged community members virtually and in-person. The engagement approach included the following activities:

- Briefings to local partners: Between January and March 2023, the project team conducted outreach to local agencies and community groups to share information about the project background and timeline, offer an opportunity for an in-person or virtual project briefing, gather initial impressions, identify concerns, and answer questions. For those interested in the briefing opportunity, the project team prepared a Lake Line 101 presentation to share the project background, Programmatic EIS and Management Plan alternatives, evaluation factors for alternatives, and the evaluation approach before answering questions from participants. See Appendix B for a summary of outreach and briefings provided to local partners.
- Virtual public meeting: In spring 2023, the project team encouraged community members to participate in the Draft Environmental Impact Statement (DEIS) public comment period. The project team promoted the DEIS comment period by sharing posters at community locations and by hosting a virtual public meeting for community members to ask questions or share testimony. The project team hosted a virtual public meeting via Zoom Webinar on April 18, 2023. The project team shared a brief presentation with the group describing the project and the EIS process. The team then facilitated a public testimony period for attendees. See Appendix C for a summary of the virtual public meeting.
- Online open houses: To encourage community input, Bellevue Utilities hosted two
 online open houses on EngagingBellevue.com. The first online open house promoted
 the DEIS public comment period in spring 2023. The second online open house was to
 solicit feedback on alternatives analysis in summer/fall 2023. A total of 1,200 participants
 engaged with both online open houses to learn more about the project and share
 feedback. See Appendix D for more details about the online open houses.
- Pop-up events: In September 2023, the project team conducted community outreach in parks, along trails, and at community events near the project service areas. Creating opportunities for engagement at community-centered events and gathering places allowed for those who don't actively seek or lack resources pertaining to City-based projects to stay involved and to share their input. These pop-up events were designed to share information about the project and solicit input on the prioritization factors being used to analyze the project alternatives. See Appendix E for a summary of the pop-up events.
- Community survey: The team hosted two opportunities to provide feedback via online surveys throughout this project, one for the DEIS public comment period and one during the analysis of potential alternatives. During the alternative selection, the team hosted a community survey on the project website, promoted through community pop-up events and other notifications. Nineteen people responded to the survey. They provided

information about in which services areas they live, work, or play, how they would prioritize consequences of lake line failure, priorities for evaluation criteria for each alternative, how they prefer to be notified about project updates, and any other feedback they wanted to share with the project team. See Appendix F for a summary of survey data and Appendix H for a full list of comments.

Notifications

The project team encouraged community participation in outreach activities through the following channels:

- Multilingual postcard mailing to people living and working near the project area
- Social media announcements on the City's Facebook and X (Twitter) pages
- Email notices sent to email listserv subscribers
- Announcements on the project website
- Articles in the "It's Your City" quarterly newsletters
- Multilingual flyers distributed to jurisdictional partner and popular gathering spaces near the project area

See **Appendix G** for photo examples of project notifications.

Key themes

For the development of the management plan, we asked communities to provide input to help inform the final recommended alternatives. The project team incorporated themes from the inperson and virtual conversations and online survey data into their analysis. What we learned from the community feedback includes:

- When asked about the most important consequences to consider in the event of a lake line failure, the majority of people prioritized the difficulty of repair or replacement of a lake line, the number of customers impacted, and the risk to the environment. These themes were repeated in comments received throughout the project.
- When asked about the most important evaluation factors for alternative selection, community members ranked impacts to land use and property easements, environmental impacts, and the feasibility of long-term maintenance as most important. This echoes the themes mentioned above.
- Some people shared a desire to maintain Lake Washington's water quality and to protect
 native habitat. Additionally, people expressed desire to implement a long-term and
 sustainable solution so that service can continue be provided for years to come without
 further disruption to Lake Washington or personal property. Lastly, people expressed
 concerns over the cost of the maintenance of the lake lines, but consistently encouraged
 the project team to prioritize the impacts to the community members over the cost of the
 project.

Bellevue Utilities learned that most people engaging with this project lived, worked, or played in the Meydenbauer Bay or Medina South service areas. The team also learned that most people preferred that Bellevue Utilities keeps them informed about this project via emails, postcards, and "It's Your City" articles.

See Appendix H for a full list of public comments.

Incorporating public input

The themes reported in this document were used by the project team to verify the EIS scoping and to inform the preferred alternative(s) for the management plan. With the EIS and Management Plan now complete, Bellevue Utilities anticipates formal adoption of the management plan with the next update to the City's Wastewater System Plan, currently anticipated in 2026. The project team is committed to ongoing engagement and will continue to inform the public before data collection, design or construction begins for any service area.

Accessibility

In compliance with Title VI, the City attached accessibility statements to all public materials:

For alternate formats, interpreters or reasonable accommodations, please contact Claude losso (ciosso@bellevuewa.gov or 425-452-4448) at least 48 hours in advance. For complaints regarding accommodations, please contact the city's ADA/Title VI administrator (adatitlevi@bellevuewa.gov or 425-452-6168). If you are deaf or hard of 정보 **Information** 情報 Información معلومات லಮுచారం Информация hearing, dial 711. All meetings are wheelchair-accessible.

సమాచారం

सूचना 425-452-6800

Thông Tin

Appendix A – Audience spreadsheet

Name	Audience category
Beaux Arts Village Town Clerk	City department or other agency
Bellevue Chamber	Business
Bellevue Christian School – Three Points Elementary	School or childcare facility
Bellevue Parks and Recreation	City department or other agency
Boys & Girls Club of Bellevue	School or childcare facility
City of Bellevue Environmental Services Commission	City department or other agency
City of Bellevue Marinas	Boating facility
City of Clyde Hill	City department or other agency
City of Medina - City Manager's office	City department or other agency
City of Medina - Development Services	City department or other agency
City of Medina - Public Works	City department or other agency
City of Newcastle - City Manager's office	City department or other agency
City of Newcastle - City Manager's office	City department or other agency
City of Newcastle - Public Works	City department or other agency
City of Newcastle - Public Works	City department or other agency
City of Yarrow Point	City department or other agency

Enatai Elementary School	School or childcare facility
First Church-Christ Scientist	Cultural or religious
riist Church-Christ Scientist	organization
Killarney Circle Pool	Social service
King County	City department or other
King County	agency
Medina Elementary School	School or childcare facility
Medina Market	Business
Meydenbauer Bay Yacht Club	Boating facility
New Hone International Church	Cultural or religious
New Hope International Church	organization
Newport Hills Community Club	Neighborhood group
Newport Yacht Club	Boating facility
NW Lifestyle Homes	Business
Old Bellevue Chevron Auto Repair	Business
Overlake Golf & Country Club	Business
Seattle Boat Company – Newport	Boating facility
Seismic Northwest	Business
St. Mary-on-the-Lake Peace & Spirituality	Cultural or religious
Center	organization
St. Thomas School	School or childcare facility
The Greater Newcastle Chamber of	
Commerce	Business
	Cultural or religious
The Well Community Church	organization
Town of Beaux Arts Village	City department or other
	agency

Town of Beaux Arts Village	City department or other agency
	City department or other
Town of Hunts Point	agency
US Army Corps of Engineers	City department or other
03 Army Corps of Engineers	agency
Villaggio on Yarrow Bay	Property owners and tenants
Virginia Mason Athletic Center	Business
Voeller and Associates	Business
Washington State Department of Ecology	City department or other
washington state Department of Ecology	agency
Washington State Department of Fish and	City department or other
Wildlife	agency
Washington State Department of	City department or other
Transportation	agency
Wells Medina Nursery	Business
Yarrow Bay Marina	Boating facility
	City department or other
Yarrow Point Town Hall	agency

Appendix B – Briefing outreach summary

Briefing outreach summary

To offer briefing presentations to community groups, the project team sent 38 outreach emails and conducted six follow up phone calls to 21 community-based organizations, agencies and local jurisdictions, neighborhood groups, chambers of commerce, and parent teacher associations. The team shared project information and details for how to provide input to the project team. Upon request, the project team shared the Lake Line 101 presentation via email or presented it during a briefing.

Generally, contacts shared appreciation for the outreach and participated in information sharing by distributing the email among their colleagues and peers. Few community members shared questions or requested briefings. Some noted the usefulness of the Lake Line 101 presentation and other online resources and committed to following up if questions arise.

Notable Outcomes

- Downtown Bellevue Residents Association requested further coordination to gather information to distribute through their Facebook page and will reconnect with the team as capacity allows.
- The Town of Yarrow Point supported the coordination of a briefing to the Hunts Point, Yarrow Point, and Beaux Arts Town Councils. The project team briefed these audiences during a meeting in spring 2023.
- The Medina Parent Teacher Association supported the project team in distributing a project update blurb in their monthly newsletter.

Outreach log

Name	Response
Bellevue Chamber	Primary contact forwarded the outreach email to colleagues who lead government affairs and communications to share the information among Bellevue Chamber membership.
Bellevue High	Primary contact shared thanks for the information and committed to
PTSA	reaching out after reviewing resources if any questions arise.
Downtown Bellevue	Primary contact responded with interest in further discussion to
Residents	support drafting a message for the DBRA Facebook page. Next steps
Association	pending DBRA capacity.
HOA for The Point	During phone call outreach, primary contact requested an additional
on Yarrow Bay	email with project information, which the project team sent following
	the call.
Hunts Point	Primary contact did not respond. However, contacts with the Town of
	Yarrow Point supported the coordination of briefings with
	municipalities. See notes in Yarrow Point communications.

Lochleven	Connected via follow up phone call and sent follow up email with
Community	more information. Primary contact shared information among
Association	Lochleven commissioners and expressed interest in supporting
	information sharing on NextDoor.
Medina Parent	Coordinated with primary contact to share project information blurb in
Teacher	the Medina PTA newsletter. Did not share any questions or request a
Association	briefing.
Meydenbauer Bay	Primary contact shared thanks, noted that the information provided
Yacht Club	was sufficient, and expressed interest in future partnership.
Newport Yacht Club	Primary contact forwarded information along to additional Newport
and HOA	Shores community contacts. None shared questions or briefing
	requests.
Overlake Golf &	Connected with primary contact during phone call outreach and
Country Club	gathered email information to share follow up information.
WABA (Town of	Primary contact did not respond. However, contacts with the Town of
Beaux Arts)	Yarrow Point supported the coordination of briefings with
	municipalities. See notes in Yarrow Point communications.
Wetherill Nature	Primary contact shared thanks, sharing positive feedback for the
Preserve	Lake Line 101 presentation, and committed to sharing the information
	among organization commissioners and following up if any questions
	arise.
Yarrow Point	Primary contact shared information with the Town Engineer, who
	offered to coordinate presentations to Hunts Point, Yarrow Point, and
	Beaux Arts Town Councils. The project team organized a
	presentation and offered one-off follow ups.

Additionally, the project team conducted outreach to the City of Medina, the Enatai Elementary School PTSA, the Enatai Neighborhood Association, the Fairweather Basin Boat Club, the Meydenhauer Bay Neighbors Association, the Newport Hills Community Club, the Greater Newcastle Chamber of Commerce, and the Vuecrest Community Association, but did not receive responses.

Appendix C – Virtual public meeting summary

Poster distribution summary

To promote the Draft Environmental Impact Statement (DEIS) virtual public meeting and to direct community members to where they can participate in the DEIS public comment period, the project team distributed 15 posters on April 4, 2023, to nine different community gathering spaces, including:

- Beaux Arts Village
- Bellevue Botanical Gardens
- Bellevue City Hall
- Bellevue Library
- Crossroads Community Center
- Hunts Point Town Hall
- Northwest Arts Center
- South Bellevue Community Center
- Yarrow Point Town Hall

The team followed up to provide virtual project materials at two locations: the Crossroads Community Center and the Yarrow Point Town Hall.

Virtual public meeting summary

The project team hosted a virtual public meeting via Zoom Webinar on April 18, 2023. The project team shared a brief presentation with the group describing the project and the EIS process. The team then facilitated a public testimony period for attendees.

Attendance:

Project team

Bellevue: Angela Chung, Reilly Pittman, Elizabeth Stead, Linda De Boldt

Carollo: Lara Kammereck, Cheyenne

Thompson

ESA: Lisa Adolfson

PRR: Scott Burns, Conny Garcia Gaitan,

Emma Dorazio, Morgan Calder

Community members

Eight people attended the virtual public meeting out of the 18 people who registered.

Q/A:

- Is a combination of these different alternatives also an option? For example, use on shore option in some places and other options in some other areas.
 - Answer: Yes, one alternative might not be feasible in each service area, so the final recommendation might be a combination of alternatives.

Testimony Comments:

- I am not sure what kind of testimony you are looking for.
 - Response from project team: Any comments are good; you can submit written comments by May 8 if you don't have anything to share now.
- In terms of the alternatives provided, I think moving the lines off the lake, instead of inside it, would be safer for the ecosystem in case it breaks. There would be less damage to the lake if they were out of the water. I think there might be an opportunity to combine some of the alternatives, which would be my recommendation. My question is: How do the private side sewers connect to the main line and who is responsible for them when they are clogged? We had a bad experience with our line clogging and backing up, and we were told we were responsible, but the clog was exactly where it joined with the main line. I was told within 5 feet of that junction is the City's responsibility.
 - Response from project team: I would say questions about the system should be directed to Bellevue Utilities, Angela Chung. The EIS is looking for comments on the environmental impact of the alternatives, or comments on the alternatives and the plan itself.
 - Response from project team: We will follow up with you, or you can contact Angela directly!

Links shared with participants during the webinar:

- To download a copy of the DEIS or submit electronic testimony through the survey, please visit: https://www.engagingbellevue.com/lake-washington-line
- Visit the project website: https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/capital-projects/lake-washington-line
- View the Lake Line 101 presentation: https://prezi.com/p/edit/l n1k8xgivgr/
- Email testimony to: <u>LakeLineEIS@bellevuewa.gov</u>

Next Steps

- Bellevue Utilities Project Manager, Angela Chung, followed up via email with the participant who provided testimony during the meeting to answer his outstanding questions.
- PRR posted the public meeting recording to the project website.

•	Any public testimony received during the DEIS comment period will be documented as part of the EIS process.

Appendix D – Online open house summaries

Online open house #1

To share information about EIS scoping and accept scoping comments for the management plan, Bellevue Utilities hosted an online open house on the EngagingBellevue.com platform. The online open house was live from July 11, 2023, to August 31, 2023. The online open house shared information about the Lake Washington Lake line system, why a management plan and EIS are needed, and potential solutions for the aging lake lines. Information and graphics for four potential alternatives – a "no action" alternative (emergency repairs and continued maintenance only), an in-water alternative, on shore alternative, and upland alternative – were presented. The online open house was published in English and a summarizing text block of information was provide on the website in Chinese (simplified and traditional), Japanese, Korean, Spanish, Russian, and Vietnamese. Visitors were able to submit scoping comments through an online open house form available in all eight languages. The online open house had a total of 286 visitors during the scoping period and two EIS scoping comments were submitted in English.

Online open house #2

To share information about the alternatives analysis and to solicit feedback for the management plan, Bellevue Utilities hosted an online open house on the EngagingBellevue.com platform. The online open house was live from September 1, 2023, to November 1, 2023. The online open house shared information about the Lake Washington Lake line system, information and graphics for potential alternatives, and the alternative evaluation factors. The main focus of this online open house was to encourage people to take the community survey to provide input on the evaluation factors so the project team could incoporate commuity priorities into the analysis of potential alternatives. The online open house was published in English and a the community survey was available in Chinese (simplified and traditional), Japanese, Korean, Spanish, Russian, and Vietnamese. The online open house had a total of 914 visitors and 19 survey responses were submitted in English.

Appendix E – Community pop-up event summary

Overview

Hearing from community members is a critical part of Bellevue Utilities' planning and decision-making process. In September 2023, the Lake Washington Wastewater Lake Line project team conducted community outreach in parks, along trails, and at community events near the service area. Creating opportunities for engagement at community-centered events and gathering places allows for those who don't actively seek or lack resources pertaining to City-based projects to stay in the know and share their input. These pop-up events were designed to share information about the project and solicit input on the prioritization factors being used to analyze the project alternatives. Residents within the service area were notified of these community events and the community input survey through promotions detailed below.

Goals

- Share information about the project and answer questions
- Collect feedback from the community that will be incorporated into the management plan alternatives recommendation

Promotions

- Postcard mailer sent to residents
- Social media posts
- Listserv emails
- Website updates



Event details

Date	Pop-up location	Impressions	Common questions and comment themes
September 6	Medina Park and Points Loop Trail	24	 Expressed curiosity about what the project is.
			 Questions about where the service areas are located
September 13	Meydenbauer Bay Park and Wildwood Park	14	 Expressed curiosity about what the project is. How will this affect me as a rate payer?

			 What happens to private property owners within the service areas?
September 14	Bellevue Farmers Market	63	 Expressed curiosity about what the project is.
			 How does this impact the environment? How will environmental impacts change based on each alternative?
			 Expressed concern about property easements. Prioritize that as an evaluation factor.
September 21	Meydenbauer Bay Park and Wildwood Park	6	 Expressed curiosity about what the project is.
			- Shared that environmental impact is more important than cost.
September 26	Road End Beach	4	 Expressed curiosity about what the project is.
			 Shared that waterfront property owners are more invested in this project than other ratepayers.

Survey responses and analysis

Community members who were engaged during a pop-up event were provided the option to leave more robust feedback through an online survey. The community survey received 19 responses.

Themes from the survey responses include:

 Prioritization of the difficulty of repair or replacement of a lake line, the number of customers impacted, and the risk to the environment as most important consequences of failure.



- Prioritized evaluation criteria were impacts to land use and property easements, environmental impacts, and the feasibility of long-term maintenance as most important.
- Desire to maintain Lake Washington's water quality and to protect native habitat, desire to implement a long-term and sustainable solution, and prioritization of the impacts to the community members over the cost of the project.
- Most people engaging with this project lived, worked, or played in the Meydenbauer Bay or Medina South service areas.
- Most people preferred that Bellevue Utilities keeps them informed about this project via emails, postcards, and "It's Your City" articles.

Incorporation of feedback

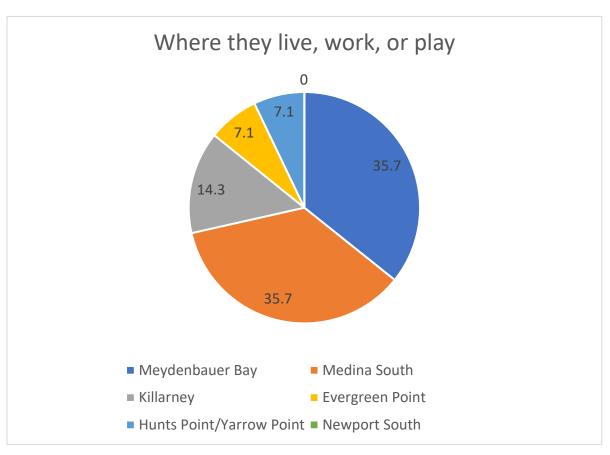
The project team incorporated community feedback into the management plan options analysis and environmental documentation in the following ways:

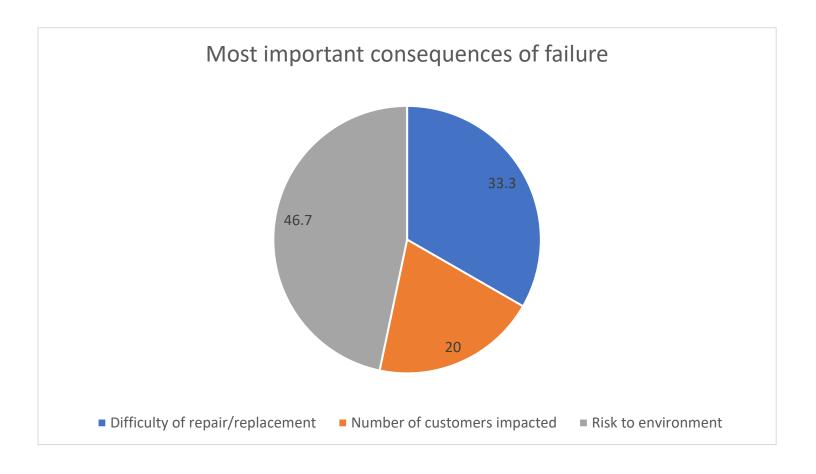
Topic	How we used it
Specifics about each service area	Management plan development and saved for future planning use
Priorities for consequences of failure	Compared to our analysis and assessed different scenarios if community priorities were different than our baseline
Priorities for evaluation criteria	Compared to our analysis and factored into high- level alternative evaluation, and saved for future planning use
How to reach folks	Will be used to prioritize outreach methods during project implementation and saved for future planning use

Appendix F - Survey data

Public comments from community surveys can be viewed in **Appendix H**.



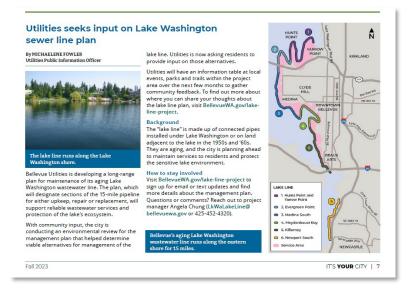




Appendix G - Notifications



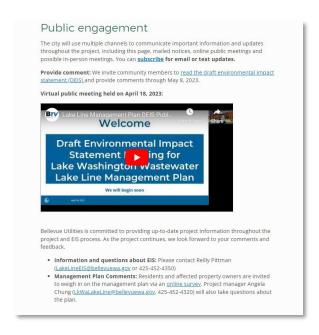
Example of project postcard



Example of It's Your City article



Example of project poster



Example of project website update

Appendix H – Full list of public comments

DEIS public comments

After reviewing the draft EIS please share your comments.

Entire Bellevue-managed sewer line should be inspected and areas that show concern should be addressed first. FYI - Its odd to ask the public what they would study without defining what an EIS is supposed to encompass.

How it impacts residents

Alternatives selection survey

Is there anything specific about the area our team should know as we plan for the management of the lake line in your service area?

No

Not really

we strenuously object to anything that dramatically encumbers our property such as easements that make that area unbuildable. Something must be done eventually with the line, but some of the proposed approaches can disproportionately harm properties served by a line update. We have 150' of lakefront on a small shelf of land before the bluff. Trenching and defining an easement across our property could seriously impact our ability to use or build on our property. We would want to know how the city plans to address this in the proposals. we do not want to see a process in which community input is simply a performative process because the city has already predetermined the option it wants. we also don't want internal priorities like the ease and convenience for staff working on this or departmental objectives that don't care about cost or impact on property owners don't trump the interests of citizens that will be affected by any changes.

It would be terribly difficult to move the sewer lines from the water to land in Meydenbauer Bay.

this could be an excellent opportunity to replace the waste water system and to potentially put all the utility lines underground.

I think that residents that do NOT have waterfront property - with it's accompanying gigantic property values - will naturally be interested in how the cost of these improvements will be shared. Clearly it's in the interest of all to maintain water quality in the lake and to get in front of necessary system improvements - but solutions will naturally have differing costs associated with them. I am encouraging the City to keep the cost and cost-sharing elements of the project transparently in front of all residents who will be expected to participate in the cost of the project.

Many families and children swim in the Meydenbauer Bay area and it is important to keep the water safe for them to use.

Why did you rank the alternatives evaluation criteria the way you did?

I feel that we need to prioritize the environment before any work can begin.

I think thats important

Thinking more on long term, how the action will effect it. Want to be sustainable long term (good quality and little impact). And then feasibility (permits and access etc). If quality is good then people would be less disrupted in the long term

Cost is important but permitting and the local people are more important

My number one concern was how much changes might jeopardize usage of our property. The current lakebed solution has worked successfully for 60 years...it's unclear why this wouldn't be the preferred approach. If there are challenges with permits for this, keep working at permits and the choice of construction tech to mitigate any concerns in doing this. We do care about the environment, but my concern would be that the city may use concern about it to drive through options that disproportionately and needlessly impact us. I'm distrusting because previously, a city-maintained sewer line running across our neighbor's lot down the bluff to the lake sewer line broke. There was landslide and raw sewage that dumped onto our property. The city fixed the break, but did nothing to remedy the debris or sewage and showed complete lack of concern when we raised this with them.

We need action and the ordering above is in my opinion the most expeditious.

Right of way will drive the cost and impact to the community. You have left our two options, lining the current pipe, and a floating line.

It needs to be taken care of so prioritization of doing it regardless of impact to residents/partners etc seems important to me. Cost of course is critical, but in light of the potential for fail and the impact to the lake quality and fish habitat etc, not as important in the end.

This area is home to many. People need to be considered, but animals and environment even more so.

It is a hard place to work.

placing the new system in a logical location should be the number on criteria

Unless you are a waterfront property owner - the environmental, ease of maintenance, and costs are primary. The permitting, right of way, and temporary inconvenience to property owners are administrative and comparatively short lived. I'm hoping the City ensures that the costs of special attention to high end property is paid by those property owners, and not just spread out to all City residents.

I appreciate that this will be challenging for the departments involved but I feel we need to prioritise the impact on the environment and the ease of future repair (if/when necessary) and think ahead - which is something that the City of Bellevue does exceptionally well.